

Three-phase Induction Motors

- H-compact
- H-compact PLUS

Catalog D 84.1 • 2009



Motors

Answers for industry.

SIEMENS

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Further documentation

"Explosion Protection" brochure 6ZB 5310-OLE02-0BA4

Motors

Three-phase Induction Motors

- H-compact
- H-compact PLUS

Catalog D 84.1 · 2009



The products and systems listed in this catalog are manufactured and marketed using a certified quality management system complying with DIN EN ISO 9001 (Certificate Registration No. 002241 QM UM). The certificate is recognized in all IQNet countries.

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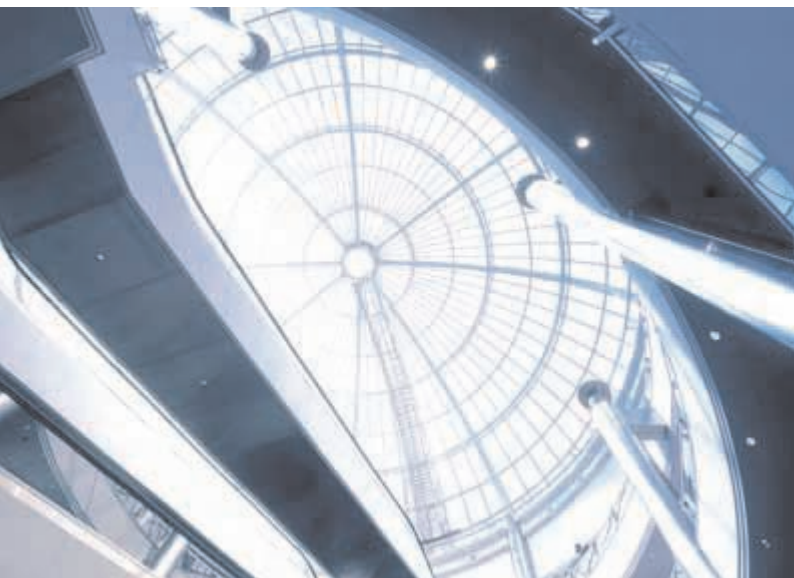
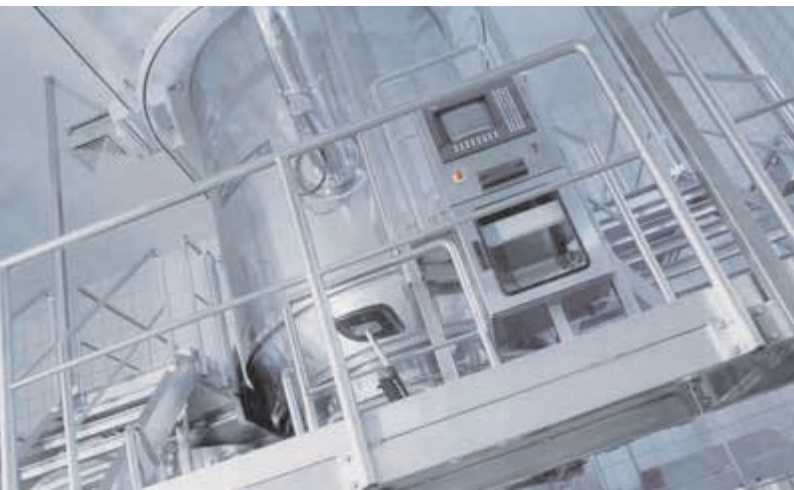
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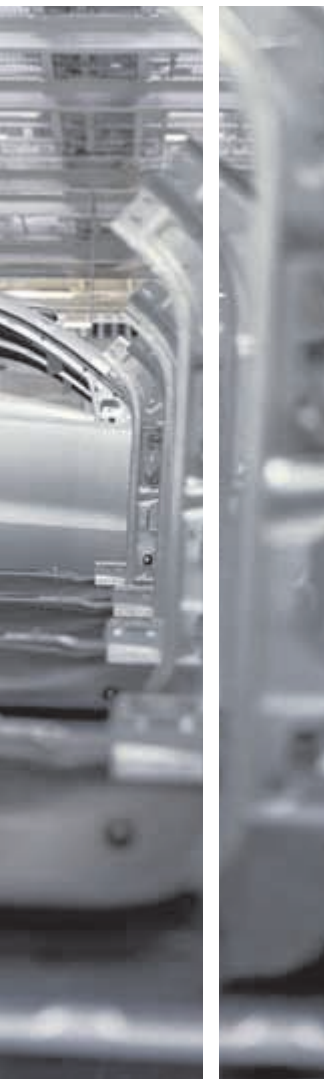
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Answers for industry.

Siemens Industry answers the challenges in the manufacturing and the process industry as well as in the building automation business. Our drive and automation solutions based on Totally Integrated Automation (TIA) and Totally Integrated Power (TIP) are employed in all kinds of industry. In the manufacturing and the process industry. In industrial as well as in functional buildings.

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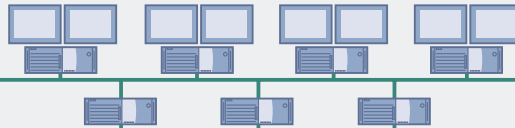
Management Level

MES – Manufacturing Execution Systems



Operations Level

SIMATIC PCS 7
Process Control (DCS)

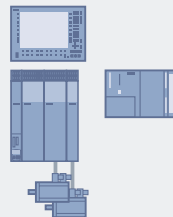


Control Level

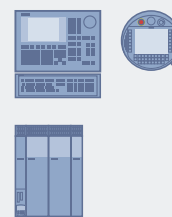
Industrial Software for

- Design and Engineering
- Installation and Commissioning
- Operation
- Maintenance
- Modernization and Upgrade
- Energy Management

SIMOTION
Motion Control System



SINUMERIK
Computer Numeric Control



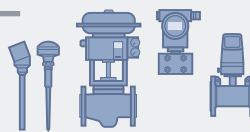
Field Level

PROFIBUS PA

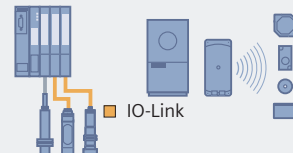


HART

Process Instrumentation



SIMATIC Sensors



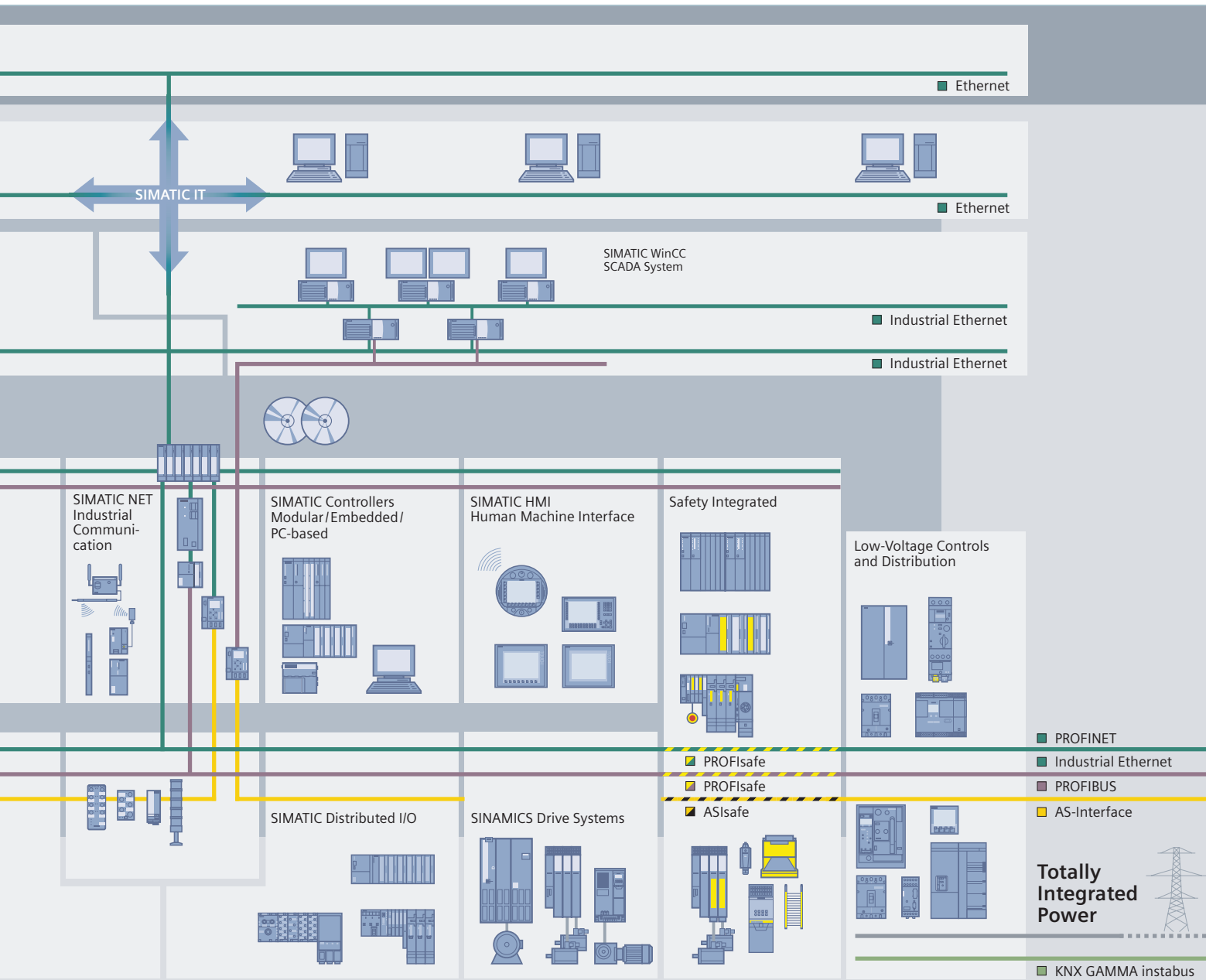
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Automation

02.03.2009

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Thanks to Totally Integrated Automation, Siemens is the only provider of an integrated basis for implementation of customized automation solutions – in all industries from inbound to outbound.



TIA is characterized by its unique continuity.

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Introduction

Overview

1

Overview

In addition to the general technical data, this catalog includes detailed descriptions of the standard versions and the options that can be supplied by specifying order codes. It should be noted that certain order codes and combinations of order codes are not possible for all motor types. Customized solutions can be offered on request.

Order No. code

The Order No. comprises a combination of digits and letters.

For options, the Order No. is supplemented by an additional hyphen and the letter **Z**. In addition, the order codes for the corresponding options must be specified.

Example:

1LA4 354-4AN60-Z H05 + K16 + L20

Ordering data:

- Complete Order No. and order code(s).
- If a quotation is available, in addition to the Order No., the quotation number should also be specified.
- When ordering a complete motor as a spare part, please specify the factory serial No. of the previously supplied motor as well as the Order No.

Overview

The following overview explains the meaning of the individual positions of the Order No. The selection tables in Chapters 2

to 4 include the motors available as standard from this range.

Structure of the Order No.:	Position:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	Z
<u>1st to 4th position:</u> Motor version	• Standard version	1	L	A	4											
	- Self-ventilated	1	P	Q	4											
	- Forced-ventilated	1	L	H	4											
	- Water-jacket-cooled															
	• Ex version	1	M	A	4											
	- Ex e	1	M	G	4											
- Ex px	1	M	S	4												
- Ex nA																
<u>5th to 6th position:</u> Shaft height	• 315 mm					3	1									
	• 355 mm					3	5									
	• 400 mm					4	0									
	• 450 mm					4	5									
	• 500 mm					5	0									
	• 560 mm					5	6									
	• 630 mm					6	3									
<u>7th position:</u> Laminated core length	• Short							0								
	• Medium							2								
	• Long							4								
	• Extra long							6								
<u>8th position:</u> Pole number	• 2-pole									2						
	• 4-pole									4						
	• 6-pole									6						
	• 8-pole									8						
	• 10-pole									3						
	• 12-pole									5						
<u>9th position:</u> Rotor version	• Standard aluminum rotor										A					
	• Special aluminum rotor										B					
	• Standard copper rotor										C					
	• Special copper rotor										D					
	• Special version (CuSi,...)										E					
<u>10th position:</u> Character for operation with:	• Line supply, high voltage											N				
	• MV drive converter											V				
	• LV drive converter											M				
<u>11th position:</u> voltage code	Line supply, high voltage:															
	3.3 kV, 50 Hz													0		
	6.6 kV, 60 Hz													1		
	–													2		
	3.0 kV, 50 Hz													3		
	4.0 kV, 60 Hz													4		
	5.0 kV, 50 Hz													5		
	6.0 kV, 50 Hz													6		
	6.6 kV, 50 Hz													7		
	10 kV, 50 Hz													8		
Other voltage/frequency (additional text data)													9			
<u>12th position:</u> Type of construction	• IM B3													0		
	• IM V1 with canopy													4		
	• IM V1 without canopy													8		
	• IM B35													6		
Options: Additional order codes required.																

Introduction

H-compact

Performance features

1

Overview

Performance features of the H compact series

The H-compact series of motors is characterized by:

- Extremely compact design
- Longest lifetime and highest reliability
- Globally proven Siemens MICALASTIC insulation system

- Proven over many years of use in the widest range of sectors
- Wide range of options, that allow the motor to be optimally adapted to customer requirements
- Various cooling concepts for every environment

Overview table of the H-compact motor series

Series	Version	Voltage range	Power range	Degree of protection	Cooling method	Type of protection	Type of construction			
1LA4	IEC	690 V	1150 ... 1650 kW ¹⁾	IP55	IC411	–	IM B3, IM B35, IM V1			
		2.3 ... 11 kV	200 ... 3000 kW ²⁾							
1LA4 Standardline		3.0; 3.3; 6.0; 6.6 kV	200 ... 800 kW ³⁾			–	IM B3			
1MS4		2.3 ... 11 kV	200 ... 3000 kW ²⁾			Ex nA	IM B3, IM B35, IM V1			
1MG4		2.3 ... 11 kV	200 ... 3000 kW ²⁾			Ex px				
1MA4		3.4 ... 6.6 kV	170 ... 630 kW ³⁾			Ex e				
1PQ4		690 V	1150 ... 1700 kW ¹⁾			IP55	IC416	–		
		2.3 ... 6.6 kV	1180 ... 2950 kW ⁴⁾							
1LH4		690 V	1380 ... 1750 kW ¹⁾				IC71W	–		
		2.3 ... 6.6 kV	1224 ... 1488 kW ³⁾							

Cooling method		Degree of protection	
IC411	Rib-cooled, self-ventilated	IP55	Enclosed, protected against dust and jet-water
IC416	Rib-cooled, forced-ventilated		
IC71W	Water-jacket-cooled		
Type of protection		Type of construction	
Ex nA	Non-sparking motor, Zone 2	IM B3	Horizontal, with feet, without flange
Ex pe	Pressurized motor enclosure, increased safety of the terminal box, Zone 1	IM B35	Horizontal, with feet, with flange
Ex e	Increased safety of the motor, Zone 1	IM V1	Vertical, without feet, with flange

1LA4 Standardline version

The 1LA4 Standardline motors are self-ventilated, enclosed rib-cooled motors belonging to the H-compact series with a restricted range of options. Due to the fact that there are a restricted number of selectable options, they have significantly shorter delivery times as a result of the simplified order administration and the standardized production process. The compact and rugged design guarantees a high degree of reliability and availability for small frame sizes.

With Standardline, a defined range of motors (pole number, power rating) are available for line operation. See Catalog D 86.1.

¹⁾ Only for converter operation. Values apply for 50 Hz, 4-pole version, insulation system, thermal class 155 (F), utilized to 155 (F).

²⁾ Values apply for 2.3 to 6.6 kV, 50 Hz, 4-pole version, insulation system, thermal class 155 (F), utilized to 130 (B).

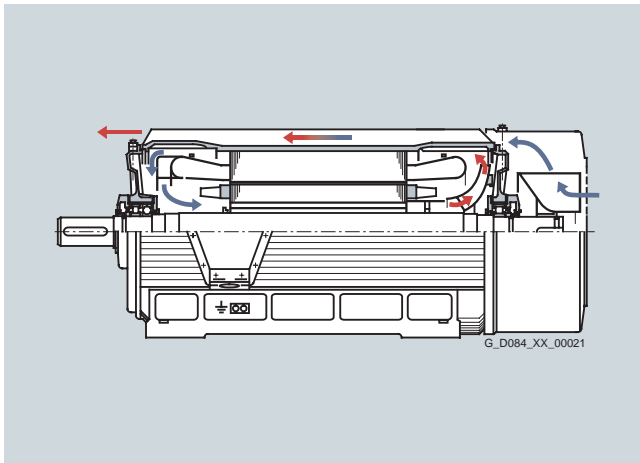
³⁾ Values apply for 50 Hz, 4-pole version, insulation system, thermal class 155 (F), utilized to 130 (B).

⁴⁾ Values apply for 6 to 6.6 kV, 50 Hz, 4-pole version, insulation system, thermal class 155 (F), utilized to 155 (F).

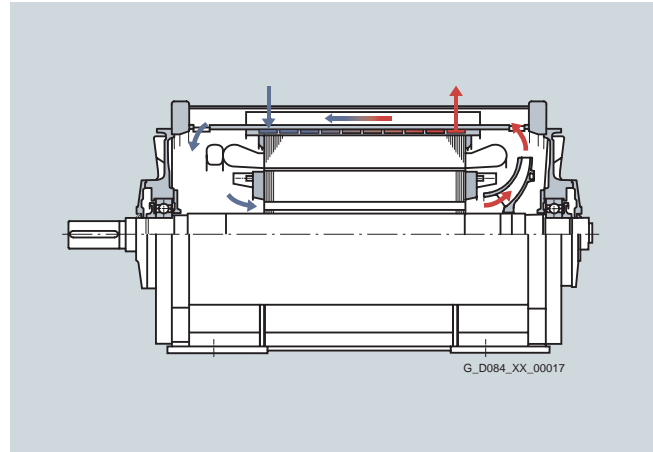
Mode of operation**Self-ventilated, IC411 cooling method, 1LA4, 1MA4, 1MS4, 1MG4 series**

Self-ventilated, rib-cooled motors have a technically sophisticated cooling concept that corresponds to cooling method IC411 according to EN 60034-6/VDE 0530-6 (IEC 60034-6) with an additional, inner cooling air circuit with fan. As can be seen in the diagram, a fan is located at the non-drive end, which draws in the air from outside and blows it axially over the outer cooling ribs of the frame. Heat is exchanged with the inner cooling circuit at this location, which guarantees a uniform temperature distribution in the active motor and bearing areas.

The fan impellers for the inner and outer cooling air flow are mounted on the motor shaft and play a role in achieving the significantly reduced noise level thanks to their optimized aerodynamic design.

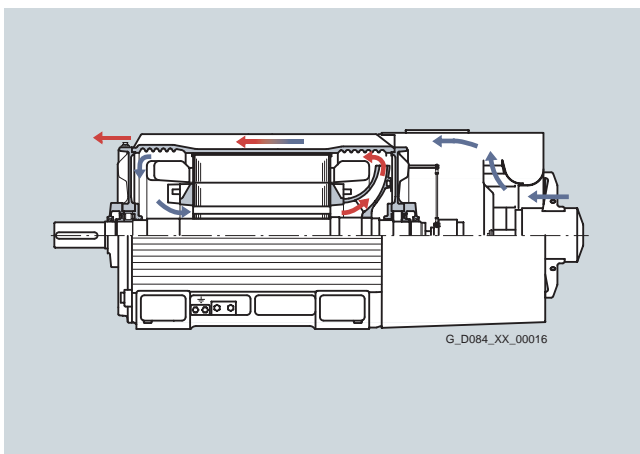
**Water-jacket-cooled, IC71W cooling method, 1LH4 series**

The water-jacket-cooled motors have a double-walled frame jacket with a spiral cooling water duct and, in addition, an inner cooling air circuit. The cooling water inlet is at the drive end, the outlet is at the non-drive end. Intensive heat exchange takes place through the cooling water. The air inner cooling circuit guarantees a uniform temperature distribution in the active motor and bearing areas.

**Forced-ventilated, IC416 cooling method, 1PQ4 series**

For the forced-ventilated motors, a fan unit is located at the non-drive end, which draws in the air from outside and blows it axially over the outer cooling ribs of the frame. Heat is exchanged with the inner cooling circuit at this location, which guarantees a uniform temperature distribution in the active motor and bearing areas.

The fan impeller for the inner cooling circuit is mounted on the motor shaft and is unaffected by the rotating direction. Further, the outer cooling air flow is generated from a separately-driven fan that guarantees a constant cooling power in every operating state. This means that the motor can always be operated over its complete speed control range and in both directions of rotation.



Introduction

H-compact PLUS

Order number code

1

Overview

The following overview explains the meaning of the individual positions of the Order No. The selection tables in Parts 2 to 4

include the motors available as standard from this range.

Structure of the Order No.:	Position:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	Z
<u>1st to 4th position:</u> Motor version	Standard version															
	Degree of protection/ cooling															
	IEC															
	NEMA															
	Open-circuit ventilated	1	R	A	4											
	IP23/IC01															
	Air/air cooling	1	R	Q	4											
	IP55/IC611															
	Air/water cooling	1	R	N	4											
	IP55/IC81W															
	Open-circuit ventilated	1	R	P	6											
	IP24W/IC01															
	Air/air cooling	1	R	Q	6											
	IP55/IC611 or IC616															
	TEAAC															
	Air/water cooling	1	R	N	6											
	IP55/IC81W															
	TEWAC															
	Ex e version															
	Air/air cooling	1	S	J	4											
	IP55/IC611															
	Air/water cooling	1	S	N	4											
	IP55/IC81W															
	Air/air cooling	1	S	J	6											
	IP55/IC611 or IC616															
	Air/water cooling	1	S	N	6											
	IP55/IC81W															
	Ex nA version															
	Air/air cooling	1	S	G	4											
	IP55/IC611															
	Air/water cooling	1	S	L	4											
	IP55/IC81W															
	Air/air cooling	1	S	G	6											
	IP55/IC611 or IC616															
	Air/water cooling	1	S	L	6											
	IP55/IC81W															
	Ex px version															
	Air/air cooling	1	S	B	4											
	IP55/IC611															
	Air/water cooling	1	S	Q	4											
	IP55/IC81W															
	Air/air cooling	1	S	B	6											
	IP55/IC611 or IC616															
	Air/water cooling	1	S	Q	6											
	IP55/IC81W															
<u>5th to 6th position:</u> Shaft height	• 450 mm					4	5									
	• 500 mm					5	0									
	• 560 mm					5	6									
	• 630 mm					6	3									
	• 710 mm					7	1									
<u>7th position:</u> Laminated core length	The laminated core length is coded in digits 0 to 9 (without fixed assignment)															

Overview (continued)

Structure of the Order No.:	Position:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	Z	
8th position: Number of poles	• 2-pole									2							
	• 4-pole									4							
	• 6-pole									6							
	• 8-pole									8							
	• 10-pole									3							
	• 12-pole									5							
	• 14-pole									7							
	• 16-pole									9							
		Additional H1A order code															
9th position: Cooling method for:	IEC version:		Cooling method:														
	• With shaft-mounted fan (basic version) or shaft-mounted fan for the inner and separately-driven fan for the outer cooling circuit		IC01/IC81W									H					
	• With shaft-mounted fan for the inner and outer cooling circuits		IC616									H					
	• With separately-driven fan for the inner or for the inner and outer cooling circuits		IC611									J					
			IC86W/IC666									F					
	NEMA version (only available for 1R.6 motors)		Cooling method:														
	• With separately-driven fan for the inner and outer cooling circuits		TEAAC									A					
	• With shaft-mounted fan		WP11 or TEWAC									B					
	• With shaft-mounted fan for the inner and separately-drive fan for the outer cooling circuit		TEAAC									B					
	• With shaft-mounted fan for the inner and outer cooling circuits		TEAAC									C					
	10th position: Rotor version or drive converter type	Line operation	Letter	Converter operation		Letter											
		1R.4: Standard rotor with E-Cu	E	1R.4: MV drive converter		V											
1R.4: Standard rotor with Si-Cu		S	1R.4: LV drive converter		M												
1R.6: Standard rotor with E-Cu		JKL (power-dependent)	1R.6: LV drive converter; copper rotor		PQR (power-dependent)												
1R.6: Standard rotor with Si-Cu		MN (power-dependent)	1R.6: MV drive converter; copper rotor		STU (power-dependent)												
1R.4 and 1R.6: Special rotor with E-Cu		X															
1R.4 and 1R.6: Special rotor with Si-Cu	Y																
11th position: voltage code	1R.4: Line operation:	1R.4: Operation with MV drive converter:	1R.4: Operation with LV drive converter	1R.6: Line and converter operation (high voltage)	1R.6: Line and converter operation (low voltage)												
	3.3 kV, 50 Hz	2.3 kV, 50 Hz	690 V, 50 Hz, on request	3.3 kV, 50 Hz	690 V, on request											0	
	6.6 kV, 60 Hz	2.3 kV, 60 Hz	–	6.6 kV, 60 Hz	–											1	
	–	3.3 kV, 50 Hz	–	13.2 kV, 60 Hz	–											2	
	3.0 kV, 50 Hz	3.3 kV, 60 Hz	–	4.16 kV, 60 Hz	–											3	
	4.0 kV, 60 Hz	4.16 kV, 50 Hz	–	4.0 kV, 60 Hz	–											4	
	5.0 kV, 50 Hz	4.16 kV, 60 Hz	–	2.3 kV, 60 Hz	–											5	
	6.0 kV, 50 Hz	6.0 kV, 50 Hz	–	6.0 kV, 50 Hz	–											6	
	6.6 kV, 50 Hz	6.6 kV, 50 Hz	–	6.6 kV, 50 Hz	–											7	
	10 kV, 50 Hz	–	–	10 kV, 50 Hz	–											8	
	Other voltage/frequency (additional text data)															9	
12th position: Type of construction	• IM B3															0	
	• IM V1 with canopy (for shaft height 630 mm, only in type of construction IM V10)															4	
	• IM V1 without canopy (for shaft height 630 mm, only in type of construction IM V10)															8	
Options: Additional order code required. Refer to section "Options and tests" in Chapter 2, Chapter 3 and Chapter 4.																	

Introduction

H-compact PLUS

Performance features

1

Overview

Performance features of the H-compact PLUS series

The motors from the H-compact PLUS series have a modular design (basic frame and cover).

This means that the following cooling methods can be implemented:

- Air/water cooling
- Air/air cooling
- Open-circuit cooling

Overview table of the H-compact PLUS motor series

Series	Version	Voltages	Powers	Degree of protection	Cooling method	Type of protection	Type of construction
1RA4	IEC	690 V	On request	IP23	IC01	–	IM B3 IM V1 (not for shaft height 630 mm; this shaft height only in type of construction IM V10)
		2.3 ... 13.8 kV	1.32 ... 7.1 MW ¹⁾				
1RN4	IEC	690 V	On request	IP55	IC81W	–	
		2.3 ... 13.8 kV	1.32 ... 7.1 MW ¹⁾				
1RQ4	IEC	690 V	On request	IP55	IC611/IC616	–	
		2.3 ... 13.8 kV	1.12 ... 5.8 MW ¹⁾				
1SG4	IEC	690 V	On request	IP55	IC611/IC616	Ex nA	
		2.3 ... 13.8 kV	1.12 ... 5.8 MW ¹⁾				
1SL4	IEC	690 V	On request	IP55	IC81W	Ex nA	
		2.3 ... 13.8 kV	1.32 ... 7.1 MW ¹⁾				
1SB4	IEC	690 V	On request	IP55	IC611/IC616	Ex px	
		2.3 ... 13.8 kV	1.12 ... 5.8 MW ¹⁾				
1SQ4	IEC	690 V	On request	IP55	IC81W	Ex px	
		2.3 ... 13.8 kV	1.32 ... 7.1 MW ¹⁾				
1SJ4	IEC	On request	On request	IP55	IC611/IC616	Ex e	
1SN4	IEC	On request	On request	IP55	IC81W	Ex e	
1RP6	IEC	3.3 ... 13.8 kV	7.6 ... 11.7 MW ¹⁾	IP24W	IC01	–	
	NEMA		11000 ... 18000 hp ²⁾	WP11	open	–	
1RN6	IEC	3.3 ... 13.8 kV	7.6 ... 11.7 MW ¹⁾	IP55	IC81W	–	
	NEMA		11000 ... 18000 hp ²⁾	TEWAC	air/water	–	
1RQ6	IEC	3.3 ... 13.8 kV	6.1 ... 8.7 MW ¹⁾	IP55	IC611/IC616	–	
	NEMA		10000 ... 13000 hp ²⁾	TEAAC	air/air	–	
1SG6	IEC	3.3 ... 13.8 kV	6.1 ... 8.7 MW ¹⁾	IP55	IC611/IC616	Ex nA	
	NEMA (NEC)		10000 ... 13000 hp ²⁾	TEAAC	air/air	Class 1, Div 2	
1SL6	IEC	3.3 ... 13.8 kV	7.6 ... 11.7 MW ¹⁾	IP55	IC81W	Ex nA	
	NEMA (NEC)		11000 ... 18000 hp ²⁾	TEWAC	air/water	Class 1, Div 2	
1SB6	IEC	3.3 ... 13.8 kV	6.1 ... 8.7 MW ¹⁾	IP55	IC611/IC616	Ex px	
1SQ6	IEC	3.3 ... 13.8 kV	7.6 ... 11.7 MW ¹⁾	IP55	IC81W	Ex px	
1SJ6	IEC	On request	On request	IP55	IC611/IC616	Ex e	
1SN6	IEC	On request	On request	IP55	IC81W	Ex e	

¹⁾ Values apply for 6 kV, 50 Hz, 4-pole version, insulation system, thermal class 155 (F), utilized to 130 (B).

²⁾ Values apply for 6.6 kV, 60 Hz, 4-pole version, insulation system, thermal class 155 (F), utilized to 130 (B).

Overview (continued)

Cooling method		Degree of protection	
IC01	Air-cooled, self-ventilated	IP23	Protected against the ingress of solid foreign bodies with a diameter greater than 12 mm and water spray
IC81W	Air/water cooler, self-ventilated	IP24W	Protected against the ingress of solid foreign bodies with a diameter greater than 12 mm and splashwater. Weather-protected version.
IC611	Air/air cooler, self-ventilated	IP55	Protected against dust and jet-water
IC616	Air/air cooler, forced-ventilated	WP11	Weather-protected motor with air intake baffles
TEWAC	Closed motor with air/water cooler	TEWAC	Closed motor with air/water cooler
TEAAC	Closed motor with air/air cooler	TEAAC	Closed motor with air/air cooler
Type of protection		Type of construction	
Ex nA	Non-sparking motor, Zone 2	IM B3	Horizontal, with feet, without flange
Ex px	Pressurized motor enclosure, increased safety of the terminal box, Zone 1	IM V1	Vertical, without feet, with flange bearing plate
Class1, Div 2	Non-sparking motor	IM V10	Vertical, without feet, with flange at the frame

Introduction

H-compact PLUS

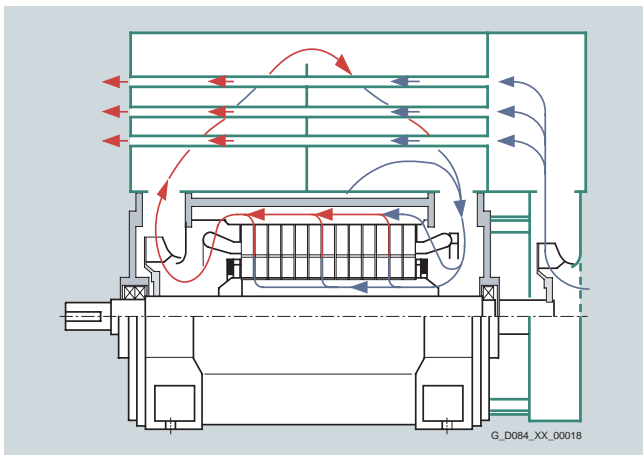
Cooling concepts

1

Mode of operation

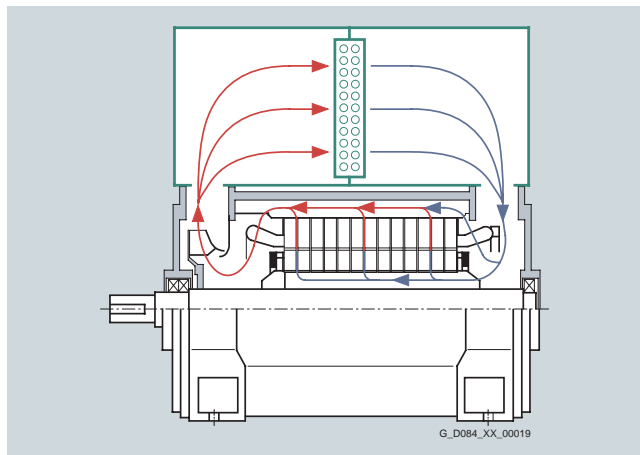
Air/air heat exchanger (IC611)

1RQ. series with one-sided ventilation (Z-ventilation)

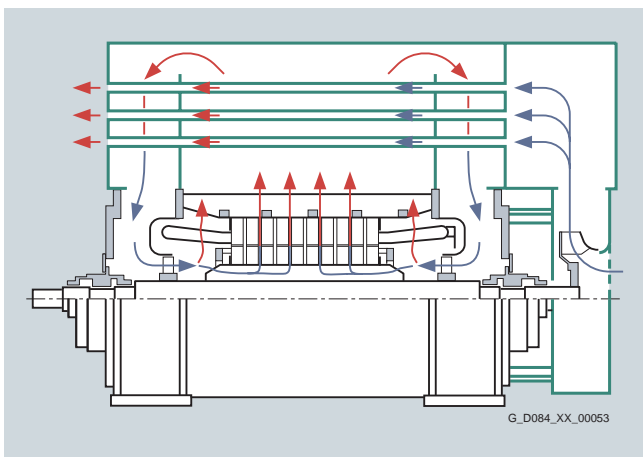


Air/water heat exchanger (IC81W)

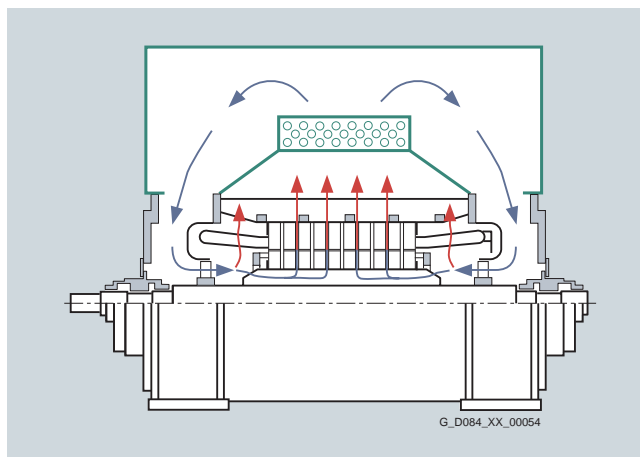
1RN. series with one-sided ventilation (Z-ventilation)

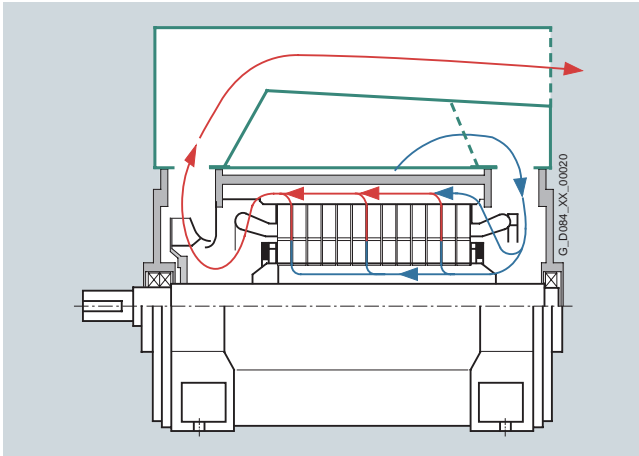
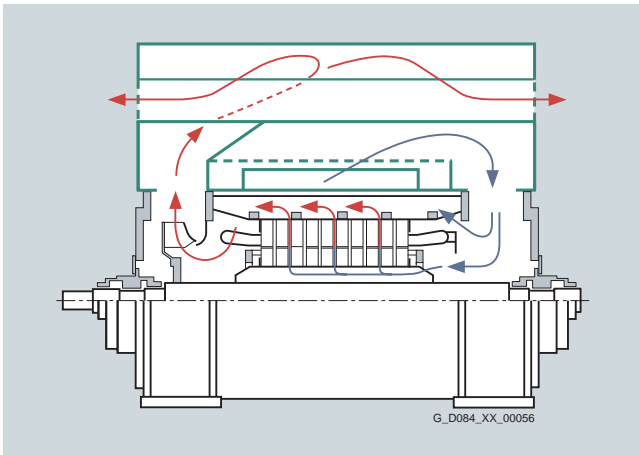
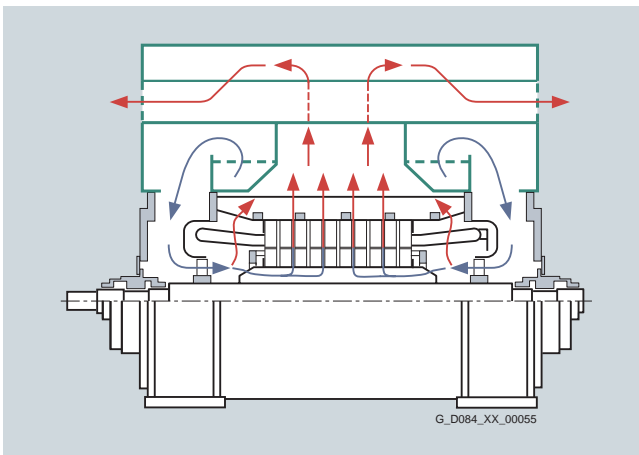


1RQ. series with two-sided ventilation (X-ventilation)



1RN. series with two-sided ventilation (X-ventilation)



Mode of operation (continued)**Through ventilation (IC01)**1RA. series with one-sided ventilation (Z-ventilation)1RP. series with one-sided ventilation (Z-ventilation)1RP. series with two-sided ventilation (X-ventilation)

Introduction

General technical versions

Overview

1

Overview

Motor protection

A series of standard and optional monitoring and protection devices are available for motor protection.

Protection device	Description
Stator winding monitoring	6 PT100 resistance thermometers for temperature monitoring as standard.
Roller bearing monitoring	Measuring nipple for shock pulse measurement as standard. Optional PT100 resistance thermometer for temperature monitoring.
Sleeve bearing monitoring	Optional PT100 resistance thermometer for temperature monitoring. Optional for circulating-oil lubrication: Throttle valves, manometer and flowmeter in the oil intake line. Optional holes in the oil discharge line to mount a thermometer or a sight glass to monitor the oil flow.
Shaft vibration monitoring	Optional for motors with sleeve bearings.
Air temperature monitoring in the cooling circuit	Optional using a thermometer in the cooler assembly on the air intake and air discharge side for H-compact PLUS motors.
Leakage water monitoring	Optional using sensors in the cooler housing for water-cooled H-compact PLUS motors
Starting and speed monitoring	Optional rotary pulse encoder for motors for converter operation.
Anti-condensation heating	Standard for H-compact PLUS motors. Optional for H-compact motors.

Electrical design

High voltage motors have the Siemens MICALASTIC insulation system according to thermal class 155 (F).

The rotor windings of H-compact motors are manufactured out of die cast aluminum or copper:

Shaft height mm	Rotor design with number of poles					
	2	4	6	8	10	12
310	Al	Al	Al	–	–	–
355	Al	Al	Al	Al	–	–
400	Al	Al	Al	Al	–	–
450	Cu	Al / Cu	Al	Al	Al	Cu
500	Cu	Al	Cu	Cu	Cu	Cu
560	Cu	Cu	Cu	Cu	Cu	Cu
630	Cu	Cu	Cu	Cu	Cu	Cu

H-compact PLUS motors always have copper rotors.

Motor connection and terminal boxes for high voltage motors

The motor terminal boxes are generously dimensioned. This design allows plastic cables, which are generally used worldwide, to be simply and quickly connected up as well as to accommodate all of the generally used cable entrance fittings.

Arrangement of the motor terminal box (standard version):

When viewing the drive side, the motor terminal box is mounted at the right-hand side of the stator frame with cable entry from below. On request, it can be mounted on the left-hand side. However, it must be specified when ordering. On request, the terminal box can be mounted rotated through 90° or through 180°, if the spatial situation at the machine permits this (except for terminal boxes with cast cable entry glands).

Terminal arrangement according to DIN 42962.

Degree of protection of the motor terminal boxes: IP55, IP56, IP66 – depending on the terminal box type (refer to the table).

The motor terminal boxes comprise a lower section or frame, bolted to the stator frame, and a removable cover. The 1XA8711, 1XB8911 and 1XB8751 terminal boxes that are normally used have bushings manufactured out of casting resin. All of the other terminal boxes have cast-resin post insulators with bolted bus-bars (exception: cable connector connection).

All motor terminal boxes are short-circuit proof. If a short-circuit occurs in the motor, all of the forces generated by the short-circuit current are reliably handled by the components in the terminal box (e.g. cast-resin post insulators).

Further, all motor terminal boxes are short-circuit proof. If arcs occur in the motor terminal box, the pressure generated is immediately dissipated using a pressure relief mechanism.

Short-circuit strength and short-circuit proof of the motor terminal boxes used as standard:

- 400 MVA at 6 kV; 0.2 s
- 700 MVA at 10 kV; 0.2 s

These values correspond to a rated peak withstand current of approx. 100 kA.

Motor connecting cable and cable entrance fittings are not supplied with the motor.

Overview

Overview of the most common motor terminal boxes

Terminal box	Rated voltage kV	Current A	Cable entries Number	Cable entry diameter, max. mm
1XB1 631	1	1230	4	75
1XA8 711	6.6	315	1	75
1XB8 751	6.6	630 (for parallel connection)	2	75
1XB8 911	11	315	1	75
1XD1 543-3AA	11	1200	–	–
1XF4 643-3AA	13.2	800	–	–

Cable connector connection on request.

Connection options

Terminal box	Terminal element	Number of cables	Cable cross-section (Cu or Al), max. that can be introduced mm ²	Weight kg	Degree of protection acc. to EN 60529
1XB1 631	Cable lug	4 cables, 3-core	240	83	IP55
1XA8 711	Connecting terminal on M16 studs Connection with cable lug and two hexagon nuts	1 cable, 3-core	1 x 3 x 240	42	IP66
1XB8 751	Connecting terminal on M16 studs Connection with cable lug and two hexagon nuts	2 cables, 3-core	2 x 3 x 240	131	IP56
1XB8 911	Connecting terminal on M16 studs Connection with cable lug and two hexagon nuts	1 cable, 3-core	1 x 3 x 240	93	IP56
1XD1 543-3AA	Cable lug on busbar	6 cables, 1-core	300	230	IP55
1XF4 643-3AA	Cable lug on busbar	4 cables, 1-core	300	500	IP55

Introduction

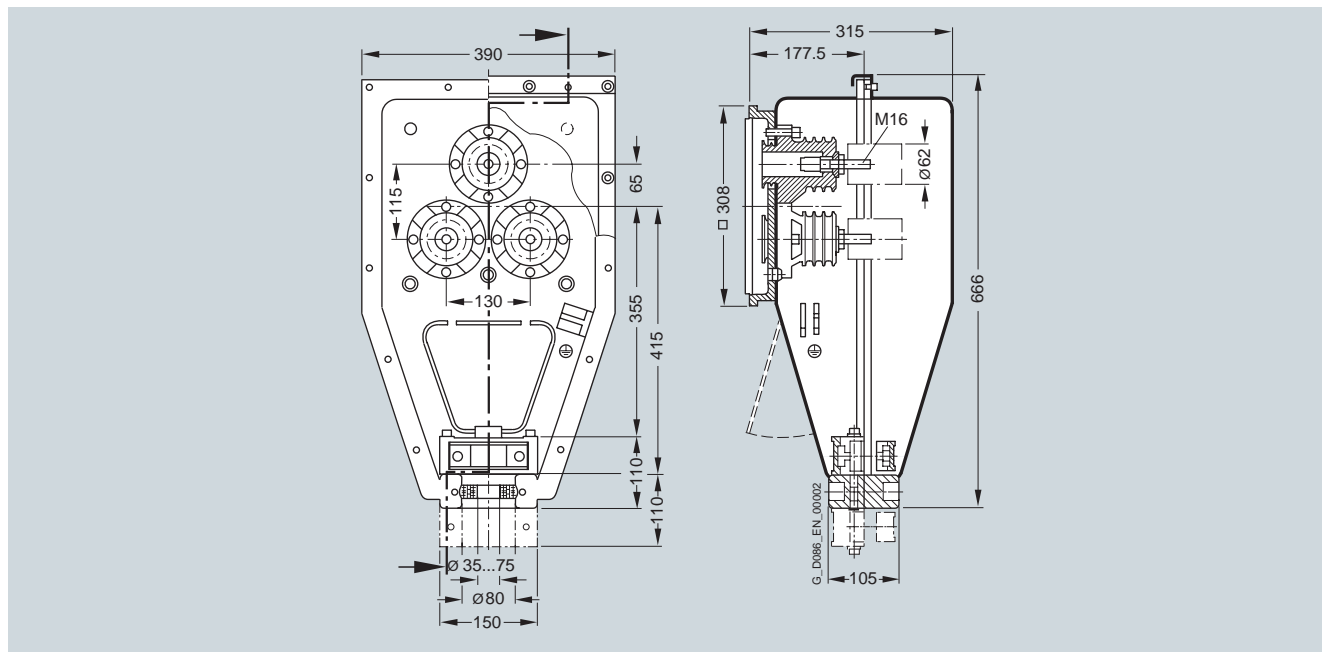
General technical versions

Motor terminal boxes

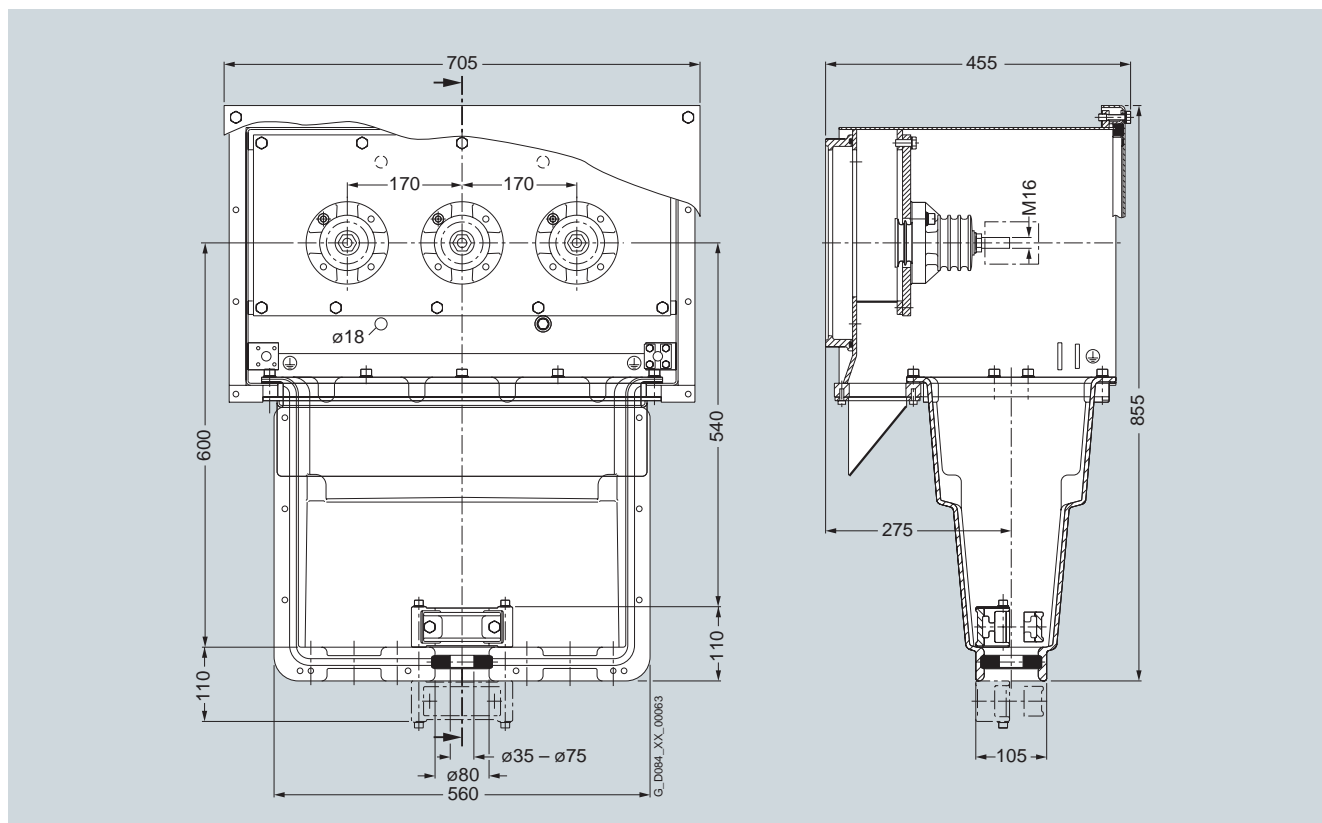
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Dimension drawings

Terminal box type 1XA8 711 (up to 6.6 kV, 3 terminals)

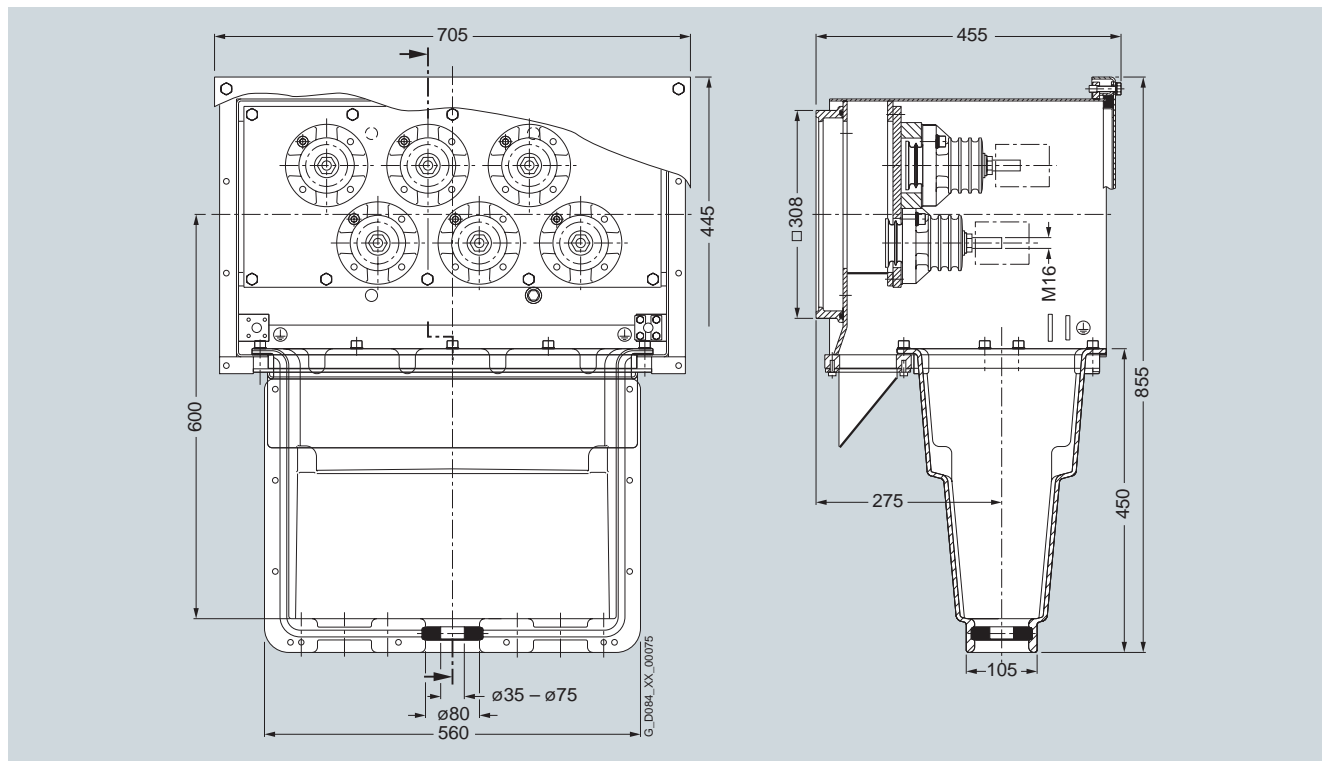


Terminal box type 1XB8 911 (up to 11 kV)

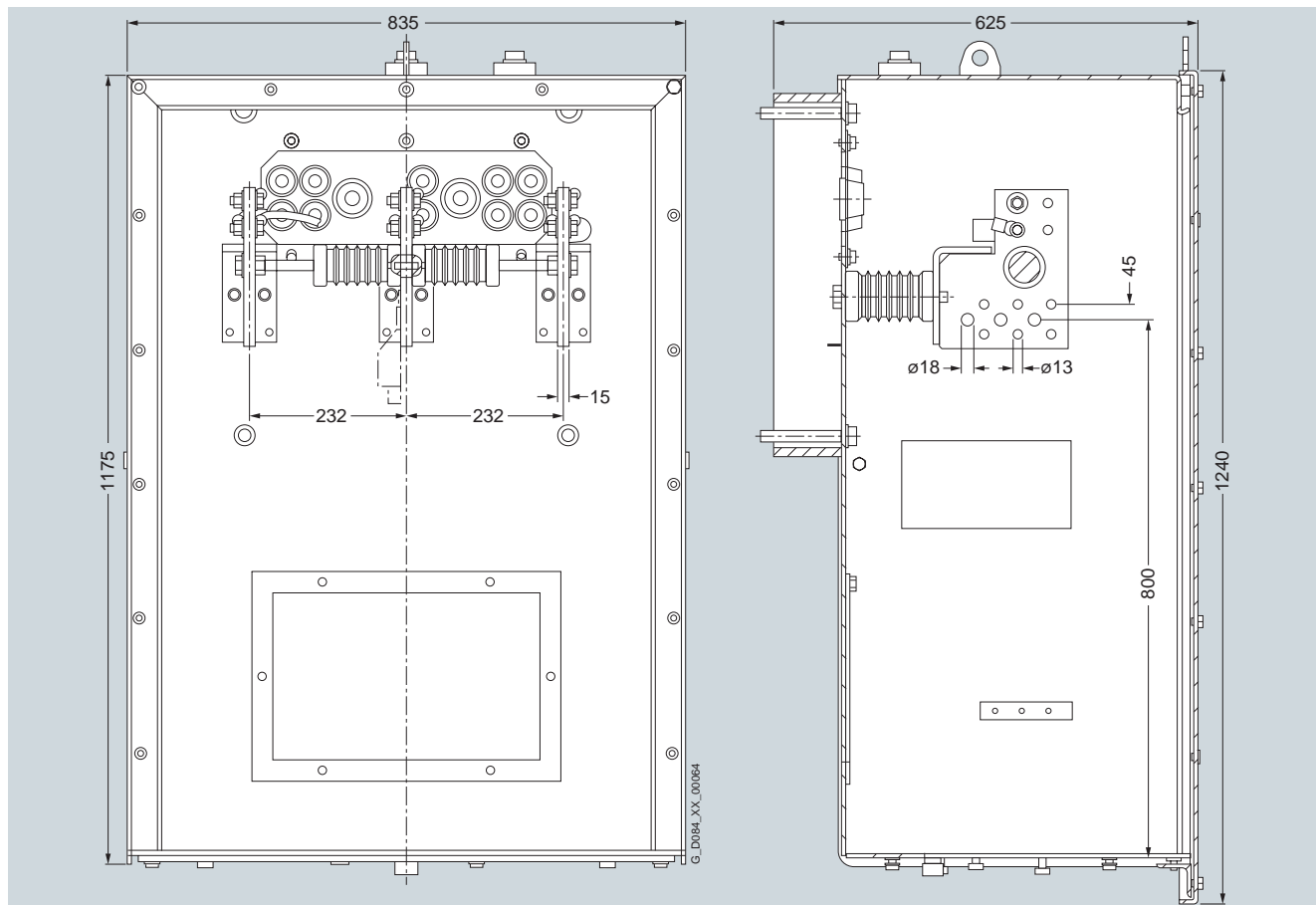


Dimension drawings (continued)

Terminal box type 1XB8 751 (up to 6.6 kV, 6 terminals)



Terminal box type 1XD1 543-3AA up to 11 kV IEC and 6.6 kV NEMA



Introduction

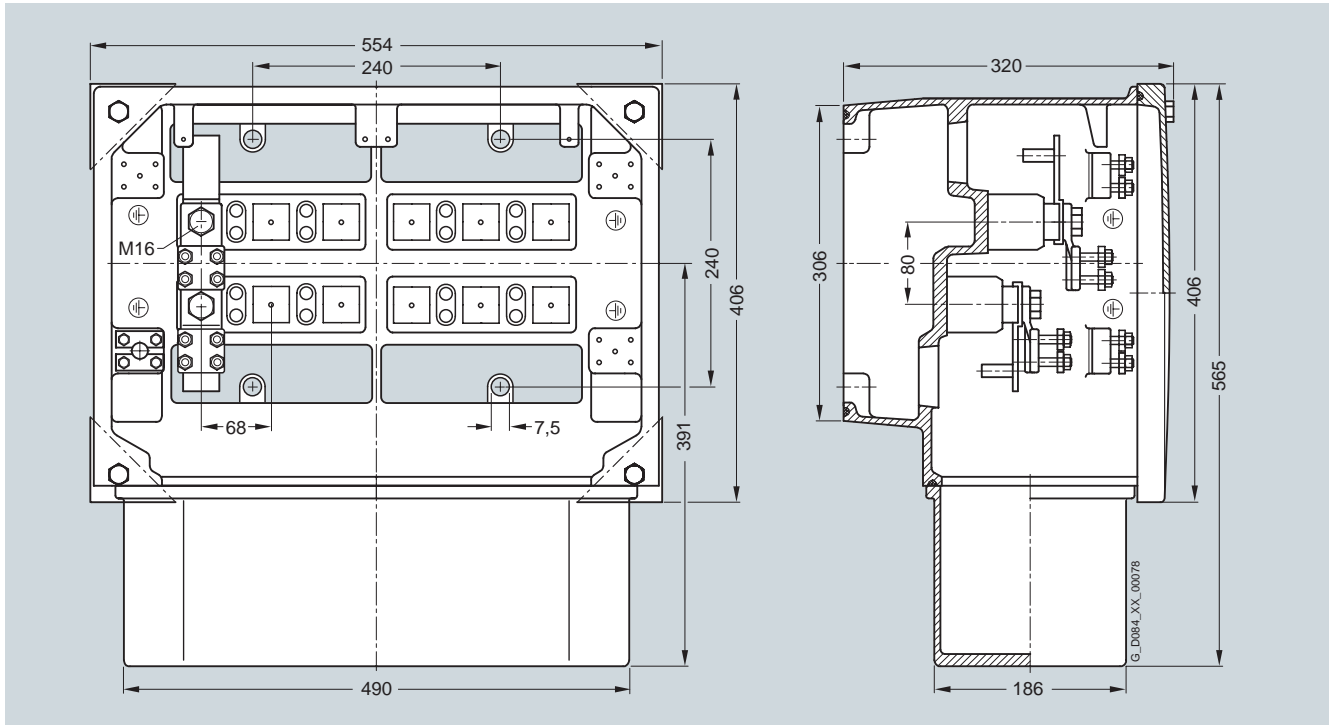
General technical versions

Motor terminal boxes

1

Dimension drawings (continued)

Terminal box type 1XB1 631 (up to 1 kV, 12 terminals)



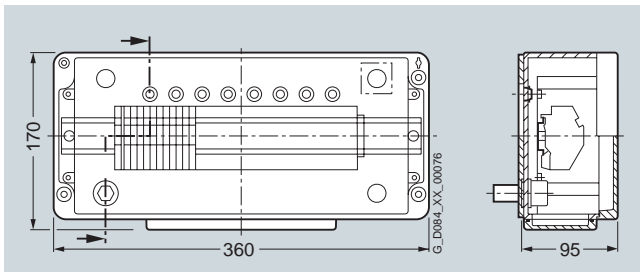
Dimension drawings (continued)

Neutral point terminal boxes

The motor terminal boxes are also used to form the neutral point of winding ends.

Auxiliary terminal boxes to connect monitoring elements, anti-condensation heating

The standard version 1XB9 014 consists of an aluminum frame. Max. connectable cable cross-section 4 mm².



Terminal boxes manufactured out of cast iron (1XB9 016) and stainless steel (1XB9 015) can be optionally ordered.

Introduction

General technical versions

Mechanical design

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Overview

Bearing version

Motors have roller bearings or sleeve bearings as standard according to the following overview.

Overview of bearing versions

Motor type	Bearing version						IM V1 ²⁾
	IM B3, IM B35 ¹⁾		Number of poles 4		Number of poles ≥ 6		
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	
1LA4 / 1M.4 31.	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings not available)	Roller bearings (sleeve bearings not available)	Roller bearings (sleeve bearings not available)
1LA4 / 1M.4 35.							
1LA4 / 1M.4 40.							
1LA4 / 1M.4 45.	Sleeve bearings				Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	
1LA4 / 1M.4 50.							
1LA4 / 1M.4 56.	Sleeve bearings						
1LA4 63.	Not available	Not available		Sleeve bearings			
1R.4 / 1S.4 45.	Sleeve bearings	Sleeve bearings	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings optional)	Roller bearings (sleeve bearings not available)
1R.4 / 1S.4 50.							
1R.4 / 1S.4 56.							
1R.4 / 1S.4 63.							
1R.6 / 1S.6 71.							

Assignment of type of construction and roller bearing type

Motor series	Type of construction	Shaft height mm	Drive end	Non-drive end
1LA4 / 1M.4	IM B3	315 ... 450	Deep-groove ball bearings (located bearing)	Deep-groove ball bearings (floating bearing)
		500 ... 630	Double bearings: Deep-groove ball bearings and cylindrical-roller bearings (located bearing)	Cylindrical-roller bearings (floating bearing)
	IM V1	315 ... 560	Double bearings: Deep-groove ball bearings and angular contact ball bearings (thrust bearing)	Deep-groove ball bearings (floating bearing)
		630	Deep-groove ball bearings (floating bearing)	Pair of angular-contact ball bearings (thrust bearing)
1R. / 1S.	IM B3	450 ... 710	Double bearings: Deep-groove ball bearings and cylindrical-roller bearings (located bearing)	Cylindrical-roller bearings (floating bearing)
		IM V1	450 ... 560	Deep-groove ball bearings (floating bearing)
	710		Deep-groove ball bearings (floating bearing)	Pair of angular-contact ball bearings (thrust bearing)
	IM V10	630	Deep-groove ball bearings (floating bearing)	Pair of angular-contact ball bearings (thrust bearing)

For motors with sleeve bearings, lateral flange or (for shaft height 710 mm) center flange sleeve bearings are used. Generally, these motors are equipped with two floating bearings. This means that the rotor must be axially guided by the bearings of the driven machine through a coupling with limited axial play. An appropriate sleeve bearing can be installed at the drive end if the motor rotor is to be axially guided.

¹⁾ IM B35 only for motor types 1L. and 1M.; not available with sleeve bearings.

²⁾ Motor type 1R.4 / 1S.4 63. only in type of construction IM V10.

Overview (continued)

Vibration response

Horizontal motors up to 3600 rpm fulfill, as standard, vibration severity level A according to IEC 60034-14. Vibration severity level B is optionally possible. Values for vertical motors on request.

Balancing quality

The motor rotors are balanced dynamically with half key (without mounted coupling halves). The balancing quality according to ISO 1940 is, up to and including 1500 rpm, G 1.5 and beyond this, G1.

Direction of rotation, fan

The direction of rotation must be specified in every order.

2-pole H-compact motors have external fans depending on the rotating direction. For higher-pole motors with shaft heights 315 to 450 mm, external fans which are unaffected by the rotating direction are used and for shaft heights 500 to 630 mm, external fans depending on the rotation direction are used.

H-compact PLUS motors have external fans depending on the rotating direction.

Paint finish

Unless otherwise specified in the order, the motors are supplied in the standard paint finish color RAL 7030 (stone grey). Other colors are available on request at an additional charge. Motors can be optionally supplied with a special paint finish.

The standard paint finish is classified in the "Moderate" climate group according to IEC 721-2-1. It is suitable for:

- Installed indoors or outdoors under a roof, where the motors are not exposed to any direct effects of the weather.
- Temperatures continuously up to +100 °C, briefly up to +120 °C
- Relative air humidity up to 85 % at +25 °C continuously; briefly up to +100 % at +30 °C

The **special paint finish** is classified in the "Worldwide" climate group acc. to IEC 721-2-1. It is suitable for:

- Installed outdoors, where motors are directly exposed to the effects of the weather, e.g. direct solar radiation
- Broad temperature and humidity range
- Temperatures continuously up to +120 °C, briefly up to +140 °C

Typical installation locations are industrial environments and coastal areas.

Standards and regulations

The motors comply with the appropriate standards and regulations, especially those listed in the table below.

Title	IEC	DIN / EN / ISO
General specifications for rotating electrical machinery	IEC 60034-1	EN 60034-1
Degrees of protection for rotating electrical machinery (IP code)	IEC 60034-5	EN 60034-5
Cooling methods for rotating electrical machinery (IC code)	IEC 60034-6	EN 60034-6
Types of construction, mounting types and terminal box positions for rotating electrical machinery (IM code)	IEC 60034-7	EN 60034-7
Terminal designations and direction of rotation for rotating electrical machinery	IEC 60034-8	EN 60034-8
Mechanical vibration of rotating electrical machinery	IEC 60034-14	EN 60034-14
Rated impulse voltages for rotating electrical machinery	IEC 60034-15	EN 60034-15
Electrical isolation – thermal classification	IEC 60085	EN 60085
Mechanical vibration – requirements on the balancing quality of rotors	–	DIN ISO 1940-1
Determining the losses and efficiency from tests	IEC 60034-2-1	EN 60034-2-1
Vibration limits	–	DIN ISO 10816

Introduction

Notes

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Motors for line operation



2/2	Overview	2/121	Water-cooled motors
2/3	Air-cooled motors	2/121	H-compact PLUS 1RN4 and 1RN6
2/3	<u>H-compact 1LA4</u>		Selection and ordering data
2/5	Selection and ordering data	2/123	3.3 to 6.6 kV, 50 Hz
2/8	2 to 6.6 kV, 50 Hz	2/127	9 to 11 kV, 50 Hz
2/10	2 to 6.6 kV, 60 Hz	2/131	4 to 6.6 kV, 60 Hz
	Dimension drawings	2/135	12.5 to 13.8 kV, 60 Hz
2/13	IM B3 type of construction, rolling-contact bearings	2/136	4 to 6.6 kV, 60 Hz NEMA version
2/19	IM B3 type of construction, sleeve bearings	2/137	12.5 to 13.8 kV, 60 Hz NEMA version
2/24	IM V1 type of construction, rolling-contact bearings		Dimension drawings
2/30	<u>H-compact PLUS 1RQ4 and 1RQ6</u>	2/138	IM B3 type of construction, rolling-contact bearings (1RN4)
	Selection and ordering data	2/144	IM B3 type of construction, sleeve bearings (1RN4)
2/32	3.3 to 6.6 kV, 50 Hz	2/151	IM V1 type of construction, rolling-contact bearings (1RN4)
2/36	9 to 11 kV, 50 Hz	2/158	IM B3 type of construction, rolling-contact bearings (1RN6)
2/40	4 to 6.6 kV, 60 Hz	2/161	IM B3 type of construction, sleeve bearings (1RN6)
2/44	12.5 to 13.8 kV, 60 Hz	2/164	IM V1 type of construction, rolling-contact bearings (1RN6)
2/45	4 to 6.6 kV, 60 Hz NEMA version		
2/46	12.5 to 13.8 kV, 60 Hz NEMA version	2/166	Options and tests
	Dimension drawings	2/166	<u>Description of the options</u>
2/47	IM B3 type of construction, rolling-contact bearings (1RQ4)		
2/53	IM B3 type of construction, sleeve bearings (1RQ4)		
2/60	IM V1 type of construction, rolling-contact bearings (1RQ4)		
2/68	IM B3 type of construction, rolling-contact bearings (1RQ6)		
2/70	IM B3 type of construction, sleeve bearings (1RQ6)		
2/73	IM V1 type of construction, rolling-contact bearings (1RQ6)		
2/76	<u>H-compact PLUS 1RA4 and 1RP6</u>		
	Selection and ordering data		
2/78	3.3 to 6.6 kV, 50 Hz		
2/82	9 to 11 kV, 50 Hz		
2/86	4 to 6.6 kV, 60 Hz		
2/90	12.5 to 13.8 kV, 60 Hz		
2/91	4 to 6.6 kV, 60 Hz NEMA version		
2/92	12.5 to 13.8 kV, 60 Hz NEMA version		
	Dimension drawings		
2/93	IM B3 type of construction, rolling-contact bearings (1RA4)		
2/99	IM B3 type of construction, sleeve bearings (1RA4)		
2/106	IM V1 type of construction, rolling-contact bearings (1RA4)		
2/113	IM B3 type of construction, rolling-contact bearings (1RP6)		
2/116	IM B3 type of construction, sleeve bearings (1RP6)		
2/119	IM V1 type of construction, rolling-contact bearings (1RP6)		

Motors for line operation

Overview

Overview

Selection and ordering data included in this chapter are valid for standard operating and installation conditions:

- Installation altitude of the motor ≤ 1000 m above seal level
- Ambient temperature (= coolant temperature for air-cooled motors) = 40 °C
- Coolant temperature for water-cooled motors = 25 °C
- Thermal class 155 (F) utilized to 130 (B)
- Continuous operation S1
- Permissible tolerances in compliance with IEC/EN 60034-1:
 - Rated voltage $V_{rated} \pm 5\%$
 - Rated frequency $f_{rated} \pm 2\%$

The H-compact and H-compact PLUS motor series are designed to be directly switched-on when certain starting conditions are maintained.

Motor starting does not have to be separately checked if the following criteria are maintained:

- The voltage during start-up does not drop below $0.9 \times V_{rated}$.
- The load torque increases approximately with the square of the speed ($T \sim n^2$).
- The maximum load torque does not exceed the corresponding value in the following table:

Shaft height	315		350		400		450		500		560		630		710	
Number of poles	2	4...	2	4...	2	4...	2	4...	2	4...	2	4...	2	4...	2	4...
H-compact																
max. load torque = $T_{rated} \times$	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	–	–
H-compact PLUS																
max. load torque = $T_{rated} \times$	–	–	–	–	–	–	0.8	0.9	0.7	0.9	0.6	0.9	0.6	0.9	0.5	0.9

With the value specified in the selection and ordering data for the maximum permissible external moment of inertia, start-up is possible three times from cold or two times from warm, assuming that the motor coasts down naturally between starts.

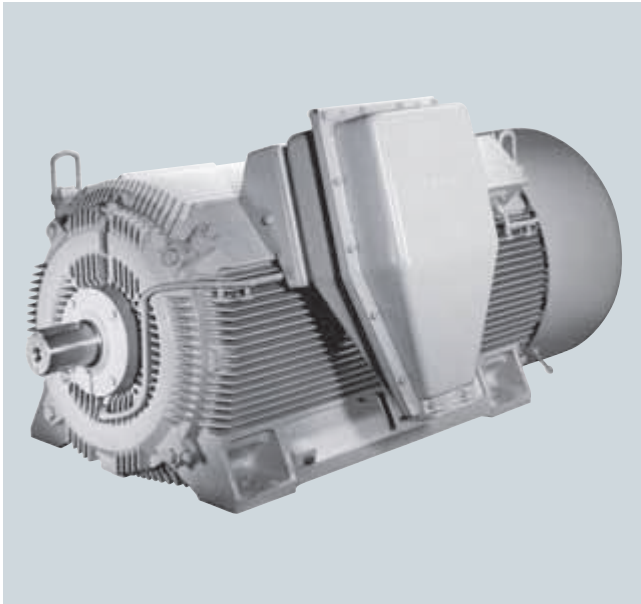
Motor start-up must be separately checked if these conditions are not maintained. In this case, please contact your Siemens sales person.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Overview



Technical data

Technical data at a glance

H-compact 1LA4	
Rated voltage	2.0 ... 11 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC411
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	315 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Die-cast aluminum or copper (dependent on the shaft height and number of poles)
Standards	IEC, EN

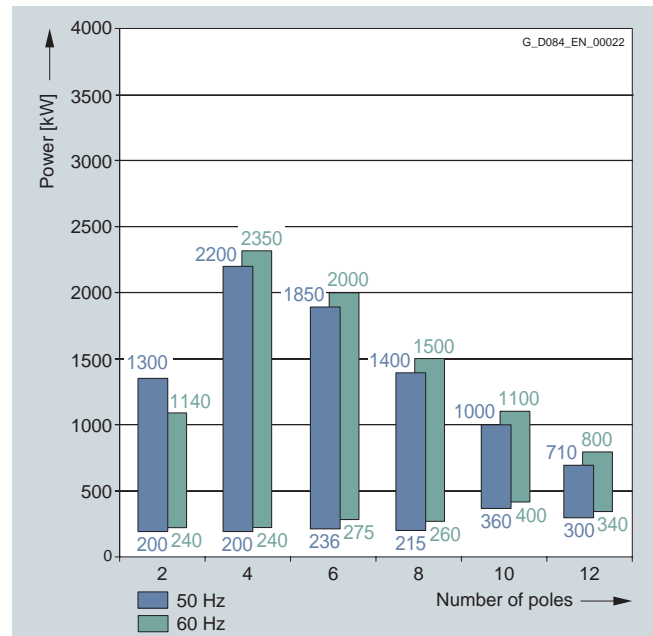
Power range for IEC motors for line operation

1LA4, 1MS4 (Ex nA), 1MG4 (Ex px) series

Insulation system, thermal class 155 (F), utilized to 130 (B).

Ambient temperature up to 40 °C, installation altitude up to 1000 m.

2.0 to 3.3 kV; 50 and 60 Hz



Motors for line operation

Air-cooled motors

H-compact 1LA4

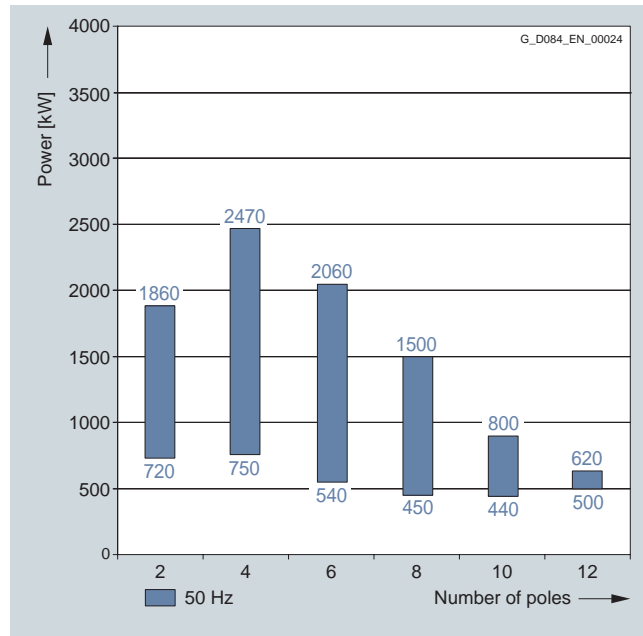
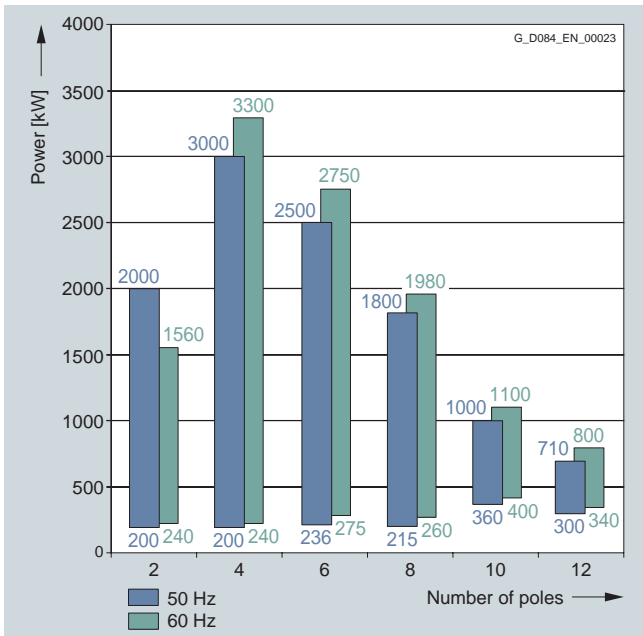
Technical data (continued)

Power range for IEC motors for line operation (continued)

3.4 to 6.6 kV; 50 and 60 Hz

9 to 11 kV; 50 Hz

2



Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data

The 1LA4 data also apply to explosion-proof 1MG4 (Ex px) and 1MS4 (Ex nA) motors.

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque T_B/T_{rated}	Locked -rotor torque T_{LR}/T_{rated}	Locked -rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					Exter- nal, max. ¹⁾ kgm ²	
2.0 ... 6.6 kV, 50 Hz														
2-pole														
200	1LA4 310-2AN	2970	23.5	94.7	94.9	0.87	0.86	643	2.30	0.90	5.0	2.2	28	
236	1LA4 312-2AN	2967	27.5	94.5	94.8	0.87	0.85	760	2.30	0.90	5.0	2.2	26	
300	1LA4 314-2AN	2972	34.5	95.2	95.4	0.88	0.86	964	2.40	1.05	5.2	2.7	30	
355	1LA4 316-2AN	2974	40.5	95.7	95.8	0.88	0.87	1140	2.50	1.10	5.3	3.1	35	
400	1LA4 350-2AN	2978	45.5	95.6	95.8	0.88	0.86	1283	2.30	1.05	5.2	4.3	38	
450	1LA4 352-2AN	2978	51.0	95.9	96.0	0.88	0.87	1443	2.50	1.20	5.5	4.8	43	
500	1LA4 354-2AN	2980	57.0	96.1	96.3	0.88	0.87	1602	2.50	1.20	5.5	5.2	46	
560	1LA4 400-2AN	2984	64.0	96.0	96.0	0.88	0.86	1792	2.50	0.85	5.4	7.8	26	
650	1LA4 402-2AN	2985	74.0	96.3	96.3	0.88	0.87	2079	2.60	0.90	5.6	8.7	27	
750	1LA4 404-2AN	2985	84.0	96.5	96.5	0.89	0.88	2399	2.60	0.95	5.6	9.9	30	
820	1LA4 450-2CN	2983	92.0	96.2	96.2	0.89	0.87	2625	2.40	0.80	5.5	17.0	68	
940	1LA4 452-2CN	2984	106.0	96.5	96.4	0.89	0.87	3008	2.50	0.80	5.8	19.0	76	
1030	1LA4 454-2CN	2984	114.0	96.6	96.6	0.90	0.89	3296	2.40	0.75	5.7	21.0	79	
1200	1LA4 500-2CN	2985	132.0	96.7	96.6	0.90	0.89	3839	2.30	0.65	5.3	29.0	93	
1300	1LA4 502-2CN	2986	144.0	96.8	96.7	0.90	0.89	4157	2.30	0.65	5.3	32.0	98	
1420 ²⁾	1LA4 504-2CN	2986	154.0	96.9	96.9	0.91	0.90	4541	2.40	0.70	5.5	35.0	125	
1680 ²⁾	1LA4 560-2CN	2990	184.0	96.9	96.7	0.91	0.90	5365	2.50	0.45	5.4	53.0	104	
1900 ²⁾	1LA4 562-2CN	2991	205.0	97.0	96.9	0.91	0.90	6066	2.60	0.50	5.7	58.0	131	
2000 ²⁾	1LA4 564-2CN	2990	220.0	97.2	97.1	0.91	0.90	6387	2.50	0.45	5.0	64.0	136	
4-pole														
200	1LA4 310-4AN	1480	25.5	93.8	94.0	0.81	0.77	1290	2.30	1.15	5.2	2.8	159	
250	1LA4 312-4AN	1480	30.5	94.5	94.8	0.84	0.81	1613	2.30	1.15	5.3	3.5	201	
300	1LA4 314-4AN	1480	36.0	94.7	95.0	0.85	0.82	1936	2.40	1.25	5.5	4.0	222	
365	1LA4 316-4AN	1481	43.5	95.2	95.5	0.85	0.82	2353	2.40	1.25	5.5	4.8	297	
400	1LA4 350-4AN	1485	48.0	95.2	95.4	0.84	0.81	2572	2.50	1.25	5.5	6.0	224	
470	1LA4 352-4AN	1484	56.0	95.4	95.6	0.85	0.82	3024	2.35	1.20	5.3	6.9	247	
560	1LA4 354-4AN	1485	65.0	95.7	95.9	0.86	0.84	3601	2.40	1.30	5.5	8.1	296	
600	1LA4 400-4AN	1489	71.0	95.4	95.4	0.85	0.81	3848	2.60	1.25	5.70	11.6	288	
680	1LA4 402-4AN	1489	80.0	95.7	95.6	0.85	0.82	4361	2.60	1.25	5.70	12.9	330	
750	1LA4 404-4AN	1489	88.0	95.8	95.7	0.86	0.83	4810	2.65	1.30	5.80	14.5	381	
850	1LA4 450-4AN	1490	102.0	96.0	95.9	0.84	0.81	5447	2.40	1.00	5.5	22.0	438	
900	1LA4 452-4AN	1490	106.0	96.0	96.0	0.85	0.83	5768	2.40	1.00	5.5	24.0	556	

Voltage code:

3 kV, 50 Hz	3
5 kV, 50 Hz	5
6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ Not available for ≤ 3.3 kV.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque $\frac{T_B}{T_{rated}}$	Locked -rotor torque $\frac{T_{LR}}{T_{rated}}$	Locked -rotor current $\frac{I_{LR}}{I_{rated}}$	Moment of inertia	
			I_{rated} at 6 kV A	4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ	Motor kgm ²					External, max. ¹⁾ kgm ²	
2.0 ... 6.6 kV, 50 Hz														
4-pole (continued)														
1000	1LA4 454-4AN	1490	118.0	96.2	96.2	0.85	0.83	6409	2.40	1.00	5.5	27.0	653	
1200	1LA4 500-4AN	1492	140.0	96.5	96.3	0.85	0.83	7680	2.4	0.90	5.5	33.0	447	
1300	1LA4 502-4AN	1492	150.0	96.6	96.4	0.86	0.84	8320	2.4	0.90	5.5	37.0	538	
1450	1LA4 504-4AN	1492	166.0	96.7	96.7	0.87	0.86	9280	2.4	0.90	5.5	42.0	628	
1700	1LA4 560-4CN	1494	196.0	96.7	96.6	0.86	0.83	10866	2.5	0.60	5.5	79.0	551	
1900	1LA4 562-4CN	1494	215.0	96.9	96.8	0.88	0.85	12144	2.5	0.60	5.5	92.0	698	
2200	1LA4 564-4CN	1494	250.0	97.2	97.1	0.88	0.86	14061	2.5	0.60	5.5	104.0	761	
2400 ²⁾	1LA4 632-4CN	1494	265.0	97.3	97.2	0.89	0.87	15341	2.3	0.55	5.5	157.0	845	
2700 ²⁾	1LA4 634-4CN	1495	300.0	97.4	97.3	0.89	0.87	17184	2.3	0.55	5.5	171.0	940	
3000 ²⁾	1LA4 636-4CN	1495	335.0	97.5	97.4	0.89	0.87	19164	2.3	0.55	5.5	186.2	1020	
6-pole														
236	1LA4 314-6AN	986	29.5	94.1	94.5	0.82	0.78	2286	2.50	1.25	5.3	5.3	375	
270	1LA4 316-6AN	985	33.5	94.3	94.8	0.82	0.80	2617	2.40	1.25	5.5	6.4	431	
315	1LA4 350-6AN	989	39.0	94.8	95.1	0.82	0.79	3041	2.30	1.10	5.3	10.8	541	
365	1LA4 352-6AN	989	44.5	95.1	95.4	0.83	0.80	3524	2.20	1.10	5.3	12.7	667	
425	1LA4 354-6AN	990	52.0	95.3	95.5	0.82	0.79	4099	2.40	1.25	5.5	15.0	841	
490	1LA4 400-6AN	991	59.0	95.4	95.6	0.84	0.81	4722	2.30	1.05	5.5	21.2	740	
570	1LA4 402-6AN	992	68.0	95.7	95.9	0.84	0.81	5487	2.30	1.10	5.5	24.2	1193	
630	1LA4 404-6AN	991	77.0	95.8	95.9	0.82	0.80	6071	2.40	1.20	5.5	27.3	1233	
700	1LA4 450-6AN	992	84.0	95.8	95.9	0.84	0.81	6738	2.30	1.10	5.4	33.0	1417	
800	1LA4 454-6AN	993	94.0	96.0	96.1	0.85	0.82	7693	2.30	1.10	5.4	41.0	1789	
1000	1LA4 500-6CN	994	114.0	96.5	96.6	0.87	0.85	9607	2.20	0.75	5.5	82.0	1668	
1120	1LA4 502-6CN	994	126.0	96.6	96.7	0.88	0.86	10759	2.20	0.75	5.5	92.0	1858	
1250	1LA4 504-6CN	994	142.0	96.8	96.9	0.88	0.86	12008	2.20	0.75	5.5	102.0	2048	
1400	1LA4 560-6CN	995	160.0	96.9	96.9	0.87	0.85	13436	2.35	0.65	5.5	138.0	2105	
1650	1LA4 562-6CN	995	188.0	97.0	97.1	0.87	0.85	15835	2.35	0.65	5.5	158.0	2470	
1850	1LA4 564-6CN	995	210.0	97.1	97.2	0.88	0.86	17754	2.35	0.65	5.5	183.0	2890	
2050 ²⁾	1LA4 632-6CN	995	230.0	97.0	96.8	0.89	0.87	19676	2.3	0.50	5.5	269.1	2230	
2300 ²⁾	1LA4 634-6CN	995	255.0	97.1	97.0	0.90	0.88	22075	2.3	0.50	5.5	297.4	2450	
2500 ²⁾	1LA4 636-6CN	995	275.0	97.2	97.1	0.90	0.88	23995	2.3	0.50	5.5	323.0	2680	
8-pole														
215	1LA4 350-8AN	738	27.0	93.8	94.2	0.81	0.78	2782	2.30	1.00	5.1	10.6	826	
250	1LA4 352-8AN	739	31.5	94.0	94.4	0.81	0.78	3230	2.40	1.00	5.3	12.5	986	
300	1LA4 354-8AN	739	38.0	94.2	94.7	0.81	0.78	3876	2.40	1.10	5.3	14.8	1107	
370	1LA4 400-8AN	741	45.5	95.0	95.3	0.82	0.79	4768	2.40	1.05	5.1	21.3	1110	

Voltage code:

3 kV, 50 Hz
5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

3
5
6
7
9

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

Type of construction:

IM B3
IM V1 (with canopy)
IM V1 (without canopy)

0
4
8

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ Not available for ≤ 3.3 kV.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data (continued)

Rated power kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked-rotor torque T_{LR}/T_{rated}	Locked-rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6 kV A	4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ	Motor kgm ²					External, max. ¹⁾ kgm ²	
2.0 ... 6.6 kV, 50 Hz														
8-pole (continued)														
420	1LA4 402-8AN	741	52.0	95.2	95.5	0.82	0.79	5412	2.40	1.10	5.4	24.4	1402	
465	1LA4 404-8AN	741	57.0	95.2	95.5	0.82	0.79	5992	2.40	1.00	5.4	27.4	1589	
530	1LA4 450-8AN	742	67.0	95.4	95.6	0.80	0.77	6821	2.50	1.00	5.4	34.0	2016	
600	1LA4 452-8AN	742	75.0	95.6	95.7	0.81	0.76	7722	2.50	1.00	5.4	37.0	2563	
670	1LA4 454-8AN	742	83.0	95.7	95.9	0.81	0.78	8622	2.50	1.00	5.4	42.0	2778	
750	1LA4 500-8CN	746	93.0	96.1	96.1	0.81	0.77	9600	2.30	0.80	5.4	82.0	2820	
820	1LA4 502-8CN	746	102.0	96.1	96.1	0.81	0.77	10496	2.30	0.80	5.4	92.0	2470	
940	1LA4 504-8CN	746	116.0	96.2	96.2	0.81	0.77	12032	2.30	0.80	5.4	102.0	3582	
1050	1LA4 560-8CN	746	126.0	96.4	96.4	0.83	0.79	13440	2.4	0.70	5.3	138.0	3672	
1200	1LA4 562-8CN	746	144.0	96.6	96.5	0.83	0.80	15360	2.4	0.70	5.3	158.0	4692	
1400	1LA4 564-8CN	746	168.0	96.7	96.7	0.83	0.80	17920	2.4	0.70	5.3	183.0	4582	
1630 ²⁾	1LA4 634-8CN	746	192.0	96.7	96.5	0.84	0.81	20867	2.4	0.50	5.5	294.0	4100	
1800 ²⁾	1LA4 636-8CN	746	210.0	96.8	96.6	0.84	0.81	23043	2.4	0.50	5.5	320.1	4440	
10-pole														
360	1LA4 450-3AN	591	48.5	94.3	94.6	0.76	0.71	5817	2.30	1.00	4.5	34.0	3266	
400	1LA4 452-3AN	591	54.0	94.6	94.9	0.76	0.71	6463	2.30	1.00	4.5	37.0	4063	
450	1LA4 454-3AN	592	60.0	94.8	95.0	0.76	0.71	7259	2.30	1.00	4.5	42.0	4458	
530	1LA4 500-3CN	593	68.0	95.2	95.4	0.79	0.75	8535	2.30	0.95	4.8	82.0	5280	
590	1LA4 502-3CN	593	75.0	95.4	95.6	0.79	0.74	9501	2.30	0.95	4.8	92.0	6200	
650	1LA4 504-3CN	593	83.0	95.5	95.6	0.79	0.74	10467	2.30	0.95	4.8	102.0	6770	
770	1LA4 560-3CN	595	98.0	95.8	95.9	0.79	0.75	12358	2.20	0.75	5.0	138.0	3902	
850	1LA4 562-3CN	596	108	95.9	96.0	0.79	0.75	13619	2.20	0.75	5.0	158.0	4102	
1000	1LA4 564-3CN	595	126	96.1	96.2	0.80	0.75	16049	2.20	0.75	5.0	183.0	5717	
12-pole														
300	1LA4 450-5CN	492	43.0	93.6	93.7	0.72	0.66	5823	2.10	0.75	4.2	34.0	3166	
325	1LA4 452-5CN	492	47.0	93.7	93.7	0.71	0.64	6308	2.10	0.75	4.2	37.0	3063	
350	1LA4 454-5CN	493	45.0	93.8	93.8	0.72	0.65	6779	2.10	0.75	4.2	42.0	3158	
420	1LA4 500-5CN	494	59.0	94.6	94.6	0.72	0.67	8119	2.00	0.65	4.2	82.0	4500	
460	1LA4 502-5CN	494	64.0	94.7	94.7	0.73	0.68	8892	2.00	0.65	4.2	92.0	5360	
500	1LA4 504-5CN	494	71.0	94.7	94.7	0.72	0.67	9665	2.00	0.65	4.2	102.0	4640	
580	1LA4 560-5CN	495	81.0	95.1	95.0	0.72	0.65	11189	2.00	0.65	4.4	138.0	7284	
640	1LA4 562-5CN	495	90.0	95.3	95.1	0.72	0.65	12346	2.00	0.65	4.4	158.0	8862	
710	1LA4 564-5CN	495	99.0	95.4	95.2	0.72	0.65	13697	2.00	0.65	4.4	183.0	10478	

Voltage code:

3 kV, 50 Hz	3
5 kV, 50 Hz	5
6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ Not available for ≤ 3.3 kV

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque $\frac{T_B}{T_{rated}}$	Locked -rotor torque $\frac{T_{LR}}{T_{rated}}$	Locked -rotor current $\frac{I_{LR}}{I_{rated}}$	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ	Motor kgm ²					External, max. ¹⁾ kgm ²	
9 ... 11 kV, 50 Hz														
2-pole														
720	1LA4 450-2CN	2983	48.5	95.9	95.9	0.89	0.88	2305	2.30	0.70	5.5	17.0	73	
820	1LA4 452-2CN	2984	55.0	96.2	96.1	0.90	0.88	2624	2.40	0.75	5.7	19.0	81	
900	1LA4 454-2CN	2984	60.0	96.3	96.3	0.90	0.89	2880	2.40	0.75	5.8	21.0	94	
1120	1LA4 500-2CN	2986	75.0	96.4	96.4	0.90	0.89	3582	2.50	0.70	5.6	29.0	102	
1170	1LA4 502-2CN	2987	78.0	96.5	96.5	0.90	0.89	3740	2.50	0.70	5.9	32.0	123	
1290	1LA4 504-2CN	2988	85.0	96.7	96.6	0.91	0.90	4123	2.60	0.75	6.0	35.0	147	
1550	1LA4 560-2CN	2991	102.0	96.7	96.6	0.91	0.90	4948	2.50	0.50	5.5	53.0	118	
1700	1LA4 562-2CN	2991	112.0	96.9	96.8	0.91	0.90	5427	2.50	0.50	5.5	58.0	138	
1860	1LA4 564-2CN	2991	122.0	97.0	96.9	0.91	0.90	5938	2.50	0.50	5.5	64.0	147	
4-pole														
750	1LA4 450-4AN	1490	53	95.6	95.5	0.85	0.82	4807	2.40	1.00	5.5	22.0	528	
800	1LA4 452-4AN	1490	56	95.8	95.7	0.86	0.84	5127	2.40	1.00	5.5	24.0	626	
850	1LA4 454-4AN	1490	59	95.9	95.9	0.86	0.84	5447	2.40	1.00	5.5	27.0	803	
1060	1LA4 500-4AN	1492	74	96.2	96.1	0.86	0.84	6784	2.4	0.90	5.5	33.0	477	
1180	1LA4 502-4AN	1492	82	96.3	96.4	0.86	0.85	7552	2.4	0.90	5.5	37.0	568	
1320	1LA4 504-4AN	1492	91	96.5	96.5	0.87	0.86	8448	2.4	0.90	5.5	42.0	703	
1500	1LA4 560-4CN	1494	104	96.6	96.4	0.86	0.83	9587	2.6	0.60	5.5	79.0	600	
1700	1LA4 562-4CN	1494	116	96.8	96.7	0.88	0.85	10866	2.5	0.60	5.4	92.0	713	
2000	1LA4 564-4CN	1494	136	97.0	96.9	0.88	0.85	12783	2.6	0.60	5.5	104.0	841	
2210	1LA4 634-4CN	1495	148	97.2	97.0	0.89	0.87	14117	2.3	0.5	5.5	171.0	1030	
2470	1LA4 636-4CN	1495	164	97.3	97.2	0.89	0.87	15778	2.3	0.5	5.5	186.2	1120	
6-pole														
540	1LA4 450-6AN	993	38.5	95.3	95.4	0.85	0.82	5193	2.30	1.10	5.4	33.0	947	
590	1LA4 452-6AN	993	42.0	95.4	95.5	0.85	0.82	5674	2.40	1.20	5.5	37.0	843	
630	1LA4 454-6AN	993	45.0	95.5	95.6	0.85	0.83	6058	2.40	1.20	5.5	41.0	1039	
900	1LA4 500-6CN	995	63.0	96.3	96.4	0.86	0.84	8637	2.2	0.70	5.4	82.0	1018	
1000	1LA4 502-6CN	995	69.0	96.4	96.6	0.87	0.85	9597	2.2	0.70	5.4	92.0	1158	
1120	1LA4 504-6CN	995	77.0	96.6	96.7	0.87	0.85	10749	2.3	0.75	5.5	102.0	1298	
1250	1LA4 560-6CN	996	86.0	96.7	96.8	0.87	0.85	11984	2.45	0.65	5.6	138.0	1680	
1450	1LA4 562-6CN	996	99.0	96.8	96.9	0.87	0.85	13902	2.45	0.65	5.6	158.0	2025	
1650	1LA4 564-6CN	996	112.0	96.9	97.0	0.87	0.85	15819	2.45	0.65	5.6	183.0	2035	
1860	1LA4 634-6CN	995	124.0	96.5	96.4	0.90	0.88	17852	2.3	0.5	5.5	297.4	1800	
2060	1LA4 636-6CN	995	136.0	96.7	96.6	0.90	0.88	19772	2.3	0.5	5.5	323.0	2090	

Voltage code:

10 kV, 50 Hz **8**
Other voltage **9**

Type of construction:

IM B3 **0**
IM V1 (with canopy) **4**
IM V1 (without canopy) **8**

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked-rotor torque T_{LR}/T_{rated}	Locked-rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load $\cos \varphi$	3/4 load $\cos \varphi$	Motor kgm ²					External, max. ¹⁾ kgm ²	
9 ... 11 kV, 50 Hz														
8-pole														
450	1LA4 450-8AN	743	34.0	94.8	95.0	0.80	0.76	5783	2.60	1.00	5.5	34.0	1286	
480	1LA4 452-8AN	743	36.0	95.0	95.2	0.81	0.77	6169	2.60	1.00	5.5	37.0	1383	
560	1LA4 454-8AN	743	42.0	95.3	95.4	0.81	0.77	7197	2.60	1.00	5.5	42.0	1788	
700	1LA4 500-8CN	746	52.0	95.8	95.8	0.81	0.77	8960	2.20	0.75	5.5	82.0	1740	
750	1LA4 502-8CN	746	55.0	95.9	95.9	0.82	0.78	9600	2.20	0.75	5.5	92.0	2020	
800	1LA4 504-8CN	746	59.0	96.0	96.0	0.82	0.78	10240	2.20	0.75	5.5	102.0	2240	
950	1LA4 560-8CN	746	70.0	96.2	96.1	0.81	0.77	12160	2.40	0.65	5.3	138.0	2562	
1050	1LA4 562-8CN	746	77.0	96.2	96.2	0.82	0.78	13440	2.40	0.65	5.3	158.0	2282	
1250	1LA4 564-8CN	746	92.0	96.5	96.3	0.81	0.77	16000	2.50	0.70	5.5	183.0	3217	
1350	1LA4 634-8CN	746	96	96.2	96.0	0.84	0.81	17282	2.4	0.50	5.5	294.0	O.R. ²⁾	
1500	1LA4 636-8CN	746	106	96.3	96.1	0.84	0.81	19202	2.4	0.50	5.5	320.1	O.R. ²⁾	
10-pole														
440	1LA4 500-3CN	593	33.5	94.7	95.0	0.80	0.76	7085	2.20	0.85	4.7	82.0	3080	
500	1LA4 502-3CN	593	38.0	95.0	95.2	0.80	0.75	8051	2.20	0.90	4.7	92.0	3770	
530	1LA4 504-3CN	593	40.0	95.1	95.3	0.80	0.75	8535	2.20	0.90	4.7	102.0	4070	
630	1LA4 560-3CN	595	47.5	95.4	95.6	0.80	0.75	10111	2.20	0.75	5.0	138.0	2382	
690	1LA4 562-3CN	596	52.0	95.4	95.6	0.80	0.75	11055	2.20	0.80	5.1	158.0	2317	
800	1LA4 564-3CN	596	61.0	95.6	95.7	0.79	0.75	12817	2.25	0.80	5.2	183.0	2807	
12-pole														
500	1LA4 560-5CN	496	43.0	94.8	94.6	0.71	0.65	9626	2.00	0.65	4.4	138.0	4655	
560	1LA4 562-5CN	496	48.0	95.0	94.8	0.71	0.64	10781	2.00	0.65	4.4	158.0	5533	
620	1LA4 564-5CN	496	52.0	95.1	94.9	0.72	0.65	11936	2.00	0.65	4.4	183.0	5774	

Voltage code:

10 kV, 50 Hz	8
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ On request.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data

The 1LA4 data also apply to explosion-proof 1MG4 (Ex px) and 1MS4 (Ex nA) motors.

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque T_B/T_{rated} [-]	Locked -rotor torque T_{LR}/T_{rated} [-]	Locked -rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 4.16 kV	4/4 load	3/4 load	4/4 load	3/4 load	cos ϕ					cos ϕ	Motor kgm ²
2.0 ... 6.6 kV, 60 Hz														
2-pole														
240	1LA4 310-2AN	3572	40.5	94.7	94.7	0.87	0.86	642	2.3	0.95	5.0	2.2	18	
285	1LA4 312-2AN	3569	48.0	94.7	94.7	0.87	0.85	763	2.2	0.85	5.0	2.2	16	
350	1LA4 314-2AN	3572	59.0	95.2	95.2	0.87	0.86	936	2.4	1.00	5.3	2.7	18	
410	1LA4 316-2AN	3574	68.0	95.6	95.6	0.88	0.87	1095	2.5	1.10	5.4	3.1	26	
460	1LA4 350-2AN	3578	76.0	95.6	95.6	0.88	0.86	1228	2.5	1.05	5.4	4.3	25	
510	1LA4 352-2AN	3580	84.0	95.9	95.8	0.88	0.87	1360	2.6	1.20	5.6	4.8	29	
560	1LA4 354-2AN	3579	91.0	96.0	96.0	0.89	0.88	1494	2.5	1.25	5.6	5.2	31	
630	1LA4 400-2AN	3583	104.0	95.9	95.6	0.88	0.87	1679	2.3	0.80	5.3	7.8	14	
730	1LA4 402-2AN	3585	120.0	96.1	95.9	0.88	0.87	1944	2.5	0.85	5.5	8.7	16	
830	1LA4 404-2AN	3585	134.0	96.3	96.1	0.89	0.88	2211	2.6	0.90	5.5	9.9	19	
920	1LA4 450-2CN	3583	150.0	96.1	95.8	0.89	0.88	2452	2.40	0.70	5.5	17.0	43	
1000	1LA4 452-2CN	3584	160.0	96.2	95.8	0.90	0.88	2664	2.45	0.70	5.7	19.0	46	
1140	1LA4 454-2CN	3585	182.0	96.6	96.4	0.90	0.88	3037	2.55	0.75	5.9	21.0	54	
1330 ²⁾	1LA4 500-2CN	3586	215.0	96.3	95.9	0.90	0.89	3542	2.4	0.65	5.5	29.0	52	
1380 ²⁾	1LA4 502-2CN	3586	220.0	96.3	96.0	0.91	0.90	3675	2.4	0.65	5.5	32.0	58	
1560 ²⁾	1LA4 504-2CN	3586	245.0	96.7	96.3	0.91	0.90	4154	2.5	0.70	5.6	35.0	72	
4-pole														
240	1LA4 310-4AN	1780	44.5	93.8	93.7	0.80	0.76	1288	2.40	1.15	5.3	2.8	104	
300	1LA4 312-4AN	1780	52.0	94.6	94.6	0.84	0.81	1609	2.30	1.20	5.2	3.5	133	
360	1LA4 314-4AN	1780	62.0	94.9	95.0	0.85	0.82	1931	2.30	1.25	5.3	4.0	145	
440	1LA4 316-4AN	1780	75.0	95.3	95.4	0.85	0.82	2360	2.40	1.30	5.5	4.8	200	
470	1LA4 350-4AN	1783	81.0	95.2	95.2	0.85	0.83	2517	2.30	1.15	5.2	6.0	144	
550	1LA4 352-4AN	1783	93.0	95.5	95.5	0.86	0.84	2946	2.20	1.15	5.2	6.9	159	
640	1LA4 354-4AN	1784	106.0	95.6	95.6	0.87	0.85	3426	2.30	1.20	5.5	8.1	195	
680	1LA4 400-4AN	1788	116.0	95.1	94.8	0.86	0.83	3632	2.55	1.20	5.80	11.6	174	
750	1LA4 402-4AN	1788	126.0	95.4	95.2	0.87	0.84	4006	2.55	1.25	5.80	12.9	206	
830	1LA4 404-4AN	1789	138.0	96.6	95.3	0.87	0.85	4431	2.55	1.20	5.90	14.5	243	
950	1LA4 450-4AN	1790	164.0	95.5	95.0	0.84	0.81	5068	2.50	1.00	5.5	22.0	298	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ Not available for ≤ 3.3 kV.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_L/T_{rated}	Locked rotor current I_L/I_{rated}	Moment of inertia	
			I_{rated} at 4.16 kV	4/4 load	3/4 load	4/4 load	3/4 load	cos φ					cos φ	Motor kgm ²
2.0 ... 6.6 kV, 60 Hz														
4-pole (continued)														
1000	1LA4 452-4AN	1790	168.0	95.6	95.3	0.86	0.84	5335	2.40	1.00	5.5	24.0	366	
1100	1LA4 454-4AN	1790	186.0	95.8	95.5	0.86	0.84	5868	2.40	1.00	5.5	27.0	443	
1350	1LA4 500-4AN	1792	230.0	96.1	95.8	0.85	0.83	7194	2.40	0.90	5.5	33.0	277	
1450	1LA4 502-4AN	1792	245.0	96.2	95.9	0.86	0.84	7727	2.40	0.90	5.5	37.0	348	
1600	1LA4 504-4AN	1792	260.0	96.3	96.2	0.88	0.86	8526	2.40	0.90	5.5	42.0	413	
1870	1LA4 560-4CN	1794	315.0	96.4	96.0	0.86	0.84	9954	2.50	0.55	5.5	79.0	356	
2090	1LA4 562-4CN	1794	345.0	96.6	96.3	0.87	0.84	11125	2.60	0.60	5.6	92.0	458	
2350	1LA4 564-4CN	1794	385.0	96.8	96.6	0.88	0.85	12508	2.60	0.60	5.6	104.0	540	
2640 ²⁾	1LA4 632-4CN	1793	425.0	96.9	96.7	0.89	0.87	14068	2.3	0.55	5.5	157.0	O.R. ³⁾	
2970 ¹²⁾	1LA4 634-4CN	1794	475	97.1	96.9	0.89	0.87	15758	2.3	0.55	5.5	171.0	O.R. ³⁾	
3300 ²⁾	1LA4 636-4CN	1794	530	97.3	97.1	0.89	0.87	17573	2.3	0.55	5.5	186.2	O.R. ³⁾	
6-pole														
275	1LA4 314-6AN	1184	49.0	94.3	94.5	0.83	0.80	2218	2.40	1.20	5.2	5.3	247	
325	1LA4 316-6AN	1185	58.0	94.7	95.0	0.82	0.80	2619	2.40	1.20	5.5	6.4	360	
380	1LA4 350-6AN	1190	68.0	95.1	95.1	0.82	0.79	3049	2.40	1.15	5.3	10.8	498	
430	1LA4 352-6AN	1190	75.0	95.3	95.4	0.83	0.80	3450	2.20	1.10	5.5	12.7	615	
510	1LA4 354-6AN	1189	90.0	95.5	95.6	0.82	0.80	4096	2.30	1.15	5.5	15.0	689	
560	1LA4 400-6AN	1192	98.0	95.6	95.5	0.83	0.80	4486	2.50	1.10	5.5	21.2	740	
670	1LA4 402-6AN	1192	116.0	95.8	95.8	0.83	0.81	5367	2.40	1.10	5.5	24.2	780	
690	1LA4 404-6AN	1191	120.0	95.8	95.8	0.83	0.82	5532	2.30	1.10	5.5	27.3	925	
800	1LA4 450-6AN	1192	138.0	95.8	95.7	0.84	0.81	6409	2.30	1.10	5.4	33.0	947	
850	1LA4 452-6AN	1192	144.0	95.9	95.9	0.85	0.83	6809	2.30	1.10	5.4	37.0	1083	
900	1LA4 454-6AN	1192	154.0	96.0	96.0	0.85	0.83	7210	2.30	1.10	5.4	41.0	1489	
1120	1LA4 500-6CN	1195	186.0	96.5	96.6	0.87	0.86	8950	2.20	0.75	5.5	82.0	1168	
1250	1LA4 502-6CN	1195	205.0	96.7	96.7	0.88	0.86	9988	2.20	0.75	5.5	92.0	1308	
1360	1LA4 504-6CN	1195	220.0	96.8	96.8	0.88	0.86	10867	2.20	0.75	5.5	102.0	1598	
1500	1LA4 560-6CN	1195	245.0	96.7	96.7	0.87	0.86	11986	2.30	0.60	5.4	138.0	1425	
1800	1LA4 562-6CN	1195	295.0	96.9	96.8	0.87	0.85	14383	2.35	0.65	5.5	158.0	1640	
2000	1LA4 564-6CN	1195	325.0	97.1	97.0	0.88	0.86	15982	2.30	0.60	5.4	183.0	1980	
2255 ²⁾	1LA4 632-6CN	1194	360	96.8	96.6	0.89	0.87	18043	2.3	0.50	5.5	269.1	O.R. ³⁾	
2530 ²⁾	1LA4 634-6CN	1194	400	96.9	96.7	0.90	0.88	20243	2.3	0.50	5.5	297.4	O.R. ³⁾	
2750 ²⁾	1LA4 636-6CN	1194	435	97.0	96.9	0.90	0.88	22003	2.3	0.50	5.5	323.0	O.R. ³⁾	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ Not available for ≤ 3.3 kV.

³⁾ On request.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque $\frac{T_B}{T_{rated}}$ [-]	Locked rotor torque $\frac{T_{LR}}{T_{rated}}$ [-]	Locked rotor current $\frac{I_{LR}}{I_{rated}}$ [-]	Moment of inertia	
			I_{rated} at 4.16 kV A	4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ	Motor kgm ²					External, max. ¹⁾ kgm ²	
2.0 ... 6.6 kV, 60 Hz														
8-pole														
260	1LA4 350-8AN	889	47.5	94.2	94.4	0.81	0.78	2793	2.30	0.95	5.1	10.6	683	
300	1LA4 352-8AN	889	54.0	94.5	94.6	0.81	0.78	3222	2.40	1.00	5.2	12.5	824	
360	1LA4 354-8AN	890	65.0	94.7	94.9	0.81	0.78	3863	2.50	1.05	5.4	14.8	879	
445	1LA4 400-8AN	892	80.0	95.3	95.3	0.81	0.79	4764	2.40	1.05	5.3	21.3	1044	
490	1LA4 402-8AN	891	86.0	95.3	95.3	0.83	0.80	5251	2.30	1.00	5.2	24.4	1069	
540	1LA4 404-8AN	892	96.0	95.6	95.6	0.82	0.80	5781	2.40	1.05	5.4	27.4	1446	
600	1LA4 450-8AN	891	108.0	95.4	95.5	0.81	0.78	6430	2.50	1.00	5.4	34.0	1466	
670	1LA4 452-8AN	892	120.0	95.6	95.7	0.81	0.76	7172	2.60	1.00	5.5	37.0	1843	
770	1LA4 454-8AN	892	138.0	95.8	95.9	0.81	0.78	8243	2.60	1.00	5.5	42.0	1958	
850	1LA4 500-8CN	896	154.0	96.1	95.8	0.80	0.76	9059	2.50	0.80	5.5	82.0	2290	
920	1LA4 502-8CN	896	164.0	96.1	96.0	0.81	0.77	9805	2.30	0.75	5.4	92.0	2050	
1000	1LA4 504-8CN	896	176.0	96.2	96.1	0.82	0.80	10657	2.20	0.70	5.3	102.0	2290	
1200	1LA4 560-8CN	896	210	96.4	96.1	0.82	0.77	12789	2.6	0.70	5.5	138.0	2487	
1340	1LA4 562-8CN	896	230	96.6	96.5	0.83	0.80	14281	2.4	0.65	5.3	158.0	3012	
1500	1LA4 564-8CN	896	260	96.7	96.5	0.83	0.79	15986	2.6	0.70	5.5	183.0	3687	
1793 ²⁾	1LA4 634-8CN	895	305	96.5	96.1	0.84	0.81	19135	2.4	0.50	5.5	294.0	O.R. ³⁾	
1980 ²⁾	1LA4 636-8CN	895	340	96.7	96.2	0.84	0.81	21130	2.4	0.50	5.5	320.1	O.R. ³⁾	
10-pole														
400	1LA4 450-3AN	711	77.0	94.5	94.7	0.76	0.73	5372	2.20	1.00	4.8	34.0	2416	
450	1LA4 452-3AN	711	87.0	94.7	94.8	0.76	0.72	6044	2.30	1.00	4.8	37.0	2513	
500	1LA4 454-3AN	711	96.0	94.8	95.0	0.76	0.73	6715	2.30	1.00	4.8	42.0	2488	
610	1LA4 500-3CN	713	112.0	95.4	95.5	0.79	0.75	8170	2.20	0.90	4.8	82.0	3700	
670	1LA4 502-3CN	713	124.0	95.4	95.6	0.79	0.75	8973	2.20	0.90	4.8	92.0	4170	
710	1LA4 504-3CN	714	132.0	95.6	95.5	0.78	0.74	9496	2.40	0.95	5.1	102.0	4840	
870	1LA4 560-3CN	715	160.0	95.9	95.9	0.79	0.74	11619	2.30	0.75	5.1	138.0	2862	
950	1LA4 562-3CN	716	176.0	96.0	95.9	0.78	0.73	12670	2.50	0.80	5.5	158.0	3377	
1100	1LA4 564-3CN	716	200.0	96.1	96.1	0.79	0.75	14670	2.30	0.75	5.3	183.0	3517	
12-pole														
340	1LA4 450-5CN	593	71.0	94.0	93.8	0.71	0.64	5475	2.00	0.70	4.3	34.0	2286	
375	1LA4 452-5CN	592	78.0	94.2	94.1	0.71	0.66	6049	2.00	0.70	4.3	37.0	2723	
410	1LA4 454-5CN	592	84.0	94.2	94.1	0.72	0.66	6613	2.00	0.70	4.3	42.0	2428	
460	1LA4 500-5CN	595	95.0	94.6	94.4	0.71	0.65	7382	2.00	0.65	4.2	82.0	3200	
500	1LA4 502-5CN	594	102.0	94.8	94.7	0.72	0.67	8038	2.00	0.65	4.2	92.0	3880	
540	1LA4 504-5CN	594	110.0	94.9	94.8	0.72	0.67	8681	2.00	0.65	4.2	102.0	3850	
650	1LA4 560-5CN	595	134.0	95.2	94.9	0.71	0.64	10432	2.00	0.65	4.4	138.0	5636	
710	1LA4 562-5CN	596	144.0	95.3	95.0	0.72	0.65	11375	2.00	0.65	4.4	158.0	6123	
800	1LA4 564-5CN	596	164.0	95.4	95.1	0.71	0.65	12817	2.00	0.65	4.4	183.0	7377	

Voltage code:

4 kV, 60 Hz
6.6 kV, 60 Hz
Other voltage

4
1
9

Type of construction:

IM B3
IM V1 (with canopy)
IM V1 (without canopy)

0
4
8

Note:

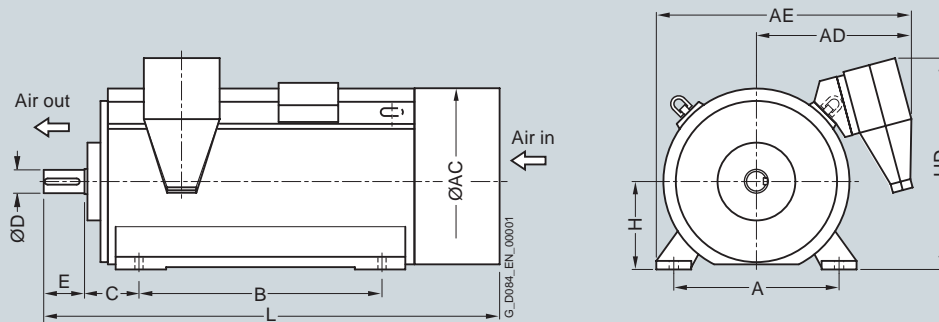
Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

³⁾ On request.

²⁾ Not available for ≤ 3.3 kV.

Dimension drawings



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ²⁾ mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings³⁾												
2-pole												
1LA4 310-2AN.0	1550	610	700	710	1075	710	200	70	105	315	860	1590
1LA4 312-2AN.0	1550	610	700	710	1075	710	200	70	105	315	860	1590
1LA4 314-2AN.0	1850	610	700	710	1075	900	200	70	105	315	860	1790
1LA4 316-2AN.0	2000	610	700	710	1075	900	200	70	105	315	860	1790
1LA4 350-2AN.0	2300	686	780	740	1155	1000	224	75	105	355	930	1930
1LA4 352-2AN.0	2400	686	780	740	1155	1000	224	75	105	355	930	1930
1LA4 354-2AN.0	2550	686	780	740	1155	1000	224	75	105	355	930	1930
1LA4 400-2AN.0	3150	750	870	775	1225	1120	254	85	130	400	1010	2095
1LA4 402-2AN.0	3300	750	870	775	1225	1120	254	85	130	400	1010	2095
1LA4 404-2AN.0	3550	750	870	775	1225	1120	254	85	130	400	1010	2095
1LA4 450-2CN.0 ⁴⁾	4600	850	960	825	1340	1250	280	95	130	450	1100	2320
1LA4 452-2CN.0 ⁴⁾	4900	850	960	825	1340	1250	280	95	130	450	1100	2320
1LA4 454-2CN.0 ⁴⁾	5200	850	960	825	1340	1250	280	95	130	450	1100	2320
4-pole												
1LA4 310-4AN.0	1500	610	700	710	1075	710	200	90	130	315	860	1610
1LA4 312-4AN.0	1650	610	700	710	1075	710	200	90	130	315	860	1610
1LA4 314-4AN.0	1900	610	700	710	1075	900	200	90	130	315	860	1810
1LA4 316-4AN.0	2050	610	700	710	1075	900	200	90	130	315	860	1810
1LA4 350-4AN.0	2350	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 352-4AN.0	2550	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 354-4AN.0	2750	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 400-4AN.0	3400	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 402-4AN.0	3600	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 404-4AN.0	3800	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 450-4AN.0	4700	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 452-4AN.0	5000	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 454-4AN.0	5300	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 500-4AN.0	5900	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 502-4AN.0	6300	950	1070	875	1440	1320	315	140	200	500	1200	2525

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

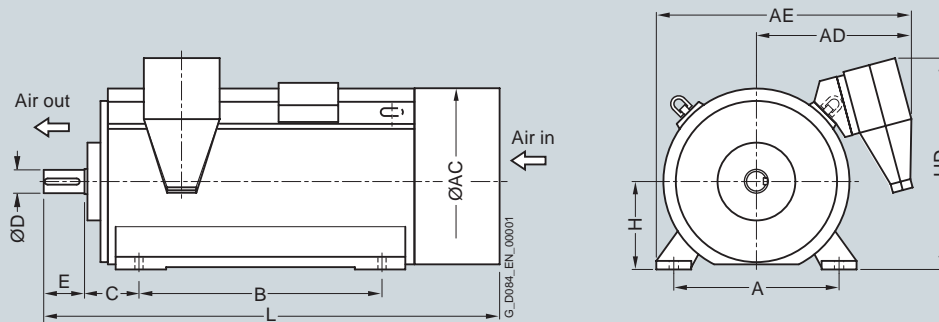
⁴⁾ Rolling-contact bearings only for 50 Hz operation.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ²⁾ mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings³⁾												
4-pole												
1LA4 504-4AN.0	6800	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 560-4CN.0	8200	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 562-4CN.0	8900	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 564-4CN.0	9700	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 632-4CN.0 ⁴⁾	12200	1120	1350	945	1560	1600	335	170	240	630	1410	3015
1LA4 634-4CN.0 ⁴⁾	12800	1120	1350	945	1560	1600	335	170	240	630	1410	3015
1LA4 636-4CN.0 ⁴⁾	13600	1120	1350	945	1560	1600	335	170	240	630	1410	3015
6-pole												
1LA4 314-6AN.0	1950	610	700	710	1075	900	200	90	130	315	860	1810
1LA4 316-6AN.0	2150	610	700	710	1075	900	200	90	130	315	860	1810
1LA4 350-6AN.0	2400	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 352-6AN.0	2600	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 354-6AN.0	2850	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 400-6AN.0	3500	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 402-6AN.0	3750	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 404-6AN.0	4000	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 450-6AN.0	4600	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 452-6AN.0	4900	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 454-6AN.0	5200	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 500-6CN.0	6400	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 502-6CN.0	6800	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 504-6CN.0	7300	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 560-6CN.0	8500	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 562-6CN.0	9300	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 564-6CN.0	10100	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 632-6CN.0	12700	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4 634-6CN.0	13400	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4 636-6CN.0	14100	1120	1350	945	1560	1600	335	180	240	630	1410	3015

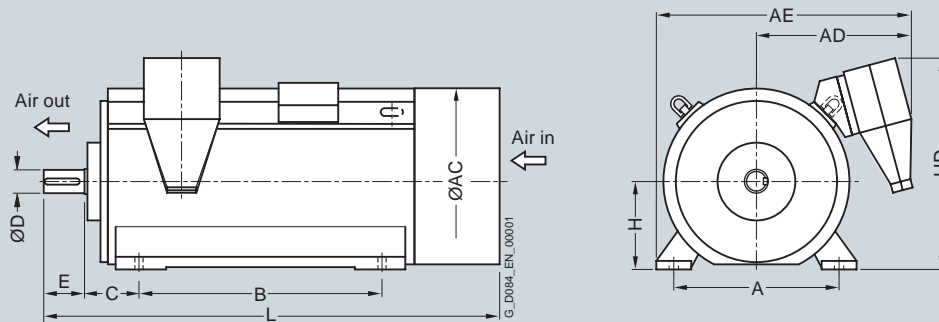
¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

⁴⁾ Rolling-contact bearings only for 50 Hz operation.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ²⁾ mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings³⁾												
8-pole												
1LA4 350-8AN.0	2400	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 352-8AN.0	2600	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 354-8AN.0	2800	686	780	740	1155	1000	224	100	165	355	930	1985
1LA4 400-8AN.0	3450	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 402-8AN.0	3700	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 404-8AN.0	3950	750	870	775	1225	1120	254	120	165	400	1010	2125
1LA4 450-8AN.0	4600	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 452-8AN.0	4900	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 454-8AN.0	5200	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 500-8CN.0	6400	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 502-8CN.0	6700	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 504-8CN.0	7200	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 560-8CN.0	8500	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 562-8CN.0	9200	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 564-8CN.0	10000	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 634-8CN.0	13300	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4 636-8CN.0	14000	1120	1350	945	1560	1600	335	180	240	630	1410	3015
10-pole												
1LA4 450-3AN.0	4600	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 452-3AN.0	4900	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 454-3AN.0	5200	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 500-3CN.0	6400	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 502-3CN.0	6700	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 504-3CN.0	7200	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 560-3CN.0	8500	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 562-3CN.0	9200	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 564-3CN.0	10000	1060	1210	925	1560	1400	335	160	240	560	1310	2775

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

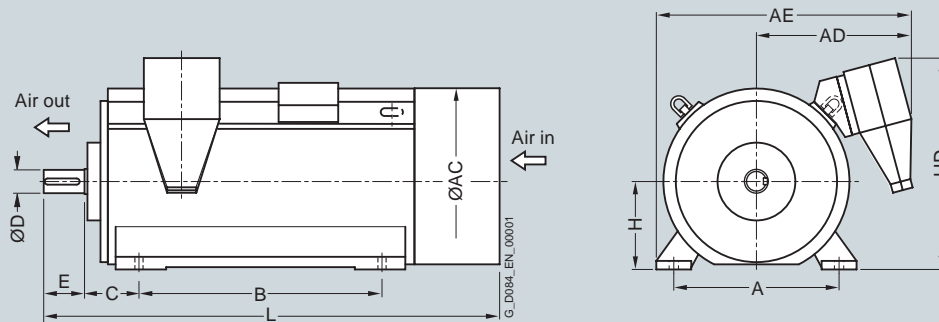
³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings (continued)



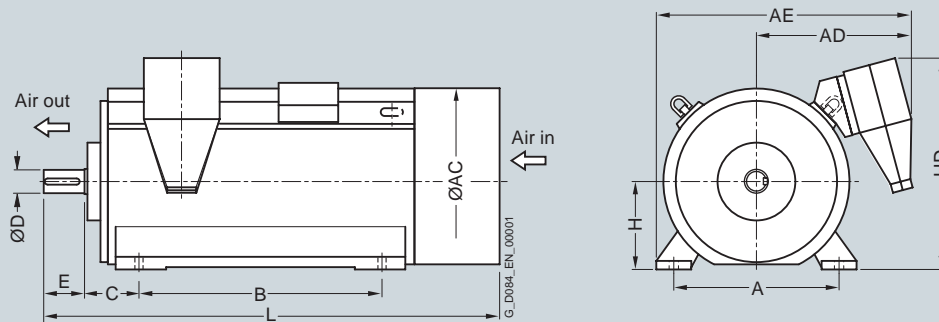
Motor type	Weight kg	Dimensions										
		A	AC	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD ²⁾	L
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings ³⁾												
12-pole												
1LA4 450-5CN.0	4600	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 452-5CN.0	4900	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 454-5CN.0	5200	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4 500-5CN.0	6400	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 502-5CN.0	6700	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 504-5CN.0	7200	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4 560-5CN.0	8500	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 562-5CN.0	9200	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4 564-5CN.0	10000	1060	1210	925	1560	1400	335	160	240	560	1310	2775

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

Dimension drawings



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings¹⁾												
2-pole												
1LA4 450-2CN.0 ²⁾	4600	850	960	970	1485	1250	280	95	130	450	1170	2320
1LA4 452-2CN.0 ²⁾	4900	850	960	970	1485	1250	280	95	130	450	1170	2320
1LA4 454-2CN.0 ²⁾	5200	850	960	970	1485	1250	280	95	130	450	1170	2320
4-pole												
1LA4 450-4AN.0	4600	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 452-4AN.0	4900	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 454-4AN.0	5200	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 500-4AN.0	5900	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 502-4AN.0	6200	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 504-4AN.0	6700	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 560-4CN.0	8100	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 562-4CN.0	8800	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 564-4CN.0	9600	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 634-4CN.0 ²⁾	12800	1120	1350	1100	1675	1600	335	170	240	630	1480	3015
1LA4 636-4CN.0 ²⁾	13600	1120	1350	1100	1675	1600	335	170	240	630	1480	3015
6-pole												
1LA4 450-6AN.0	4600	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 452-6AN.0	4800	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 454-6AN.0	5200	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 500-6CN.0	6300	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 502-6CN.0	6800	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 504-6CN.0	7200	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 560-6CN.0	8500	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 562-6CN.0	9100	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 564-6CN.0	10000	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 634-6CN.0	13400	1120	1350	1100	1675	1600	335	180	240	630	1480	3015
1LA4 636-6CN.0	14100	1120	1350	1100	1675	1600	335	180	240	630	1480	3015

¹⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

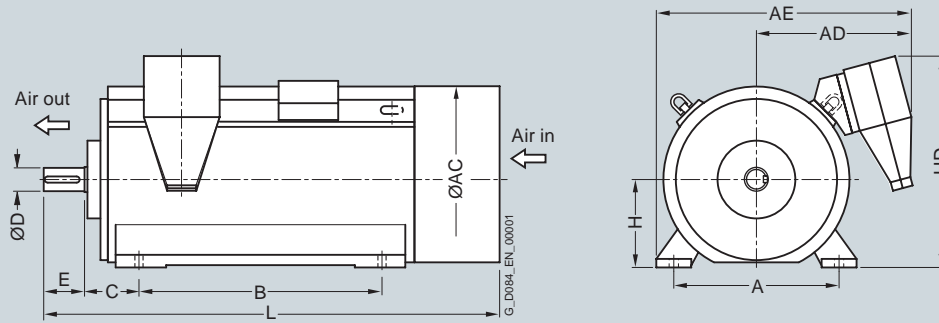
²⁾ Rolling-contact bearings only for 50 Hz operation.

Motors for line operation

Air-cooled motors

H-compact 1LA4

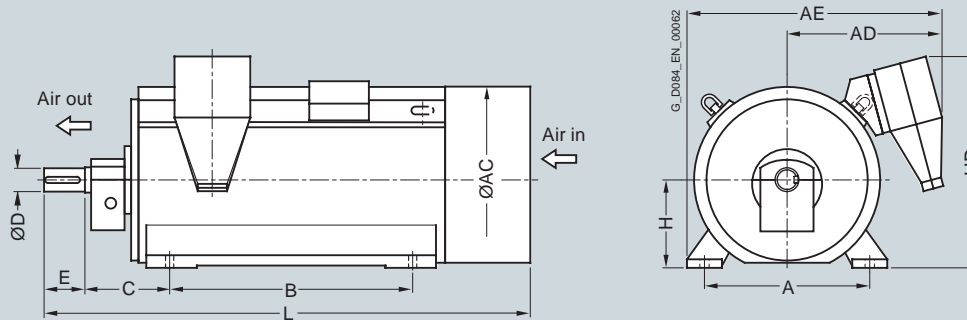
Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings¹⁾												
8-pole												
1LA4 450-8AN.0	4600	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 452-8AN.0	4800	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 454-8AN.0	5200	850	960	970	1485	1250	280	130	200	450	1170	2390
1LA4 500-8CN.0	6300	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 502-8CN.0	6700	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 504-8CN.0	7100	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 560-8CN.0	8400	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 562-8CN.0	9100	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 564-8CN.0	10000	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 634-8CN.0	13300	1120	1350	1100	1675	1600	335	180	240	630	1480	3015
1LA4 636-8CN.0	14000	1120	1350	1100	1675	1600	335	180	240	630	1480	3015
10-pole												
1LA4 500-3CN.0	6300	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 502-3CN.0	6700	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 504-3CN.0	7100	950	1070	1015	1580	1320	315	140	200	500	1270	2525
1LA4 560-3CN.0	8400	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 562-3CN.0	9100	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 564-3CN.0	10000	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
12-pole												
1LA4 560-5CN.0	8400	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 562-5CN.0	9100	1060	1210	1070	1705	1400	335	160	240	560	1380	2775
1LA4 564-5CN.0	10000	1060	1210	1070	1705	1400	335	160	240	560	1380	2775

¹⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

Dimension drawings



Motor type	Weight kg	Dimensions										
		A	AC	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD ²⁾	L
Up to 6.6 kV, IM B3 type of construction, sleeve bearings ³⁾												
2-pole												
1LA4 310-2AN.0-Z K96	1650	610	700	710	1075	710	375	70	105	315	860	1980
1LA4 312-2AN.0-Z K96	1650	610	700	710	1075	710	375	70	105	315	860	1980
1LA4 314-2AN.0-Z K96	1950	610	700	710	1075	900	375	70	105	315	860	2180
1LA4 316-2AN.0-Z K96	2100	610	700	710	1075	900	375	70	105	315	860	2180
1LA4 350-2AN.0-Z K96	2400	686	780	740	1155	1000	400	75	105	355	930	2340
1LA4 352-2AN.0-Z K96	2500	686	780	740	1155	1000	400	75	105	355	930	2340
1LA4 354-2AN.0-Z K96	2600	686	780	740	1155	1000	400	75	105	355	930	2340
1LA4 400-2AN.0-Z K96	3200	750	870	775	1225	1120	425	85	130	400	1010	2510
1LA4 402-2AN.0-Z K96	3350	750	870	775	1225	1120	425	85	130	400	1010	2510
1LA4 404-2AN.0-Z K96	3600	750	870	775	1225	1120	425	85	130	400	1010	2510
1LA4 450-2CN.0-Z K96 ⁴⁾	4700	850	960	825	1340	1250	475	95	130	450	1100	2515
1LA4 452-2CN.0-Z K96 ⁴⁾	5000	850	960	825	1340	1250	475	95	130	450	1100	2515
1LA4 454-2CN.0-Z K96 ⁴⁾	5200	850	960	825	1340	1250	475	95	130	450	1100	2515
1LA4 500-2CN.0	6100	950	1070	875	1440	1320	500	110	165	500	1200	2675
1LA4 502-2CN.0	6300	950	1070	875	1440	1320	500	110	165	500	1200	2675
1LA4 504-2CN.0	6700	950	1070	875	1440	1320	500	110	165	500	1200	2675
1LA4 560-2CN.0	8200	1060	1210	925	1560	1400	500	120	165	560	1310	2865
1LA4 562-2CN.0	8600	1060	1210	925	1560	1400	500	120	165	560	1310	2865
1LA4 564-2CN.0	9100	1060	1210	925	1560	1400	500	120	165	560	1310	2865
4-pole												
1LA4 310-4AN.0-Z K96	1600	610	700	710	1075	710	375	90	130	315	860	2010
1LA4 312-4AN.0-Z K96	1750	610	700	710	1075	710	375	90	130	315	860	2010
1LA4 314-4AN.0-Z K96	2000	610	700	710	1075	900	375	90	130	315	860	2210
1LA4 316-4AN.0-Z K96	2150	610	700	710	1075	900	375	90	130	315	860	2210
1LA4 350-4AN.0-Z K96	2450	686	780	740	1155	1000	400	100	165	355	930	2400
1LA4 352-4AN.0-Z K96	2600	686	780	740	1155	1000	400	100	165	355	930	2400
1LA4 354-4AN.0-Z K96	2850	686	780	740	1155	1000	400	100	165	355	930	2400
1LA4 400-4AN.0-Z K96	3450	750	870	775	1225	1120	450	120	165	400	1010	2570
1LA4 402-4AN.0-Z K96	3650	750	870	775	1225	1120	450	120	165	400	1010	2570

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

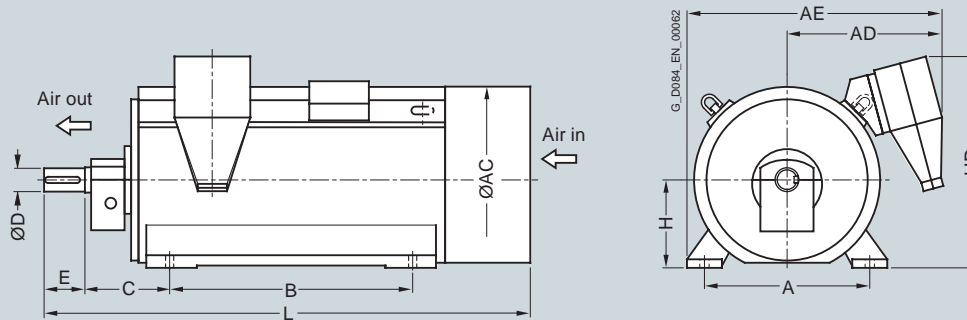
⁴⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A	AC	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD ²⁾	L
Up to 6.6 kV, IM B3 type of construction, sleeve bearings³⁾												
4-pole												
1LA4 404-4AN.0-Z K96	3850	750	870	775	1225	1120	450	120	165	400	1010	2570
1LA4 450-4AN.0-Z K96	4800	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 452-4AN.0-Z K96	5100	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 454-4AN.0-Z K96	5400	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 500-4AN.0-Z K96	6100	950	1070	875	1440	1320	500	140	200	500	1200	2870
1LA4 502-4AN.0-Z K96	6500	950	1070	875	1440	1320	500	140	200	500	1200	2870
1LA4 504-4AN.0-Z K96	7000	950	1070	875	1440	1320	500	140	200	500	1200	2870
1LA4 560-4CN.0-Z K96	8500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 562-4CN.0-Z K96	9200	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 564-4CN.0-Z K96	10000	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 632-4CN.0-Z K96 ⁴⁾	12500	1120	1350	945	1560	1600	560	170	240	630	1410	3450
1LA4 634-4CN.0-Z K96 ⁴⁾	13100	1120	1350	945	1560	1600	560	170	240	630	1410	3450
1LA4 636-4CN.0-Z K96 ⁴⁾	13900	1120	1350	945	1560	1600	560	170	240	630	1410	3450
6-pole												
1LA4 450-6AN.0-Z K96	4800	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 452-6AN.0-Z K96	5000	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 454-6AN.0-Z K96	5300	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 500-6CN.0-Z K96	6600	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 502-6CN.0-Z K96	7000	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 504-6CN.0-Z K96	7500	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 560-6CN.0-Z K96	8800	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 562-6CN.0-Z K96	9500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 564-6CN.0-Z K96	10400	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 632-6CN.0-Z K96	13000	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4 634-6CN.0-Z K96	13700	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4 636-6CN.0-Z K96	14500	1120	1350	945	1560	1600	560	180	240	630	1410	3450

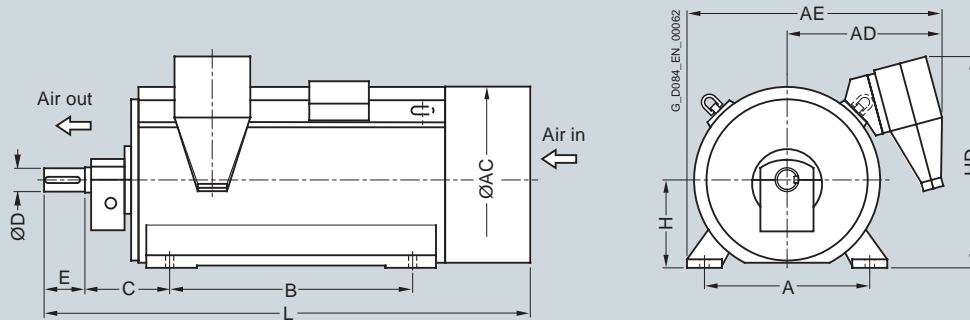
¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

⁴⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ²⁾ mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings³⁾												
8-pole												
1LA4 450-8AN.0-Z K96	4700	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 452-8AN.0-Z K96	5000	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 454-8AN.0-Z K96	5300	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 500-8CN.0-Z K96	6600	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 502-8CN.0-Z K96	6900	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 504-8CN.0-Z K96	7400	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 560-8CN.0-Z K96	8800	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 562-8CN.0-Z K96	9500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 564-8CN.0-Z K96	10300	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 634-8CN.0-Z K96	13600	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4 636-8CN.0-Z K96	14400	1120	1350	945	1560	1600	560	180	240	630	1410	3450
10-pole												
1LA4 450-3AN.0-Z K96	4700	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 452-3AN.0-Z K96	5000	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 454-3AN.0-Z K96	5300	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 500-3CN.0-Z K96	6600	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 502-3CN.0-Z K96	6900	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 504-3CN.0-Z K96	7400	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 560-3CN.0-Z K96	8800	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 562-3CN.0-Z K96	9500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 564-3CN.0-Z K96	10300	1060	1210	925	1560	1400	560	160	240	560	1310	3170
12-pole												
1LA4 450-5CN.0-Z K96	4700	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 452-5CN.0-Z K96	5000	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 454-5CN.0-Z K96	5300	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4 500-5CN.0-Z K96	6600	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 502-5CN.0-Z K96	6900	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 504-5CN.0-Z K96	7400	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4 560-5CN.0-Z K96	8800	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 562-5CN.0-Z K96	9500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4 564-5CN.0-Z K96	10300	1060	1210	925	1560	1400	560	160	240	560	1310	3170

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 140 mm (for H = 500), by + 145 mm (for H = 560) or by + 155 mm (for H = 630).

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 70 mm.

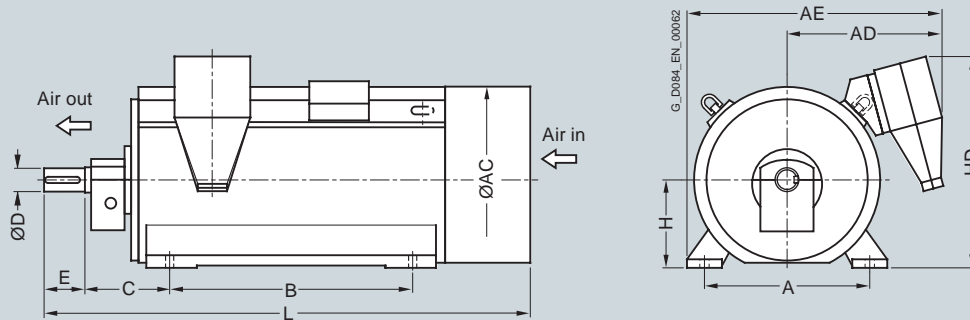
³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings

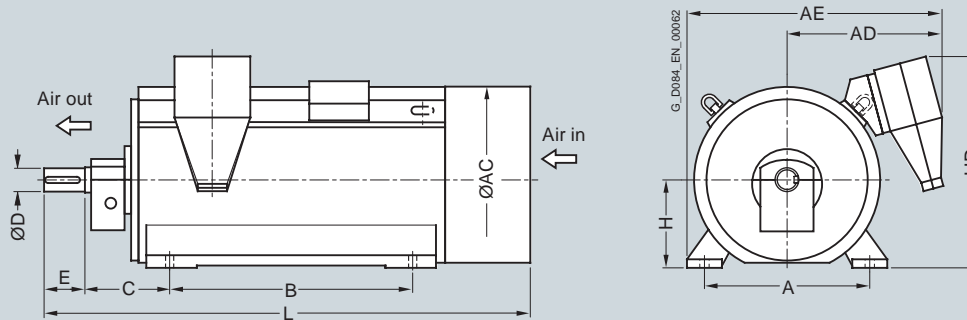


Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings¹⁾												
2-pole												
1LA4 450-2CN.0-Z K96 ²⁾	4600	850	960	970	1485	1250	475	95	130	450	1170	2515
1LA4 452-2CN.0-Z K96 ²⁾	4900	850	960	970	1485	1250	475	95	130	450	1170	2515
1LA4 454-2CN.0-Z K96 ²⁾	5200	850	960	970	1485	1250	475	95	130	450	1170	2515
1LA4 500-2CN.0	6000	950	1070	1015	1580	1320	500	110	165	500	1270	2675
1LA4 502-2CN.0	6300	950	1070	1015	1580	1320	500	110	165	500	1270	2675
1LA4 504-2CN.0	6700	950	1070	1015	1580	1320	500	110	165	500	1270	2675
1LA4 560-2CN.0	8100	1060	1210	1070	1705	1400	500	120	165	560	1380	2865
1LA4 562-2CN.0	8600	1060	1210	1070	1705	1400	500	120	165	560	1380	2865
1LA4 564-2CN.0	9100	1060	1210	1070	1705	1400	500	120	165	560	1380	2865
4-pole												
1LA4 450-4AN.0-Z K96	4700	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 452-4AN.0-Z K96	5000	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 454-4AN.0-Z K96	5300	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 500-4AN.0-Z K96	6100	950	1070	1015	1580	1320	500	140	200	500	1270	2870
1LA4 502-4AN.0-Z K96	6400	950	1070	1015	1580	1320	500	140	200	500	1270	2870
1LA4 504-4AN.0-Z K96	6900	950	1070	1015	1580	1320	500	140	200	500	1270	2870
1LA4 560-4CN.0-Z K96	8400	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 562-4CN.0-Z K96	9100	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 564-4CN.0-Z K96	9800	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 634-4CN.0-Z K96 ²⁾	13100	1120	1350	945	1560	1600	560	170	240	630	1410	3450
1LA4 636-4CN.0-Z K96 ²⁾	13900	1120	1350	945	1560	1600	560	170	240	630	1410	3450
6-pole												
1LA4 450-6AN.0-Z K96	4700	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 452-6AN.0-Z K96	5000	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 454-6AN.0-Z K96	5300	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 500-6CN.0-Z K96	6500	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 502-6CN.0-Z K96	7000	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 504-6CN.0-Z K96	7400	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 560-6CN.0-Z K96	8800	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 562-6CN.0-Z K96	9400	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 564-6CN.0-Z K96	10300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 634-6CN.0-Z K96	13700	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4 636-6CN.0-Z K96	14500	1120	1350	945	1560	1600	560	180	240	630	1410	3450

¹⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings¹⁾												
8-pole												
1LA4 450-8AN.0-Z K96	4700	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 452-8AN.0-Z K96	4900	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 454-8AN.0-Z K96	5300	850	960	970	1485	1250	475	130	200	450	1170	2745
1LA4 500-8CN.0-Z K96	6500	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 502-8CN.0-Z K96	6900	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 504-8CN.0-Z K96	7400	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 560-8CN.0-Z K96	8700	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 562-8CN.0-Z K96	9300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 564-8CN.0-Z K96	10300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 634-8CN.0-Z K96	13600	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4 636-8CN.0-Z K96	14400	1120	1350	945	1560	1600	560	180	240	630	1410	3450
10-pole												
1LA4 500-3CN.0-Z K96	6500	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 502-3CN.0-Z K96	6900	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 504-3CN.0-Z K96	7400	950	1070	1015	1580	1320	530	140	200	500	1270	2900
1LA4 560-3CN.0-Z K96	8700	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 562-3CN.0-Z K96	9300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 564-3CN.0-Z K96	10300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
12-pole												
1LA4 560-5CN.0-Z K96	8700	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 562-5CN.0-Z K96	9300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170
1LA4 564-5CN.0-Z K96	10300	1060	1210	1070	1705	1400	560	160	240	560	1380	3170

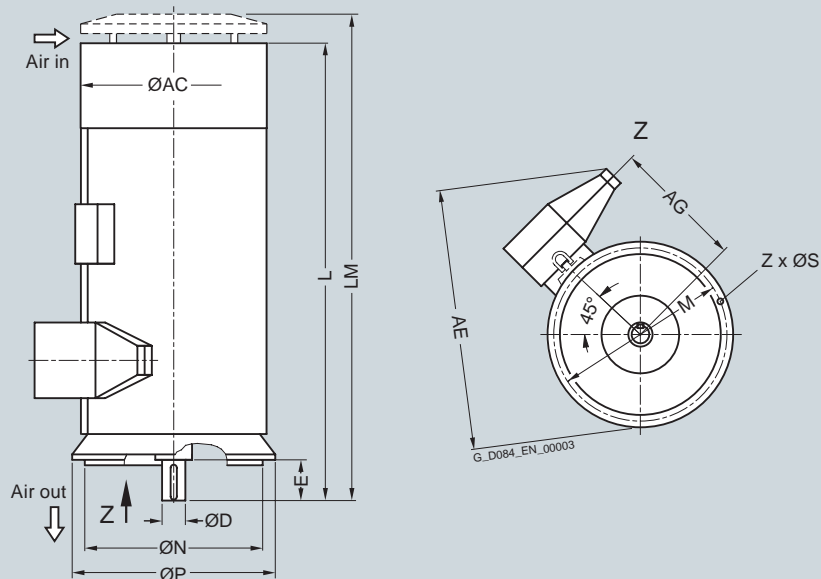
¹⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾ mm	AE ²⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings³⁾													
2-pole													
1LA4 310-2AN..	1600	700	620	1225	70	105	1590	1720	800	680	740	22	8
1LA4 312-2AN..	1600	700	620	1225	70	105	1590	1720	800	680	740	22	8
1LA4 314-2AN..	1850	700	620	1225	70	105	1790	1920	800	680	740	22	8
1LA4 316-2AN..	2000	700	620	1225	70	105	1790	1920	800	680	740	22	8
1LA4 350-2AN.. ⁴⁾	2350	780	660	1310	75	105	1930	2070	900	780	840	22	8
1LA4 352-2AN.. ⁴⁾	2450	780	660	1310	75	105	1930	2070	900	780	840	22	8
1LA4 354-2AN.. ⁴⁾	2550	780	660	1310	75	105	1930	2070	900	780	840	22	8
1LA4 400-2AN.. ⁴⁾	3100	870	710	1400	85	130	2095	2245	1000	880	940	22	8
1LA4 402-2AN.. ⁴⁾	3300	870	710	1400	85	130	2095	2245	1000	880	940	22	8
1LA4 404-2AN.. ⁴⁾	3550	870	710	1400	85	130	2095	2245	1000	880	940	22	8
4-pole													
1LA4 310-4AN..	1500	700	620	1225	90	130	1610	1740	800	680	740	22	8
1LA4 312-4AN..	1650	700	620	1225	90	130	1610	1740	800	680	740	22	8
1LA4 314-4AN..	1900	700	620	1225	90	130	1810	1940	800	680	740	22	8
1LA4 316-4AN..	2050	700	620	1225	90	130	1810	1940	800	680	740	22	8
1LA4 350-4AN..	2400	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 352-4AN..	2600	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 354-4AN..	2800	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 400-4AN..	3400	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 402-4AN..	3600	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 404-4AN..	3800	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 450-4AN..	4700	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8

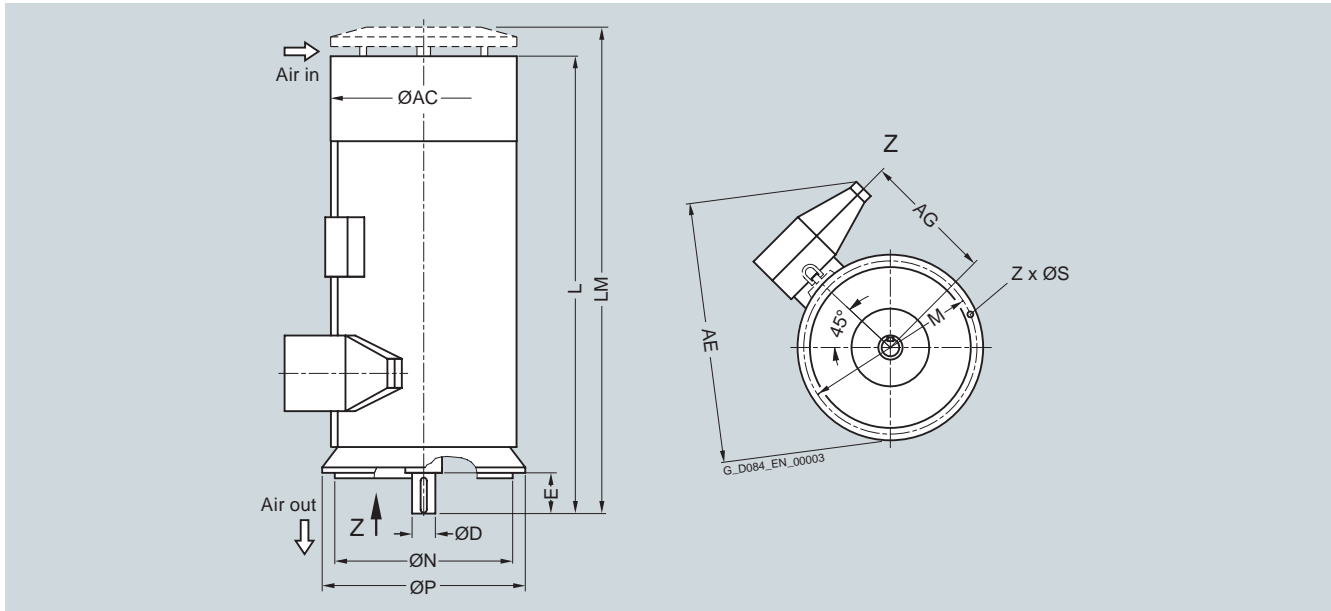
¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 185 mm (for AC = 1070), by + 180 mm (for AC = 1210) or by + 130 mm (for AC = 1350).

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

⁴⁾ Only in the 50 Hz version.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾ mm	AE ²⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings³⁾													
4-pole													
1LA4 452-4AN..	5000	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-4AN..	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-4AN..	5900	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-4AN..	6300	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-4AN..	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-4CN..	8300	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-4CN..	9000	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-4CN..	9700	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
6-pole													
1LA4 314-6AN..	1950	700	620	1225	90	130	1810	1940	800	680	740	22	8
1LA4 316-6AN..	2150	700	620	1225	90	130	1810	1940	800	680	740	22	8
1LA4 350-6AN..	2450	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 352-6AN..	2650	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 354-6AN..	2900	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 400-6AN..	3500	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 402-6AN..	3750	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 404-6AN..	4000	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 450-6AN..	4600	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-6AN..	4900	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-6AN..	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-6CN..	6400	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-6CN..	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-6CN..	7300	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-6CN..	8500	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-6CN..	9300	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

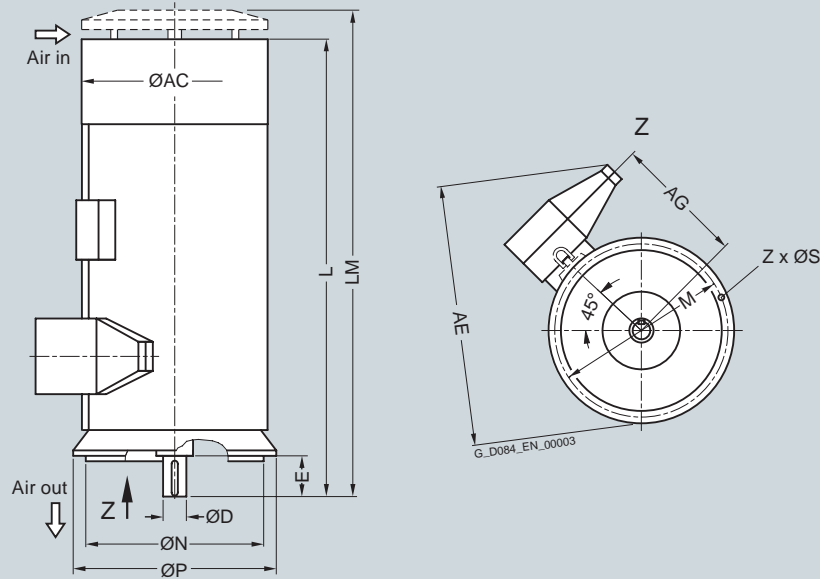
²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 185 mm (for AC = 1070), by + 180 mm (for AC = 1210) or by + 130 mm (for AC = 1350).

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾ mm	AE ²⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings³⁾													
6-pole													
1LA4 564-6CN..	10100	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 632-6CN..	12700	1350	O.R. ⁴⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4 634-6CN..	13400	1350	O.R. ⁴⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4 636-6CN..	14100	1350	O.R. ⁴⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
8-pole													
1LA4 350-8AN..	2450	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 352-8AN..	2650	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 354-8AN..	2850	780	660	1310	100	165	1985	2125	900	780	840	22	8
1LA4 400-8AN..	3450	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 402-8AN..	3700	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 404-8AN..	3950	870	710	1400	120	165	2125	2275	1000	880	940	22	8
1LA4 450-8AN..	4600	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-8AN..	4900	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-8AN..	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-8CN..	6400	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-8CN..	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-8CN..	7200	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-8CN..	8500	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-8CN..	9200	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-8CN..	10000	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 632-8CN..	12500	1350	O.R. ⁴⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4 634-8CN..	13300	1350	O.R. ⁴⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4 636-8CN..	14000	1350	O.R. ⁴⁾	1820	180	240	3115	3305	1400	1250	1320	26	16

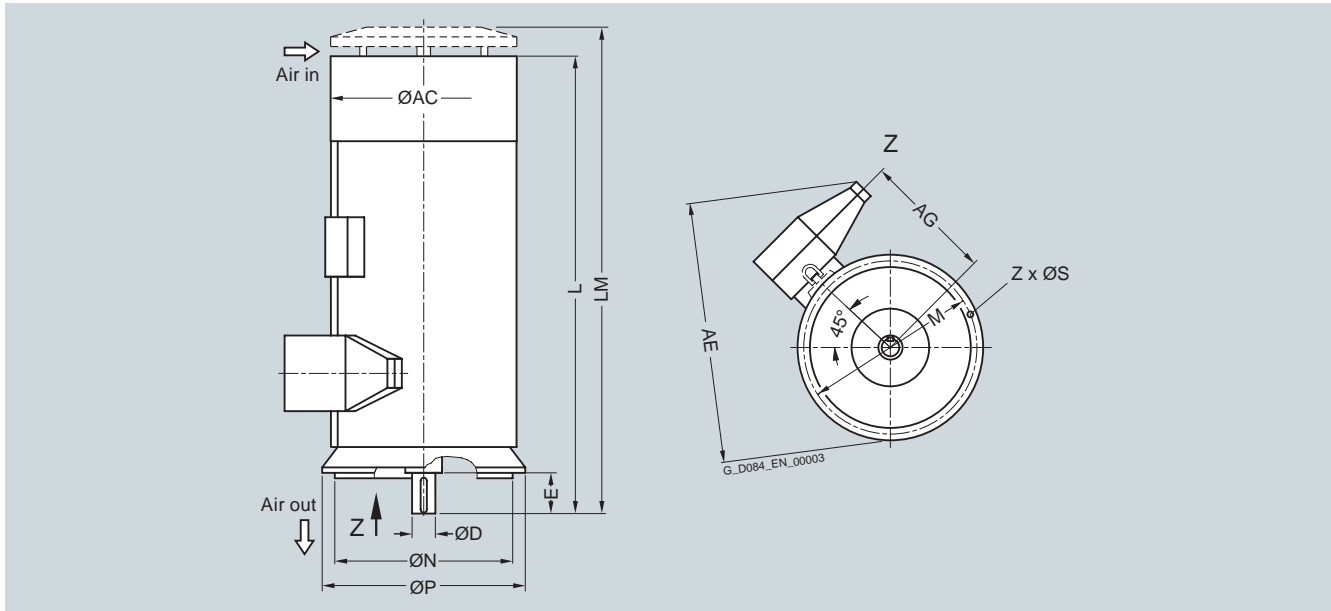
¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 185 mm (for AC = 1070), by + 180 mm (for AC = 1210) or by + 130 mm (for AC = 1350).

³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

⁴⁾ On request

Dimension drawings (continued)



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾ mm	AE ²⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings³⁾													
10-pole													
1LA4 450-3AN..	4600	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-3AN..	4900	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-3AN..	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-3CN..	6400	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-3CN..	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-3CN..	7200	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-3CN..	8500	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-3CN..	9200	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-3CN..	10000	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
12-pole													
1LA4 450-5CN..	4600	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-5CN..	4900	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-5CN..	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-5CN..	6400	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-5CN..	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-5CN..	7200	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-5CN..	8500	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-5CN..	9200	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-5CN..	10000	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16

¹⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 185 mm (for AC = 1070), by + 180 mm (for AC = 1210) or by + 130 mm (for AC = 1350).

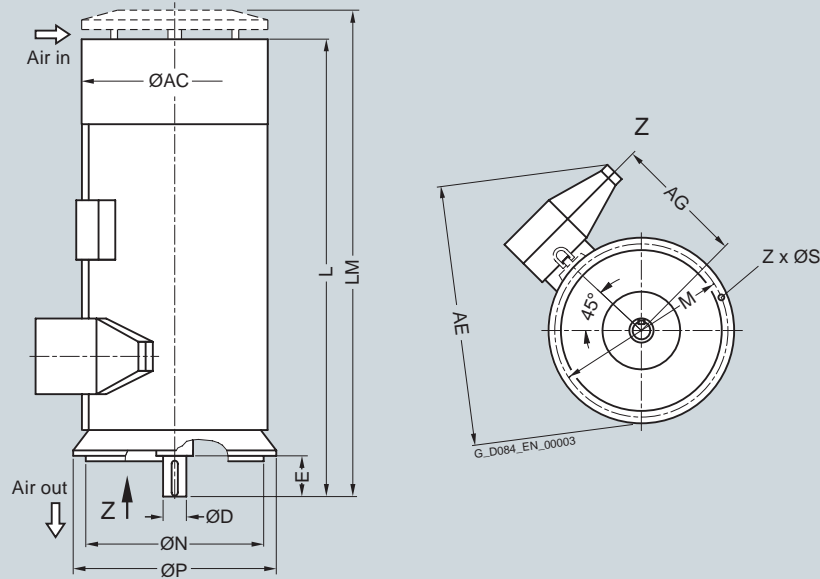
³⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

Motors for line operation

Air-cooled motors

H-compact 1LA4

Dimension drawings

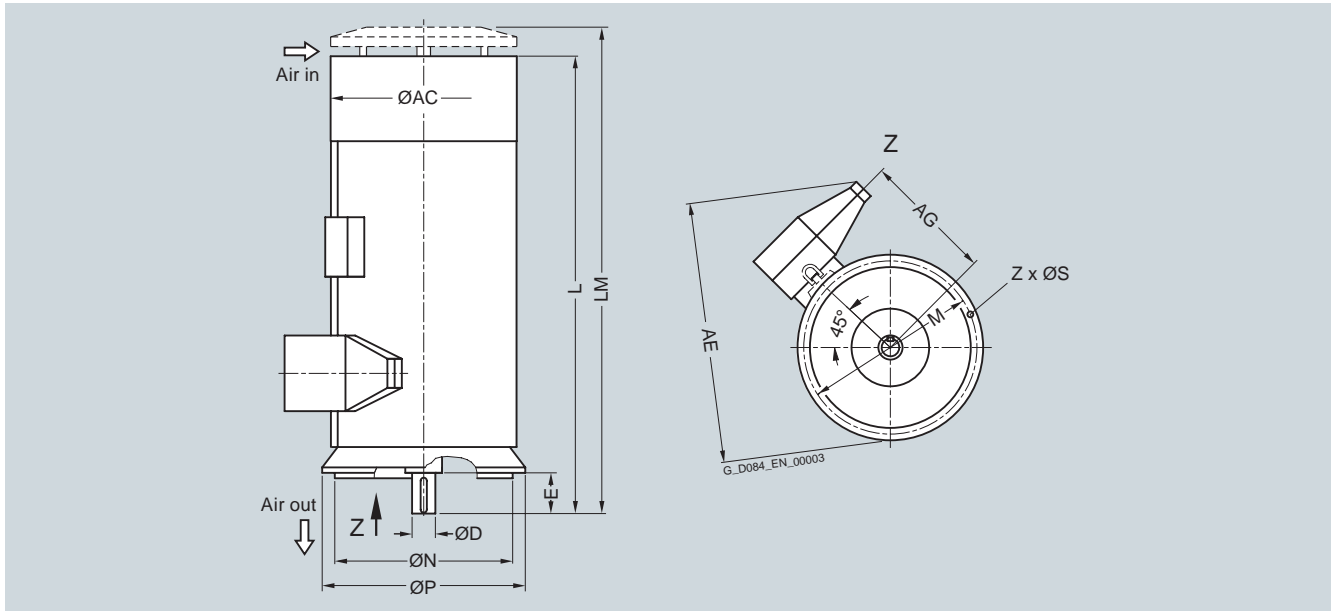


Motor type	Weight kg	Dimensions											
		AC mm	AG mm	AE mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings¹⁾													
4-pole													
1LA4 450-4AN..	4600	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-4AN..	4900	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-4AN..	5200	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-4AN..	5900	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-4AN..	6300	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-4AN..	6700	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-4CN..	8100	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-4CN..	8900	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-4CN..	9600	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
6-pole													
1LA4 450-6AN..	4600	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-6AN..	4800	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-6AN..	5100	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-6CN..	6400	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-6CN..	6800	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-6CN..	7200	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-6CN..	8500	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-6CN..	9200	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-6CN..	10000	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 634-6CN..	13400	1350	O.R. ²⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4 636-6CN..	14100	1350	O.R. ²⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
8-pole													
1LA4 450-8AN..	4600	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 452-8AN..	4800	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 454-8AN..	5100	960	865	1740	130	200	2390	2550	1150	1000	1080	26	8
1LA4 500-8CN..	6300	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16

¹⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

²⁾ On request.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions											
		AC mm	AG mm	AE mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings¹⁾													
8-pole													
1LA4 502-8CN..	6800	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-8CN..	7200	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-8CN..	8400	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-8CN..	9100	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-8CN..	10000	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 634-8CN..	13300	1350	O.R. ²⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4 636-8CN..	14000	1350	O.R. ²⁾	1820	180	240	3115	3305	1400	1250	1320	26	16
10-pole													
1LA4 500-3CN..	6300	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 502-3CN..	6800	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 504-3CN..	7200	1070	940	1845	140	200	2525	2695	1250	1120	1180	26	16
1LA4 560-3CN..	8400	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-3CN..	9100	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-3CN..	10000	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
12-pole													
1LA4 560-5CN..	8400	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 562-5CN..	9100	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16
1LA4 564-5CN..	10000	1210	1010	1980	160	240	2775	2955	1400	1250	1320	26	16

¹⁾ The dimensions also apply for the 1MA4 and 1MS4 series.

²⁾ On request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1RQ4/1RQ6	
Rated voltage	3.3 ... 13.8 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC611 / IC616
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN, NEMA
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

Technical data (continued)

Power ranges for IEC motors for line operation

1RQ4, 1SG4 (Ex nA), 1SB4 (Ex px) series

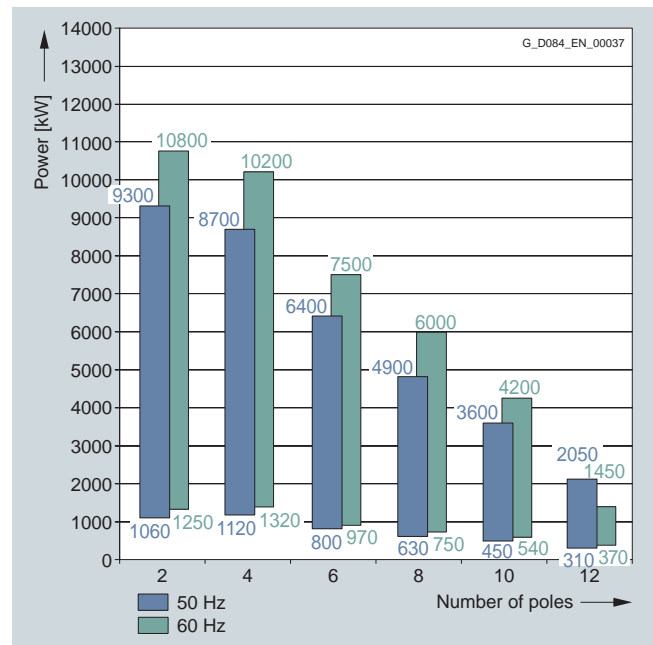
1RQ6, 1SG6 (Ex nA), 1SB6 (Ex px) series

Insulation system, thermal class 155 (F), utilized to 130 (B).

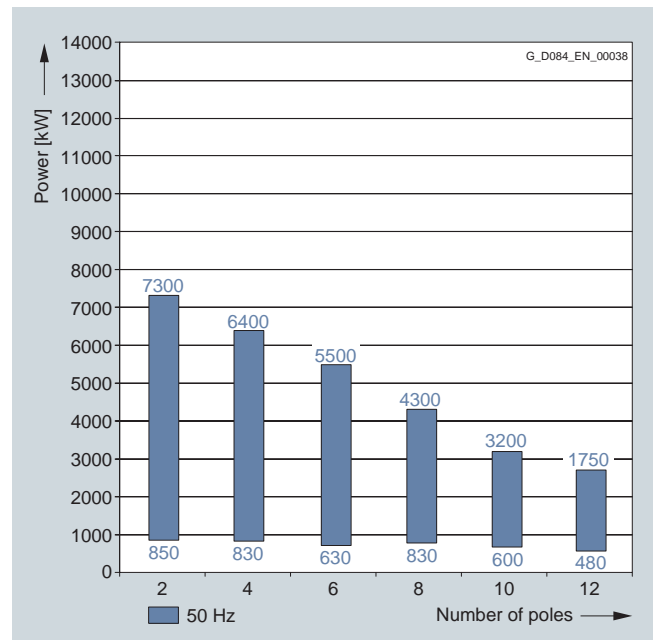
Ambient temperature up to 40 °C, installation altitude up to 1000 m.

3.3 to 6.6 kV; 50 Hz

4.0 to 6.6 kV; 60 Hz



9 to 11 kV; 50 Hz



Motors for line operation

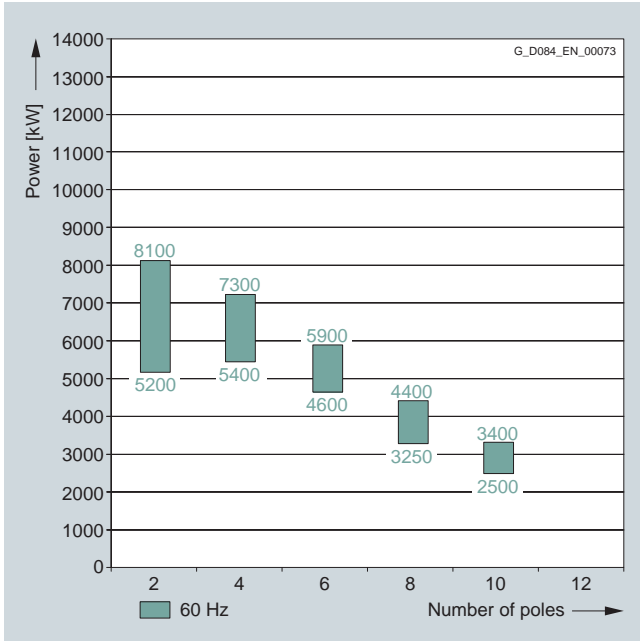
Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Technical data (continued)

Power ranges for IEC motors for line operation (continued)

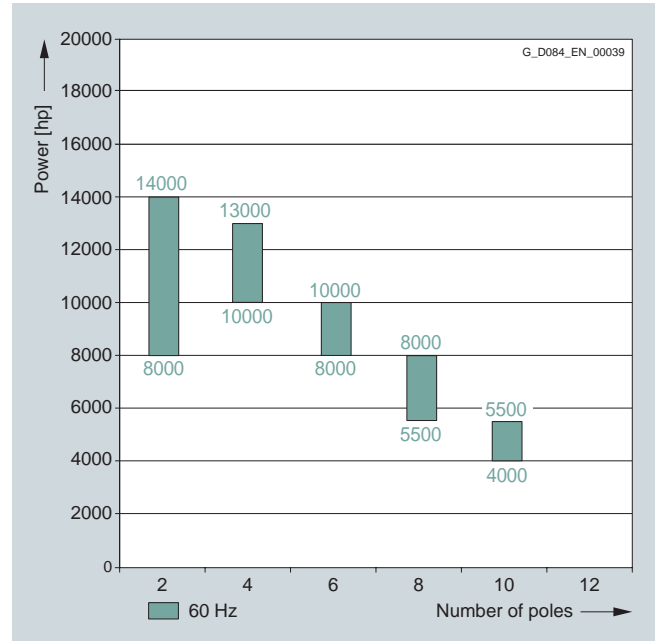
12.5 to 13.8 kV; 60 Hz



Power ranges for NEMA motors for line operation

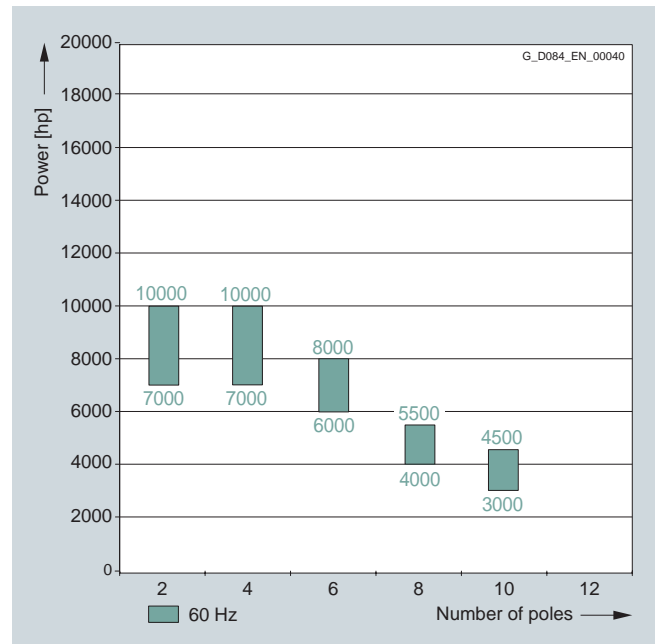
Insulation system, thermal class 155 (F), utilized to 130 (B).

4 to 6.6 kV; 60 Hz



2

12.5 to 13.8 kV; 60 Hz



Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

The 1RQ4 data also apply for explosion-proof 1SB4 (Ex px) and 1 SG4 (Ex nA).

Rated power IEC kW	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current I_{rated} 6 kV A	Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ					Motor kgm ²	External, max. ¹⁾ kgm ²
3.3 ... 6.6 kV, 50 Hz													
2-pole													
1060	1RQ4 450-2JE	2973	120	95.2	95.2	0.89	0.88	3405	2.3	0.68	5.1	10.5	32
1220	1RQ4 452-2JE	2976	140	95.7	95.7	0.88	0.86	3915	2.5	0.70	5.5	11.5	38
1370	1RQ4 454-2JE	2975	152	95.9	95.9	0.90	0.88	4398	2.5	0.68	5.5	13.0	43
1550	1RQ4 456-2JE	2977	172	96.1	96.1	0.90	0.88	4972	2.5	0.70	5.5	14.5	49
1700	1RQ4 500-2JE	2978	194	95.8	95.6	0.88	0.87	5452	2.3	0.63	5.3	22	42
1950	1RQ4 502-2JE	2979	220	96.1	95.9	0.88	0.87	6251	2.5	0.68	5.5	23	49
2200	1RQ4 504-2JE	2981	250	96.3	96.2	0.88	0.87	7048	2.6	0.68	5.5	26	56
2500	1RQ4 506-2JE	2981	285	96.5	96.4	0.88	0.87	8009	2.6	0.68	5.5	28	67
2750	1RQ4 560-2JE	2981	310	96.1	96.0	0.89	0.87	8810	2.1	0.50	4.7	33	58
3000	1RQ4 562-2JE	2982	335	96.3	96.2	0.89	0.88	9608	2.3	0.55	5.2	35	70
3550	1RQ4 564-2JE	2983	395	96.7	96.5	0.90	0.89	11365	2.4	0.55	5.3	40	85
4000	1RQ4 566-2JE	2985	445	96.9	96.7	0.89	0.87	12797	2.5	0.55	5.5	44	104
4000	1RQ4 630-2JE	2984	450	96.6	96.5	0.89	0.89	12802	2.40	0.35	4.6	80	150
4500	1RQ4 632-2JE	2986	495	96.9	96.8	0.90	0.88	14392	2.70	0.42	5.4	85	200
5300	1RQ4 634-2JE	2986	580	97.3	97.2	0.90	0.89	16951	2.70	0.44	5.4	95	280
6000	1RQ4 636-2JE	2987	660	97.5	97.4	0.90	0.89	19183	2.70	0.45	5.5	105	320
4-pole													
1120	1RQ4 450-4JE	1485	128	95.6	95.7	0.88	0.86	7203	2.3	0.70	5.4	22	240
1240	1RQ4 452-4JE	1485	142	95.9	96.0	0.88	0.86	7974	2.3	0.70	5.5	24	270
1380	1RQ4 454-4JE	1486	158	96.0	96.1	0.88	0.86	8869	2.3	0.70	5.5	27	310
1540	1RQ4 456-4JE	1487	178	96.2	96.3	0.87	0.84	9890	2.3	0.65	5.5	30	325
1750	1RQ4 500-4JE	1487	198	96.0	96.1	0.89	0.88	11239	2.3	0.75	5.4	42	320
1920	1RQ4 502-4JE	1487	215	96.2	96.2	0.89	0.88	12331	2.3	0.78	5.5	45	360
2200	1RQ4 504-4JE	1488	245	96.4	96.5	0.89	0.88	14120	2.3	0.78	5.5	51	420
2450	1RQ4 506-4JE	1488	275	96.6	96.7	0.89	0.88	15724	2.3	0.75	5.5	56	480
2950	1RQ4 560-4JE	1489	325	96.5	96.7	0.90	0.89	18920	2.3	0.68	5.4	77	350
3250	1RQ4 562-4JE	1489	360	96.8	97.9	0.90	0.89	20845	2.3	0.68	5.4	86	410
3700	1RQ4 564-4JE	1490	410	97.0	97.0	0.89	0.88	23715	2.3	0.68	5.5	97	480
4000	1RQ4 566-4JE	1491	445	97.1	97.2	0.89	0.88	25620	2.3	0.68	5.5	106	540
4400	1RQ4 630-4JE	1490	490	96.8	96.9	0.89	0.89	28201	2.30	0.62	5.2	150	920
4900	1RQ4 632-4JE	1491	550	97.0	97.1	0.89	0.88	31385	2.45	0.65	5.5	170	1150
5300	1RQ4 634-4JE	1492	590	97.3	97.2	0.89	0.88	33924	2.40	0.62	5.5	185	1350
5800	1RQ4 636-4JE	1492	650	97.3	97.3	0.88	0.87	37125	2.40	0.61	5.5	200	1200

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RQ4	Speed	Rated current		Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
			I_{rated} at 6 kV	4/4 load	3/4 load	4/4 load	3/4 load	T_B/T_{rated}					T_{LR}/T_{rated}	I_{LR}/I_{rated}
kW	Order No.	rpm	A	%	%	cos φ	cos φ	Nm	[-]	[-]	[-]	kgm ²	kgm ²	
3.3 ... 6.6 kV, 50 Hz														
6-pole														
800	1RQ4 450-6JE	988	95	95.0	95.1	0.85	0.83	7733	2.2	0.85	5.3	31	700	
900	1RQ4 452-6JE	988	106	95.2	95.3	0.86	0.84	8699	2.2	0.85	5.3	35	800	
1050	1RQ4 454-6JE	989	124	95.3	95.4	0.86	0.84	10139	2.2	0.85	5.5	38	850	
1200	1RQ4 456-6JE	990	142	95.7	95.7	0.85	0.83	11576	2.3	0.80	5.5	43	870	
1400	1RQ4 500-6JE	990	162	95.7	95.8	0.87	0.86	13505	2.2	0.85	5.4	62	1050	
1600	1RQ4 502-6JE	990	184	95.9	96.0	0.87	0.86	15434	2.2	0.85	5.4	70	1150	
1780	1RQ4 504-6JE	990	205	96.0	96.1	0.87	0.86	17171	2.2	0.85	5.5	77	1350	
1950	1RQ4 506-6JE	991	225	96.2	96.2	0.87	0.86	18792	2.2	0.85	5.5	85	1600	
2250	1RQ4 560-6JE	992	260	96.3	96.5	0.87	0.85	21661	2.1	0.72	5.1	108	1300	
2550	1RQ4 562-6JE	993	295	96.5	96.6	0.86	0.84	24524	2.2	0.75	5.4	123	1600	
2800	1RQ4 564-6JE	993	320	96.6	96.7	0.87	0.85	26928	2.2	0.75	5.4	137	1800	
3000	1RQ4 566-6JE	993	345	96.7	96.8	0.87	0.85	28852	2.2	0.75	5.4	149	2000	
3550	1RQ4 630-6JE	993	410	96.8	96.7	0.86	0.85	34141	2.15	0.63	5.0	188	2400	
3850	1RQ4 632-6JE	993	440	96.9	96.8	0.87	0.85	37027	2.20	0.66	5.2	207	2800	
4100	1RQ4 634-6JE	994	475	96.9	96.9	0.86	0.84	39391	2.30	0.68	5.5	228	2500	
4400	1RQ4 636-6JE	994	510	97.1	97.1	0.86	0.84	42274	2.40	0.68	5.5	251	3200	
8-pole														
630	1RQ4 450-8JE	742	78	94.6	94.7	0.82	0.78	8108	2.3	0.88	5.5	39	850	
700	1RQ4 452-8JE	742	87	94.8	94.9	0.82	0.78	9009	2.3	0.88	5.5	43	900	
780	1RQ4 454-8JE	743	96	95.0	95.0	0.82	0.77	10026	2.3	0.88	5.5	48	930	
880	1RQ4 456-8JE	743	108	95.2	95.2	0.82	0.77	11311	2.3	0.88	5.5	54	1200	
1040	1RQ4 500-8JE	743	126	95.3	95.4	0.83	0.80	13367	2.3	0.90	5.5	74	1600	
1160	1RQ4 502-8JE	743	140	95.5	95.6	0.83	0.80	14910	2.3	0.90	5.5	84	1900	
1280	1RQ4 504-8JE	743	154	95.8	95.8	0.84	0.81	16452	2.3	0.90	5.5	92	1900	
1400	1RQ4 506-8JE	743	166	95.8	95.9	0.85	0.82	17995	2.2	0.90	5.5	103	2200	
1650	1RQ4 560-8JE	744	198	95.9	96.0	0.84	0.81	21179	2.1	0.78	5.3	128	2500	
1850	1RQ4 562-8JE	744	220	96.1	96.2	0.85	0.82	23747	2.1	0.78	5.4	146	3000	
2000	1RQ4 564-8JE	744	235	96.3	96.3	0.85	0.82	25672	2.1	0.80	5.5	163	3500	
2200	1RQ4 566-8JE	745	260	96.4	96.4	0.85	0.82	28201	2.2	0.80	5.5	178	3700	
2650	1RQ4 630-8JE	744	315	96.4	96.4	0.84	0.81	34015	2.40	0.75	5.1	246	3300	
2850	1RQ4 632-8JE	745	340	96.5	96.5	0.83	0.79	36534	2.50	0.81	5.5	272	3600	
3000	1RQ4 634-8JE	745	355	96.5	96.6	0.84	0.81	38456	2.50	0.81	5.5	300	3800	
3200	1RQ4 636-8JE	745	375	96.7	96.6	0.85	0.82	41020	2.50	0.80	5.5	331	4200	

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque T_B/T_{rated}	Locked -rotor torque T_{LR}/T_{rated}	Locked -rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor kgm ²
3.3 ... 6.6 kV, 50 Hz														
10-pole														
450	1RQ4 450-3JE	592	59	93.7	93.6	0.78	0.72	7259	2.3	1.00	5.4	39	1250	
500	1RQ4 452-3JE	592	66	93.9	93.8	0.78	0.72	8066	2.4	1.00	5.5	43	1500	
560	1RQ4 454-3JE	592	74	94.1	94.0	0.77	0.71	9034	2.4	1.00	5.5	48	1650	
610	1RQ4 456-3JE	593	82	94.2	94.0	0.76	0.69	9824	2.5	1.00	5.5	54	1950	
740	1RQ4 500-3JE	593	94	94.6	94.6	0.80	0.76	11917	2.2	0.83	5.2	74	1600	
820	1RQ4 502-3JE	593	104	94.8	94.8	0.80	0.76	13206	2.3	0.85	5.4	84	1950	
900	1RQ4 504-3JE	593	114	94.9	94.9	0.80	0.76	14494	2.3	0.90	5.4	92	2500	
1020	1RQ4 506-3JE	593	128	95.1	95.1	0.80	0.74	16427	2.3	0.90	5.5	103	3100	
1220	1RQ4 560-3JE	594	156	95.2	95.1	0.79	0.74	19614	2.3	0.85	5.2	128	3000	
1400	1RQ4 562-3JE	594	176	95.5	95.4	0.80	0.75	22508	2.3	0.85	5.4	146	4600	
1550	1RQ4 564-3JE	594	194	95.6	95.6	0.80	0.75	24920	2.4	0.85	5.5	163	5100	
1660	1RQ4 566-3JE	595	215	95.7	95.7	0.78	0.72	26644	2.4	0.85	5.5	178	5700	
2000	1RQ4 630-3JE	593	240	96.0	96.2	0.84	0.81	32209	2.10	0.74	4.8	246	5000	
2200	1RQ4 632-3JE	594	260	96.1	96.3	0.84	0.81	35370	2.20	0.76	4.9	272	5700	
2400	1RQ4 634-3JE	594	285	96.3	96.5	0.84	0.81	38586	2.20	0.77	4.9	300	6600	
2600	1RQ4 636-3JE	594	315	96.4	96.6	0.83	0.79	41801	2.50	0.88	5.5	331	7300	
12-pole														
310	1RQ4 450-5JE	493	46	92.7	92.5	0.71	0.64	6005	2.0	0.72	4.6	39	1250	
350	1RQ4 452-5JE	493	52	93.1	92.7	0.70	0.62	6780	2.2	0.78	4.9	43	1600	
400	1RQ4 454-5JE	493	58	93.4	93.2	0.71	0.66	7748	2.0	0.72	4.6	48	1800	
450	1RQ4 456-5JE	493	64	93.6	93.4	0.72	0.66	8717	2.1	0.75	4.8	54	1950	
540	1RQ4 500-5JE	492	76	94.0	93.9	0.73	0.67	10482	2.1	0.70	4.6	74	2200	
610	1RQ4 502-5JE	493	85	94.3	94.2	0.73	0.67	11816	2.2	0.75	4.8	84	3000	
670	1RQ4 504-5JE	493	95	94.4	94.3	0.72	0.65	12979	2.3	0.78	5.0	91	3700	
740	1RQ4 506-5JE	493	104	94.6	94.4	0.72	0.65	14335	2.3	0.78	5.2	102	4400	
920	1RQ4 560-5JE	494	128	94.7	94.8	0.73	0.67	17785	2.0	0.67	4.5	128	4100	
1020	1RQ4 562-5JE	495	144	94.9	94.9	0.72	0.65	19679	2.1	0.72	4.6	146	4700	
1120	1RQ4 564-5JE	495	158	95.0	95.0	0.72	0.65	21608	2.2	0.72	4.8	163	5300	
1220	1RQ4 566-5JE	495	172	95.2	95.1	0.72	0.65	23537	2.3	0.75	4.8	178	5900	
1600	1RQ4 630-5JE	494	205	95.5	95.8	0.78	0.72	30931	2.25	0.83	5.0	246	5700	
1800	1RQ4 632-5JE	494	230	95.8	96.0	0.78	0.73	34798	2.30	0.85	5.1	272	7500	
1950	1RQ4 634-5JE	494	250	96.0	96.1	0.78	0.73	37697	2.30	0.87	5.2	300	8800	
2050	1RQ4 636-5JE	495	265	96.2	96.3	0.78	0.72	39551	2.45	0.92	5.4	331	10500	

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

The 1RQ6 data also apply to explosion-proof 1SB6 (Ex px) and 1SG6 (Ex nA) motors.

Rated power IEC	High voltage motor H-compact PLUS 1RQ6	Speed	Rated current		Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
			I_{rated} at 6 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\frac{T_B}{T_{rated}}$					$\frac{T_{LR}}{T_{rated}}$	$\frac{I_{LR}}{I_{rated}}$
kW	Order No.	rpm	A	%	%	cos φ	cos φ	Nm	[-]	[-]	[-]	kgm ²	kgm ²	
3.3 ... 6.6 kV, 50 Hz														
2-pole														
5400 ²⁾	1RQ6 710-2HJ ■0	2991	600	96.9	96.7	0.89	0.88	17245	2.4	0.51	5.5	134	166	
7000 ²⁾	1RQ6 712-2HJ ■0	2990	770	97.1	97.0	0.90	0.90	22362	2.2	0.49	5.2	148	172	
8100 ²⁾	1RQ6 714-2HJ ■0	2991	880	97.3	97.1	0.91	0.90	25871	2.4	0.55	5.5	163	182	
9300 ²⁾	1RQ6 716-2HJ ■0	2990	1000	97.4	97.3	0.92	0.91	29710	2.3	0.54	5.5	180	200	
4-pole														
6100 ²⁾	1RQ6 710-4JJ ■0	1493	660	97.3	97.4	0.91	0.90	39025	2.2	0.58	5.5	278	772	
7000 ²⁾	1RQ6 712-4JJ ■0	1493	760	97.4	97.5	0.91	0.90	44773	2.2	0.58	5.5	305	815	
7400 ²⁾	1RQ6 714-4JJ ■0	1493	790	97.4	97.5	0.92	0.92	47357	2.1	0.60	5.5	341	989	
8700 ²⁾	1RQ6 716-4JJ ■0	1493	930	97.6	97.6	0.92	0.91	55655	2.2	0.61	5.5	374	1066	
6-pole														
4900	1RQ6 710-6JJ ■■	994	560	97.0	97.3	0.86	0.85	47091	2.1	0.68	5.2	338	2362	
5300	1RQ6 712-6JJ ■■	994	600	97.2	97.4	0.87	0.86	50929	2.1	0.75	5.5	375	2725	
5800	1RQ6 714-6JJ ■■	994	650	97.3	97.4	0.88	0.86	55713	2.2	0.80	5.5	427	3373	
6400	1RQ6 716-6JJ ■■	995	730	97.4	97.5	0.87	0.86	61459	2.3	0.83	5.5	476	3924	
8-pole														
3650	1RQ6 710-8JJ ■■	745	425	96.8	97.1	0.85	0.83	46798	1.9	0.77	5.2	426	5374	
4000	1RQ6 712-8JJ ■■	745	465	96.9	97.2	0.85	0.84	51282	1.9	0.78	5.2	476	6124	
4400	1RQ6 714-8JJ ■■	746	510	97.0	97.2	0.85	0.83	56368	2.1	0.89	5.5	542	7308	
4900	1RQ6 716-8JJ ■■	746	570	97.1	97.3	0.85	0.83	62760	2.2	0.93	5.5	608	8492	
10-pole														
2750	1RQ6 710-3JJ ■■	596	340	96.3	96.9	0.81	0.78	44099	2.1	0.72	5.1	426	8974	
3000	1RQ6 712-3JJ ■■	596	370	96.6	97.0	0.81	0.77	48083	2.2	0.76	5.4	476	10324	
3300	1RQ6 714-3JJ ■■	596	405	96.8	97.0	0.81	0.77	52867	2.3	0.82	5.5	542	12458	
3600	1RQ6 716-3JJ ■■	596	440	96.8	97.0	0.81	0.77	57653	2.4	0.85	5.5	609	14691	

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque T_B/T_{rated}	Locked -rotor torque T_{LR}/T_{rated}	Locked -rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	Motor					External, max. ¹⁾	
kW			A	%	%	cos ϕ	cos ϕ		[-]	[-]	[-]	kgm ²	kgm ²	
9.0 ... 11 kV, 50 Hz														
2-pole														
850	1RQ4 450-2JE ■0	2975	58	94.8	94.6	0.90	0.88	2729	2.4	0.68	5.4	10.5	23	
970	1RQ4 452-2JE ■0	2977	65	95.2	95.1	0.90	0.88	3112	2.5	0.70	5.5	11.5	28	
1120	1RQ4 454-2JE ■0	2978	75	95.4	95.3	0.90	0.88	3592	2.5	0.70	5.5	13.0	30	
1220	1RQ4 456-2JE ■0	2978	82	95.7	95.6	0.90	0.89	3912	2.5	0.68	5.5	14.5	32	
1400	1RQ4 500-2JE ■0	2980	95	95.3	95.0	0.89	0.87	4487	2.4	0.65	5.5	22	31	
1550	1RQ4 502-2JE ■0	2980	106	95.6	95.4	0.89	0.88	4967	2.5	0.68	5.5	23	36	
1800	1RQ4 504-2JE ■0	2981	122	95.9	95.7	0.89	0.88	5767	2.4	0.62	5.5	26	55	
2050	1RQ4 506-2JE ■0	2982	138	96.2	96.0	0.89	0.88	6565	2.4	0.62	5.5	28	66	
2350	1RQ4 560-2JE ■0	2983	158	95.9	95.6	0.89	0.87	7523	2.2	0.45	4.9	33	62	
2600	1RQ4 562-2JE ■0	2984	176	96.0	95.8	0.89	0.87	8321	2.3	0.50	5.2	35	69	
3100	1RQ4 564-2JE ■0	2985	205	96.5	96.2	0.90	0.88	9918	2.5	0.55	5.5	40	90	
3400	1RQ4 566-2JE ■0	2985	225	96.7	96.4	0.90	0.89	10878	2.5	0.55	5.5	44	115	
3600	1RQ4 630-2JE ■0	2986	240	96.5	96.2	0.89	0.88	11514	2.60	0.39	5.1	61	100	
4100	1RQ4 632-2JE ■0	2987	270	96.8	96.7	0.90	0.89	13108	2.70	0.42	5.5	68	140	
4600	1RQ4 634-2JE ■0	2987	305	97.1	96.9	0.90	0.89	14707	2.70	0.42	5.5	77	160	
5200	1RQ4 636-2JE ■0	2987	340	97.3	97.1	0.91	0.90	16625	2.60	0.43	5.5	87	200	
4-pole														
830	1RQ4 450-4JE ■■	1485	56	95.1	95.2	0.90	0.89	5338	2.3	0.70	5.5	22	135	
930	1RQ4 452-4JE ■■	1485	63	95.3	95.4	0.90	0.89	5981	2.3	0.70	5.5	24	140	
1050	1RQ4 454-4JE ■■	1485	71	95.5	95.7	0.90	0.89	6753	2.3	0.70	5.5	27	180	
1220	1RQ4 456-4JE ■■	1487	83	95.8	95.9	0.89	0.87	7835	2.3	0.63	5.5	30	170	
1450	1RQ4 500-4JE ■■	1488	99	95.7	95.7	0.88	0.87	9306	2.3	0.70	5.5	42	240	
1600	1RQ4 502-4JE ■■	1489	110	95.9	95.8	0.88	0.86	10262	2.3	0.70	5.5	45	250	
1800	1RQ4 504-4JE ■■	1489	122	96.0	96.0	0.88	0.87	11545	2.3	0.70	5.5	51	290	
2000	1RQ4 506-4JE ■■	1490	136	96.3	96.2	0.88	0.86	12819	2.3	0.70	5.5	56	340	
2500	1RQ4 560-4JE ■■	1490	166	96.2	96.4	0.90	0.89	16023	2.3	0.65	5.5	77	330	
2750	1RQ4 562-4JE ■■	1491	184	96.5	96.6	0.89	0.87	17614	2.3	0.65	5.5	86	380	
3100	1RQ4 564-4JE ■■	1491	205	96.7	96.7	0.90	0.89	19856	2.2	0.65	5.5	97	450	
3350	1RQ4 566-4JE ■■	1491	225	96.8	96.8	0.89	0.89	21457	2.2	0.65	5.5	106	530	
3800	1RQ4 630-4JE ■■	1491	255	96.7	96.6	0.89	0.88	24339	2.40	0.62	5.4	139	600	
4250	1RQ4 632-4JE ■■	1491	280	96.8	96.9	0.90	0.90	27222	2.40	0.64	5.5	154	720	
4700	1RQ4 634-4JE ■■	1492	310	97.0	97.0	0.90	0.89	30084	2.40	0.63	5.5	174	850	
5100	1RQ4 636-4JE ■■	1492	340	97.2	97.1	0.89	0.88	32644	2.45	0.60	5.5	186	850	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
9.0 ... 11 kV, 50 Hz														
6-pole														
630	1RQ4 450-6JE	990	45	94.6	94.6	0.85	0.83	6077	2.3	0.85	5.5	31	300	
710	1RQ4 452-6JE	990	51	94.8	94.8	0.85	0.83	6849	2.2	0.82	5.5	35	380	
800	1RQ4 454-6JE	990	56	94.8	94.8	0.87	0.85	7717	2.3	0.82	5.5	38	320	
940	1RQ4 456-6JE	991	66	95.1	95.1	0.86	0.83	9059	2.3	0.75	5.5	43	360	
1120	1RQ4 500-6JE	991	78	95.1	95.2	0.87	0.85	10793	2.2	0.80	5.5	62	500	
1280	1RQ4 502-6JE	992	89	95.5	95.6	0.87	0.85	12323	2.2	0.80	5.5	70	600	
1400	1RQ4 504-6JE	992	98	95.7	95.7	0.86	0.84	13478	2.2	0.75	5.5	77	650	
1550	1RQ4 506-6JE	992	108	95.8	95.8	0.86	0.84	14922	2.3	0.75	5.5	85	720	
1950	1RQ4 560-6JE	993	136	96.1	96.1	0.86	0.84	18754	2.2	0.75	5.5	108	900	
2150	1RQ4 562-6JE	994	150	96.3	96.2	0.86	0.83	20656	2.2	0.70	5.5	123	950	
2400	1RQ4 564-6JE	994	170	96.4	96.4	0.85	0.82	23058	2.3	0.70	5.5	137	1100	
2600	1RQ4 566-6JE	994	182	96.5	96.5	0.85	0.82	24980	2.3	0.70	5.5	149	1350	
3100	1RQ4 630-6JE	994	215	96.6	96.5	0.86	0.84	29784	2.30	0.66	5.4	188	1400	
3400	1RQ4 632-6JE	994	235	96.7	96.7	0.87	0.85	32666	2.30	0.68	5.5	207	1700	
3700	1RQ4 634-6JE	994	255	96.8	96.8	0.86	0.85	35548	2.30	0.67	5.5	228	2000	
4000	1RQ4 636-6JE	994	275	97.0	96.9	0.86	0.84	38431	2.40	0.67	5.5	251	2400	
8-pole														
830	1RQ4 500-8JE	744	62	94.7	94.8	0.82	0.78	10654	2.2	0.75	5.5	74	580	
930	1RQ4 502-8JE	744	67	95.1	95.1	0.84	0.81	11938	2.2	0.80	5.5	84	750	
1020	1RQ4 504-8JE	744	74	95.2	95.2	0.84	0.81	13093	2.2	0.80	5.5	92	850	
1120	1RQ4 506-8JE	744	81	95.3	95.5	0.84	0.82	14376	2.2	0.80	5.5	103	1000	
1380	1RQ4 560-8JE	745	99	95.6	95.6	0.84	0.81	17690	2.2	0.75	5.4	128	1150	
1550	1RQ4 562-8JE	745	112	95.9	95.8	0.83	0.80	19869	2.2	0.75	5.5	146	1550	
1700	1RQ4 564-8JE	745	124	95.9	95.9	0.83	0.80	21792	2.2	0.72	5.5	163	1450	
1900	1RQ4 566-8JE	746	138	96.1	96.0	0.83	0.80	24323	2.2	0.72	5.5	178	1600	
2300	1RQ4 630-8JE	744	164	96.1	96.1	0.84	0.81	29523	2.40	0.76	5.3	246	2000	
2500	1RQ4 632-8JE	745	180	96.2	96.2	0.83	0.79	32047	2.60	0.81	5.5	272	2100	
2700	1RQ4 634-8JE	745	194	96.3	96.3	0.83	0.79	34611	2.60	0.80	5.5	300	2400	
2900	1RQ4 636-8JE	745	205	96.5	96.5	0.84	0.80	37174	2.60	0.80	5.5	331	2900	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked rotor torque T_{LR}/T_{rated} [-]	Locked rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
9.0 ... 11 kV, 50 Hz														
10-pole														
600	1RQ4 500-3JE	595	48	93.8	93.6	0.77	0.71	9630	2.4	0.85	5.5	74	900	
680	1RQ4 502-3JE	594	51	94.2	94.2	0.81	0.76	10933	2.3	0.90	5.5	84	1150	
750	1RQ4 504-3JE	594	57	94.3	94.3	0.81	0.76	12058	2.3	0.90	5.5	92	1300	
820	1RQ4 506-3JE	594	61	94.5	94.5	0.82	0.77	13184	2.3	0.90	5.5	103	1600	
1050	1RQ4 560-3JE	594	81	94.7	94.7	0.79	0.73	16881	2.4	0.85	5.5	128	1850	
1180	1RQ4 562-3JE	594	90	95.0	95.0	0.80	0.75	18971	2.3	0.85	5.5	146	2300	
1300	1RQ4 564-3JE	595	100	95.2	95.1	0.79	0.74	20866	2.4	0.82	5.5	163	2600	
1400	1RQ4 566-3JE	595	112	95.3	95.0	0.76	0.69	22471	2.6	0.82	5.5	178	2750	
1800	1RQ4 630-3JE	594	132	95.8	95.9	0.82	0.78	28939	2.40	0.85	5.4	246	2600	
1950	1RQ4 632-3JE	595	146	96.0	96.0	0.80	0.74	31298	2.60	0.88	5.5	272	3100	
2100	1RQ4 634-3JE	595	156	96.1	96.1	0.81	0.76	33706	2.60	0.89	5.5	300	3200	
2250	1RQ4 636-3JE	595	166	96.2	96.1	0.81	0.76	36113	2.60	0.85	5.5	331	3500	
12-pole														
480	1RQ4 502-5JE	494	42	93.4	93.4	0.70	0.62	9279	2.4	0.85	5.4	84	1500	
530	1RQ4 504-5JE	494	46	93.5	93.5	0.70	0.62	10246	2.4	0.85	5.4	91	1650	
580	1RQ4 506-5JE	494	50	93.7	93.9	0.72	0.64	11213	2.5	0.85	5.4	102	1800	
720	1RQ4 560-5JE	495	60	94.0	94.4	0.74	0.67	13891	2.1	0.70	4.8	128	1950	
840	1RQ4 562-5JE	495	71	94.4	94.7	0.72	0.65	16206	2.3	0.78	5.0	146	2500	
920	1RQ4 564-5JE	495	77	94.6	94.9	0.73	0.66	17749	2.3	0.75	5.0	163	2950	
1000	1RQ4 566-5JE	495	83	94.8	95.1	0.73	0.67	19293	2.3	0.75	5.0	178	3400	
1400	1RQ4 630-5JE	495	110	95.2	95.7	0.77	0.71	27010	2.50	0.91	5.4	246	3100	
1500	1RQ4 632-5JE	495	116	95.3	95.9	0.79	0.73	28939	2.35	0.86	5.3	272	3300	
1630	1RQ4 634-5JE	495	124	95.5	96.1	0.79	0.75	31447	2.30	0.84	5.2	300	4100	
1750	1RQ4 636-5JE	496	138	95.7	96.0	0.76	0.69	33695	2.70	1.00	5.5	331	4300	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RQ6	Speed	Rated current		Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	T_B/T_{rated}					T_{LR}/T_{rated}	I_{LR}/I_{rated}
kW	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²	
9.0 ... 11 kV, 50 Hz														
2-pole														
5100	1RQ6 710-2HJ ■0	2991	340	96.8	96.6	0.89	0.87	16284	2.5	0.53	5.5	134	176	
6000	1RQ6 712-2HJ ■0	2991	395	96.9	96.7	0.91	0.90	19164	2.3	0.51	5.5	148	202	
6600	1RQ6 714-2HJ ■0	2991	425	96.9	96.8	0.92	0.91	21081	2.3	0.53	5.5	163	217	
7300	1RQ6 716-2HJ ■0	2990	470	97.0	96.8	0.92	0.92	23317	2.4	0.55	5.5	180	250	
4-pole														
5100	1RQ6 710-4JJ ■0	1494	335	97.1	97.1	0.91	0.90	32613	2.3	0.57	5.5	278	822	
5500	1RQ6 712-4JJ ■0	1493	355	97.1	97.2	0.92	0.91	35180	2.2	0.58	5.5	305	945	
6100	1RQ6 714-4JJ ■0	1493	395	97.1	97.3	0.92	0.91	39020	2.2	0.60	5.5	341	1109	
6400	1RQ6 716-4JJ ■0	1494	415	97.2	97.3	0.92	0.91	40924	2.3	0.60	5.5	374	1326	
6-pole														
4200	1RQ6 710-6JJ ■■	994	290	96.9	97.1	0.87	0.85	40353	2.1	0.69	5.4	338	2212	
4600	1RQ6 712-6JJ ■■	994	315	97.0	97.2	0.87	0.86	44186	2.2	0.73	5.5	375	2525	
5000	1RQ6 714-6JJ ■■	995	340	97.1	97.3	0.88	0.86	48018	2.3	0.79	5.5	427	3073	
5500	1RQ6 716-6JJ ■■	995	375	97.2	97.3	0.87	0.86	52802	2.3	0.79	5.5	476	3474	
8-pole														
3150	1RQ6 710-8JJ ■■	745	220	96.6	96.9	0.85	0.84	40379	2.0	0.76	5.3	426	5924	
3450	1RQ6 712-8JJ ■■	745	240	96.7	97.0	0.86	0.84	44216	2.0	0.80	5.4	476	6774	
3850	1RQ6 714-8JJ ■■	746	270	96.8	97.1	0.85	0.83	49317	2.1	0.86	5.5	542	7958	
4300	1RQ6 716-8JJ ■■	746	300	96.9	97.2	0.85	0.83	55059	2.2	0.89	5.5	608	9292	
10-pole														
2300	1RQ6 710-3JJ ■■	596	172	96.3	96.6	0.80	0.76	36841	2.4	0.82	5.5	426	8174	
2550	1RQ6 712-3JJ ■■	596	188	96.4	96.7	0.81	0.77	40851	2.3	0.79	5.5	476	9424	
2900	1RQ6 714-3JJ ■■	596	215	96.6	96.9	0.81	0.77	46442	2.4	0.83	5.5	542	13308	
3200	1RQ6 716-3JJ ■■	597	235	96.7	96.9	0.81	0.77	51238	2.5	0.86	5.5	609	14591	

Voltage code:

10 kV, 50 Hz	8
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

The 1RQ4 data also apply for explosion-proof 1SB4 (Ex px) and 1SG4 (Ex nA) motors.

Rated power IEC kW	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current I_{rated} at 6.6 kV A	Efficiency		Power factor		Torque Nm	Break- down torque $T_B/$ T_{rated} [-]	Locked -rotor torque $T_{LR}/$ T_{rated} [-]	Locked -rotor current $I_{LR}/$ I_{rated} [-]	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load $\cos \phi$	3/4 load $\cos \phi$					Motor kgm ²	External, max. ¹⁾ kgm ²
4.0 ... 6.6 kV, 60 Hz													
2-pole													
1250	1RQ4 450-2JE	3574	130	95.2	94.9	0.89	0.87	3340	2.50	0.68	5.4	10.5	18
1430	1RQ4 452-2JE	3575	148	95.6	95.3	0.89	0.87	3820	2.50	0.68	5.5	11.5	21
1620	1RQ4 454-2JE	3576	166	95.8	95.6	0.89	0.87	4326	2.50	0.68	5.5	13.0	24
1820	1RQ4 456-2JE	3577	184	96.1	95.9	0.90	0.88	4859	2.40	0.65	5.5	14.5	28
2050	1RQ4 500-2JE	3579	215	95.8	95.4	0.88	0.86	5470	2.40	0.62	5.4	22	19
2300	1RQ4 502-2JE	3579	235	96.0	95.6	0.89	0.87	6137	2.50	0.65	5.5	23	23
2650	1RQ4 504-2JE	3581	275	96.2	95.9	0.88	0.86	7067	2.60	0.65	5.5	26	27
3000	1RQ4 506-2JE	3581	305	96.6	96.2	0.89	0.87	8001	2.50	0.65	5.5	28	32
3300	1RQ4 560-2JE	3581	340	96.0	95.5	0.88	0.86	8801	2.20	0.45	4.8	33	28
3500	1RQ4 562-2JE	3582	360	96.2	95.7	0.89	0.88	9331	2.30	0.50	5.3	35	34
4000	1RQ4 564-2JE	3584	405	96.4	96.1	0.90	0.89	10658	2.50	0.55	5.5	40	46
4400 ²⁾	1RQ4 566-2JE	3585	445	96.6	96.3	0.90	0.89	11721	2.50	0.50	5.5	44	54
4300	1RQ4 630-2JE	3584	435	96.1	95.8	0.90	0.89	11458	2.30	0.33	4.7	61	80
4900	1RQ4 632-2JE	3585	495	96.5	96.2	0.90	0.89	13053	2.50	0.37	5.1	68	110
5600	1RQ4 634-2JE	3586	560	96.9	96.6	0.90	0.90	14914	2.60	0.38	5.3	77	160
6300	1RQ4 636-2JE	3587	620	97.1	96.8	0.91	0.90	16773	2.60	0.40	5.5	87	190
4-pole													
1320	1RQ4 450-4JE	1784	138	95.7	95.6	0.88	0.87	7066	2.20	0.65	5.5	22	140
1450	1RQ4 452-4JE	1785	150	95.9	95.8	0.88	0.86	7758	2.30	0.65	5.5	24	170
1630	1RQ4 454-4JE	1786	168	96.0	96.0	0.88	0.86	8716	2.30	0.62	5.5	27	190
1850	1RQ4 456-4JE	1787	194	96.2	96.2	0.87	0.84	9887	2.30	0.62	5.5	30	220
2100	1RQ4 500-4JE	1787	215	96.1	95.9	0.89	0.88	11223	2.30	0.75	5.5	42	200
2300	1RQ4 502-4JE	1787	235	96.2	96.1	0.89	0.88	12292	2.30	0.75	5.5	45	220
2600	1RQ4 504-4JE	1787	265	96.4	96.3	0.89	0.88	13895	2.20	0.70	5.5	51	250
2900	1RQ4 506-4JE	1788	295	96.6	96.5	0.89	0.88	15489	2.20	0.70	5.5	56	290
3350	1RQ4 560-4JE	1789	335	96.6	96.5	0.90	0.89	17883	2.30	0.65	5.5	77	200
3700	1RQ4 562-4JE	1790	370	96.8	96.7	0.90	0.89	19740	2.30	0.65	5.5	86	240
4250	1RQ4 564-4JE	1790	425	96.9	96.9	0.90	0.89	22675	2.30	0.65	5.5	97	280
4500	1RQ4 566-4JE	1790	450	97.0	97.0	0.90	0.89	24008	2.20	0.62	5.5	106	310
5000	1RQ4 630-4JE	1791	500	96.8	96.6	0.90	0.89	26661	2.40	0.60	5.3	139	650
5500	1RQ4 632-4JE	1791	551	96.9	96.8	0.90	0.90	29327	2.40	0.62	5.3	154	750
6100	1RQ4 634-4JE	1791	610	97.1	96.9	0.90	0.90	32527	2.40	0.65	5.5	174	800
6700	1RQ4 636-4JE	1791	670	97.2	97.1	0.90	0.90	35726	2.40	0.65	5.5	186	820

Voltage code:

4 kV, 60 Hz
6.6 kV, 60 Hz
Other voltage

4
1
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6.6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 6.6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
4.0 ... 6.6 kV, 60 Hz														
6-pole														
970	1RQ4 450-6JE	1188	104	95.2	95.1	0.85	0.83	7798	2.30	0.82	5.5	31	470	
1100	1RQ4 452-6JE	1188	118	95.4	95.3	0.85	0.83	8843	2.20	0.80	5.5	35	540	
1260	1RQ4 454-6JE	1189	134	95.6	95.6	0.86	0.84	10120	2.20	0.78	5.4	38	550	
1430	1RQ4 456-6JE	1191	154	95.8	95.7	0.85	0.82	11466	2.30	0.75	5.5	43	590	
1700	1RQ4 500-6JE	1190	176	95.8	95.7	0.88	0.86	13643	2.20	0.80	5.5	62	650	
1920	1RQ4 502-6JE	1191	200	96.1	95.9	0.87	0.85	15395	2.30	0.85	5.5	70	750	
2100	1RQ4 504-6JE	1190	215	96.2	96.0	0.88	0.86	16853	2.20	0.80	5.4	77	850	
2300	1RQ4 506-6JE	1191	235	96.3	96.2	0.88	0.86	18442	2.20	0.80	5.5	85	1000	
2700	1RQ4 560-6JE	1192	280	96.3	96.3	0.87	0.85	21632	2.00	0.65	5.0	108	800	
3050	1RQ4 562-6JE	1193	320	96.5	96.4	0.86	0.83	24415	2.20	0.70	5.5	123	950	
3350	1RQ4 564-6JE	1193	350	96.7	96.5	0.87	0.84	26817	2.20	0.75	5.5	137	1100	
3600	1RQ4 566-6JE	1194	380	96.8	96.6	0.86	0.83	28794	2.20	0.70	5.5	149	1250	
4250	1RQ4 630-6JE	1193	445	96.8	96.7	0.86	0.84	34021	2.30	0.62	5.2	188	1850	
4550	1RQ4 632-6JE	1193	480	96.8	96.8	0.86	0.85	36423	2.20	0.62	5.2	207	1700	
4900	1RQ4 634-6JE	1194	510	97.0	96.9	0.87	0.85	39192	2.30	0.66	5.4	228	2300	
5200	1RQ4 636-6JE	1194	540	97.2	97.0	0.87	0.85	41591	2.40	0.67	5.5	251	2600	
8-pole														
750	1RQ4 450-8JE	892	83	94.7	94.7	0.83	0.80	8030	2.20	0.78	5.4	39	500	
840	1RQ4 452-8JE	892	94	95.0	95.0	0.82	0.78	8993	2.20	0.80	5.5	43	600	
930	1RQ4 454-8JE	892	104	95.1	95.0	0.82	0.78	9957	2.30	0.80	5.5	48	650	
1030	1RQ4 456-8JE	893	116	95.3	95.2	0.82	0.78	11015	2.30	0.80	5.5	54	750	
1250	1RQ4 500-8JE	892	136	95.6	95.5	0.84	0.82	13383	2.10	0.80	5.4	74	1000	
1400	1RQ4 502-8JE	893	154	95.8	95.6	0.83	0.80	14972	2.30	0.82	5.5	84	1200	
1550	1RQ4 504-8JE	893	170	95.9	95.8	0.83	0.80	16576	2.30	0.85	5.5	92	1350	
1700	1RQ4 506-8JE	893	184	96.0	95.9	0.84	0.81	18180	2.30	0.85	5.5	103	1600	
2000	1RQ4 560-8JE	894	215	96.1	95.9	0.84	0.81	21365	2.10	0.75	5.3	128	1750	
2200	1RQ4 562-8JE	895	240	96.2	96.1	0.84	0.81	23475	2.20	0.75	5.5	146	2100	
2400	1RQ4 564-8JE	894	255	96.3	96.3	0.85	0.82	25638	2.10	0.75	5.5	163	2500	
2650	1RQ4 566-8JE	895	285	96.4	96.4	0.84	0.82	28277	2.20	0.75	5.5	178	2800	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RQ4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 6.6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
4.0 ... 6.6 kV, 60 Hz														
10-pole														
540	1RQ4 450-3JE	711	63	93.9	93.8	0.80	0.75	7253	2.20	0.88	5.3	39	700	
600	1RQ4 452-3JE	712	71	94.2	94.1	0.79	0.73	8048	2.30	0.90	5.5	43	900	
670	1RQ4 454-3JE	712	80	94.3	94.2	0.78	0.73	8987	2.40	1.00	5.5	48	950	
730	1RQ4 456-3JE	713	88	94.5	94.3	0.77	0.72	9778	2.40	0.90	5.5	54	1100	
900	1RQ4 500-3JE	713	104	94.9	94.7	0.80	0.76	12055	2.10	0.78	5.2	74	1400	
1000	1RQ4 502-3JE	713	114	95.1	94.9	0.80	0.75	13394	2.20	0.82	5.3	84	1700	
1100	1RQ4 504-3JE	713	126	95.1	94.9	0.80	0.76	14734	2.20	0.82	5.3	92	1700	
1250	1RQ4 506-3JE	713	144	95.4	95.1	0.80	0.75	16743	2.30	0.88	5.5	103	2250	
1460	1RQ4 560-3JE	714	172	95.4	95.2	0.78	0.72	19528	2.40	0.85	5.4	128	2400	
1680	1RQ4 562-3JE	714	196	95.7	95.5	0.78	0.72	22471	2.40	0.85	5.5	146	2800	
1820	1RQ4 564-3JE	714	210	95.7	95.6	0.80	0.76	24343	2.30	0.80	5.4	163	3200	
1930	1RQ4 566-3JE	715	225	95.9	95.6	0.79	0.73	25778	2.40	0.80	5.5	178	3600	
12-pole														
370	1RQ4 450-5JE	592	48	93.1	92.9	0.72	0.66	5969	2.00	0.68	4.6	39	700	
425	1RQ4 452-5JE	593	57	93.5	93.0	0.70	0.63	6844	2.20	0.72	4.8	43	1000	
480	1RQ4 454-5JE	593	63	94.0	93.7	0.71	0.65	7730	2.10	0.72	4.8	48	1300	
540	1RQ4 456-5JE	593	69	94.1	93.9	0.73	0.68	8696	2.00	0.68	4.7	54	1500	
650	1RQ4 500-5JE	593	84	94.3	94.1	0.72	0.66	10468	2.20	0.70	4.8	74	1600	
730	1RQ4 502-5JE	593	91	94.5	94.3	0.74	0.70	11756	2.10	0.65	4.7	84	1800	
820	1RQ4 504-5JE	593	104	94.7	94.4	0.73	0.68	13206	2.20	0.70	4.8	91	2100	
900	1RQ4 506-5JE	593	116	94.8	94.5	0.72	0.66	14494	2.30	0.75	5.2	102	2400	
1100	1RQ4 560-5JE	594	138	95.0	94.9	0.73	0.67	17685	2.00	0.62	4.5	128	2400	
1220	1RQ4 562-5JE	594	152	95.2	95.1	0.74	0.68	19614	2.10	0.65	4.5	146	3000	
1320	1RQ4 564-5JE	595	166	95.3	95.1	0.73	0.67	21187	2.20	0.68	4.6	163	3300	
1450	1RQ4 566-5JE	595	180	95.4	95.3	0.74	0.68	23273	2.20	0.68	4.6	178	3800	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

The 1RQ6 data also apply to explosion-proof 1SB6 (Ex px) and 1SG6 (Ex nA) motors.

Rated power	High voltage motor H-compact PLUS 1RQ6	Speed	Rated current	Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
IEC				I_{rated} at 6.6 kV	4/4 load	3/4 load	4/4 load					3/4 load	$T_{\text{B}}/T_{\text{rated}}$
kW	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²
4.0 ... 6.6 kV, 60 Hz													
2-pole													
6100 ²⁾	1RQ6 710-2HJ ■0	3591	610	96.6	96.2	0.90	0.88	16226	2.4	0.48	5.5	134	61
7700 ²⁾	1RQ6 712-2HJ ■0	3590	760	96.9	96.6	0.91	0.90	20485	2.3	0.48	5.5	148	62
9500 ²⁾	1RQ6 714-2HJ ■0	3590	940	97.2	96.9	0.91	0.91	25277	2.2	0.46	5.3	163	57
10800 ²⁾	1RQ6 716-2HJ ■0	3590	1060	97.3	97.0	0.92	0.91	28734	2.4	0.52	5.5	180	60
4-pole													
6900 ²⁾	1RQ6 710-4JJ ■0	1794	690	97.1	97.0	0.90	0.88	36736	2.5	0.57	5.5	278	372
8400 ²⁾	1RQ6 712-4JJ ■0	1793	830	97.4	97.3	0.91	0.90	44743	2.3	0.60	5.5	305	395
9200 ²⁾	1RQ6 714-4JJ ■0	1793	900	97.4	97.3	0.92	0.91	49006	2.3	0.61	5.5	341	469
10200 ²⁾	1RQ6 716-4JJ ■0	1793	990	97.5	97.4	0.92	0.91	54328	2.3	0.62	5.5	374	526
6-pole													
5700	1RQ6 710-6JJ ■■	1194	590	97.1	97.1	0.87	0.85	45593	2.2	0.71	5.5	338	1024
6400	1RQ6 712-6JJ ■■	1194	660	97.2	97.2	0.87	0.85	51190	2.2	0.69	5.5	375	1190
6800	1RQ6 714-6JJ ■■	1195	710	97.3	97.3	0.86	0.84	54356	2.3	0.72	5.5	427	1496
7500	1RQ6 716-6JJ ■■	1195	770	97.3	97.3	0.87	0.85	59959	2.3	0.75	5.5	476	1848
8-pole													
4400	1RQ6 710-8JJ ■■	895	475	96.9	97.1	0.84	0.82	46939	2.1	0.82	5.5	426	3174
4900	1RQ6 712-8JJ ■■	895	520	96.9	97.1	0.85	0.83	52270	2.1	0.84	5.5	476	3624
5400	1RQ6 714-8JJ ■■	896	580	97.1	97.2	0.84	0.82	57577	2.2	0.85	5.5	542	4358
6000	1RQ6 716-8JJ ■■	896	650	97.2	97.2	0.83	0.80	63953	2.2	0.82	5.5	608	5192
10-pole													
3000	1RQ6 710-3JJ ■■	716	340	96.6	96.8	0.80	0.75	40008	2.4	0.77	5.5	426	5774
3350	1RQ6 712-3JJ ■■	716	375	96.8	96.9	0.81	0.77	44683	2.3	0.74	5.5	476	6424
3750	1RQ6 714-3JJ ■■	716	425	96.9	97.0	0.80	0.76	49999	2.4	0.80	5.5	542	7758
4200	1RQ6 716-3JJ ■■	717	475	96.9	97.0	0.80	0.76	55987	2.4	0.79	5.5	609	9041

Voltage code:

4 kV, 60 Hz
4.16 kV, 60 Hz
6.6 kV, 60 Hz
Other voltage

4
3
1
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{\text{rated}} < 6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RQ6 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked rotor torque T_{LR}/T_{rated} [-]	Locked rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 13.2 kV	4/4 load	3/4 load	4/4 load	3/4 load	cos ϕ					cos ϕ	Motor kgm ²
12.5 ... 13.8 kV, 60 Hz														
2-pole														
5200	1RQ6 710-2HJ ■0	3591	260	96.2	95.7	0.91	0.89	13830	2.5	0.49	5.5	134	76	
6400	1RQ6 712-2HJ ■0	3591	320	96.4	96.1	0.91	0.90	17024	2.4	0.48	5.5	148	87	
7100	1RQ6 714-2HJ ■0	3591	350	96.4	96.1	0.92	0.92	18888	2.3	0.48	5.5	163	92	
8100	1RQ6 716-2HJ ■0	3590	395	96.7	96.3	0.93	0.93	21552	2.3	0.50	5.5	180	105	
4-pole														
5400	1RQ6 710-4JJ ■0	1794	270	96.6	96.5	0.91	0.90	28752	2.4	0.57	5.5	278	452	
6200	1RQ6 712-4JJ ■0	1794	310	96.8	96.7	0.91	0.90	33007	2.4	0.57	5.5	305	515	
6600	1RQ6 714-4JJ ■0	1794	325	96.8	96.7	0.92	0.91	35144	2.4	0.60	5.5	341	619	
7300	1RQ6 716-4JJ ■0	1794	360	96.9	96.8	0.92	0.91	38870	2.4	0.60	5.5	374	706	
6-pole														
4600	1RQ6 710-6JJ ■■	1195	240	96.7	96.7	0.86	0.83	36768	2.4	0.70	5.5	338	1602	
5000	1RQ6 712-6JJ ■■	1195	260	96.9	96.8	0.87	0.85	39972	2.3	0.71	5.5	375	1825	
5400	1RQ6 714-6JJ ■■	1195	285	96.9	96.9	0.86	0.84	43153	2.4	0.69	5.5	427	2273	
5900	1RQ6 716-6JJ ■■	1195	305	97.0	96.9	0.87	0.84	47144	2.4	0.69	5.5	476	2674	
8-pole														
3250	1RQ6 710-8JJ ■■	896	174	96.4	96.5	0.85	0.82	34652	2.3	0.82	5.5	426	3574	
3600	1RQ6 712-8JJ ■■	896	192	96.5	96.6	0.85	0.83	38384	2.3	0.83	5.5	476	4124	
3950	1RQ6 714-8JJ ■■	896	210	96.6	96.7	0.86	0.84	42116	2.2	0.83	5.5	542	5008	
4400	1RQ6 716-8JJ ■■	896	235	96.6	96.8	0.85	0.82	46894	2.3	0.79	5.5	608	5392	
10-pole														
2500	1RQ6 710-3JJ ■■	717	142	96.2	96.3	0.80	0.76	33330	2.4	0.76	5.5	426	4374	
2750	1RQ6 712-3JJ ■■	716	154	96.3	96.5	0.81	0.78	36668	2.3	0.73	5.5	476	5174	
3100	1RQ6 714-3JJ ■■	717	176	96.5	96.5	0.80	0.75	41311	2.5	0.75	5.5	542	5658	
3400	1RQ6 716-3JJ ■■	717	192	96.6	96.6	0.80	0.76	45308	2.5	0.74	5.5	609	6791	

Voltage code:

13.2 kV, 60 Hz
Other voltage

2
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

NEMA version

Rated power	High voltage motor H-compact PLUS 1RQ6	Speed	Rated current	Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
NEMA			I_{rated} at 6.6 kV	4/4 load	3/4 load	4/4 load	3/4 load		$\frac{T_B}{T_{rated}}$	$\frac{T_{LR}}{T_{rated}}$	$\frac{I_{LR}}{I_{rated}}$	Motor	External, max. ¹⁾
hp	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²
4.0 ... 6.6 kV, 60 Hz													
2-pole													
8000	1RQ6 710-2BM ■0	3588	603	96.1	95.7	0.90	0.88	15881	2.5	0.60	5.7	134	41
9000	1RQ6 712-2BM ■0	3587	664	96.1	95.8	0.92	0.91	17868	2.4	0.60	5.6	148	43
10000	1RQ6 712-2BN ■0	3588	742	96.3	96.0	0.91	0.90	19852	2.6	0.62	6.1	148	44
11000	1RQ6 714-2BM ■0	3587	807	96.4	96.0	0.92	0.91	21841	2.5	0.60	5.8	163	46
12000	1RQ6 714-2BN ■0	3587	883	96.5	96.2	0.92	0.91	23827	2.4	0.60	5.7	163	47
13000	1RQ6 716-2BM ■0	3587	948	96.5	96.3	0.92	0.92	25815	2.4	0.60	5.8	180	48
14000	1RQ6 716-2BN ■0	3587	1021	96.6	96.4	0.92	0.92	27801	2.5	0.65	6.0	180	49
4-pole													
10000	1RQ6 710-4CJ ■0	1794	745	97.0	96.9	0.90	0.88	39707	2.4	0.60	6.3	278	555
11000	1RQ6 712-4CJ ■0	1793	805	97.1	97.0	0.91	0.90	43690	2.4	0.61	6.2	305	661
12000	1RQ6 714-4CJ ■0	1793	873	97.1	97.0	0.92	0.91	47659	2.4	0.63	6.3	341	679
13000	1RQ6 716-4CJ ■0	1794	948	97.2	97.1	0.91	0.91	51626	2.3	0.60	6.1	374	695
6-pole													
8000	1RQ6 710-6CJ ■■	1194	626	96.9	96.9	0.86	0.83	47715	2.2	0.71	5.7	338	1847
9000	1RQ6 714-6CJ ■■	1195	703	97.0	97.0	0.86	0.83	53642	2.3	0.73	6.0	427	1954
10000	1RQ6 716-6CJ ■■	1195	770	97.1	97.1	0.87	0.85	59613	2.3	0.76	6.0	476	2043
8-pole													
5500	1RQ6 710-8CJ ■■	896	440	96.7	96.8	0.84	0.81	43733	2.3	0.86	6.0	426	3235
6000	1RQ6 712-8CJ ■■	896	481	96.7	96.8	0.84	0.81	47703	2.2	0.83	6.0	476	3437
7000	1RQ6 714-8CJ ■■	896	561	96.9	96.9	0.84	0.81	55649	2.2	0.83	6.0	542	3817
8000	1RQ6 716-8CJ ■■	896	645	96.9	97.0	0.83	0.80	63590	2.2	0.80	6.0	608	4154
10-pole													
4000	1RQ6 710-3CJ ■■	716	339	96.5	96.5	0.80	0.75	39780	2.4	0.77	5.8	426	4563
4500	1RQ6 712-3CJ ■■	716	375	96.6	96.7	0.81	0.77	44763	2.3	0.73	5.6	476	5006
5000	1RQ6 714-3CJ ■■	716	418	96.7	96.7	0.80	0.76	49717	2.4	0.80	6.0	542	5428
5500	1RQ6 716-3CJ ■■	717	464	96.7	96.7	0.80	0.75	54660	2.5	0.79	6.0	609	5833

Voltage code:

4kV, 60Hz	4
4.16kV, 60Hz	3
6.6kV, 60Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Selection and ordering data

NEMA version

Rated power	High voltage motor H-compact PLUS 1RQ6	Speed	Rated current	Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
NEMA			I_{rated} at 13.2 kV	4/4 load	3/4 load	4/4 load	3/4 load		$\frac{T_B}{T_{rated}}$	$\frac{T_{LR}}{T_{rated}}$	$\frac{I_{LR}}{I_{rated}}$	Motor	External, max. ¹⁾
hp	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²
12.5 ... 13.8 kV, 60 Hz													
2-pole													
7000	1RQ6 710-2BM ■0	3589	263	95.7	95.2	0.91	0.89	13894	2.5	0.60	5.7	134	40
8000	1RQ6 712-2BM ■0	3589	298	95.8	95.3	0.91	0.90	15879	2.6	0.60	6.0	148	41
9000	1RQ6 714-2BM ■0	3588	332	95.9	95.4	0.92	0.91	17865	2.5	0.60	5.8	163	43
10000	1RQ6 716-2BM ■0	3588	365	95.9	95.6	0.93	0.93	19854	2.5	0.60	5.9	180	44
4-pole													
7000	1RQ6 710-4CJ ■0	1794	258	96.4	96.2	0.91	0.90	27791	2.4	0.60	6.3	278	520
8000	1RQ6 714-4CJ ■0	1794	291	96.5	96.4	0.92	0.92	31772	2.3	0.60	6.1	341	541
9000	1RQ6 714-4CK ■0	1794	328	96.6	96.5	0.92	0.91	35738	2.4	0.60	6.2	341	552
10000	1RQ6 716-4CJ ■0	1794	364	96.7	96.6	0.92	0.91	39707	2.4	0.60	6.3	374	555
6-pole													
6000	1RQ6 710-6CJ ■■	1195	237	96.5	96.4	0.85	0.83	35757	2.4	0.69	6.0	338	1571
7000	1RQ6 714-6CJ ■■	1195	274	96.7	96.6	0.86	0.83	41709	2.4	0.67	6.0	427	1720
8000	1RQ6 716-6CJ ■■	1195	310	96.7	96.7	0.87	0.84	47674	2.4	0.68	6.0	476	1846
8-pole													
4000	1RQ6 710-8CJ ■■	896	160	96.2	96.2	0.85	0.82	31800	2.3	0.79	6.0	426	2560
4500	1RQ6 712-8CJ ■■	896	179	96.3	96.3	0.85	0.83	35780	2.2	0.79	5.9	476	2796
5000	1RQ6 714-8CJ ■■	896	197	96.4	96.5	0.86	0.84	39760	2.2	0.79	5.9	542	3024
5500	1RQ6 716-8CJ ■■	896	216	96.4	96.5	0.86	0.84	43719	2.2	0.81	6.0	608	3235
10-pole													
3000	1RQ6 710-3CJ ■■	716	125	96.0	96.1	0.81	0.78	29829	2.3	0.70	5.7	426	3619
3500	1RQ6 712-3CJ ■■	717	147	96.2	96.2	0.81	0.77	34792	2.5	0.77	6.0	476	4104
4000	1RQ6 714-3CJ ■■	717	167	96.2	96.2	0.81	0.77	39763	2.4	0.76	6.0	542	4563
4500	1RQ6 716-3CJ ■■	717	190	96.4	96.4	0.80	0.76	44718	2.5	0.74	6.0	609	5006

Voltage code:

13.2 kV, 60 Hz	2
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

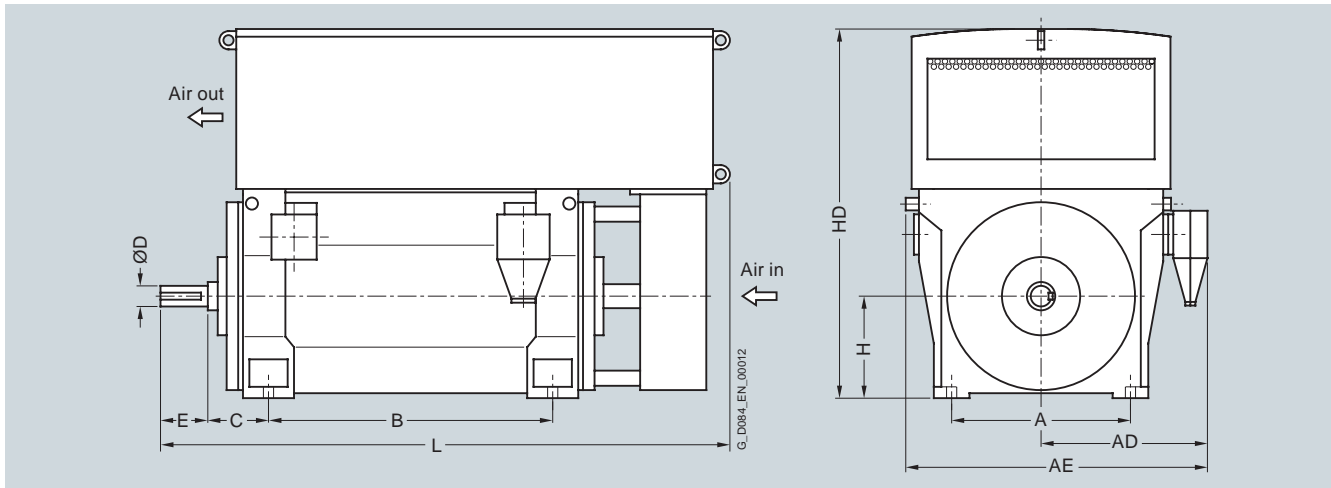
¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RQ4 series ²⁾											
4-pole											
1RQ4 450-4JE.0	4300	850	930	1620	1180	250	120	165	450	1810	2430
1RQ4 452-4JE.0	4500	850	930	1620	1180	250	120	165	450	1810	2430
1RQ4 454-4JE.0	4950	850	930	1620	1400	250	130	200	450	1810	2680
1RQ4 456-4JE.0	5250	850	930	1620	1400	250	130	200	450	1810	2680
1RQ4 500-4JE.0	5900	950	1000	1760	1320	280	140	200	500	2000	2660
1RQ4 502-4JE.0	6100	950	1000	1760	1320	280	140	200	500	2000	2660
1RQ4 504-4JE.0	6800	950	1000	1760	1500	280	150	200	500	2000	2870
1RQ4 506-4JE.0	7150	950	1000	1760	1500	280	150	200	500	2000	2870
1RQ4 560-4JE.0	8000	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 562-4JE.0	8450	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 564-4JE.0	9350	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-4JE.0	9800	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 630-4JE.0 ³⁾	11 100	1320	1330	2210	1600	335	190	280	630	2340	3140
1RQ4 632-4JE.0 ³⁾	11 800	1320	1330	2210	1600	335	190	280	630	2340	3140
1RQ4 634-4JE.0 ³⁾	12 900	1320	1330	2210	1800	335	200	280	630	2340	3380
1RQ4 636-4JE.0 ³⁾	13 450	1320	1330	2210	1800	335	200	280	630	2340	3380
6-pole											
1RQ4 450-6JE.0	4400	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 452-6JE.0	4600	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 454-6JE.0	5050	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 456-6JE.0	5350	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 500-6JE.0	6000	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 502-6JE.0	6400	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 504-6JE.0	6950	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 506-6JE.0	7350	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 560-6JE.0	8100	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 562-6JE.0	8650	1060	1070	1900	1400	315	170	240	560	2260	2950

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1S4 and 1SG4 series.

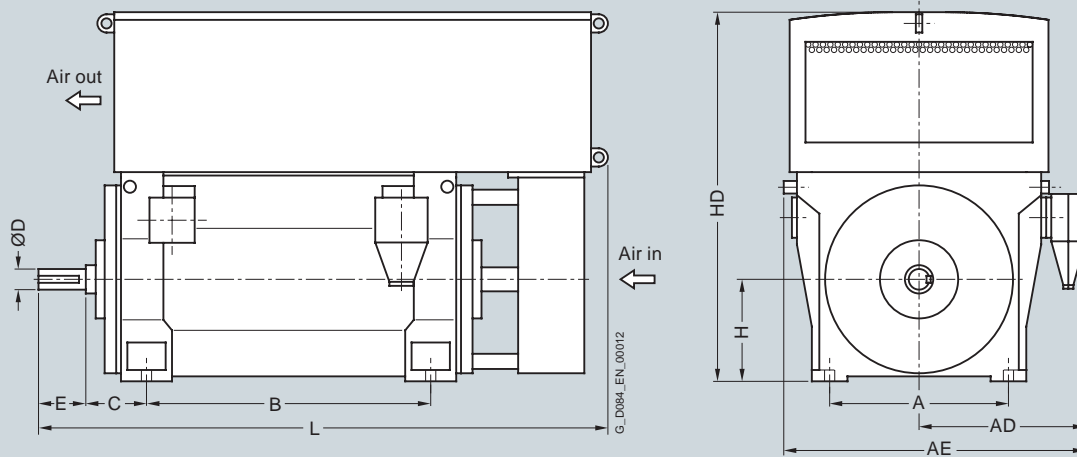
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RQ4 series²⁾											
6-pole											
1RQ4 564-6JE.0	9600	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-6JE.0	10050	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 630-6JE.0	11400	1320	1330	2210	1600	335	200	280	630	2340	3140
1RQ4 632-6JE.0	12000	1320	1330	2210	1600	335	200	280	630	2340	3140
1RQ4 634-6JE.0	12900	1320	1330	2210	1800	335	200	280	630	2340	3380
1RQ4 636-6JE.0	13750	1320	1330	2210	1800	335	200	280	630	2340	3380
8-pole											
1RQ4 450-8JE.0	4350	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 452-8JE.0	4600	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 454-8JE.0	5050	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 456-8JE.0	5350	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 500-8JE.0	6050	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 502-8JE.0	6400	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 504-8JE.0	6950	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 506-8JE.0	7350	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 560-8JE.0	8100	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 562-8JE.0	8650	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 564-8JE.0	9500	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4 566-8JE.0	9950	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4 630-8JE.0 ³⁾	11200	1320	1180	2060	1600	335	200	280	630	2340	3140
1RQ4 632-8JE.0 ³⁾	11950	1320	1330	2210	1600	335	200	280	630	2340	3140
1RQ4 634-8JE.0 ³⁾	12900	1320	1330	2210	1800	335	200	280	630	2340	3380
1RQ4 636-8JE.0 ³⁾	13650	1320	1330	2210	1800	335	200	280	630	2340	3380
10-pole											
1RQ4 450-3JE.0	4350	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 452-3JE.0	4550	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 454-3JE.0	4950	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 456-3JE.0	5350	850	930	1620	1400	250	140	200	450	1810	2680

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

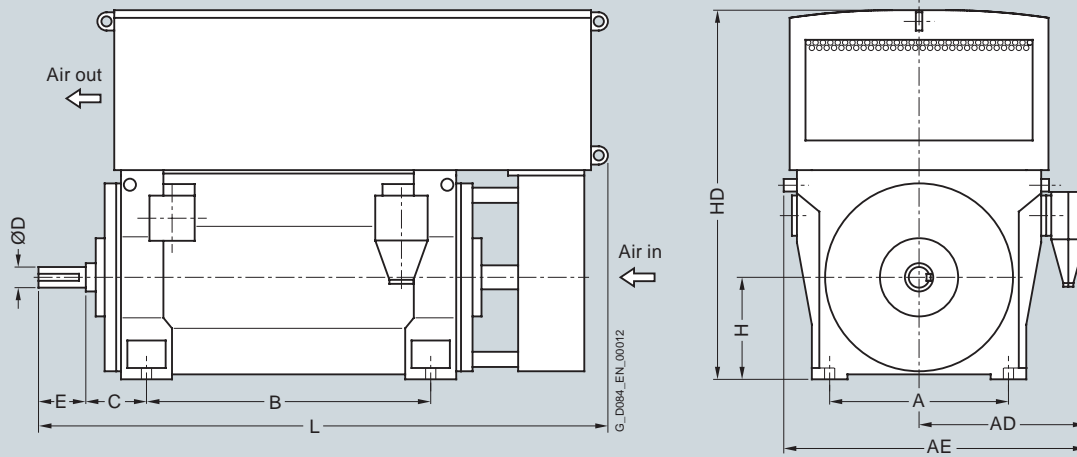
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RQ4 series²⁾											
10-pole											
1RQ4 500-3JE.0	6000	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 502-3JE.0	6300	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 504-3JE.0	6900	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 506-3JE.0	7300	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 560-3JE.0	8000	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 562-3JE.0	8600	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 564-3JE.0	9450	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4 566-3JE.0	9900	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4 630-3JE.0 ³⁾	11200	1320	1180	2060	1600	335	200	280	630	2340	3140
1RQ4 632-3JE.0 ³⁾	11800	1320	1180	2060	1600	335	200	280	630	2340	3140
1RQ4 634-3JE.0 ³⁾	12900	1320	1180	2060	1800	335	200	280	630	2340	3380
1RQ4 636-3JE.0 ³⁾	13550	1320	1180	2060	1800	335	200	280	630	2340	3380
12-pole											
1RQ4 450-5JE.0	4350	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 452-5JE.0	4550	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4 454-5JE.0	4950	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 456-5JE.0	5300	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4 500-5JE.0	6000	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 502-5JE.0	6300	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4 504-5JE.0	6900	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 506-5JE.0	7300	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4 560-5JE.0	8050	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 562-5JE.0	8600	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4 564-5JE.0	9400	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4 566-5JE.0	9900	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4 630-5JE.0 ³⁾	11100	1320	1180	2060	1600	335	200	280	630	2340	3140
1RQ4 632-5JE.0 ³⁾	11750	1320	1180	2060	1600	335	200	280	630	2340	3140
1RQ4 634-5JE.0 ³⁾	12800	1320	1180	2060	1800	335	200	280	630	2340	3380
1RQ4 636-5JE.0 ³⁾	13500	1320	1180	2060	1800	335	200	280	630	2340	3380

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

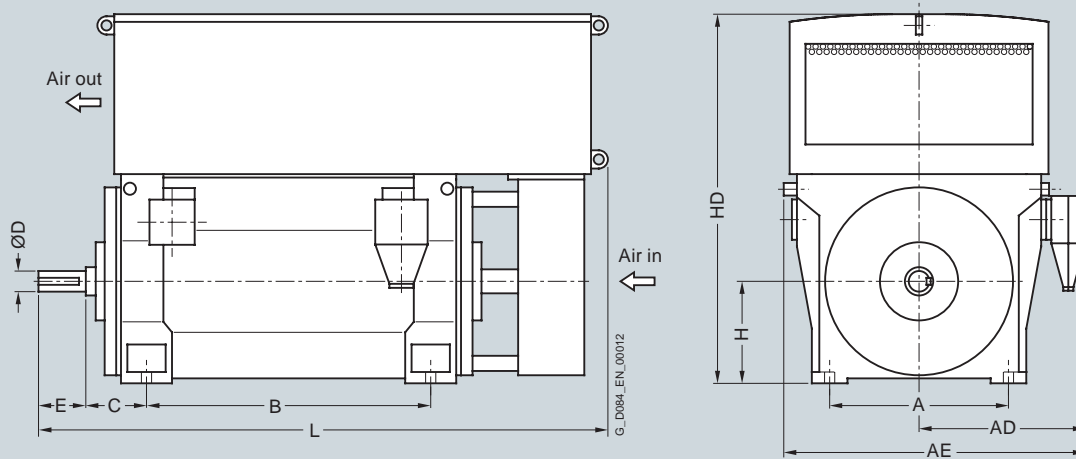
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RQ4 series¹⁾											
4-pole											
1RQ4 450-4JE.0	4300	850	1070	1840	1180	250	120	165	450	1810	2430
1RQ4 452-4JE.0	4500	850	1070	1840	1180	250	120	165	450	1810	2430
1RQ4 454-4JE.0	4950	850	1070	1840	1400	250	130	200	450	1810	2680
1RQ4 456-4JE.0	5300	850	1070	1840	1400	250	130	200	450	1810	2680
1RQ4 500-4JE.0	5900	950	1220	1980	1320	280	140	200	500	2000	2660
1RQ4 502-4JE.0	6100	950	1220	1980	1320	280	140	200	500	2000	2660
1RQ4 504-4JE.0	6750	950	1220	1980	1500	280	150	200	500	2000	2870
1RQ4 506-4JE.0	7100	950	1220	1980	1500	280	150	200	500	2000	2870
1RQ4 560-4JE.0	7850	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 562-4JE.0	8300	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 564-4JE.0	9200	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-4JE.0	9650	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 630-4JE.0 ²⁾	11100	1320	1320	2200	1600	335	190	280	630	2340	3140
1RQ4 632-4JE.0 ²⁾	11800	1320	1320	2200	1600	335	190	280	630	2340	3140
1RQ4 634-4JE.0 ²⁾	12900	1320	1320	2200	1800	335	200	280	630	2340	3380
1RQ4 636-4JE.0 ²⁾	13450	1320	1330	2210	1800	335	200	280	630	2340	3380
6-pole											
1RQ4 450-6JE.0	4400	850	1070	1840	1180	250	130	200	450	1810	2470
1RQ4 452-6JE.0	4600	850	1070	1840	1180	250	130	200	450	1810	2470
1RQ4 454-6JE.0	5050	850	1070	1840	1400	250	140	200	450	1810	2680
1RQ4 456-6JE.0	5350	850	1070	1840	1400	250	140	200	450	1810	2680
1RQ4 500-6JE.0	6000	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 502-6JE.0	6400	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 504-6JE.0	6950	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 506-6JE.0	7350	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 560-6JE.0	8050	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 562-6JE.0	8600	1060	1210	2040	1400	315	170	240	560	2260	2950

¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

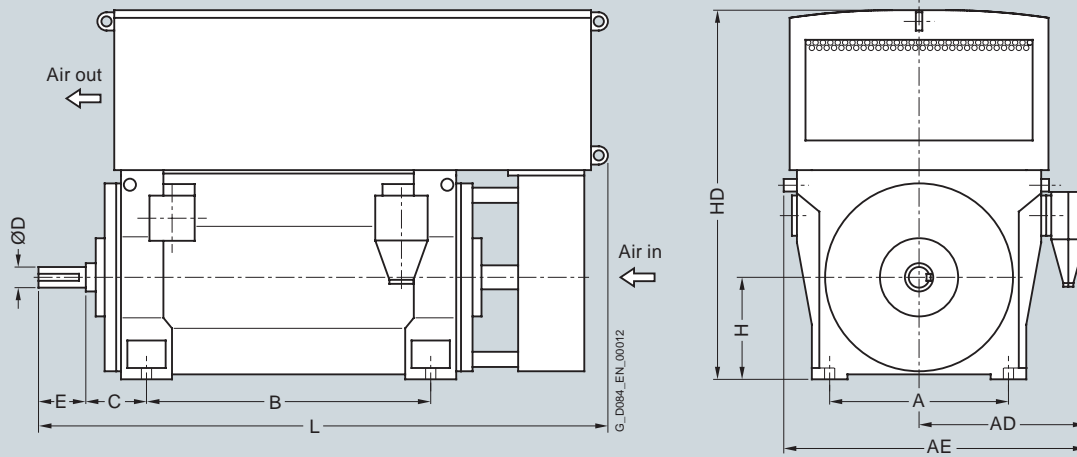
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RQ4 series¹⁾											
6-pole											
1RQ4 564-6JE.0	9400	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-6JE.0	9900	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 630-6JE.0	11400	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 632-6JE.0	12000	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 634-6JE.0	12900	1320	1320	2200	1800	335	200	280	630	2340	3380
1RQ4 636-6JE.0	13750	1320	1320	2200	1800	335	200	280	630	2340	3380
8-pole											
1RQ4 500-8JE.0	6050	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 502-8JE.0	6400	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 504-8JE.0	6950	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 506-8JE.0	7300	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 560-8JE.0	8050	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 562-8JE.0	8600	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 564-8JE.0	9450	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-8JE.0	9850	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 630-8JE.0	11200	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 632-8JE.0	11950	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 634-8JE.0	12900	1320	1320	2200	1800	335	200	280	630	2340	3380
1RQ4 636-8JE.0	13650	1320	1320	2200	1800	335	200	280	630	2340	3380
10-pole											
1RQ4 500-3JE.0	6000	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 502-3JE.0	6300	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 504-3JE.0	6850	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 506-3JE.0	7250	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 560-3JE.0	8200	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 562-3JE.0	8900	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 564-3JE.0	9700	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-3JE.0	10100	1060	1210	2040	1600	315	180	240	560	2260	3180

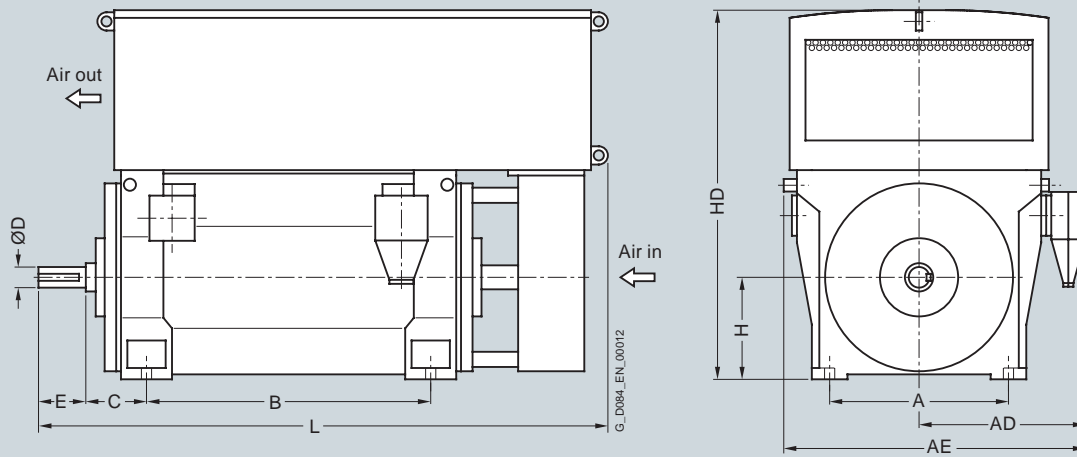
¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RQ4 series¹⁾											
10-pole											
1RQ4 630-3JE.0	11200	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 632-3JE.0	11800	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 634-3JE.0	12900	1320	1320	2200	1800	335	200	280	630	2340	3380
1RQ4 636-3JE.0	13550	1320	1320	2200	1800	335	200	280	630	2340	3380
12-pole											
1RQ4 502-5JE.0	6350	950	1220	1980	1320	280	150	200	500	2000	2660
1RQ4 504-5JE.0	6850	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 506-5JE.0	7250	950	1220	1980	1500	280	160	240	500	2000	2910
1RQ4 560-5JE.0	8000	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 562-5JE.0	8550	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4 564-5JE.0	9400	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 566-5JE.0	9850	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4 630-5JE.0	11100	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 632-5JE.0	11750	1320	1320	2200	1600	335	200	280	630	2340	3140
1RQ4 634-5JE.0	12800	1320	1320	2200	1800	335	200	280	630	2340	3380
1RQ4 636-5JE.0	13500	1320	1320	2200	1800	335	200	280	630	2340	3380

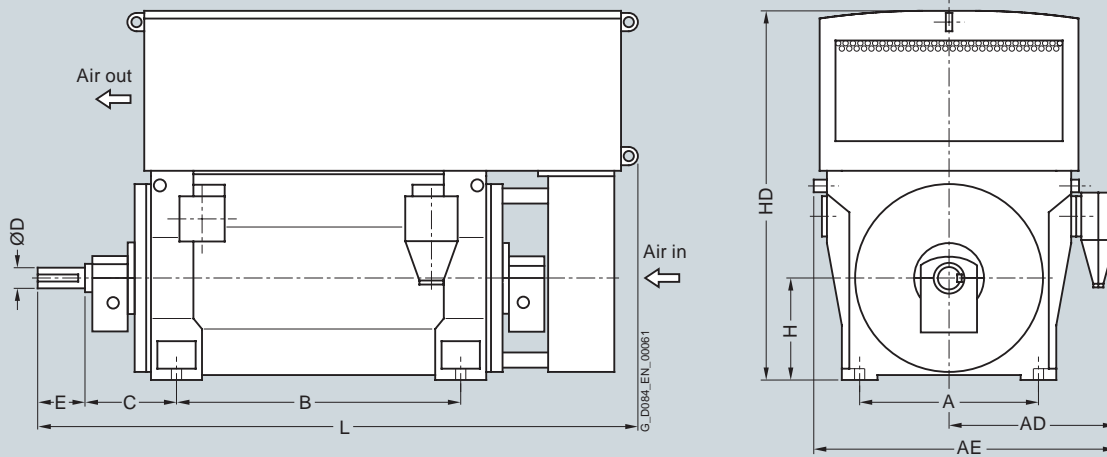
¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series²⁾											
2-pole											
1RQ4 450-2JE.0	4150	850	930	1620	1180	450	100	165	450	1810	2630
1RQ4 452-2JE.0	4350	850	930	1620	1180	450	100	165	450	1810	2630
1RQ4 454-2JE.0	4700	850	930	1620	1400	450	110	165	450	1810	2840
1RQ4 456-2JE.0	5000	850	930	1620	1400	450	110	165	450	1810	2840
1RQ4 500-2JE.0	5550	950	1000	1760	1320	475	110	165	500	2000	3220
1RQ4 502-2JE.0	5800	950	1000	1760	1320	475	110	165	500	2000	3220
1RQ4 504-2JE.0	6300	950	1000	1760	1500	475	120	165	500	2000	3430
1RQ4 506-2JE.0	6600	950	1000	1760	1500	475	120	165	500	2000	3430
1RQ4 560-2JE.0	7550	1060	1070	2040	1400	500	130	200	560	2260	3560
1RQ4 562-2JE.0	7800	1060	1070	2040	1400	500	130	200	560	2260	3560
1RQ4 564-2JE.0	8650	1060	1070	2040	1600	500	140	200	560	2260	3790
1RQ4 566-2JE.0	9150	1060	1070	2040	1600	500	140	200	560	2260	3790
1RQ4 630-2JE.0	10900	1320	1330	2210	1600	560	140	200	630	2340	3840
1RQ4 632-2JE.0	11550	1320	1330	2210	1600	560	140	200	630	2340	3840
1RQ4 634-2JE.0	12750	1320	1330	2210	1800	560	150	200	630	2340	4080
1RQ4 636-2JE.0	13600	1320	1330	2210	1800	560	150	200	630	2340	4080
4-pole											
1RQ4 450-4JE.0-Z K96	4400	850	930	1620	1180	450	120	165	450	1810	2630
1RQ4 452-4JE.0-Z K96	4600	850	930	1620	1180	450	120	165	450	1810	2630
1RQ4 454-4JE.0-Z K96	5100	850	930	1620	1400	450	130	200	450	1810	2880
1RQ4 456-4JE.0-Z K96	5350	850	930	1620	1400	450	130	200	450	1810	2880
1RQ4 500-4JE.0-Z K96	6000	950	1000	1760	1320	500	140	200	500	2000	2880
1RQ4 502-4JE.0-Z K96	6250	950	1000	1760	1320	500	140	200	500	2000	2880
1RQ4 504-4JE.0-Z K96	6950	950	1000	1760	1500	500	150	200	500	2000	3090
1RQ4 506-4JE.0-Z K96	7300	950	1000	1760	1500	500	150	200	500	2000	3090

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

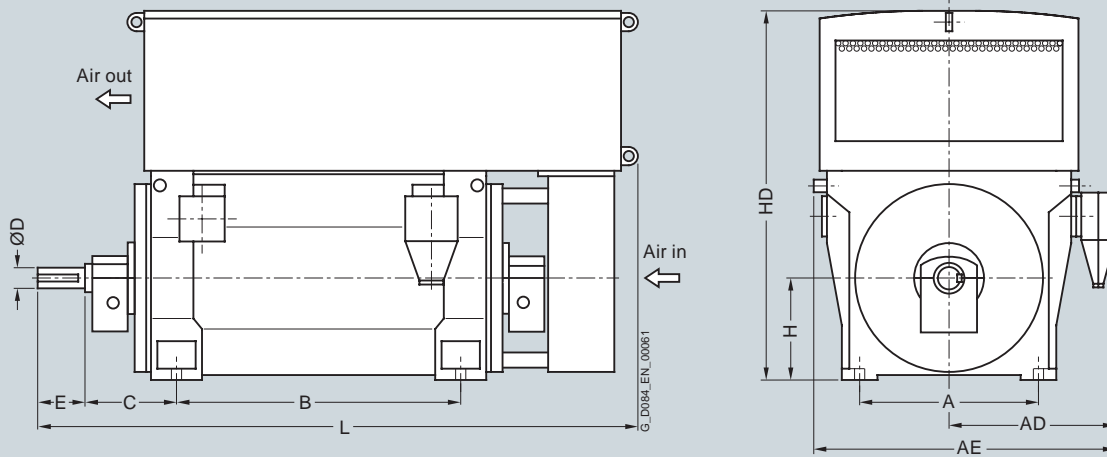
²⁾ The dimensions are also valid for the 1S4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series²⁾											
4-pole											
1RQ4 560-4JE.0-Z K96	8150	1060	1070	2040	1400	530	170	240	560	2260	3170
1RQ4 562-4JE.0-Z K96	8600	1060	1070	2040	1400	530	170	240	560	2260	3170
1RQ4 564-4JE.0-Z K96	9500	1060	1070	2040	1600	530	180	240	560	2260	3400
1RQ4 566-4JE.0-Z K96	9950	1060	1070	2040	1600	530	180	240	560	2260	3400
1RQ4 630-4JE.0-Z K96 ³⁾	11350	1320	1330	2210	1600	600	190	280	630	2340	3400
1RQ4 632-4JE.0-Z K96 ³⁾	12050	1320	1330	2210	1600	600	190	280	630	2340	3400
1RQ4 634-4JE.0-Z K96 ³⁾	13150	1320	1330	2210	1800	600	200	280	630	2340	3640
1RQ4 636-4JE.0-Z K96 ³⁾	13700	1320	1330	2210	1800	600	200	280	630	2340	3640
6-pole											
1RQ4 450-6JE.0-Z K96	4500	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 452-6JE.0-Z K96	4700	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 454-6JE.0-Z K96	5150	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 456-6JE.0-Z K96	5450	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 500-6JE.0-Z K96	6200	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 502-6JE.0-Z K96	6500	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 504-6JE.0-Z K96	7150	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 506-6JE.0-Z K96	7550	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 560-6JE.0-Z K96	8250	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 562-6JE.0-Z K96	8800	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 564-6JE.0-Z K96	9750	1060	1070	2040	1600	530	180	240	560	2260	3400
1RQ4 566-6JE.0-Z K96	10200	1060	1070	2040	1600	530	180	240	560	2260	3400
1RQ4 630-6JE.0-Z K96	11650	1320	1330	2210	1600	600	200	280	630	2340	3400
1RQ4 632-6JE.0-Z K96	12250	1320	1330	2210	1600	600	200	280	630	2340	3400
1RQ4 634-6JE.0-Z K96	13150	1320	1330	2210	1800	600	200	280	630	2340	3640
1RQ4 636-6JE.0-Z K96	14000	1320	1330	2210	1800	600	200	280	630	2340	3640

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

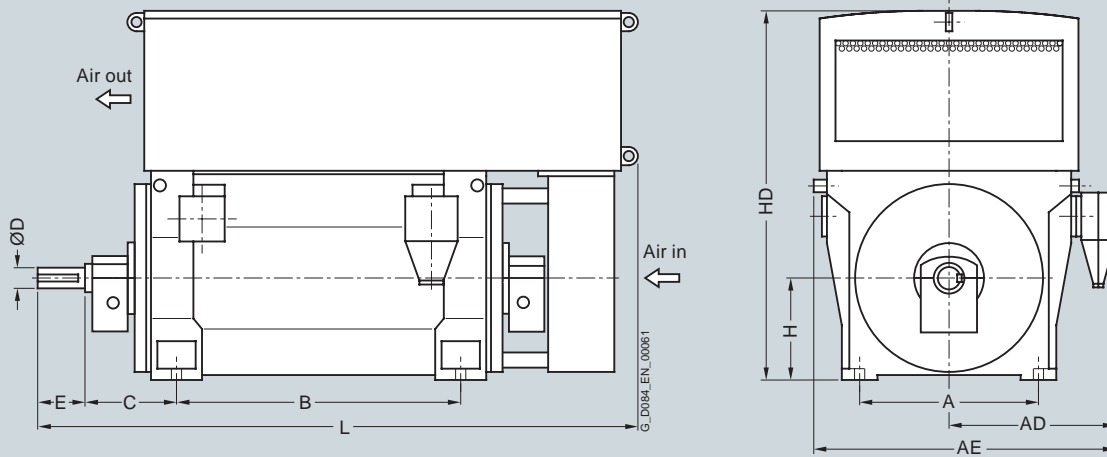
³⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series²⁾											
8-pole											
1RQ4 450-8JE.0-Z K96	4500	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 452-8JE.0-Z K96	4700	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 454-8JE.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 456-8JE.0-Z K96	5450	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 500-8JE.0-Z K96	6200	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 502-8JE.0-Z K96	6550	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 504-8JE.0-Z K96	7050	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 506-8JE.0-Z K96	7450	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 560-8JE.0-Z K96	8250	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 562-8JE.0-Z K96	8800	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 564-8JE.0-Z K96	9650	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4 566-8JE.0-Z K96	10100	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4 630-8JE.0-Z K96 ³⁾	11450	1320	1180	2060	1600	600	200	280	630	2340	3400
1RQ4 632-8JE.0-Z K96 ³⁾	12200	1320	1330	2210	1600	600	200	280	630	2340	3400
1RQ4 634-8JE.0-Z K96 ³⁾	13150	1320	1330	2210	1800	600	200	280	630	2340	3640
1RQ4 636-8JE.0-Z K96 ³⁾	13900	1320	1330	2210	1800	600	200	280	630	2340	3640
10-pole											
1RQ4 450-3JE.0-Z K96	4400	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 452-3JE.0-Z K96	4650	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 454-3JE.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 456-3JE.0-Z K96	5400	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 500-3JE.0-Z K96	6100	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 502-3JE.0-Z K96	6500	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 504-3JE.0-Z K96	7050	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 506-3JE.0-Z K96	7400	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 560-3JE.0-Z K96	8150	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 562-3JE.0-Z K96	8750	1060	1070	1900	1400	530	170	240	560	2260	3170

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1S4 and 1SG4 series.

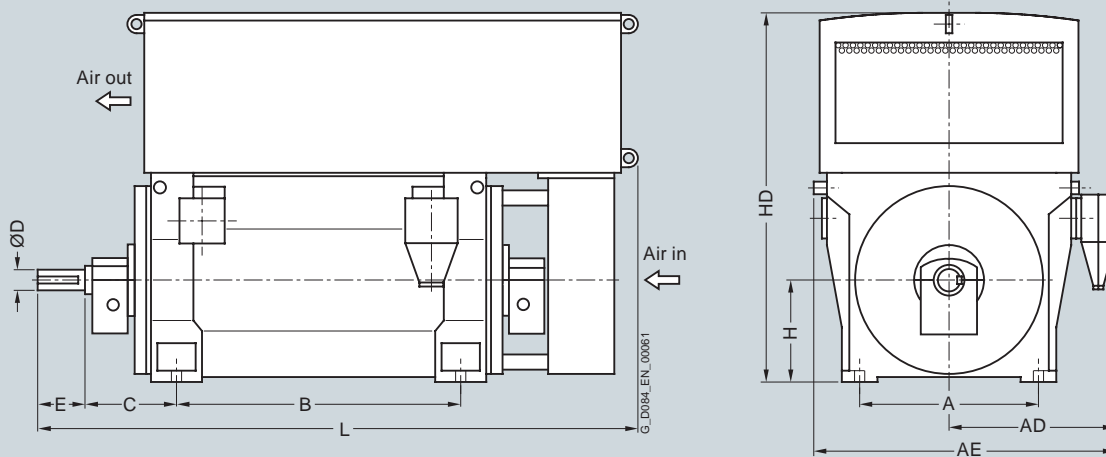
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series²⁾											
10-pole											
1RQ4 564-3JE.0-Z K96	9600	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4 566-3JE.0-Z K96	10050	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4 630-3JE.0-Z K96 ³⁾	11450	1320	1180	2060	1600	600	200	280	630	2340	3400
1RQ4 632-3JE.0-Z K96 ³⁾	12050	1320	1180	2060	1600	600	200	280	630	2340	3400
1RQ4 634-3JE.0-Z K96 ³⁾	13150	1320	1180	2060	1800	600	200	280	630	2340	3640
1RQ4 636-3JE.0-Z K96 ³⁾	13800	1320	1180	2060	1800	600	200	280	630	2340	3640
12-pole											
1RQ4 450-5JE.0-Z K96	4450	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 452-5JE.0-Z K96	4650	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4 454-5JE.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 456-5JE.0-Z K96	5400	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4 500-5JE.0-Z K96	6100	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 502-5JE.0-Z K96	6500	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4 504-5JE.0-Z K96	7050	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 506-5JE.0-Z K96	7450	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4 560-5JE.0-Z K96	8200	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 562-5JE.0-Z K96	8750	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4 564-5JE.0-Z K96	9550	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4 566-5JE.0-Z K96	10050	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4 630-5JE.0-Z K96 ³⁾	11350	1320	1180	2060	1600	600	200	280	630	2340	3400
1RQ4 632-5JE.0-Z K96 ³⁾	12000	1320	1180	2060	1600	600	200	280	630	2340	3400
1RQ4 634-5JE.0-Z K96 ³⁾	13050	1320	1180	2060	1800	600	200	280	630	2340	3640
1RQ4 636-5JE.0-Z K96 ³⁾	13750	1320	1180	2060	1800	600	200	280	630	2340	3640

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

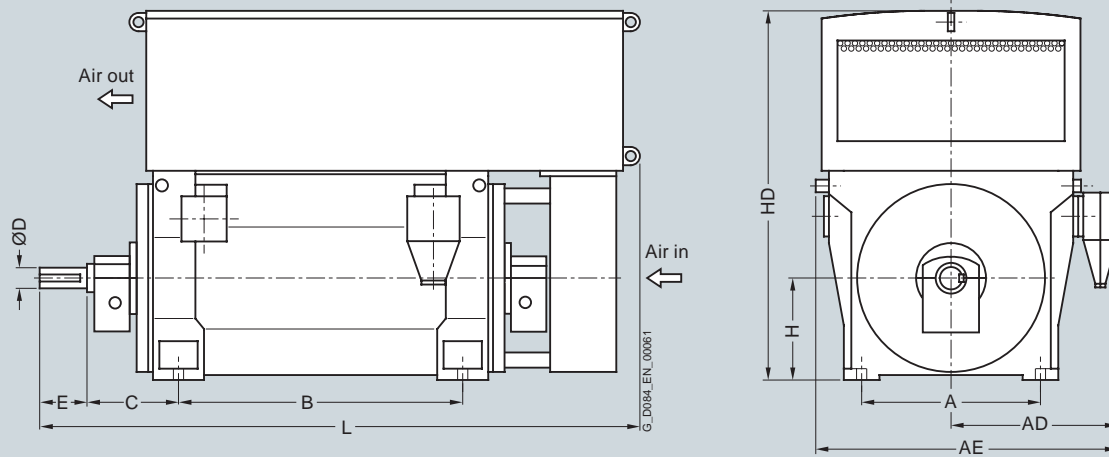
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series¹⁾											
2-pole											
1RQ4 450-2JE.0	4150	850	1070	1840	1180	450	100	165	450	1810	2630
1RQ4 452-2JE.0	4350	850	1070	1840	1180	450	100	165	450	1810	2630
1RQ4 454-2JE.0	4700	850	1070	1840	1400	450	110	165	450	1810	2840
1RQ4 456-2JE.0	5000	850	1070	1840	1400	450	110	165	450	1810	2840
1RQ4 500-2JE.0	5550	950	1140	1900	1320	475	110	165	500	2000	3220
1RQ4 502-2JE.0	5750	950	1140	1900	1320	475	110	165	500	2000	3220
1RQ4 504-2JE.0	6300	950	1140	1900	1500	475	120	165	500	2000	3430
1RQ4 506-2JE.0	6600	950	1140	1900	1500	475	120	165	500	2000	3430
1RQ4 560-2JE.0	7450	1060	1210	2040	1400	500	130	200	560	2260	3480
1RQ4 562-2JE.0	7650	1060	1210	2040	1400	500	130	200	560	2260	3480
1RQ4 564-2JE.0	8550	1060	1210	2040	1600	500	140	200	560	2260	3710
1RQ4 566-2JE.0	9000	1060	1210	2040	1600	500	140	200	560	2260	3710
1RQ4 630-2JE.0	10800	1320	1320	2200	1600	560	140	200	630	2340	3840
1RQ4 632-2JE.0	11450	1320	1320	2200	1600	560	140	200	630	2340	3840
1RQ4 634-2JE.0	12600	1320	1320	2200	1800	560	150	200	630	2340	4080
1RQ4 636-2JE.0	13400	1320	1330	2210	1800	560	150	200	630	2340	4080
4-pole											
1RQ4 450-4JE.0-Z K96	4400	850	1070	1840	1180	450	120	165	450	1810	2630
1RQ4 452-4JE.0-Z K96	4600	850	1070	1840	1180	450	120	165	450	1810	2630
1RQ4 454-4JE.0-Z K96	5100	850	1070	1840	1400	450	130	200	450	1810	2880
1RQ4 456-4JE.0-Z K96	5350	850	1070	1840	1400	450	130	200	450	1810	2880
1RQ4 500-4JE.0-Z K96	6050	950	1140	1980	1320	500	140	200	500	2000	2880
1RQ4 502-4JE.0-Z K96	6250	950	1140	1980	1320	500	140	200	500	2000	2880
1RQ4 504-4JE.0-Z K96	6900	950	1140	1980	1500	500	150	200	500	2000	3090
1RQ4 506-4JE.0-Z K96	7300	950	1140	1980	1500	500	150	200	500	2000	3090
1RQ4 560-4JE.0-Z K96	8000	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 562-4JE.0-Z K96	8450	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 564-4JE.0-Z K96	9350	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 566-4JE.0-Z K96	9800	1060	1210	2040	1600	530	180	240	560	2260	3400

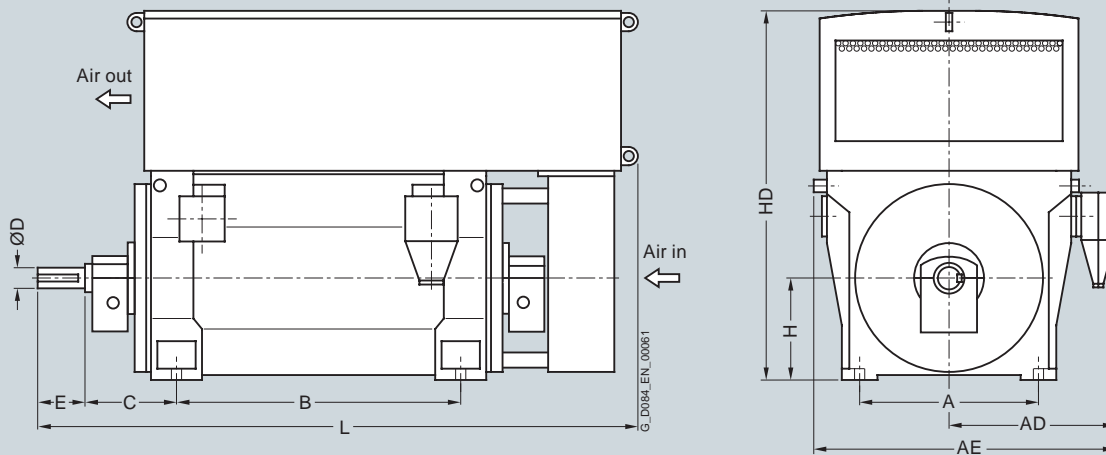
¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)

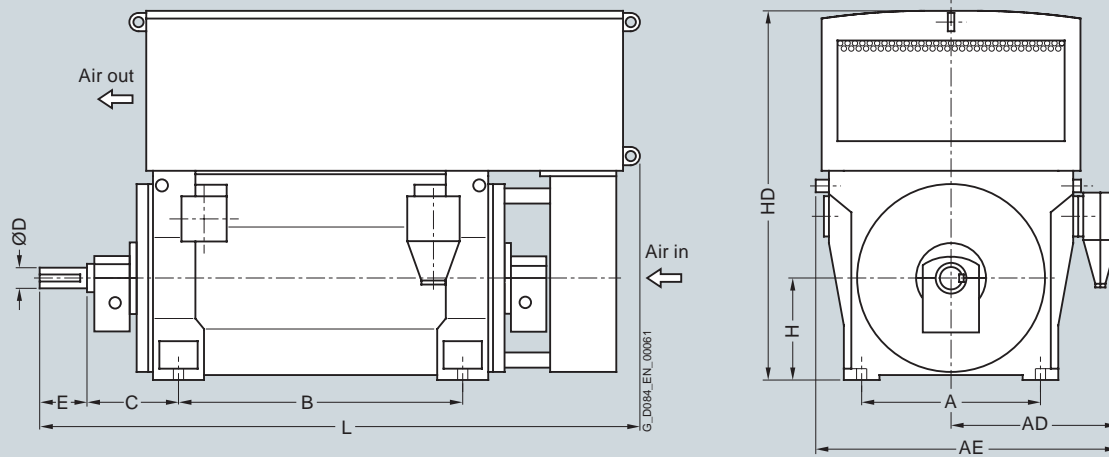


Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series¹⁾											
4-pole											
1RQ4 630-4JE.0-Z K96 ²⁾	11250	1320	1320	2200	1600	600	190	280	630	2340	3400
1RQ4 632-4JE.0-Z K96 ²⁾	11950	1320	1320	2200	1600	600	190	280	630	2340	3400
1RQ4 634-4JE.0-Z K96 ²⁾	13000	1320	1320	2200	1800	600	200	280	630	2340	3640
1RQ4 636-4JE.0-Z K96 ²⁾	13600	1320	1330	2210	1800	600	200	280	630	2340	3640
6-pole											
1RQ4 450-6JE.0-Z K96	4500	850	1070	1840	1180	450	130	200	450	1810	2670
1RQ4 452-6JE.0-Z K96	4750	850	1070	1840	1180	450	130	200	450	1810	2670
1RQ4 454-6JE.0-Z K96	5100	850	1070	1840	1400	450	140	200	450	1810	2880
1RQ4 456-6JE.0-Z K96	5450	850	1070	1840	1400	450	140	200	450	1810	2880
1RQ4 500-6JE.0-Z K96	6200	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 502-6JE.0-Z K96	6550	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 504-6JE.0-Z K96	7100	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 506-6JE.0-Z K96	7500	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 560-6JE.0-Z K96	8200	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 562-6JE.0-Z K96	8750	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 564-6JE.0-Z K96	9550	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 566-6JE.0-Z K96	10050	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 630-6JE.0-Z K96	11450	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 632-6JE.0-Z K96	12100	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 634-6JE.0-Z K96	13150	1320	1320	2200	1800	600	200	280	630	2340	3640
1RQ4 636-6JE.0-Z K96	13850	1320	1320	2200	1800	600	200	280	630	2340	3640
8-pole											
1RQ4 500-8JE.0-Z K96	6150	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 502-8JE.0-Z K96	6500	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 504-8JE.0-Z K96	7050	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 506-8JE.0-Z K96	7450	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 560-8JE.0-Z K96	8200	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 562-8JE.0-Z K96	8750	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 564-8JE.0-Z K96	9550	1060	1210	2040	1600	530	180	240	560	2260	3400

¹⁾ The dimensions are also valid for the 1S4 and 1SG4 series.

²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RQ4 series¹⁾											
8-pole											
1RQ4 566-8JE.0-Z K96	10000	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 630-8JE.0-Z K96	11450	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 632-8JE.0-Z K96	12000	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 634-8JE.0-Z K96	13050	1320	1320	2200	1800	600	200	280	630	2340	3640
1RQ4 636-8JE.0-Z K96	13800	1320	1320	2200	1800	600	200	280	630	2340	3640
10-pole											
1RQ4 500-3JE.0-Z K96	6100	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 502-3JE.0-Z K96	6450	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 504-3JE.0-Z K96	7050	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 506-3JE.0-Z K96	7400	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 560-3JE.0-Z K96	8400	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 562-3JE.0-Z K96	9400	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 564-3JE.0-Z K96	9900	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 566-3JE.0-Z K96	13000	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 630-3JE.0-Z K96	11400	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 632-3JE.0-Z K96	12000	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 634-3JE.0-Z K96	13000	1320	1320	2200	1800	600	200	280	630	2340	3640
1RQ4 636-3JE.0-Z K96	13750	1320	1320	2200	1800	600	200	280	630	2340	3640
12-pole											
1RQ4 502-5JE.0-Z K96	6500	950	1140	1980	1320	500	150	200	500	2000	2880
1RQ4 504-5JE.0-Z K96	7050	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 506-5JE.0-Z K96	7400	950	1140	1980	1500	500	160	240	500	2000	3130
1RQ4 560-5JE.0-Z K96	8150	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 562-5JE.0-Z K96	8700	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4 564-5JE.0-Z K96	9550	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 566-5JE.0-Z K96	10000	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4 630-5JE.0-Z K96	11350	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 632-5JE.0-Z K96	11900	1320	1320	2200	1600	600	200	280	630	2340	3400
1RQ4 634-5JE.0-Z K96	12950	1320	1320	2200	1800	600	200	280	630	2340	3640
1RQ4 636-5JE.0-Z K96	13650	1320	1320	2200	1800	600	200	280	630	2340	3640

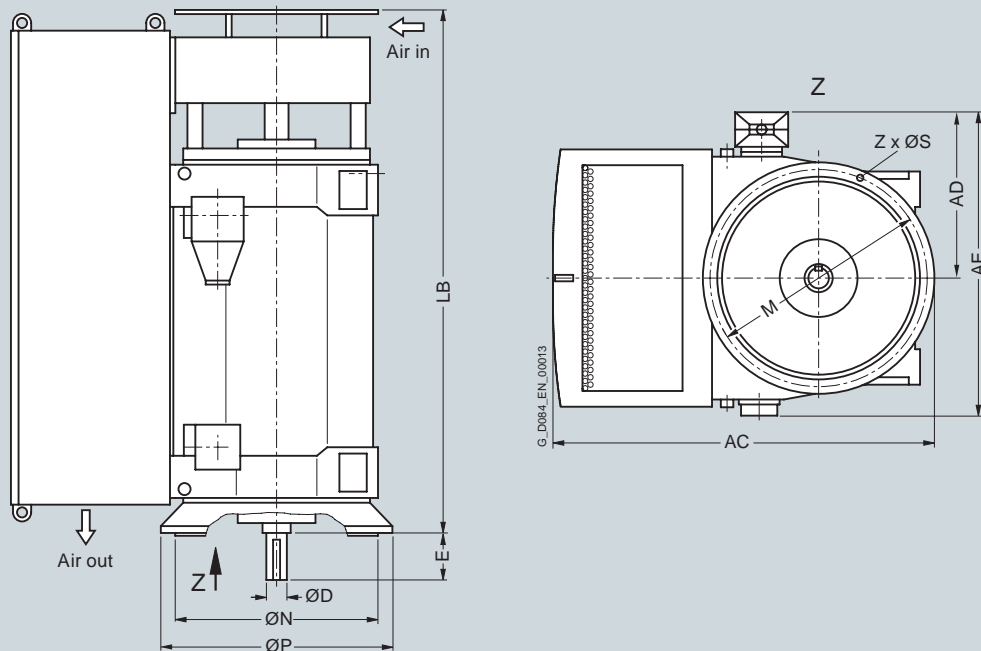
¹⁾ The dimensions are also valid for the 1S4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



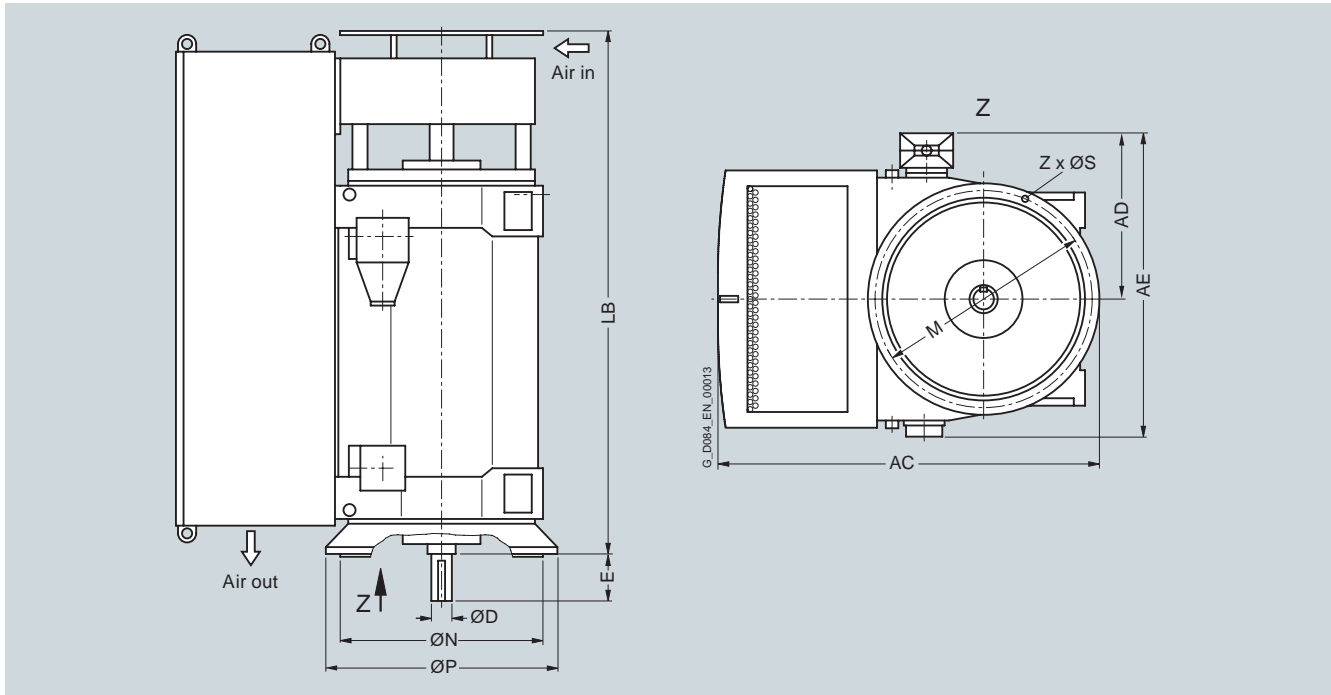
Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series²⁾												
4-pole												
1RQ4 450-4JE.4	4450	1940	930	1670	120	165	2360	1150	1000	1080	26	8
1RQ4 452-4JE.4	4650	1940	930	1670	120	165	2360	1150	1000	1080	26	8
1RQ4 454-4JE.4	5100	1940	930	1670	130	200	2570	1150	1000	1080	26	8
1RQ4 456-4JE.4	5400	1940	930	1670	130	200	2570	1150	1000	1080	26	8
1RQ4 500-4JE.4	6050	2130	1000	1810	140	200	2560	1250	1120	1180	26	8
1RQ4 502-4JE.4	6250	2130	1000	1810	140	200	2560	1250	1120	1180	26	8
1RQ4 504-4JE.4	6950	2130	1000	1810	150	200	2770	1250	1120	1180	26	8
1RQ4 506-4JE.4	7300	2130	1000	1810	150	200	2770	1250	1120	1180	26	8
1RQ4 560-4JE.4	8200	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 562-4JE.4	8600	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 564-4JE.4 ³⁾	9500	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 566-4JE.4 ³⁾	9950	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-4JE.4 ³⁾	12750	2840	1330	2300	200	280	3170	2000	1800	1900	33	8
1RQ4 632-4JE.4 ³⁾	13450	2840	1330	2300	200	280	3170	2000	1800	1900	33	8
1RQ4 634-4JE.4 ³⁾	14550	2840	1330	2300	200	280	3410	2000	1800	1900	33	8
1RQ4 636-4JE.4 ³⁾	15100	2840	1330	2300	200	280	3410	2000	1800	1900	33	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

³⁾ Only in the 50 Hz version.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series²⁾												
6-pole												
1RQ4 450-6JE.4	4500	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 452-6JE.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 454-6JE.4	5200	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 456-6JE.4	5500	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 500-6JE.4	6200	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 502-6JE.4	6550	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 504-6JE.4	7100	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 506-6JE.4	7500	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 560-6JE.4	8300	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 562-6JE.4	8800	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 564-6JE.4	9750	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 566-6JE.4	10200	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-6JE.4	13050	2840	1330	2300	200	280	3170	2000	1800	1900	33	8
1RQ4 632-6JE.4	13650	2840	1330	2300	200	280	3170	2000	1800	1900	33	8
1RQ4 634-6JE.4	14550	2840	1330	2300	200	280	3410	2000	1800	1900	33	8
1RQ4 636-6JE.4	15400	2840	1330	2300	200	280	3410	2000	1800	1900	33	8
8-pole												
1RQ4 450-8JE.4	4500	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 452-8JE.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 454-8JE.4	5150	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 456-8JE.4	5500	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 500-8JE.4	6200	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 502-8JE.4	6600	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 504-8JE.4	7100	2130	1000	1810	160	240	2770	1250	1120	1180	26	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

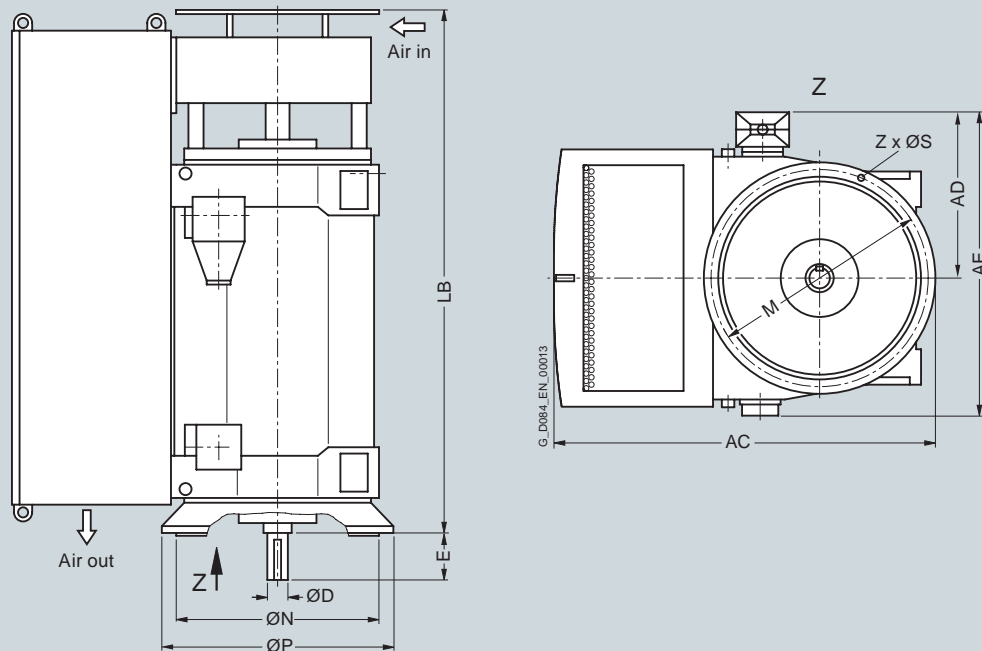
²⁾ The dimensions are also valid for the 1S4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series²⁾												
8-pole												
1RQ4 506-8JE.4	7500	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 560-8JE.4	8250	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 562-8JE.4	8800	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 564-8JE.4	9650	2400	1070	1960	180	240	3030	1400	1250	1320	26	8
1RQ4 566-8JE.4	10100	2400	1070	1960	180	240	3030	1400	1250	1320	26	8
1RQ4 630-8JE.4 ³⁾	12850	2840	1180	2150	200	280	3170	2000	1800	1900	33	8
1RQ4 632-8JE.4 ³⁾	13600	2840	1330	2300	200	280	3170	2000	1800	1900	33	8
1RQ4 634-8JE.4 ³⁾	14550	2840	1330	2300	200	280	3410	2000	1800	1900	33	8
1RQ4 636-8JE.4 ³⁾	15300	2840	1330	2300	200	280	3410	2000	1800	1900	33	8
10-pole												
1RQ4 450-3JE.4	4450	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 452-3JE.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 454-3JE.4	5100	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 456-3JE.4	5450	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 500-3JE.4	6150	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 502-3JE.4	6450	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 504-3JE.4	7050	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 506-3JE.4	7450	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 560-3JE.4	8200	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 562-3JE.4	8750	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 564-3JE.4	9600	2400	1070	1960	180	240	3030	1400	1250	1320	26	8
1RQ4 566-3JE.4	10050	2400	1070	1960	180	240	3030	1400	1250	1320	26	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

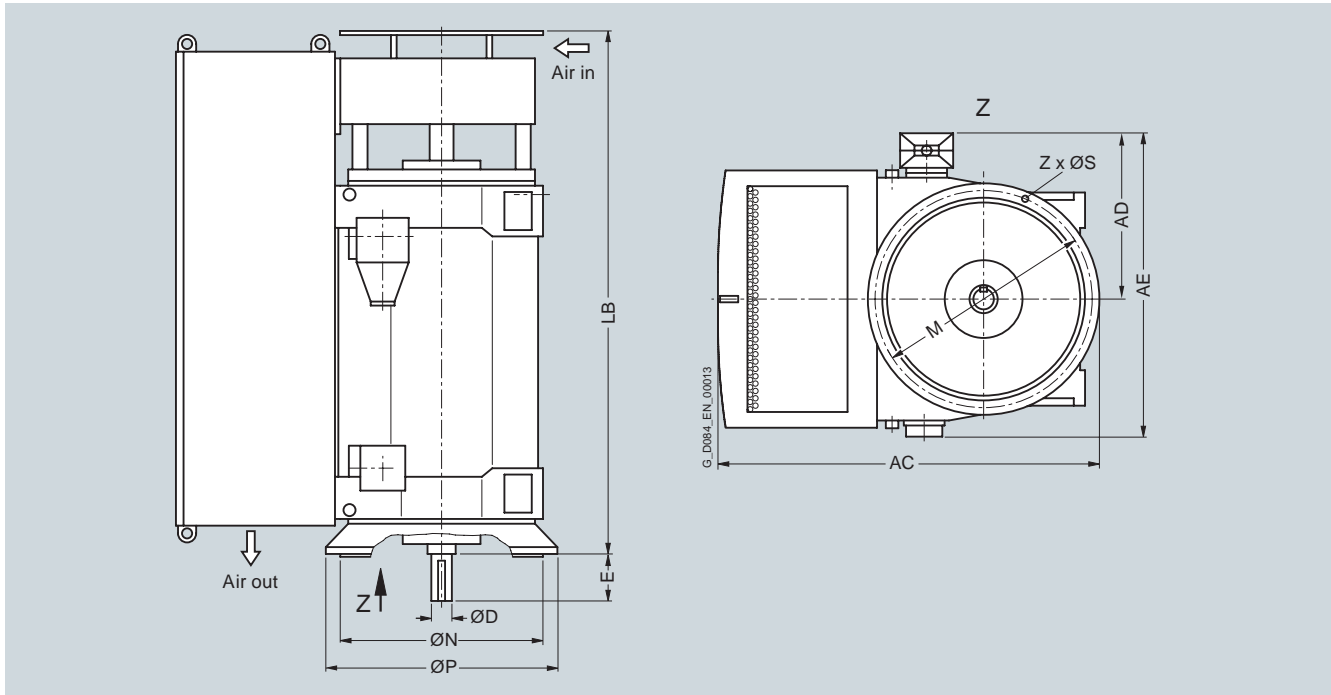
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series²⁾												
10-pole												
1RQ4 630-3JE.4 ³⁾	12850	2840	1180	2150	200	280	3170	2000	1800	1900	33	8
1RQ4 632-3JE.4 ³⁾	13450	2840	1180	2150	200	280	3170	2000	1800	1900	33	8
1RQ4 634-3JE.4 ³⁾	14550	2840	1180	2150	200	280	3410	2000	1800	1900	33	8
1RQ4 636-3JE.4 ³⁾	15200	2840	1180	2150	200	280	3410	2000	1800	1900	33	8
12-pole												
1RQ4 450-5JE.4	4450	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 452-5JE.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 454-5JE.4	5100	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 456-5JE.4	5450	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4 500-5JE.4	6150	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 502-5JE.4	6500	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4 504-5JE.4	7050	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 506-5JE.4	7500	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4 560-5JE.4	8200	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 562-5JE.4	8750	2400	1070	1960	170	240	2800	1400	1250	1320	26	8
1RQ4 564-5JE.4	9550	2400	1070	1960	180	240	3030	1400	1250	1320	26	8
1RQ4 566-5JE.4	10050	2400	1070	1960	180	240	3030	1400	1250	1320	26	8
1RQ4 630-5JE.4 ³⁾	12750	2840	1180	2150	200	280	3170	2000	1800	1900	33	8
1RQ4 632-5JE.4 ³⁾	13400	2840	1180	2150	200	280	3170	2000	1800	1900	33	8
1RQ4 634-5JE.4 ³⁾	14450	2840	1180	2150	200	280	3410	2000	1800	1900	33	8
1RQ4 636-5JE.4 ³⁾	15150	2840	1180	2150	200	280	3410	2000	1800	1900	33	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

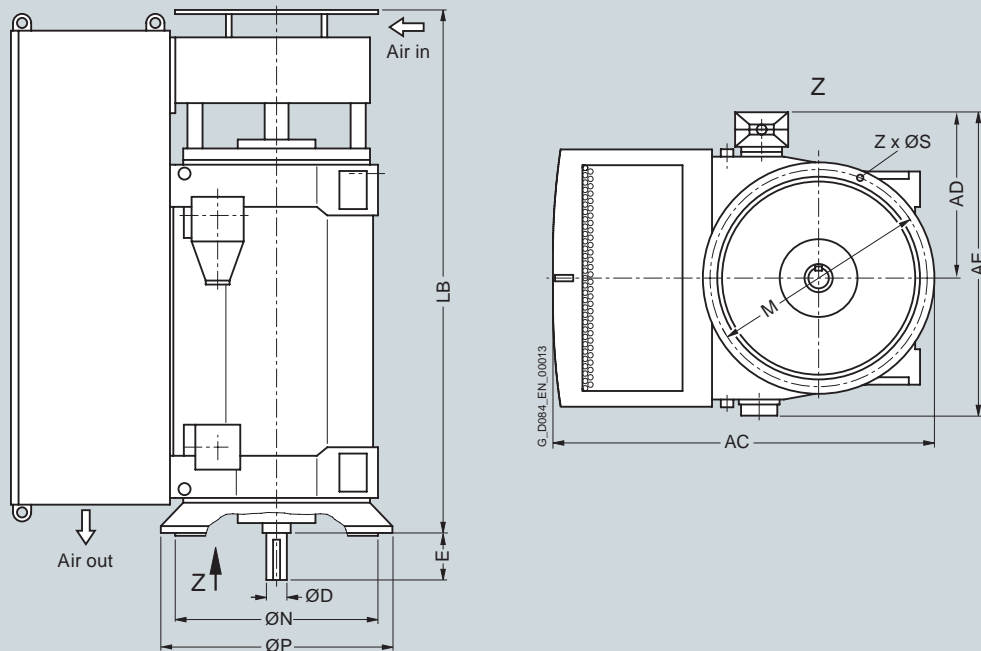
³⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

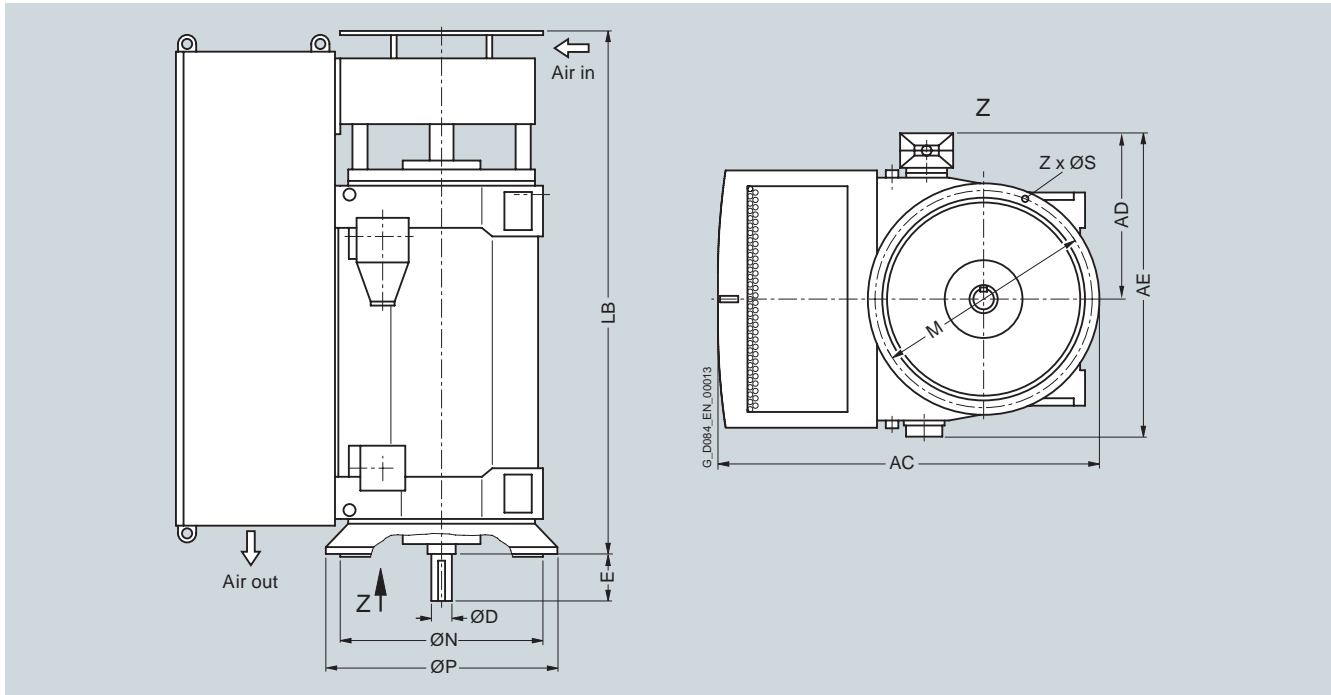
Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings¹⁾												
4-pole												
1RQ4 450-4JE.4	4450	1940	1070	1810	120	165	2360	1150	1000	1080	26	8
1RQ4 452-4JE.4	4650	1940	1070	1810	120	165	2360	1150	1000	1080	26	8
1RQ4 454-4JE.4	5100	1940	1070	1810	130	200	2570	1150	1000	1080	26	8
1RQ4 456-4JE.4	5400	1940	1070	1810	130	200	2570	1150	1000	1080	26	8
1RQ4 500-4JE.4	6050	2130	1140	1950	140	200	2560	1250	1120	1180	26	8
1RQ4 502-4JE.4	6250	2130	1140	1950	140	200	2560	1250	1120	1180	26	8
1RQ4 504-4JE.4	6950	2130	1140	1950	150	200	2770	1250	1120	1180	26	8
1RQ4 506-4JE.4	7300	2130	1140	1950	150	200	2770	1250	1120	1180	26	8
1RQ4 560-4JE.4	8050	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 562-4JE.4	8500	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 564-4JE.4	9400	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 566-4JE.4	9800	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-4JE.4	12750	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 632-4JE.4	13450	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 634-4JE.4	14550	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
1RQ4 636-4JE.4	15100	2840	1330	2300	200	280	3410	2000	1800	1900	33	8
6-pole												
1RQ4 450-6JE.4	4500	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 452-6JE.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4 454-6JE.4	5150	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 456-6JE.4	5500	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 500-6JE.4	6150	2130	1140	1950	150	200	2560	1250	1120	1180	26	8

¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series¹⁾												
6-pole												
1RQ4 502-6JE.4	6550	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 504-6JE.4	7100	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 506-6JE.4	7500	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 560-6JE.4	8250	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 562-6JE.4	8750	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 564-6JE.4	9600	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 566-6JE.4	10050	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-6JE.4	13050	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 632-6JE.4	13650	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 634-6JE.4	14550	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
1RQ4 636-6JE.4	15400	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
8-pole												
1RQ4 450-8JE.4	4500	1940	1070	1810	130	200	2360	1150	1000	1080	26	8
1RQ4 452-8JE.4	4750	1940	1070	1810	130	200	2360	1150	1000	1080	26	8
1RQ4 454-8JE.4	5200	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 456-8JE.4	5500	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 500-8JE.4	6200	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 502-8JE.4	6550	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 504-8JE.4	7100	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 506-8JE.4	7500	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 560-8JE.4	8200	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 562-8JE.4	8750	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 564-8JE.4	9600	2400	1210	2100	180	240	3030	1400	1250	1320	26	8

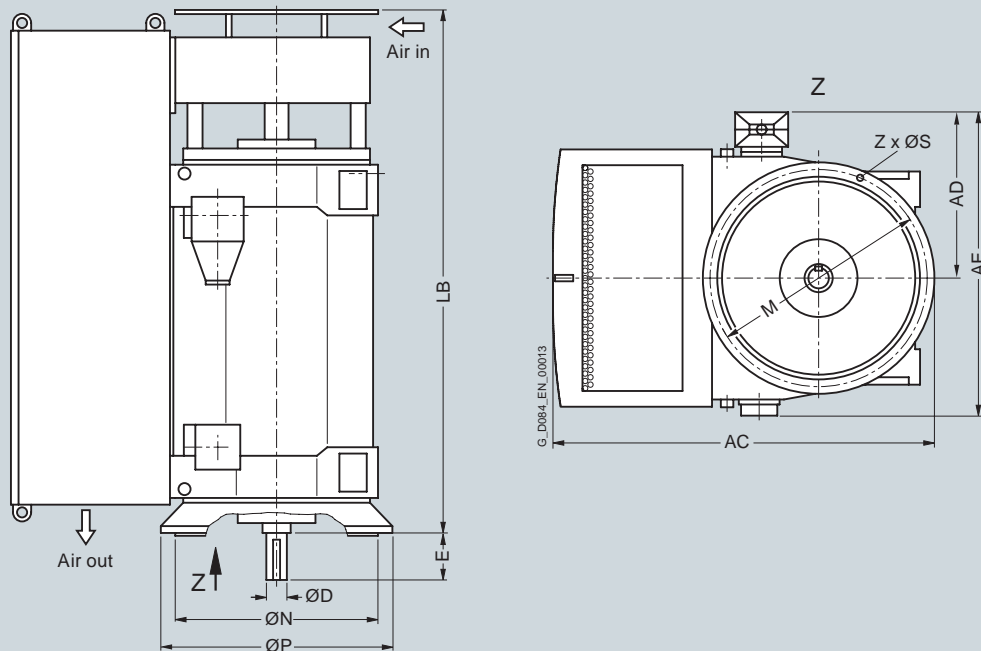
¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

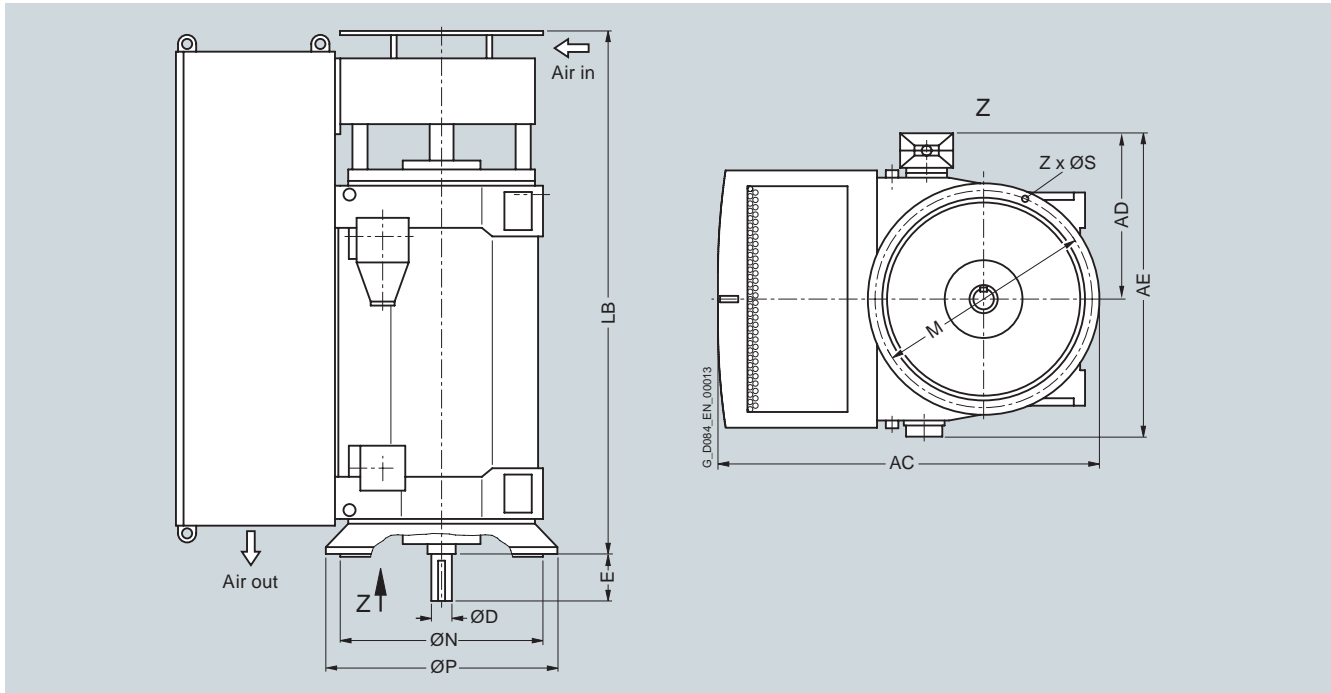
Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series¹⁾												
8-pole												
1RQ4 566-8JE.4	10000	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-8JE.4	12850	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 632-8JE.4	13600	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 634-8JE.4	14550	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
1RQ4 636-8JE.4	15300	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
10-pole												
1RQ4 450-3JE.4	4500	1940	1070	1810	130	200	2360	1150	1000	1080	26	8
1RQ4 452-3JE.4	4750	1940	1070	1810	130	200	2360	1150	1000	1080	26	8
1RQ4 454-3JE.4	5100	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 456-3JE.4	5500	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 500-3JE.4	6150	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 502-3JE.4	6450	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 504-3JE.4	7000	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 506-3JE.4	7450	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 560-3JE.4	8700	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 562-3JE.4	9350	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 564-3JE.4	10150	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 566-3JE.4	10600	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-3JE.4	12850	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 632-3JE.4	13450	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 634-3JE.4	14550	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
1RQ4 636-3JE.4	15200	2840	1320	2290	200	280	3410	2000	1800	1900	33	8

¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RQ4 series¹⁾												
12-pole												
1RQ4 450-5JE.4	4500	1940	1070	1810	130	200	2360	1150	1000	1080	26	8
1RQ4 452-5JE.4	4750	1940	1070	1810	130	200	2360	1150	1000	1080	26	8
1RQ4 454-5JE.4	5150	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 456-5JE.4	5500	1940	1070	1810	140	200	2570	1150	1000	1080	26	8
1RQ4 500-5JE.4	6200	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 502-5JE.4	6500	2130	1140	1950	150	200	2560	1250	1120	1180	26	8
1RQ4 504-5JE.4	7000	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 506-5JE.4	7450	2130	1140	1950	160	240	2770	1250	1120	1180	26	8
1RQ4 560-5JE.4	8200	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 562-5JE.4	8700	2400	1210	2100	170	240	2800	1400	1250	1320	26	8
1RQ4 564-5JE.4	9550	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 566-5JE.4	10000	2400	1210	2100	180	240	3030	1400	1250	1320	26	8
1RQ4 630-5JE.4	12750	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 632-5JE.4	13400	2840	1320	2290	200	280	3170	2000	1800	1900	33	8
1RQ4 634-5JE.4	14450	2840	1320	2290	200	280	3410	2000	1800	1900	33	8
1RQ4 636-5JE.4	15150	2840	1320	2290	200	280	3410	2000	1800	1900	33	8

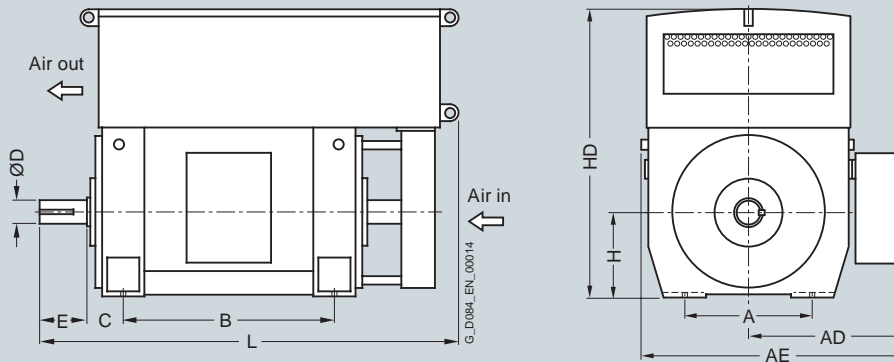
¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings

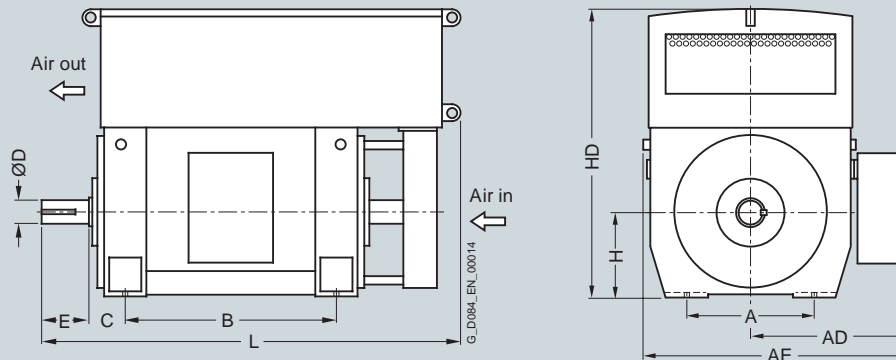


Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RQ6 series¹⁾											
4-pole											
1RQ6 710-4JJ.0 ²⁾	21100	1500	1500	2530	2000	355	220	280	710	2820	4720
1RQ6 712-4JJ.0 ²⁾	21900	1500	1500	2530	2000	355	220	280	710	2820	4720
1RQ6 714-4JJ.0 ²⁾	23400	1500	1500	2530	2240	355	220	280	710	2820	4960
1RQ6 716-4JJ.0 ²⁾	24400	1500	1500	2530	2240	355	220	280	710	2820	4960
6-pole											
1RQ6 710-6JJ.0	20400	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 712-6JJ.0	21100	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 714-6JJ.0	22800	1500	1500	2530	2240	355	240	330	710	2810	4130
1RQ6 716-6JJ.0	24000	1500	1500	2530	2240	355	240	330	710	2810	4130
8-pole											
1RQ6 710-8JJ.0	20200	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 712-8JJ.0	21000	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 714-8JJ.0	22600	1500	1500	2530	2240	355	240	330	710	2810	4130
1RQ6 716-8JJ.0	23700	1500	1500	2530	2240	355	240	330	710	2810	4130
10-pole											
1RQ6 710-3JJ.0	20000	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 712-3JJ.0	20900	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 714-3JJ.0	22500	1500	1500	2530	2240	355	240	330	710	2810	4130
1RQ6 716-3JJ.0	23600	1500	1500	2530	2240	355	240	330	710	2810	4130

¹⁾ The dimensions are also valid for the 1SJ4 and 1SG4 series.

²⁾ Only in the 50 Hz version.

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RQ6 series¹⁾											
4-pole											
1RQ6 710-4JJ.0 ²⁾	20800	1500	1500	2530	2000	355	220	280	710	2820	4720
1RQ6 712-4JJ.0 ²⁾	21600	1500	1500	2530	2000	355	220	280	710	2820	4720
1RQ6 714-4JJ.0 ²⁾	23100	1500	1500	2530	2240	355	220	280	710	2820	4960
1RQ6 716-4JJ.0 ²⁾	24000	1500	1500	2530	2240	355	220	280	710	2820	4960
6-pole											
1RQ6 710-6JJ.0	20200	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 712-6JJ.0	21000	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 714-6JJ.0	22600	1500	1500	2530	2240	355	240	330	710	2810	4130
1RQ6 716-6JJ.0	23700	1500	1500	2530	2240	355	240	330	710	2810	4130
8-pole											
1RQ6 710-8JJ.0	20100	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 712-8JJ.0	20800	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 714-8JJ.0	22400	1500	1500	2530	2240	355	240	330	710	2810	4130
1RQ6 716-8JJ.0	23600	1500	1500	2530	2240	355	240	330	710	2810	4130
10-pole											
1RQ6 710-3JJ.0	19900	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 712-3JJ.0	20700	1500	1500	2530	2000	355	240	330	710	2810	3890
1RQ6 714-3JJ.0	22400	1500	1500	2530	2240	355	240	330	710	2810	4130
1RQ6 716-3JJ.0	23500	1500	1500	2530	2240	355	240	330	710	2810	4130

¹⁾ The dimensions are also valid for the 1SJ6 and 1SG6 series.

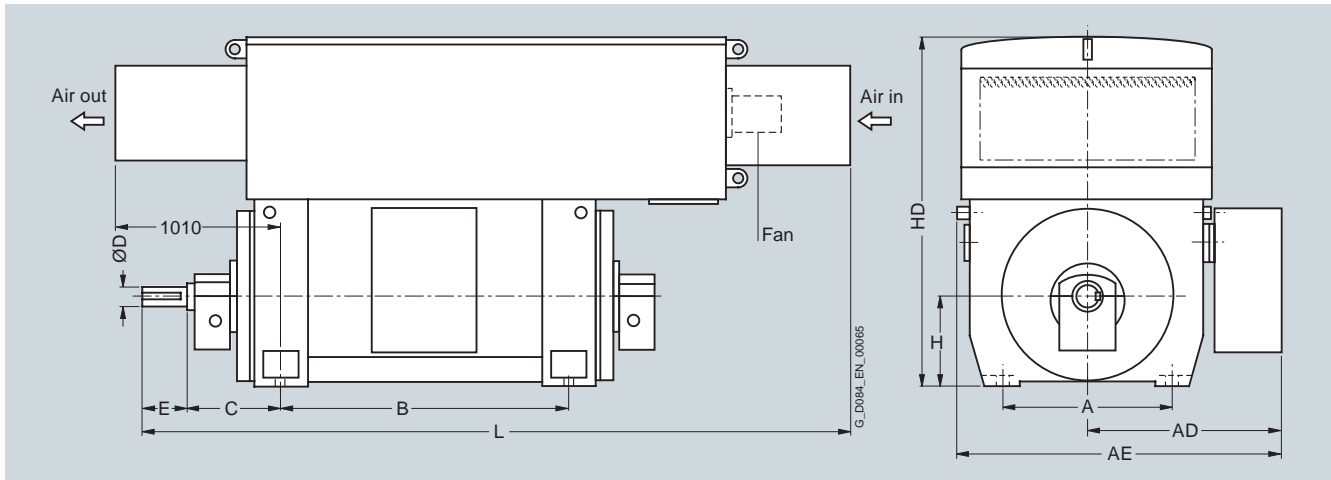
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RQ6 series¹⁾											
2-pole											
1RQ6 710-2HJ.0	19300	1500	1500	2530	2000	600	180	240	710	2820	4940
1RQ6 712-2HJ.0	20100	1500	1500	2530	2000	600	180	240	710	2820	4940
1RQ6 714-2HJ.0	21400	1500	1500	2530	2240	600	180	240	710	2820	5180
1RQ6 716-2HJ.0	22400	1500	1500	2530	2240	600	180	240	710	2820	5180

Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RQ6 series¹⁾											
2-pole											
1RQ6 710-2HJ.0	19100	1500	1500	2530	2000	600	180	240	710	2820	4940
1RQ6 712-2HJ.0	19900	1500	1500	2530	2000	600	180	240	710	2820	4940
1RQ6 714-2HJ.0	21200	1500	1500	2530	2240	600	180	240	710	2820	5180
1RQ6 716-2HJ.0	22200	1500	1500	2530	2240	600	180	240	710	2820	5180

¹⁾ The dimensions are also valid for the 1SJ6 and 1SG6 series.

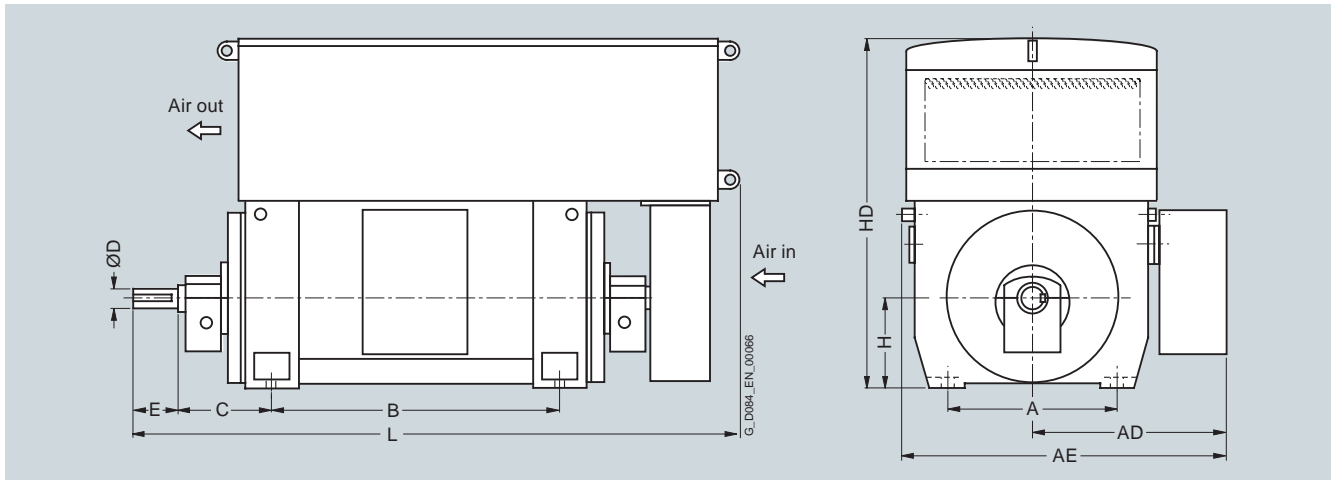
²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RQ6 series¹⁾											
4-pole											
1RQ6 710-4JJ.0-Z K96 ²⁾	21100	1500	1500	2530	2000	530	220	280	710	2820	4890
1RQ6 712-4JJ.0-Z K96 ²⁾	21900	1500	1500	2530	2000	530	220	280	710	2820	4890
1RQ6 714-4JJ.0-Z K96 ²⁾	23400	1500	1500	2530	2240	530	220	280	710	2820	5130
1RQ6 716-4JJ.0-Z K96 ²⁾	24400	1500	1500	2530	2240	530	220	280	710	2820	5130
6-pole											
1RQ6 710-6JJ.0-Z K96	21300	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 712-6JJ.0-Z K96	22000	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 714-6JJ.0-Z K96	23700	1500	1500	2530	2240	670	240	330	710	2810	4440
1RQ6 716-6JJ.0-Z K96	24900	1500	1500	2530	2240	670	240	330	710	2810	4440
8-pole											
1RQ6 710-8JJ.0-Z K96	21100	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 712-8JJ.0-Z K96	21900	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 714-8JJ.0-Z K96	23500	1500	1500	2530	2240	670	240	330	710	2810	4440
1RQ6 716-8JJ.0-Z K96	24600	1500	1500	2530	2240	670	240	330	710	2810	4440
10-pole											
1RQ6 710-3JJ.0-Z K96	20900	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 712-3JJ.0-Z K96	21800	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 714-3JJ.0-Z K96	23400	1500	1500	2530	2240	670	240	330	710	2810	4440
1RQ6 716-3JJ.0-Z K96	24500	1500	1500	2530	2240	670	240	330	710	2810	4440

¹⁾ The dimensions are also valid for the 1SJ6 and 1SG6 series.

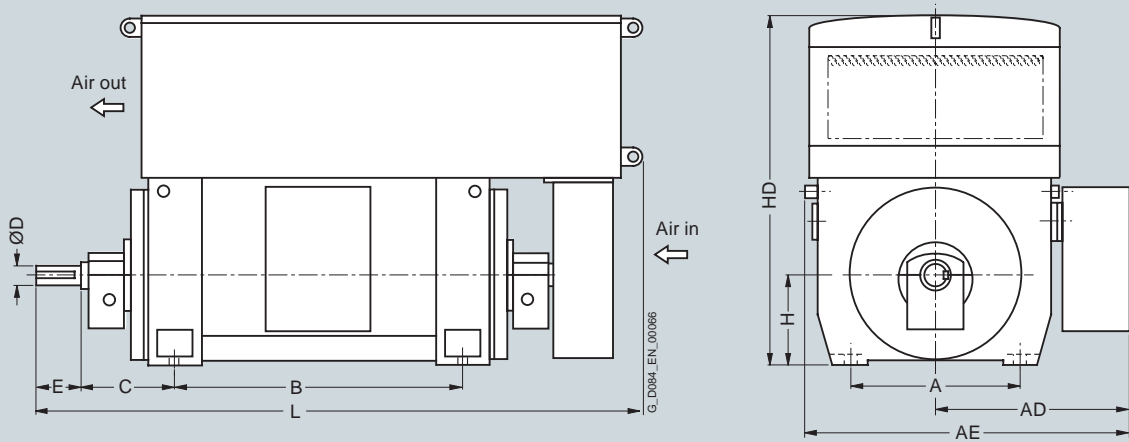
²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RQ6 series¹⁾											
4-pole											
1RQ6 710-4JJ.0-Z K96 ²⁾	20800	1500	1500	2530	2000	530	220	280	710	2820	4890
1RQ6 712-4JJ.0-Z K96 ²⁾	21600	1500	1500	2530	2000	530	220	280	710	2820	4890
1RQ6 714-4JJ.0-Z K96 ²⁾	23100	1500	1500	2530	2240	530	220	280	710	2820	5130
1RQ6 716-4JJ.0-Z K96 ²⁾	24000	1500	1500	2530	2240	530	220	280	710	2820	5130
6-pole											
1RQ6 710-6JJ.0-Z K96	21100	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 712-6JJ.0-Z K96	21900	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 714-6JJ.0-Z K96	23500	1500	1500	2530	2240	670	240	330	710	2810	4440
1RQ6 716-6JJ.0-Z K96	24600	1500	1500	2530	2240	670	240	330	710	2810	4440
8-pole											
1RQ6 710-8JJ.0-Z K96	21000	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 712-8JJ.0-Z K96	21700	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 714-8JJ.0-Z K96	23300	1500	1500	2530	2240	670	240	330	710	2810	4440
1RQ6 716-8JJ.0-Z K96	24500	1500	1500	2530	2240	670	240	330	710	2810	4440
10-pole											
1RQ6 710-3JJ.0-Z K96	20800	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 712-3JJ.0-Z K96	21600	1500	1500	2530	2000	670	240	330	710	2810	4200
1RQ6 714-3JJ.0-Z K96	23300	1500	1500	2530	2240	670	240	330	710	2810	4440
1RQ6 716-3JJ.0-Z K96	24400	1500	1500	2530	2240	670	240	330	710	2810	4440

¹⁾ The dimensions are also valid for the 1SJ6 and 1SG6 series.

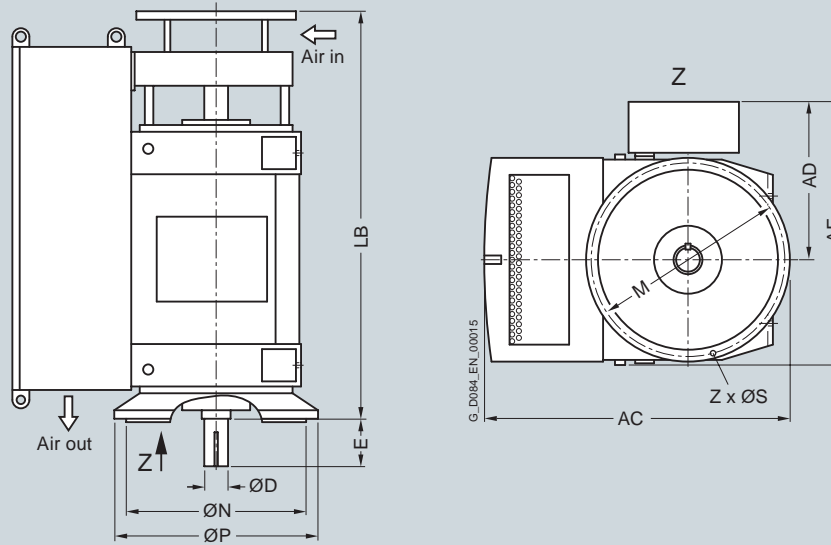
²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC	AD	AE	D	E	LB	P	N	M	S	Z
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RQ6 series ¹⁾												
6-pole												
1RQ6 710-6JJ.4	22500	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 712-6JJ.4	23200	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 714-6JJ.4	24900	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
1RQ6 716-6JJ.4	26100	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
8-pole												
1RQ6 710-8JJ.4	22300	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 712-8JJ.4	23100	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 714-8JJ.4	24700	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
1RQ6 716-8JJ.4	25800	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
10-pole												
1RQ6 710-3JJ.4	22100	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 712-3JJ.4	23000	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 714-3JJ.4	24600	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
1RQ6 716-3JJ.4	25700	3100	1500	2530	240	330	4160	2000	1800	1900	33	24

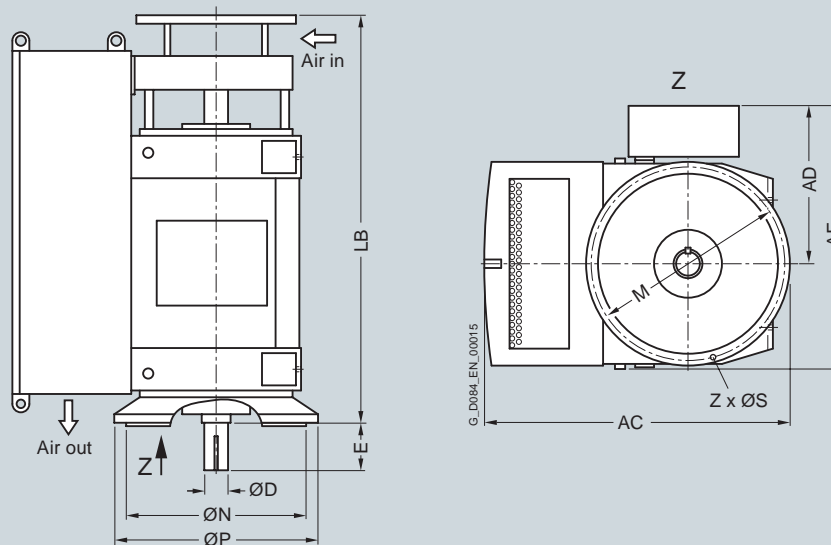
¹⁾ The dimensions are also valid for the 1SJ6 and 1SG6 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RQ6 series¹⁾												
6-pole												
1RQ6 710-6JJ.4	22300	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 712-6JJ.4	23100	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 714-6JJ.4	24700	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
1RQ6 716-6JJ.4	25800	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
8-pole												
1RQ6 710-8JJ.4	22200	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 712-8JJ.4	23000	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 714-8JJ.4	24500	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
1RQ6 716-8JJ.4	25700	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
10-pole												
1RQ6 710-3JJ.4	22000	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 712-3JJ.4	22800	3100	1500	2530	240	330	3920	2000	1800	1900	33	24
1RQ6 714-3JJ.4	24500	3100	1500	2530	240	330	4160	2000	1800	1900	33	24
1RQ6 716-3JJ.4	25600	3100	1500	2530	240	330	4160	2000	1800	1900	33	24

¹⁾ The dimensions are also valid for the 1SJ6 and 1SG6 series.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RQ4 and 1RQ6

Notes

2

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1RA4/1RP6	
Rated voltage	3.3 ... 13.8 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP23 / IP24W
Cooling method	IC 01
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN, NEMA
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

Technical data (continued)

Power ranges for IEC motors for line operation

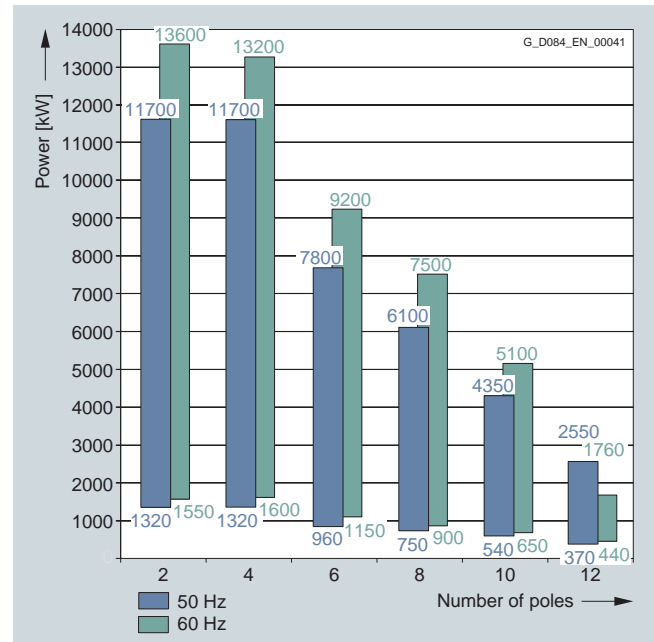
1RA4, 1RP6 series

Insulation system, thermal class 155 (F), utilized to 130 (B).

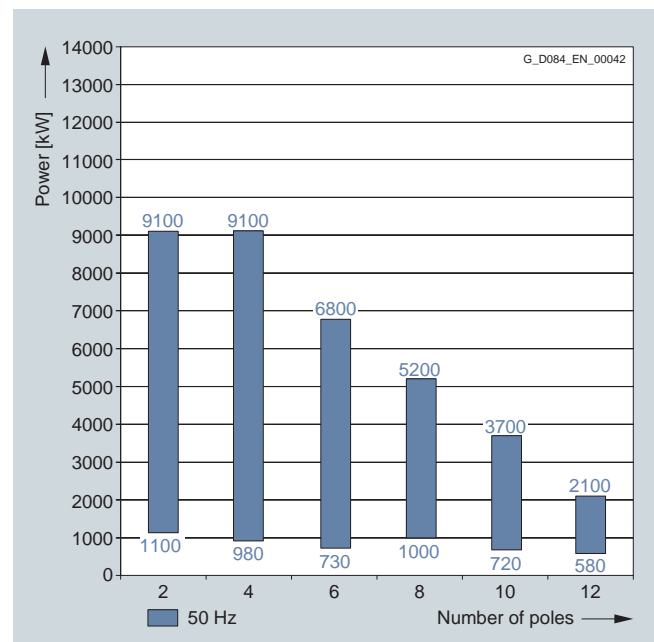
Ambient temperature up to 40 °C, installation altitude up to 1000 m.

3.3 to 6.6 kV; 50 Hz

4.0 to 6.6 kV; 60 Hz



9 to 11 kV; 50 Hz



Motors for line operation

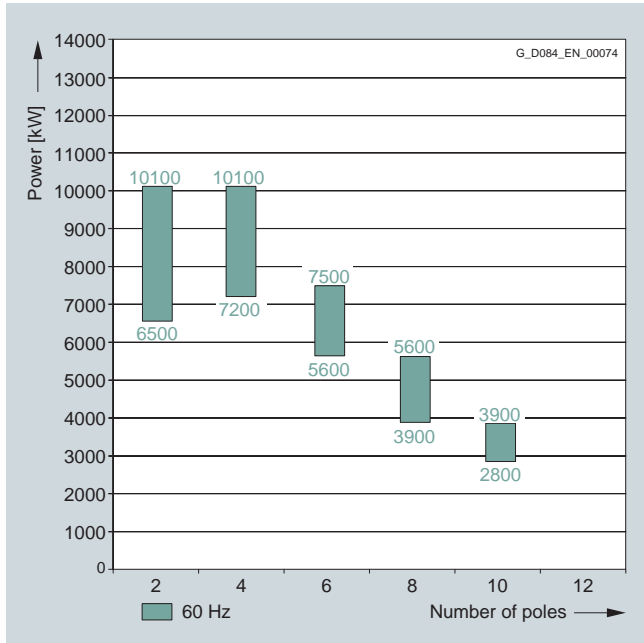
Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Technical data (continued)

Power ranges for IEC motors for line operation (continued)

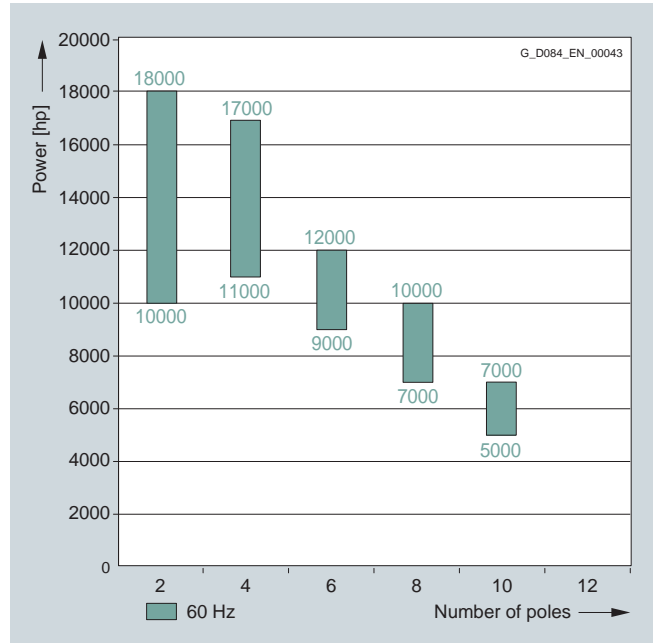
12.5 to 13.8 kV; 60 Hz



Power ranges for NEMA motors for line operation

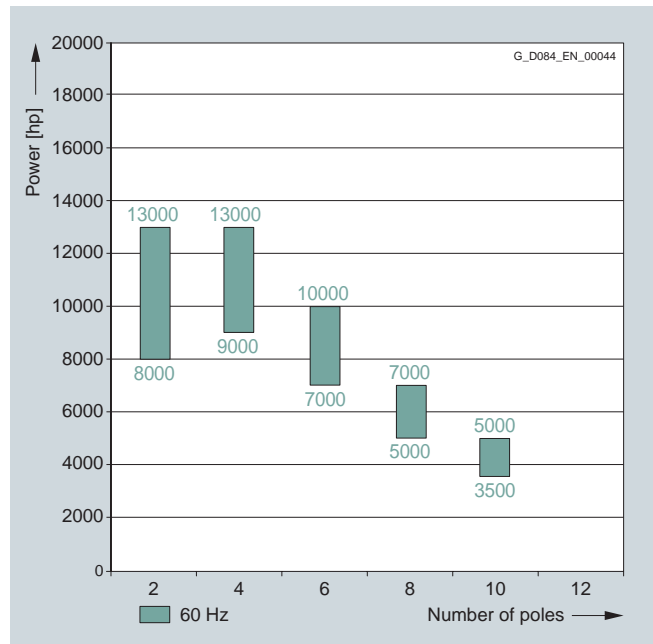
Insulation system, thermal class 155 (F), utilized to 130 (B)

4 to 6.6 kV; 60 Hz



2

12.5 to 13.8 kV; 60 Hz



Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC kW	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked rotor torque T_{LR}/T_{rated} [-]	Locked rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
3.3 ... 6.6 kV, 50 Hz														
2-pole														
1320	1RA4 450-2HE ■ 0	2969	150	95.6	96.0	0.89	0.88	4246	2.1	0.60	4.6	10.5	29	
1530	1RA4 452-2HE ■ 0	2973	170	96.0	96.3	0.90	0.88	4915	2.3	0.70	5.4	11.5	37	
1730	1RA4 454-2HE ■ 0	2974	192	96.2	96.4	0.90	0.88	5555	2.4	0.72	5.5	12.5	42	
1950	1RA4 456-2HE ■ 0	2975	215	96.5	96.6	0.90	0.88	6260	2.5	0.72	5.5	14.0	49	
2100	1RA4 500-2HE ■ 0	2975	240	96.2	96.3	0.88	0.87	6741	2.2	0.63	5.0	20	42	
2400	1RA4 502-2HE ■ 0	2975	270	96.4	96.6	0.89	0.87	7704	2.2	0.63	5.0	22	50	
2750	1RA4 504-2HE ■ 0	2977	310	96.6	96.8	0.89	0.87	8822	2.4	0.68	5.4	24	60	
3100	1RA4 506-2HE ■ 0	2978	345	96.9	97.0	0.89	0.88	9941	2.4	0.68	5.5	26	69	
3350	1RA4 560-2HE ■ 0	2978	375	96.6	96.7	0.89	0.88	10743	2.0	0.45	4.3	32	55	
3700	1RA4 562-2HE ■ 0	2980	415	96.8	96.9	0.89	0.88	11857	2.1	0.50	4.7	35	64	
4350	1RA4 564-2HE ■ 0	2982	480	97.0	97.2	0.90	0.88	13931	2.3	0.55	5.2	40	82	
4900	1RA4 566-2HE ■ 0	2984	540	97.2	97.3	0.90	0.88	15682	2.5	0.60	5.5	44	102	
4900	1RA4 630-2HE ■ 0	2982	550	96.9	97.1	0.88	0.88	15692	2.10	0.31	4.0	60	110	
5700	1RA4 632-2HE ■ 0	2983	630	97.3	97.3	0.89	0.89	18248	2.20	0.34	4.3	67	150	
6500	1RA4 634-2HE ■ 0	2985	710	97.5	97.6	0.90	0.89	20796	2.50	0.41	5.0	77	190	
7500	1RA4 636-2HE ■ 0	2986	820	97.7	97.8	0.90	0.89	23987	2.60	0.46	5.4	86	240	
4-pole														
1320	1RA4 450-4HE ■ ■	1484	148	95.9	96.2	0.89	0.87	8495	2.2	0.72	5.5	21	230	
1480	1RA4 452-4HE ■ ■	1484	166	96.0	96.3	0.89	0.87	9524	2.2	0.72	5.5	23	265	
1680	1RA4 454-4HE ■ ■	1485	188	96.2	96.5	0.89	0.87	10804	2.2	0.72	5.5	26	300	
1900	1RA4 456-4HE ■ ■	1485	215	96.3	96.6	0.89	0.87	12219	2.2	0.72	5.5	29	340	
2100	1RA4 500-4HE ■ ■	1485	235	96.2	96.4	0.89	0.88	13505	2.1	0.72	5.2	39	310	
2300	1RA4 502-4HE ■ ■	1486	260	96.4	96.6	0.89	0.88	14781	2.1	0.75	5.3	42	340	
2650	1RA4 504-4HE ■ ■	1487	295	96.6	98.8	0.89	0.88	17019	2.2	0.80	5.5	48	410	
3000	1RA4 506-4HE ■ ■	1487	335	96.8	97.0	0.89	0.88	19267	2.2	0.80	5.5	53	460	
3600	1RA4 560-4HE ■ ■	1487	400	96.7	96.9	0.90	0.89	23120	2.0	0.65	4.9	76	340	
4000	1RA4 562-4HE ■ ■	1488	440	96.9	97.2	0.90	0.89	25672	2.2	0.70	5.3	84	400	
4500	1RA4 564-4HE ■ ■	1489	495	97.1	97.3	0.90	0.89	28862	2.2	0.70	5.3	96	470	
4900	1RA4 566-4HE ■ ■	1489	540	97.2	97.4	0.90	0.89	31427	2.2	0.70	5.3	105	530	
5300	1RA4 630-4HE ■ ■	1489	590	97.1	97.3	0.89	0.89	33993	2.00	0.54	4.6	134	780	
6000	1RA4 632-4HE ■ ■	1490	670	97.3	97.4	0.89	0.89	38456	2.15	0.60	4.9	150	1050	
6600	1RA4 634-4HE ■ ■	1490	720	97.4	97.6	0.90	0.90	42302	2.20	0.63	5.1	168	1200	
7100	1RA4 636-4HE ■ ■	1491	780	97.6	97.6	0.90	0.89	45476	2.40	0.70	5.5	197	1100	

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked-rotor torque T_{LR}/T_{rated}	Locked-rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%	%	%						kgm ²	kgm ²
3.3 ... 6.6 kV, 50 Hz														
6-pole														
960	1RA4 450-6HE	987	114	95.1	95.8	0.85	0.83	9289	2.0	0.80	5.0	29	600	
1080	1RA4 452-6HE	987	128	95.2	96.0	0.85	0.84	10450	2.0	0.80	5.0	33	650	
1260	1RA4 454-6HE	988	146	95.5	96.1	0.87	0.85	12179	2.1	0.85	5.4	36	700	
1470	1RA4 456-6HE	989	172	95.7	96.3	0.86	0.84	14195	2.2	0.88	5.5	41	800	
1700	1RA4 500-6HE	989	196	95.8	96.4	0.87	0.85	16416	2.0	0.75	5.0	57	900	
1920	1RA4 502-6HE	989	220	96.0	96.5	0.87	0.86	18540	2.0	0.80	5.1	65	950	
2150	1RA4 504-6HE	990	245	96.2	96.6	0.87	0.85	20740	2.0	0.80	5.2	72	1200	
2350	1RA4 506-6HE	990	270	96.3	96.7	0.87	0.85	22669	2.0	0.80	5.2	81	1400	
2750	1RA4 560-6HE	991	315	96.3	96.8	0.87	0.85	26501	1.9	0.72	4.9	105	1250	
3100	1RA4 562-6HE	992	355	96.6	97.0	0.87	0.85	29844	2.0	0.75	5.1	120	1500	
3450	1RA4 564-6HE	992	395	96.8	97.1	0.87	0.86	33213	2.0	0.75	5.1	135	1700	
3750	1RA4 566-6HE	992	430	96.9	97.2	0.87	0.85	36101	2.0	0.75	5.1	147	1900	
4200	1RA4 630-6HE	992	490	96.8	97.2	0.85	0.84	40433	2.00	0.57	4.5	183	2000	
4700	1RA4 632-6HE	993	540	97.0	97.3	0.86	0.85	45201	2.10	0.62	4.8	202	2100	
5100	1RA4 634-6HE	993	590	97.2	97.4	0.86	0.84	49048	2.25	0.69	5.2	223	2800	
5600	1RA4 636-6HE	994	640	97.3	97.4	0.86	0.84	53803	2.30	0.70	5.3	246	3300	
8-pole														
750	1RA4 450-8HE	740	91	94.5	94.9	0.84	0.82	9679	2.1	0.85	5.2	37	800	
830	1RA4 452-8HE	741	100	94.7	95.0	0.84	0.82	10697	2.1	0.85	5.2	41	850	
930	1RA4 454-8HE	742	114	94.9	95.1	0.83	0.80	11970	2.2	0.88	5.5	46	1000	
1060	1RA4 456-8HE	742	130	95.1	95.3	0.83	0.80	13643	2.2	0.88	5.5	52	1200	
1250	1RA4 500-8HE	741	150	95.4	95.7	0.84	0.82	16110	1.9	0.75	4.9	70	1350	
1400	1RA4 502-8HE	742	166	95.6	95.8	0.85	0.83	18019	2.0	0.80	5.1	80	1650	
1550	1RA4 504-8HE	742	184	95.7	95.9	0.85	0.83	19949	2.0	0.80	5.1	88	1750	
1700	1RA4 506-8HE	742	200	95.8	96.0	0.85	0.83	21880	2.1	0.85	5.3	99	1800	
1950	1RA4 560-8HE	744	235	96.0	96.3	0.84	0.82	25030	2.0	0.72	4.9	123	2300	
2200	1RA4 562-8HE	744	260	96.2	96.3	0.84	0.82	28239	2.0	0.72	5.0	141	2400	
2400	1RA4 564-8HE	744	285	96.3	96.5	0.84	0.82	30806	2.0	0.75	5.1	158	2800	
2600	1RA4 566-8HE	744	305	96.3	96.6	0.85	0.84	33374	1.95	0.75	5.0	173	3500	
3200	1RA4 630-8HE	743	375	96.5	96.7	0.85	0.83	41131	1.90	0.60	4.3	239	3100	
3500	1RA4 632-8HE	743	410	96.7	96.8	0.85	0.82	44987	2.10	0.67	4.6	265	3400	
3750	1RA4 634-8HE	743	440	96.7	96.9	0.85	0.84	48200	2.00	0.65	4.6	293	3600	
4100	1RA4 636-8HE	744	485	96.9	96.9	0.84	0.81	52628	2.30	0.76	5.3	324	3800	

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

Type of construction:

IM B3
IM V1 (without canopy)

0
8

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current I_{rated} at 6 kV A	Efficiency		Power factor		Torque Nm	Break- down torque $T_B/$ T_{rated} [-]	Locked -rotor torque $T_{LR}/$ T_{rated} [-]	Locked -rotor current $I_{LR}/$ I_{rated} [-]	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load $\cos \phi$	3/4 load $\cos \phi$					Motor kgm ²	External, max. ¹⁾ kgm ²
3.3 ... 6.6 kV, 50 Hz													
10-pole													
540	1RA4 450-3HE	590	70	93.4	93.7	0.80	0.76	8741	2.0	0.80	4.6	37	1150
600	1RA4 452-3HE	590	76	93.7	93.9	0.81	0.76	9712	2.0	0.80	4.7	41	1350
670	1RA4 454-3HE	591	86	93.9	94.1	0.80	0.75	10827	2.1	0.82	4.9	46	1450
760	1RA4 456-3HE	591	97	94.1	94.2	0.80	0.75	12281	2.2	0.90	5.2	52	1800
900	1RA4 500-3HE	591	112	94.4	94.7	0.82	0.80	14543	1.9	0.68	4.3	70	1400
1000	1RA4 502-3HE	592	122	95.7	94.9	0.83	0.80	16132	1.9	0.70	4.5	80	1700
1100	1RA4 504-3HE	592	134	94.8	95.0	0.83	0.80	17745	1.9	0.72	4.6	88	2200
1250	1RA4 506-3HE	592	152	95.0	95.1	0.83	0.80	20165	1.9	0.75	4.7	99	2600
1480	1RA4 560-3HE	593	184	95.1	95.4	0.81	0.77	23835	2.0	0.70	4.5	123	2700
1700	1RA4 562-3HE	593	210	95.4	95.7	0.82	0.78	27378	2.0	0.70	4.5	141	4100
1880	1RA4 564-3HE	593	230	95.6	95.7	0.82	0.78	30277	2.0	0.72	4.7	158	4400
2050	1RA4 566-3HE	593	255	95.7	95.8	0.81	0.76	33014	2.1	0.78	5.0	173	5200
2400	1RA4 630-3HE	592	285	95.8	96.4	0.84	0.83	38716	1.80	0.62	4.0	239	4700
2650	1RA4 632-3HE	592	315	96.0	96.5	0.84	0.83	42749	1.80	0.65	4.2	265	5300
2900	1RA4 634-3HE	593	345	96.2	96.6	0.84	0.82	46703	2.00	0.70	4.5	293	6300
3150	1RA4 636-3HE	593	375	96.4	96.7	0.84	0.82	50729	2.00	0.73	4.6	324	7500
12-pole													
370	1RA4 450-5HE	491	53	92.4	92.7	0.73	0.68	7197	1.8	0.60	4.0	37	1100
425	1RA4 452-5HE	492	60	92.8	93.0	0.73	0.67	8249	1.8	0.63	4.2	41	1400
475	1RA4 454-5HE	491	66	93.1	93.3	0.74	0.69	9239	1.8	0.60	4.0	46	1600
540	1RA4 456-5HE	492	77	93.5	93.5	0.72	0.65	10482	2.0	0.68	4.4	52	2000
680	1RA4 500-5HE	491	94	93.9	94.0	0.74	0.69	13226	1.9	0.62	4.1	70	2350
760	1RA4 502-5HE	491	102	94.1	94.2	0.76	0.71	14782	1.8	0.60	4.0	79	2600
840	1RA4 504-5HE	491	112	94.3	94.4	0.76	0.71	16338	1.9	0.62	4.1	87	3100
930	1RA4 506-5HE	492	128	94.5	94.6	0.74	0.69	18052	1.9	0.62	4.3	98	3700
1100	1RA4 560-5HE	493	150	94.5	94.8	0.75	0.71	21308	1.8	0.57	3.9	123	3600
1230	1RA4 562-5HE	493	168	94.9	95.0	0.74	0.68	23827	1.8	0.60	4.0	141	4100
1350	1RA4 564-5HE	494	184	95.0	95.1	0.74	0.68	26098	2.0	0.63	4.3	158	4700
1470	1RA4 566-5HE	494	198	95.1	95.2	0.75	0.69	28418	2.0	0.65	4.3	173	5200
1900	1RA4 630-5HE	493	245	95.4	95.8	0.79	0.76	36805	1.90	0.70	4.3	239	5500
2150	1RA4 632-5HE	493	270	95.6	96.0	0.80	0.76	41648	1.90	0.71	4.3	265	7000
2350	1RA4 634-5HE	493	295	95.8	96.3	0.80	0.77	45522	1.90	0.72	4.4	293	8300
2550	1RA4 636-5HE	493	320	95.9	96.4	0.80	0.77	49397	2.00	0.74	4.5	324	9800

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RP6	Speed	Rated current		Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
			I_{rated} at 6 kV	4/4 load	3/4 load	4/4 load	3/4 load	T_B/T_{rated}					T_{LR}/T_{rated}	I_{LR}/I_{rated}
kW	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²	
3.3 ... 6.6 kV, 50 Hz														
2-pole														
6700 ²⁾	1RP6 710-2HJ ■ ■ 0	2989	740	97.0	96.8	0.90	0.90	21414	2.0	0.43	4.6	132	108	
8700 ²⁾	1RP6 712-2HJ ■ ■ 0	2987	960	97.2	97.1	0.90	0.91	27818	1.8	0.42	4.3	147	158	
10100 ²⁾	1RP6 714-2HJ ■ ■ 0	2988	1100	97.4	97.2	0.91	0.91	32286	2.0	0.46	4.7	162	158	
11700 ²⁾	1RP6 716-2HJ ■ ■ 0	2988	1260	97.5	97.3	0.91	0.91	37396	2.0	0.49	4.9	179	171	
4-pole														
7600 ²⁾	1RP6 710-4HJ ■ ■ 0	1493	840	97.7	97.9	0.89	0.87	48609	2.3	0.60	5.5	273	627	
8900 ²⁾	1RP6 712-4HJ ■ ■ 0	1493	970	97.8	98.0	0.90	0.89	56954	2.1	0.59	5.5	300	700	
10100 ²⁾	1RP6 714-4HJ ■ ■ 0	1493	1100	97.8	98.0	0.91	0.90	64636	2.1	0.62	5.5	337	803	
11700 ²⁾	1RP6 716-4HJ ■ ■ 0	1492	1260	97.9	98.0	0.91	0.91	74886	2.1	0.63	5.5	369	881	
6-pole														
5700	1RP6 710-6HJ ■ ■ ■	994	660	97.3	97.6	0.86	0.84	54792	2.0	0.68	5.1	330	1720	
6400	1RP6 712-6HJ ■ ■ ■	994	730	97.4	97.6	0.87	0.85	61526	2.0	0.72	5.2	367	1933	
7100	1RP6 714-6HJ ■ ■ ■	994	810	97.5	97.7	0.87	0.85	68225	2.1	0.79	5.5	419	2361	
7800	1RP6 716-6HJ ■ ■ ■	994	880	97.5	97.7	0.87	0.85	74930	2.2	0.82	5.5	468	3032	
8-pole														
4550	1RP6 710-8HJ ■ ■ ■	745	540	96.9	97.3	0.84	0.82	58354	1.9	0.76	5.0	415	4735	
5000	1RP6 712-8HJ ■ ■ ■	745	590	97.1	97.4	0.84	0.82	64111	1.9	0.79	5.2	465	5335	
5500	1RP6 714-8HJ ■ ■ ■	745	640	97.1	97.4	0.85	0.83	70512	1.9	0.80	5.2	531	6469	
6100	1RP6 716-8HJ ■ ■ ■	745	710	97.3	97.5	0.85	0.83	78174	2.0	0.85	5.5	597	7503	
10-pole														
3050	1RP6 710-3HJ ■ ■ ■	596	380	96.4	96.9	0.80	0.77	48916	2.1	0.72	5.0	415	8485	
3450	1RP6 712-3HJ ■ ■ ■	596	430	96.7	97.0	0.80	0.77	55318	2.1	0.73	5.1	465	10335	
3850	1RP6 714-3HJ ■ ■ ■	596	480	96.8	97.1	0.80	0.77	61707	2.2	0.78	5.4	531	11469	
4350	1RP6 716-3HJ ■ ■ ■	596	530	96.6	97.2	0.81	0.77	69716	2.2	0.80	5.5	598	13202	

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%	%	%						kgm ²	kgm ²
9 ... 11 kV, 50 Hz														
2-pole														
1100	1RA4 450-2HE ■ ■ 0	2975	75	95.4	95.7	0.89	0.87	3531	2.40	0.68	5.4	10.5	22	
1250	1RA4 452-2HE ■ ■ 0	2976	84	95.8	96.0	0.90	0.88	4011	2.40	0.68	5.5	11.5	26	
1420	1RA4 454-2HE ■ ■ 0	2977	95	96.0	96.1	0.90	0.88	4555	2.50	0.68	5.5	12.5	28	
1580	1RA4 456-2HE ■ ■ 0	2977	104	96.1	96.3	0.91	0.90	5069	2.40	0.68	5.5	14.0	32	
1700	1RA4 500-2HE ■ ■ 0	2980	116	95.9	95.9	0.88	0.86	5448	2.40	0.62	5.3	20	30	
1950	1RA4 502-2HE ■ ■ 0	2980	132	96.2	96.1	0.89	0.87	6249	2.40	0.65	5.5	22	36	
2200	1RA4 504-2HE ■ ■ 0	2980	146	96.4	96.5	0.90	0.89	7050	2.50	0.68	5.5	24	48	
2500	1RA4 506-2HE ■ ■ 0	2980	166	96.6	96.7	0.90	0.88	8012	2.40	0.68	5.5	26	54	
2850	1RA4 560-2HE ■ ■ 0	2982	194	96.4	96.4	0.88	0.86	9127	2.10	0.50	4.9	32	56	
3150	1RA4 562-2HE ■ ■ 0	2983	210	96.7	96.6	0.89	0.87	10085	2.30	0.50	5.1	35	59	
3700	1RA4 564-2HE ■ ■ 0	2984	245	96.9	96.9	0.90	0.88	11841	2.50	0.57	5.5	40	83	
4100	1RA4 566-2HE ■ ■ 0	2984	270	97.0	97.1	0.90	0.89	13122	2.50	0.60	5.5	44	93	
4300	1RA4 630-2HE ■ ■ 0	2984	290	96.8	96.9	0.89	0.88	13762	2.30	0.34	4.5	60	75	
5000	1RA4 632-2HE ■ ■ 0	2985	330	97.3	97.3	0.9	0.89	15997	2.50	0.39	4.9	67	100	
5700	1RA4 634-2HE ■ ■ 0	2986	375	97.4	97.4	0.90	0.89	18230	2.60	0.42	5.2	77	110	
6700	1RA4 636-2HE ■ ■ 0	2987	440	97.6	97.7	0.90	0.89	21421	2.60	0.45	5.5	86	160	
4-pole														
980	1RA4 450-4HE ■ ■ ■	1484	66	95.3	95.7	0.90	0.89	6307	2.20	0.70	5.5	21	115	
1120	1RA4 452-4HE ■ ■ ■	1485	75	95.5	95.8	0.90	0.89	7203	2.20	0.70	5.5	23	125	
1260	1RA4 454-4HE ■ ■ ■	1486	84	95.8	96.1	0.90	0.88	8098	2.20	0.70	5.5	26	140	
1500	1RA4 456-4HE ■ ■ ■	1486	100	96.1	96.3	0.90	0.88	9640	2.20	0.70	5.5	29	185	
1750	1RA4 500-4HE ■ ■ ■	1488	118	96.0	96.2	0.89	0.88	11232	2.30	0.75	5.5	39	220	
1920	1RA4 502-4HE ■ ■ ■	1488	130	96.2	96.3	0.89	0.87	12323	2.20	0.75	5.5	42	230	
2150	1RA4 504-4HE ■ ■ ■	1488	144	96.4	96.5	0.89	0.88	13799	2.20	0.75	5.5	48	270	
2450	1RA4 506-4HE ■ ■ ■	1488	164	96.6	96.8	0.89	0.88	15724	2.20	0.75	5.5	53	320	
3000	1RA4 560-4HE ■ ■ ■	1489	200	96.4	96.7	0.90	0.89	19241	2.10	0.65	5.2	76	280	
3400	1RA4 562-4HE ■ ■ ■	1489	225	96.7	96.9	0.90	0.89	21807	2.10	0.65	5.2	84	370	
3800	1RA4 564-4HE ■ ■ ■	1489	250	96.8	97.0	0.90	0.90	24372	2.10	0.65	5.2	96	410	
4150	1RA4 566-4HE ■ ■ ■	1489	275	96.9	97.2	0.90	0.90	26617	2.10	0.65	5.3	105	490	
4500	1RA4 630-4HE ■ ■ ■	1490	300	96.9	97.1	0.89	0.89	28842	2.10	0.57	4.9	134	550	
5000	1RA4 632-4HE ■ ■ ■	1490	330	97.1	97.2	0.90	0.90	32047	2.15	0.59	5.0	150	650	
5600	1RA4 634-4HE ■ ■ ■	1490	370	97.3	97.4	0.90	0.90	35893	2.20	0.63	5.3	168	750	
6200	1RA4 636-4HE ■ ■ ■	1491	410	97.4	97.5	0.90	0.90	39712	2.40	0.68	5.5	197	780	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
9 ... 11 kV, 50 Hz														
6-pole														
730	1RA4 450-6HE	989	52	94.6	94.9	0.85	0.83	7049	2.20	0.82	5.4	29	275	
830	1RA4 452-6HE	989	59	94.9	95.1	0.86	0.84	8015	2.20	0.82	5.5	33	320	
960	1RA4 454-6HE	990	67	94.8	95.1	0.87	0.85	9261	2.20	0.82	5.5	36	275	
1120	1RA4 456-6HE	990	78	95.1	95.4	0.87	0.85	10804	2.20	0.80	5.5	41	330	
1350	1RA4 500-6HE	991	94	95.4	95.7	0.87	0.85	13010	2.20	0.80	5.4	57	430	
1520	1RA4 502-6HE	991	106	95.6	95.9	0.87	0.86	14648	2.10	0.80	5.2	65	540	
1700	1RA4 504-6HE	991	118	95.8	96.0	0.87	0.85	16382	2.10	0.80	5.4	72	590	
1900	1RA4 506-6HE	991	132	96.0	96.1	0.87	0.85	18310	2.20	0.80	5.5	81	710	
2400	1RA4 560-6HE	992	168	96.3	96.5	0.86	0.85	23105	2.10	0.75	5.3	105	950	
2650	1RA4 562-6HE	992	182	96.3	96.6	0.87	0.86	25512	2.10	0.75	5.2	120	980	
2950	1RA4 564-6HE	993	205	96.5	96.7	0.87	0.85	28371	2.20	0.75	5.5	135	1250	
3200	1RA4 566-6HE	993	220	96.7	96.8	0.87	0.85	30775	2.10	0.75	5.4	147	1300	
3600	1RA4 630-6HE	993	250	96.7	96.9	0.86	0.84	34622	2.20	0.63	5.0	183	1200	
4000	1RA4 632-6HE	993	275	96.8	97.0	0.87	0.85	38469	2.10	0.64	5.0	202	1500	
4400	1RA4 634-6HE	993	300	97.0	97.1	0.87	0.86	42316	2.20	0.66	5.2	223	1750	
4800	1RA4 636-6HE	994	330	97.1	97.2	0.87	0.86	46117	2.30	0.71	5.5	246	2000	
8-pole														
1000	1RA4 500-8HE	743	72	94.9	95.1	0.84	0.81	12853	2.10	0.85	5.4	70	600	
1160	1RA4 502-8HE	744	85	95.3	95.3	0.83	0.80	14890	2.20	0.85	5.5	80	750	
1280	1RA4 504-8HE	744	93	95.4	95.5	0.83	0.80	16430	2.20	0.80	5.5	88	800	
1400	1RA4 506-8HE	744	102	95.5	95.6	0.83	0.80	17970	2.10	0.80	5.5	99	870	
1650	1RA4 560-8HE	744	118	95.8	96.0	0.84	0.81	21179	2.10	0.75	5.3	123	1350	
1900	1RA4 562-8HE	744	134	96.0	96.1	0.85	0.82	24388	2.00	0.75	5.3	141	1400	
2050	1RA4 564-8HE	745	144	96.2	96.2	0.85	0.82	26279	2.20	0.80	5.5	158	1800	
2250	1RA4 566-8HE	745	158	96.2	96.2	0.85	0.82	28842	2.10	0.80	5.5	173	1700	
2600	1RA4 630-8HE	744	186	96.3	96.4	0.84	0.81	33374	2.40	0.75	5.2	239	1800	
2900	1RA4 632-8HE	744	205	96.4	96.5	0.84	0.81	37224	2.30	0.75	5.2	265	2000	
3200	1RA4 634-8HE	744	225	96.6	96.7	0.85	0.82	41075	2.30	0.74	5.1	293	2200	
3500	1RA4 636-8HE	744	245	96.7	96.8	0.86	0.83	44926	2.30	0.75	5.2	324	2600	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%								kgm ²	kgm ²
9 ... 11 kV, 50 Hz														
10-pole														
720	1RA4 500-3HE	593	55	93.8	93.9	0.80	0.76	11595	2.20	0.82	5.2	70	900	
830	1RA4 502-3HE	594	64	94.2	94.2	0.79	0.74	13344	2.20	0.82	5.3	80	1100	
920	1RA4 504-3HE	594	71	94.3	94.3	0.79	0.74	14791	2.20	0.82	5.3	88	1200	
1020	1RA4 506-3HE	594	79	94.5	94.5	0.79	0.75	16399	2.20	0.80	5.3	99	1400	
1250	1RA4 560-3HE	593	94	94.8	94.9	0.81	0.77	20131	2.10	0.72	4.7	123	1650	
1420	1RA4 562-3HE	593	106	94.9	95.2	0.82	0.78	22868	2.00	0.70	4.7	141	2050	
1570	1RA4 564-3HE	593	116	95.1	95.4	0.82	0.78	25284	2.00	0.72	5.0	158	2500	
1700	1RA4 566-3HE	595	128	95.3	95.4	0.80	0.75	27286	2.40	0.85	5.5	173	2700	
2100	1RA4 630-3HE	593	152	95.8	96.1	0.83	0.80	33820	2.10	0.73	4.7	239	2500	
2350	1RA4 632-3HE	594	172	96.0	96.2	0.82	0.78	37782	2.30	0.82	5.1	265	2900	
2550	1RA4 634-3HE	594	184	96.0	96.3	0.83	0.79	40997	2.30	0.80	5.1	293	3000	
2750	1RA4 636-3HE	594	196	96.2	96.5	0.84	0.80	44213	2.30	0.83	5.2	324	3500	
12-pole														
580	1RA4 502-5HE	493	48	93.3	93.3	0.74	0.68	11235	2.00	0.70	4.7	79	1350	
640	1RA4 504-5HE	493	53	93.5	93.6	0.74	0.68	12398	2.00	0.70	4.8	87	1500	
700	1RA4 506-5HE	493	58	93.6	93.7	0.75	0.69	13560	2.10	0.70	4.8	98	1600	
850	1RA4 560-5HE	494	69	93.8	94.1	0.76	0.71	16432	1.85	0.60	4.2	123	1750	
1000	1RA4 562-5HE	494	82	94.4	94.6	0.75	0.69	19332	1.95	0.65	4.5	141	2200	
1100	1RA4 564-5HE	494	88	94.5	94.7	0.76	0.71	21265	1.95	0.63	4.4	158	2500	
1200	1RA4 566-5HE	494	96	94.8	94.8	0.76	0.71	23198	1.95	0.63	4.4	173	2900	
1650	1RA4 630-5HE	494	126	95.1	95.5	0.79	0.74	31898	2.10	0.75	4.6	239	3000	
1800	1RA4 632-5HE	494	142	95.4	95.7	0.77	0.71	34798	2.40	0.88	5.2	265	3500	
1950	1RA4 634-5HE	494	152	95.5	95.7	0.78	0.73	37697	2.30	0.85	5.1	293	3400	
2100	1RA4 636-5HE	495	162	95.7	95.9	0.78	0.73	40515	2.35	0.88	5.3	324	4000	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RP6 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%	%	%						kgm ²	kgm ²
9 ... 11 kV, 50 Hz														
2-pole														
6400	1RP6 710-2HJ ■ 0	2989	425	96.9	96.8	0.90	0.89	20451	2.1	0.45	4.8	132	138	
7500	1RP6 712-2HJ ■ 0	2990	495	97.0	96.9	0.90	0.89	23961	2.2	0.48	5.1	147	163	
8200	1RP6 714-2HJ ■ 0	2990	540	97.2	97.0	0.91	0.91	26197	2.2	0.51	5.3	162	188	
9100	1RP6 716-2HJ ■ 0	2990	590	97.2	97.1	0.92	0.92	29072	2.3	0.53	5.4	179	221	
4-pole														
6700	1RP6 710-4HJ ■ 0	1493	440	97.5	97.7	0.90	0.88	42853	2.3	0.61	5.5	273	697	
7500	1RP6 712-4HJ ■ 0	1493	485	97.6	97.8	0.91	0.90	47979	2.2	0.59	5.5	300	800	
8200	1RP6 714-4HJ ■ 0	1493	530	97.7	97.8	0.91	0.90	52456	2.2	0.61	5.5	337	933	
9100	1RP6 716-4HJ ■ 0	1493	590	97.7	97.8	0.91	0.90	58205	2.2	0.62	5.5	369	1031	
6-pole														
5000	1RP6 710-6HJ ■ ■	994	345	97.2	97.4	0.86	0.85	48051	2.1	0.69	5.3	330	2520	
5500	1RP6 712-6HJ ■ ■	994	375	97.3	97.5	0.87	0.85	52847	2.1	0.74	5.5	367	2133	
6100	1RP6 714-6HJ ■ ■	994	415	97.4	97.6	0.87	0.85	58591	2.2	0.78	5.5	419	2561	
6800	1RP6 716-6HJ ■ ■	995	465	97.4	97.6	0.87	0.86	65303	2.3	0.82	5.5	468	2982	
8-pole														
3850	1RP6 710-8HJ ■ ■	745	270	96.7	97.2	0.85	0.83	49372	1.9	0.71	4.9	415	5185	
4200	1RP6 712-8HJ ■ ■	745	295	96.8	97.2	0.85	0.83	53835	2.0	0.78	5.3	465	5935	
4650	1RP6 714-8HJ ■ ■	746	325	97.0	97.3	0.85	0.82	59562	2.2	0.93	5.5	531	7019	
5200	1RP6 716-8HJ ■ ■	746	365	97.1	97.3	0.85	0.82	66595	2.2	0.93	5.5	597	8203	
10-pole														
2800	1RP6 710-3HJ ■ ■	596	210	96.4	96.8	0.80	0.77	44889	2.1	0.72	5.2	415	8485	
3100	1RP6 712-3HJ ■ ■	596	230	96.6	96.9	0.81	0.78	49700	2.1	0.71	5.1	465	10335	
3400	1RP6 714-3HJ ■ ■	596	250	96.7	97.0	0.81	0.77	54475	2.3	0.78	5.5	531	11369	
3700	1RP6 716-3HJ ■ ■	596	275	96.7	97.0	0.81	0.77	59266	2.3	0.82	5.5	598	12702	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC kW	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque T_B/T_{rated}	Locked -rotor torque T_{LR}/T_{rated}	Locked -rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6.6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
4 ... 6.6 kV, 60 Hz														
2-pole														
1550	1RA4 450-2HE 0	3571	160	95.7	95.9	0.89	0.88	4145	2.2	0.64	5.0	10.5	18	
1800	1RA4 452-2HE 0	3573	182	96.1	96.2	0.90	0.88	4811	2.4	0.68	5.4	11.5	21	
2050	1RA4 454-2HE 0	3573	205	96.4	96.4	0.90	0.89	5479	2.4	0.68	5.4	12.5	24	
2320	1RA4 456-2HE 0	3575	235	96.6	96.7	0.90	0.88	6197	2.5	0.68	5.5	14.0	27	
2450	1RA4 500-2HE 0	3575	250	96.2	96.3	0.89	0.88	6545	2.2	0.60	5.0	20	21	
2800	1RA4 502-2HE 0	3576	285	96.4	96.5	0.89	0.88	7478	2.2	0.60	5.1	22	24	
3250	1RA4 504-2HE 0	3578	330	96.8	96.8	0.89	0.88	8675	2.3	0.60	5.3	24	27	
3700	1RA4 506-2HE 0	3578	370	97.0	96.9	0.90	0.88	9876	2.4	0.62	5.5	26	34	
4000	1RA4 560-2HE 0	3579	410	96.6	96.5	0.88	0.86	10673	2.0	0.43	4.5	32	26	
4300	1RA4 562-2HE 0	3581	435	96.8	96.7	0.89	0.87	11467	2.2	0.50	5.2	35	34	
4950	1RA4 564-2HE 0	3583	495	97.0	96.9	0.90	0.88	13194	2.5	0.55	5.5	40	47	
5300 ²⁾	1RA4 566-2HE 0	3584	530	97.2	97.1	0.90	0.89	14122	2.5	0.55	5.5	44	57	
5700	1RA4 630-2HE 0	3583	580	97.0	96.9	0.88	0.87	15193	2.10	0.30	4.2	60	95	
6500	1RA4 632-2HE 0	3584	660	97.2	97.2	0.89	0.89	17320	2.30	0.34	4.6	67	140	
7500	1RA4 634-2HE 0	3585	750	97.5	97.5	0.90	0.89	19979	2.60	0.41	5.3	77	150	
8200	1RA4 636-2HE 0	3585	820	97.6	97.6	0.90	0.90	21844	2.60	0.42	5.4	86	110	
4-pole														
1600	1RA4 450-4HE 0	1784	166	96.1	96.2	0.88	0.86	8565	2.2	0.65	5.5	21	135	
1800	1RA4 452-4HE 0	1784	186	96.2	96.3	0.88	0.86	9636	2.2	0.65	5.5	23	165	
2000	1RA4 454-4HE 0	1784	205	96.4	96.4	0.89	0.87	10706	2.2	0.65	5.5	26	180	
2280	1RA4 456-4HE 0	1785	230	96.6	96.7	0.89	0.88	12198	2.2	0.68	5.5	29	230	
2500	1RA4 500-4HE 0	1785	255	96.5	96.6	0.89	0.88	13375	2.1	0.70	5.2	39	180	
2750	1RA4 502-4HE 0	1786	280	96.6	96.7	0.89	0.88	14705	2.2	0.72	5.4	42	200	
3200	1RA4 504-4HE 0	1786	325	96.9	96.9	0.89	0.88	17111	2.2	0.72	5.4	48	240	
3600	1RA4 506-4HE 0	1787	365	97.0	97.0	0.89	0.88	19239	2.2	0.75	5.5	53	280	
4300	1RA4 560-4HE 0	1787	430	96.9	97.1	0.90	0.89	22980	2.0	0.55	4.9	76	180	
4800	1RA4 562-4HE 0	1788	480	97.0	97.2	0.90	0.89	25638	2.1	0.63	5.3	84	220	
5400	1RA4 564-4HE 0	1789	540	97.3	97.3	0.90	0.89	28826	2.1	0.63	5.3	96	270	
5600	1RA4 566-4HE 0	1790	560	97.3	97.3	0.90	0.89	29877	2.3	0.65	5.5	105	310	
6500	1RA4 630-4HE 0	1789	660	97.2	97.3	0.88	0.88	34698	2.10	0.52	4.8	134	600	
7300	1RA4 632-4HE 0	1789	740	97.3	97.5	0.89	0.89	38969	2.10	0.54	4.8	150	650	
8000	1RA4 634-4HE 0	1790	810	97.5	97.6	0.89	0.89	42682	2.20	0.59	5.2	168	680	
8600	1RA4 636-4HE 0	1791	870	97.7	97.7	0.89	0.88	45857	2.40	0.61	5.5	197	800	

Voltage code:

4 kV, 60 Hz
6.6 kV, 60 Hz
Other voltage

4
1
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6.6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked rotor torque T_{LR}/T_{rated} [-]	Locked rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 6.6 kV	4/4 load	3/4 load	4/4 load	3/4 load	cos ϕ					cos ϕ	Motor
			A	%	%								kgm ²	kgm ²
4 ... 6.6 kV, 60 Hz														
6-pole														
1150	1RA4 450-6HE	1188	124	95.4	95.5	0.85	0.82	9245	2.1	0.80	5.3	29	410	
1300	1RA4 452-6HE	1187	140	95.6	95.8	0.85	0.84	10459	2.0	0.72	5.0	33	500	
1520	1RA4 454-6HE	1188	160	95.7	95.9	0.87	0.85	12219	2.1	0.78	5.3	36	480	
1760	1RA4 456-6HE	1189	186	95.9	96.1	0.86	0.85	14136	2.1	0.78	5.4	41	580	
2050	1RA4 500-6HE	1189	215	96.1	96.1	0.87	0.85	16466	2.0	0.72	5.1	57	600	
2300	1RA4 502-6HE	1189	240	96.3	96.4	0.87	0.86	18474	2.0	0.70	5.0	65	650	
2600	1RA4 504-6HE	1189	270	96.4	96.6	0.87	0.86	20883	2.0	0.72	5.1	72	800	
2850	1RA4 506-6HE	1190	295	96.5	96.6	0.87	0.85	22872	2.0	0.75	5.3	81	950	
3300	1RA4 560-6HE	1191	345	96.6	96.6	0.87	0.86	26461	2.0	0.65	4.9	105	750	
3750	1RA4 562-6HE	1192	390	96.8	96.9	0.87	0.85	30044	2.0	0.70	5.1	120	900	
4150	1RA4 564-6HE	1192	430	96.9	97.0	0.87	0.86	33249	2.0	0.75	5.3	135	1050	
4500	1RA4 566-6HE	1192	465	97.0	97.1	0.87	0.86	36053	2.0	0.70	5.2	147	1200	
5100	1RA4 630-6HE	1192	530	97.1	97.2	0.86	0.85	40860	1.90	0.51	4.3	183	1700	
5700	1RA4 632-6HE	1193	600	97.2	97.2	0.85	0.84	45629	2.00	0.56	4.7	202	2100	
6200	1RA4 634-6HE	1193	650	97.3	97.3	0.86	0.85	49631	2.10	0.61	4.9	223	2000	
6700	1RA4 636-6HE	1193	700	97.4	97.4	0.86	0.84	53634	2.30	0.64	5.2	246	2600	
8-pole														
900	1RA4 450-8HE	891	100	94.8	95.0	0.83	0.81	9646	2.2	0.85	5.5	37	450	
1000	1RA4 452-8HE	892	110	95.1	95.1	0.83	0.80	10706	2.3	0.90	5.5	41	550	
1120	1RA4 454-8HE	891	122	95.2	95.3	0.84	0.82	12004	2.0	0.75	5.2	46	650	
1280	1RA4 456-8HE	892	142	95.5	95.5	0.83	0.80	13704	2.2	0.82	5.5	52	800	
1500	1RA4 500-8HE	892	164	95.7	95.7	0.84	0.81	16059	2.0	0.75	5.2	70	750	
1700	1RA4 502-8HE	892	182	95.9	95.9	0.85	0.83	18201	2.0	0.75	5.2	80	1050	
1860	1RA4 504-8HE	892	200	96.0	96.0	0.85	0.83	19914	2.0	0.78	5.1	88	1200	
2050	1RA4 506-8HE	893	220	96.2	96.1	0.84	0.81	21923	2.1	0.82	5.5	99	1300	
2350	1RA4 560-8HE	893	255	96.2	96.3	0.84	0.81	25132	1.9	0.65	4.9	123	1600	
2700	1RA4 562-8HE	894	290	96.4	96.4	0.84	0.82	28842	2.0	0.70	5.1	141	1650	
2900	1RA4 564-8HE	894	315	96.4	96.6	0.84	0.82	30979	2.0	0.70	5.0	158	2300	
3100	1RA4 566-8HE	894	330	96.6	96.7	0.85	0.84	33115	2.0	0.70	5.0	173	2500	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RA4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6.6 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%	%	%						kgm ²	kgm ²
4 ... 6.6 kV, 60 Hz														
10-pole														
650	1RA4 450-3HE	710	74	93.7	94.0	0.82	0.78	8743	1.9	0.72	4.5	37	650	
720	1RA4 452-3HE	710	83	94.1	94.3	0.81	0.77	9685	2.0	0.75	4.7	41	850	
800	1RA4 454-3HE	711	92	94.3	94.4	0.81	0.76	10745	2.1	0.80	4.9	46	900	
910	1RA4 456-3HE	711	104	94.5	94.6	0.81	0.77	12223	2.1	0.80	5.0	52	1100	
1080	1RA4 500-3HE	711	122	94.8	95.0	0.82	0.80	14506	1.8	0.65	4.4	70	1200	
1200	1RA4 502-3HE	712	134	95.2	95.2	0.82	0.80	16096	1.9	0.68	4.7	80	1500	
1320	1RA4 504-3HE	712	146	95.1	95.2	0.83	0.80	17705	1.9	0.70	4.7	88	1450	
1500	1RA4 506-3HE	712	166	95.4	95.5	0.83	0.79	20119	2.0	0.72	4.9	99	1900	
1780	1RA4 560-3HE	713	205	95.5	95.6	0.80	0.76	23842	2.0	0.70	4.6	123	2100	
2040	1RA4 562-3HE	713	235	95.8	95.8	0.80	0.76	27324	2.0	0.70	4.8	141	2600	
2200	1RA4 564-3HE	713	245	95.9	95.8	0.82	0.79	29467	2.0	0.68	4.6	158	2800	
2400	1RA4 566-3HE	713	270	96.0	96.0	0.81	0.77	32146	2.1	0.75	5.0	173	3300	
12-pole														
440	1RA4 450-5HE	591	56	92.9	93.1	0.74	0.71	7110	1.8	0.56	4.0	37	630	
510	1RA4 452-5HE	591	65	93.3	93.3	0.73	0.68	8241	1.8	0.60	4.2	41	850	
570	1RA4 454-5HE	592	73	93.9	93.9	0.73	0.68	9195	1.8	0.60	4.2	46	1150	
650	1RA4 456-5HE	592	82	94.0	93.9	0.74	0.68	10486	1.9	0.60	4.3	52	1300	
820	1RA4 500-5HE	592	102	94.4	94.3	0.74	0.68	13228	2.0	0.62	4.5	70	1650	
920	1RA4 502-5HE	592	114	94.6	94.6	0.75	0.70	14841	1.9	0.62	4.4	79	2000	
1020	1RA4 504-5HE	592	128	94.8	94.7	0.74	0.68	16454	2.0	0.65	4.7	87	2400	
1120	1RA4 506-5HE	592	136	94.8	94.8	0.76	0.71	18068	1.9	0.60	4.4	98	2200	
1300	1RA4 560-5HE	593	160	95.0	95.1	0.75	0.70	20936	1.8	0.53	3.9	123	2050	
1470	1RA4 562-5HE	593	182	95.2	95.3	0.74	0.69	23674	1.8	0.55	4.0	141	2500	
1620	1RA4 564-5HE	594	205	95.4	95.4	0.73	0.67	26045	2.0	0.63	4.3	158	3500	
1760	1RA4 566-5HE	594	220	95.5	95.5	0.73	0.68	28296	2.0	0.63	4.4	173	3900	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RP6	Speed	Rated current		Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
			I_{rated} at 6.6 kV	4/4 load	3/4 load	4/4 load	3/4 load	T_B/T_{rated}					T_{LR}/T_{rated}	I_{LR}/I_{rated}
kW	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²	
4 ... 6.6 kV, 60 Hz														
2-pole														
7600 ²⁾	1RP6 710-2HJ	3589	760	96.8	96.6	0.90	0.90	20229	2.0	0.40	4.6	132	48	
9700 ²⁾	1RP6 712-2HJ	3589	970	97.1	96.9	0.90	0.89	25813	2.2	0.47	5.2	147	43	
11900 ²⁾	1RP6 714-2HJ	3589	1180	97.3	97.1	0.91	0.91	31672	2.2	0.49	5.2	162	38	
13600 ²⁾	1RP6 716-2HJ	3590	1340	97.4	97.2	0.91	0.91	36190	2.3	0.52	5.5	179	41	
4-pole														
8700 ²⁾	1RP6 710-4HJ	1793	860	97.8	97.8	0.90	0.88	46340	2.3	0.59	5.5	273	297	
10400 ²⁾	1RP6 712-4HJ	1793	1040	97.9	97.9	0.90	0.89	55399	2.3	0.60	5.5	300	310	
11900 ²⁾	1RP6 714-4HJ	1793	1160	97.9	98.0	0.91	0.90	63396	2.2	0.61	5.5	337	353	
13200 ²⁾	1RP6 716-4HJ	1793	1300	98.0	98.0	0.91	0.89	70311	2.3	0.62	5.5	369	406	
6-pole														
6900	1RP6 710-6HJ	1194	720	97.4	97.6	0.86	0.84	55212	2.1	0.69	5.4	330	970	
7600	1RP6 712-6HJ	1194	790	97.5	97.6	0.86	0.84	60797	2.1	0.70	5.5	367	1083	
8400	1RP6 714-6HJ	1194	860	97.7	97.7	0.87	0.85	67196	2.1	0.73	5.5	419	1311	
9200	1RP6 716-6HJ	1194	940	97.7	97.7	0.88	0.87	73603	2.1	0.74	5.5	468	1572	
8-pole														
5400	1RP6 710-8HJ	895	590	97.2	97.4	0.83	0.81	57627	2.0	0.76	5.3	415	2835	
6100	1RP6 712-8HJ	895	660	97.2	97.4	0.83	0.81	65089	2.0	0.78	5.4	465	3185	
6800	1RP6 714-8HJ	895	730	97.3	97.5	0.84	0.81	72542	2.1	0.82	5.5	531	3769	
7500	1RP6 716-8HJ	896	810	97.4	97.5	0.83	0.80	79967	2.2	0.88	5.5	597	4453	
10-pole														
3700	1RP6 710-3HJ	716	425	96.8	97.0	0.79	0.75	49369	2.2	0.73	5.4	415	5185	
4050	1RP6 712-3HJ	716	455	96.9	97.1	0.80	0.76	54035	2.2	0.73	5.4	465	5935	
4500	1RP6 714-3HJ	716	510	96.9	97.1	0.80	0.77	60031	2.2	0.74	5.5	531	7119	
5100	1RP6 716-3HJ	716	570	97.1	97.2	0.80	0.77	68021	2.3	0.79	5.5	598	8202	

Voltage code:

4 kV, 60 Hz
4.16 kV, 60 Hz
6.6 kV, 60 Hz
Other voltage

4
3
1
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

Rated power IEC kW	High voltage motor H-compact PLUS 1RP6 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked rotor torque T_{LR}/T_{rated} [-]	Locked rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 13.2 kV	4/4 load	3/4 load	4/4 load	3/4 load	cos ϕ					cos ϕ	Motor kgm ²
12.5 ... 13.8 kV, 60 Hz														
2-pole														
6500	1RP6 710-2HJ ■ 0	3590	330	96.4	96.1	0.90	0.89	17293	2.3	0.44	5.2	132	58	
8000	1RP6 712-2HJ ■ 0	3591	405	96.8	96.4	0.89	0.88	21278	2.5	0.50	5.5	147	53	
8800	1RP6 714-2HJ ■ 0	3591	435	96.8	96.4	0.91	0.89	23406	2.5	0.53	5.5	162	78	
10100	1RP6 716-2HJ ■ 0	3591	495	96.9	96.6	0.92	0.91	26867	2.4	0.53	5.5	179	111	
4-pole														
7200	1RP6 710-4HJ ■ 0	1794	365	97.4	97.5	0.89	0.88	38335	2.4	0.58	5.5	273	367	
8000	1RP6 712-4HJ ■ 0	1794	395	97.5	97.6	0.91	0.90	42606	2.3	0.59	5.5	300	427	
8800	1RP6 714-4HJ ■ 0	1793	435	97.6	97.6	0.91	0.91	46869	2.3	0.59	5.5	337	503	
10100	1RP6 716-4HJ ■ 0	1793	490	97.6	97.7	0.92	0.91	53794	2.3	0.61	5.5	369	546	
6-pole														
5600	1RP6 710-6HJ ■ ■	1195	295	97.2	97.3	0.85	0.83	44775	2.3	0.70	5.5	330	1105	
6200	1RP6 712-6HJ ■ ■	1195	325	97.3	97.4	0.86	0.83	49566	2.3	0.73	5.5	367	1253	
6800	1RP6 714-6HJ ■ ■	1195	355	97.3	97.4	0.86	0.84	54357	2.3	0.72	5.5	419	1535	
7500	1RP6 716-6HJ ■ ■	1195	390	97.4	97.5	0.86	0.84	59945	2.3	0.72	5.5	468	1782	
8-pole														
3900	1RP6 710-8HJ ■ ■	896	210	96.6	96.8	0.84	0.80	41582	2.2	0.79	5.5	415	3485	
4400	1RP6 712-8HJ ■ ■	896	235	96.7	97.0	0.84	0.81	46912	2.2	0.81	5.5	465	3935	
5000	1RP6 714-8HJ ■ ■	896	270	96.9	97.0	0.83	0.80	53295	2.2	0.78	5.5	531	4669	
5600	1RP6 716-8HJ ■ ■	896	305	97.0	97.0	0.83	0.79	59674	2.3	0.76	5.5	597	5303	
10-pole														
2800	1RP6 710-3HJ ■ ■	716	160	96.2	96.5	0.80	0.75	37334	2.4	0.76	5.5	415	3985	
3200	1RP6 712-3HJ ■ ■	716	182	96.5	96.6	0.80	0.75	42664	2.4	0.78	5.5	465	4785	
3550	1RP6 714-3HJ ■ ■	716	198	96.6	96.8	0.81	0.78	47340	2.3	0.74	5.5	531	5569	
3900	1RP6 716-3HJ ■ ■	716	215	96.7	96.9	0.82	0.79	52006	2.3	0.75	5.5	598	6552	

Voltage code:

13.2 kV, 60 Hz
Other voltage

2
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

NEMA version

Rated power NEMA hp	High voltage motor H-compact PLUS 1RP6 Order No.	Speed rpm	Rated current I_{rated} at 13.2 kV	Efficiency		Power factor		Torque Nm	Break-down torque $\frac{T_B}{T_{rated}}$	Locked rotor torque $\frac{T_{LR}}{T_{rated}}$	Locked rotor current $\frac{I_{LR}}{I_{rated}}$	Moment of inertia	
				4/4 load	3/4 load	4/4 load	3/4 load					Motor	External, max. ¹⁾
4 ... 6.6 kV, 60 Hz													
2-pole													
10000	1RP6 710-2BM ■ ²⁾	3586	747	96.4	96.2	0.90	0.89	19861	2.2	0.60	5.2	132	56
11000	1RP6 712-2BM ■ ²⁾	3588	828	96.5	96.2	0.89	0.88	21837	2.5	0.60	5.8	147	55
12000	1RP6 712-2BN ■ ²⁾	3587	898	96.6	96.4	0.90	0.89	23827	2.3	0.60	5.4	147	54
13000	1RP6 714-2BM ■ ²⁾	3587	956	96.6	96.4	0.92	0.91	25814	2.5	0.64	6.0	162	54
14000	1RP6 714-2BN ■ ²⁾	3587	1036	96.7	96.5	0.91	0.90	27801	2.4	0.60	5.7	162	53
16000	1RP6 716-2BM ■ ²⁾	3586	1166	96.8	96.7	0.92	0.92	31777	2.4	0.62	5.8	179	51
17000	1RP6 716-2BN ■ ²⁾	3587	1251	96.9	96.8	0.91	0.90	33759	2.4	0.60	5.8	179	49
4-pole													
11000	1RP6 710-4BJ ■ ²⁾	1793	815	97.4	97.6	0.90	0.89	43695	2.3	0.60	5.9	273	603
12000	1RP6 712-4BJ ■ ²⁾	1793	880	97.5	97.6	0.91	0.90	47668	2.2	0.60	5.9	300	637
13000	1RP6 712-4BK ■ ²⁾	1793	962	97.5	97.6	0.90	0.89	51635	2.3	0.60	5.9	300	620
14000	1RP6 714-4BJ ■ ²⁾	1793	1021	97.4	97.6	0.91	0.91	55625	2.2	0.60	5.8	337	651
15000	1RP6 714-4BK ■ ²⁾	1793	1104	97.5	97.7	0.91	0.89	59583	2.3	0.60	6.0	337	665
16000	1RP6 716-4BJ ■ ²⁾	1793	1161	97.5	97.7	0.92	0.91	63575	2.2	0.61	5.8	369	678
17000	1RP6 716-4BK ■ ²⁾	1792	1238	97.5	97.7	0.92	0.91	67557	2.1	0.60	5.6	369	691
18000	1RP6 716-4BL ■ ²⁾	1793	1324	97.6	97.7	0.91	0.90	71504	2.2	0.61	5.9	369	702
6-pole													
9000	1RP6 710-6BJ ■	1194	702	97.1	97.3	0.86	0.84	53690	2.1	0.71	5.5	330	1954
10000	1RP6 712-6BJ ■	1194	781	97.2	97.4	0.86	0.83	59647	2.2	0.71	5.6	367	2043
11000	1RP6 714-6BJ ■	1194	846	97.3	97.4	0.87	0.85	65612	2.2	0.75	5.7	419	2113
12000	1RP6 716-6BJ ■	1194	915	97.2	97.3	0.88	0.86	71577	2.2	0.77	5.7	468	2168
8-pole													
7000	1RP6 710-8BJ ■	895	566	96.9	97.1	0.83	0.80	55695	2.1	0.79	5.5	415	3817
8000	1RP6 712-8BJ ■	895	646	97.0	97.1	0.83	0.81	63651	2.0	0.80	5.5	465	4154
9000	1RP6 714-8BJ ■	895	721	97.1	97.2	0.84	0.81	71587	2.1	0.83	5.7	531	4458
10000	1RP6 716-8BJ ■	896	810	97.1	97.2	0.83	0.80	79506	2.2	0.87	6.0	597	4732
10-pole													
5000	1RP6 710-3BJ ■	716	427	96.6	96.7	0.79	0.75	49758	2.2	0.73	5.3	415	5006
5500	1RP6 712-3BJ ■	716	464	96.7	96.9	0.80	0.76	54720	2.2	0.72	5.3	465	5428
6000	1RP6 714-3BJ ■	716	502	96.8	96.9	0.80	0.77	59682	2.2	0.74	5.5	531	6221
7000	1RP6 716-3BJ ■	716	584	96.9	97.0	0.80	0.77	69631	2.2	0.77	5.6	598	6955

Voltage code:

4 kV, 60 Hz	4
4.16 kV, 60 Hz	3
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6$ kV on request.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Selection and ordering data

NEMA version

Rated power NEMA hp	High voltage motor H-compact PLUS 1RP6 Order No.	Speed rpm	Rated current A	Efficiency		Power factor		Torque Nm	Break- down torque $\frac{T_B}{T_{rated}}$	Locked -rotor torque $\frac{T_{LR}}{T_{rated}}$	Locked -rotor current $\frac{I_{LR}}{I_{rated}}$	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ					Motor kgm ²	External, max. ¹⁾ kgm ²
12.5 ... 13.8 kV, 60 Hz													
2-pole													
8000	1RP6 710-2BM 0	3588	301	96.0	95.6	0.90	0.89	15881	2.5	0.60	5.6	132	52
9000	1RP6 712-2BM 0	3588	334	96.0	95.6	0.91	0.90	17864	2.6	0.60	6.0	147	51
10000	1RP6 712-2BN 0	3588	375	96.2	95.9	0.90	0.89	19849	2.6	0.60	6.0	147	49
11000	1RP6 714-2BM 0	3588	407	96.2	95.9	0.91	0.90	21837	2.5	0.60	6.0	162	48
12000	1RP6 716-2BM 0	3587	437	96.3	96.0	0.93	0.92	23827	2.4	0.60	5.8	179	47
13000	1RP6 716-2BN 0	3588	478	96.4	96.2	0.92	0.91	25806	2.5	0.60	6.0	179	45
4-pole													
9000	1RP6 710-4BJ 0	1794	337	97.1	97.2	0.89	0.88	35727	2.4	0.60	6.2	273	553
10000	1RP6 712-4BJ 0	1794	368	97.1	97.3	0.91	0.90	39708	2.3	0.60	6.2	300	555
11000	1RP6 714-4BJ 0	1794	403	97.2	97.3	0.91	0.90	43682	2.3	0.60	6.2	337	603
12000	1RP6 716-4BJ 0	1793	436	97.2	97.3	0.92	0.92	47662	2.3	0.63	6.2	369	620
13000	1RP6 716-4BK 0	1794	475	97.2	97.4	0.91	0.91	51625	2.3	0.60	6.1	369	637
6-pole													
7000	1RP6 710-6BJ 0	1195	278	96.9	97.0	0.85	0.82	41723	2.4	0.72	6.0	330	1722
8000	1RP6 712-6BJ 0	1195	315	97.0	97.1	0.85	0.82	47688	2.4	0.73	6.0	367	1849
9000	1RP6 714-6BJ 0	1195	350	97.0	97.1	0.86	0.84	53642	2.3	0.73	6.0	419	1954
10000	1RP6 716-6BJ 0	1195	388	97.1	97.2	0.86	0.84	59600	2.3	0.72	6.0	468	2042
8-pole													
5000	1RP6 710-8BJ 0	896	201	96.5	96.6	0.84	0.81	39760	2.2	0.79	5.9	415	3024
5500	1RP6 712-8BJ 0	896	220	96.6	96.7	0.84	0.81	43721	2.2	0.80	6.0	465	3235
6000	1RP6 714-8BJ 0	896	239	96.6	96.7	0.84	0.82	47691	2.3	0.80	6.0	531	3438
7000	1RP6 716-8BJ 0	896	279	96.7	96.8	0.85	0.82	55642	2.2	0.79	6.0	597	3817
10-pole													
3500	1RP6 710-3BJ 0	717	151	96.2	96.2	0.79	0.74	34788	2.5	0.78	6.0	415	4104
4000	1RP6 712-3BJ 0	717	172	96.3	96.3	0.79	0.74	39757	2.5	0.78	6.0	465	4564
4500	1RP6 714-3BJ 0	717	188	96.4	96.5	0.81	0.77	44739	2.4	0.79	6.0	531	5006
5000	1RP6 716-3BJ 0	717	207	96.5	96.6	0.82	0.78	49713	2.4	0.78	6.0	598	5428

Voltage code:

13.2 kV, 60 Hz
Other voltage

2
9

Type of construction:

IM B3
IM V1 (with canopy)

0
4

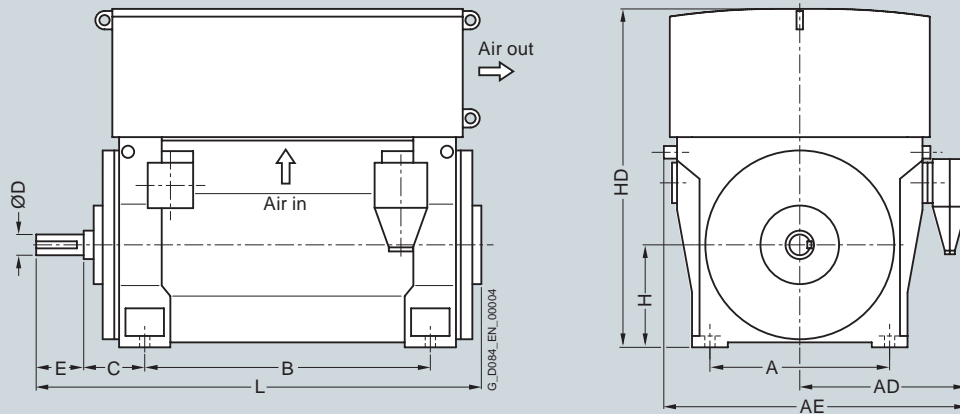
¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RA4 series											
4-pole											
1RA4 450-4HE.0	3850	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 452-4HE.0	4050	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 454-4HE.0	4550	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 456-4HE.0	4800	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 500-4HE.0	5150	950	1000	1760	1320	280	150	200	500	1520	2230
1RA4 502-4HE.0	5350	950	1000	1760	1320	280	150	200	500	1520	2230
1RA4 504-4HE.0	6000	950	1000	1760	1500	280	160	240	500	1520	2480
1RA4 506-4HE.0	6400	950	1000	1980	1500	280	160	240	500	1520	2480
1RA4 560-4HE.0	7100	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-4HE.0	7550	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 564-4HE.0	8400	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-4HE.0	8900	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-4HE.0 ²⁾	9950	1320	1330	2210	1600	335	200	280	630	2400	2500
1RA4 632-4HE.0 ²⁾	10650	1320	1330	2210	1600	335	200	280	630	2400	2500
1RA4 634-4HE.0 ²⁾	11700	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4 636-4HE.0 ²⁾	12250	1320	1330	2210	1800	335	220	280	630	2400	2740
6-pole											
1RA4 450-6HE.0	3950	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 452-6HE.0	4150	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 454-6HE.0	4500	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 456-6HE.0	4900	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 500-6HE.0	5250	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 502-6HE.0	5650	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 504-6HE.0	6200	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 506-6HE.0	6550	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 560-6HE.0	7200	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-6HE.0	7850	1060	1210	2040	1400	315	180	240	560	1750	2300

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

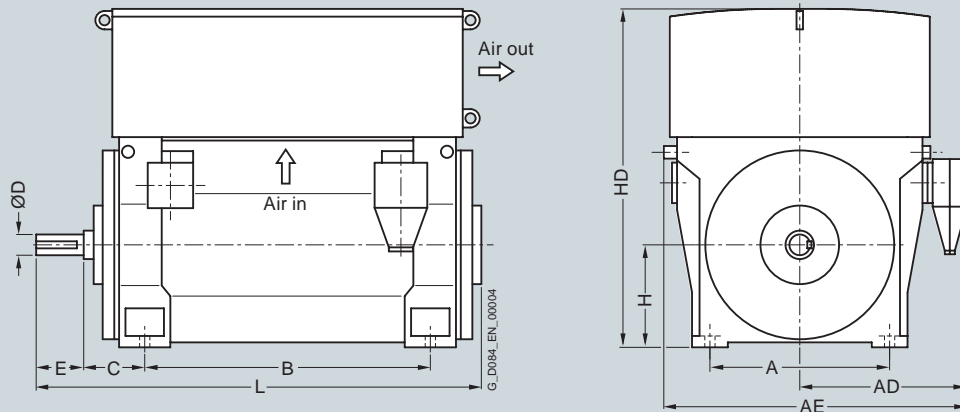
²⁾ Rolling-contact bearings only for 50 Hz operation.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RA4 series											
6-pole											
1RA4 564-6HE.0	8650	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-6HE.0	9100	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-6HE.0	10250	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4 632-6HE.0	10800	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4 634-6HE.0	11800	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4 636-6HE.0	12550	1320	1330	2210	1800	335	220	280	630	2400	2740
8-pole											
1RA4 450-8HE.0	3900	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 452-8HE.0	4100	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 454-8HE.0	4500	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 456-8HE.0	4900	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 500-8HE.0	5300	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 502-8HE.0	5700	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 504-8HE.0	6200	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 506-8HE.0	6550	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 560-8HE.0	7200	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4 562-8HE.0	7700	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4 564-8HE.0	8550	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4 566-8HE.0	9000	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4 630-8HE.0 ²⁾	10150	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4 632-8HE.0 ²⁾	10800	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4 634-8HE.0 ²⁾	11700	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4 636-8HE.0 ²⁾	12450	1320	1330	2210	1800	335	220	280	630	2400	2740
10-pole											
1RA4 450-3HE.0	3900	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 452-3HE.0	4050	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 454-3HE.0	4500	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 456-3HE.0	4800	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 500-3HE.0	5250	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 502-3HE.0	5600	950	1000	1760	1320	280	160	240	500	1520	2270

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

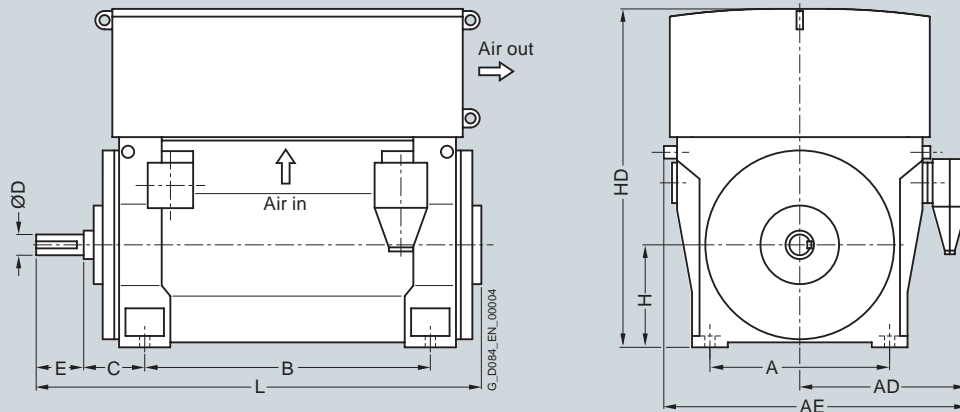
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RA4 series											
10-pole											
1RA4 504-3HE.0	6150	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 506-3HE.0	6550	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 560-3HE.0	7100	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4 562-3HE.0	7700	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4 564-3HE.0	8500	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4 566-3HE.0	8950	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4 630-3HE.0 ²⁾	10050	1320	1180	2060	1600	335	220	280	630	2400	2500
1RA4 632-3HE.0 ²⁾	10750	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4 634-3HE.0 ²⁾	11750	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4 636-3HE.0 ²⁾	12450	1320	1330	2210	1800	335	220	280	630	2400	2740
12-pole											
1RA4 450-5HE.0	3900	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 452-5HE.0	4050	850	930	1620	1180	250	130	200	450	1390	1920
1RA4 454-5HE.0	4500	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 456-5HE.0	4800	850	930	1620	1400	250	140	200	450	1390	2130
1RA4 500-5HE.0	5250	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 502-5HE.0	5650	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4 504-5HE.0	6100	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 506-5HE.0	6550	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4 560-5HE.0	7150	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4 562-5HE.0	7700	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4 564-5HE.0	8500	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4 566-5HE.0	8950	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4 630-5HE.0 ²⁾	9950	1320	1180	2060	1600	335	220	280	630	2400	2500
1RA4 632-5HE.0 ²⁾	10600	1320	1180	2060	1600	335	220	280	630	2400	2500
1RA4 634-5HE.0 ²⁾	11600	1320	1180	2060	1800	335	220	280	630	2400	2740
1RA4 636-5HE.0 ²⁾	12400	1320	1330	2210	1800	335	220	280	630	2400	2740

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

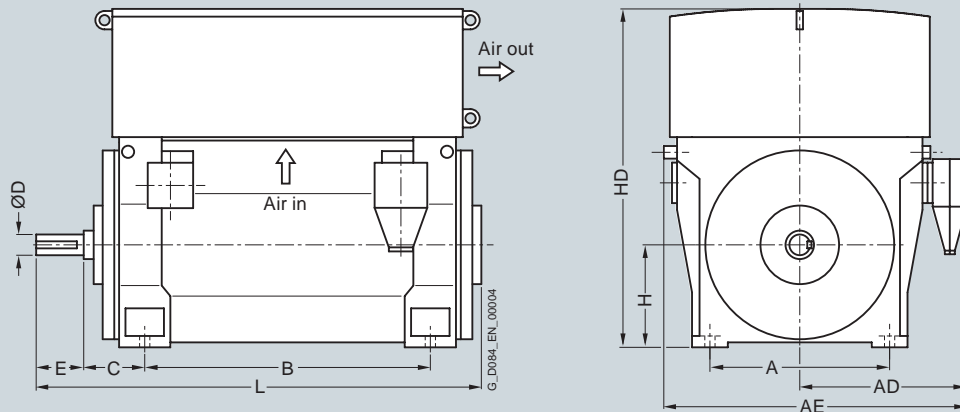
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RA4 series											
4-pole											
1RA4 450-4HE.0	3850	850	1070	1840	1180	250	130	200	450	1390	1920
1RA4 452-4HE.0	4050	850	1070	1840	1180	250	130	200	450	1390	1920
1RA4 454-4HE.0	4500	850	1070	1840	1400	250	140	200	450	1390	2130
1RA4 456-4HE.0	4800	850	1070	1840	1400	250	140	200	450	1390	2130
1RA4 500-4HE.0	5150	950	1220	1980	1320	280	150	200	500	1520	2230
1RA4 502-4HE.0	5350	950	1220	1980	1320	280	150	200	500	1520	2230
1RA4 504-4HE.0	6000	950	1220	1980	1500	280	160	240	500	1520	2480
1RA4 506-4HE.0	6300	950	1220	1980	1500	280	160	240	500	1520	2480
1RA4 560-4HE.0	6950	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-4HE.0	7450	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 564-4HE.0	8300	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-4HE.0	8750	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-4HE.0 ¹⁾	9850	1320	1320	2200	1600	335	200	280	630	2400	2500
1RA4 632-4HE.0 ¹⁾	10500	1320	1330	2210	1600	335	200	280	630	2400	2500
1RA4 634-4HE.0 ¹⁾	11550	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4 636-4HE.0 ¹⁾	12150	1320	1330	2210	1800	335	220	280	630	2400	2740
6-pole											
1RA4 450-6HE.0	3950	850	1070	1840	1180	250	130	200	450	1390	1920
1RA4 452-6HE.0	4150	850	1070	1840	1180	250	130	200	450	1390	1920
1RA4 454-6HE.0	4500	850	1070	1840	1400	250	140	200	450	1390	2130
1RA4 456-6HE.0	4850	850	1070	1840	1400	250	140	200	450	1390	2130
1RA4 500-6HE.0	5250	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 502-6HE.0	5650	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 504-6HE.0	6150	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 506-6HE.0	6550	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 560-6HE.0	7200	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-6HE.0	7700	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 564-6HE.0	8500	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-6HE.0	8950	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-6HE.0	10200	1320	1320	2200	1600	335	220	280	630	2400	2500

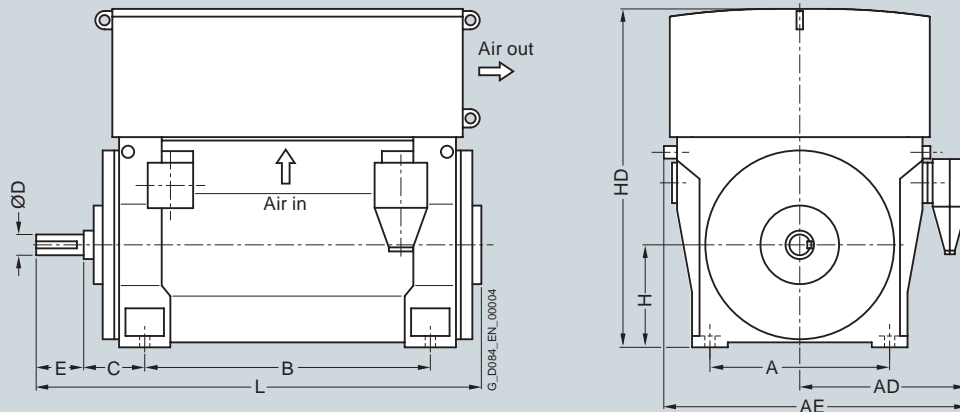
¹⁾ Rolling-contact bearings only for 50 Hz operation.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



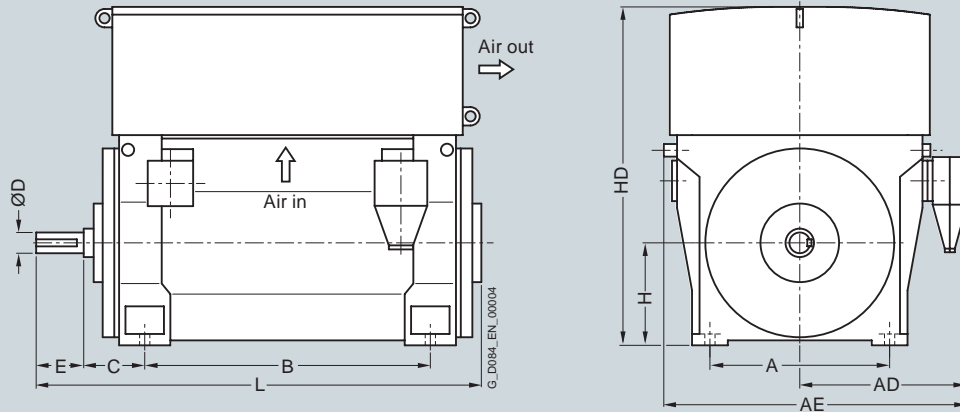
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RA4 series											
6-pole											
1RA4 632-6HE.0	10750	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 634-6HE.0	11800	1320	1320	2200	1800	335	220	280	630	2400	2740
1RA4 636-6HE.0	12550	1320	1330	2210	1800	335	220	280	630	2400	2740
8-pole											
1RA4 500-8HE.0	5300	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 502-8HE.0	5650	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 504-8HE.0	6150	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 506-8HE.0	6550	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 560-8HE.0	7150	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-8HE.0	7700	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 564-8HE.0	8550	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-8HE.0	8950	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-8HE.0	10050	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 632-8HE.0	10600	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 634-8HE.0	11600	1320	1320	2200	1800	335	220	280	630	2400	2740
1RA4 636-8HE.0	12350	1320	1320	2200	1800	335	220	280	630	2400	2740
10-pole											
1RA4 500-3HE.0	5250	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 502-3HE.0	5600	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 504-3HE.0	6150	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 506-3HE.0	6500	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 560-3HE.0	7350	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-3HE.0	7950	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 564-3HE.0	8750	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-3HE.0	9200	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-3HE.0	10000	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 632-3HE.0	10600	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 634-3HE.0	11550	1320	1320	2200	1800	335	220	280	630	2400	2740
1RA4 636-3HE.0	12300	1320	1320	2200	1800	335	220	280	630	2400	2740

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



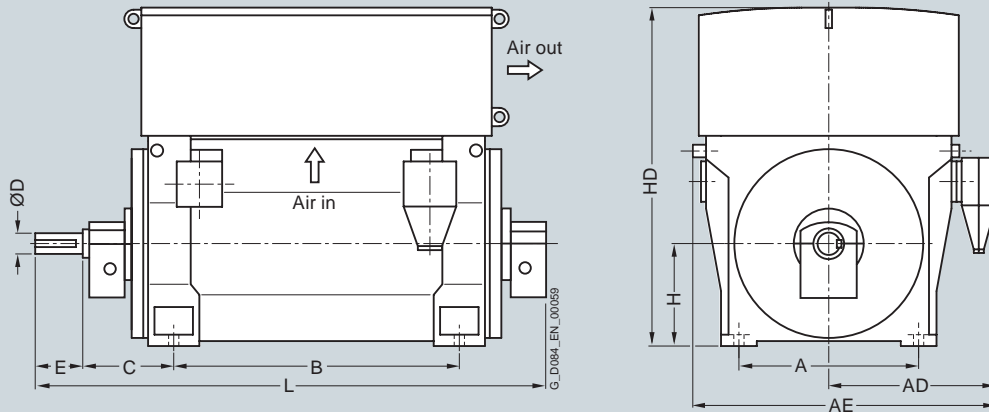
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RA4 series											
12-pole											
1RA4 502-5HE.0	5650	950	1220	1980	1320	280	160	240	500	1520	2270
1RA4 504-5HE.0	6100	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 506-5HE.0	6500	950	1220	1980	1500	280	170	240	500	1520	2480
1RA4 560-5HE.0	7100	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 562-5HE.0	7650	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4 564-5HE.0	8450	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 566-5HE.0	8900	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4 630-5HE.0	10050	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 632-5HE.0	10650	1320	1320	2200	1600	335	220	280	630	2400	2500
1RA4 634-5HE.0	11650	1320	1320	2200	1800	335	220	280	630	2400	2740
1RA4 636-5HE.0	12400	1320	1320	2200	1800	335	220	280	630	2400	2740

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
2-pole											
1RA4 450-2HE.0	3700	850	930	1620	1180	450	110	165	450	1390	2080
1RA4 452-2HE.0	3900	850	930	1620	1180	450	110	165	450	1390	2080
1RA4 454-2HE.0	4250	850	930	1620	1400	450	110	165	450	1390	2290
1RA4 456-2HE.0	4500	850	930	1620	1400	450	110	165	450	1390	2290
1RA4 500-2HE.0	4750	950	1000	1760	1320	475	110	165	500	1520	2520
1RA4 502-2HE.0	5000	950	1000	1760	1320	475	110	165	500	1520	2520
1RA4 504-2HE.0	5450	950	1000	1760	1500	475	120	165	500	1520	2730
1RA4 506-2HE.0	5900	950	1000	1980	1500	475	120	165	500	1520	2730
1RA4 560-2HE.0	6550	1060	1210	2040	1400	500	140	200	560	1750	2560
1RA4 562-2HE.0	6850	1060	1210	2040	1400	500	140	200	560	1750	2560
1RA4 564-2HE.0	7700	1060	1210	2040	1600	530	150	200	560	1750	2820
1RA4 566-2HE.0	8150	1060	1210	2040	1600	530	150	200	560	1750	2820
1RA4 630-2HE.0	9700	1320	1330	2210	1600	560	150	200	630	2400	2820
1RA4 632-2HE.0	10350	1320	1330	2210	1600	560	150	200	630	2400	2820
1RA4 634-2HE.0	11450	1320	1330	2210	1800	560	160	240	630	2400	3100
1RA4 636-2HE.0	12250	1320	1330	2210	1800	560	160	240	630	2400	3100
4-pole											
1RA4 450-4HE.0-Z K96	3950	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 452-4HE.0-Z K96	4150	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 454-4HE.0-Z K96	4600	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 456-4HE.0-Z K96	4950	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 500-4HE.0-Z K96	5300	950	1000	1760	1320	500	150	200	500	1520	2580
1RA4 502-4HE.0-Z K96	5500	950	1000	1760	1320	500	150	200	500	1520	2580
1RA4 504-4HE.0-Z K96	6200	950	1000	1760	1500	500	160	240	500	1520	2830
1RA4 506-4HE.0-Z K96	6600	950	1000	1980	1500	500	160	240	500	1520	2830
1RA4 560-4HE.0-Z K96	7250	1060	1210	2040	1400	530	180	240	560	1750	2630
1RA4 562-4HE.0-Z K96	7700	1060	1210	2040	1400	530	180	240	560	1750	2630
1RA4 564-4HE.0-Z K96	8600	1060	1210	2040	1600	530	190	280	560	1750	2940

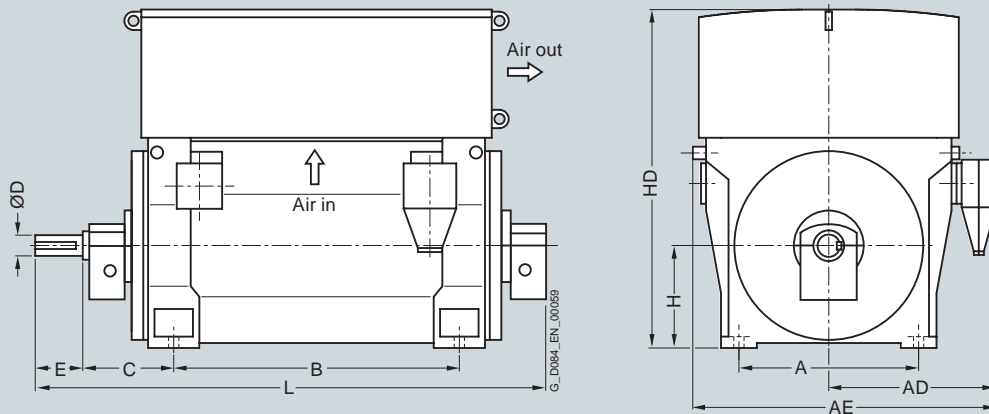
¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
4-pole											
1RA4 566-4HE.0-Z K96	9100	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4 630-4HE.0-Z K96 ²⁾	10250	1320	1330	2210	1600	600	200	280	630	2400	2970
1RA4 632-4HE.0-Z K96 ²⁾	10950	1320	1330	2210	1600	600	200	280	630	2400	2970
1RA4 634-4HE.0-Z K96 ²⁾	11950	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4 636-4HE.0-Z K96 ²⁾	12500	1320	1330	2210	1800	600	220	280	630	2400	3210
6-pole											
1RA4 450-6HE.0-Z K96	4050	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 452-6HE.0-Z K96	4250	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 454-6HE.0-Z K96	4650	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 456-6HE.0-Z K96	4950	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 500-6HE.0-Z K96	5450	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 502-6HE.0-Z K96	5800	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 504-6HE.0-Z K96	6350	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 506-6HE.0-Z K96	6750	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 560-6HE.0-Z K96	7450	1060	1210	2040	1400	530	180	240	560	1750	2670
1RA4 562-6HE.0-Z K96	8050	1060	1210	2040	1400	530	180	240	560	1750	2670
1RA4 564-6HE.0-Z K96	8850	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4 566-6HE.0-Z K96	9300	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4 630-6HE.0-Z K96	10500	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 632-6HE.0-Z K96	11050	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 634-6HE.0-Z K96	12100	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4 636-6HE.0-Z K96	12850	1320	1330	2210	1800	600	220	280	630	2400	3210
8-pole											
1RA4 450-8HE.0-Z K96	4000	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 452-8HE.0-Z K96	4250	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 454-8HE.0-Z K96	4650	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 456-8HE.0-Z K96	5000	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 500-8HE.0-Z K96	5500	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 502-8HE.0-Z K96	5850	950	1000	1760	1320	500	160	240	500	1520	2620

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

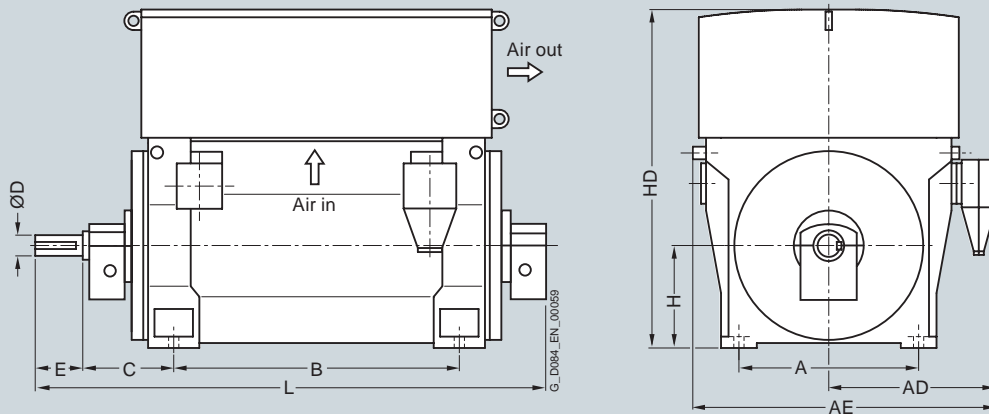
²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
8-pole											
1RA4 504-8HE.0-Z K96	6350	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 506-8HE.0-Z K96	6700	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 560-8HE.0-Z K96	7400	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4 562-8HE.0-Z K96	7950	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4 564-8HE.0-Z K96	8750	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4 566-8HE.0-Z K96	9250	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4 630-8HE.0-Z K96 ²⁾	10400	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 632-8HE.0-Z K96 ²⁾	11050	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 634-8HE.0-Z K96 ²⁾	12000	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4 636-8HE.0-Z K96 ²⁾	12700	1320	1330	2210	1800	600	220	280	630	2400	3210
10-pole											
1RA4 450-3HE.0-Z K96	4000	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 452-3HE.0-Z K96	4200	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 454-3HE.0-Z K96	4650	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 456-3HE.0-Z K96	4950	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 500-3HE.0-Z K96	5400	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 502-3HE.0-Z K96	5800	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 504-3HE.0-Z K96	6350	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 506-3HE.0-Z K96	6700	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 560-3HE.0-Z K96	7350	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4 562-3HE.0-Z K96	7900	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4 564-3HE.0-Z K96	8700	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4 566-3HE.0-Z K96	9200	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4 630-3HE.0-Z K96 ²⁾	10350	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 632-3HE.0-Z K96 ²⁾	11000	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 634-3HE.0-Z K96 ²⁾	12050	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4 636-3HE.0-Z K96 ²⁾	12750	1320	1330	2210	1800	600	220	280	630	2400	3210

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

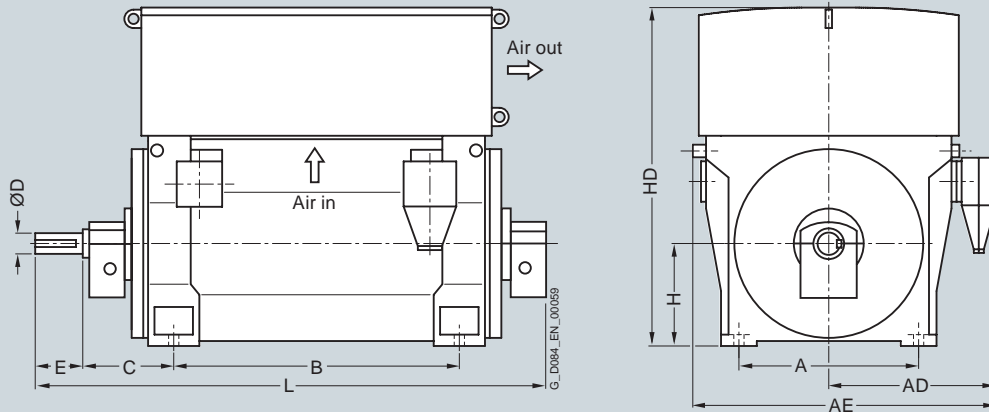
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
12-pole											
1RA4 450-5HE.0-Z K96	4000	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 452-5HE.0-Z K96	4200	850	930	1620	1180	450	130	200	450	1390	2120
1RA4 454-5HE.0-Z K96	4650	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 456-5HE.0-Z K96	4950	850	930	1620	1400	450	140	200	450	1390	2330
1RA4 500-5HE.0-Z K96	5450	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 502-5HE.0-Z K96	5800	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4 504-5HE.0-Z K96	6250	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 506-5HE.0-Z K96	6700	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4 560-5HE.0-Z K96	7350	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4 562-5HE.0-Z K96	7950	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4 564-5HE.0-Z K96	8700	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4 566-5HE.0-Z K96	9150	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4 630-5HE.0-Z K96 ²⁾	10250	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 632-5HE.0-Z K96 ²⁾	10850	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4 634-5HE.0-Z K96 ²⁾	11850	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4 636-5HE.0-Z K96 ²⁾	12700	1320	1330	2210	1800	600	220	280	630	2400	3210

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

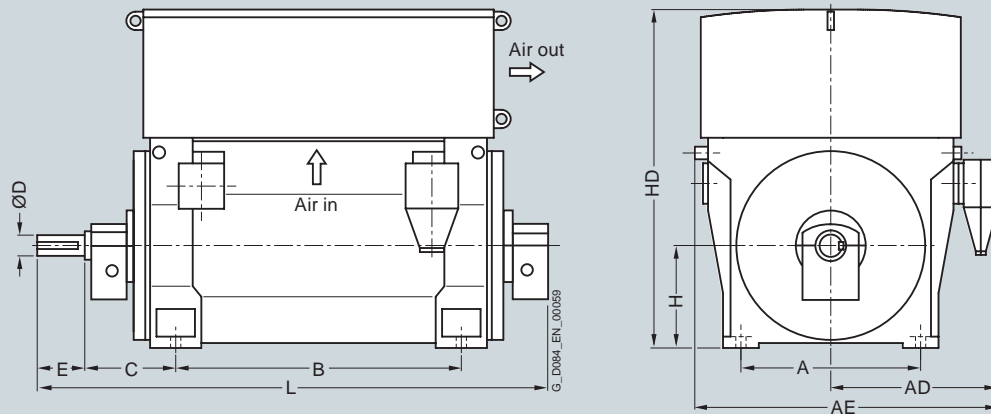
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



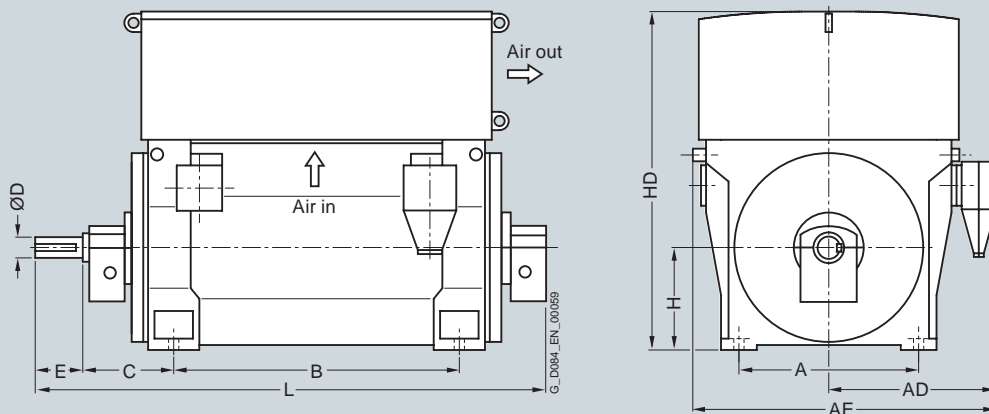
Motor type	Weight kg	Dimensions mm									
		A	AD	AE	B	C	D	E	H	HD	L
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
2-pole											
1RA4 450-2HE.0	3700	850	1070	1840	1180	450	110	165	450	1390	2080
1RA4 452-2HE.0	3950	850	1070	1840	1180	450	110	165	450	1390	2080
1RA4 454-2HE.0	4250	850	1070	1840	1400	450	110	165	450	1390	2290
1RA4 456-2HE.0	4500	850	1070	1840	1400	450	110	165	450	1390	2290
1RA4 500-2HE.0	4750	950	1150	1900	1320	475	110	165	500	1520	2360
1RA4 502-2HE.0	4950	950	1150	1900	1320	475	110	165	500	1520	2360
1RA4 504-2HE.0	5450	950	1150	1900	1500	475	120	165	500	1520	2570
1RA4 506-2HE.0	5800	950	1150	1900	1500	475	120	165	500	1520	2570
1RA4 560-2HE.0	6450	1060	1220	2040	1400	500	140	200	560	1670	2570
1RA4 562-2HE.0	6700	1060	1220	2040	1400	500	140	200	560	1670	2570
1RA4 564-2HE.0	7550	1060	1220	2040	1600	530	150	200	560	1670	2830
1RA4 566-2HE.0	8000	1060	1220	2040	1600	530	150	200	560	1670	2830
1RA4 630-2HE.0	9600	1320	1330	2200	1600	560	150	200	630	2400	2820
1RA4 632-2HE.0	10250	1320	1330	2210	1600	560	150	200	630	2400	2820
1RA4 634-2HE.0	11300	1320	1330	2210	1800	560	160	240	630	2400	3100
1RA4 636-2HE.0	12150	1320	1330	2210	1800	560	160	240	630	2400	3100
4-pole											
1RA4 450-4HE.0-Z K96	3950	850	1070	1840	1180	450	130	200	450	1390	2120
1RA4 452-4HE.0-Z K96	4150	850	1070	1840	1180	450	130	200	450	1390	2120
1RA4 454-4HE.0-Z K96	4600	850	1070	1840	1400	450	140	200	450	1390	2330
1RA4 456-4HE.0-Z K96	4950	850	1070	1840	1400	450	140	200	450	1390	2330
1RA4 500-4HE.0-Z K96	5350	950	1150	1980	1320	500	150	200	500	1520	2430
1RA4 502-4HE.0-Z K96	5500	950	1150	1980	1320	500	150	200	500	1520	2430
1RA4 504-4HE.0-Z K96	6150	950	1150	1980	1500	500	160	240	500	1520	2680
1RA4 506-4HE.0-Z K96	6500	950	1150	1980	1500	500	160	240	500	1520	2680
1RA4 560-4HE.0-Z K96	7100	1060	1220	2040	1400	530	180	240	560	1750	2650
1RA4 562-4HE.0-Z K96	7600	1060	1220	2040	1400	530	180	240	560	1750	2650
1RA4 564-4HE.0-Z K96	8500	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 566-4HE.0-Z K96	8950	1060	1220	2040	1600	530	190	280	560	1750	2960

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

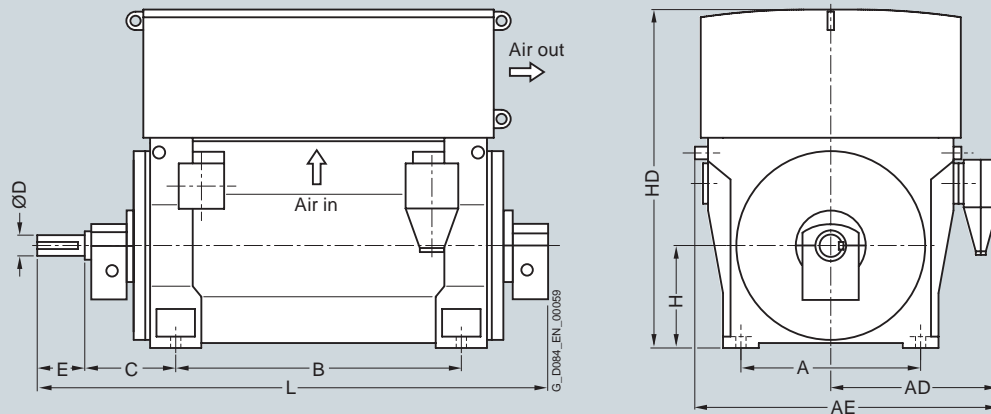
Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
4-pole											
1RA4 630-4HE.0-Z K96 ¹⁾	10150	1320	1320	2200	1600	600	200	280	630	2400	2970
1RA4 632-4HE.0-Z K96 ¹⁾	10800	1320	1330	2210	1600	600	200	280	630	2400	2970
1RA4 634-4HE.0-Z K96 ¹⁾	11800	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4 636-4HE.0-Z K96 ¹⁾	12400	1320	1330	2210	1800	600	220	280	630	2400	3210
6-pole											
1RA4 450-6HE.0-Z K96	4050	850	1070	1840	1180	450	130	200	450	1390	2120
1RA4 452-6HE.0-Z K96	4300	850	1070	1840	1180	450	130	200	450	1390	2120
1RA4 454-6HE.0-Z K96	4650	850	1070	1840	1400	450	140	200	450	1390	2330
1RA4 456-6HE.0-Z K96	4950	850	1070	1840	1400	450	140	200	450	1390	2330
1RA4 500-6HE.0-Z K96	5450	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 502-6HE.0-Z K96	5800	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 504-6HE.0-Z K96	6300	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 506-6HE.0-Z K96	6700	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 560-6HE.0-Z K96	7400	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 562-6HE.0-Z K96	7900	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 564-6HE.0-Z K96	8700	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 566-6HE.0-Z K96	9150	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 630-6HE.0-Z K96	10500	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 632-6HE.0-Z K96	11050	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 634-6HE.0-Z K96	12100	1320	1320	2200	1800	600	220	280	630	2400	3210
1RA4 636-6HE.0-Z K96	12850	1320	1330	2210	1800	600	220	280	630	2400	3210
8-pole											
1RA4 500-8HE.0-Z K96	5450	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 502-8HE.0-Z K96	5850	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 504-8HE.0-Z K96	6350	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 506-8HE.0-Z K96	6700	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 560-8HE.0-Z K96	7400	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 562-8HE.0-Z K96	7950	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 564-8HE.0-Z K96	8750	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 566-8HE.0-Z K96	9150	1060	1220	2040	1600	530	190	280	560	1750	2960

¹⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Dimension drawings (continued)



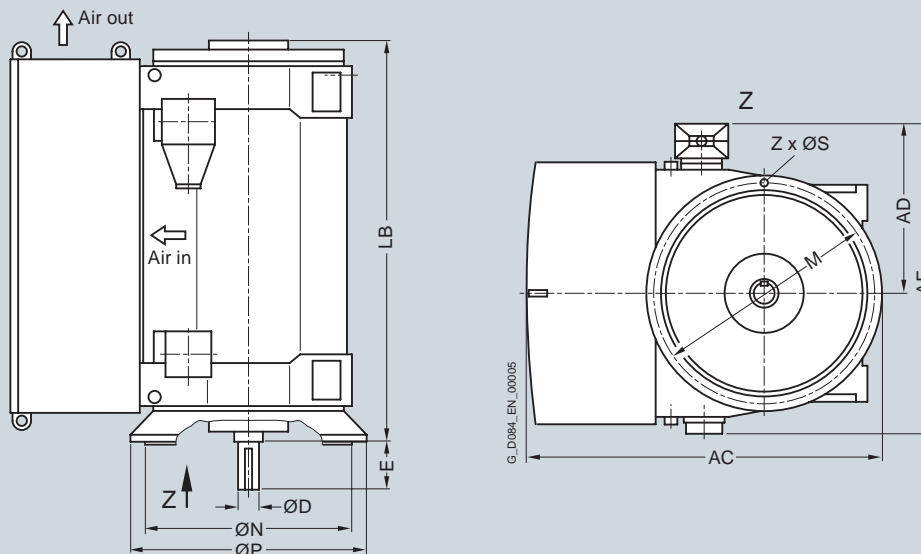
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RA4 series											
8-pole											
1RA4 630-8HE.0-Z K96	10300	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 632-8HE.0-Z K96	10900	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 634-8HE.0-Z K96	11900	1320	1320	2200	1800	600	220	280	630	2400	3210
1RA4 636-8HE.0-Z K96	12600	1320	1320	2200	1800	600	220	280	630	2400	3210
10-pole											
1RA4 500-3HE.0-Z K96	5400	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 502-3HE.0-Z K96	5800	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 504-3HE.0-Z K96	6300	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 506-3HE.0-Z K96	6650	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 560-3HE.0-Z K96	7550	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 562-3HE.0-Z K96	8150	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 564-3HE.0-Z K96	8950	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 566-3HE.0-Z K96	9400	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 630-3HE.0-Z K96	10300	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 632-3HE.0-Z K96	10900	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 634-3HE.0-Z K96	11850	1320	1320	2200	1800	600	220	280	630	2400	3210
1RA4 636-3HE.0-Z K96	12550	1320	1320	2200	1800	600	220	280	630	2400	3210
12-pole											
1RA4 502-5HE.0-Z K96	5800	950	1150	1980	1320	500	160	240	500	1520	2430
1RA4 504-5HE.0-Z K96	6250	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 506-5HE.0-Z K96	6650	950	1150	1980	1500	500	170	240	500	1520	2680
1RA4 560-5HE.0-Z K96	7350	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 562-5HE.0-Z K96	7850	1060	1220	2040	1400	530	180	240	560	1750	2670
1RA4 564-5HE.0-Z K96	8650	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 566-5HE.0-Z K96	9150	1060	1220	2040	1600	530	190	280	560	1750	2960
1RA4 630-5HE.0-Z K96	10300	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 632-5HE.0-Z K96	10950	1320	1320	2200	1600	600	220	280	630	2400	2970
1RA4 634-5HE.0-Z K96	11950	1320	1320	2200	1800	600	220	280	630	2400	3210
1RA4 636-5HE.0-Z K96	12650	1320	1320	2200	1800	600	220	280	630	2400	3210

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
4-pole												
1RA4 450-4HE.8	3950	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 452-4HE.8	4150	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 454-4HE.8	4650	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 456-4HE.8	4900	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 500-4HE.8	5250	1640	1000	1810	150	200	1910	1250	1120	1180	26	16
1RA4 502-4HE.8	5450	1640	1000	1810	150	200	1910	1250	1120	1180	26	16
1RA4 504-4HE.8	6150	1640	1000	1810	160	240	2120	1250	1120	1180	26	16
1RA4 506-4HE.8	6550	1640	1000	1810	160	240	2120	1250	1120	1180	26	16
1RA4 560-4HE.8	7250	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-4HE.8 ²⁾	7700	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-4HE.8 ²⁾	8600	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-4HE.8 ²⁾	9050	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-4HE.8 ²⁾	11600	2430	1330	2300	200	280	2470	2000	1800	1900	33	16
1RA4 632-4HE.8 ²⁾	12300	2430	1330	2300	200	280	2470	2000	1800	1900	33	16
1RA4 634-4HE.8 ²⁾	13350	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4 636-4HE.8 ²⁾	13900	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
6-pole												
1RA4 450-6HE.8	4050	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 452-6HE.8	4250	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 454-6HE.8	4650	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 456-6HE.8	5000	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 500-6HE.8	5400	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 502-6HE.8	5750	1640	1000	1810	160	240	1910	1250	1120	1180	26	16

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

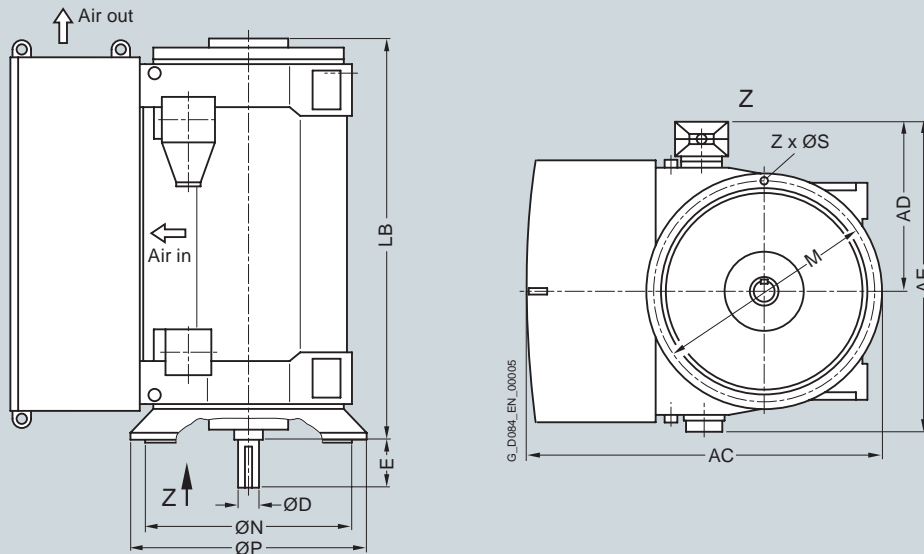
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
6-pole												
1RA4 504-6HE.8	6300	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 506-6HE.8	6700	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 560-6HE.8	7400	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-6HE.8	8000	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-6HE.8	8800	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-6HE.8	9300	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-6HE.8	11900	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4 632-6HE.8	12450	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4 634-6HE.8	13450	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4 636-6HE.8	14200	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
8-pole												
1RA4 450-8HE.8	4000	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 452-8HE.8	4200	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 454-8HE.8	4650	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 456-8HE.8	5000	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 500-8HE.8	5450	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 502-8HE.8	5800	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 504-8HE.8	6300	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 506-8HE.8	6700	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 560-8HE.8	7350	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4 562-8HE.8	7900	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4 564-8HE.8	8700	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4 566-8HE.8	9200	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4 630-8HE.8 ²⁾	11800	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4 632-8HE.8 ²⁾	12450	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4 634-8HE.8 ²⁾	13350	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4 636-8HE.8 ²⁾	14100	2430	1330	2300	220	280	2710	2000	1800	1900	33	16

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

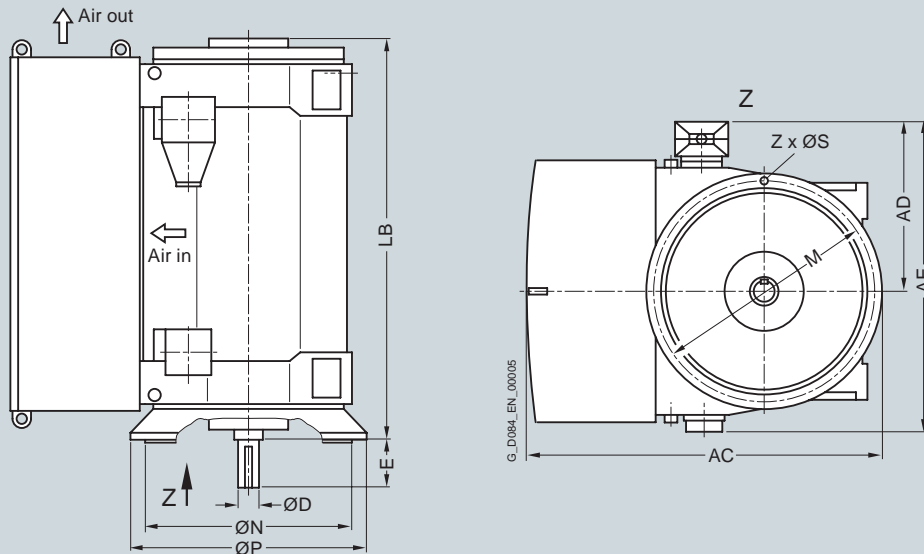
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
10-pole												
1RA4 450-3HE.8	4000	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 452-3HE.8	4200	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 454-3HE.8	4600	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 456-3HE.8	4950	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 500-3HE.8	5350	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 502-3HE.8	5750	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 504-3HE.8	6300	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 506-3HE.8	6650	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 560-3HE.8	7300	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4 562-3HE.8	7900	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4 564-3HE.8	8700	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4 566-3HE.8	9150	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4 630-3HE.8 ²⁾	11700	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4 632-3HE.8 ²⁾	12400	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4 634-3HE.8 ²⁾	13400	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4 636-3HE.8 ²⁾	14100	2430	1330	2300	220	280	2710	2000	1800	1900	33	16

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

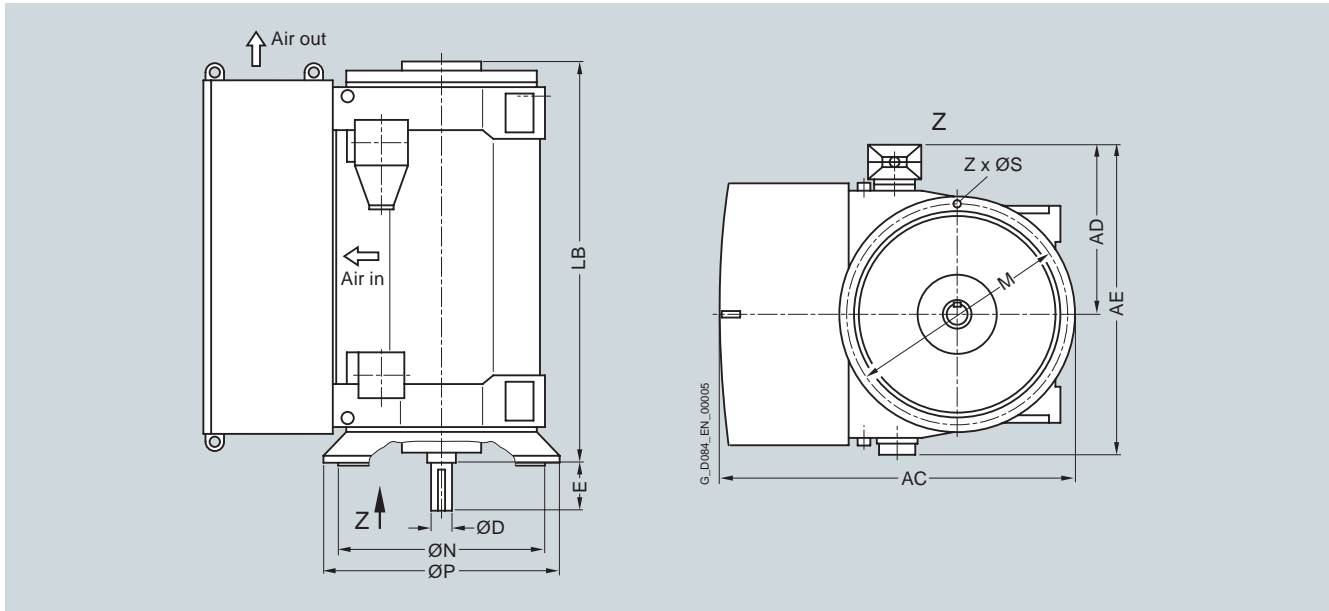
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
12-pole												
1RA4 450-5HE.8	4000	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 452-5HE.8	4200	1520	930	1670	130	200	1720	1150	1000	1080	26	16
1RA4 454-5HE.8	4600	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 456-5HE.8	4950	1520	930	1670	140	200	1930	1150	1000	1080	26	16
1RA4 500-5HE.8	5400	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 502-5HE.8	5750	1640	1000	1810	160	240	1910	1250	1120	1180	26	16
1RA4 504-5HE.8	6250	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 506-5HE.8	6650	1640	1000	1810	170	240	2120	1250	1120	1180	26	16
1RA4 560-5HE.8	7350	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4 562-5HE.8	7900	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4 564-5HE.8	8650	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4 566-5HE.8	9150	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4 630-5HE.8 ²⁾	11600	2430	1180	2150	220	280	2470	2000	1800	1900	33	16
1RA4 632-5HE.8 ²⁾	12250	2430	1180	2150	220	280	2470	2000	1800	1900	33	16
1RA4 634-5HE.8 ²⁾	13250	2430	1180	2150	220	280	2710	2000	1800	1900	33	16
1RA4 636-5HE.8 ²⁾	14050	2430	1180	2150	220	280	2710	2000	1800	1900	33	16

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

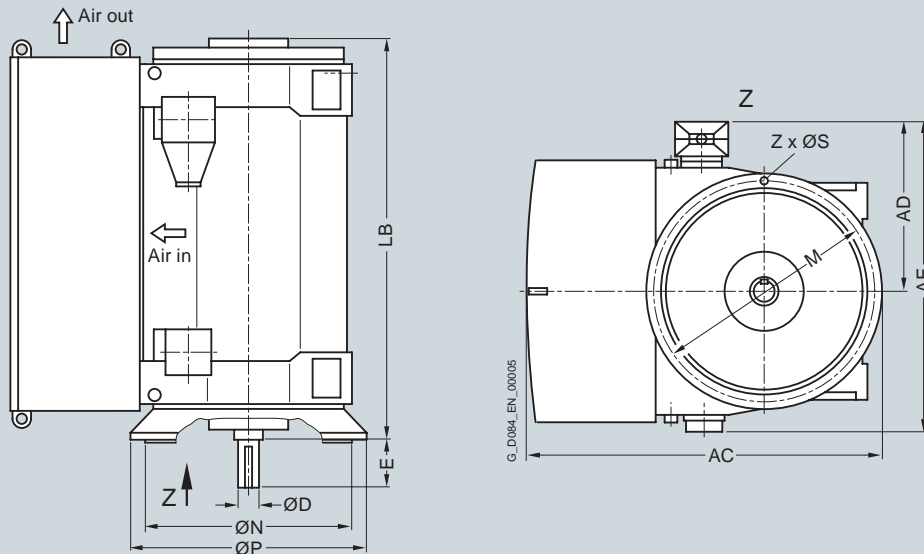
²⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
4-pole												
1RA4 450-4HE.8	3950	1520	1070	1810	130	200	1720	1150	1000	1080	26	16
1RA4 452-4HE.8	4150	1520	1070	1810	130	200	1720	1150	1000	1080	26	16
1RA4 454-4HE.8	4600	1520	1070	1810	140	200	1930	1150	1000	1080	26	16
1RA4 456-4HE.8	4900	1520	1070	1810	140	200	1930	1150	1000	1080	26	16
1RA4 500-4HE.8	5250	1640	1140	1950	150	200	1910	1250	1120	1180	26	16
1RA4 502-4HE.8	5450	1640	1140	1950	150	200	1910	1250	1120	1180	26	16
1RA4 504-4HE.8	6100	1640	1140	1950	160	240	2120	1250	1120	1180	26	16
1RA4 506-4HE.8	6450	1640	1140	1950	160	240	2120	1250	1120	1180	26	16
1RA4 560-4HE.8	7150	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-4HE.8	7600	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-4HE.8	8450	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-4HE.8	8900	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-4HE.8 ¹⁾	11500	2430	1320	2290	200	280	2470	2000	1800	1900	33	16
1RA4 632-4HE.8 ¹⁾	12150	2430	1330	2300	200	280	2470	2000	1800	1900	33	16
1RA4 634-4HE.8 ¹⁾	13200	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4 636-4HE.8 ¹⁾	13800	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
6-pole												
1RA4 450-6HE.8	4050	1520	1070	1810	130	200	1720	1150	1000	1080	26	16
1RA4 452-6HE.8	4250	1520	1070	1810	130	200	1720	1150	1000	1080	26	16
1RA4 454-6HE.8	4650	1520	1070	1810	140	200	1930	1150	1000	1080	26	16
1RA4 456-6HE.8	5000	1520	1070	1810	140	200	1930	1150	1000	1080	26	16
1RA4 500-6HE.8	5400	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 502-6HE.8	5800	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 504-6HE.8	6250	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 506-6HE.8	6650	1640	1140	1950	170	240	2120	1250	1120	1180	26	16

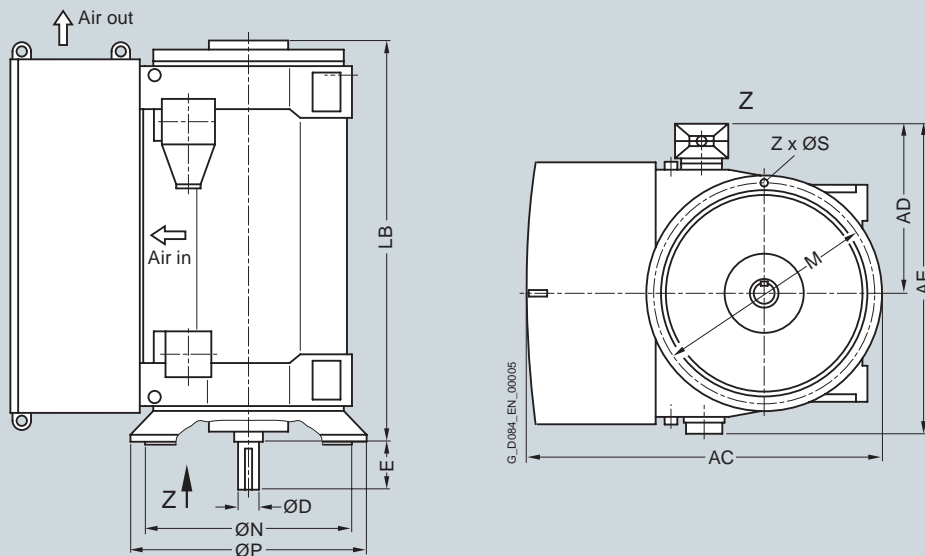
¹⁾ Only in the 50 Hz version.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



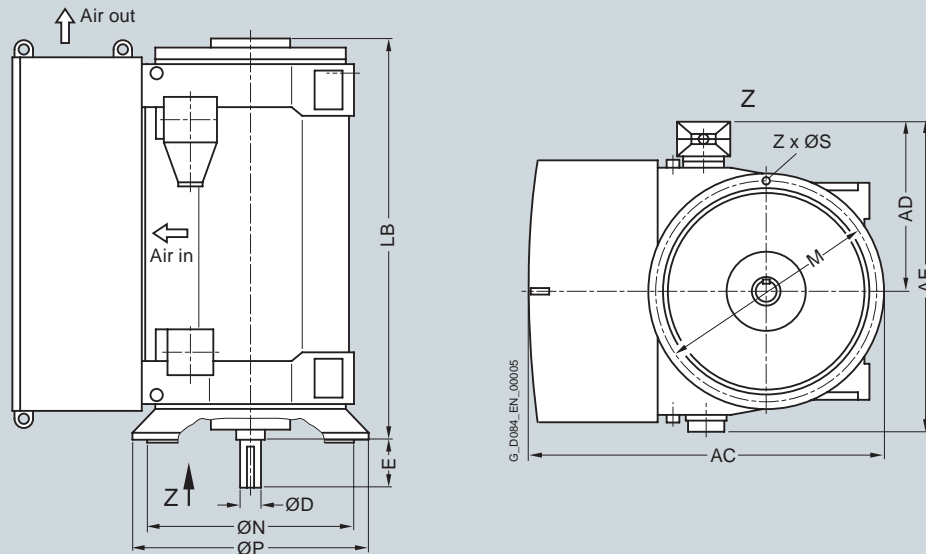
Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
6-pole												
1RA4 560-6HE.8	7400	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-6HE.8	7850	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-6HE.8	8700	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-6HE.8	9150	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-6HE.8	11850	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 632-6HE.8	12400	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 634-6HE.8	13450	2430	1320	2290	220	280	2710	2000	1800	1900	33	16
1RA4 636-6HE.8	14200	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
8-pole												
1RA4 500-8HE.8	5400	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 502-8HE.8	5800	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 504-8HE.8	6300	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 506-8HE.8	6650	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 560-8HE.8	7350	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-8HE.8	7900	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-8HE.8	8700	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-8HE.8	9100	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-8HE.8	11700	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 632-8HE.8	12250	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 634-8HE.8	13250	2430	1320	2290	220	280	2710	2000	1800	1900	33	16
1RA4 636-8HE.8	14000	2430	1320	2290	220	280	2710	2000	1800	1900	33	16

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings (continued)



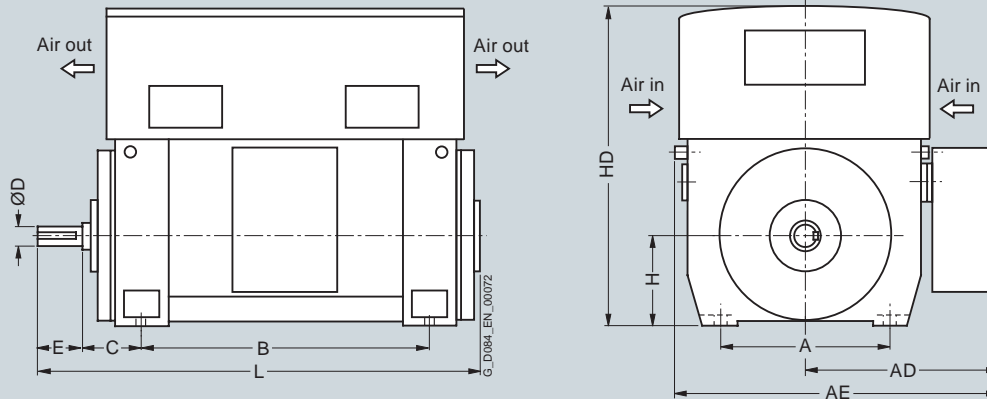
Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RA4 series												
10-pole												
1RA4 500-3HE.8	5350	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 502-3HE.8	5750	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 504-3HE.8	6250	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 506-3HE.8	6600	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 560-3HE.8	7450	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-3HE.8	8000	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-3HE.8	8750	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-3HE.8	9250	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-3HE.8	11650	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 632-3HE.8	12250	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 634-3HE.8	13200	2430	1320	2290	220	280	2710	2000	1800	1900	33	16
1RA4 636-3HE.8	13950	2430	1320	2290	220	280	2710	2000	1800	1900	33	16
12-pole												
1RA4 502-5HE.8	5750	1640	1140	1950	160	240	1910	1250	1120	1180	26	16
1RA4 504-5HE.8	6200	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 506-5HE.8	6600	1640	1140	1950	170	240	2120	1250	1120	1180	26	16
1RA4 560-5HE.8	7300	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 562-5HE.8	7850	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4 564-5HE.8	8650	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 566-5HE.8	9100	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4 630-5HE.8	11700	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 632-5HE.8	12300	2430	1320	2290	220	280	2470	2000	1800	1900	33	16
1RA4 634-5HE.8	13300	2430	1320	2290	220	280	2710	2000	1800	1900	33	16
1RA4 636-5HE.8	14050	2430	1320	2290	220	280	2710	2000	1800	1900	33	16

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings, X ventilation – 1RP6 series											
4-pole											
1RP6 710-4HJ.0 ¹⁾	18100	1500	1500	2530	2000	355	220	280	710	3030	2980
1RP6 712-4HJ.0 ¹⁾	18900	1500	1500	2530	2000	355	220	280	710	3030	2980
1RP6 714-4HJ.0 ¹⁾	20300	1500	1500	2530	2240	355	220	280	710	3030	3220
1RP6 716-4HJ.0 ¹⁾	21300	1500	1500	2530	2240	355	220	280	710	3030	3220

Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings, X ventilation – 1RP6 series											
4-pole											
1RP6 710-4HJ.0 ¹⁾	17800	1500	1500	2530	2000	355	220	280	710	3030	2980
1RP6 712-4HJ.0 ¹⁾	18600	1500	1500	2530	2000	355	220	280	710	3030	2980
1RP6 714-4HJ.0 ¹⁾	20100	1500	1500	2530	2240	355	220	280	710	3030	3220
1RP6 716-4HJ.0 ¹⁾	21000	1500	1500	2530	2240	355	220	280	710	3030	3220

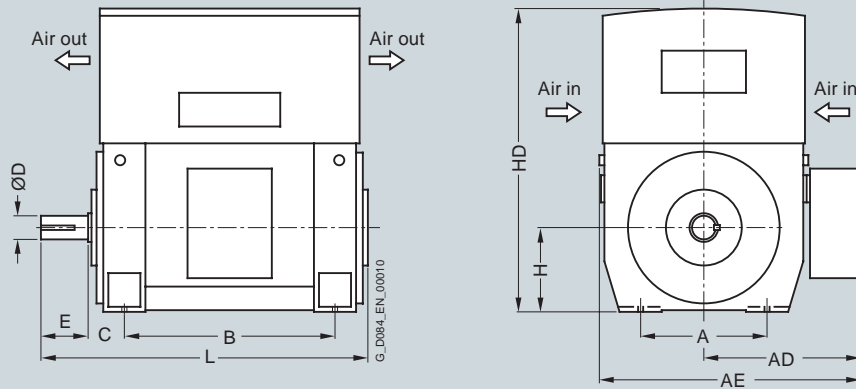
¹⁾ Rolling-contact bearings only for 50 Hz operation.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



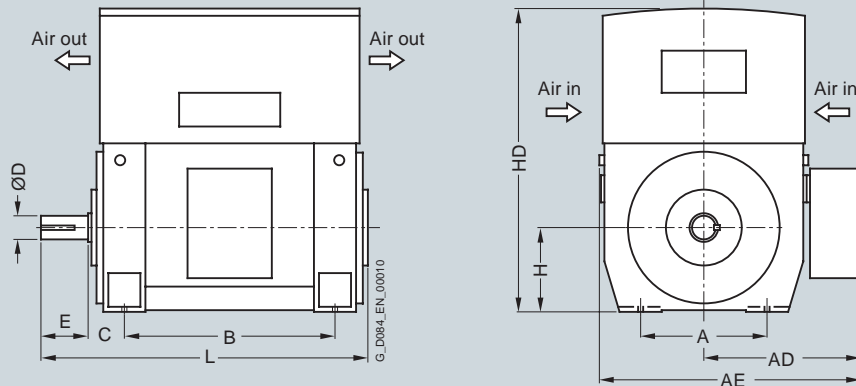
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings, Z ventilation – 1RP6 series											
6-pole											
1RP6 710-6HJ.0	17200	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 712-6HJ.0	17900	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 714-6HJ.0	19600	1500	1500	2530	2240	355	240	330	710	3040	3270
1RP6 716-6HJ.0	20800	1500	1500	2530	2240	355	240	330	710	3040	3270
8-pole											
1RP6 710-8HJ.0	17000	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 712-8HJ.0	17800	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 714-8HJ.0	19400	1500	1500	2530	2240	355	240	330	710	3040	3270
1RP6 716-8HJ.0	20500	1500	1500	2530	2240	355	240	330	710	3040	3270
10-pole											
1RP6 710-3HJ.0	16800	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 712-3HJ.0	17600	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 714-3HJ.0	19300	1500	1500	2530	2240	355	240	330	710	3040	3270
1RP6 716-3HJ.0	20400	1500	1500	2530	2240	355	240	330	710	3040	3270

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



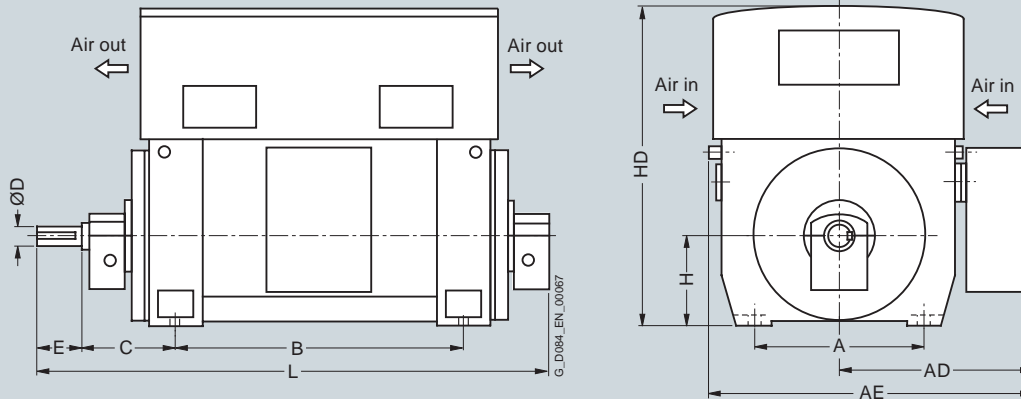
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings, Z ventilation – 1RP6 series											
6-pole											
1RP6 710-6HJ.0	17000	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 712-6HJ.0	17700	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 714-6HJ.0	19500	1500	1500	2530	2240	355	240	330	710	3040	3270
1RP6 716-6HJ.0	20500	1500	1500	2530	2240	355	240	330	710	3040	3270
8-pole											
1RP6 710-8HJ.0	16900	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 712-8HJ.0	17600	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 714-8HJ.0	19300	1500	1500	2530	2240	355	240	330	710	3040	3270
1RP6 716-8HJ.0	20300	1500	1500	2530	2240	355	240	330	710	3040	3270
10-pole											
1RP6 710-3HJ.0	16800	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 712-3HJ.0	17500	1500	1500	2530	2000	355	240	330	710	3040	3030
1RP6 714-3HJ.0	19200	1500	1500	2530	2240	355	240	330	710	3040	3270
1RP6 716-3HJ.0	20300	1500	1500	2530	2240	355	240	330	710	3040	3270

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings, X ventilation – 1RP6 series											
2-pole											
1RP6 710-2HJ.0	16300	1500	1500	2530	2000	600	180	240	710	3030	3370
1RP6 712-2HJ.0	17100	1500	1500	2530	2000	600	180	240	710	3030	3370
1RP6 714-2HJ.0	18400	1500	1500	2530	2240	600	180	240	710	3030	3610
1RP6 716-2HJ.0	19400	1500	1500	2530	2240	600	180	240	710	3030	3610
4-pole											
1RP6 710-4HJ.0-Z K96 ¹⁾	18100	1500	1500	2530	2000	530	220	280	710	3030	3260
1RP6 712-4HJ.0-Z K96 ¹⁾	18900	1500	1500	2530	2000	530	220	280	710	3030	3260
1RP6 714-4HJ.0-Z K96 ¹⁾	20300	1500	1500	2530	2240	530	220	280	710	3030	3500
1RP6 716-4HJ.0-Z K96 ¹⁾	21300	1500	1500	2530	2240	530	220	280	710	3030	3500

Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings, X ventilation – 1RP6 series											
2-pole											
1RP6 710-2HJ.0	16200	1500	1500	2530	2000	600	180	240	710	3030	3370
1RP6 712-2HJ.0	17000	1500	1500	2530	2000	600	180	240	710	3030	3370
1RP6 714-2HJ.0	18200	1500	1500	2530	2240	600	180	240	710	3030	3610
1RP6 716-2HJ.0	19200	1500	1500	2530	2240	600	180	240	710	3030	3610
4-pole											
1RP6 710-4HJ.0-Z K96 ¹⁾	17800	1500	1500	2530	2000	530	220	280	710	3030	3260
1RP6 712-4HJ.0-Z K96 ¹⁾	18600	1500	1500	2530	2000	530	220	280	710	3030	3260
1RP6 714-4HJ.0-Z K96 ¹⁾	20100	1500	1500	2530	2240	530	220	280	710	3030	3500
1RP6 716-4HJ.0-Z K96 ¹⁾	21000	1500	1500	2530	2240	530	220	280	710	3030	3500

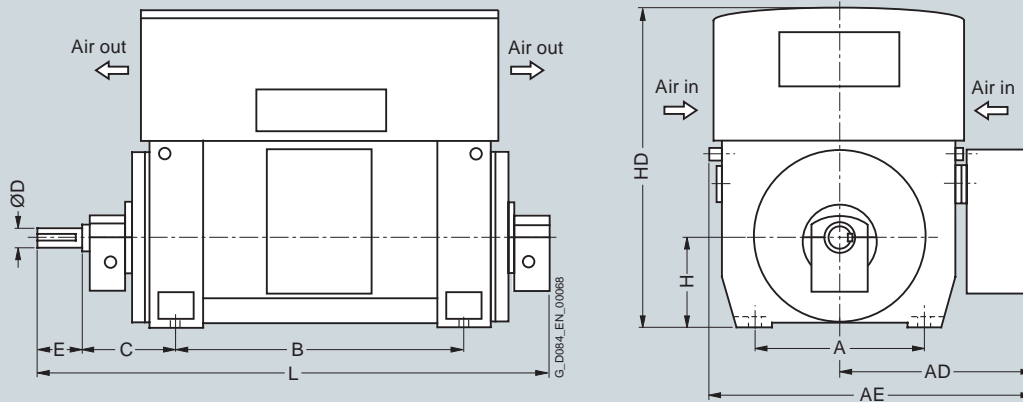
¹⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



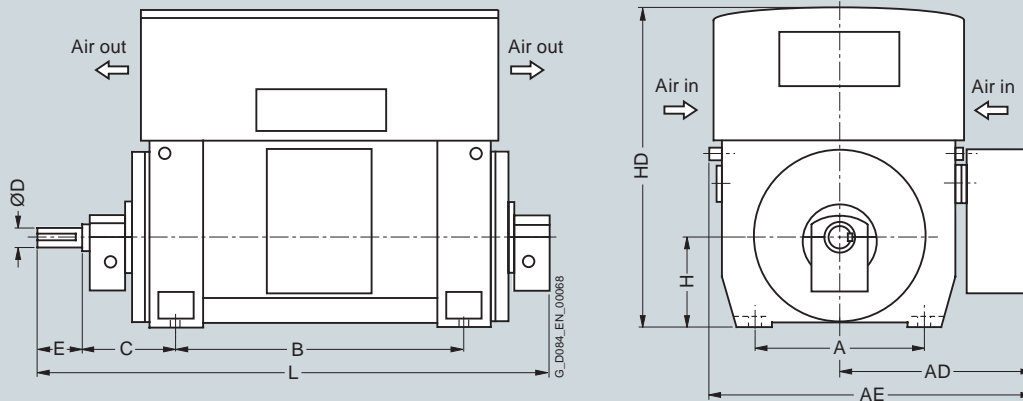
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings, Z ventilation – 1RP6 series											
6-pole											
1RP6 710-6HJ.0-Z K96	18200	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 712-6HJ.0-Z K96	18900	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 714-6HJ.0-Z K96	20700	1500	1500	2530	2240	670	240	330	710	3040	3840
1RP6 716-6HJ.0-Z K96	21800	1500	1500	2530	2240	670	240	330	710	3040	3840
8-pole											
1RP6 710-8HJ.0-Z K96	18000	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 712-8HJ.0-Z K96	18800	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 714-8HJ.0-Z K96	20500	1500	1500	2530	2240	670	240	330	710	3040	3840
1RP6 716-8HJ.0-Z K96	21600	1500	1500	2530	2240	670	240	330	710	3040	3840
10-pole											
1RP6 710-3HJ.0-Z K96	17800	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 712-3HJ.0-Z K96	18700	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 714-3HJ.0-Z K96	20300	1500	1500	2530	2240	670	240	330	710	3040	3840
1RP6 716-3HJ.0-Z K96	21500	1500	1500	2530	2240	670	240	330	710	3040	3840

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



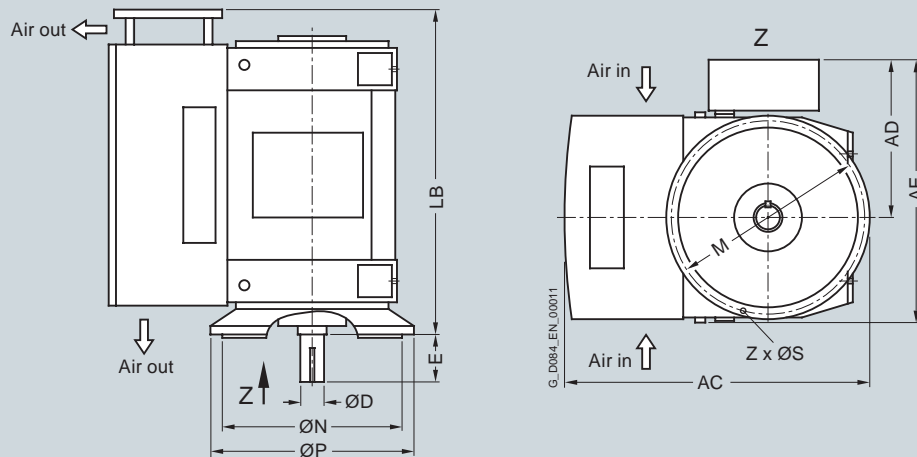
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings, Z ventilation – 1RP6 series											
6-pole											
1RP6 710-6HJ.0-Z K96	18000	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 712-6HJ.0-Z K96	18800	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 714-6HJ.0-Z K96	20500	1500	1500	2530	2240	670	240	330	710	3040	3840
1RP6 716-6HJ.0-Z K96	21600	1500	1500	2530	2240	670	240	330	710	3040	3840
8-pole											
1RP6 710-8HJ.0-Z K96	17900	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 712-8HJ.0-Z K96	18700	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 714-8HJ.0-Z K96	20300	1500	1500	2530	2240	670	240	330	710	3040	3840
1RP6 716-8HJ.0-Z K96	21400	1500	1500	2530	2240	670	240	330	710	3040	3840
10-pole											
1RP6 710-3HJ.0-Z K96	17800	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 712-3HJ.0-Z K96	18600	1500	1500	2530	2000	670	240	330	710	3040	3600
1RP6 714-3HJ.0-Z K96	20200	1500	1500	2530	2240	670	240	330	710	3040	3840
1RP6 716-3HJ.0-Z K96	21300	1500	1500	2530	2240	670	240	330	710	3040	3840

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



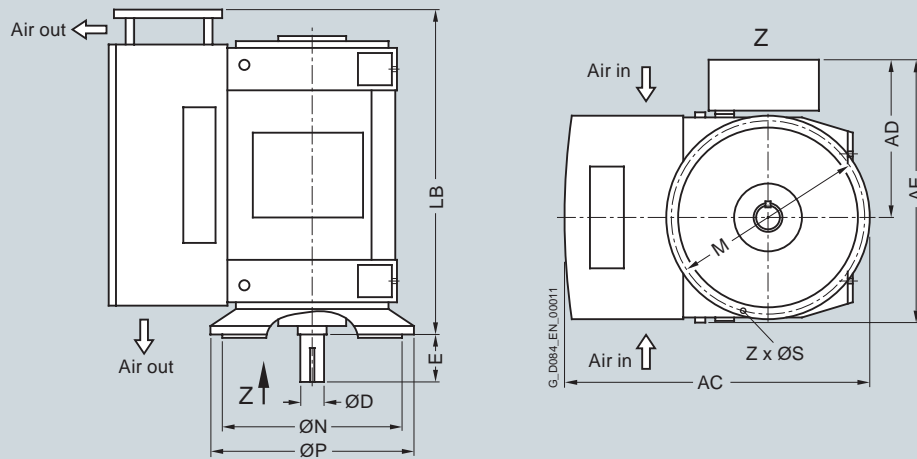
Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings, Z ventilation – 1RP6 series												
6-pole												
1RP6 710-6HE.4	18400	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 712-6HE.4	19100	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 714-6HE.4	20800	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
1RP6 716-6HE.4	22000	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
8-pole												
1RP6 710-8HE.4	18200	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 712-8HE.4	19000	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 714-8HE.4	20600	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
1RP6 716-8HE.4	21800	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
10-pole												
1RP6 710-3HE.4	18000	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 712-3HE.4	18900	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 714-3HE.4	20500	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
1RP6 716-3HE.4	21600	3330	1500	2530	240	330	3305	2000	1800	1900	33	24

Motors for line operation

Air-cooled motors

H-compact PLUS 1RA4 and 1RP6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings, Z ventilation – 1RP6 series												
6-pole												
1RP6 710-6HE.4	18200	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 712-6HE.4	19000	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 714-6HE.4	20700	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
1RP6 716-6HE.4	21800	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
8-pole												
1RP6 710-8HE.4	18100	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 712-8HE.4	18900	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 714-8HE.4	20500	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
1RP6 716-8HE.4	21600	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
10-pole												
1RP6 710-3HE.4	18000	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 712-3HE.4	18800	3330	1500	2530	240	330	3065	2000	1800	1900	33	24
1RP6 714-3HE.4	20400	3330	1500	2530	240	330	3305	2000	1800	1900	33	24
1RP6 716-3HE.4	21500	3330	1500	2530	240	330	3305	2000	1800	1900	33	24

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1RN4/1RN6	
Rated voltage	3.3 ... 13.8 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC81W
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN, NEMA
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

Technical data (continued)

Power ranges for IEC motors for line operation

1RN4, 1SL4 (Ex nA), 1SQ4 (Ex px) series

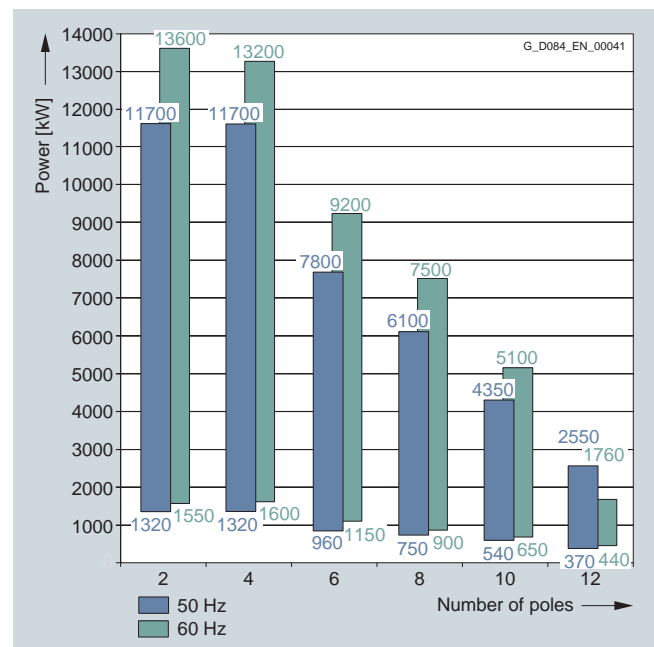
1RN6, 1SL6 (Ex nA), 1SQ6 (Ex px) series

Insulation system, thermal class 155 (F), utilized to 130 (B).

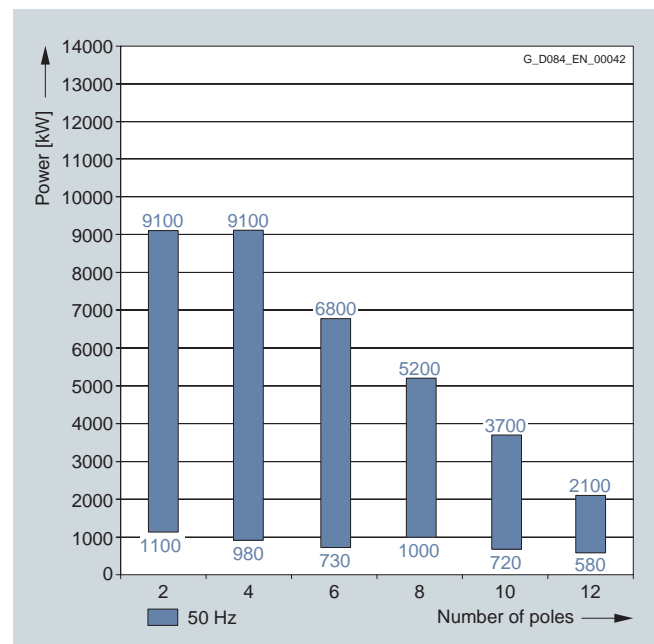
Coolant temperature up to 25 °C, installation altitude up to 1000 m.

3.3 to 6.6 kV; 50 Hz

4.0 to 6.6 kV; 60 Hz



9 to 11 kV; 50 Hz



Motors for line operation

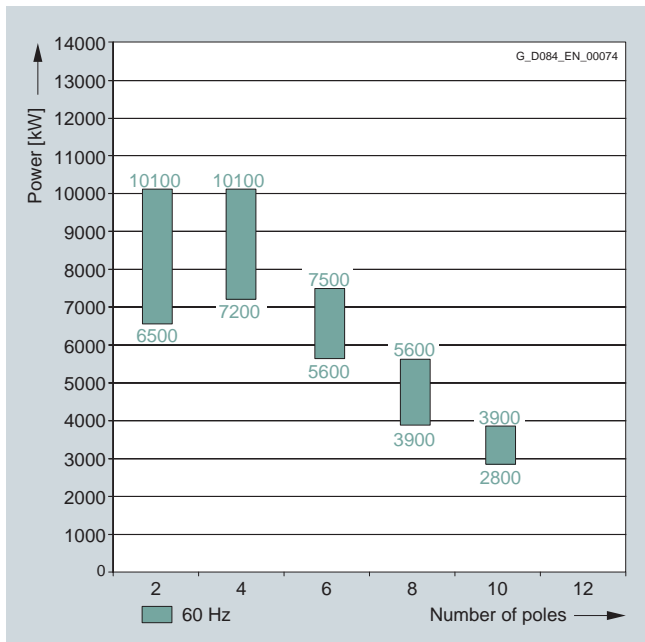
Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Technical data (continued)

Power ranges from IEC motors for line operation (continued)

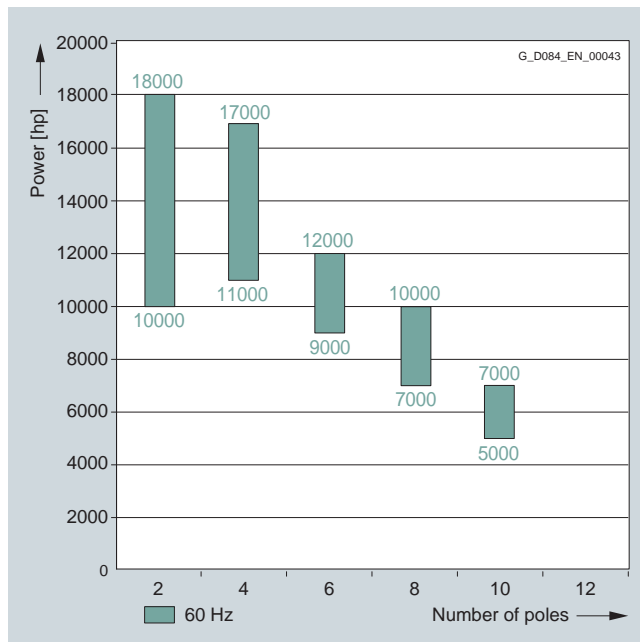
12.5 to 13.8 kV; 60 Hz



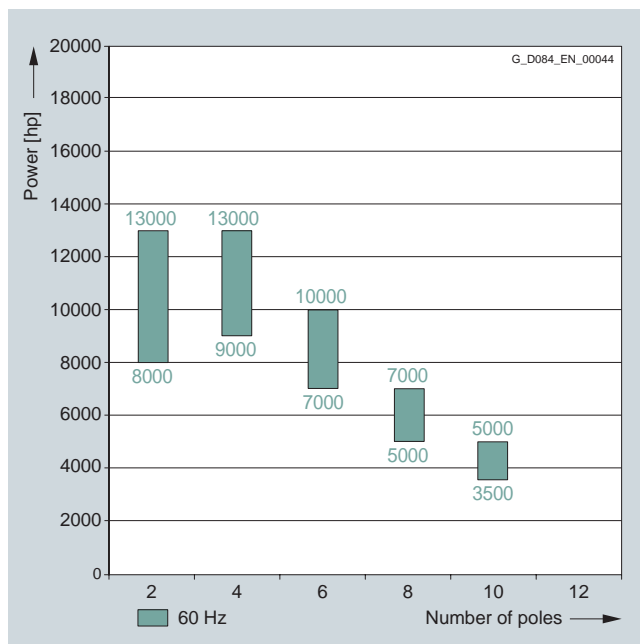
Power ranges for NEMA motors for line operation

Insulation system, thermal class 155 (F), utilized to 130 (B)

4 to 6.6 kV; 60 Hz



12.5 to 13.8 kV; 60 Hz



2

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

IEC version

The data for 1RN4 also apply to explosion-proof 1SL4 (Ex nA) and 1SQ4 (Ex px) motors.

Rated power IEC kW	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break- down torque T _B / T _{rated}	Locked -rotor torque T _{LR} / T _{rated}	Locked -rotor current I _{LR} / I _{rated}	Moment of inertia	
			I _{rated} at 6 kV A	4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ	Motor kgm ²					External, max. ¹⁾ kgm ²	
3.3 ... 6.6 kV, 50 Hz														
2-pole														
1320	1RN4 450-2HE■ 0	2969	150	95.6	96.0	0.89	0.88	4246	2.1	0.60	4.6	10.5	29	
1530	1RN4 452-2HE■ 0	2973	170	96.0	96.3	0.90	0.88	4915	2.3	0.70	5.4	11.5	37	
1730	1RN4 454-2HE■ 0	2974	192	96.2	96.4	0.90	0.88	5555	2.4	0.72	5.5	12.5	42	
1950	1RN4 456-2HE■ 0	2975	215	96.5	96.6	0.90	0.88	6260	2.5	0.72	5.5	14.0	49	
2100	1RN4 500-2HE■ 0	2975	240	96.2	96.3	0.88	0.87	6741	2.2	0.63	5.0	20	42	
2400	1RN4 502-2HE■ 0	2975	270	96.4	96.6	0.89	0.87	7704	2.2	0.63	5.0	22	50	
2750	1RN4 504-2HE■ 0	2977	310	96.6	96.8	0.89	0.87	8822	2.4	0.68	5.4	24	60	
3100	1RN4 506-2HE■ 0	2978	345	96.9	97.0	0.89	0.88	9941	2.4	0.68	5.5	26	69	
3350	1RN4 560-2HE■ 0	2978	375	96.6	96.7	0.89	0.88	10743	2.0	0.45	4.3	32	55	
3700	1RN4 562-2HE■ 0	2980	415	96.8	96.9	0.89	0.88	11857	2.1	0.50	4.7	35	64	
4350	1RN4 564-2HE■ 0	2982	480	97.0	97.2	0.90	0.88	13931	2.3	0.55	5.2	40	82	
4900	1RN4 566-2HE■ 0	2984	540	97.2	97.3	0.90	0.88	15682	2.5	0.60	5.5	44	102	
4900	1RN4 630-2HE■ 0	2982	550	96.9	97.1	0.88	0.88	15692	2.10	0.31	4.0	75	110	
5700	1RN4 632-2HE■ 0	2983	630	97.3	97.3	0.89	0.89	18248	2.20	0.34	4.3	85	150	
6500	1RN4 634-2HE■ 0	2985	710	97.5	97.6	0.90	0.89	20796	2.50	0.41	5.0	90	190	
7500	1RN4 636-2HE■ 0	2986	820	97.7	97.8	0.90	0.89	23987	2.60	0.46	5.4	100	240	
4-pole														
1320	1RN4 450-4HE■ ■	1484	148	95.9	96.2	0.89	0.87	8495	2.2	0.72	5.5	21	230	
1480	1RN4 452-4HE■ ■	1484	166	96.0	96.3	0.89	0.87	9524	2.2	0.72	5.5	23	265	
1680	1RN4 454-4HE■ ■	1485	188	96.2	96.5	0.89	0.87	10804	2.2	0.72	5.5	26	300	
1900	1RN4 456-4HE■ ■	1485	215	96.3	96.6	0.89	0.87	12219	2.2	0.72	5.5	29	340	
2100	1RN4 500-4HE■ ■	1485	235	96.2	96.4	0.89	0.88	13505	2.1	0.72	5.2	39	310	
2300	1RN4 502-4HE■ ■	1486	260	96.4	96.6	0.89	0.88	14781	2.1	0.75	5.3	42	340	
2650	1RN4 504-4HE■ ■	1487	295	96.6	98.8	0.89	0.88	17019	2.2	0.80	5.5	48	410	
3000	1RN4 506-4HE■ ■	1487	335	96.8	97.0	0.89	0.88	19267	2.2	0.80	5.5	53	460	
3600	1RN4 560-4HE■ ■	1487	400	96.7	96.9	0.90	0.89	23120	2.0	0.65	4.9	76	340	
4000	1RN4 562-4HE■ ■	1488	440	96.9	97.2	0.90	0.89	25672	2.2	0.70	5.3	84	400	
4500	1RN4 564-4HE■ ■	1489	495	97.1	97.3	0.90	0.89	28862	2.2	0.70	5.3	96	470	
4900	1RN4 566-4HE■ ■	1489	540	97.2	97.4	0.90	0.89	31427	2.2	0.70	5.3	105	530	
5300	1RN4 630-4HE■ ■	1489	590	97.1	97.3	0.89	0.89	33993	2.00	0.54	4.6	150	780	
6000	1RN4 632-4HE■ ■	1490	670	97.3	97.4	0.89	0.89	38456	2.15	0.60	4.9	165	1050	
6600	1RN4 634-4HE■ ■	1490	720	97.4	97.6	0.90	0.90	42302	2.20	0.63	5.1	180	1200	
7100	1RN4 636-4HE■ ■	1491	780	97.6	97.6	0.90	0.89	45476	2.40	0.70	5.5	195	1100	

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

Type of construction:

IM B3
IM V1 (without canopy)

0
8

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data (continued)

Rated power IEC kW	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current I_{rated} at 6 kV A	Efficiency		Power factor		Torque Nm	Break- down torque T_B/T_{rated} [-]	Locked -rotor torque T_{LR}/T_{rated} [-]	Locked -rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load $\cos \phi$	3/4 load $\cos \phi$					Motor kgm ²	External, max. ¹⁾ kgm ²
3.3 ... 6.6 kV, 50 Hz													
6-pole													
960	1RN4 450-6HE	987	114	95.1	95.8	0.85	0.83	9289	2.0	0.80	5.0	29	600
1080	1RN4 452-6HE	987	128	95.2	96.0	0.85	0.84	10450	2.0	0.80	5.0	3	650
1260	1RN4 454-6HE	988	146	95.5	96.1	0.87	0.85	12179	2.1	0.85	5.4	36	700
1470	1RN4 456-6HE	989	172	95.7	96.3	0.86	0.84	14195	2.2	0.88	5.5	41	800
1700	1RN4 500-6HE	989	196	95.8	96.4	0.87	0.85	16416	2.0	0.75	5.0	57	900
1920	1RN4 502-6HE	989	220	96.0	96.5	0.87	0.86	18540	2.0	0.80	5.1	65	950
2150	1RN4 504-6HE	990	245	96.2	96.6	0.87	0.85	20740	2.0	0.80	5.2	72	1200
2350	1RN4 506-6HE	990	270	96.3	96.7	0.87	0.85	22669	2.0	0.80	5.2	81	1400
2750	1RN4 560-6HE	991	315	96.3	96.8	0.87	0.85	26501	1.9	0.72	4.9	105	1250
3100	1RN4 562-6HE	992	355	96.6	97.0	0.87	0.85	29844	2.0	0.75	5.1	120	1500
3450	1RN4 564-6HE	992	395	96.8	97.1	0.87	0.86	33213	2.0	0.75	5.1	135	1700
3750	1RN4 566-6HE	992	430	96.9	97.2	0.87	0.85	36101	2.0	0.75	5.1	147	1900
4200	1RN4 630-6HE	992	490	96.8	97.2	0.85	0.84	40433	2.00	0.57	4.5	190	2000
4700	1RN4 632-6HE	993	540	97.0	97.3	0.86	0.85	45201	2.10	0.62	4.8	210	2100
5100	1RN4 634-6HE	993	590	97.2	97.4	0.86	0.84	49048	2.25	0.69	5.2	230	2800
5600	1RN4 636-6HE	994	640	97.3	97.4	0.86	0.84	53803	2.30	0.70	5.3	255	3300
8-pole													
750	1RN4 450-8HE	740	91	94.5	94.9	0.84	0.82	9679	2.1	0.85	5.2	37	800
830	1RN4 452-8HE	741	100	94.7	95.0	0.84	0.82	10697	2.1	0.85	5.2	41	850
930	1RN4 454-8HE	742	114	94.9	95.1	0.83	0.80	11970	2.2	0.88	5.5	46	1000
1060	1RN4 456-8HE	742	130	95.1	95.3	0.83	0.80	13643	2.2	0.88	5.5	52	1200
1250	1RN4 500-8HE	741	150	95.4	95.7	0.84	0.82	16110	1.9	0.75	4.9	70	1350
1400	1RN4 502-8HE	742	166	95.6	95.8	0.85	0.83	18019	2.0	0.80	5.1	80	1650
1550	1RN4 504-8HE	742	184	95.7	95.9	0.85	0.83	19949	2.0	0.80	5.1	88	1750
1700	1RN4 506-8HE	742	200	95.8	96.0	0.85	0.83	21880	2.1	0.85	5.3	99	1800
1950	1RN4 560-8HE	744	235	96.0	96.3	0.84	0.82	25030	2.0	0.72	4.9	123	2300
2200	1RN4 562-8HE	744	260	96.2	96.3	0.84	0.82	28239	2.0	0.72	5.0	141	2400
2400	1RN4 564-8HE	744	285	96.3	96.5	0.84	0.82	30806	2.0	0.75	5.1	158	2800
2600	1RN4 566-8HE	744	305	96.3	96.6	0.85	0.84	33374	1.95	0.75	5.0	173	3500
3200	1RN4 630-8HE	743	375	96.5	96.7	0.85	0.83	41131	1.90	0.60	4.3	255	3100
3500	1RN4 632-8HE	743	410	96.7	96.8	0.85	0.82	44987	2.10	0.67	4.6	280	3400
3750	1RN4 634-8HE	743	440	96.7	96.9	0.85	0.84	48200	2.00	0.65	4.6	310	3600
4100	1RN4 636-8HE	744	485	96.9	96.9	0.84	0.81	52628	2.30	0.76	5.3	340	3800

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6 kV	at 4/4 load	at 3/4 load	at 4/4 load	at 3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%	%	%						kgm ²	kgm ²
3.3 ... 6.6 kV, 50 Hz														
10-pole														
540	1RN4 450-3HE	590	70	93.4	93.7	0.80	0.76	8741	2.0	0.80	4.6	37	1150	
600	1RN4 452-3HE	590	76	93.7	93.9	0.81	0.76	9712	2.0	0.80	4.7	41	1350	
670	1RN4 454-3HE	591	86	93.9	94.1	0.80	0.75	10827	2.1	0.82	4.9	46	1450	
760	1RN4 456-3HE	591	97	94.1	94.2	0.80	0.75	12281	2.2	0.90	5.2	52	1800	
900	1RN4 500-3HE	591	112	94.4	94.7	0.82	0.80	14543	1.9	0.68	4.3	70	1400	
1000	1RN4 502-3HE	592	122	95.7	94.9	0.83	0.80	16132	1.9	0.70	4.5	80	1700	
1100	1RN4 504-3HE	592	134	94.8	95.0	0.83	0.80	17745	1.9	0.72	4.6	88	2200	
1250	1RN4 506-3HE	592	152	95.0	95.1	0.83	0.80	20165	1.9	0.75	4.7	99	2600	
1480	1RN4 560-3HE	593	184	95.1	95.4	0.81	0.77	23835	2.0	0.70	4.5	123	2700	
1700	1RN4 562-3HE	593	210	95.4	95.7	0.82	0.78	27378	2.0	0.70	4.5	141	4100	
1880	1RN4 564-3HE	593	230	95.6	95.7	0.82	0.78	30277	2.0	0.72	4.7	158	4400	
2050	1RN4 566-3HE	593	255	95.7	95.8	0.81	0.76	33014	2.1	0.78	5.0	173	5200	
2400	1RN4 630-3HE	592	285	95.8	96.4	0.84	0.83	38716	1.80	0.62	4.0	250	4700	
2650	1RN4 632-3HE	592	315	96.0	96.5	0.84	0.83	42749	1.80	0.65	4.2	280	5300	
2900	1RN4 634-3HE	593	345	96.2	96.6	0.84	0.82	46703	2.00	0.70	4.5	305	6300	
3150	1RN4 636-3HE	593	375	96.4	96.7	0.84	0.82	50729	2.00	0.73	4.6	335	7500	
12-pole														
370	1RN4 450-5HE	491	53	92.4	92.7	0.73	0.68	7197	1.8	0.60	4.0	37	1100	
425	1RN4 452-5HE	492	60	92.8	93.0	0.73	0.67	8249	1.8	0.63	4.2	41	1400	
475	1RN4 454-5HE	491	66	93.1	93.3	0.74	0.69	9239	1.8	0.60	4.0	46	1600	
540	1RN4 456-5HE	492	77	93.5	93.5	0.72	0.65	10482	2.0	0.68	4.4	52	2000	
680	1RN4 500-5HE	491	94	93.9	94.0	0.74	0.69	13226	1.9	0.62	4.1	70	2350	
760	1RN4 502-5HE	491	102	94.1	94.2	0.76	0.71	14782	1.8	0.60	4.0	79	2600	
840	1RN4 504-5HE	491	112	94.3	94.4	0.76	0.71	16338	1.9	0.62	4.1	87	3100	
930	1RN4 506-5HE	492	128	94.5	94.6	0.74	0.69	18052	1.9	0.62	4.3	98	3700	
1100	1RN4 560-5HE	493	150	94.5	94.8	0.75	0.71	21308	1.8	0.57	3.9	123	3600	
1230	1RN4 562-5HE	493	168	94.9	95.0	0.74	0.68	23827	1.8	0.60	4.0	141	4100	
1350	1RN4 564-5HE	494	184	95.0	95.1	0.74	0.68	26098	2.0	0.63	4.3	158	4700	
1470	1RN4 566-5HE	494	198	95.1	95.2	0.75	0.69	28418	2.0	0.65	4.3	173	5200	
1900	1RN4 630-5HE	493	245	95.4	95.8	0.79	0.76	36805	1.90	0.70	4.3	250	5500	
2150	1RN4 632-5HE	493	270	95.6	96.0	0.80	0.76	41648	1.90	0.71	4.3	275	7000	
2350	1RN4 634-5HE	493	295	95.8	96.3	0.80	0.77	45522	1.90	0.72	4.4	305	8300	
2550	1RN4 636-5HE	493	320	95.9	96.4	0.80	0.77	49397	2.00	0.74	4.5	335	9800	

Voltage code:

5 kV, 50 Hz
6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

5
6
7
9

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

Type of construction:

IM B3
IM V1 (without canopy)

0
8

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

The data for 1RN6 also apply to explosion-proof 1SL6 (Ex nA) and 1SQ6 (Ex px) motors.

Rated power IEC	High voltage motor H-compact PLUS 1RN6 Order No.	Speed rpm	Rated current I_{rated} at 6 kV A	Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load $\cos \varphi$	3/4 load $\cos \varphi$					Motor kgm ²	External, max. ¹⁾ kgm ²
3.3 ... 6.6 kV, 50 Hz													
2-pole													
6700 ²⁾	1RN6 710-2HJ	2989	740	97.0	96.8	0.90	0.90	21414	2.0	0.43	4.6	132	108
8700 ²⁾	1RN6 712-2HJ	2987	960	97.2	97.1	0.90	0.91	27818	1.8	0.42	4.3	147	158
10100 ²⁾	1RN6 714-2HJ	2988	1100	97.4	97.2	0.91	0.91	32286	2.0	0.46	4.7	162	158
11700 ²⁾	1RN6 716-2HJ	2988	1260	97.5	97.3	0.91	0.91	37396	2.0	0.49	4.9	179	171
4-pole													
7600 ²⁾	1RN6 710-4HJ	1493	840	97.7	97.9	0.89	0.87	48609	2.3	0.60	5.5	273	627
8900 ²⁾	1RN6 712-4HJ	1493	970	97.8	98.0	0.90	0.89	56954	2.1	0.59	5.5	300	700
10100 ²⁾	1RN6 714-4HJ	1493	1100	97.8	98.0	0.91	0.90	64636	2.1	0.62	5.5	337	803
11700 ²⁾	1RN6 716-4HJ	1492	1260	97.9	98.0	0.91	0.91	74886	2.1	0.63	5.5	369	881
6-pole													
5700	1RN6 710-6HJ	994	660	97.3	97.6	0.86	0.84	54792	2.0	0.68	5.1	330	1720
6400	1RN6 712-6HJ	994	730	97.4	97.6	0.87	0.85	61526	2.0	0.72	5.2	367	1933
7100	1RN6 714-6HJ	994	810	97.5	97.7	0.87	0.85	68225	2.1	0.79	5.5	419	2361
7800	1RN6 716-6HJ	994	880	97.5	97.7	0.87	0.85	74930	2.2	0.82	5.5	468	3032
8-pole													
4550	1RN6 710-8HJ	745	540	96.9	97.3	0.84	0.82	58354	1.9	0.76	5.0	415	4735
5000	1RN6 712-8HJ	745	590	97.1	97.4	0.84	0.82	64111	1.9	0.79	5.2	465	5335
5500	1RN6 714-8HJ	745	640	97.1	97.4	0.85	0.83	70512	1.9	0.80	5.2	531	6469
6100	1RN6 716-8HJ	745	710	97.3	97.5	0.85	0.83	78174	2.0	0.85	5.5	597	7503
10-pole													
3050	1RN6 710-3HJ	596	380	96.4	96.9	0.80	0.77	48916	2.1	0.72	5.0	415	8485
3450	1RN6 712-3HJ	596	430	96.7	97.0	0.80	0.77	55318	2.1	0.73	5.1	465	10335
3850	1RN6 714-3HJ	596	480	96.8	97.1	0.80	0.77	61707	2.2	0.78	5.4	531	11469
4350	1RN6 716-3HJ	596	530	96.6	97.2	0.81	0.77	69716	2.2	0.80	5.5	598	13202

Voltage code:

6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

6
7
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6$ kV on request.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	cos ϕ					cos ϕ	Motor
kW			A	%	%					[-]	[-]	[-]	kgm ²	kgm ²
9 ... 11 kV, 50 Hz														
2-pole														
1100	1RN4 450-2HE ■ ■ 0	2975	75	95.4	95.7	0.89	0.87	3531	2.4	0.68	5.4	10.5	22	
1250	1RN4 452-2HE ■ ■ 0	2976	84	95.8	96.0	0.90	0.88	4011	2.4	0.68	5.5	11.5	26	
1420	1RN4 454-2HE ■ ■ 0	2977	95	96.0	96.1	0.90	0.88	4555	2.5	0.68	5.5	12.5	28	
1580	1RN4 456-2HE ■ ■ 0	2977	104	96.1	96.3	0.91	0.90	5069	2.4	0.68	5.5	14.0	32	
1700	1RN4 500-2HE ■ ■ 0	2980	116	95.9	95.9	0.88	0.86	5448	2.4	0.62	5.3	20	30	
1950	1RN4 502-2HE ■ ■ 0	2980	132	96.2	96.1	0.89	0.87	6249	2.4	0.65	5.5	22	36	
2200	1RN4 504-2HE ■ ■ 0	2980	146	96.4	96.5	0.90	0.89	7050	2.5	0.68	5.5	24	48	
2500	1RN4 506-2HE ■ ■ 0	2980	166	96.6	96.7	0.90	0.88	8012	2.4	0.68	5.5	26	54	
2850	1RN4 560-2HE ■ ■ 0	2982	194	96.4	96.4	0.88	0.86	9127	2.1	0.50	4.9	32	56	
3150	1RN4 562-2HE ■ ■ 0	2983	210	96.7	96.6	0.89	0.87	10085	2.3	0.50	5.1	35	59	
3700	1RN4 564-2HE ■ ■ 0	2984	245	96.9	96.9	0.90	0.88	11841	2.5	0.57	5.5	40	83	
4100	1RN4 566-2HE ■ ■ 0	2984	270	97.0	97.1	0.90	0.89	13122	2.5	0.60	5.5	44	93	
4300	1RN4 630-2HE ■ ■ 0	2984	290	96.8	96.9	0.89	0.88	13762	2.30	0.34	4.5	75	75	
5000	1RN4 632-2HE ■ ■ 0	2985	330	97.3	97.3	0.9	0.89	15997	2.50	0.39	4.9	85	100	
5700	1RN4 634-2HE ■ ■ 0	2986	375	97.4	97.4	0.90	0.89	18230	2.60	0.42	5.2	90	110	
6700	1RN4 636-2HE ■ ■ 0	2987	440	97.6	97.7	0.90	0.89	21421	2.60	0.45	5.5	100	160	
4-pole														
980	1RN4 450-4HE ■ ■ ■	1484	66	95.3	95.7	0.90	0.89	6307	2.2	0.70	5.5	21	115	
1120	1RN4 452-4HE ■ ■ ■	1485	75	95.5	95.8	0.90	0.89	7203	2.2	0.70	5.5	23	125	
1260	1RN4 454-4HE ■ ■ ■	1486	84	95.8	96.1	0.90	0.88	8098	2.2	0.70	5.5	26	140	
1500	1RN4 456-4HE ■ ■ ■	1486	100	96.1	96.3	0.90	0.88	9640	2.2	0.70	5.5	29	185	
1750	1RN4 500-4HE ■ ■ ■	1488	118	96.0	96.2	0.89	0.88	11232	2.3	0.75	5.5	39	220	
1920	1RN4 502-4HE ■ ■ ■	1488	130	96.2	96.3	0.89	0.87	12323	2.2	0.75	5.5	42	230	
2150	1RN4 504-4HE ■ ■ ■	1488	144	96.4	96.5	0.89	0.88	13799	2.2	0.75	5.5	48	270	
2450	1RN4 506-4HE ■ ■ ■	1488	164	96.6	96.8	0.89	0.88	15724	2.2	0.75	5.5	53	320	
3000	1RN4 560-4HE ■ ■ ■	1489	200	96.4	96.7	0.90	0.89	19241	2.1	0.65	5.2	76	280	
3400	1RN4 562-4HE ■ ■ ■	1489	225	96.7	96.9	0.90	0.89	21807	2.1	0.65	5.2	84	370	
3800	1RN4 564-4HE ■ ■ ■	1489	250	96.8	97.0	0.90	0.90	24372	2.1	0.65	5.2	96	410	
4150	1RN4 566-4HE ■ ■ ■	1489	275	96.9	97.2	0.90	0.90	26617	2.1	0.65	5.3	105	490	
4500	1RN4 630-4HE ■ ■ ■	1490	300	96.9	97.1	0.89	0.89	28842	2.10	0.57	4.9	150	550	
5000	1RN4 632-4HE ■ ■ ■	1490	330	97.1	97.2	0.90	0.90	32047	2.15	0.59	5.0	165	650	
5600	1RN4 634-4HE ■ ■ ■	1490	370	97.3	97.4	0.90	0.90	35893	2.20	0.63	5.3	180	750	
6200	1RN4 636-4HE ■ ■ ■	1491	410	97.4	97.5	0.90	0.90	39712	2.40	0.68	5.5	195	780	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked rotor torque T_{LR}/T_{rated} [-]	Locked rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
9 ... 11 kV, 50 Hz														
6-pole														
730	1RN4 450-6HE	989	52	94.6	94.9	0.85	0.83	7049	2.2	0.82	5.4	29	275	
830	1RN4 452-6HE	989	59	94.9	95.1	0.86	0.84	8015	2.2	0.82	5.5	3	320	
960	1RN4 454-6HE	990	67	94.8	95.1	0.87	0.85	9261	2.2	0.82	5.5	36	275	
1120	1RN4 456-6HE	990	78	95.1	95.4	0.87	0.85	10804	2.2	0.80	5.5	41	330	
1350	1RN4 500-6HE	991	94	95.4	95.7	0.87	0.85	13010	2.2	0.80	5.4	57	430	
1520	1RN4 502-6HE	991	106	95.6	95.9	0.87	0.86	14648	2.1	0.80	5.2	65	540	
1700	1RN4 504-6HE	991	118	95.8	96.0	0.87	0.85	16382	2.1	0.80	5.4	72	590	
1900	1RN4 506-6HE	991	132	96.0	96.1	0.87	0.85	18310	2.2	0.80	5.5	81	710	
2400	1RN4 560-6HE	992	168	96.3	96.5	0.86	0.85	23105	2.1	0.75	5.3	105	950	
2650	1RN4 562-6HE	992	182	96.3	96.6	0.87	0.86	25512	2.1	0.75	5.2	120	980	
2950	1RN4 564-6HE	993	205	96.5	96.7	0.87	0.85	28371	2.2	0.75	5.5	135	1250	
3200	1RN4 566-6HE	993	220	96.7	96.8	0.87	0.85	30775	2.1	0.75	5.4	147	1300	
3600	1RN4 630-6HE	993	250	96.7	96.9	0.86	0.84	34622	2.20	0.63	5.0	190	1200	
4000	1RN4 632-6HE	993	275	96.8	97.0	0.87	0.09	38469	2.10	0.64	5.0	210	1500	
4400	1RN4 634-6HE	993	300	97.0	97.1	0.87	0.86	42316	2.20	0.66	5.2	230	1750	
4800	1RN4 636-6HE	994	330	97.1	97.2	0.87	0.86	46117	2.30	0.71	5.5	255	2000	
8-pole														
1000	1RN4 500-8HE	743	72	94.9	95.1	0.84	0.81	12853	2.1	0.85	5.4	70	600	
1160	1RN4 502-8HE	744	85	95.3	95.3	0.83	0.80	14890	2.2	0.85	5.5	80	750	
1280	1RN4 504-8HE	744	93	95.4	95.5	0.83	0.80	16430	2.2	0.80	5.5	88	800	
1400	1RN4 506-8HE	744	102	95.5	95.6	0.83	0.80	17970	2.1	0.80	5.5	99	870	
1650	1RN4 560-8HE	744	118	95.8	96.0	0.84	0.81	21179	2.1	0.75	5.3	123	1350	
1900	1RN4 562-8HE	744	134	96.0	96.1	0.85	0.82	24388	2.0	0.75	5.3	141	1400	
2050	1RN4 564-8HE	745	144	96.2	96.2	0.85	0.82	26279	2.2	0.80	5.5	158	1800	
2250	1RN4 566-8HE	745	158	96.2	96.2	0.85	0.82	28842	2.1	0.80	5.5	173	1700	
2600	1RN4 630-8HE	744	186	96.3	96.4	0.84	0.81	33374	2.40	0.75	5.2	255	1800	
2900	1RN4 632-8HE	744	205	96.4	96.5	0.84	0.81	37224	2.30	0.75	5.2	280	2000	
3200	1RN4 634-8HE	744	225	96.6	96.7	0.85	0.82	41075	2.30	0.74	5.1	310	2200	
3500	1RN4 636-8HE	744	245	96.7	96.8	0.86	0.83	44926	2.30	0.75	5.2	340	2600	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 10 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
9 ... 11 kV, 50 Hz														
10-pole														
720	1RN4 500-3HE	593	55	93.8	93.9	0.80	0.76	11595	2.20	0.82	5.2	70	900	
830	1RN4 502-3HE	594	64	94.2	94.2	0.79	0.74	13344	2.20	0.82	5.3	80	1100	
920	1RN4 504-3HE	594	71	94.3	94.3	0.79	0.74	14791	2.20	0.82	5.3	88	1200	
1020	1RN4 506-3HE	594	79	94.5	94.5	0.79	0.75	16399	2.20	0.80	5.3	99	1400	
1250	1RN4 560-3HE	593	94	94.8	94.9	0.81	0.77	20131	2.10	0.72	4.7	123	1650	
1420	1RN4 562-3HE	593	106	94.9	95.2	0.82	0.78	22868	2.00	0.70	4.7	141	2050	
1570	1RN4 564-3HE	593	116	95.1	95.4	0.82	0.78	25284	2.00	0.72	5.0	158	2500	
1700	1RN4 566-3HE	595	128	95.3	95.4	0.80	0.75	27286	2.40	0.85	5.5	173	2700	
2100	1RN4 630-3HE	593	152	95.8	96.1	0.83	0.80	33820	2.10	0.73	4.7	250	2500	
2350	1RN4 632-3HE	594	172	96.0	96.2	0.82	0.78	37782	2.30	0.82	5.1	280	2900	
2550	1RN4 634-3HE	594	184	96.0	96.3	0.83	0.79	40997	2.30	0.80	5.1	305	3000	
2750	1RN4 636-3HE	594	196	96.2	96.5	0.84	0.80	44213	2.30	0.83	5.2	335	3500	
12-pole														
580	1RN4 502-5HE	493	48	93.3	93.3	0.74	0.68	11235	2.00	0.70	4.7	79	1350	
640	1RN4 504-5HE	493	53	93.5	93.6	0.74	0.68	12398	2.00	0.70	4.8	87	1500	
700	1RN4 506-5HE	493	58	93.6	93.7	0.75	0.69	13560	2.10	0.70	4.8	98	1600	
850	1RN4 560-5HE	494	69	93.8	94.1	0.76	0.71	16432	1.85	0.60	4.2	123	1750	
1000	1RN4 562-5HE	494	82	94.4	94.6	0.75	0.69	19332	1.95	0.65	4.5	141	2200	
1100	1RN4 564-5HE	494	88	94.5	94.7	0.76	0.71	21265	1.95	0.63	4.4	158	2500	
1200	1RN4 566-5HE	494	96	94.8	94.8	0.76	0.71	23198	1.95	0.63	4.4	173	2900	
1650	1RN4 630-5HE	494	126	95.1	95.5	0.79	0.74	31898	2.10	0.75	4.6	250	3000	
1800	1RN4 632-5HE	494	142	95.4	95.7	0.77	0.71	34798	2.40	0.88	5.2	275	3500	
1950	1RN4 634-5HE	494	152	95.5	95.7	0.78	0.73	37697	2.30	0.85	5.1	305	3400	
2100	1RN4 636-5HE	495	162	95.7	95.9	0.78	0.73	40515	2.35	0.88	5.3	335	4000	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RN6	Speed	Rated current		Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
			I_{rated} at 10 kV	4/4 load	3/4 load	4/4 load	3/4 load	T_B/T_{rated}					T_{LR}/T_{rated}	I_{LR}/I_{rated}
kW	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²	
9 ... 11 kV, 50 Hz														
2-pole														
6400	1RN6 710-2HJ ■ 0	2989	425	96.9	96.8	0.90	0.89	20451	2.1	0.45	4.8	132	138	
7500	1RN6 712-2HJ ■ 0	2990	495	97.0	96.9	0.90	0.89	23961	2.2	0.48	5.1	147	163	
8200	1RN6 714-2HJ ■ 0	2990	540	97.2	97.0	0.91	0.91	26197	2.2	0.51	5.3	162	188	
9100	1RN6 716-2HJ ■ 0	2990	590	97.2	97.1	0.92	0.92	29072	2.3	0.53	5.4	179	221	
4-pole														
6700	1RN6 710-4HJ ■ 0	1493	440	97.5	97.7	0.90	0.88	42853	2.3	0.61	5.5	273	697	
7500	1RN6 712-4HJ ■ 0	1493	485	97.6	97.8	0.91	0.90	47979	2.2	0.59	5.5	300	800	
8200	1RN6 714-4HJ ■ 0	1493	530	97.7	97.8	0.91	0.90	52456	2.2	0.61	5.5	337	933	
9100	1RN6 716-4HJ ■ 0	1493	590	97.7	97.8	0.91	0.90	58205	2.2	0.62	5.5	369	1031	
6-pole														
5000	1RN6 710-6HJ ■ ■	994	345	97.2	97.4	0.86	0.85	48051	2.1	0.69	5.3	330	2520	
5500	1RN6 712-6HJ ■ ■	994	375	97.3	97.5	0.87	0.85	52847	2.1	0.74	5.5	367	2133	
6100	1RN6 714-6HJ ■ ■	994	415	97.4	97.6	0.87	0.85	58591	2.2	0.78	5.5	419	2561	
6800	1RN6 716-6HJ ■ ■	995	465	97.4	97.6	0.87	0.86	65303	2.3	0.82	5.5	468	2982	
8-pole														
3850	1RN6 710-8HJ ■ ■	745	270	96.7	97.2	0.85	0.83	49372	1.9	0.71	4.9	415	5185	
4200	1RN6 712-8HJ ■ ■	745	295	96.8	97.2	0.85	0.83	53835	2.0	0.78	5.3	465	5935	
4650	1RN6 714-8HJ ■ ■	746	325	97.0	97.3	0.85	0.82	59562	2.2	0.93	5.5	531	7019	
5200	1RN6 716-8HJ ■ ■	746	365	97.1	97.3	0.85	0.82	66595	2.2	0.93	5.5	597	8203	
10-pole														
2800	1RN6 710-3HJ ■ ■	596	210	96.4	96.8	0.80	0.77	44889	2.1	0.72	5.2	415	8485	
3100	1RN6 712-3HJ ■ ■	596	230	96.6	96.9	0.81	0.78	49700	2.1	0.71	5.1	465	10335	
3400	1RN6 714-3HJ ■ ■	596	250	96.7	97.0	0.81	0.77	54475	2.3	0.78	5.5	531	11369	
3700	1RN6 716-3HJ ■ ■	596	275	96.7	97.0	0.81	0.77	59266	2.3	0.82	5.5	598	12702	

Voltage code:

10 kV, 50 Hz
Other voltage

8
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

The data for 1RN4 also apply to explosion-proof 1SL4 (Ex nA) and 1SQ4 (Ex px) motors.

Rated power IEC kW	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque $\frac{T_B}{T_{rated}}$ [-]	Locked rotor torque $\frac{T_{LR}}{T_{rated}}$ [-]	Locked rotor current $\frac{I_{LR}}{I_{rated}}$ [-]	Moment of inertia	
			I_{rated} at 6.6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
4 ... 6.6 kV, 60 Hz														
2-pole														
1550	1RN4 450-2HE ■ 0	3571	160	95.7	95.9	0.89	0.88	4145	2.2	0.64	5.0	10.5	18	
1800	1RN4 452-2HE ■ 0	3573	182	96.1	96.2	0.90	0.88	4811	2.4	0.68	5.4	11.5	21	
2050	1RN4 454-2HE ■ 0	3573	205	96.4	96.4	0.90	0.89	5479	2.4	0.68	5.4	12.5	24	
2320	1RN4 456-2HE ■ 0	3575	235	96.6	96.7	0.90	0.88	6197	2.5	0.68	5.5	14.0	27	
2450	1RN4 500-2HE ■ 0	3575	250	96.2	96.3	0.89	0.88	6545	2.2	0.60	5.0	20	21	
2800	1RN4 502-2HE ■ 0	3576	285	96.4	96.5	0.89	0.88	7478	2.2	0.60	5.1	22	24	
3250	1RN4 504-2HE ■ 0	3578	330	96.8	96.8	0.89	0.88	8675	2.3	0.60	5.3	24	27	
3700	1RN4 506-2HE ■ 0	3578	370	97.0	96.9	0.90	0.88	9876	2.4	0.62	5.5	26	34	
4000	1RN4 560-2HE ■ 0	3579	410	96.6	96.5	0.88	0.86	10673	2.0	0.43	4.5	32	26	
4300	1RN4 562-2HE ■ 0	3581	435	96.8	96.7	0.89	0.87	11467	2.2	0.50	5.2	35	34	
4950	1RN4 564-2HE ■ 0	3583	495	97.0	96.9	0.90	0.88	13194	2.5	0.55	5.5	40	47	
5300 ²⁾	1RN4 566-2HE ■ 0	3584	530	97.2	97.1	0.90	0.89	14122	2.5	0.55	5.5	44	57	
5700	1RN4 630-2HE ■ 0	3583	580	97.0	96.9	0.88	0.87	15193	2.10	0.30	4.2	75	95	
6500	1RN4 632-2HE ■ 0	3584	660	97.2	97.2	0.89	0.89	17320	2.30	0.34	4.6	85	140	
7500	1RN4 634-2HE ■ 0	3585	750	97.5	97.5	0.90	0.89	19979	2.60	0.41	5.3	90	150	
8200	1RN4 636-2HE ■ 0	3585	820	97.6	97.6	0.90	0.90	21844	2.60	0.42	5.4	100	110	
4-pole														
1600	1RN4 450-4HE ■ ■	1784	166	96.1	96.2	0.88	0.86	8565	2.2	0.65	5.5	21	135	
1800	1RN4 452-4HE ■ ■	1784	186	96.2	96.3	0.88	0.86	9636	2.2	0.65	5.5	23	165	
2000	1RN4 454-4HE ■ ■	1784	205	96.4	96.4	0.89	0.87	10706	2.2	0.65	5.5	26	180	
2280	1RN4 456-4HE ■ ■	1785	230	96.6	96.7	0.89	0.88	12198	2.2	0.68	5.5	29	230	
2500	1RN4 500-4HE ■ ■	1785	255	96.5	96.6	0.89	0.88	13375	2.1	0.70	5.2	39	180	
2750	1RN4 502-4HE ■ ■	1786	280	96.6	96.7	0.89	0.88	14705	2.2	0.72	5.4	42	200	
3200	1RN4 504-4HE ■ ■	1786	325	96.9	96.9	0.89	0.88	17111	2.2	0.72	5.4	48	240	
3600	1RN4 506-4HE ■ ■	1787	365	97.0	97.0	0.89	0.88	19239	2.2	0.75	5.5	53	280	
4300	1RN4 560-4HE ■ ■	1787	430	96.9	97.1	0.90	0.89	22980	2.0	0.55	4.9	76	180	
4800	1RN4 562-4HE ■ ■	1788	480	97.0	97.2	0.90	0.89	25638	2.1	0.63	5.3	84	220	
5400	1RN4 564-4HE ■ 0	1789	540	97.3	97.3	0.90	0.89	28826	2.1	0.63	5.3	96	270	
5600	1RN4 566-4HE ■ 0	1790	560	97.3	97.3	0.90	0.89	29877	2.3	0.65	5.5	105	310	
6500	1RN4 630-4HE ■ 0	1789	660	97.2	97.3	0.88	0.88	34698	2.10	0.52	4.8	150	600	
7300	1RN4 632-4HE ■ 0	1789	740	97.3	97.5	0.89	0.89	38969	2.10	0.54	4.8	165	650	
8000	1RN4 634-4HE ■ 0	1790	810	97.5	97.6	0.89	0.89	42682	2.20	0.59	5.2	180	680	
8600	1RN4 636-4HE ■ 0	1791	870	97.7	97.7	0.89	0.88	45857	2.40	0.61	5.5	195	800	

Voltage code:

4 kV, 60 Hz
6.6 kV, 60 Hz
Other voltage

4
1
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6.6$ kV on request.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 6.6 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%	%	%						kgm ²	kgm ²
4 ... 6.6 kV, 60 Hz														
6-pole														
1150	1RN4 450-6HE	1188	124	95.4	95.5	0.85	0.82	9245	2.1	0.80	5.3	29	410	
1300	1RN4 452-6HE	1187	140	95.6	95.8	0.85	0.84	10459	2.0	0.72	5.0	3	500	
1520	1RN4 454-6HE	1188	160	95.7	95.9	0.87	0.85	12219	2.1	0.78	5.3	36	480	
1760	1RN4 456-6HE	1189	186	95.9	96.1	0.86	0.85	14136	2.1	0.78	5.4	41	580	
2050	1RN4 500-6HE	1189	215	96.1	96.1	0.87	0.85	16466	2.0	0.72	5.1	57	600	
2300	1RN4 502-6HE	1189	240	96.3	96.4	0.87	0.86	18474	2.0	0.70	5.0	65	650	
2600	1RN4 504-6HE	1189	270	96.4	96.6	0.87	0.86	20883	2.0	0.72	5.1	72	800	
2850	1RN4 506-6HE	1190	295	96.5	96.6	0.87	0.85	22872	2.0	0.75	5.3	81	950	
3300	1RN4 560-6HE	1191	345	96.6	96.6	0.87	0.86	26461	2.0	0.65	4.9	105	750	
3750	1RN4 562-6HE	1192	390	96.8	96.9	0.87	0.85	30044	2.0	0.70	5.1	120	900	
4150	1RN4 564-6HE	1192	430	96.9	97.0	0.87	0.86	33249	2.0	0.75	5.3	135	1050	
4500	1RN4 566-6HE	1192	465	97.0	97.1	0.87	0.86	36053	2.0	0.70	5.2	147	1200	
5100	1RN4 630-6HE	1192	530	97.1	97.2	0.86	0.85	40860	1.90	0.51	4.3	190	1700	
5700	1RN4 632-6HE	1193	600	97.2	97.2	0.85	0.84	45629	2.00	0.56	4.7	210	2100	
6200	1RN4 634-6HE	1193	650	97.3	97.3	0.86	0.85	49631	2.10	0.61	4.9	230	2000	
6700	1RN4 636-6HE	1193	700	97.4	97.4	0.86	0.84	53634	2.30	0.64	5.2	255	2600	
8-pole														
900	1RN4 450-8HE	891	100	94.8	95.0	0.83	0.81	9646	2.2	0.85	5.5	37	450	
1000	1RN4 452-8HE	892	110	95.1	95.1	0.83	0.80	10706	2.3	0.90	5.5	41	550	
1120	1RN4 454-8HE	891	122	95.2	95.3	0.84	0.82	12004	2.0	0.75	5.2	46	650	
1280	1RN4 456-8HE	892	142	95.5	95.5	0.83	0.80	13704	2.2	0.82	5.5	52	800	
1500	1RN4 500-8HE	892	164	95.7	95.7	0.84	0.81	16059	2.0	0.75	5.2	70	750	
1700	1RN4 502-8HE	892	182	95.9	95.9	0.85	0.83	18201	2.0	0.75	5.2	80	1050	
1860	1RN4 504-8HE	892	200	96.0	96.0	0.85	0.83	19914	2.0	0.78	5.1	88	1200	
2050	1RN4 506-8HE	893	220	96.2	96.1	0.84	0.81	21923	2.1	0.82	5.5	99	1300	
2350	1RN4 560-8HE	893	255	96.2	96.3	0.84	0.81	25132	1.9	0.65	4.9	123	1600	
2700	1RN4 562-8HE	894	290	96.4	96.4	0.84	0.82	28842	2.0	0.70	5.1	141	1650	
2900	1RN4 564-8HE	894	315	96.4	96.6	0.84	0.82	30979	2.0	0.70	5.0	158	2300	
3100	1RN4 566-8HE	894	330	96.6	96.7	0.85	0.84	33115	2.0	0.70	5.0	173	2500	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data (continued)

Rated power IEC	High voltage motor H-compact PLUS 1RN4 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated} [-]	Locked-rotor torque T_{LR}/T_{rated} [-]	Locked-rotor current I_{LR}/I_{rated} [-]	Moment of inertia	
			I_{rated} at 6.6 kV A	4/4 load %	3/4 load %	4/4 load cos ϕ	3/4 load cos ϕ	Motor kgm ²					External, max. ¹⁾ kgm ²	
4 ... 6.6 kV, 60 Hz														
10-pole														
650	1RN4 450-3HE	710	74	93.7	94.0	0.82	0.78	8743	1.9	0.72	4.5	37	650	
720	1RN4 452-3HE	710	83	94.1	94.3	0.81	0.77	9685	2.0	0.75	4.7	41	850	
800	1RN4 454-3HE	711	92	94.3	94.4	0.81	0.76	10745	2.1	0.80	4.9	46	900	
910	1RN4 456-3HE	711	104	94.5	94.6	0.81	0.77	12223	2.1	0.80	5.0	52	1100	
1080	1RN4 500-3HE	711	122	94.8	95.0	0.82	0.80	14506	1.8	0.65	4.4	70	1200	
1200	1RN4 502-3HE	712	134	95.2	95.2	0.82	0.80	16096	1.9	0.68	4.7	80	1500	
1320	1RN4 504-3HE	712	146	95.1	95.2	0.83	0.80	17705	1.9	0.70	4.7	88	1450	
1500	1RN4 506-3HE	712	166	95.4	95.5	0.83	0.79	20119	2.0	0.72	4.9	99	1900	
1780	1RN4 560-3HE	713	205	95.5	95.6	0.80	0.76	23842	2.0	0.70	4.6	123	2100	
2040	1RN4 562-3HE	713	235	95.8	95.8	0.80	0.76	27324	2.0	0.70	4.8	141	2600	
2200	1RN4 564-3HE	713	245	95.9	95.8	0.82	0.79	29467	2.0	0.68	4.6	158	2800	
2400	1RN4 566-3HE	713	270	96.0	96.0	0.81	0.77	32146	2.1	0.75	5.0	173	3300	
12-pole														
440	1RN4 450-5HE	591	56	92.9	93.1	0.74	0.71	7110	1.8	0.56	4.0	37	630	
510	1RN4 452-5HE	591	65	93.3	93.3	0.73	0.68	8241	1.8	0.60	4.2	41	850	
570	1RN4 454-5HE	592	73	93.9	93.9	0.73	0.68	9195	1.8	0.60	4.2	46	1150	
650	1RN4 456-5HE	592	82	94.0	93.9	0.74	0.68	10486	1.9	0.60	4.3	52	1300	
820	1RN4 500-5HE	592	102	94.4	94.3	0.74	0.68	13228	2.0	0.62	4.5	70	1650	
920	1RN4 502-5HE	592	114	94.6	94.6	0.75	0.70	14841	1.9	0.62	4.4	79	2000	
1020	1RN4 504-5HE	592	128	94.8	94.7	0.74	0.68	16454	2.0	0.65	4.7	87	2400	
1120	1RN4 506-5HE	592	136	94.8	94.8	0.76	0.71	18068	1.9	0.60	4.4	98	2200	
1300	1RN4 560-5HE	593	160	95.0	95.1	0.75	0.70	20936	1.8	0.53	3.9	123	2050	
1470	1RN4 562-5HE	593	182	95.2	95.3	0.74	0.69	23674	1.8	0.55	4.0	141	2500	
1620	1RN4 564-5HE	594	205	95.4	95.4	0.73	0.67	26045	2.0	0.63	4.3	158	3500	
1760	1RN4 566-5HE	594	220	95.5	95.5	0.73	0.68	28296	2.0	0.63	4.4	173	3900	

Voltage code:

4 kV, 60 Hz	4
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

The data for 1RN6 also apply to explosion-proof 1SL6 (Ex nA) and 1SQ6 (Ex px) motors.

Rated power IEC	High voltage motor H-compact PLUS 1RN6 Order No.	Speed rpm	Rated current I_{rated} at 6.6 kV	Efficiency		Power factor		Torque Nm	Break- down torque $T_B /$ T_{rated}	Locked -rotor torque $T_{LR} /$ T_{rated}	Locked -rotor current $I_{LR} /$ I_{rated}	Moment of inertia	
				4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ					Motor kgm ²	External, max. ¹⁾ kgm ²
4 ... 6.6 kV, 60 Hz													
2-pole													
7600 ²⁾	1RN6 710-2HJ	3589	760	96.8	96.6	0.90	0.90	20229	2.0	0.40	4.6	132	48
9700 ²⁾	1RN6 712-2HJ	3589	970	97.1	96.9	0.90	0.89	25813	2.2	0.47	5.2	147	43
11900 ²⁾	1RN6 714-2HJ	3589	1180	97.3	97.1	0.91	0.91	31672	2.2	0.49	5.2	162	38
13600 ²⁾	1RN6 716-2HJ	3590	1340	97.4	97.2	0.91	0.91	36190	2.3	0.52	5.5	179	41
4-pole													
8700 ²⁾	1RN6 710-4HJ	1793	860	97.8	97.8	0.90	0.88	46340	2.3	0.59	5.5	273	297
10400 ²⁾	1RN6 712-4HJ	1793	1040	97.9	97.9	0.90	0.89	55399	2.3	0.60	5.5	300	310
11900 ²⁾	1RN6 714-4HJ	1793	1160	97.9	98.0	0.91	0.90	63396	2.2	0.61	5.5	337	353
13200 ²⁾	1RN6 716-4HJ	1793	1300	98.0	98.0	0.91	0.89	70311	2.3	0.62	5.5	369	406
6-pole													
6900	1RN6 710-6HJ	1194	720	97.4	97.6	0.86	0.84	55212	2.1	0.69	5.4	330	970
7600	1RN6 712-6HJ	1194	790	97.5	97.6	0.86	0.84	60797	2.1	0.70	5.5	367	1083
8400	1RN6 714-6HJ	1194	860	97.7	97.7	0.87	0.85	67196	2.1	0.73	5.5	419	1311
9200	1RN6 716-6HJ	1194	940	97.7	97.7	0.88	0.87	73603	2.1	0.74	5.5	468	1572
8-pole													
5400	1RN6 710-8HJ	895	590	97.2	97.4	0.83	0.81	57627	2.0	0.76	5.3	415	2835
6100	1RN6 712-8HJ	895	660	97.2	97.4	0.83	0.81	65089	2.0	0.78	5.4	465	3185
6800	1RN6 714-8HJ	895	730	97.3	97.5	0.84	0.81	72542	2.1	0.82	5.5	531	3769
7500	1RN6 716-8HJ	896	810	97.4	97.5	0.83	0.80	79967	2.2	0.88	5.5	597	4453
10-pole													
3700	1RN6 710-3HJ	716	425	96.8	97.0	0.79	0.75	49369	2.2	0.73	5.4	415	5185
4050	1RN6 712-3HJ	716	455	96.9	97.1	0.80	0.76	54035	2.2	0.73	5.4	465	5935
4500	1RN6 714-3HJ	716	510	96.9	97.1	0.80	0.77	60031	2.2	0.74	5.5	531	7119
5100	1RN6 716-3HJ	716	570	97.1	97.2	0.80	0.77	68021	2.3	0.79	5.5	598	8202

Voltage code:

4 kV, 60 Hz	4
4.16 kV, 60 Hz	3
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

²⁾ $V_{rated} < 6$ kV on request.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

Rated power IEC	High voltage motor H-compact PLUS 1RN6 Order No.	Speed rpm	Rated current		Efficiency		Power factor		Torque Nm	Break-down torque T_B/T_{rated}	Locked rotor torque T_{LR}/T_{rated}	Locked rotor current I_{LR}/I_{rated}	Moment of inertia	
			I_{rated} at 13.2 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\cos \varphi$					$\cos \varphi$	Motor
kW			A	%	%					[-]	[-]	[-]	kgm ²	kgm ²
12.5 ... 13.8 kV, 60 Hz														
2-pole														
6500	1RN6 710-2HJ ■ 0	3590	330	96.4	96.1	0.90	0.89	17293	2.3	0.44	5.2	132	58	
8000	1RN6 712-2HJ ■ 0	3591	405	96.8	96.4	0.89	0.88	21278	2.5	0.50	5.5	147	53	
8800	1RN6 714-2HJ ■ 0	3591	435	96.8	96.4	0.91	0.89	23406	2.5	0.53	5.5	162	78	
10100	1RN6 716-2HJ ■ 0	3591	495	96.9	96.6	0.92	0.91	26867	2.4	0.53	5.5	179	111	
4-pole														
7200	1RN6 710-4HJ ■ 0	1794	365	97.4	97.5	0.89	0.88	38335	2.4	0.58	5.5	273	367	
8000	1RN6 712-4HJ ■ 0	1794	395	97.5	97.6	0.91	0.90	42606	2.3	0.59	5.5	300	427	
8800	1RN6 714-4HJ ■ 0	1793	435	97.6	97.6	0.91	0.91	46869	2.3	0.59	5.5	337	503	
10100	1RN6 716-4HJ ■ 0	1793	490	97.6	97.7	0.92	0.91	53794	2.3	0.61	5.5	369	546	
6-pole														
5600	1RN6 710-6HJ ■ ■	1195	295	97.2	97.3	0.85	0.83	44775	2.3	0.70	5.5	330	1105	
6200	1RN6 712-6HJ ■ ■	1195	325	97.3	97.4	0.86	0.83	49566	2.3	0.73	5.5	367	1253	
6800	1RN6 714-6HJ ■ ■	1195	355	97.3	97.4	0.86	0.84	54357	2.3	0.72	5.5	419	1535	
7500	1RN6 716-6HJ ■ ■	1195	390	97.4	97.5	0.86	0.84	59945	2.3	0.72	5.5	468	17832	
8-pole														
3900	1RN6 710-8HJ ■ ■	896	210	96.6	96.8	0.84	0.80	41582	2.2	0.79	5.5	415	3485	
4400	1RN6 712-8HJ ■ ■	896	235	96.7	97.0	0.84	0.81	46912	2.2	0.81	5.5	465	3935	
5000	1RN6 714-8HJ ■ ■	896	270	96.9	97.0	0.83	0.80	53295	2.2	0.78	5.5	531	4669	
5600	1RN6 716-8HJ ■ ■	896	305	97.0	97.0	0.83	0.79	59674	2.3	0.76	5.5	597	5303	
10-pole														
2800	1RN6 710-3HJ ■ ■	716	160	96.2	96.5	0.80	0.75	37334	2.4	0.76	5.5	415	3985	
3200	1RN6 712-3HJ ■ ■	716	182	96.5	96.6	0.80	0.75	42664	2.4	0.78	5.5	465	4785	
3550	1RN6 714-3HJ ■ ■	716	198	96.6	96.8	0.81	0.78	47340	2.3	0.74	5.5	531	5569	
3900	1RN6 716-3HJ ■ ■	716	215	96.7	96.9	0.82	0.79	52006	2.3	0.75	5.5	598	6552	

Voltage code:

13.2 kV, 60 Hz
Other voltage

2
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

Efficiencies according to IEC 60034-2-1:2007; load-dependent supplementary losses determined by statistically evaluated measurements.

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

NEMA version

Rated power	High voltage motor H-compact PLUS 1RN6	Speed	Rated current	Efficiency	Power factor	Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia			
NEMA			I_{rated} at 13.2 kV	4/4 load	3/4 load	4/4 load	3/4 load	$\frac{T_B}{T_{rated}}$	$\frac{T_{LR}}{T_{rated}}$	$\frac{I_{LR}}{I_{rated}}$	Motor	External, max. ¹⁾	
hp	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²
4 ... 6.6 kV, 60 Hz													
2-pole													
10000	1RN6 710-2BM ■ 0	3586	747	96.4	96.2	0.90	0.89	19861	2.2	0.60	5.2	132	56
11000	1RN6 712-2BM ■ 0	3588	828	96.5	96.2	0.89	0.88	21837	2.5	0.60	5.8	147	55
12000	1RN6 712-2BN ■ 0	3587	898	96.6	96.4	0.90	0.89	23827	2.3	0.60	5.4	147	54
13000	1RN6 714-2BM ■ 0	3587	956	96.6	96.4	0.92	0.91	25814	2.5	0.64	6.0	162	54
14000	1RN6 714-2BN ■ 0	3587	1036	96.7	96.5	0.91	0.90	27801	2.4	0.60	5.7	162	53
16000	1RN6 716-2BM ■ 0	3586	1166	96.8	96.7	0.92	0.92	31777	2.4	0.62	5.8	179	51
17000	1RN6 716-2BN ■ 0	3587	1251	96.9	96.8	0.91	0.90	33759	2.4	0.60	5.8	179	49
4-pole													
11000	1RN6 710-4BJ ■ 0	1793	815	97.4	97.6	0.90	0.89	43695	2.3	0.60	5.9	273	603
12000	1RN6 712-4BJ ■ 0	1793	880	97.5	97.6	0.91	0.90	47668	2.2	0.60	5.9	300	637
13000	1RN6 712-4BK ■ 0	1793	962	97.5	97.6	0.90	0.89	51635	2.3	0.60	5.9	300	620
14000	1RN6 714-4BJ ■ 0	1793	1021	97.4	97.6	0.91	0.91	55625	2.2	0.60	5.8	337	651
15000	1RN6 714-4BK ■ 0	1793	1104	97.5	97.7	0.91	0.89	59583	2.3	0.60	6.0	337	665
16000	1RN6 716-4BJ ■ 0	1793	1161	97.5	97.7	0.92	0.91	63575	2.2	0.61	5.8	369	678
17000	1RN6 716-4BK ■ 0	1792	1238	97.5	97.7	0.92	0.91	67557	2.1	0.60	5.6	369	691
18000	1RN6 716-4BL ■ 0	1793	1324	97.6	97.7	0.91	0.90	71504	2.2	0.61	5.9	369	702
6-pole													
9000	1RN6 710-6BJ ■ ■	1194	702	97.1	97.3	0.86	0.84	53690	2.1	0.71	5.5	330	1954
10000	1RN6 712-6BJ ■ ■	1194	781	97.2	97.4	0.86	0.83	59647	2.2	0.71	5.6	367	2043
11000	1RN6 714-6BJ ■ ■	1194	846	97.3	97.4	0.87	0.85	65612	2.2	0.75	5.7	419	2113
12000	1RN6 716-6BJ ■ ■	1194	915	97.2	97.3	0.88	0.86	71577	2.2	0.77	5.7	468	2168
8-pole													
7000	1RN6 710-8BJ ■ ■	895	566	96.9	97.1	0.83	0.80	55695	2.1	0.79	5.5	415	3817
8000	1RN6 712-8BJ ■ ■	895	646	97.0	97.1	0.83	0.81	63651	2.0	0.80	5.5	465	4154
9000	1RN6 714-8BJ ■ ■	895	721	97.1	97.2	0.84	0.81	71587	2.1	0.83	5.7	531	4458
10000	1RN6 716-8BJ ■ ■	896	810	97.1	97.2	0.83	0.80	79506	2.2	0.87	6.0	597	4732
10-pole													
5000	1RN6 710-3BJ ■ ■	716	427	96.6	96.7	0.79	0.75	49758	2.2	0.73	5.3	415	5006
5500	1RN6 712-3BJ ■ ■	716	464	96.7	96.9	0.80	0.76	54720	2.2	0.72	5.3	465	5428
6000	1RN6 714-3BJ ■ ■	716	502	96.8	96.9	0.80	0.77	59682	2.2	0.74	5.5	531	6221
7000	1RN6 716-3BJ ■ ■	716	584	96.9	97.0	0.80	0.77	69631	2.2	0.77	5.6	598	6955

Voltage code:

4 kV, 60 Hz	4
4.16 kV, 60 Hz	3
6.6 kV, 60 Hz	1
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Selection and ordering data

NEMA version

Rated power	High voltage motor H-compact PLUS 1RN6	Speed	Rated current	Efficiency		Power factor		Torque	Break-down torque	Locked rotor torque	Locked rotor current	Moment of inertia	
NEMA		I_{rated} at 13.2 kV	4/4 load	3/4 load	4/4 load	3/4 load	T_B/T_{rated}	T_{LR}/T_{rated}	I_{LR}/I_{rated}	Motor	External, max. ¹⁾		
hp	Order No.	rpm	A	%	%	cos ϕ	cos ϕ	Nm	[-]	[-]	[-]	kgm ²	kgm ²
12.5 ... 13.8 kV, 60 Hz													
2-pole													
8000	1RN6 710-2BM ■ 0	3588	301	96.0	95.6	0.90	0.89	15881	2.5	0.60	5.6	132	52
9000	1RN6 712-2BM ■ 0	3588	334	96.0	95.6	0.91	0.90	17864	2.6	0.60	6.0	147	51
10000	1RN6 712-2BN ■ 0	3588	375	96.2	95.9	0.90	0.89	19849	2.6	0.60	6.0	147	49
11000	1RN6 714-2BM ■ 0	3588	407	96.2	95.9	0.91	0.90	21837	2.5	0.60	6.0	162	48
12000	1RN6 716-2BM ■ 0	3587	437	96.3	96.0	0.93	0.92	23827	2.4	0.60	5.8	179	47
13000	1RN6 716-2BN ■ 0	3588	478	96.4	96.2	0.92	0.91	25806	2.5	0.60	6.0	179	45
4-pole													
9000	1RN6 710-4BJ ■ 0	1794	337	97.1	97.2	0.89	0.88	35727	2.4	0.60	6.2	273	553
10000	1RN6 712-4BJ ■ 0	1794	368	97.1	97.3	0.91	0.90	39708	2.3	0.60	6.2	300	555
11000	1RN6 714-4BJ ■ 0	1794	403	97.2	97.3	0.91	0.90	43682	2.3	0.60	6.2	337	603
12000	1RN6 716-4BJ ■ 0	1793	436	97.2	97.3	0.92	0.92	47662	2.3	0.63	6.2	369	620
13000	1RN6 716-4BK ■ 0	1794	475	97.2	97.4	0.91	0.91	51625	2.3	0.60	6.1	369	637
6-pole													
7000	1RN6 710-6BJ ■ ■	1195	278	96.9	97.0	0.85	0.82	41723	2.4	0.72	6.0	330	1722
8000	1RN6 712-6BJ ■ ■	1195	315	97.0	97.1	0.85	0.82	47688	2.4	0.73	6.0	367	1849
9000	1RN6 714-6BJ ■ ■	1195	350	97.0	97.1	0.86	0.84	53642	2.3	0.73	6.0	419	1954
10000	1RN6 716-6BJ ■ ■	1195	388	97.1	97.2	0.86	0.84	59600	2.3	0.72	6.0	468	2042
8-pole													
5000	1RN6 710-8BJ ■ ■	896	201	96.5	96.6	0.84	0.81	39760	2.2	0.79	5.9	415	3024
5500	1RN6 712-8BJ ■ ■	896	220	96.6	96.7	0.84	0.81	43721	2.2	0.80	6.0	465	3235
6000	1RN6 714-8BJ ■ ■	896	239	96.6	96.7	0.84	0.82	47691	2.3	0.80	6.0	531	3438
7000	1RN6 716-8BJ ■ ■	896	279	96.7	96.8	0.85	0.82	55642	2.2	0.79	6.0	597	3817
10-pole													
3500	1RN6 710-3BJ ■ ■	717	151	96.2	96.2	0.79	0.74	34788	2.5	0.78	6.0	415	4104
4000	1RN6 712-3BJ ■ ■	717	172	96.3	96.3	0.79	0.74	39757	2.5	0.78	6.0	465	4564
4500	1RN6 714-3BJ ■ ■	717	188	96.4	96.5	0.81	0.77	44739	2.4	0.79	6.0	531	5006
5000	1RN6 716-3BJ ■ ■	717	207	96.5	96.6	0.82	0.78	49713	2.4	0.78	6.0	598	5428
Voltage code:													
13.2 kV, 60 Hz		2											
Other voltage		9											
Type of construction:													
IM B3		0											
IM V1 (without canopy)		8											

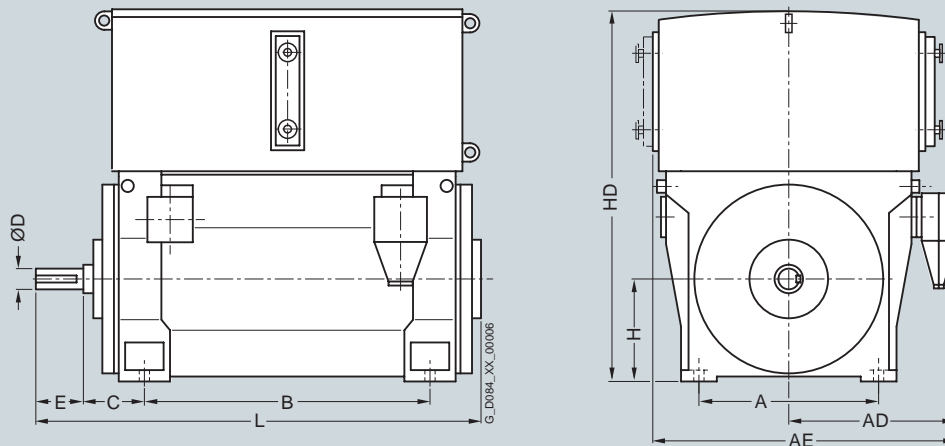
¹⁾ Max. permissible external moment of inertia for three starts from cold or two starts from warm under the conditions described on page 2/2.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RN4 series ²⁾											
4-pole											
1RN4 450-4HE.0	4050	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 452-4HE.0	4200	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 454-4HE.0	4700	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 456-4HE.0	4950	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 500-4HE.0	5400	950	1000	1790	1320	280	150	200	500	1830	2230
1RN4 502-4HE.0	5600	950	1000	1790	1320	280	150	200	500	1830	2230
1RN4 504-4HE.0	6250	950	1000	1790	1500	280	160	240	500	1830	2480
1RN4 506-4HE.0	6650	950	1000	1790	1500	280	160	240	500	1830	2480
1RN4 560-4HE.0	7400	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-4HE.0	7850	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 564-4HE.0	8750	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-4HE.0	9200	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-4HE.0 ³⁾	10400	1320	1330	2290	1600	335	200	280	630	2400	2500
1RN4 632-4HE.0 ³⁾	11100	1320	1330	2290	1600	335	200	280	630	2400	2500
1RN4 634-4HE.0 ³⁾	12150	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4 636-4HE.0 ³⁾	12700	1320	1330	2290	1800	335	220	280	630	2400	2740
6-pole											
1RN4 450-6HE.0	4100	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 452-6HE.0	4300	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 454-6HE.0	4700	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 456-6HE.0	5050	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 500-6HE.0	5550	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 502-6HE.0	5900	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 504-6HE.0	6450	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 506-6HE.0	6850	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 560-6HE.0	7500	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-6HE.0	8150	1060	1210	2060	1400	315	180	240	560	2040	2300

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

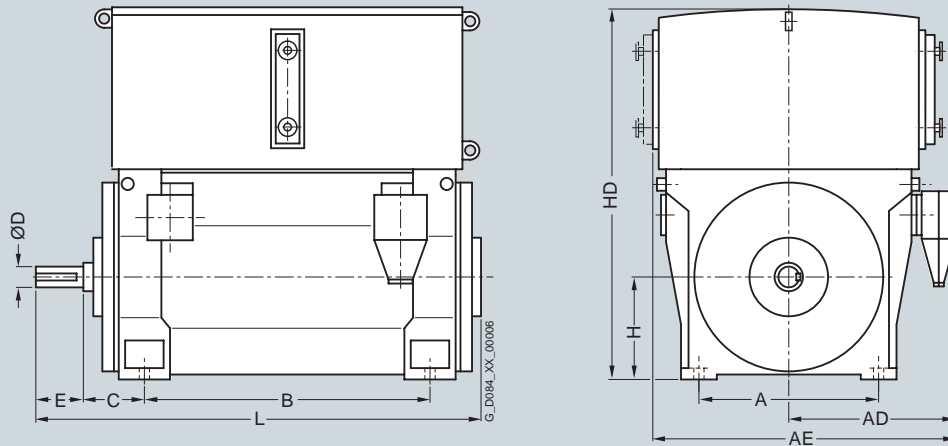
³⁾ Rolling-contact bearings only for 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RN4 series ²⁾											
6-pole											
1RN4 564-6HE.0	8950	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-6HE.0	9400	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-6HE.0	10650	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4 632-6HE.0	11200	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4 634-6HE.0	12300	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4 636-6HE.0	13000	1320	1330	2290	1800	335	220	280	630	2400	2740
8-pole											
1RN4 450-8HE.0	4100	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 452-8HE.0	4250	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 454-8HE.0	4700	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 456-8HE.0	5050	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 500-8HE.0	5550	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 502-8HE.0	5950	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 504-8HE.0	6450	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 506-8HE.0	6800	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 560-8HE.0	7500	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4 562-8HE.0	8000	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4 564-8HE.0	8850	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4 566-8HE.0	9350	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4 630-8HE.0 ³⁾	10600	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4 632-8HE.0 ³⁾	11200	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4 634-8HE.0 ³⁾	12150	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4 636-8HE.0 ³⁾	12900	1320	1330	2290	1800	335	220	280	630	2400	2740
10-pole											
1RN4 450-3HE.0	4050	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 452-3HE.0	4250	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 454-3HE.0	4650	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 456-3HE.0	5000	850	930	1620	1400	250	140	200	450	1620	2130

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

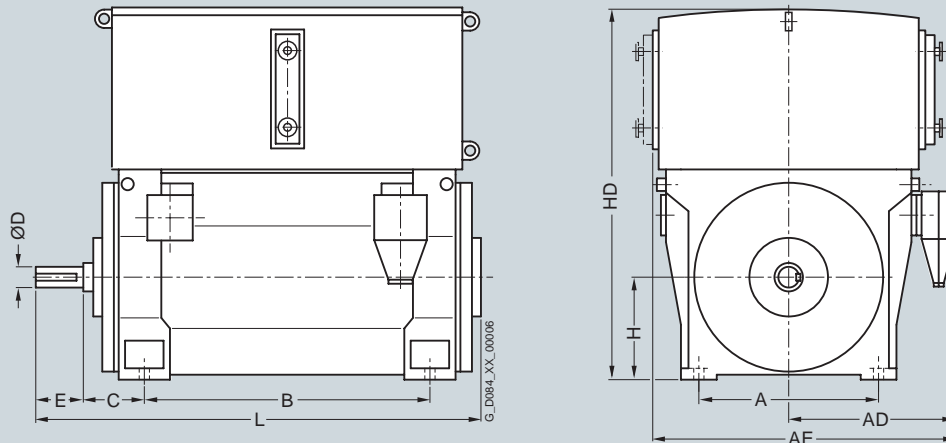
³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



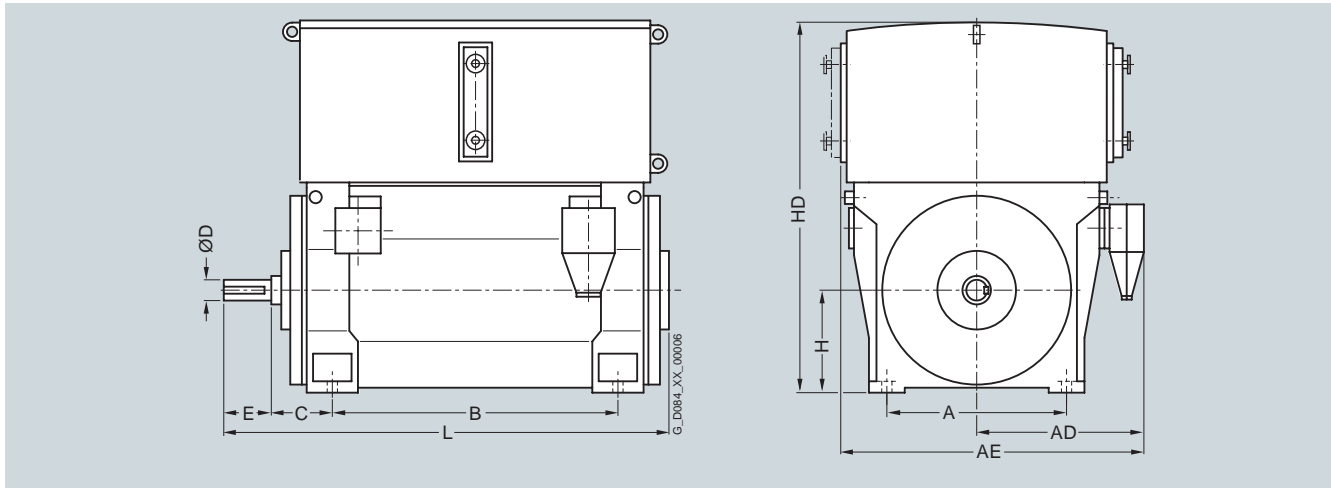
Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings – 1RN4 series ²⁾											
10-pole											
1RN4 500-3HE.0	5500	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 502-3HE.0	5850	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 504-3HE.0	6450	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 506-3HE.0	6800	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 560-3HE.0	7450	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4 562-3HE.0	8000	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4 564-3HE.0	8800	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4 566-3HE.0	9300	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4 630-3HE.0 ³⁾	10500	1320	1180	2290	1600	335	220	280	630	2400	2500
1RN4 632-3HE.0 ³⁾	11200	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4 634-3HE.0 ³⁾	12200	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4 636-3HE.0 ³⁾	12900	1320	1330	2290	1800	335	220	280	630	2400	2740
12-pole											
1RN4 450-5HE.0	4050	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 452-5HE.0	4250	850	930	1620	1180	250	130	200	450	1620	1920
1RN4 454-5HE.0	4650	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 456-5HE.0	5000	850	930	1620	1400	250	140	200	450	1620	2130
1RN4 500-5HE.0	5550	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 502-5HE.0	5900	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4 504-5HE.0	6350	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 506-5HE.0	6800	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4 560-5HE.0	7450	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4 562-5HE.0	8000	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4 564-5HE.0	8800	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4 566-5HE.0	9250	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4 630-5HE.0 ³⁾	10400	1320	1180	2140	1600	335	220	280	630	2400	2500
1RN4 632-5HE.0 ³⁾	11000	1320	1180	2140	1600	335	220	280	630	2400	2500
1RN4 634-5HE.0 ³⁾	12050	1320	1180	2140	1800	335	220	280	630	2400	2740
1RN4 636-5HE.0 ³⁾	12850	1320	1180	2140	1800	335	220	280	630	2400	2740

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

³⁾ Only in the 50 Hz version.

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RN4 series¹⁾											
4-pole											
1RN4 450-4HE.0	4050	850	1070	1840	1180	250	130	200	450	1620	1920
1RN4 452-4HE.0	4200	850	1070	1840	1180	250	130	200	450	1620	1920
1RN4 454-4HE.0	4700	850	1070	1840	1400	250	140	200	450	1620	2130
1RN4 456-4HE.0	5000	850	1070	1840	1400	250	140	200	450	1620	2130
1RN4 500-4HE.0	5400	950	1220	2010	1320	280	150	200	500	1830	2230
1RN4 502-4HE.0	5600	950	1220	2010	1320	280	150	200	500	1830	2230
1RN4 504-4HE.0	6250	950	1220	2010	1500	280	160	240	500	1830	2480
1RN4 506-4HE.0	6600	950	1220	2010	1500	280	160	240	500	1830	2480
1RN4 560-4HE.0	7250	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-4HE.0	7750	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 564-4HE.0	8600	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-4HE.0	9050	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-4HE.0	10300	1320	1320	2280	1600	335	200	280	630	2400	2500
1RN4 632-4HE.0	10950	1320	1330	2290	1600	335	200	280	630	2400	2500
1RN4 634-4HE.0	12000	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4 636-4HE.0	12600	1320	1330	2290	1800	335	220	280	630	2400	2740

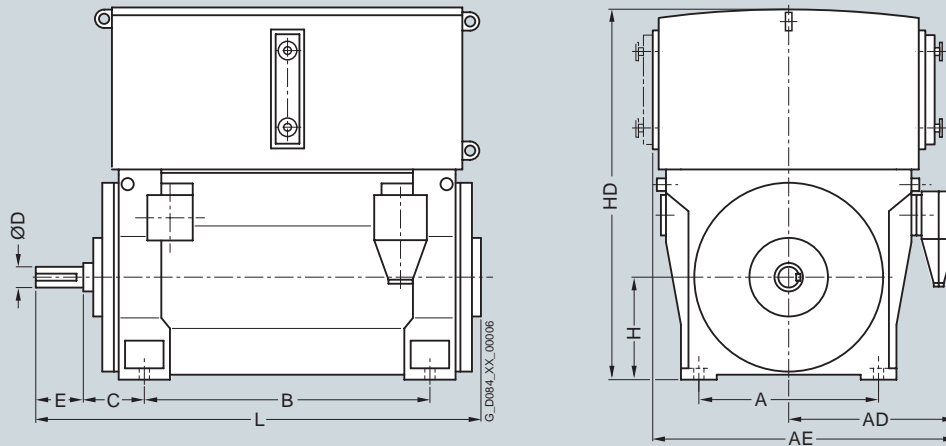
¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RN4 series¹⁾											
6-pole											
1RN4 450-6HE.0	4150	850	1070	1840	1180	250	130	200	450	1620	1920
1RN4 452-6HE.0	4300	850	1070	1840	1180	250	130	200	450	1620	1920
1RN4 454-6HE.0	4650	850	1070	1840	1400	250	140	200	450	1620	2130
1RN4 456-6HE.0	5050	850	1070	1840	1400	250	140	200	450	1620	2130
1RN4 500-6HE.0	5500	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 502-6HE.0	5900	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 504-6HE.0	6400	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 506-6HE.0	6800	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 560-6HE.0	7500	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-6HE.0	8000	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 564-6HE.0	8850	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-6HE.0	9250	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-6HE.0	10650	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 632-6HE.0	11200	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 634-6HE.0	12250	1320	1320	2280	1800	335	220	280	630	2400	2740
1RN4 636-6HE.0	13000	1320	1330	2290	1800	335	220	280	630	2400	2740
8-pole											
1RN4 500-8HE.0	5550	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 502-8HE.0	5900	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 504-8HE.0	6450	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 506-8HE.0	6800	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 560-8HE.0	7500	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-8HE.0	8000	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 564-8HE.0	8850	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-8HE.0	9250	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-8HE.0	10450	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 632-8HE.0	11050	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 634-8HE.0	12050	1320	1320	2280	1800	335	220	280	630	2400	2740
1RN4 636-8HE.0	12800	1320	1320	2280	1800	335	220	280	630	2400	2740

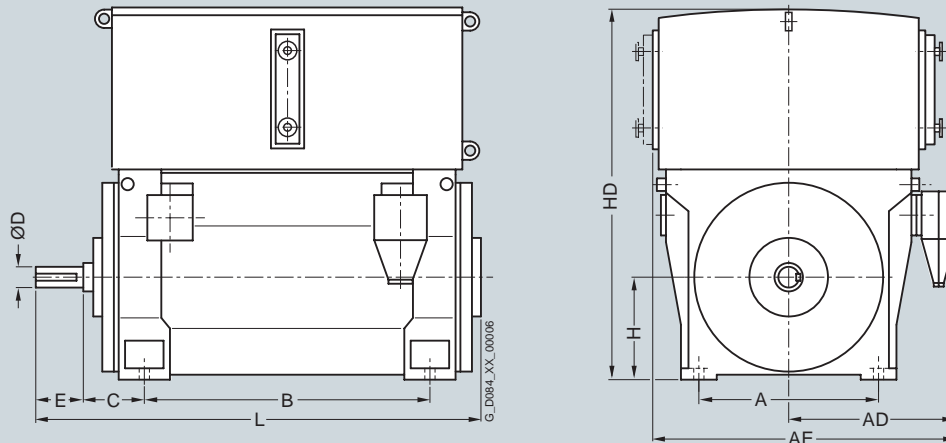
¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings – 1RN4 series¹⁾											
10-pole											
1RN4 500-3HE.0	5500	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 502-3HE.0	5850	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 504-3HE.0	6400	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 506-3HE.0	6750	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 560-3HE.0	7850	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-3HE.0	8350	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 564-3HE.0	8950	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-3HE.0	9350	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-3HE.0	10450	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 632-3HE.0	11050	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 634-3HE.0	12000	1320	1320	2280	1800	335	220	280	630	2400	2740
1RN4 636-3HE.0	12750	1320	1320	2280	1800	335	220	280	630	2400	2740
12-pole											
1RN4 502-5HE.0	5900	950	1220	2010	1320	280	160	240	500	1830	2270
1RN4 504-5HE.0	6350	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 506-5HE.0	6750	950	1220	2010	1500	280	170	240	500	1830	2480
1RN4 560-5HE.0	7450	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 562-5HE.0	7950	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4 564-5HE.0	8800	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 566-5HE.0	9250	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4 630-5HE.0	10450	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 632-5HE.0	11100	1320	1320	2280	1600	335	220	280	630	2400	2500
1RN4 634-5HE.0	12100	1320	1320	2280	1800	335	220	280	630	2400	2740
1RN4 636-5HE.0	12850	1320	1320	2280	1800	335	220	280	630	2400	2740

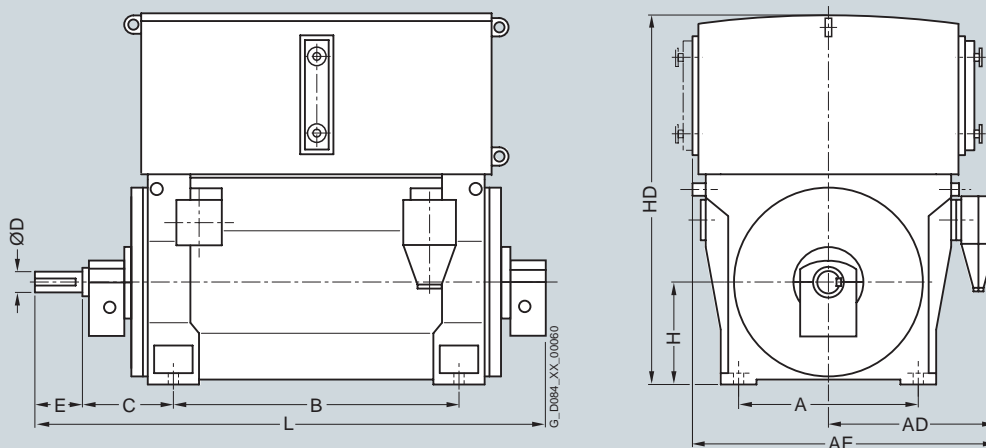
¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings

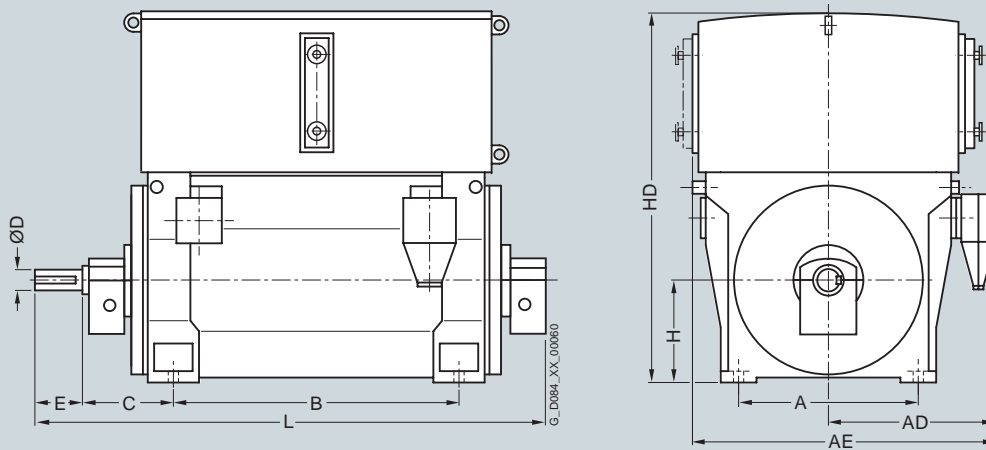


Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RN4 series ²⁾											
2-pole											
1RN4 450-2HE.0	3850	850	930	1620	1180	450	110	165	450	1620	2080
1RN4 452-2HE.0	4100	850	930	1620	1180	450	110	165	450	1620	2080
1RN4 454-2HE.0	4400	850	930	1620	1400	450	110	165	450	1620	2290
1RN4 456-2HE.0	4700	850	930	1620	1400	450	110	165	450	1620	2290
1RN4 500-2HE.0	5000	950	1000	1790	1320	475	110	165	500	1830	2400
1RN4 502-2HE.0	5250	950	1000	1790	1320	475	110	165	500	1830	2400
1RN4 504-2HE.0	5700	950	1000	1790	1500	475	120	165	500	1830	2600
1RN4 506-2HE.0	6150	950	1000	1790	1500	475	120	165	500	1830	2600
1RN4 560-2HE.0	6850	1060	1210	2060	1400	500	140	200	560	2040	2560
1RN4 562-2HE.0	7150	1060	1210	2060	1400	500	140	200	560	2040	2560
1RN4 564-2HE.0	8000	1060	1210	2060	1600	530	150	200	560	2040	2820
1RN4 566-2HE.0	8450	1060	1210	2060	1600	530	150	200	560	2040	2820
1RN4 630-2HE.0	10150	1320	1330	2290	1600	560	150	200	630	2400	2820
1RN4 632-2HE.0	10800	1320	1330	2290	1600	560	150	200	630	2400	2820
1RN4 634-2HE.0	11900	1320	1330	2290	1800	560	160	240	630	2400	3100
1RN4 636-2HE.0	12750	1320	1330	2290	1800	560	160	240	630	2400	3100
4-pole											
1RN4 450-4HE.0-Z K96	4100	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 452-4HE.0-Z K96	4300	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 454-4HE.0-Z K96	4800	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 456-4HE.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 500-4HE.0-Z K96	5550	950	1000	1790	1320	500	150	200	500	1830	2580
1RN4 502-4HE.0-Z K96	5750	950	1000	1790	1320	500	150	200	500	1830	2580
1RN4 504-4HE.0-Z K96	6450	950	1000	1790	1500	500	160	240	500	1830	2830
1RN4 506-4HE.0-Z K96	6850	950	1000	2010	1500	500	160	240	500	1830	2830
1RN4 560-4HE.0-Z K96	7550	1060	1210	2060	1400	530	180	240	560	2040	2630
1RN4 562-4HE.0-Z K96	8000	1060	1210	2060	1400	530	180	240	560	2040	2630

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RN4 series ²⁾											
4-pole											
1RN4 564-4HE.0-Z K96	8950	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-4HE.0-Z K96	9400	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 630-4HE.0-Z K96 ³⁾	10650	1320	1330	2290	1600	600	200	280	630	2400	2970
1RN4 632-4HE.0-Z K96 ³⁾	11350	1320	1330	2290	1600	600	200	280	630	2400	2970
1RN4 634-4HE.0-Z K96 ³⁾	12400	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4 636-4HE.0-Z K96 ³⁾	13000	1320	1330	2290	1800	600	220	280	630	2400	3210
6-pole											
1RN4 450-6HE.0-Z K96	4200	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 452-6HE.0-Z K96	4450	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 454-6HE.0-Z K96	4850	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 456-6HE.0-Z K96	5150	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 500-6HE.0-Z K96	5700	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 502-6HE.0-Z K96	6100	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 504-6HE.0-Z K96	6600	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 506-6HE.0-Z K96	7000	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 560-6HE.0-Z K96	7750	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 562-6HE.0-Z K96	8350	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 564-6HE.0-Z K96	9150	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-6HE.0-Z K96	9650	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 630-6HE.0-Z K96	10950	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4 632-6HE.0-Z K96	11500	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4 634-6HE.0-Z K96	12550	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4 636-6HE.0-Z K96	13300	1320	1330	2290	1800	600	220	280	630	2400	3210
8-pole											
1RN4 450-8HE.0-Z K96	4200	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 452-8HE.0-Z K96	4400	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 454-8HE.0-Z K96	4850	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 456-8HE.0-Z K96	5150	850	930	1620	1400	450	140	200	450	1620	2330

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

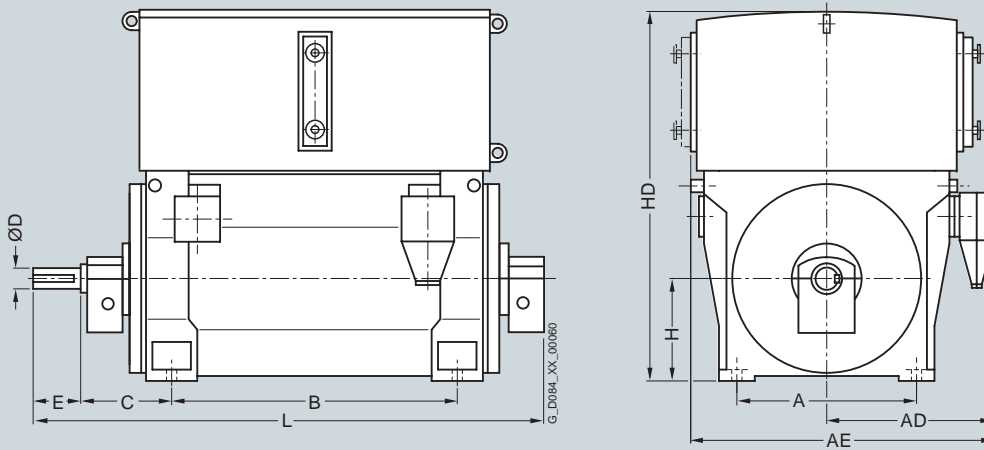
³⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RN4 series²⁾											
8-pole											
1RN4 500-8HE.0-Z K96	5750	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 502-8HE.0-Z K96	6100	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 504-8HE.0-Z K96	6600	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 506-8HE.0-Z K96	7000	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 560-8HE.0-Z K96	7700	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 562-8HE.0-Z K96	8250	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 564-8HE.0-Z K96	9050	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4 566-8HE.0-Z K96	9550	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4 630-8HE.0-Z K96 ³⁾	10850	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4 632-8HE.0-Z K96 ³⁾	11500	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4 634-8HE.0-Z K96 ³⁾	12450	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4 636-8HE.0-Z K96 ³⁾	13150	1320	1330	2290	1800	600	220	280	630	2400	3210
10-pole											
1RN4 450-3HE.0-Z K96	4150	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 452-3HE.0-Z K96	4400	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 454-3HE.0-Z K96	4800	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 456-3HE.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 500-3HE.0-Z K96	5700	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 502-3HE.0-Z K96	6050	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 504-3HE.0-Z K96	6600	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 506-3HE.0-Z K96	6950	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 560-3HE.0-Z K96	7650	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 562-3HE.0-Z K96	8200	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 564-3HE.0-Z K96	9050	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4 566-3HE.0-Z K96	9500	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4 630-3HE.0-Z K96 ³⁾	10750	1320	1180	2140	1600	600	220	280	630	2400	2970
1RN4 632-3HE.0-Z K96 ³⁾	11450	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4 634-3HE.0-Z K96 ³⁾	12500	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4 636-3HE.0-Z K96 ³⁾	13200	1320	1330	2290	1800	600	220	280	630	2400	3210

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

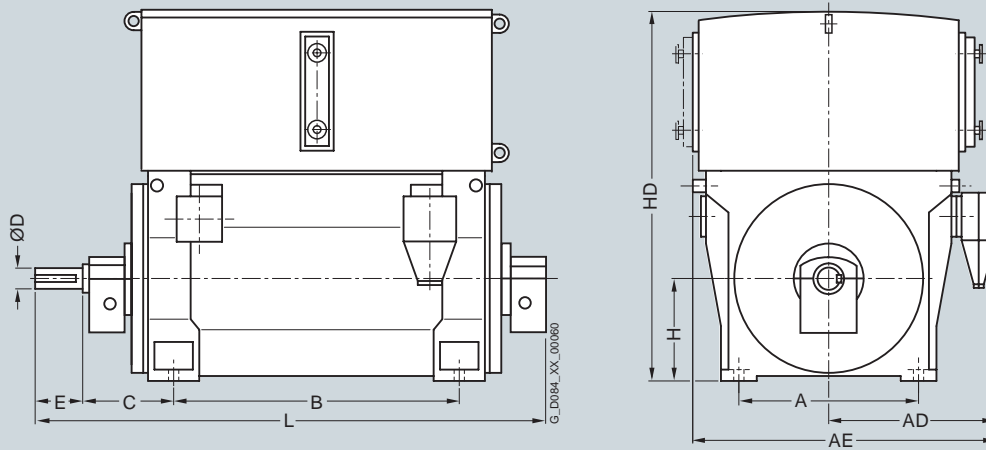
³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings – 1RN4 series²⁾											
12-pole											
1RN4 450-5HE.0-Z K96	4150	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 452-5HE.0-Z K96	4400	850	930	1620	1180	450	130	200	450	1620	2120
1RN4 454-5HE.0-Z K96	4800	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 456-5HE.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1620	2330
1RN4 500-5HE.0-Z K96	5700	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 502-5HE.0-Z K96	6050	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4 504-5HE.0-Z K96	6550	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 506-5HE.0-Z K96	6950	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4 560-5HE.0-Z K96	7650	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 562-5HE.0-Z K96	8250	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4 564-5HE.0-Z K96	9000	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4 566-5HE.0-Z K96	9500	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4 630-5HE.0-Z K96 ³⁾	10650	1320	1180	2140	1600	600	220	280	630	2400	2970
1RN4 632-5HE.0-Z K96 ³⁾	11300	1320	1180	2140	1600	600	220	280	630	2400	2970
1RN4 634-5HE.0-Z K96 ³⁾	12300	1320	1180	2140	1800	600	220	280	630	2400	3210
1RN4 636-5HE.0-Z K96 ³⁾	13150	1320	1330	2290	1800	600	220	280	630	2400	3210

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

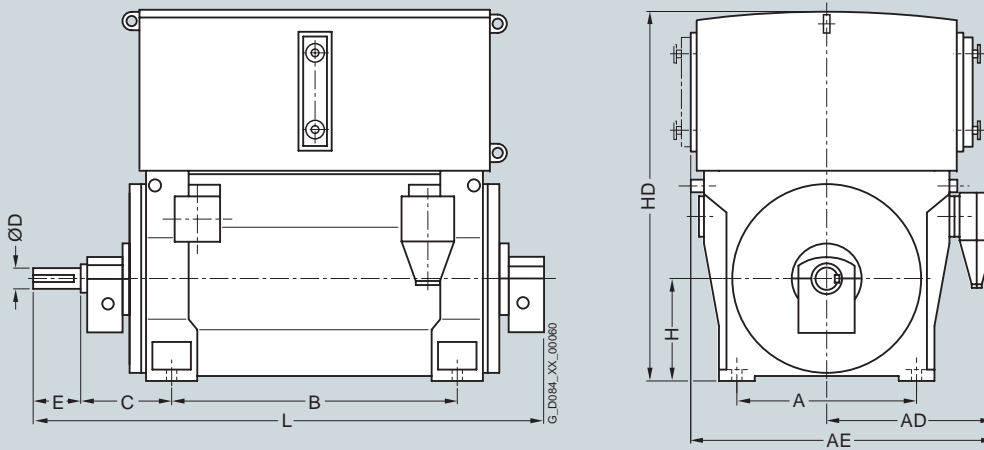
³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

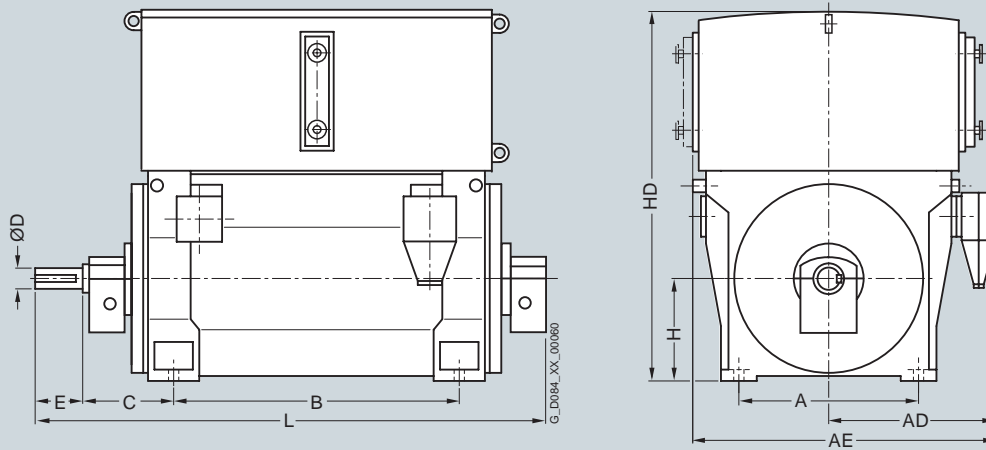
Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RN4 series¹⁾											
2-pole											
1RN4 450-2HE.0	3900	850	1070	1840	1180	450	110	165	450	1620	2080
1RN4 452-2HE.0	4100	850	1070	1840	1180	450	110	165	450	1620	2080
1RN4 454-2HE.0	4400	850	1070	1840	1400	450	110	165	450	1620	2290
1RN4 456-2HE.0	4700	850	1070	1840	1400	450	110	165	450	1620	2290
1RN4 500-2HE.0	5000	950	1220	2010	1320	475	110	165	500	1830	2360
1RN4 502-2HE.0	5250	950	1220	2010	1320	475	110	165	500	1830	2360
1RN4 504-2HE.0	5700	950	1220	2010	1500	475	120	165	500	1830	2570
1RN4 506-2HE.0	6050	950	1220	2010	1500	475	120	165	500	1830	2570
1RN4 560-2HE.0	6750	1060	1210	2060	1400	500	140	200	560	2040	2570
1RN4 562-2HE.0	7000	1060	1210	2060	1400	500	140	200	560	2040	2570
1RN4 564-2HE.0	7850	1060	1210	2060	1600	530	150	200	560	2040	2830
1RN4 566-2HE.0	8350	1060	1210	2060	1600	530	150	200	560	2040	2830
1RN4 630-2HE.0	10050	1320	1330	2280	1600	560	150	200	630	2400	2820
1RN4 632-2HE.0	10700	1320	1330	2290	1600	560	150	200	630	2400	2820
1RN4 634-2HE.0	11750	1320	1330	2290	1800	560	160	240	630	2400	3100
1RN4 636-2HE.0	12600	1320	1330	2290	1800	560	160	240	630	2400	3100
4-pole											
1RN4 450-4HE.0-Z K96	4100	850	1070	1840	1180	450	130	200	450	1620	2120
1RN4 452-4HE.0-Z K96	4300	850	1070	1840	1180	450	130	200	450	1620	2120
1RN4 454-4HE.0-Z K96	4800	850	1070	1840	1400	450	140	200	450	1620	2330
1RN4 456-4HE.0-Z K96	5100	850	1070	1840	1400	450	140	200	450	1620	2330
1RN4 500-4HE.0-Z K96	5600	950	1220	2010	1320	500	150	200	500	1830	2580
1RN4 502-4HE.0-Z K96	5750	950	1220	2010	1320	500	150	200	500	1830	2580
1RN4 504-4HE.0-Z K96	6400	950	1220	2010	1500	500	160	240	500	1830	2830
1RN4 506-4HE.0-Z K96	6750	950	1220	2010	1500	500	160	240	500	1830	2830
1RN4 560-4HE.0-Z K96	7400	1060	1210	2060	1400	530	180	240	560	2040	2630
1RN4 562-4HE.0-Z K96	7900	1060	1210	2060	1400	530	180	240	560	2040	2630
1RN4 564-4HE.0-Z K96	8800	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-4HE.0-Z K96	9250	1060	1210	2060	1600	530	190	280	560	2040	2940

¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RN4 series¹⁾											
4-pole											
1RN4 630-4HE.0-Z K96	10550	1320	1320	2280	1600	600	200	280	630	2400	2970
1RN4 632-4HE.0-Z K96	11250	1320	1330	2290	1600	600	200	280	630	2400	2970
1RN4 634-4HE.0-Z K96	12250	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4 636-4HE.0-Z K96	12900	1320	1330	2290	1800	600	220	280	630	2400	3210
6-pole											
1RN4 450-6HE.0-Z K96	4200	850	1070	1840	1180	450	130	200	450	1620	2120
1RN4 452-6HE.0-Z K96	4450	850	1070	1840	1180	450	130	200	450	1620	2120
1RN4 454-6HE.0-Z K96	4800	850	1070	1840	1400	450	140	200	450	1620	2330
1RN4 456-6HE.0-Z K96	5150	850	1070	1840	1400	450	140	200	450	1620	2330
1RN4 500-6HE.0-Z K96	5700	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 502-6HE.0-Z K96	6100	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 504-6HE.0-Z K96	6550	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 506-6HE.0-Z K96	6950	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 560-6HE.0-Z K96	7700	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 562-6HE.0-Z K96	8200	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 564-6HE.0-Z K96	9050	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-6HE.0-Z K96	9450	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 630-6HE.0-Z K96	10900	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 632-6HE.0-Z K96	11500	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 634-6HE.0-Z K96	12550	1320	1320	2280	1800	600	220	280	630	2400	3210
1RN4 636-6HE.0-Z K96	13300	1320	1330	2290	1800	600	220	280	630	2400	3210
8-pole											
1RN4 500-8HE.0-Z K96	5700	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 502-8HE.0-Z K96	6100	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 504-8HE.0-Z K96	6600	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 506-8HE.0-Z K96	6950	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 560-8HE.0-Z K96	7700	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 562-8HE.0-Z K96	8250	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 564-8HE.0-Z K96	9050	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-8HE.0-Z K96	9450	1060	1210	2060	1600	530	190	280	560	2040	2940

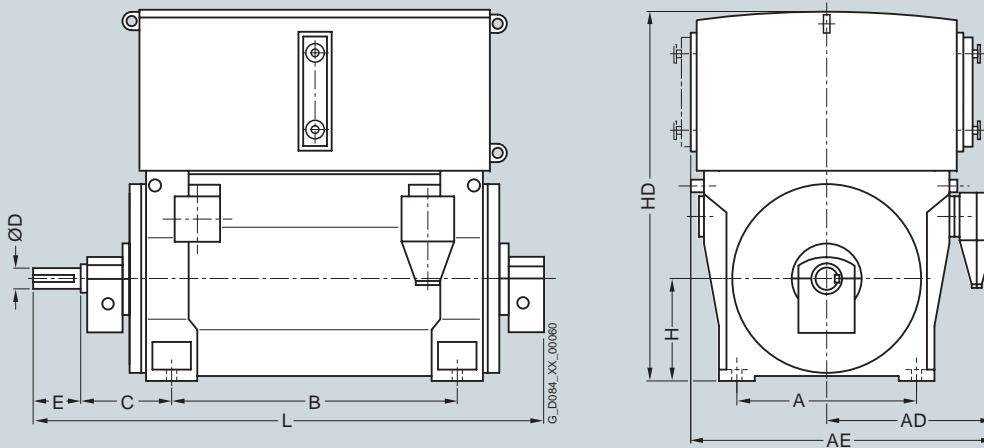
¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings – 1RN4 series¹⁾											
8-pole											
1RN4 630-8HE.0-Z K96	10750	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 632-8HE.0-Z K96	11350	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 634-8HE.0-Z K96	12350	1320	1320	2280	1800	600	220	280	630	2400	3210
1RN4 636-8HE.0-Z K96	13050	1320	1320	2280	1800	600	220	280	630	2400	3210
10-pole											
1RN4 500-3HE.0-Z K96	5700	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 502-3HE.0-Z K96	6050	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 504-3HE.0-Z K96	6550	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 506-3HE.0-Z K96	6900	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 560-3HE.0-Z K96	8050	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 562-3HE.0-Z K96	8550	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 564-3HE.0-Z K96	9150	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-3HE.0-Z K96	9550	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 630-3HE.0-Z K96	10700	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 632-3HE.0-Z K96	11350	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 634-3HE.0-Z K96	12300	1320	1320	2280	1800	600	220	280	630	2400	3210
1RN4 636-3HE.0-Z K96	13000	1320	1320	2280	1800	600	220	280	630	2400	3210
12-pole											
1RN4 502-5HE.0-Z K96	6050	950	1220	2010	1320	500	160	240	500	1830	2620
1RN4 504-5HE.0-Z K96	6500	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 506-5HE.0-Z K96	6900	950	1220	2010	1500	500	170	240	500	1830	2830
1RN4 560-5HE.0-Z K96	7650	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 562-5HE.0-Z K96	8200	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4 564-5HE.0-Z K96	9000	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 566-5HE.0-Z K96	9450	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4 630-5HE.0-Z K96	10750	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 632-5HE.0-Z K96	11350	1320	1320	2280	1600	600	220	280	630	2400	2970
1RN4 634-5HE.0-Z K96	12400	1320	1320	2280	1800	600	220	280	630	2400	3210
1RN4 636-5HE.0-Z K96	13100	1320	1320	2280	1800	600	220	280	630	2400	3210

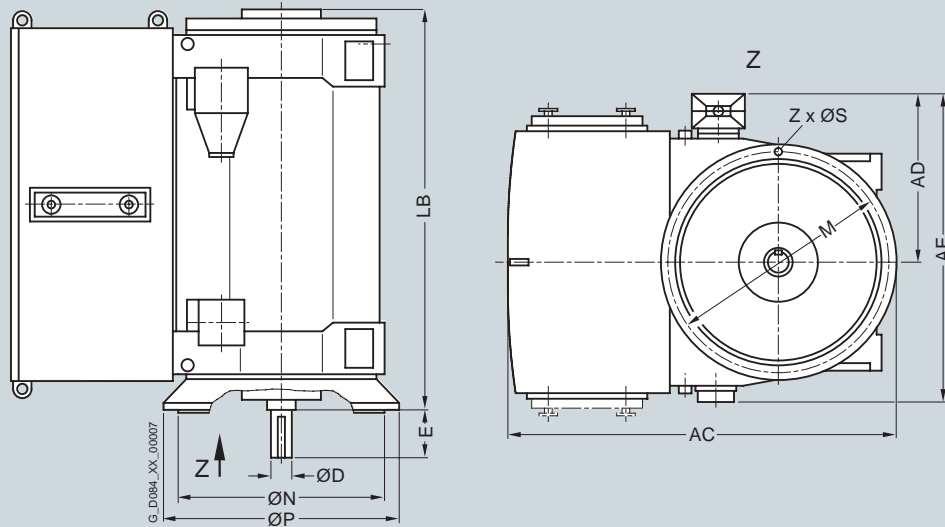
¹⁾ The dimensions are also valid for the 1SN4, 1SL4 and 1SQ4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series²⁾												
4-pole												
1RN4 450-4HE.0	4150	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 452-4HE.0	4350	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 454-4HE.0	4850	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 456-4HE.0	5100	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 500-4HE.0	5500	1960	1000	1810	150	200	1910	1250	1120	1180	26	8
1RN4 502-4HE.0	5700	1960	1000	1810	150	200	1910	1250	1120	1180	26	8
1RN4 504-4HE.0	6400	1960	1000	1810	160	240	2120	1250	1120	1180	26	8
1RN4 506-4HE.0	6800	1960	1000	1810	160	240	2120	1250	1120	1180	26	8
1RN4 560-4HE.0	7550	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-4HE.0	8000	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-4HE.0 ³⁾	8900	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-4HE.0 ³⁾	9350	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-4HE.0 ³⁾	12050	2875	1330	2300	200	280	2400	2000	1800	1900	33	8
1RN4 632-4HE.0 ³⁾	12750	2875	1330	2300	200	280	2400	2000	1800	1900	33	8
1RN4 634-4HE.0 ³⁾	13800	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
1RN4 636-4HE.0 ³⁾	14350	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
6-pole												
1RN4 450-6HE.0	4250	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 452-6HE.0	4400	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 454-6HE.0	4850	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 456-6HE.0	5150	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 500-6HE.0	5650	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 502-6HE.0	6050	1960	1000	1810	160	240	1910	1250	1120	1180	26	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

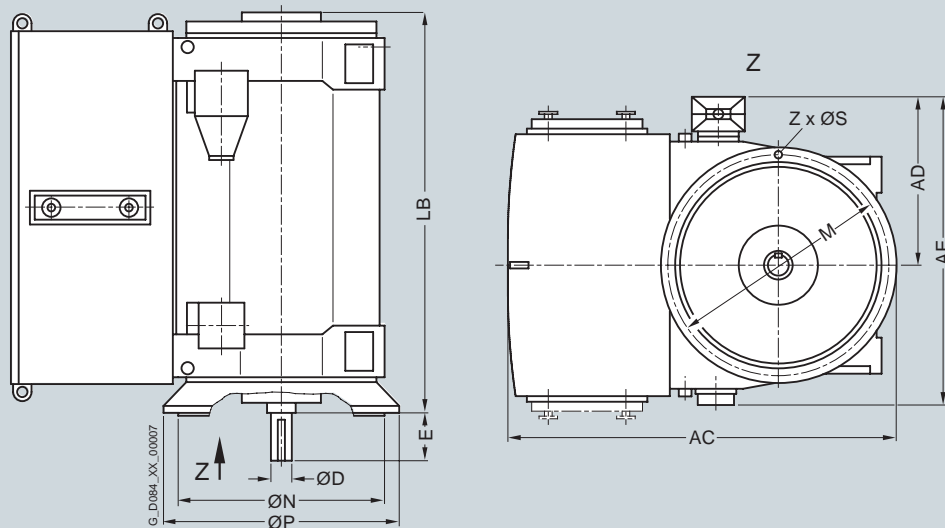
³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series²⁾												
6-pole												
1RN4 504-6HE.0	6550	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 506-6HE.0	6950	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 560-6HE.0	7650	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-6HE.0	8250	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-6HE.0	9100	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-6HE.0	9550	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-6HE.0	12300	2875	1330	2300	220	280	2400	2000	1800	1900	33	8
1RN4 632-6HE.0	12850	2875	1330	2300	220	280	2400	2000	1800	1900	33	8
1RN4 634-6HE.0	13950	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
1RN4 636-6HE.0	14650	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
8-pole												
1RN4 450-8HE.0	4200	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 452-8HE.0	4400	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 454-8HE.0	4800	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 456-8HE.0	5200	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 500-8HE.0	5700	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 502-8HE.0	6050	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 504-8HE.0	6550	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 506-8HE.0	6950	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 560-8HE.0	7650	2180	1070	1960	180	240	2090	1400	1250	1320	26	8
1RN4 562-8HE.0	8150	2180	1070	1960	180	240	2090	1400	1250	1320	26	8
1RN4 564-8HE.0	9000	2180	1070	1960	190	280	2320	1400	1250	1320	26	8
1RN4 566-8HE.0	9450	2180	1070	1960	190	280	2320	1400	1250	1320	26	8
1RN4 630-8HE.0 ³⁾	12250	2875	1330	2300	220	280	2400	2000	1800	1900	33	8
1RN4 632-8HE.0 ³⁾	12850	2875	1330	2300	220	280	2400	2000	1800	1900	33	8
1RN4 634-8HE.0 ³⁾	13800	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
1RN4 636-8HE.0 ³⁾	14550	2875	1330	2300	220	280	2640	2000	1800	1900	33	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

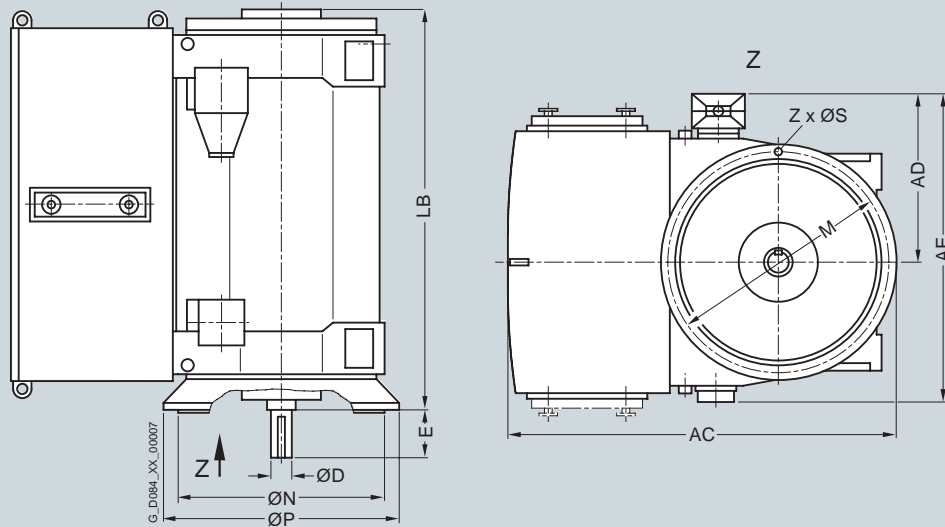
³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series²⁾												
10-pole												
1RN4 450-3HE.0	4200	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 452-3HE.0	4350	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 454-3HE.0	4800	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 456-3HE.0	5150	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 500-3HE.0	5650	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 502-3HE.0	6000	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 504-3HE.0	6550	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 506-3HE.0	6900	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 560-3HE.0	7550	2180	1070	1960	180	240	2090	1400	1250	1320	26	8
1RN4 562-3HE.0	8150	2180	1070	1960	180	240	2090	1400	1250	1320	26	8
1RN4 564-3HE.0	8950	2180	1070	1960	190	280	2320	1400	1250	1320	26	8
1RN4 566-3HE.0	9400	2180	1070	1960	190	280	2320	1400	1250	1320	26	8
1RN4 630-3HE.0 ³⁾	12150	2875	1180	2150	220	280	2400	2000	1800	1900	33	8
1RN4 632-3HE.0 ³⁾	12850	2875	1330	2300	220	280	2400	2000	1800	1900	33	8
1RN4 634-3HE.0 ³⁾	13850	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
1RN4 636-3HE.0 ³⁾	14550	2875	1330	2300	220	280	2640	2000	1800	1900	33	8

¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

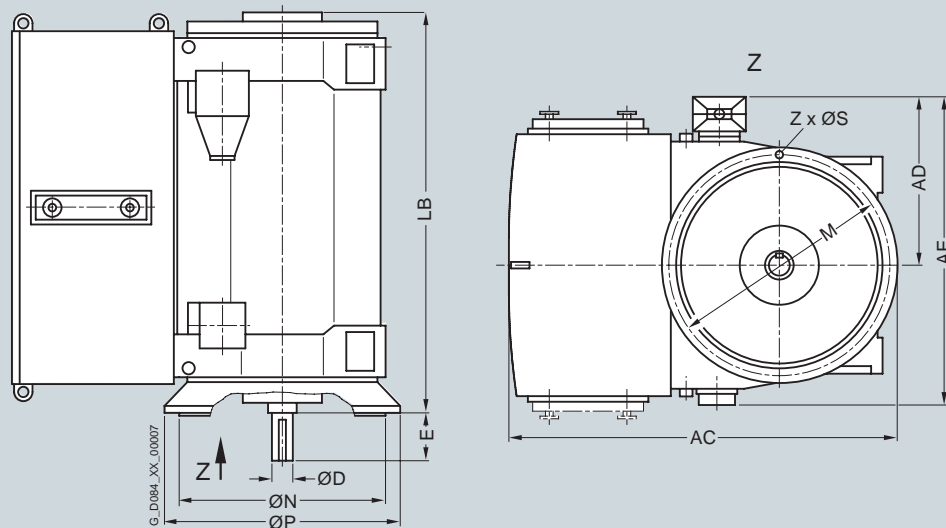
³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series²⁾												
12-pole												
1RN4 450-5HE.0	4200	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 452-5HE.0	4350	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4 454-5HE.0	4800	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 456-5HE.0	5150	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4 500-5HE.0	5650	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 502-5HE.0	6000	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4 504-5HE.0	6500	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 506-5HE.0	6950	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4 560-5HE.0	7600	2180	1070	1960	180	240	2090	1400	1250	1320	26	8
1RN4 562-5HE.0	8150	2180	1070	1960	180	240	2090	1400	1250	1320	26	8
1RN4 564-5HE.0	8950	2180	1070	1960	190	280	2320	1400	1250	1320	26	8
1RN4 566-5HE.0	9400	2180	1070	1960	190	280	2320	1400	1250	1320	26	8
1RN4 630-5HE.0 ³⁾	12050	2875	1180	2150	220	280	2400	2000	1800	1900	33	8
1RN4 632-5HE.0 ³⁾	12650	2875	1180	2150	220	280	2400	2000	1800	1900	33	8
1RN4 634-5HE.0 ³⁾	13700	2875	1180	2150	220	280	2640	2000	1800	1900	33	8
1RN4 636-5HE.0 ³⁾	14500	2875	1330	2300	220	280	2640	2000	1800	1900	33	8

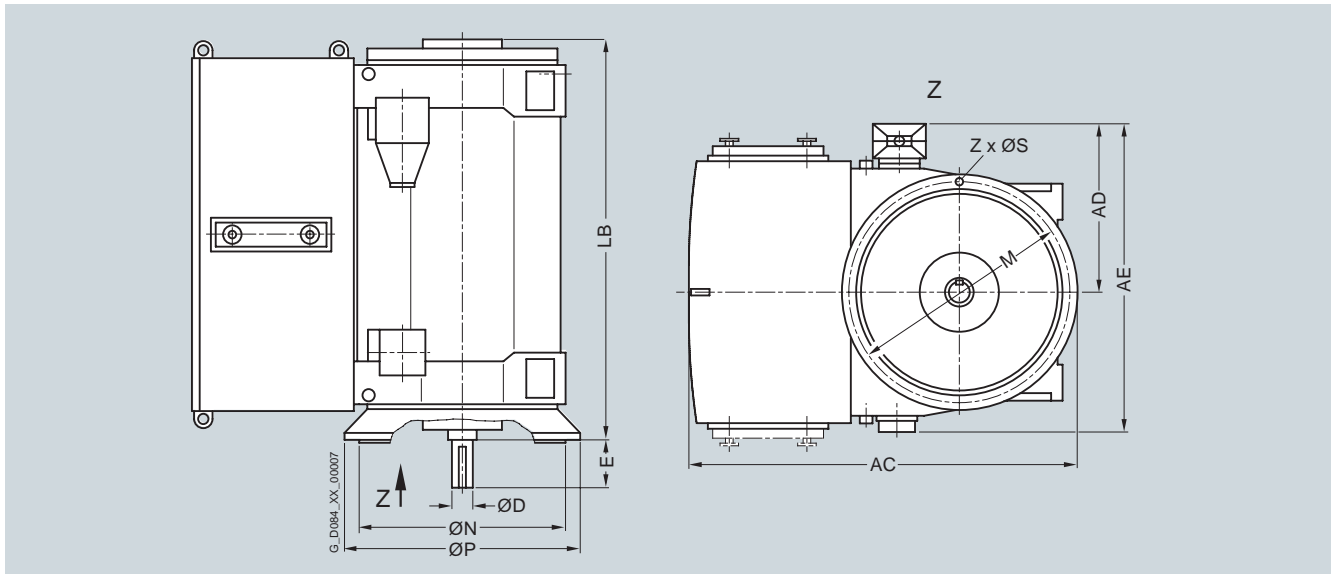
¹⁾ The value applies for 6 kV. When a lower voltage is selected, the rated current increases. If, in this case, it exceeds the value of 315 A, then the dimension changes by + 140 mm.

²⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

³⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6
Dimension drawings


Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series¹⁾												
4-pole												
1RN4 450-4HE.8	4150	1750	1070	1810	130	200	1720	1150	1000	1080	26	8
1RN4 452-4HE.8	4350	1750	1070	1810	130	200	1720	1150	1000	1080	26	8
1RN4 454-4HE.8	4800	1750	1070	1810	140	200	1930	1150	1000	1080	26	8
1RN4 456-4HE.8	5100	1750	1070	1810	140	200	1930	1150	1000	1080	26	8
1RN4 500-4HE.8	5550	1960	1140	1950	150	200	1910	1250	1120	1180	26	8
1RN4 502-4HE.8	5700	1960	1140	1950	150	200	1910	1250	1120	1180	26	8
1RN4 504-4HE.8	6350	1960	1140	1950	160	240	2120	1250	1120	1180	26	8
1RN4 506-4HE.8	6700	1960	1140	1950	160	240	2120	1250	1120	1180	26	8
1RN4 560-4HE.8	7400	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-4HE.8	7900	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-4HE.8	8750	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-4HE.8	9200	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-4HE.8 ²⁾	11950	2875	1320	2290	200	280	2400	2000	1800	1900	33	8
1RN4 632-4HE.8 ²⁾	12600	2875	1330	2300	200	280	2400	2000	1800	1900	33	8
1RN4 634-4HE.8 ²⁾	13650	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
1RN4 636-4HE.8 ²⁾	14250	2875	1330	2300	220	280	2640	2000	1800	1900	33	8

¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

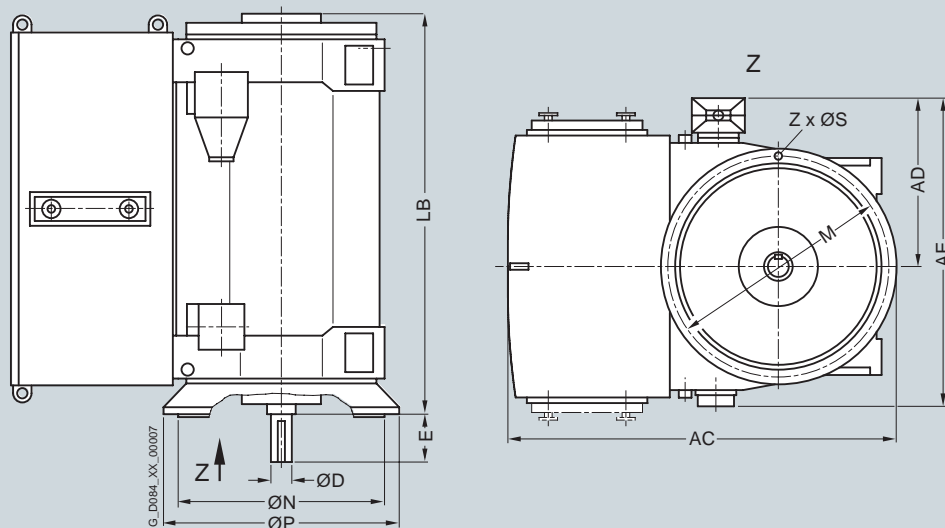
²⁾ Only in the 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series¹⁾												
6-pole												
1RN4 450-6HE.8	4250	1750	1070	1810	130	200	1720	1150	1000	1080	26	8
1RN4 452-6HE.8	4450	1750	1070	1810	130	200	1720	1150	1000	1080	26	8
1RN4 454-6HE.8	4850	1750	1070	1810	140	200	1930	1150	1000	1080	26	8
1RN4 456-6HE.8	5150	1750	1070	1810	140	200	1930	1150	1000	1080	26	8
1RN4 500-6HE.8	5650	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 502-6HE.8	6050	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 504-6HE.8	6550	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 506-6HE.8	6950	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 560-6HE.8	7650	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-6HE.8	8150	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-6HE.8	8950	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-6HE.8	9400	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-6HE.8	12300	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 632-6HE.8	12850	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 634-6HE.8	13900	2875	1320	2290	220	280	2640	2000	1800	1900	33	8
1RN4 636-6HE.8	14650	2875	1330	2300	220	280	2640	2000	1800	1900	33	8
8-pole												
1RN4 500-8HE.8	5700	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 502-8HE.8	6050	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 504-8HE.8	6550	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 506-8HE.8	6950	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 560-8HE.8	7600	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-8HE.8	8150	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-8HE.8	9000	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-8HE.8	9400	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-8HE.8	12100	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 632-8HE.8	12700	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 634-8HE.8	13700	2875	1320	2290	220	280	2640	2000	1800	1900	33	8
1RN4 636-8HE.8	14450	2875	1320	2290	220	280	2640	2000	1800	1900	33	8

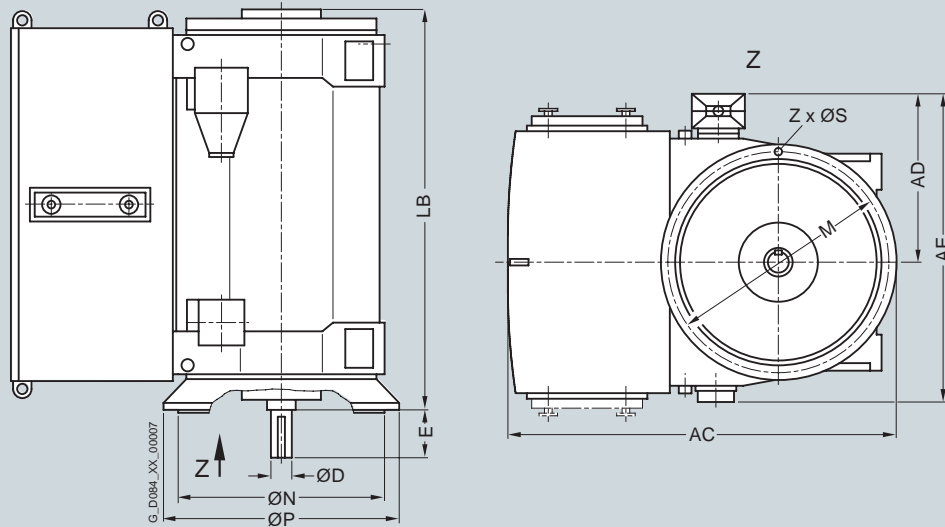
¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RN4 series¹⁾												
10-pole												
1RN4 500-3HE.8	5650	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 502-3HE.8	6000	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 504-3HE.8	6500	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 506-3HE.8	6900	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 560-3HE.8	7900	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-3HE.8	8550	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-3HE.8	9400	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-3HE.8	10000	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-3HE.8	12100	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 632-3HE.8	12700	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 634-3HE.8	13650	2875	1320	2290	220	280	2640	2000	1800	1900	33	8
1RN4 636-3HE.8	14400	2875	1320	2290	220	280	2640	2000	1800	1900	33	8
12-pole												
1RN4 502-5HE.8	6050	1960	1140	1950	160	240	1910	1250	1120	1180	26	8
1RN4 504-5HE.8	6450	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 506-5HE.8	6900	1960	1140	1950	170	240	2120	1250	1120	1180	26	8
1RN4 560-5HE.8	7550	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 562-5HE.8	8100	2180	1210	2100	180	240	2090	1400	1250	1320	26	8
1RN4 564-5HE.8	8900	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 566-5HE.8	9350	2180	1210	2100	190	280	2320	1400	1250	1320	26	8
1RN4 630-5HE.8	12100	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 632-5HE.8	12750	2875	1320	2290	220	280	2400	2000	1800	1900	33	8
1RN4 634-5HE.8	13750	2875	1320	2290	220	280	2640	2000	1800	1900	33	8
1RN4 636-5HE.8	14500	2875	1320	2290	220	280	2640	2000	1800	1900	33	8

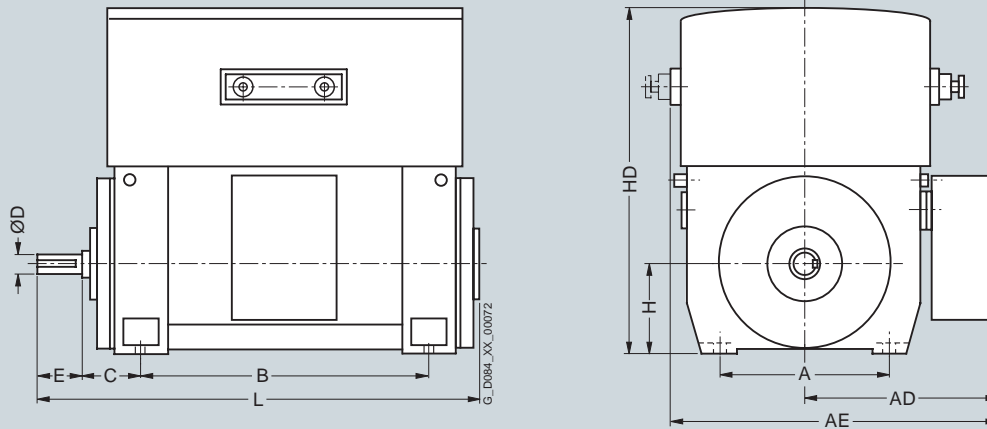
¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings, X cooling – 1RN6 series¹⁾											
4-pole											
1RN6 710-4HJ.0 ²⁾	17700	1500	1500	2560	2000	355	220	280	710	2510	2980
1RN6 712-4HJ.0 ²⁾	18500	1500	1500	2560	2000	355	220	280	710	2510	2980
1RN6 714-4HJ.0 ²⁾	19900	1500	1500	2560	2240	355	220	280	710	2510	3220
1RN6 716-4HJ.0 ²⁾	20900	1500	1500	2560	2240	355	220	280	710	2510	3220
9 ... 11 kV, IM B3 type of construction, rolling-contact bearings, X cooling – 1RN6 series¹⁾											
4-pole											
1RN6 710-4HJ.0 ²⁾	17400	1500	1500	2560	2000	355	220	280	710	2510	2980
1RN6 712-4HJ.0 ²⁾	18200	1500	1500	2560	2000	355	220	280	710	2510	2980
1RN6 714-4HJ.0 ²⁾	19700	1500	1500	2560	2240	355	220	280	710	2510	3220
1RN6 716-4HJ.0 ²⁾	20600	1500	1500	2560	2240	355	220	280	710	2510	3220

¹⁾ The dimensions are also valid for the 1SN4 and 1SL4 series.

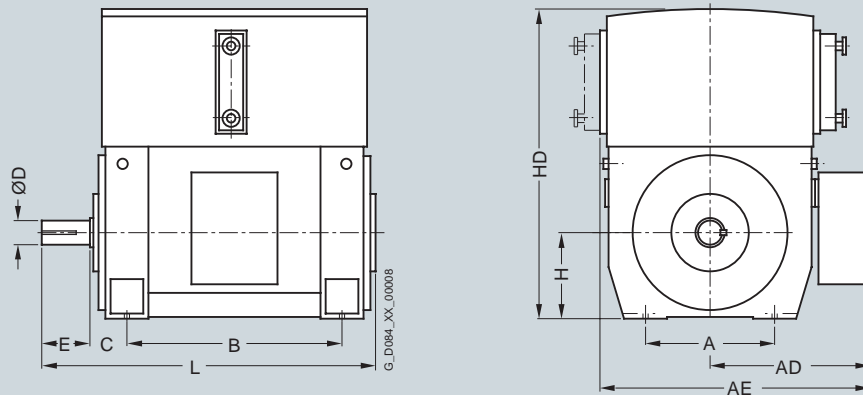
²⁾ Rolling-contact bearings only for 50 Hz version.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, rolling-contact bearings, Z cooling – 1RN6 series¹⁾											
6-pole											
1RN6 710-6HJ.0	16700	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 712-6HJ.0	17400	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 714-6HJ.0	19100	1500	1500	2560	2240	355	240	330	710	2600	3270
1RN6 716-6HJ.0	20200	1500	1500	2560	2240	355	240	330	710	2600	3270
8-pole											
1RN6 710-8HJ.0	16500	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 712-8HJ.0	17300	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 714-8HJ.0	18900	1500	1500	2560	2240	355	240	330	710	2600	3270
1RN6 716-8HJ.0	20000	1500	1500	2560	2240	355	240	330	710	2600	3270
10-pole											
1RN6 710-3HJ.0	16300	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 712-3HJ.0	17100	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 714-3HJ.0	18700	1500	1500	2560	2240	355	240	330	710	2600	3270
1RN6 716-3HJ.0	19900	1500	1500	2560	2240	355	240	330	710	2600	3270

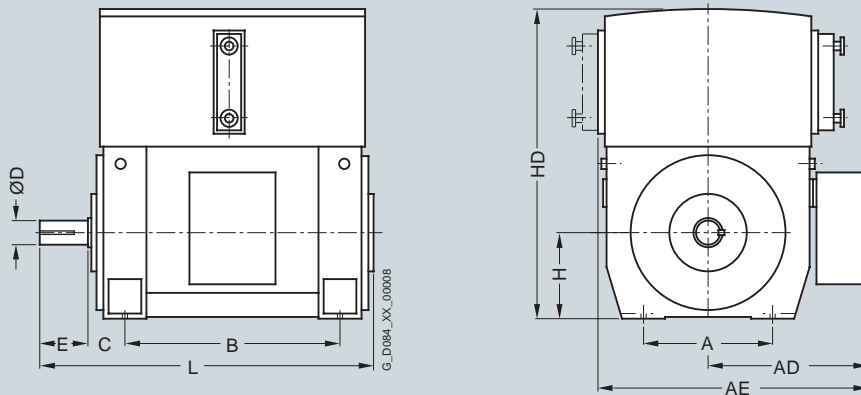
¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ...11kV, IM B3 type of construction, rolling-contact bearings, Z cooling – 1RN6 series¹⁾											
6-pole											
1RN6 710-6HJ.0	16500	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 712-6HJ.0	17200	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 714-6HJ.0	18900	1500	1500	2560	2240	355	240	330	710	2600	3270
1RN6 716-6HJ.0	20000	1500	1500	2560	2240	355	240	330	710	2600	3270
8-pole											
1RN6 710-8HJ.0	16400	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 712-8HJ.0	17100	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 714-8HJ.0	18800	1500	1500	2560	2240	355	240	330	710	2600	3270
1RN6 716-8HJ.0	19800	1500	1500	2560	2240	355	240	330	710	2600	3270
8-pole											
1RN6 710-3HJ.0	16200	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 712-3HJ.0	17000	1500	1500	2560	2000	355	240	330	710	2600	3030
1RN6 714-3HJ.0	18700	1500	1500	2560	2240	355	240	330	710	2600	3270
1RN6 716-3HJ.0	19800	1500	1500	2560	2240	355	240	330	710	2600	3270

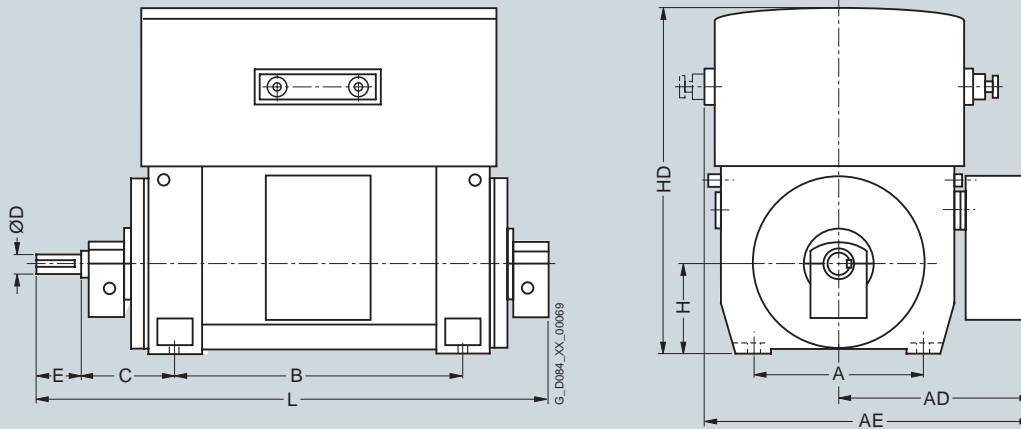
¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings, X cooling – 1RN6 series¹⁾											
2-pole											
1RN6 710-2HJ.0	15900	1500	1500	2560	2000	600	180	240	710	2510	3370
1RN6 712-2HJ.0	16800	1500	1500	2560	2000	600	180	240	710	2510	3370
1RN6 714-2HJ.0	18000	1500	1500	2560	2240	600	180	240	710	2510	3610
1RN6 716-2HJ.0	19000	1500	1500	2560	2240	600	180	240	710	2510	3610
4-pole											
1RN6 710-4HJ.0-Z K96 ²⁾	17700	1500	1500	2560	2000	530	220	280	710	2510	3260
1RN6 712-4HJ.0-Z K96 ²⁾	18500	1500	1500	2560	2000	530	220	280	710	2510	3260
1RN6 714-4HJ.0-Z K96 ²⁾	19900	1500	1500	2560	2240	530	220	280	710	2510	3500
1RN6 716-4HJ.0-Z K96 ²⁾	20900	1500	1500	2560	2240	530	220	280	710	2510	3500

Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings, X cooling – 1RN6 series¹⁾											
2-pole											
1RN6 710-2HJ.0	15800	1500	1500	2560	2000	600	180	240	710	2510	3370
1RN6 712-2HJ.0	16600	1500	1500	2560	2000	600	180	240	710	2510	3370
1RN6 714-2HJ.0	17800	1500	1500	2560	2240	600	180	240	710	2510	3610
1RN6 716-2HJ.0	18800	1500	1500	2560	2240	600	180	240	710	2510	3610
4-pole											
1RN6 710-4HJ.0-Z K96 ²⁾	17400	1500	1500	2560	2000	530	220	280	710	2510	3260
1RN6 712-4HJ.0-Z K96 ²⁾	18200	1500	1500	2560	2000	530	220	280	710	2510	3260
1RN6 714-4HJ.0-Z K96 ²⁾	19700	1500	1500	2560	2240	530	220	280	710	2510	3500
1RN6 716-4HJ.0-Z K96 ²⁾	20600	1500	1500	2560	2240	530	220	280	710	2510	3500

¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

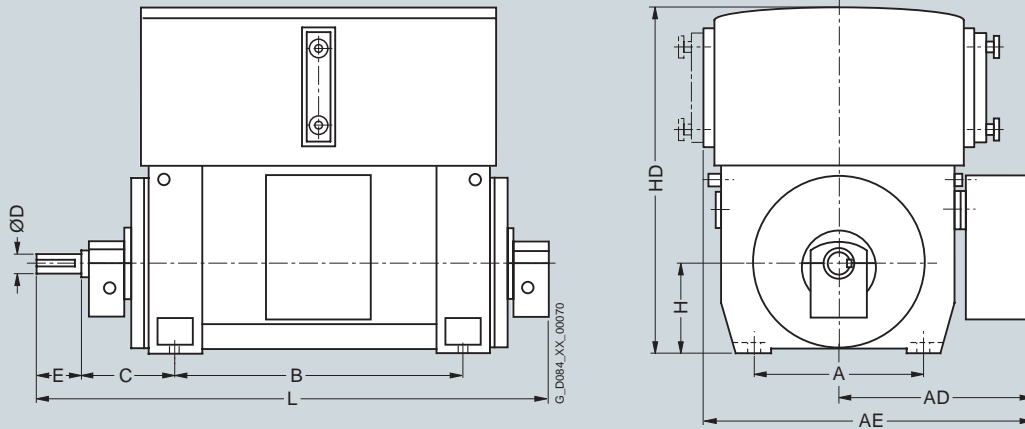
²⁾ For the 60 Hz version, sleeve bearings are standard, "-Z K96" not necessary.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, IM B3 type of construction, sleeve bearings, Z cooling – 1RN6 series¹⁾											
6-pole											
1RN6 710-6HJ.0-Z K96	17700	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 712-6HJ.0-Z K96	18400	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 714-6HJ.0-Z K96	20200	1500	1500	2560	2240	670	240	330	710	2600	3840
1RN6 716-6HJ.0-Z K96	21300	1500	1500	2560	2240	670	240	330	710	2600	3840
8-pole											
1RN6 710-8HJ.0-Z K96	17500	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 712-8HJ.0-Z K96	18300	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 714-8HJ.0-Z K96	20000	1500	1500	2560	2240	670	240	330	710	2600	3840
1RN6 716-8HJ.0-Z K96	21100	1500	1500	2560	2240	670	240	330	710	2600	3840
10-pole											
1RN6 710-3HJ.0-Z K96	17300	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 712-3HJ.0-Z K96	18200	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 714-3HJ.0-Z K96	19800	1500	1500	2560	2240	670	240	330	710	2600	3840
1RN6 716-3HJ.0-Z K96	21000	1500	1500	2560	2240	670	240	330	710	2600	3840

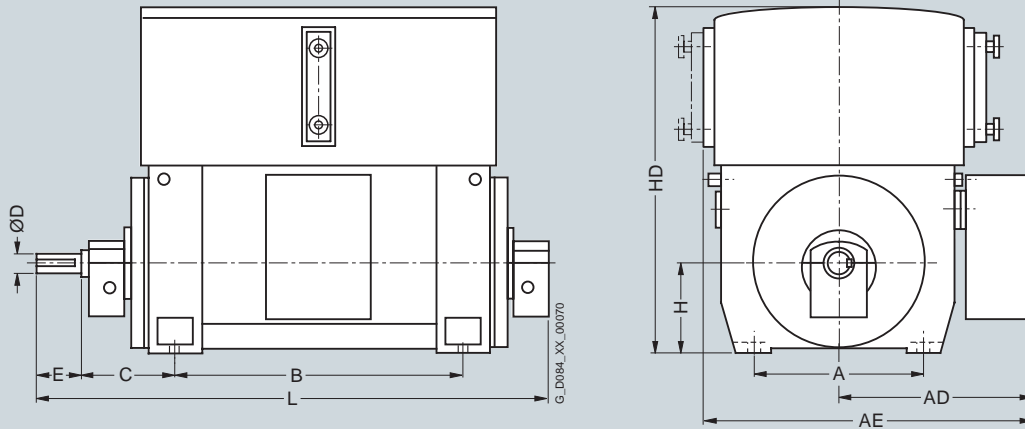
¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
9 ... 11 kV, IM B3 type of construction, sleeve bearings, Z cooling – 1RN6 series¹⁾											
6-pole											
1RN6 710-6HJ.0-Z K96	17500	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 712-6HJ.0-Z K96	18300	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 714-6HJ.0-Z K96	20000	1500	1500	2560	2240	670	240	330	710	2600	3840
1RN6 716-6HJ.0-Z K96	21100	1500	1500	2560	2240	670	240	330	710	2600	3840
8-pole											
1RN6 710-8HJ.0-Z K96	17400	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 712-8HJ.0-Z K96	18200	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 714-8HJ.0-Z K96	19800	1500	1500	2560	2240	670	240	330	710	2600	3840
1RN6 716-8HJ.0-Z K96	20900	1500	1500	2560	2240	670	240	330	710	2600	3840
10-pole											
1RN6 710-3HJ.0-Z K96	17300	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 712-3HJ.0-Z K96	18100	1500	1500	2560	2000	670	240	330	710	2600	3600
1RN6 714-3HJ.0-Z K96	19700	1500	1500	2560	2240	670	240	330	710	2600	3840
1RN6 716-3HJ.0-Z K96	20800	1500	1500	2560	2240	670	240	330	710	2600	3840

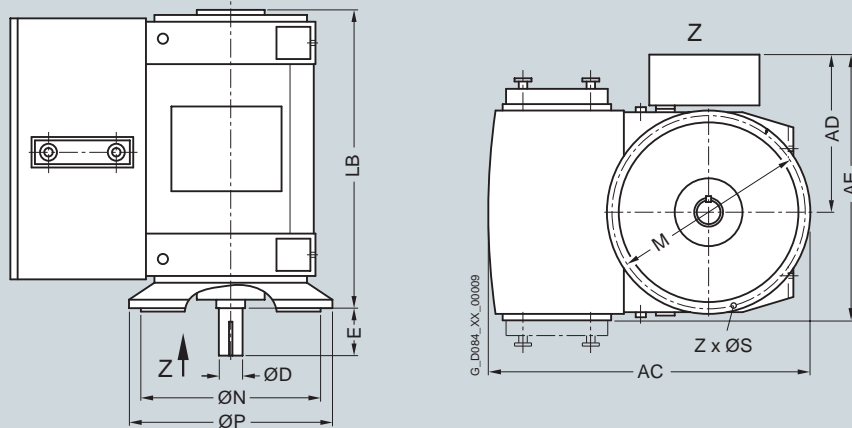
¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, IM V1 type of construction, rolling-contact bearings – 1RN6 series¹⁾												
6-pole												
1RN6 710-6HJ.8	17800	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 712-6HJ.8	18700	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 714-6HJ.8	20400	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
1RN6 716-6HJ.8	21400	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
8-pole												
1RN6 710-8HJ.8	17700	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 712-8HJ.8	18500	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 714-8HJ.8	20100	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
1RN6 716-8HJ.8	21200	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
10-pole												
1RN6 710-3HJ.8	17500	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 712-3HJ.8	18300	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 714-3HJ.8	20000	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
1RN6 716-3HJ.8	21100	2890	1500	2560	240	330	3110	2000	1800	1900	33	24

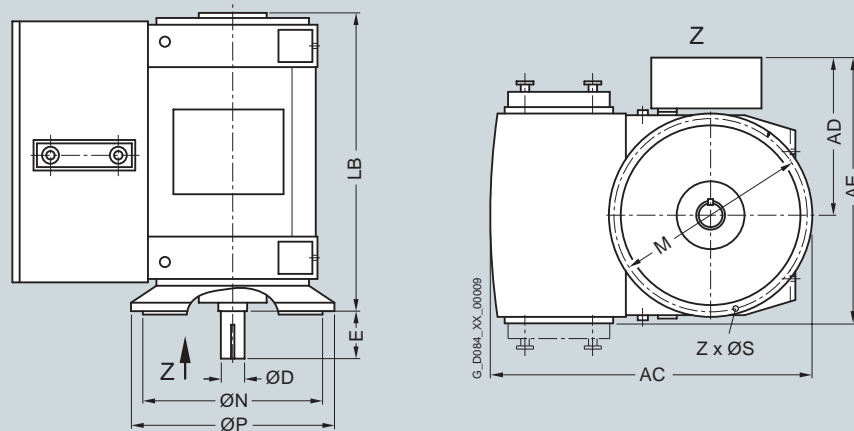
¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

Motors for line operation

Water-cooled motors

H-compact PLUS 1RN4 and 1RN6

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD mm	AE mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
9 ... 11 kV, IM V1 type of construction, rolling-contact bearings – 1RN6 series¹⁾												
6-pole												
1RN6 710-6HJ.8	17800	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 712-6HJ.8	18700	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 714-6HJ.8	20400	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
1RN6 716-6HJ.8	21400	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
8-pole												
1RN6 710-8HJ.8	17700	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 712-8HJ.8	18400	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 714-8HJ.8	20100	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
1RN6 716-8HJ.8	21200	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
10-pole												
1RN6 710-3HJ.8	17500	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 712-3HJ.8	18300	2890	1500	2560	240	330	2870	2000	1800	1900	33	24
1RN6 714-3HJ.8	20000	2890	1500	2560	240	330	3110	2000	1800	1900	33	24
1RN6 716-3HJ.8	21100	2890	1500	2560	240	330	3110	2000	1800	1900	33	24

¹⁾ The dimensions are also valid for the 1SN6 and 1SL6 series.

Motors for line operation

Options and tests

Description of the options

Overview

H-compact and H-compact PLUS motors can be supplied with additional equipment and/or in special versions. In this case, the Order No. is supplemented with a "-Z" and with either one or several order codes.

Example:

1LA4354-4AN60-Z H05 + K16 + L20

As standard, 6 PT 100 slot resistance thermometers without surge arrester for 3-wire or 4-wire circuit from the terminal box are integrated in the stator winding.

The motors are prepared as standard with SPM nipples to monitor the rolling-contact bearings.

Order code	Option description	Remark
	Paint finish	
K26	Special paint finish in the standard color RAL 7030	
Y53	Normal paint finish not in the standard color	
Y54	Special paint finish not in the standard color	
	Documentation	
B00	No motor manual	
B21	Motor manual on CD instead of paper (PDF format)	
B22	Motor manual as e-mail (PDF format) instead of paper	
B23	Motor manual printed on paper, 3x	
B34	Document standard inspection and test plan	
B35	Document balance report	
B36	Document test and inspection description	
B37	Document load characteristics	
B38	Document recommended spare parts	
B41	Document instrumentation list	
B43	Document production schedule: Generated once	
B44	Document production schedule: Updated biweekly	
B45	Document production schedule: Updated monthly	
B48	Document order-specific inspection and test plan	
	Document language	
D00	Documentation in German	
D54	Documentation in Czech	
D55	Documentation in Polish	
D56	Documentation in Russian	
D72	Documentation in Italian	
D73	Documentation in Finnish	
D74	Documentation in Dutch	
D75	Documentation in Turkish	
D76	Documentation in English	Standard
D77	Documentation in French	
D78	Documentation in Spanish	
D79	Documentation in Portuguese	
D80	Documentation in Bulgarian	
D81	Documentation in Norwegian	
D82	Documentation in Hungarian	
D83	Documentation in Swedish	
D84	Documentation in Chinese	

Overview (continued)

Order code	Option description	Remark
Speed monitoring		
H70	Rotary pulse encoder LL 861 900 220 (Leine+Linde)	
H73	Rotary pulse encoder HOG 10 D1024 I (16mm)	
H88	Rotary pulse encoder HOG 11 DN 1024 I (16 mm) with special anti-corrosion protection	For marine applications
H89	Rotary pulse encoder HOG 11 DN 1024 I (16 mm) with integrated shaft grounding and special anti-corrosion protection	For marine applications
Direction of rotation		
K97	Clockwise rotation	
K98	Anticlockwise rotation	
Noise reduction		
L20	Silencer for air inlet	
L21	Silencer for air outlet	Only for H-compact PLUS
L22	Lining of interior space	Only for H-compact PLUS
L23	External metal fan, unique directional	
L25	Rustless grid at inlet silencer	Only for H-compact
Terminal box mounting position		
K09	Terminal box on right-hand side, view from D.E.	
K10	Terminal box on left-hand side, view from D.E.	
K83	Terminal box turned through 90°, cable from D.E.	
K84	Terminal box turned through 90°, cable from N.D.E.	
K85	Terminal box turned through 180°	
M00	Terminal box on left, D.E., cable from D.E.	
M01	Terminal box on left, D.E., cable from top	
Terminal box, main and auxiliary terminal box		
L54	Terminal box 1XB8 751, 6 terminals with 2 cable entries for connection to power supply, rated current > 315 A	
L55	Star-point terminal box 1XA8 711, up to 6 kV, 3 terminals	
L56	Star-point terminal box 1XB8 911, up to 10 kV, 3 terminals	
L57	Star-point terminal box 1XB8 751, up to 6 kV, 6 terminals	
L58	Star-point terminal box 1XB9 011, for installing current transformer (without current transformer)	
L59	Terminal box 1XB8 911 for 1 cable entry for power supply	
M50	Auxiliary terminal box material: Cast iron	
M51	Auxiliary terminal box material: Stainless steel	
M52	Separate auxiliary terminal box for anti-condensation heater	Standard for H-compact PLUS
Terminal box - accessories/equipping		
K59	Cable plug connection, rated voltage 2 to 6.6 kV	
L79	Gland plate for 3 winding ends to connect to the line supply via separately mounted terminal box, 3 m free cable length from the frame	
L80	Gland plate for 3 winding ends to connect to the line supply via separately mounted terminal box, 3 m free cable length from the frame	
L83	Cable plug connection, rated voltage 9 to 11 kV	

Motors for line operation

Options and tests

Description of the options

Overview (continued)

Order code	Option description	Remark
Cooling air monitoring		
A44	1 resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box for cold air temperature	
A45	1 resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box for hot air temperature	
A46	1 double resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box, for cold air temperature	
A47	1 double resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box, for hot air temperature	
A86	1 dial-type thermometer with 2 NO-Contacts for cold air temperature incl. terminal box	
A87	1 dial-type thermometer with 2 NO-Contacts for hot air temperature incl. terminal box	
Bearing version / instrumentation		
H09 + H11	DIN flange type for forced oil lubrication for oil inlet with flowmeter, manometer and throttle valve (incl. counter flange) + DIN flange type forced oil lubrication for oil outlet with sight glass (incl. counter flange)	
H10 + H12	ANSI flange type for forced oil lubrication for oil inlet with flowmeter, manometer and throttle valve (incl. counter flange) + ANSI flange type for forced oil lubrication for oil outlet with sight glass (incl. counter flange)	
H43	DIN flange type for forced oil lubrication for in- and outlet without instruments (with counter flanges)	
H44	ANSI flange type for forced oil lubrication for in- and outlet without instruments (with counter flanges)	
K94	Fixed bearing at D.E. for sleeve bearing	
K96	Sleeve bearing instead of rolling-contact bearing	
L18	D.E. insulation	
L27	N.D.E. insulation	Standard for H-compact PLUS
L60	Forced-circulation oil lubrication (with oil cooling) instead of oil-ring lubrication	
L66	Air cooling, but prepared for future conversion to forced-circulation oil lubrication	
P44	Oil manifold; connections with counter flange; flange flush with the axial shaft face	
Bearing monitoring - sleeve bearings		
A02	Shaft vibration monitoring for sleeve bearings, Bently Nevada system	
A03	Speed monitoring using an inductive proximity switch, Pepperl + Fuchs, incl. terminal box, without evaluation unit	
A39	Prepared for shaft vibration monitoring for sleeve bearings (without monitoring system)	
A41	2 resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for sleeve bearing	
A43	2 double resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for sleeve bearing	
A70	2 dial-type thermometers without contacts	
A71	2 dial-type thermometers with contacts	

Overview (continued)

Order code	Option description	Remark
Bearing monitoring – rolling-contact bearings		
A40	2 resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box for rolling-contact bearings	
A42	2 double resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for rolling-contact bearing	
G50	Shock pulse measuring nipple (SPM) at D.E. and N.D.E.	Standard
H05	Shock pulse measurement (SPM), fixed sensors and distributor box	
H07	Shock pulse measurement (SPM), complete alarm box	
Mechanical versions		
K16	Second shaft extension up to 50 % rated torque	
L81	Reduced vibration severity	
Y55	Non-standard cylindrical shaft extension (an inquiry must be sent to the factory)	
Y85	Oil shrink fit for cylindrical, single-stage shaft extension instead of a key connection	
Certified for pump drives		
E88	Construction supervision for motors for seawater desalination plants where Siemens AG commissions the acceptance authority	
E89	Construction supervision for motors for seawater desalination plants where a third party commissions the acceptance authority	
E90	Pump drive for seawater desalination plants certified according to Lloyds Register	
Marine applications		
E09	Individual acceptance by the classification society (Essential Service)	
E10	Individual acceptance by the classification society (Non-Essential Service)	
E11	Motor for marine applications in accordance with Germanischer Lloyd (Germany), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E21	Motor for marine applications in accordance with Lloyds Registry of Shipping (England), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E31	Motor for marine applications in accordance with Bureau Veritas (France), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E51	Motor for marine applications in accordance with Det Norske Veritas (Scandinavia), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E61	Motor for marine applications in accordance with American Bureau of Shipping (US), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E71	Motor for marine applications in accordance with China Classification Society (China), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
Others / additional options		
H08	Leakage water detection for water cooler	
K52	Degree of protection IP56 non-heavy-sea	
L15	Supporting ring for coupling guard	
L17	Mounting a coupling provided (finish machined and balanced)	
L31	Motor mounting materials for mounting on a steel foundation: Bolts, shims and taper dowels	
L32	Motor mounting materials for mounting on a concrete foundation or concrete base: Threaded bolts, armature plates, sole plates, shims, leveling plates and taper dowels	
L33	Motor mounting materials to mount on a concrete foundation or concrete base: T-head bolts, foundation bolt sleeves, sole plates, shims, leveling plates and taper dowels	
L91	Higher number of starts, > 1000 ... 10000 starts per year, for Cu rotors	
L92	Higher number of starts, > 5000 ... 10000 starts per year, for Al rotors	
P45	External screws made of stainless steel	

Motors for line operation

Options and tests

Description of the options

Overview (continued)

Order code	Option description	Remark
Anti-condensation heating		
L08	Anti-condensation heater, rated voltage 400 V	
L09	Anti-condensation heater, rated voltage 500 V	
M12	Anti-condensation heater 110-120 V (min. 100 V, max. 132 V)	
M13	Anti-condensation heater 220-240 V (min. 200 V, max. 264 V)	Standard for H-compact PLUS
Y83	Anti-condensation heater with other rated voltages, $U =$	
Ambient conditions		
D04	Ambient temperature – 21 to – 30 °C	
M06	For use in sulfurous or hydrogenous atmosphere	
Winding and motor protection		
A12	6 PTC thermistors without lightning arresters	
A23	1 Temperature sensor KTY 84-130	
A65	6 embedded resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box without lightning arresters	Standard
A66	6 embedded resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box with lightning arresters	
Tests with acceptance		
F01	All standard tests (routine test), with acceptance	
F15	Recording of no-load characteristic and determination of core and friction losses, with acceptance	
F17	Recording of short-circuit characteristic and determination of short-circuit losses, with acceptance	
F19	Recording of load characteristic, with acceptance	
F23	Dissipation factor test (tan delta) on 2 (test) coils, with acceptance	
F29	No-load noise measurement, without noise analysis, with acceptance	
F31	Cooling air flow and pressure drop measurement, with acceptance	
F35	Recording of current and torque characteristics during acceleration, with acceptance	
F37	Determination of moment of inertia by retardation method, with acceptance	
F39	Overspeed test, with acceptance	
F41	Recording of residual voltage curve, with acceptance	
F53	Locked-rotor torque and current measurement, with acceptance	
F55	Polarization index measurement, with acceptance	
F61	Impulse or AC voltage test on 2 (test) coils, with acceptance	In addition, specify order code F90
F63	Noise analysis, with acceptance	
F83	Type test for horizontal motors with temperature rise test, if necessary as equivalent load test, with acceptance	
F90	2 test coils	
F93	Type test for vertical motors with temperature rise test, if necessary as equivalent load test, with acceptance	

Overview (continued)

Order code	Option description	Remark
	Tests without acceptance	
F14	Recording of no-load characteristic and determination of core and friction losses, without acceptance	
F16	Recording of short-circuit characteristic and determination of short-circuit losses, without acceptance	
F18	Recording of load characteristic, without acceptance	
F22	Dissipation factor test (tan delta) on 2 (test) coils, without acceptance	In addition, specify order code F90
F28	No-load noise measurement, without noise analysis, without acceptance	
F30	Cooling air flow and pressure drop measurement, without acceptance	
F34	Recording of current and torque characteristics during acceleration, without acceptance	
F36	Determination of moment of inertia by retardation method, without acceptance	
F38	Overspeed test, without acceptance	
F42	"Conformance Test (Wet Test)" to NEMA Standard, without acceptance	
F52	Locked-rotor torque and current measurement, without acceptance	
F54	Polarization index measurement, without acceptance	
F60	Impulse or AC voltage test on 2 (test) coils, without acceptance	In addition, specify order code F90
F62	Noise analysis, without acceptance	
F82	Type test for horizontal motors with temperature rise test, if necessary as equivalent load test, without acceptance	
F90	2 test coils	
F92	Type test for vertical motors with temperature rise test, if necessary as equivalent load test, without acceptance	

Motors for line operation

Notes

2



Motors for converter operation



3/2	Overview	3/58	3.4 to 4.16 kV, 50 Hz (fan/pump/compressor drive)
3/2	<u>With sinusoidal output</u>	3/62	6 to 6.6 kV, 50 Hz (fan/pump/compressor drive)
3/2	<u>With non-sinusoidal output</u>	3/66	2.3 kV, 60 Hz (fan/pump/compressor drive)
3/3	With non-sinusoidal output	3/68	3.4 to 4.16 kV, 60 Hz (fan/pump/compressor drive)
3/3	<u>Air-cooled H-compact 1LA4 motors</u>	3/70	Dimension drawings IM B3 type of construction, rolling-contact bearings
3/6	Selection and ordering data 690 V, 50 Hz (fan/pump/compressor drive)	3/72	IM B3 type of construction, sleeve bearings
3/8	690 V, 50 Hz (constant-torque drive)	3/74	IM V1 type of construction, rolling-contact bearings
3/10	2.3 kV, 50 Hz (fan/pump/compressor drive)	3/77	<u>Air-cooled H-compact PLUS 1RQ4 motors</u>
3/12	3.4 to 4.16 kV, 50 Hz (fan/pump/compressor drive)	3/80	Selection and ordering data 2.3 kV, 50 Hz (fan/pump/compressor drive)
3/14	6 to 6.6 kV, 50 Hz (fan/pump/compressor drive)	3/82	3.4 to 4.16 kV, 50 Hz (fan/pump/compressor drive)
3/16	2.3 kV, 60 Hz (fan/pump/compressor drive)	3/86	6 to 6.6 kV, 50 Hz (fan/pump/compressor drive)
3/18	3.4 to 4.16 kV, 60 Hz (fan/pump/compressor drive)	3/88	2.3 kV, 60 Hz (fan/pump/compressor drive)
3/20	2.3 kV, 50 Hz (constant-torque drive)	3/90	3.4 to 4.16 kV, 60 Hz (fan/pump/compressor drive)
3/22	3.4 to 4.16 kV, 50 Hz (constant-torque drive)	3/92	Dimension drawings IM B3 type of construction, rolling-contact bearings
3/24	6 to 6.6 kV, 50 Hz (constant-torque drive)	3/94	IM B3 type of construction, sleeve bearings
3/26	2.3 kV, 60 Hz (constant-torque drive)	3/96	IM V1 type of construction, rolling-contact bearings
3/28	3.4 to 4.16 kV, 60 Hz (constant-torque drive)	3/99	<u>Water-cooled H-compact 1LH4 motors</u>
3/30	Dimension drawings IM B3 type of construction, rolling-contact bearings	3/100	Selection and ordering data 690 V, 50 Hz
3/31	IM B3 type of construction, sleeve bearings	3/100	2.3 to 4.16 kV, 50 Hz
3/33	IM V1 type of construction, rolling-contact bearings	3/101	Dimension drawings IM B3 type of construction, rolling-contact bearings
3/35	<u>Air-cooled H-compact 1PQ4 motors</u>	3/102	IM V1 type of construction, rolling-contact bearings
3/38	Selection and ordering data 690 V, 50 Hz (constant-torque drive)	3/103	<u>Water-cooled H-compact PLUS 1RN4 motors</u>
3/40	2.3 kV, 50 Hz (constant-torque drive)	3/106	Selection and ordering data 2.3 kV, 50 Hz (fan/pump/compressor drive)
3/42	3.4 to 4.16 kV, 50 Hz (constant-torque drive)	3/108	3.4 to 4.16 kV, 50 Hz (fan/pump/compressor drive)
3/44	6 to 6.6 kV, 50 Hz (constant-torque drive)	3/112	6 to 6.6 kV, 50 Hz (fan/pump/compressor drive)
3/46	2.3 kV, 60 Hz (constant-torque drive)	3/116	2.3 kV, 60 Hz (fan/pump/compressor drive)
3/48	3.4 to 4.16 kV, 60 Hz (constant-torque drive)	3/118	3.4 to 4.16 kV, 60 Hz (fan/pump/compressor drive)
3/50	Dimension drawings IM B3 type of construction, rolling-contact bearings	3/120	Dimension drawings IM B3 type of construction, rolling-contact bearings
3/51	IM B3 type of construction, sleeve bearings	3/122	IM B3 type of construction, sleeve bearings
3/52	IM V1 type of construction, rolling-contact bearings	3/124	IM V1 type of construction, rolling-contact bearings
3/53	<u>Air-cooled H-compact PLUS 1RA4 motors</u>	3/126	Options and tests
3/56	Selection and ordering data 2.3 kV, 50 Hz (fan/pump/compressor drive)	3/126	<u>Description of the options</u>

Motors for converter operation

Overview

With sinusoidal output

Overview

H-compact and H-compact PLUS motors have proven themselves many times over in variable-speed applications.

Conventional line-fed motors are suitable for operation with the ROBICON Perfect Harmony and SINAMICS GM150 and SINAMICS SM150 medium-voltage drive converters with sine-wave filter due to the sinusoidal output. For converter operation, these motors must be equipped with electrically-isolated bearings at the NDE. The technical data can be taken from the tables in Chapter 2.

The insulation system of these motors corresponds to thermal class 155 (F) – and they are generally utilized to thermal class 130 (B).

It must be ensured that the motor does not run-through any critical speed in the required speed control range and that the maximum speed does not exceed the mechanical limit speed of the motor! Please contact your Siemens sales person regarding this check.

With non-sinusoidal output

Overview

H-compact and H-compact PLUS motors have proven themselves many times over in variable-speed applications.

For the H-compact and H-compact PLUS motor series, special versions have been designed for operation with SINAMICS GM150 and SINAMICS SM150 drive converters (in the medium voltage range) or with SINAMICS G and SINAMICS S drive converters (in the low-voltage range).

These motors have, as standard, a reinforced stator winding insulation so that they can be fed from the specified drive converter without requiring a sine-wave filter. Further, for the medium-voltage version of the motors, both bearings are electrically insulated and the shaft is equipped with a grounding system.

The technical data can be taken from the tables in Chapter 3. The motor insulation system corresponds to thermal class 155 (F) and they are generally utilized to thermal class 155 (F).

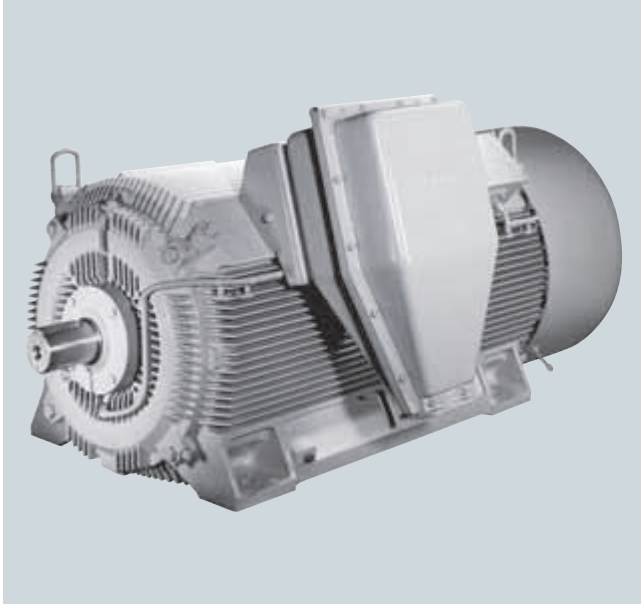
It must be ensured that the motor does not run-through any critical speed in the required speed control range and that the maximum speed does not exceed the mechanical limit speed of the motor! Please contact your Siemens sales person regarding this check.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Overview



Technical data

Technical data at a glance

H-compact 1LA4	
Rated voltage	690 V ... 6.6 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC411
Stator winding insulation	Insulation system, thermal class 155 (F), utilized to 155 (F)
Shaft height	450 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Die-cast aluminum or copper (dependent on the shaft height and number of poles)
Standards	IEC, EN
Frame design	Cast iron with cooling ribs

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Technical data (continued)

Power ranges for IEC motors with reinforced insulation for SINAMICS drive converters without sine-wave filter

1LA4 series

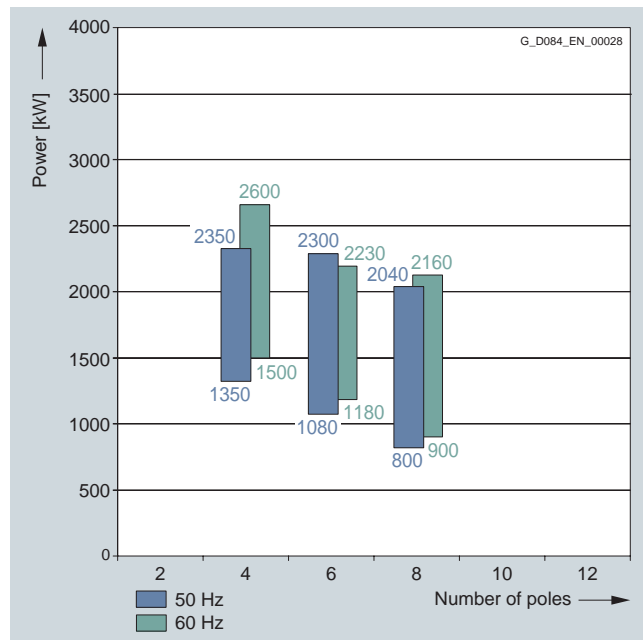
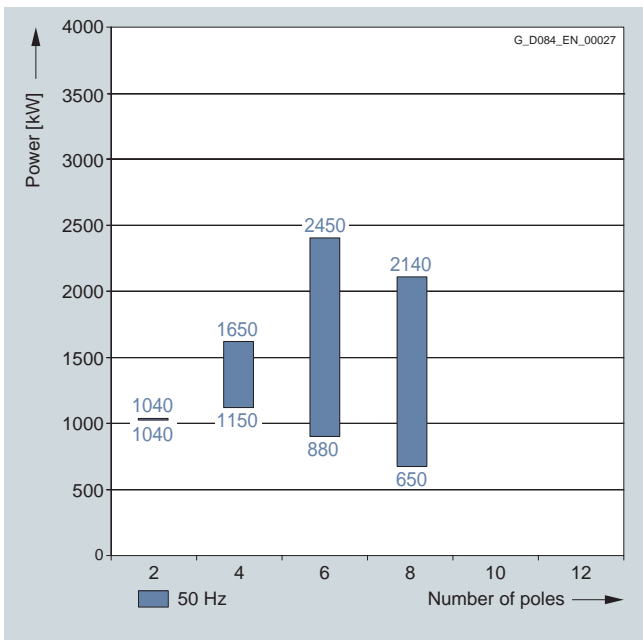
Insulation system, thermal class 155 (F), utilized to 155 (F)

The power data listed here apply for an ambient temperature of 40 °C and an installation altitude ≤ 1000 m.

690 V; 50 Hz

2.3 kV; 50 and 60 Hz

3



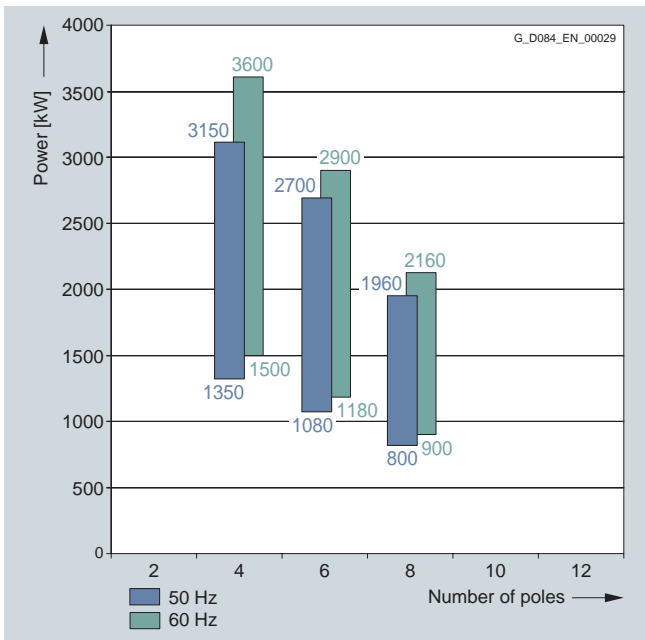
Motors for converter operation

With non-sinusoidal output

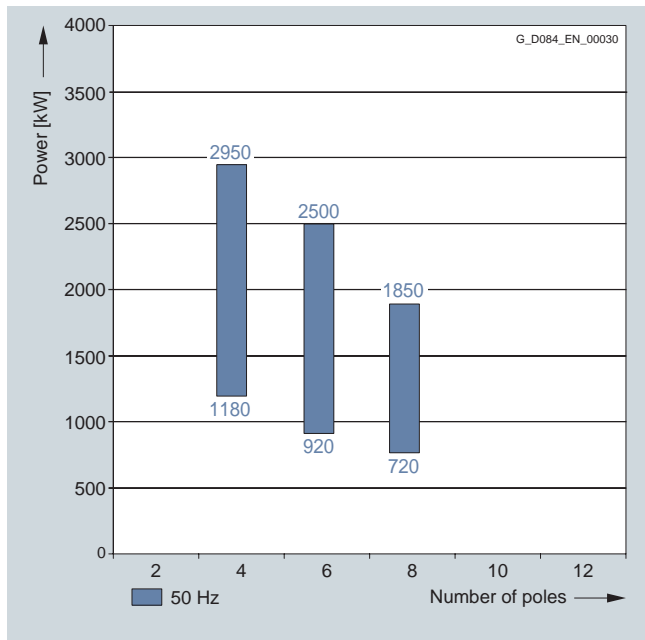
**Air-cooled motors
H-compact 1LA4**

Technical data (continued)

3.4 to 4.16 kV; 50 and 60 Hz



6 to 6.6 kV; 50 Hz



3

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	Low voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 690 V I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
690 V, 50 Hz									
2-pole									
1040	1LA4 454-2CM00	2981	97.2	0.92	970	3331	2.70	22.2	3000
4-pole									
1150	1LA4 454-4AM0	1491	97.2	0.89	1120	7365	2.50	33.9	2400
1300	1LA4 500-4CM0	1491	96.9	0.88	1280	8326	2.10	44.3	2200
1500	1LA4 502-4CM0	1492	97.2	0.87	1480	9600	2.30	49.0	2200
1650	1LA4 504-4CM0	1491	97.2	0.89	1600	10567	2.10	56.2	2200
6-pole									
880	1LA4 454-6AM0	993	97.1	0.86	880	8462	2.50	53.5	2200
1250	1LA4 500-6CM0	995	97.1	0.85	1260	11996	2.35	82.1	2100
1350	1LA4 502-6CM0	995	97.1	0.86	1360	12956	2.35	92.4	2100
1500	1LA4 504-6CM0	995	97.2	0.86	1500	14395	2.35	102.6	2100
1750	1LA4 560-6CM0	995	97.4	0.86	1740	16795	2.60	141.5	2000
1950	1LA4 562-6CM0	995	97.5	0.86	1940	18714	2.60	162.1	2000
2150	1LA4 564-6CM0	995	97.6	0.86	2150	20634	2.60	188.5	2000
2300	1LA4 634-6CM0	997	97.3	0.88	2250	22030	2.70	297.0	O.R. ²⁾
2450	1LA4 636-6CM0	997	97.3	0.89	2350	23495	2.70	323.0	O.R. ²⁾
8-pole									
650	1LA4 454-8AM0	745	96.6	0.80	700	8331	2.40	52.8	2200
900	1LA4 500-8CM0	746	96.6	0.80	970	11520	2.20	81.7	2100
970	1LA4 502-8CM0	746	96.7	0.80	1040	12416	2.30	91.9	2100
1080	1LA4 504-8CM0	746	96.8	0.80	1160	13824	2.30	102.2	2100
1250	1LA4 560-8CM0	746	96.9	0.80	1340	16000	2.60	141.6	2000
1400	1LA4 562-8CM0	746	97.0	0.80	1500	17920	2.60	162.3	2000
1630	1LA4 564-8CM0	746	97.1	0.81	1740	20864	2.60	188.8	2000
1900	1LA4 634-8CM0	746	96.8	0.86	1900	24321	2.65	294.0	O.R. ²⁾
2140	1LA4 636-8CM0	746	97.0	0.85	2150	27357	2.60	320.0	O.R. ²⁾

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
Fan/pump/compressor drive												
2-pole												
1LA4 454-2...	780	2709	97.2	0.92	520	2366	97.1	0.90	260	1878	96.6	0.83
4-pole												
1LA4 454-4...	863	1355	97.2	0.89	575	1183	97.2	0.86	288	939	96.7	0.76
1LA4 500-4...	975	1355	97.0	0.88	650	1183	96.9	0.86	325	939	96.3	0.77
1LA4 502-4...	1125	1356	97.2	0.86	750	1184	97.0	0.84	375	940	96.4	0.73
1LA4 504-4...	1238	1355	97.3	0.89	825	1183	97.2	0.87	413	939	96.7	0.79
6-pole												
1LA4 454-6...	660	902	96.9	0.85	440	788	96.8	0.81	220	626	96.0	0.69
1LA4 500-6...	938	904	97.1	0.85	625	790	96.9	0.81	313	627	96.0	0.69
1LA4 502-6...	1013	904	97.1	0.86	675	790	97.0	0.82	338	627	96.1	0.70
1LA4 504-6...	1125	904	97.2	0.86	750	790	97.0	0.83	375	627	96.2	0.72
1LA4 560-6...	1313	904	97.4	0.86	875	790	97.1	0.81	438	627	96.3	0.70
1LA4 562-6...	1463	904	97.5	0.86	975	790	97.1	0.81	488	627	96.2	0.69
1LA4 564-6...	1613	904	97.6	0.86	1075	790	97.2	0.82	538	627	96.3	0.70
1LA4 634-6...	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾
1LA4 636-6...	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾
8-pole												
1LA4 454-8...	488	677	96.5	0.77	325	591	96.2	0.72	163	469	95.1	0.58
1LA4 500-8...	675	678	96.6	0.78	450	592	96.2	0.73	225	470	95.0	0.60
1LA4 502-8...	728	678	96.7	0.79	485	592	96.3	0.74	243	470	95.1	0.61
1LA4 504-8...	810	678	96.8	0.79	540	592	96.3	0.74	270	470	95.2	0.60
1LA4 560-8...	938	678	96.8	0.78	625	592	96.4	0.73	313	470	95.1	0.58
1LA4 562-8...	1050	678	96.9	0.78	700	592	96.4	0.73	350	470	95.1	0.58
1LA4 564-8...	1223	678	97.0	0.79	815	592	96.4	0.73	408	470	95.2	0.59
1LA4 634-8...	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾
1LA4 636-8...	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾	O.R. ²⁾

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	Low voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 690 V I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
690 V, 50 Hz									
2-pole									
1040	1LA4 454-2CM00	2981	97.2	0.92	970	3331	2.70	22.2	3000
4-pole									
1150	1LA4 454-4AM0	1491	97.2	0.89	1120	7365	2.50	33.9	2400
1300	1LA4 500-4CM0	1491	96.9	0.88	1280	8326	2.10	44.3	2200
1500	1LA4 502-4CM0	1492	97.2	0.87	1480	9600	2.30	49.0	2200
1650	1LA4 504-4CM0	1491	97.2	0.89	1600	10567	2.10	56.2	2200
6-pole									
880	1LA4 454-6AM0	993	96.9	0.86	880	8462	2.50	53.5	2200
1250	1LA4 500-6CM0	995	97.1	0.85	1260	11996	2.35	82.1	2100
1350	1LA4 502-6CM0	995	97.1	0.86	1360	12956	2.35	92.4	2100
1500	1LA4 504-6CM0	995	97.2	0.86	1500	14395	2.35	102.6	2100
1750	1LA4 560-6CM0	995	97.4	0.86	1740	16795	2.60	141.5	2000
1950	1LA4 562-6CM0	995	97.5	0.86	1940	18714	2.60	162.1	2000
2150	1LA4 564-6CM0	995	97.6	0.86	2150	20634	2.60	188.5	2000
2300	1LA4 634-6CM0	997	97.3	0.88	2250	22030	2.70	297.0	1200
2450	1LA4 636-6CM0	997	97.3	0.89	2350	23495	2.70	323.0	1200
8-pole									
650	1LA4 454-8AM0	745	96.6	0.80	700	8331	2.40	52.8	2200
900	1LA4 500-8CM0	746	96.6	0.80	970	11520	2.20	81.7	2100
970	1LA4 502-8CM0	746	96.7	0.80	1040	12416	2.30	91.9	2100
1080	1LA4 504-8CM0	760	96.8	0.80	1160	13570	2.30	102.2	2100
1250	1LA4 560-8CM0	746	96.9	0.80	1340	16000	2.60	141.6	2000
1400	1LA4 562-8CM0	746	97.0	0.80	1500	17920	2.60	162.3	2000
1630	1LA4 564-8CM0	746	97.1	0.81	1740	20864	2.60	188.8	2000
1900	1LA4 634-8CM0	746	96.8	0.86	1900	24321	2.65	294.0	1200
2140	1LA4 636-8CM0	746	97.0	0.85	2150	27357	2.60	320.0	1200

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} rpm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} rpm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} rpm	η %	$\cos \varphi$ [-]
Constant torque drive												
2-pole												
1LA4 454-2...	970	3107	96.9	0.91	800	2563	97.1	0.91	750	2402	97.1	0.91
4-pole												
1LA4 454-4...	1060	6789	97.1	0.88	940	6020	97.3	0.88	900	5764	97.3	0.88
1LA4 500-4...	1200	7685	96.7	0.87	1000	6404	96.9	0.87	940	6020	96.9	0.87
1LA4 502-4...	1400	8960	96.9	0.85	1170	7488	97.1	0.85	1100	7040	97.1	0.85
1LA4 504-4...	1500	9607	97.0	0.88	1250	8006	97.2	0.88	1200	7685	97.2	0.88
6-pole												
1LA4 454-6...	820	7885	97.0	0.85	700	6731	97.2	0.84	660	6347	97.2	0.84
1LA4 500-6...	1180	11324	96.8	0.84	1020	9789	97.0	0.83	960	9213	97.1	0.83
1LA4 502-6...	1280	12284	97.0	0.84	1120	10749	97.1	0.84	1040	9981	97.2	0.84
1LA4 504-6...	1430	13724	97.1	0.84	1260	12092	97.2	0.84	1180	11324	97.3	0.84
1LA4 560-6...	1650	15835	97.1	0.82	1450	13916	97.3	0.83	1350	12956	97.4	0.83
1LA4 562-6...	1850	17754	97.2	0.83	1650	15835	97.3	0.83	1550	14875	97.4	0.83
1LA4 564-6...	2100	20154	97.1	0.83	1850	17754	97.4	0.84	1800	17275	97.4	0.84
1LA4 634-6...	2180	20880	97.2	0.88	1960	18773	97.2	0.87	1875	17959	97.1	0.87
1LA4 636-6...	2325	22269	97.3	0.89	2080	19922	97.2	0.89	1985	19012	97.2	0.89
8-pole												
1LA4 454-8...	580	7434	96.4	0.79	490	6281	96.6	0.76	450	5768	96.6	0.74
1LA4 500-8...	900	11520	96.5	0.81	770	9856	96.5	0.79	710	9088	96.5	0.78
1LA4 502-8...	970	12416	96.6	0.81	850	10880	96.6	0.79	780	9984	96.6	0.78
1LA4 504-8...	1080	13570	96.7	0.81	940	11811	96.7	0.79	880	11057	96.7	0.78
1LA4 560-8...	1150	14720	96.8	0.79	980	12544	96.8	0.77	930	11904	96.8	0.76
1LA4 562-8...	1290	16512	96.9	0.79	1100	14080	96.9	0.78	1050	13440	96.9	0.77
1LA4 564-8...	1500	19200	96.9	0.80	1280	16384	97.0	0.79	1250	16000	97.0	0.78
1LA4 634-8...	1725	22081	96.8	0.85	1560	19969	96.7	0.84	1460	18689	96.7	0.83
1LA4 636-8...	1950	24961	97.0	0.85	1760	22529	96.9	0.84	1670	21377	96.9	0.83

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 50 Hz									
4-pole									
1350	1LA4 500-4CV0	1493	97.0	0.87	400	8634	2.50	42	2200
1500	1LA4 502-4CV0	1493	97.2	0.87	445	9594	2.60	47	2200
1650	1LA4 504-4CV0	1493	97.3	0.88	485	10553	2.60	54	2200
1850	1LA4 560-4CV0	1494	97.5	0.87	550	11824	2.40	79	2000
2100	1LA4 562-4CV0	1494	97.5	0.87	620	13422	2.40	92	2000
2350	1LA4 564-4CV0	1494	97.5	0.87	700	15020	2.40	104	2000
6-pole									
1080	1LA4 500-6CV0	995	97.0	0.86	325	10365	2.40	82	2100
1180	1LA4 502-6CV0	995	97.0	0.87	350	11324	2.40	92	2100
1280	1LA4 504-6CV0	995	97.1	0.87	380	12284	2.40	103	2100
1500	1LA4 560-6CV0	995	97.3	0.86	450	14395	2.60	142	2000
1750	1LA4 562-6CV0	995	97.4	0.86	520	16795	2.70	162	2000
1950	1LA4 564-6CV0	995	97.5	0.87	580	18714	2.50	189	2000
2300	1LA4 632-6CV0	995	97.1	0.89	670	22075	2.40	269	1500
8-pole									
800	1LA4 500-8CV0	745	96.5	0.81	255	10254	2.10	82	2100
850	1LA4 502-8CV0	745	96.5	0.81	275	10895	2.10	92	2100
950	1LA4 504-8CV0	745	96.5	0.81	305	12177	2.10	102	2100
1120	1LA4 560-8CV0	745	96.8	0.83	350	14356	2.20	142	2000
1250	1LA4 562-8CV0	745	96.9	0.83	390	16022	2.20	162	2000
1450	1LA4 564-8CV0	745	97.0	0.83	450	18585	2.20	189	2000
1650	1LA4 632-8CV0	745	96.7	0.84	510	21151	2.20	265	1500
1850	1LA4 634-8CV0	746	96.8	0.84	570	23683	2.40	294	1500
2040	1LA4 636-8CV0	745	96.9	0.85	620	26150	2.10	320	1500

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1LA4 500-4...	1013	1357	97.0	0.87	675	1185	96.9	0.84	338	941	96.5	0.73
1LA4 502-4...	1125	1357	97.1	0.87	750	1185	97.0	0.84	375	941	96.5	0.73
1LA4 504-4...	1238	1357	97.2	0.88	825	1185	97.1	0.86	413	941	96.8	0.77
1LA4 560-4...	1388	1357	97.4	0.85	925	1186	97.2	0.81	463	941	96.8	0.68
1LA4 562-4...	1575	1357	97.5	0.86	1050	1186	97.4	0.83	525	941	97.0	0.71
1LA4 564-4...	1763	1357	97.5	0.86	1175	1186	97.4	0.83	588	941	97.0	0.72

6-pole

1LA4 500-6...	810	904	96.9	0.86	540	790	96.7	0.83	270	627	96.2	0.72
1LA4 502-6...	885	904	97.0	0.86	590	790	97.0	0.84	295	627	96.4	0.73
1LA4 504-6...	960	904	97.1	0.87	640	790	97.0	0.84	320	627	96.5	0.74
1LA4 560-6...	1125	904	97.3	0.85	750	790	97.2	0.81	375	627	96.7	0.70
1LA4 562-6...	1313	904	97.4	0.85	875	790	97.2	0.82	438	627	96.7	0.70
1LA4 564-6...	1463	904	97.5	0.86	975	790	97.3	0.84	488	627	96.9	0.73
1LA4 632-6...	1725	904	97.2	0.89	1150	789	97.0	0.86	575	626	96.7	0.77

8-pole

1LA4 500-8...	600	677	96.3	0.80	400	591	96.1	0.75	200	469	95.2	0.62
1LA4 502-8...	638	677	96.4	0.80	425	591	96.1	0.75	213	469	95.2	0.62
1LA4 504-8...	713	677	96.4	0.80	475	591	96.2	0.75	238	469	95.2	0.62
1LA4 560-8...	840	677	96.8	0.82	560	591	96.6	0.78	280	469	96.1	0.66
1LA4 562-8...	938	677	96.9	0.82	625	591	96.7	0.78	313	469	96.1	0.66
1LA4 564-8...	1088	677	97.0	0.82	725	591	96.8	0.78	363	469	96.1	0.66
1LA4 632-8...	1240	677	96.6	0.83	825	592	96.4	0.79	415	470	95.8	0.68
1LA4 634-8...	1390	678	96.7	0.82	925	592	96.4	0.78	465	470	95.7	0.66
1LA4 636-8...	1530	677	96.8	0.84	1020	592	96.7	0.80	510	470	96.1	0.70

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
4-pole									
1350	1LA4 500-4CV ■■■	1493	97.0	0.87	280	8634	2.50	42	2200
1500	1LA4 502-4CV ■■■	1493	97.2	0.87	310	9594	2.60	47	2200
1650	1LA4 504-4CV ■■■	1493	97.3	0.88	335	10553	2.60	54	2200
1850	1LA4 560-4CV ■■■	1494	97.5	0.87	380	11824	2.40	79	2000
2100	1LA4 562-4CV ■■■	1494	97.5	0.87	435	13422	2.40	92	2000
2350	1LA4 564-4CV ■■■	1494	97.5	0.87	485	15020	2.40	104	2000
2600	1LA4 632-4CV ■■0	1494	97.5	0.88	530	16620	2.20	157	1500
2900	1LA4 634-4CV ■■0	1494	97.6	0.88	590	18537	2.20	171	1500
3150	1LA4 636-4CV ■■0	1494	97.7	0.88	640	20136	2.20	186	1500
6-pole									
1080	1LA4 500-6CV ■■■	995	97.0	0.86	225	10365	2.40	82	2100
1180	1LA4 502-6CV ■■■	995	97.0	0.87	245	11324	2.40	92	2100
1280	1LA4 504-6CV ■■■	995	97.1	0.87	265	12284	2.40	103	2100
1500	1LA4 560-6CV ■■■	995	97.3	0.86	315	14395	2.60	142	2000
1750	1LA4 562-6CV ■■■	995	97.4	0.86	365	16795	2.70	162	2000
1950	1LA4 564-6CV ■■■	995	97.5	0.87	400	18714	2.50	189	2000
2220	1LA4 632-6CV ■■■	995	97.1	0.89	450	21308	2.30	269	1500
2480	1LA4 634-6CV ■■■	995	97.2	0.89	500	23803	2.20	297	1500
2700	1LA4 636-6CV ■■■	995	97.3	0.89	550	25915	2.20	323	1500
8-pole									
800	1LA4 500-8CV ■■■	745	96.5	0.81	180	10254	2.10	82	2100
850	1LA4 502-8CV ■■■	745	96.5	0.81	190	10895	2.10	92	2100
950	1LA4 504-8CV ■■■	745	96.5	0.81	215	12177	2.10	102	2100
1120	1LA4 560-8CV ■■■	745	96.8	0.83	245	14356	2.20	142	2000
1250	1LA4 562-8CV ■■■	745	96.9	0.83	270	16022	2.20	162	2000
1450	1LA4 564-8CV ■■■	745	97.0	0.83	315	18585	2.20	189	2000
1570	1LA4 632-8CV ■■■	745	96.6	0.84	340	20126	2.30	265	1500
1780	1LA4 634-8CV ■■■	745	96.7	0.84	385	22817	2.30	294	1500
1960	1LA4 636-8CV ■■■	745	96.8	0.85	415	25125	2.20	320	1500

Voltage code:

4.16 kV, 50 Hz

4

Other voltage

9

Type of construction:

IM B3

0

IM V1 (with canopy)

4

IM V1 (without canopy)

8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1LA4 500-4...	1013	1357	97.0	0.87	675	1185	96.9	0.84	338	941	96.5	0.73
1LA4 502-4...	1125	1357	97.1	0.87	750	1185	97.0	0.84	375	941	96.5	0.73
1LA4 504-4...	1238	1357	97.2	0.88	825	1185	97.1	0.86	413	941	96.8	0.77
1LA4 560-4...	1388	1357	97.4	0.85	925	1186	97.2	0.81	463	941	96.8	0.68
1LA4 562-4...	1575	1357	97.5	0.86	1050	1186	97.4	0.83	525	941	97.0	0.71
1LA4 564-4...	1763	1357	97.5	0.86	1175	1186	97.4	0.83	588	941	97.0	0.72
1LA4 632-4...	1950	1357	97.5	0.87	1300	1185	97.5	0.85	650	940	97.2	0.76
1LA4 634-4...	2175	1357	97.6	0.87	1450	1185	97.6	0.85	725	940	97.3	0.76
1LA4 636-4...	2363	1357	97.6	0.87	1575	1185	97.6	0.85	788	940	97.4	0.77
6-pole												
1LA4 500-6...	810	904	96.9	0.86	540	790	96.7	0.83	270	627	96.2	0.72
1LA4 502-6...	885	904	97.0	0.86	590	790	97.0	0.84	295	627	96.4	0.73
1LA4 504-6...	960	904	97.1	0.87	640	790	97.0	0.84	320	627	96.5	0.74
1LA4 560-6...	1125	904	97.3	0.85	750	790	97.2	0.81	375	627	96.7	0.70
1LA4 562-6...	1313	904	97.4	0.85	875	790	97.2	0.82	438	627	96.7	0.70
1LA4 564-6...	1463	904	97.5	0.86	975	790	97.3	0.84	488	627	96.9	0.73
1LA4 632-6...	1665	904	97.1	0.89	1110	789	97.1	0.87	555	626	96.7	0.79
1LA4 634-6...	1860	904	97.2	0.89	1240	789	97.2	0.87	620	626	96.9	0.80
1LA4 636-6...	2025	905	97.3	0.89	1350	789	97.3	0.87	675	627	96.9	0.80
8-pole												
1LA4 500-8...	600	677	96.3	0.80	400	591	96.1	0.75	200	469	95.2	0.62
1LA4 502-8...	638	677	96.4	0.80	425	591	96.1	0.75	213	469	95.2	0.62
1LA4 504-8...	713	677	96.4	0.80	475	591	96.2	0.75	238	469	95.2	0.62
1LA4 560-8...	840	677	96.8	0.82	560	591	96.6	0.78	280	469	96.1	0.66
1LA4 562-8...	938	677	96.9	0.82	625	591	96.7	0.78	313	469	96.1	0.66
1LA4 564-8...	1088	677	97.0	0.82	725	591	96.8	0.78	363	469	96.1	0.66
1LA4 632-8...	1180	678	96.6	0.82	785	592	96.5	0.78	395	470	95.9	0.66
1LA4 634-8...	1335	678	96.7	0.83	890	592	96.5	0.79	445	470	95.9	0.68
1LA4 636-8...	1470	677	96.8	0.84	980	592	96.7	0.80	490	470	96.1	0.70

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
4-pole									
1180	1LA4 500-4CV	1493	96.8	0.87	122	7548	2.60	42	2200
1300	1LA4 502-4CV	1493	96.9	0.87	134	8315	2.60	47	2200
1450	1LA4 504-4CV	1493	97.1	0.88	148	9275	2.50	54	2200
1600	1LA4 560-4CV	1494	97.2	0.86	168	10228	2.60	79	2000
1850	1LA4 562-4CV	1494	97.4	0.87	190	11826	2.60	92	2000
2100	1LA4 564-4CV	1494	97.5	0.87	215	13424	2.60	104	2000
2400	1LA4 632-4CV 0	1494	97.3	0.88	245	15341	2.40	157	1500
2700	1LA4 634-4CV 0	1494	97.4	0.87	280	17259	2.40	171	1500
2950	1LA4 636-4CV 0	1494	97.5	0.87	305	18857	2.40	186	1500
6-pole									
920	1LA4 500-6CV	995	96.6	0.86	97	8830	2.50	82	2100
1030	1LA4 502-6CV	995	96.7	0.87	108	9886	2.40	92	2100
1120	1LA4 504-6CV	995	96.8	0.87	116	10750	2.40	103	2100
1400	1LA4 560-6CV	996	97.1	0.86	146	13424	2.70	142	2000
1550	1LA4 562-6CV	996	97.2	0.86	162	14862	2.70	162	2000
1700	1LA4 564-6CV	996	97.3	0.87	176	16300	2.50	189	2000
2050	1LA4 632-6CV	995	97.0	0.88	210	19676	2.40	269	1500
2300	1LA46 34-6CV	995	97.1	0.89	235	22075	2.40	297	1500
2500	1LA4 636-6CV	995	97.1	0.88	255	23995	2.40	323	1500
8-pole									
720	1LA4 500-8CV	746	96.0	0.8	82	9217	2.30	82	2100
760	1LA45 02-8CV	746	96.2	0.81	85	9729	2.30	92	2100
820	1LA4 504-8CV	746	96.3	0.81	92	10497	2.30	102	2100
1050	1LA4 560-8CV	745	96.6	0.82	116	13460	2.40	142	2000
1180	1LA4 562-8CV	745	96.7	0.82	130	15126	2.40	162	2000
1350	1LA4 564-8CV	745	96.8	0.83	146	17305	2.40	189	2000
1500	1LA4 632-8CV	746	96.5	0.83	164	19202	2.50	265	1500
1700	1LA4 634-8CV	746	96.6	0.83	186	21763	2.50	294	1500
1850	1LA4 636-8CV	746	96.7	0.83	200	23683	2.50	320	1500

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1LA4 500-4...	885	1356	96.8	0.86	590	1185	96.7	0.82	295	941	96.3	0.72
1LA4 502-4...	975	1356	96.9	0.87	650	1185	96.8	0.83	325	941	96.5	0.73
1LA4 504-4...	1088	1356	97.1	0.87	725	1185	97.0	0.85	363	941	96.7	0.75
1LA4 560-4...	1200	1357	97.1	0.85	800	1186	97.0	0.80	400	941	96.7	0.68
1LA4 562-4...	1388	1357	97.3	0.86	925	1186	97.2	0.83	463	941	96.9	0.72
1LA4 564-4...	1575	1357	97.5	0.86	1050	1186	97.4	0.83	525	941	97.2	0.73
1LA4 632-4...	1800	1357	97.2	0.88	1200	1186	97.1	0.85	600	941	96.9	0.76
1LA4 634-4...	2025	1357	97.4	0.86	1350	1186	97.3	0.83	675	941	97.0	0.73
1LA4 636-4...	2213	1357	97.5	0.86	1475	1186	97.4	0.83	738	941	97.1	0.73

6-pole

1LA4 500-6...	690	904	96.6	0.85	460	790	96.5	0.83	230	627	96.1	0.72
1LA4 502-6...	773	904	96.7	0.86	515	790	96.7	0.83	258	627	96.3	0.74
1LA4 504-6...	840	904	96.8	0.87	560	790	96.8	0.84	280	627	96.4	0.74
1LA4 560-6...	1050	905	97.1	0.85	700	791	97.0	0.81	350	627	96.5	0.69
1LA4 562-6...	1163	905	97.1	0.85	775	791	97.0	0.82	388	627	96.6	0.71
1LA4 564-6...	1275	905	97.3	0.87	850	791	97.2	0.84	425	627	96.8	0.74
1LA4 632-6...	1538	904	96.9	0.88	1025	790	96.7	0.86	513	627	96.3	0.77
1LA46 34-6...	1725	904	97.1	0.89	1150	790	97.0	0.86	575	627	96.6	0.79
1LA4 636-6...	1875	904	97.1	0.88	1250	790	97.0	0.86	625	627	96.6	0.78

8-pole

1LA4 500-8...	540	678	96.0	0.79	360	592	95.8	0.74	180	470	95.1	0.62
1LA45 02-8...	570	678	96.2	0.80	380	592	96.0	0.76	190	470	95.3	0.64
1LA4 504-8...	615	678	96.3	0.79	410	592	96.0	0.75	205	470	95.2	0.63
1LA4 560-8...	788	677	96.5	0.81	525	591	96.4	0.77	263	469	95.8	0.65
1LA4 562-8...	885	677	96.6	0.81	590	591	96.4	0.77	295	469	95.8	0.65
1LA4 564-8...	1013	677	96.8	0.81	675	591	96.6	0.76	338	469	96.0	0.64
1LA4 632-8...	1125	678	96.4	0.81	750	592	96.1	0.77	375	470	95.4	0.65
1LA4 634-8...	1275	678	96.5	0.81	850	592	96.2	0.77	425	470	95.5	0.65
1LA4 636-8...	1388	678	96.6	0.82	925	592	96.3	0.77	463	470	95.6	0.65

3

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 60 Hz									
4-pole									
1500	1LA4 500-4CV1 ■	1793	96.8	0.87	445	7989	2.50	42	2200
1650	1LA4 502-4CV1 ■	1793	96.8	0.87	490	8787	2.50	47	2200
1800	1LA4 504-4CV1 ■	1793	96.8	0.87	540	9586	2.50	54	2200
2000	1LA4 560-4CV1 ■	1794	97.3	0.87	590	10645	2.40	79	2000
2300	1LA4 562-4CV1 ■	1794	97.3	0.87	680	12242	2.40	92	2000
2600	1LA4 564-4CV1 ■	1794	97.3	0.87	770	13839	2.40	104	2000
6-pole									
1180	1LA4 500-6CV1 ■	1195	96.8	0.87	350	9429	2.40	82	2100
1320	1LA4 502-6CV1 ■	1195	97.0	0.87	395	10548	2.40	92	2100
1450	1LA4 504-6CV1 ■	1195	97.1	0.87	430	11587	2.50	103	2100
1650	1LA4 560-6CV1 ■	1195	97.2	0.86	495	13185	2.60	142	2000
1900	1LA4 562-6CV1 ■	1195	97.4	0.86	570	15183	2.60	162	2000
2150	1LA4 564-6CV1 ■	1195	97.5	0.87	640	17180	2.60	189	2000
2230	1LA4 632-6CV1 ■	1195	96.7	0.89	650	17825	2.40	234	1500
8-pole									
900	1LA4 500-8CV1 ■	896	96.4	0.79	295	9592	2.30	82	2100
950	1LA4 502-8CV1 ■	896	96.4	0.79	315	10124	2.30	92	2100
1050	1LA4 504-8CV1 ■	896	96.4	0.79	345	11190	2.30	102	2100
1200	1LA4 560-8CV1 ■	895	96.8	0.83	375	12803	2.20	142	2000
1380	1LA4 562-8CV1 ■	895	96.8	0.83	430	14724	2.30	162	2000
1580	1LA4 564-8CV1 ■	895	96.9	0.83	495	16857	2.40	189	2000
1800	1LA4 632-8CV1 ■	895	96.6	0.85	550	19205	2.10	265	1500
2000	1LA4 634-8CV1 ■	895	96.7	0.86	600	21339	2.00	294	1500
2160	1LA4 636-8CV1 ■	895	96.8	0.86	650	23046	2.10	320	1500

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1LA4 500-4...	1125	1629	96.5	0.86	750	1423	96.2	0.82	375	1130	95.5	0.71
1LA4 502-4...	1238	1629	96.7	0.86	825	1423	96.4	0.83	413	1130	95.7	0.73
1LA4 504-4...	1350	1629	96.8	0.87	900	1423	96.5	0.84	450	1130	95.9	0.75
1LA4 560-4...	1500	1630	97.1	0.86	1000	1424	96.9	0.82	500	1130	96.4	0.72
1LA4 562-4...	1725	1630	97.2	0.86	1150	1424	97.2	0.83	575	1130	96.8	0.74
1LA4 564-4...	1950	1630	97.3	0.87	1300	1424	97.3	0.84	650	1130	96.9	0.74

6-pole

1LA4 500-6...	885	1086	96.8	0.86	590	949	96.6	0.83	295	753	96.0	0.74
1LA4 502-6...	990	1086	96.9	0.86	660	949	96.7	0.83	330	753	96.0	0.74
1LA4 504-6...	1088	1086	97.0	0.86	725	949	96.7	0.83	363	753	96.0	0.73
1LA4 560-6...	1238	1086	97.2	0.85	825	949	97.0	0.82	413	753	96.3	0.72
1LA4 562-6...	1425	1086	97.3	0.85	950	949	97.0	0.82	475	753	96.4	0.72
1LA4 564-6...	1613	1086	97.4	0.86	1075	949	97.1	0.83	538	753	96.5	0.73
1LA4 632-6...	1675	1086	96.6	0.88	1115	945	96.4	0.85	560	755	95.8	0.77

8-pole

1LA4 500-8...	675	814	96.3	0.79	450	711	95.8	0.74	225	564	94.8	0.62
1LA4 502-8...	713	814	96.3	0.78	475	711	95.8	0.73	238	564	94.8	0.60
1LA4 504-8...	788	814	96.3	0.78	525	711	95.9	0.73	263	564	94.9	0.61
1LA4 560-8...	900	813	96.7	0.82	600	710	96.4	0.78	300	564	95.7	0.66
1LA4 562-8...	1035	813	96.8	0.82	690	710	96.4	0.77	345	564	95.7	0.66
1LA4 564-8...	1185	813	96.8	0.81	790	710	96.4	0.76	395	564	95.7	0.65
1LA4 632-8...	1350	814	96.4	0.84	900	708	96.1	0.81	450	566	95.5	0.71
1LA4 634-8...	1500	814	96.6	0.85	1000	708	96.4	0.82	500	565	95.8	0.73
1LA4 636-8...	1620	814	96.7	0.84	1080	708	96.5	0.82	540	565	95.9	0.72

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 60 Hz									
4-pole									
1500	1LA4 500-4CV5	1793	96.8	0.87	245	7989	2.50	42	2200
1650	1LA4 502-4CV5	1793	96.8	0.87	270	8787	2.50	47	2200
1800	1LA4 504-4CV5	1793	96.8	0.87	295	9586	2.50	54	2200
2000	1LA4 560-4CV5	1794	97.3	0.87	330	10645	2.40	79	2000
2300	1LA4 562-4CV5	1794	97.3	0.87	375	12242	2.40	92	2000
2600	1LA4 564-4CV5	1794	97.3	0.87	425	13839	2.40	104	2000
2950	1LA4 632-4CV5 0	1794	97.2	0.87	485	15702	2.40	157	1500
3320	1LA4 634-4CV5 0	1794	97.3	0.87	540	17672	2.20	171	1500
3600	1LA4 636-4CV5 0	1795	97.5	0.87	590	19161	2.40	186	1500
6-pole									
1180	1LA4 500-6CV5	1195	96.8	0.87	194	9429	2.40	82	2100
1320	1LA4 502-6CV5	1195	97.0	0.87	215	10548	2.40	92	2100
1450	1LA4 504-6CV5	1195	97.1	0.87	240	11587	2.50	103	2100
1650	1LA4 560-6CV5	1195	97.2	0.86	275	13185	2.60	142	2000
1900	1LA4 562-6CV5	1195	97.4	0.86	315	15183	2.60	162	2000
2150	1LA4 564-6CV5	1195	97.5	0.87	350	17180	2.60	189	2000
2400	1LA4 632-6CV5	1195	96.8	0.89	385	19183	2.40	269	1500
2700	1LA4 634-6CV5	1195	96.9	0.89	435	21587	2.20	297	1500
2900	1LA4 636-6CV5	1195	97.0	0.89	465	23181	2.20	323	1500
8-pole									
900	1LA4 500-8CV5	896	96.4	0.79	164	9592	2.30	82	2100
950	1LA4 502-8CV5	896	96.4	0.79	174	10124	2.30	92	2100
1050	1LA4 504-8CV5	896	96.4	0.79	192	11190	2.30	102	2100
1200	1LA4 560-8CV5	895	96.8	0.83	205	12803	2.20	142	2000
1380	1LA4 562-8CV5	895	96.8	0.83	240	14724	2.30	162	2000
1580	1LA4 564-8CV5	895	96.9	0.83	275	16857	2.40	189	2000
1800	1LA4 632-8CV5	895	96.6	0.85	305	19205	2.20	265	1500
1960	1LA4 634-8CV5	895	96.7	0.86	325	20912	2.00	294	1500
2160	1LA4 636-8CV5	895	96.8	0.86	360	23046	2.10	320	1500

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1LA4 500-4...	1125	1629	96.5	0.86	750	1423	96.2	0.82	375	1130	95.5	0.71
1LA4 502-4...	1238	1629	96.7	0.86	825	1423	96.4	0.83	413	1130	95.7	0.73
1LA4 504-4...	1350	1629	96.8	0.87	900	1423	96.5	0.84	450	1130	95.9	0.75
1LA4 560-4...	1500	1630	97.1	0.86	1000	1424	96.9	0.82	500	1130	96.4	0.72
1LA4 562-4...	1725	1630	97.2	0.86	1150	1424	97.2	0.83	575	1130	96.8	0.74
1LA4 564-4...	1950	1630	97.3	0.87	1300	1424	97.3	0.84	650	1130	96.9	0.74
1LA4 632-4...	2215	1630	97.2	0.86	1475	1419	97.0	0.83	740	1132	96.6	0.73
1LA4 634-4...	2490	1631	97.3	0.86	1660	1419	97.2	0.83	830	1132	96.8	0.74
1LA4 636-4...	2700	1631	97.4	0.87	1800	1419	97.2	0.83	900	1132	96.8	0.74
6-pole												
1LA4 500-6...	885	1086	96.8	0.86	590	949	96.6	0.83	295	753	96.0	0.74
1LA4 502-6...	990	1086	96.9	0.86	660	949	96.7	0.83	330	753	96.0	0.74
1LA4 504-6...	1088	1086	97.0	0.86	725	949	96.7	0.83	363	753	96.0	0.73
1LA4 560-6...	1238	1086	97.2	0.85	825	949	97.0	0.82	413	753	96.3	0.72
1LA4 562-6...	1425	1086	97.3	0.85	950	949	97.0	0.82	475	753	96.4	0.72
1LA4 564-6...	1613	1086	97.4	0.86	1075	949	97.1	0.83	538	753	96.5	0.73
1LA4 632-6...	1800	1086	96.7	0.88	1200	945	96.5	0.86	600	755	95.9	0.78
1LA4 634-6...	2025	1086	97.0	0.89	1350	945	96.8	0.87	675	755	96.4	0.80
1LA4 636-6...	2175	1086	97.0	0.89	1450	945	96.9	0.87	725	755	96.4	0.80
8-pole												
1LA4 500-8...	675	814	96.3	0.79	450	711	95.8	0.74	225	564	94.8	0.62
1LA4 502-8...	713	814	96.3	0.78	475	711	95.8	0.73	238	564	94.8	0.60
1LA4 504-8...	788	814	96.3	0.78	525	711	95.9	0.73	263	564	94.9	0.61
1LA4 560-8...	900	813	96.7	0.82	600	710	96.4	0.78	300	564	95.7	0.66
1LA4 562-8...	1035	813	96.8	0.82	690	710	96.4	0.77	345	564	95.7	0.66
1LA4 564-8...	1185	813	96.8	0.81	790	710	96.4	0.76	395	564	95.7	0.65
1LA4 632-8...	1350	814	96.3	0.83	900	709	95.9	0.79	450	566	95.1	0.67
1LA4 634-8...	1470	814	96.5	0.84	980	708	96.3	0.82	490	566	95.8	0.72
1LA4 636-8...	1620	814	96.6	0.84	1080	708	96.4	0.81	540	566	95.8	0.72

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 50 Hz									
4-pole									
1350	1LA4 500-4CV0	1493	97.0	0.87	400	8634	2.50	42	2200
1500	1LA4 502-4CV0	1493	97.2	0.87	445	9594	2.60	47	2200
1650	1LA4 504-4CV0	1493	97.3	0.88	485	10553	2.60	54	2200
1850	1LA4 560-4CV0	1494	97.5	0.87	550	11824	2.40	79	2000
2100	1LA4 562-4CV0	1494	97.5	0.87	620	13422	2.40	92	2000
2350	1LA4 564-4CV0	1494	97.5	0.87	700	15020	2.40	104	2000
6-pole									
1080	1LA4 500-6CV0	995	97.0	0.86	325	10365	2.40	82	2100
1180	1LA4 502-6CV0	995	97.0	0.87	350	11324	2.40	92	2100
1280	1LA4 504-6CV0	995	97.1	0.87	380	12284	2.40	103	2100
1500	1LA4 560-6CV0	995	97.3	0.86	450	14395	2.60	142	2000
1750	1LA4 562-6CV0	995	97.4	0.86	520	16795	2.70	162	2000
1950	1LA4 564-6CV0	995	97.5	0.87	580	18714	2.50	189	2000
2300	1LA4 632-6CV0	995	97.1	0.89	670	22075	2.40	269	1500
8-pole									
800	1LA4 500-8CV0	745	96.5	0.81	255	10254	2.10	82	2100
850	1LA4 502-8CV0	745	96.5	0.81	275	10895	2.10	92	2100
950	1LA4 504-8CV0	745	96.5	0.81	305	12177	2.10	102	2100
1120	1LA4 560-8CV0	745	96.8	0.83	350	14356	2.20	142	2000
1250	1LA4 562-8CV0	745	96.9	0.83	390	16022	2.20	162	2000
1450	1LA4 564-8CV0	745	97.0	0.83	450	18585	2.20	189	2000
1650	1LA4 632-8CV0	745	96.7	0.84	510	21151	2.20	265	1500
1850	1LA4 634-8CV0	746	96.8	0.84	570	23683	2.40	294	1500
2040	1LA4 636-8CV0	745	96.9	0.85	620	26150	2.10	320	1500

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1LA4 500-4...	1300	8315	96.8	0.85	1050	6716	96.9	0.85	940	6012	96.9	0.84
1LA4 502-4...	1450	9274	97.0	0.85	1180	7547	97.1	0.85	1060	6780	97.1	0.85
1LA4 504-4...	1600	10233	97.1	0.86	1320	8443	97.2	0.86	1180	7547	97.2	0.86
1LA4 560-4...	1760	11249	97.3	0.85	1450	9268	97.4	0.84	1320	8437	97.4	0.83
1LA4 562-4...	2040	13039	97.3	0.85	1680	10738	97.4	0.85	1550	9907	97.4	0.84
1LA4 564-4...	2300	14701	97.3	0.85	1900	12144	97.4	0.85	1750	11185	97.4	0.84
6-pole												
1LA4 500-6...	1060	10173	96.6	0.85	880	8445	96.8	0.84	800	7678	96.9	0.84
1LA4 502-6...	1160	11133	96.8	0.86	970	9309	97.0	0.86	880	8445	97.0	0.85
1LA4 504-6...	1260	12092	96.8	0.86	1060	10173	97.0	0.86	960	9213	97.1	0.86
1LA4 560-6...	1480	14204	97.0	0.84	1250	11996	97.2	0.84	1120	10749	97.2	0.83
1LA4 562-6...	1720	16507	97.1	0.84	1450	13916	97.3	0.83	1250	11996	97.3	0.83
1LA4 564-6...	1930	18522	97.3	0.85	1650	15835	97.4	0.85	1400	13436	97.5	0.85
1LA4 632-6...	2210	21190	97.1	0.89	1795	17720	97.0	0.88	1680	16115	97.0	0.87
8-pole												
1LA4 500-8...	790	10126	96.1	0.79	650	8331	96.3	0.78	580	7434	96.3	0.76
1LA4 502-8...	850	10895	96.1	0.80	730	9357	96.2	0.79	650	8331	96.3	0.77
1LA4 504-8...	950	12177	96.1	0.80	800	10254	96.2	0.78	710	9100	96.3	0.77
1LA4 560-8...	1090	13971	96.6	0.82	890	11408	96.8	0.81	800	10254	96.8	0.79
1LA4 562-8...	1240	15894	96.7	0.82	1020	13074	96.9	0.81	920	11792	96.9	0.80
1LA4 564-8...	1440	18457	96.8	0.82	1200	15381	97.0	0.81	1100	14099	97.0	0.80
1LA4 632-8...	1585	20305	96.6	0.84	1285	16495	96.5	0.82	1205	15440	96.4	0.81
1LA4 634-8...	1775	22735	96.7	0.83	1445	18470	96.6	0.81	1350	17285	96.5	0.80
1LA4 636-8...	1960	25100	96.8	0.85	1590	20395	96.8	0.83	1490	19090	96.7	0.82

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
4-pole									
1350	1LA4 500-4CV	1493	97.0	0.87	280	8634	2.50	42	2200
1500	1LA4 502-4CV	1493	97.2	0.87	310	9594	2.60	47	2200
1650	1LA4 504-4CV	1493	97.3	0.88	335	10553	2.60	54	2200
1850	1LA4 560-4CV	1494	97.5	0.87	380	11824	2.40	79	2000
2100	1LA4 562-4CV	1494	97.5	0.87	435	13422	2.40	92	2000
2350	1LA4 564-4CV	1494	97.5	0.87	485	15020	2.40	104	2000
2600	1LA4 632-4CV 0	1494	97.5	0.88	530	16620	2.20	157	1500
2900	1LA4 634-4CV 0	1494	97.6	0.88	590	18537	2.20	171	1500
3150	1LA4 636-4CV 0	1494	97.7	0.88	640	20136	2.20	186	1500
6-pole									
1080	1LA4 500-6CV	995	97.0	0.86	225	10365	2.40	82	2100
1180	1LA4 502-6CV	995	97.0	0.87	245	11324	2.40	92	2100
1280	1LA4 504-6CV	995	97.1	0.87	265	12284	2.40	103	2100
1500	1LA4 560-6CV	995	97.3	0.86	315	14395	2.60	142	2000
1750	1LA4 562-6CV	995	97.4	0.86	365	16795	2.70	162	2000
1950	1LA4 564-6CV	995	97.5	0.87	400	18714	2.50	189	2000
2220	1LA4 632-6CV	995	97.1	0.89	450	21308	2.30	269	1500
2480	1LA4 634-6CV	995	97.2	0.89	500	23803	2.20	297	1500
2700	1LA4 636-6CV	995	97.3	0.89	550	25915	2.20	323	1500
8-pole									
800	1LA4 500-8CV	745	96.5	0.81	180	10254	2.10	82	2100
850	1LA4 502-8CV	745	96.5	0.81	190	10895	2.10	92	2100
950	1LA4 504-8CV	745	96.5	0.81	215	12177	2.10	102	2100
1120	1LA4 560-8CV	745	96.8	0.83	245	14356	2.20	142	2000
1250	1LA4 562-8CV	745	96.9	0.83	270	16022	2.20	162	2000
1450	1LA4 564-8CV	745	97.0	0.83	315	18585	2.20	189	2000
1570	1LA4 632-8CV	745	96.6	0.84	340	20126	2.30	265	1500
1780	1LA4 634-8CV	745	96.7	0.84	385	22817	2.30	294	1500
1960	1LA4 636-8CV	745	96.8	0.85	415	25125	2.20	320	1500

Voltage code:

4.16 kV, 50 Hz

4

Other voltage

9

Type of construction:

IM B3

0

IM V1 (with canopy)

4

IM V1 (without canopy)

8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1LA4 500-4...	1300	8315	96.8	0.85	1050	6716	96.9	0.85	940	6012	96.9	0.84
1LA4 502-4...	1450	9274	97.0	0.85	1180	7547	97.1	0.85	1060	6780	97.1	0.85
1LA4 504-4...	1600	10233	97.1	0.86	1320	8443	97.2	0.86	1180	7547	97.2	0.86
1LA4 560-4...	1760	11249	97.3	0.85	1450	9268	97.4	0.84	1320	8437	97.4	0.83
1LA4 562-4...	2040	13039	97.3	0.85	1680	10738	97.4	0.85	1550	9907	97.4	0.84
1LA4 564-4...	2300	14701	97.3	0.85	1900	12144	97.4	0.85	1750	11185	97.4	0.84
1LA4 632-4...	2495	15950	97.4	0.88	2030	12960	97.4	0.87	1900	12130	97.4	0.87
1LA4 634-4...	2780	17790	97.5	0.88	2260	14460	97.5	0.87	2110	13530	97.4	0.87
1LA4 636-4...	3020	19330	97.6	0.88	2460	15700	97.6	0.87	2300	14700	97.5	0.87
6-pole												
1LA4 500-6...	1060	10173	96.6	0.85	880	8445	96.8	0.84	800	7678	96.9	0.84
1LA4 502-6...	1160	11133	96.8	0.86	970	9309	97.0	0.86	880	8445	97.0	0.85
1LA4 504-6...	1260	12092	96.8	0.86	1060	10173	97.0	0.86	960	9213	97.1	0.86
1LA4 560-6...	1480	14204	97.0	0.84	1250	11996	97.2	0.84	1120	10749	97.2	0.83
1LA4 562-6...	1720	16507	97.1	0.84	1450	13916	97.3	0.83	1250	11996	97.3	0.83
1LA4 564-6...	1930	18522	97.3	0.85	1650	15835	97.4	0.85	1400	13436	97.5	0.85
1LA4 632-6...	2130	20456	97.0	0.89	1730	16620	97.0	0.88	1620	15555	97.0	0.88
1LA4 634-6...	2380	22839	97.1	0.89	1935	18545	97.2	0.89	1810	17342	97.1	0.88
1LA4 636-6...	2590	24880	97.3	0.89	2100	20215	97.3	0.89	1970	18920	97.2	0.88
8-pole												
1LA4 500-8...	790	10126	96.1	0.79	650	8331	96.3	0.78	580	7434	96.3	0.76
1LA4 502-8...	850	10895	96.1	0.80	730	9357	96.2	0.79	650	8331	96.3	0.77
1LA4 504-8...	950	12177	96.1	0.80	800	10254	96.2	0.78	710	9100	96.3	0.77
1LA4 560-8...	1090	13971	96.6	0.82	890	11408	96.8	0.81	800	10254	96.8	0.79
1LA4 562-8...	1240	15894	96.7	0.82	1020	13074	96.9	0.81	920	11792	96.9	0.80
1LA4 564-8...	1440	18457	96.8	0.82	1200	15381	97.0	0.81	1100	14099	97.0	0.80
1LA4 632-8...	1510	19310	96.5	0.84	1225	15697	96.4	0.82	1145	14690	96.3	0.81
1LA4 634-8...	1710	21903	96.7	0.84	1390	17796	96.6	0.82	1300	16666	96.5	0.81
1LA4 636-8...	1880	24118	96.8	0.85	1530	19596	96.7	0.83	1430	18340	96.7	0.82

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
4-pole									
1180	1LA4 500-4CV	1493	96.8	0.87	122	7548	2.60	42	2200
1300	1LA4 502-4CV	1493	96.9	0.87	134	8315	2.60	47	2200
1450	1LA4 504-4CV	1493	97.1	0.88	148	9275	2.50	54	2200
1600	1LA4 560-4CV	1494	97.2	0.86	168	10228	2.60	79	2000
1850	1LA4 562-4CV	1494	97.4	0.87	190	11826	2.60	92	2000
2100	1LA4 564-4CV	1494	97.5	0.87	215	13424	2.60	104	2000
2400	1LA4 632-4CV 0	1494	97.3	0.88	245	15341	2.40	157	1500
2700	1LA4 634-4CV 0	1494	97.4	0.87	280	17259	2.40	171	1500
2950	1LA4 636-4CV 0	1494	97.5	0.87	305	18857	2.40	186	1500
6-pole									
920	1LA4 500-6CV	995	96.6	0.86	97	8830	2.50	82	2100
1030	1LA4 502-6CV	995	96.7	0.87	108	9886	2.40	92	2100
1120	1LA4 504-6CV	995	96.8	0.87	116	10750	2.40	103	2100
1400	1LA4 560-6CV	996	97.1	0.86	146	13424	2.70	142	2000
1550	1LA4 562-6CV	996	97.2	0.86	162	14862	2.70	162	2000
1700	1LA4 564-6CV	996	97.3	0.87	176	16300	2.50	189	2000
2050	1LA4 632-6CV	995	97.0	0.88	210	19676	2.40	269	1500
2300	1LA4 634-6CV	995	97.1	0.89	235	22075	2.40	297	1500
2500	1LA4 636-6CV	995	97.1	0.88	255	23995	2.40	323	1500
8-pole									
720	1LA4 500-8CV	746	96.0	0.8	82	9217	2.30	82	2100
760	1LA4 502-8CV	746	96.2	0.81	85	9729	2.30	92	2100
820	1LA4 504-8CV	746	96.3	0.81	92	10497	2.30	102	2100
1050	1LA4 560-8CV	745	96.6	0.82	116	13460	2.40	142	2000
1180	1LA4 562-8CV	745	96.7	0.82	130	15126	2.40	162	2000
1350	1LA4 564-8CV	745	96.8	0.83	146	17305	2.40	189	2000
1500	1LA4 632-8CV	746	96.5	0.83	164	19202	2.50	265	1500
1700	1LA4 634-8CV	746	96.6	0.83	186	21763	2.50	294	1500
1850	1LA4 636-8CV	746	96.7	0.83	200	23683	2.50	320	1500

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1LA4 500-4...	1150	7356	96.8	0.87	950	6077	96.6	0.86	750	4797	96.3	0.81
1LA4 502-4...	1250	7996	96.9	0.87	1050	6716	96.8	0.86	830	5309	96.5	0.82
1LA4 504-4...	1400	8955	97.1	0.88	1200	7676	96.9	0.87	950	6077	96.7	0.84
1LA4 560-4...	1550	9908	97.2	0.86	1350	8630	97.1	0.84	980	6264	96.7	0.78
1LA4 562-4...	1750	11186	97.4	0.87	1550	9908	97.3	0.85	1150	7351	97.0	0.81
1LA4 564-4...	2000	12784	97.5	0.87	1750	11186	97.4	0.86	1400	8949	97.3	0.83
1LA4 632-4...	2300	14702	97.3	0.88	2000	12784	97.3	0.87	1540	9844	97.0	0.84
1LA4 634-4...	2650	16939	97.4	0.87	2300	14702	97.4	0.86	1800	11506	97.1	0.83
1LA4 636-4...	2900	18537	97.5	0.87	2600	16620	97.5	0.86	1950	12465	97.3	0.83
6-pole												
1LA4 500-6...	900	8638	96.6	0.86	760	7294	96.6	0.85	600	5759	96.4	0.81
1LA4 502-6...	1000	9598	96.7	0.87	850	8158	96.7	0.86	680	6527	96.6	0.83
1LA4 504-6...	1070	10270	96.8	0.87	930	8926	96.8	0.86	750	7198	96.7	0.83
1LA4 560-6...	1380	13232	97.1	0.86	1200	11506	97.1	0.85	900	8630	96.9	0.79
1LA4 562-6...	1500	14383	97.2	0.86	1320	12657	97.2	0.85	1000	9588	97.0	0.80
1LA4 564-6...	1680	16108	97.3	0.87	1480	14191	97.3	0.86	1180	11314	97.3	0.83
1LA4 632-6...	2050	19676	97.0	0.88	1830	17564	96.9	0.87	1480	14205	96.8	0.86
1LA4 634-6...	2300	22075	97.1	0.89	2000	19196	97.0	0.88	1650	15837	96.9	0.87
1LA4 636-6...	2500	23995	97.1	0.88	2230	21404	97.1	0.87	1850	17756	97.0	0.87
8-pole												
1LA4 500-8...	700	8961	96.0	0.80	600	7681	96.0	0.78	420	5377	95.6	0.70
1LA4 502-8...	750	9601	96.2	0.81	630	8065	96.1	0.79	480	6145	95.8	0.73
1LA4 504-8...	820	10497	96.3	0.81	710	9089	96.2	0.79	520	6657	95.8	0.73
1LA4 560-8...	1000	12819	96.6	0.82	860	11024	96.6	0.81	650	8332	96.3	0.74
1LA4 562-8...	1150	14742	96.7	0.82	1000	12819	96.7	0.81	780	9999	96.6	0.76
1LA4 564-8...	1300	16664	96.8	0.83	1130	14485	96.8	0.81	850	10896	96.5	0.74
1LA4 632-8...	1500	19202	96.5	0.83	1330	17026	96.4	0.81	1050	13442	96.0	0.77
1LA4 634-8...	1700	21763	96.6	0.83	1520	19458	96.5	0.81	1180	15106	96.2	0.77
1LA4 636-8...	1850	23683	96.7	0.83	1680	21507	96.6	0.81	1340	17154	96.4	0.78

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 60 Hz									
4-pole									
1500	1LA4 500-4CV1 ■	1793	96.8	0.87	445	7989	2.50	42	2200
1650	1LA4 502-4CV1 ■	1793	96.8	0.87	490	8787	2.50	47	2200
1800	1LA4 504-4CV1 ■	1793	96.8	0.87	540	9586	2.50	54	2200
2000	1LA4 560-4CV1 ■	1794	97.3	0.87	590	10645	2.40	79	2000
2300	1LA4 562-4CV1 ■	1794	97.3	0.87	680	12242	2.40	92	2000
2600	1LA4 564-4CV1 ■	1794	97.3	0.87	770	13839	2.40	104	2000
6-pole									
1180	1LA4 500-6CV1 ■	1195	96.8	0.87	350	9429	2.40	82	2100
1320	1LA4 502-6CV1 ■	1195	97.0	0.87	395	10548	2.40	92	2100
1450	1LA4 504-6CV1 ■	1195	97.1	0.87	430	11587	2.50	103	2100
1650	1LA4 560-6CV1 ■	1195	97.2	0.86	495	13185	2.60	142	2000
1900	1LA4 562-6CV1 ■	1195	97.4	0.86	570	15183	2.60	162	2000
2150	1LA4 564-6CV1 ■	1195	97.5	0.87	640	17180	2.60	189	2000
2230	1LA4 632-6CV1 ■	1195	96.7	0.89	650	17825	2.40	234	1500
8-pole									
900	1LA4 500-8CV1 ■	896	96.4	0.79	295	9592	2.30	82	2100
950	1LA4 502-8CV1 ■	896	96.4	0.79	315	10124	2.30	92	2100
1050	1LA4 504-8CV1 ■	896	96.4	0.79	345	11190	2.30	102	2100
1200	1LA4 560-8CV1 ■	895	96.8	0.83	375	12803	2.20	142	2000
1380	1LA4 562-8CV1 ■	895	96.8	0.83	430	14724	2.30	162	2000
1580	1LA4 564-8CV1 ■	895	96.9	0.83	495	16857	2.40	189	2000
1800	1LA4 632-8CV1 ■	895	96.6	0.85	550	19205	2.10	265	1500
2000	1LA4 634-8CV1 ■	895	96.7	0.86	600	21339	2.00	294	1500
2160	1LA4 636-8CV1 ■	895	96.8	0.86	650	23046	2.10	320	1500

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
Constant torque drive												
4-pole												
1LA4 500-4...	1470	7829	96.5	0.86	1270	6764	96.5	0.86	1150	6125	96.5	0.85
1LA4 502-4...	1600	8521	96.5	0.86	1320	7030	96.5	0.85	1200	6391	96.5	0.85
1LA4 504-4...	1750	9320	96.5	0.86	1500	7989	96.5	0.86	1350	7190	96.5	0.85
1LA4 560-4...	1920	10220	97.1	0.87	1610	8570	97.2	0.86	1500	7984	97.2	0.85
1LA4 562-4...	2250	11976	97.1	0.87	1880	10007	97.2	0.86	1750	9315	97.2	0.85
1LA4 564-4...	2580	13733	97.1	0.87	2250	11976	97.2	0.86	2100	11178	97.2	0.86
6-pole												
1LA4 500-6...	1160	9269	96.6	0.86	980	7831	96.7	0.86	880	7032	96.7	0.85
1LA4 502-6...	1300	10388	96.7	0.85	1120	8950	96.8	0.85	1020	8151	96.8	0.85
1LA4 504-6...	1430	11427	96.9	0.86	1250	9988	97.0	0.86	1150	9189	97.0	0.85
1LA4 560-6...	1630	13025	97.0	0.84	1450	11587	97.1	0.84	1350	10788	97.1	0.84
1LA4 562-6...	1880	15023	97.1	0.85	1650	13185	97.1	0.85	1520	12146	97.2	0.84
1LA4 564-6...	2130	17020	97.3	0.86	1930	15422	97.3	0.86	1800	14383	97.4	0.86
1LA4 632-6...	2165	17297	96.6	0.89	1760	14048	96.4	0.88	1650	13166	96.3	0.87
8-pole												
1LA4 500-8...	880	9378	96.0	0.79	780	8313	96.0	0.77	710	7567	96.0	0.76
1LA4 502-8...	950	10124	96.0	0.79	870	9272	96.0	0.78	780	8313	96.0	0.77
1LA4 504-8...	1050	11190	96.0	0.79	970	10338	96.0	0.78	880	9378	96.0	0.77
1LA4 560-8...	1200	12803	96.6	0.83	1010	10776	96.7	0.82	930	9922	96.7	0.81
1LA4 562-8...	1380	14724	96.6	0.82	1190	12696	96.7	0.81	1100	11736	96.8	0.81
1LA4 564-8...	1580	16857	96.8	0.82	1420	15150	96.9	0.81	1320	14083	96.9	0.81
1LA4 632-8...	1746	18629	96.4	0.85	1422	15172	96.2	0.84	1332	14212	96.3	0.83
1LA4 634-8...	1940	20699	96.6	0.85	1580	16858	96.4	0.84	1480	15791	96.4	0.84
1LA4 636-8...	2095	22355	96.6	0.85	1705	18206	96.5	0.84	1598	17054	96.4	0.84

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 60 Hz									
4-pole									
1500	1LA4 500-4CV5	1793	96.8	0.87	245	7989	2.50	42	2200
1650	1LA4 502-4CV5	1793	96.8	0.87	270	8787	2.50	47	2200
1800	1LA4 504-4CV5	1793	96.8	0.87	295	9586	2.50	54	2200
2000	1LA4 560-4CV5	1794	97.3	0.87	330	10645	2.40	79	2000
2300	1LA4 562-4CV5	1794	97.3	0.87	375	12242	2.40	92	2000
2600	1LA4 564-4CV5	1794	97.3	0.87	425	13839	2.40	104	2000
2950	1LA4 632-4CV5 0	1794	97.2	0.87	485	15702	2.40	157	1500
3320	1LA4 634-4CV5 0	1794	97.3	0.87	540	17672	2.20	171	1500
3600	1LA4 636-4CV5 0	1795	97.5	0.87	590	19161	2.40	186	1500
6-pole									
1180	1LA4 500-6CV5	1195	96.8	0.87	194	9429	2.40	82	2100
1320	1LA4 502-6CV5	1195	97.0	0.87	215	10548	2.40	92	2100
1450	1LA4 504-6CV5	1195	97.1	0.87	240	11587	2.50	103	2100
1650	1LA4 560-6CV5	1195	97.2	0.86	275	13185	2.60	142	2000
1900	1LA4 562-6CV5	1195	97.4	0.86	315	15183	2.60	162	2000
2150	1LA4 564-6CV5	1195	97.5	0.87	350	17180	2.60	189	2000
2400	1LA4 632-6CV5	1195	96.8	0.89	385	19183	2.40	269	1500
2700	1LA4 634-6CV5	1195	96.9	0.89	435	21587	2.20	297	1500
2900	1LA4 636-6CV5	1195	97.0	0.89	465	23181	2.20	323	1500
8-pole									
900	1LA4 500-8CV5	896	96.4	0.79	164	9592	2.30	82	2100
950	1LA4 502-8CV5	896	96.4	0.79	174	10124	2.30	92	2100
1050	1LA4 504-8CV5	896	96.4	0.79	192	11190	2.30	102	2100
1200	1LA4 560-8CV5	895	96.8	0.83	205	12803	2.20	142	2000
1380	1LA4 562-8CV5	895	96.8	0.83	240	14724	2.30	162	2000
1580	1LA4 564-8CV5	895	96.9	0.83	275	16857	2.40	189	2000
1800	1LA4 632-8CV5	895	96.6	0.85	305	19205	2.20	265	1500
1960	1LA4 634-8CV5	895	96.7	0.86	325	20912	2.00	294	1500
2160	1LA4 636-8CV5	895	96.8	0.86	360	23046	2.10	320	1500

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

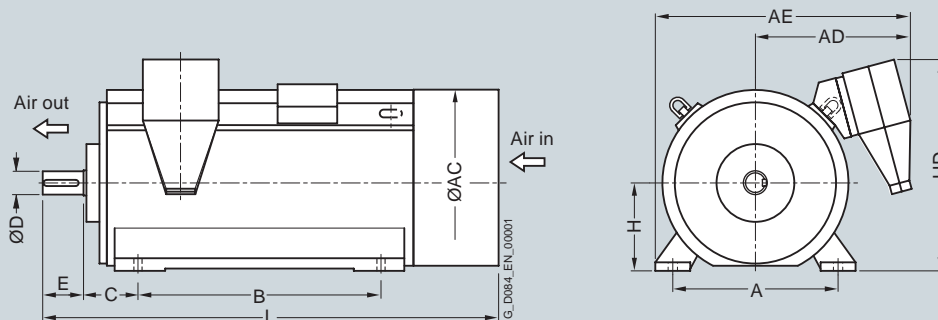
Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1LA4 500-4...	1470	7829	96.5	0.86	1270	6764	96.5	0.86	1150	6125	96.5	0.85
1LA4 502-4...	1600	8521	96.5	0.86	1320	7030	96.5	0.85	1200	6391	96.5	0.85
1LA4 504-4...	1750	9320	96.5	0.86	1500	7989	96.5	0.86	1350	7190	96.5	0.85
1LA4 560-4...	1920	10220	97.1	0.87	1610	8570	97.2	0.86	1500	7984	97.2	0.85
1LA4 562-4...	2250	11976	97.1	0.87	1880	10007	97.2	0.86	1750	9315	97.2	0.85
1LA4 564-4...	2580	13733	97.1	0.87	2250	11976	97.2	0.86	2100	11178	97.2	0.86
1LA4 632-4...	2860	15219	97.2	0.87	2330	12389	97.0	0.86	2185	11616	96.9	0.85
1LA4 634-4...	3220	17135	97.3	0.87	2625	13957	97.1	0.86	2455	13052	97.1	0.85
1LA4 636-4...	3490	18567	97.4	0.87	2845	15125	97.2	0.86	2665	14166	97.2	0.85
6-pole												
1LA4 500-6...	1160	9269	96.6	0.86	980	7831	96.7	0.86	880	7032	96.7	0.85
1LA4 502-6...	1300	10388	96.7	0.85	1120	8950	96.8	0.85	1020	8151	96.8	0.85
1LA4 504-6...	1430	11427	96.9	0.86	1250	9988	97.0	0.86	1150	9189	97.0	0.85
1LA4 560-6...	1630	13025	97.0	0.84	1450	11587	97.1	0.84	1350	10788	97.1	0.84
1LA4 562-6...	1880	15023	97.1	0.85	1650	13185	97.1	0.85	1520	12146	97.2	0.84
1LA4 564-6...	2130	17020	97.3	0.86	1930	15422	97.3	0.86	1800	14383	97.4	0.86
1LA4 632-6...	2330	18613	96.7	0.89	1895	15124	96.5	0.88	1775	14163	96.4	0.88
1LA4 634-6...	2620	20937	96.9	0.89	2135	17042	96.8	0.89	2000	15960	96.7	0.88
1LA4 636-6...	2815	22489	97.0	0.89	2290	18276	96.9	0.89	2145	17115	96.8	0.88
8-pole												
1LA4 500-8...	880	9378	96.0	0.79	780	8313	96.0	0.77	710	7567	96.0	0.76
1LA4 502-8...	950	10124	96.0	0.79	870	9272	96.0	0.78	780	8313	96.0	0.77
1LA4 504-8...	1050	11190	96.0	0.79	970	10338	96.0	0.78	880	9378	96.0	0.77
1LA4 560-8...	1200	12803	96.6	0.83	1010	10776	96.7	0.82	930	9922	96.7	0.81
1LA4 562-8...	1380	14724	96.6	0.82	1190	12696	96.7	0.81	1100	11736	96.8	0.81
1LA4 564-8...	1580	16857	96.8	0.82	1420	15150	96.9	0.81	1320	14083	96.9	0.81
1LA4 632-8...	1746	18629	96.3	0.84	1422	15172	96.1	0.82	1332	14212	95.9	0.81
1LA4 634-8...	1901	20285	96.5	0.85	1548	16520	96.4	0.84	1450	15475	96.3	0.83
1LA4 636-8...	2095	22355	96.6	0.85	1706	18206	96.5	0.84	1598	17054	96.4	0.83

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Dimension drawings



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾³⁾ mm	AE ¹⁾²⁾³⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ⁴⁾ mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction												
2-pole												
1LA4454-2CM00	5200	850	960	825	1340	1250	280	95	130	450	1100	2320
4-pole												
1LA4454-4A..0	5300	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4500-4C..0	6200	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4502-4C..0	6500	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4504-4C..0	7000	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4560-4C..0	8200	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4562-4C..0	8900	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4564-4C..0	9700	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4632-4C..0	12200	1120	1350	945	1560	1600	335	170	240	630	1410	3015
1LA4634-4C..0	12800	1120	1350	945	1560	1600	335	170	240	630	1410	3015
1LA4636-4C..0	13600	1120	1350	945	1560	1600	335	170	240	630	1410	3015
6-pole												
1LA4454-6AM00	5200	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4500-6C..0	6400	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4502-6C..0	6800	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4504-6C..0	7300	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4560-6C..0	8500	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4562-6C..0	9300	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4564-6C..0	10100	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4632-6C..0	12700	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4634-6C..0	13400	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4636-6C..0	14100	1120	1350	945	1560	1600	335	180	240	630	1410	3015
8-pole												
1LA4454-8AM00	5200	850	960	825	1340	1250	280	130	200	450	1100	2390
1LA4500-8C..0	6400	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4502-8C..0	6700	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4504-8C..0	7200	950	1070	875	1440	1320	315	140	200	500	1200	2525
1LA4560-8C..0	8500	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4562-8C..0	9200	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4564-8C..0	10000	1060	1210	925	1560	1400	335	160	240	560	1310	2775
1LA4632-8C..0	12500	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4634-8C..0	13300	1120	1350	945	1560	1600	335	180	240	630	1410	3015
1LA4636-8C..0	14000	1120	1350	945	1560	1600	335	180	240	630	1410	3015

¹⁾ For $V_{\text{rated}} = 690$ V, the dimension changes by + 100 mm.

²⁾ For $V_{\text{rated}} = 690$ V and $I_{\text{rated}} > 1230$ A, the dimension changes by + 475 mm (a second main terminal box is required).

³⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

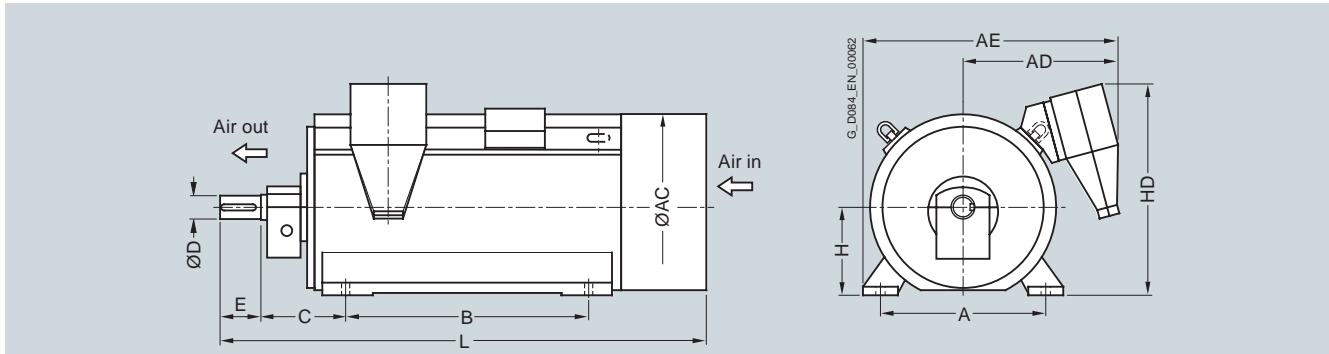
⁴⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 70 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Dimension drawings



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾³⁾ mm	AE ¹⁾²⁾³⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ⁴⁾ mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction												
2-pole												
1LA4454-2CM00-Z K96	5200	850	960	825	1340	1250	475	95	130	450	1100	2515
4-pole												
1LA4454-4AM00-Z K96	5400	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4500-4C..0-Z K96	6300	950	1070	875	1440	1320	500	140	200	500	1200	2870
1LA4502-4C..0-Z K96	6700	950	1070	875	1440	1320	500	140	200	500	1200	2870
1LA4504-4C..0-Z K96	7200	950	1070	875	1440	1320	500	140	200	500	1200	2870
1LA4560-4C..0-Z K96	8500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4562-4C..0-Z K96	9200	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4564-4C..0-Z K96	10000	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4632-4C..0-Z K96	12500	1120	1350	945	1560	1600	560	170	240	630	1410	3450
1LA4634-4C..0-Z K96	13100	1120	1350	945	1560	1600	560	170	240	630	1410	3450
1LA4636-4C..0-Z K96	13900	1120	1350	945	1560	1600	560	170	240	630	1410	3450
6-pole												
1LA4454-6AM00-Z K96	5300	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4500-6C..0-Z K96	6600	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4502-6C..0-Z K96	7000	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4504-6C..0-Z K96	7500	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4560-6C..0-Z K96	8800	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4562-6C..0-Z K96	9500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4564-6C..0-Z K96	10400	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4632-6C..0-Z K96	13000	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4634-6C..0-Z K96	13700	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4636-6C..0-Z K96	14500	1120	1350	945	1560	1600	560	180	240	630	1410	3450

¹⁾ For $V_{rated} = 690$ V, the dimension changes by + 100 mm.

²⁾ For $V_{rated} = 690$ V and $I_{rated} > 1230$ A, the dimension changes by + 475 mm (a second main terminal box is required).

³⁾ For $V_{rated} \geq 2.0$ kV and current $I_{rated} > 315$ A, the dimension changes by + 140 mm.

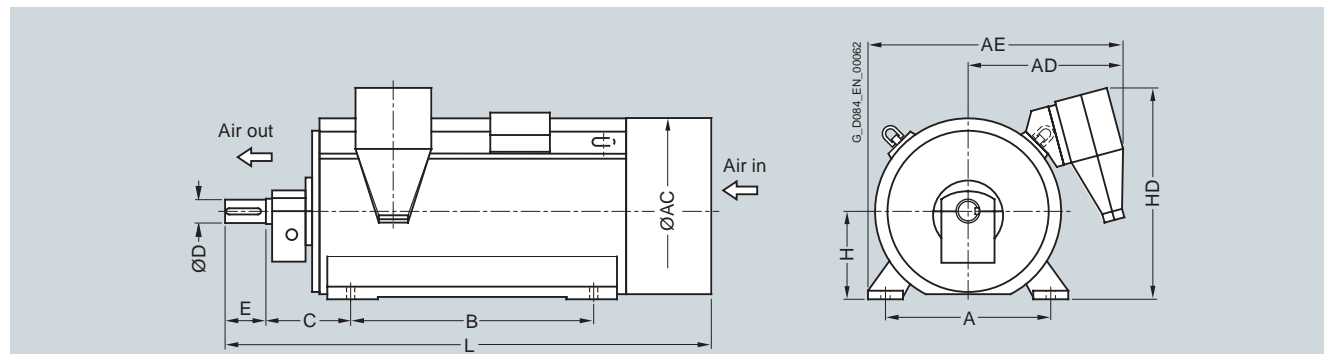
⁴⁾ For $V_{rated} \geq 2.0$ kV and current $I_{rated} > 315$ A, the dimension changes by + 70 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾³⁾ mm	AE ¹⁾²⁾³⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ⁴⁾ mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction												
8-pole												
1LA4454-8AM00-Z K96	5300	850	960	825	1340	1250	475	130	200	450	1100	2745
1LA4500-8C..0-Z K96	6600	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4502-8C..0-Z K96	6900	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4504-8C..0-Z K96	7400	950	1070	875	1440	1320	530	140	200	500	1200	2900
1LA4560-8C..0-Z K96	8800	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4562-8C..0-Z K96	9500	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4564-8C..0-Z K96	10300	1060	1210	925	1560	1400	560	160	240	560	1310	3170
1LA4632-8C..0-Z K96	12800	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4634-8C..0-Z K96	13600	1120	1350	945	1560	1600	560	180	240	630	1410	3450
1LA4636-8C..0-Z K96	14400	1120	1350	945	1560	1600	560	180	240	630	1410	3450

¹⁾ For $V_{\text{rated}} = 690$ V, the dimension changes by + 100 mm.

²⁾ For $V_{\text{rated}} = 690$ V and $I_{\text{rated}} > 1230$ A, the dimension changes by + 475 mm (a second main terminal box is required).

³⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

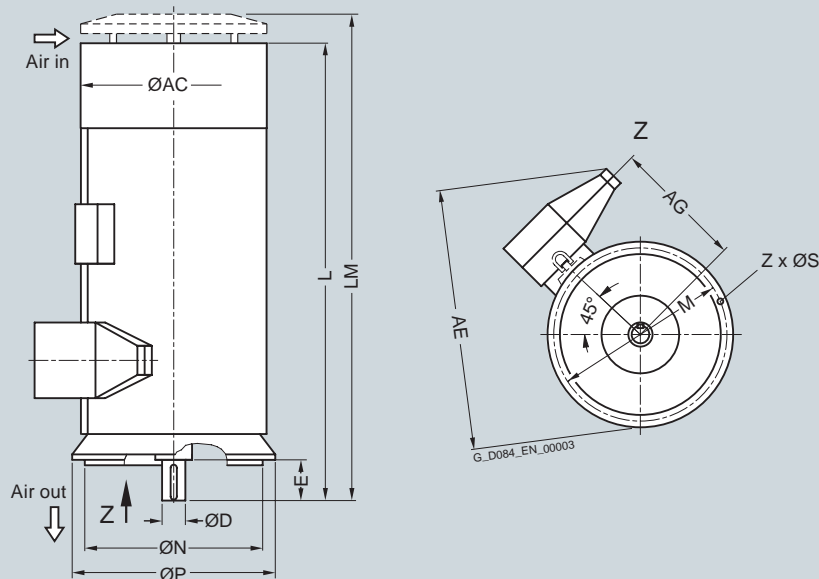
⁴⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 70 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1LA4

Dimension drawings



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾²⁾ mm	AE ³⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction													
4-pole													
1LA4454-4AM0.	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4500-4C...	6100	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4502-4C...	6500	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4504-4C...	7000	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4560-4C...	8300	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4562-4C...	9000	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4564-4C...	9700	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
6-pole													
1LA4454-6AM0.	5200	960	770	1550	130	200	2390	2550	1150	1000	1080	26	8
1LA4500-6C...	6400	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4502-6C...	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4504-6C...	7300	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4560-6C...	8500	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4562-6C...	9300	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4564-6C...	10100	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4632-6C...	12700	1350	980	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4634-6C...	13400	1350	980	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4636-6C...	14100	1350	980	1820	180	240	3115	3305	1400	1250	1320	26	16

¹⁾ For $V_{rated} = 690$ V, the dimension changes by - 50 mm.

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

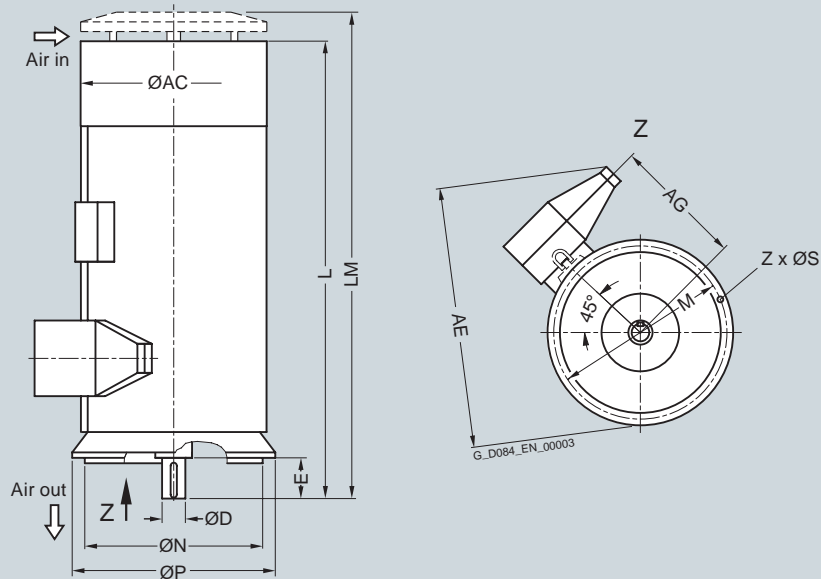
³⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 180 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1LA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾²⁾ mm	AE ³⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction													
8-pole													
1LA4454-8AM0.	5200	960	770	1550	130	200	2390	2550	1000	1150	1080	26	8
1LA4500-8C...	6400	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4502-8C...	6800	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4504-8C...	7200	1070	840	1660	140	200	2525	2695	1250	1120	1180	26	16
1LA4560-8C...	8500	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4562-8C...	9200	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4564-8C...	10000	1210	910	1800	160	240	2775	2955	1400	1250	1320	26	16
1LA4632-8C...	12500	1350	980	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4634-8C...	13300	1350	980	1820	180	240	3115	3305	1400	1250	1320	26	16
1LA4636-8C...	14000	1350	980	1820	180	240	3115	3305	1400	1250	1320	26	16

1) For $V_{rated} = 690$ V, the dimension changes by - 50 mm.

2) For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

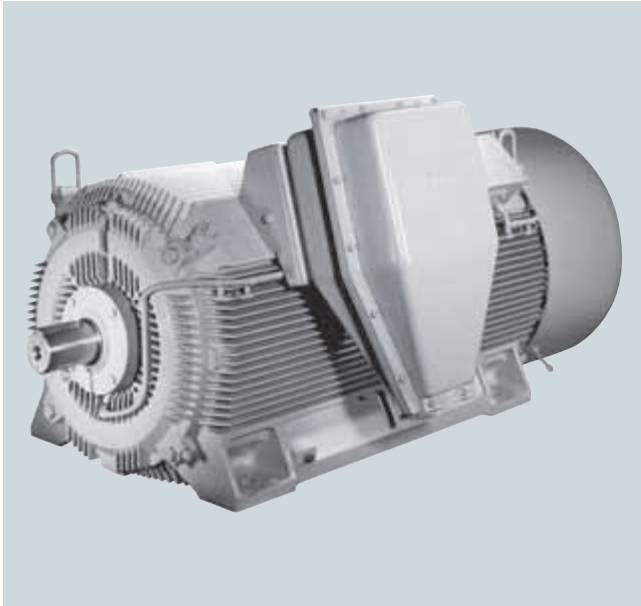
3) For currents $I_{rated} > 315$ A, the dimension changes by + 180 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1PQ4

Overview



Technical data

Technical data at a glance

H-compact 1PQ4	
Rated voltage	690 V ... 6.6 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC416
Stator winding insulation	Insulation system, thermal class 155 (F), utilized to 155 (F)
Shaft height	450 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Die-cast aluminum or copper (dependent on the shaft height and number of poles)
Standards	IEC, EN
Frame design	Cast iron with cooling ribs

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Technical data (continued)

Power ranges for IEC motors with reinforced insulation for SINAMICS drive converters without sine-wave filter

1PQ4 series

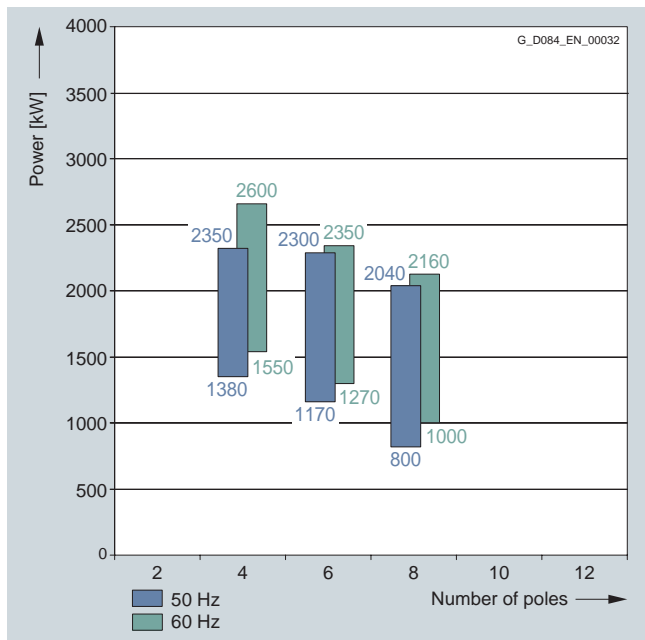
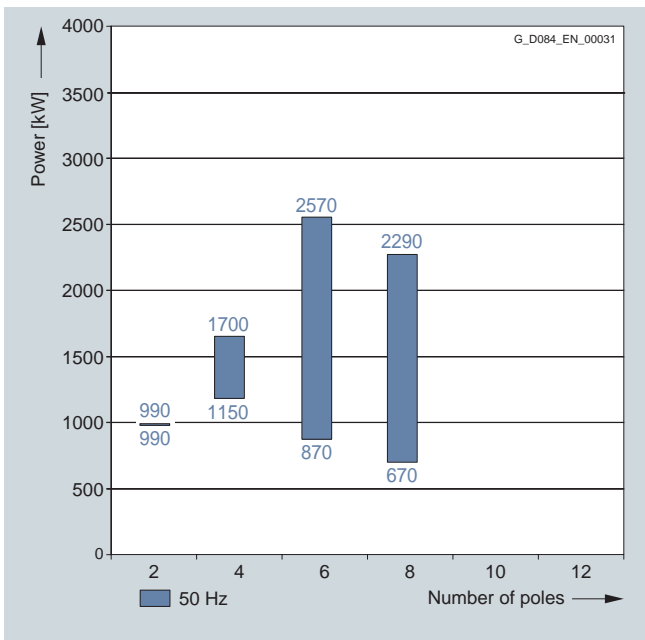
Insulation system, thermal class 155 (F), utilized to 155 (F)

The power data listed here apply for an ambient temperature of 40 °C and an installation altitude ≤ 1000 m.

690 V; 50 Hz

2.3 kV; 50 and 60 Hz

3



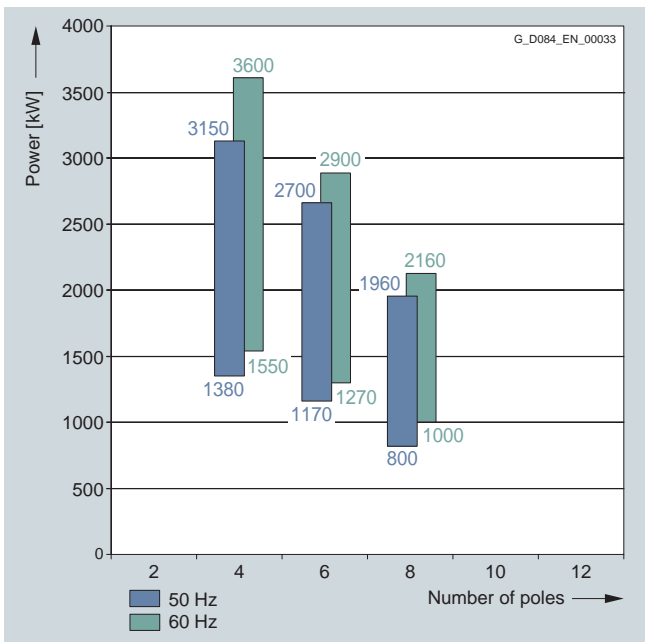
Motors for converter operation

With non-sinusoidal output

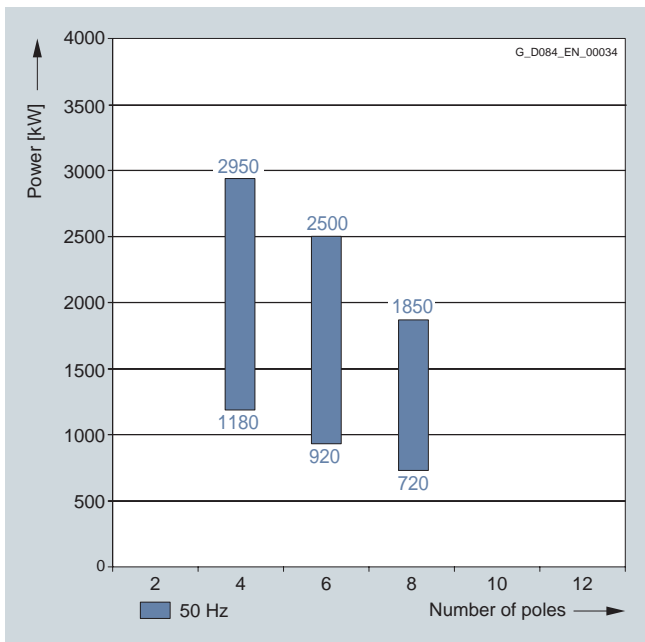
**Air-cooled motors
H-compact 1PQ4**

Technical data (continued)

3.4 to 4.16 kV; 50 and 60 Hz



6 to 6.6 kV; 50 Hz



3

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Selection and ordering data

Rated power P_{rated} kW	Low voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 690 V I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
690 V, 50 Hz									
2-pole									
990	1PQ4 454-2CM0	2983	97.3	0.92	930	3169	2.80	22.2	3000
4-pole									
1150	1PQ4 454-4AM0	1491	97.5	0.89	1100	7365	2.50	33.9	2400
1340	1PQ4 500-4CM0	1490	97.3	0.88	1300	8588	2.00	44.3	2400
1550	1PQ4 502-4CM0	1492	97.5	0.87	1520	9920	2.20	49.0	2400
1700	1PQ4 504-4CM0	1490	97.4	0.89	1640	10895	2.00	56.2	2400
6-pole									
870	1PQ4 454-6AM0	993	97.3	0.86	870	8366	2.50	53.5	2200
1350	1PQ4 500-6CM0	995	97.2	0.86	1360	12956	2.20	82.1	2200
1480	1PQ4 502-6CM0	995	97.2	0.86	1480	14204	2.15	92.4	2200
1630	1PQ4 504-6CM0	995	97.3	0.87	1620	15643	2.15	102.6	2200
1900	1PQ4 560-6CM0	995	97.5	0.86	1900	18234	2.30	141.5	2000
2100	1PQ4 562-6CM0	995	97.5	0.86	2100	20154	2.40	162.1	2000
2300	1PQ4 564-6CM0	995	97.6	0.87	2250	22073	2.40	188.5	2000
2455	1PQ4 634-6CM0	996	97.4	0.88	2400	23538	3.00	331.5	1200
2570	1PQ4 636-6CM0	996	97.4	0.89	2500	24640	3.00	361.5	1200
8-pole									
670	1PQ4 454-8AM0	745	96.7	0.80	720	8588	2.40	52.8	2200
950	1PQ4 500-8CM0	746	96.7	0.80	1020	12160	2.10	81.7	2200
1050	1PQ4 502-8CM0	746	96.8	0.81	1120	13440	2.10	91.9	2200
1150	1PQ4 504-8CM0	746	96.9	0.81	1220	14720	2.10	102.2	2200
1400	1PQ4 560-8CM0	745	97.0	0.81	1500	17944	2.30	141.6	2000
1600	1PQ4 562-8CM0	746	97.1	0.82	1680	20480	2.30	162.3	2000
1850	1PQ4 564-8CM0	746	97.1	0.82	1940	23680	2.30	188.8	2000
2030	1PQ4 634-8CM0	746	97.0	0.86	2050	25985	2.40	330.0	1200
2290	1PQ4 636-8CM0	746	97.1	0.86	2300	29314	2.40	360.0	1200

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

**Air-cooled motors
H-compact 1PQ4**

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} rpm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} rpm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} rpm	η %	$\cos \varphi$ [-]
	Constant torque drive											
2-pole												
1PQ4 454-2...	990	3169	97.3	0.92	880	2817	97.3	0.92	850	2721	97.3	0.92
4-pole												
1PQ4 454-4...	1130	7237	97.5	0.89	1060	6789	97.6	0.89	1020	6533	97.6	0.88
1PQ4 500-4...	1320	8460	97.2	0.88	1230	7883	97.3	0.88	1200	7690	97.3	0.88
1PQ4 502-4...	1530	9792	97.5	0.87	1420	9088	97.6	0.87	1390	8896	97.6	0.87
1PQ4 504-4...	1680	10767	97.4	0.89	1540	9869	97.5	0.89	1510	9677	97.5	0.89
6-pole												
1PQ4 454-6...	870	8366	97.3	0.86	770	7405	97.4	0.85	740	7116	97.4	0.85
1PQ4 500-6...	1350	12956	97.2	0.85	1320	12668	97.2	0.85	1300	12476	97.2	0.85
1PQ4 502-6...	1480	14204	97.2	0.86	1430	13724	97.2	0.86	1420	13628	97.2	0.86
1PQ4 504-6...	1630	15643	97.3	0.87	1580	15163	97.3	0.87	1570	15067	97.3	0.87
1PQ4 560-6...	1900	18234	97.5	0.86	1750	16795	97.5	0.86	1700	16315	97.5	0.85
1PQ4 562-6...	2100	20154	97.5	0.86	2000	19194	97.5	0.86	1950	18714	97.6	0.86
1PQ4 564-6...	2300	22073	97.6	0.87	2250	21593	97.6	0.87	2200	21113	97.6	0.87
1PQ4 634-6...	2455	23538	97.4	0.88	2455	23538	97.4	0.88	2455	23538	97.4	0.88
1PQ4 636-6...	2570	24640	97.4	0.89	2570	24640	97.4	0.89	2570	24640	97.4	0.89
8-pole												
1PQ4 454-8...	670	8588	96.7	0.80	640	8203	96.7	0.80	610	7819	96.8	0.79
1PQ4 500-8...	950	12160	96.7	0.80	950	12160	96.7	0.80	950	12160	96.7	0.80
1PQ4 502-8...	1050	13440	96.8	0.81	1050	13440	96.8	0.81	1050	13440	96.8	0.81
1PQ4 504-8...	1150	14720	96.9	0.81	1150	14720	96.9	0.81	1150	14720	96.9	0.81
1PQ4 560-8...	1400	17944	97.0	0.81	1300	16663	97.0	0.80	1300	16663	97.0	0.80
1PQ4 562-8...	1600	20480	97.1	0.82	1500	19200	97.1	0.82	1500	19200	97.1	0.82
1PQ4 564-8...	1850	23680	97.1	0.82	1700	21760	97.1	0.81	1700	21760	97.1	0.81
1PQ4 634-8...	2030	25985	97.0	0.86	2030	25985	97.0	0.86	2030	25985	97.0	0.86
1PQ4 636-8...	2290	29314	97.1	0.86	2290	29314	97.1	0.86	2290	29314	97.1	0.86

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 50 Hz									
4-pole									
1380	1PQ4 500-4CV0	1492	97.4	0.87	410	8833	2.35	42.3	2400
1530	1PQ4 502-4CV0	1492	97.5	0.87	455	9793	2.35	47.0	2400
1680	1PQ4 504-4CV0	1492	97.6	0.88	490	10753	2.35	54.2	2400
1850	1PQ4 560-4CV0	1494	97.8	0.87	550	11826	2.45	79.0	2200
2100	1PQ4 562-4CV0	1494	97.8	0.87	620	13424	2.45	92.0	2200
2350	1PQ4 564-4CV0	1494	97.8	0.87	690	15022	2.45	104.0	2200
6-pole									
1170	1PQ4 500-6CV0	994	97.2	0.87	345	11241	2.20	82.1	2200
1280	1PQ4 502-6CV0	994	97.2	0.87	380	12298	2.20	92.4	2200
1380	1PQ4 504-6CV0	994	97.2	0.87	410	13259	2.20	102.6	2200
1700	1PQ4 560-6CV0	995	97.4	0.86	510	16317	2.25	141.5	2000
1900	1PQ4 562-6CV0	995	97.5	0.87	560	18236	2.40	162.1	2000
2150	1PQ4 564-6CV0	995	97.6	0.87	640	20636	2.25	188.5	2000
2300	1PQ4 632-6CV0	995	97.1	0.89	670	22075	2.40	269.0	O.R. ²⁾
8-pole									
800	1PQ4 500-8CV0	746	96.6	0.81	255	10241	2.20	81.7	2200
850	1PQ4 502-8CV0	746	96.6	0.81	275	10881	2.20	91.9	2200
950	1PQ4 504-8CV0	746	96.6	0.81	305	12162	2.20	102.2	2200
1300	1PQ4 560-8CV0	744	96.8	0.84	400	16687	1.90	141.6	2000
1450	1PQ4 562-8CV0	744	96.9	0.84	445	18612	1.90	162.3	2000
1700	1PQ4 564-8CV0	744	97.0	0.84	520	21821	1.90	188.8	2000
1850	1PQ4 634-8CV0	746	96.8	0.84	570	23683	2.40	294.0	O.R. ²⁾
2040	1PQ4 636-8CV0	745	96.9	0.85	620	26150	2.10	320.0	O.R. ²⁾

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1PQ4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1PQ4 500-4...	1350	8641	97.4	0.87	1280	8193	97.4	0.87	1230	7873	97.4	0.86
1PQ4 502-4...	1500	9601	97.5	0.87	1430	9153	97.5	0.87	1380	8833	97.5	0.87
1PQ4 504-4...	1650	10561	97.6	0.88	1560	9985	97.6	0.88	1500	9601	97.6	0.88
1PQ4 560-4...	1850	11826	97.8	0.87	1780	11378	97.8	0.87	1730	11059	97.8	0.87
1PQ4 562-4...	2100	13424	97.8	0.87	2030	12976	97.8	0.87	1980	12657	97.8	0.87
1PQ4 564-4...	2350	15022	97.8	0.87	2300	14702	97.8	0.87	2250	14383	97.8	0.87
6-pole												
1PQ4 500-6...	1170	11241	97.2	0.87	1170	11241	97.2	0.87	1120	10761	97.2	0.87
1PQ4 502-6...	1280	12298	97.2	0.87	1280	12298	97.2	0.87	1220	11721	97.2	0.87
1PQ4 504-6...	1380	13259	97.2	0.87	1380	13259	97.2	0.87	1320	12682	97.3	0.87
1PQ4 560-6...	1700	16317	97.4	0.86	1700	16317	97.4	0.86	1600	15357	97.4	0.86
1PQ4 562-6...	1900	18236	97.5	0.87	1900	18236	97.5	0.87	1800	17276	97.5	0.87
1PQ4 564-6...	2150	20636	97.6	0.87	2150	20636	97.6	0.87	2050	19676	97.6	0.87
1PQ4 632-6...	2210	21212	97.1	0.89	1795	17228	97.0	0.88	1680	16125	97.0	0.87
8-pole												
1PQ4 500-8...	800	10241	96.6	0.81	800	10241	96.6	0.81	760	9729	96.6	0.81
1PQ4 502-8...	850	10881	96.6	0.81	850	10881	96.6	0.81	810	10369	96.6	0.81
1PQ4 504-8...	980	12546	96.6	0.81	980	12546	96.6	0.81	930	11905	96.6	0.81
1PQ4 560-8...	1300	16687	96.8	0.84	1260	16173	96.8	0.84	1230	15788	96.8	0.84
1PQ4 562-8...	1450	18612	96.9	0.84	1440	18484	96.9	0.84	1400	17970	96.9	0.84
1PQ4 564-8...	1700	21821	97.0	0.84	1690	21693	97.0	0.84	1650	21179	97.0	0.84
1PQ4 634-8...	1775	22723	96.7	0.83	1445	18498	96.6	0.81	1350	17282	96.5	0.80
1PQ4 636-8...	1960	25125	96.8	0.85	1590	20382	96.8	0.83	1490	19100	96.7	0.82

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
4-pole									
1380	1PQ4 500-4CV ■■■	1492	97.4	0.87	285	8833	2.35	42.3	2400
1530	1PQ4 502-4CV ■■■	1492	97.5	0.87	315	9793	2.35	47.0	2400
1680	1PQ4 504-4CV ■■■	1492	97.6	0.88	340	10753	2.35	54.2	2400
1850	1PQ4 560-4CV ■■■	1494	97.8	0.87	380	11826	2.45	79.0	2200
2100	1PQ4 562-4CV ■■■	1494	97.8	0.87	430	13424	2.45	92.0	2200
2350	1PQ4 564-4CV ■■■	1494	97.8	0.87	485	15022	2.45	104.0	2200
2600	1PQ4 632-4CV ■ 0	1494	97.5	0.88	530	16620	2.20	157.0	O.R. ²⁾
2900	1PQ4 634-4CV ■ 0	1494	97.6	0.88	590	18537	2.20	171.0	O.R. ²⁾
3150	1PQ4 636-4CV ■ 0	1494	97.7	0.88	640	20136	2.20	186.0	O.R. ²⁾
6-pole									
1170	1PQ4 500-6CV ■■■	994	97.2	0.87	240	11241	2.20	82.1	2200
1280	1PQ4 502-6CV ■■■	994	97.2	0.87	265	12298	2.20	92.4	2200
1380	1PQ4 504-6CV ■■■	994	97.2	0.87	285	13259	2.20	102.6	2200
1700	1PQ4 560-6CV ■■■	995	97.4	0.86	355	16317	2.25	141.5	2000
1900	1PQ4 562-6CV ■■■	995	97.5	0.87	390	18236	2.40	162.1	2000
2150	1PQ4 564-6CV ■■■	995	97.6	0.87	445	20636	2.25	188.5	2000
2220	1PQ4 632-6CV ■■■	995	97.1	0.89	450	21308	2.30	269.0	O.R. ²⁾
2480	1PQ4 634-6CV ■■■	995	97.2	0.89	500	23803	2.20	297.0	O.R. ²⁾
2700	1PQ4 636-6CV ■■■	995	97.3	0.89	550	25915	2.20	323.0	O.R. ²⁾
8-pole									
800	1PQ4 500-8CV ■■■	746	96.6	0.81	178	10241	2.20	81.7	2200
850	1PQ4 502-8CV ■■■	746	96.6	0.81	190	10881	2.20	91.9	2200
950	1PQ4 504-8CV ■■■	746	96.6	0.81	210	12162	2.20	102.2	2200
1300	1PQ4 560-8CV ■■■	744	96.8	0.84	280	16687	1.90	141.6	2000
1450	1PQ4 562-8CV ■■■	744	96.9	0.84	310	18612	1.90	162.3	2000
1700	1PQ4 564-8CV ■■■	744	97.0	0.84	365	21821	1.90	188.8	2000
1780	1PQ4 634-8CV ■■■	745	96.7	0.84	385	22817	2.30	294.0	O.R. ²⁾
1960	1PQ4 636-8CV ■■■	745	96.8	0.85	415	25125	2.20	320.0	O.R. ²⁾

Voltage code:

4.16 kV, 50 Hz	4
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

**Air-cooled motors
H-compact 1PQ4**

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1PQ4 500-4...	1350	8641	97.4	0.87	1280	8193	97.4	0.87	1230	7873	97.4	0.86
1PQ4 502-4...	1500	9601	97.5	0.87	1430	9153	97.5	0.87	1380	8833	97.5	0.87
1PQ4 504-4...	1650	10561	97.6	0.88	1560	9985	97.6	0.88	1500	9601	97.6	0.88
1PQ4 560-4...	1850	11826	97.8	0.87	1780	11378	97.8	0.87	1730	11059	97.8	0.87
1PQ4 562-4...	2100	13424	97.8	0.87	2030	12976	97.8	0.87	1980	12657	97.8	0.87
1PQ4 564-4...	2350	15022	97.3	0.85	1900	12145	97.8	0.87	2250	14383	97.8	0.87
1PQ4 632-4...	2495	15949	97.4	0.88	2030	12976	97.4	0.87	1900	12145	97.4	0.87
1PQ4 634-4...	2780	17770	97.5	0.88	2260	14446	97.5	0.87	2110	13488	97.4	0.87
1PQ4 636-4...	3020	19305	97.6	0.88	2460	15725	97.6	0.87	2300	14702	97.5	0.87
6-pole												
1PQ4 500-6...	1170	11241	97.2	0.87	1170	11241	97.1	0.87	1200	11529	97.2	0.87
1PQ4 502-6...	1280	12298	97.2	0.87	1280	12298	96.9	0.87	1350	12970	97.2	0.87
1PQ4 504-6...	1380	13259	97.2	0.87	1380	13259	97.4	0.87	1530	14700	97.3	0.87
1PQ4 560-6...	1700	16317	97.4	0.86	1700	16317	97.5	0.87	1750	16796	97.4	0.86
1PQ4 562-6...	1900	18236	97.5	0.87	1900	18236	97.5	0.87	1950	18716	97.5	0.87
1PQ4 564-6...	2150	20636	97.6	0.87	2150	20636	97.6	0.87	2250	21595	97.6	0.87
1PQ4 632-6...	2130	20444	97.0	0.89	1730	16605	97.0	0.88	1620	15549	97.0	0.88
1PQ4 634-6...	2380	22843	97.1	0.89	1935	18572	97.2	0.89	1810	17372	97.1	0.88
1PQ4 636-6...	2590	24859	97.3	0.89	2100	20156	97.3	0.89	1970	18908	97.2	0.88
8-pole												
1PQ4 500-8...	800	10241	96.6	0.81	800	10241	96.6	0.81	760	9729	96.6	0.81
1PQ4 502-8...	850	10881	96.6	0.81	850	10881	96.6	0.81	810	10369	96.6	0.81
1PQ4 504-8...	980	12546	96.6	0.81	980	12546	96.6	0.81	930	11905	96.6	0.81
1PQ4 560-8...	1300	16687	96.8	0.84	1260	16173	96.8	0.84	1230	15788	96.8	0.84
1PQ4 562-8...	1450	18612	96.9	0.84	1440	18484	96.9	0.84	1400	17970	96.9	0.84
1PQ4 564-8...	1700	21821	97.0	0.84	1690	21693	97.0	0.84	1650	21179	97.0	0.84
1PQ4 634-8...	1710	21920	96.7	0.84	1390	17818	96.6	0.82	1300	16664	96.5	0.81
1PQ4 636-8...	1880	24099	96.8	0.85	1530	19613	96.7	0.83	1430	18331	96.7	0.82

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
4-pole									
1180	1PQ4 500-4CV ■■■	1493	96.8	0.87	122	7548	2.60	42.0	2400
1300	1PQ4 502-4CV ■■■	1493	96.9	0.87	134	8315	2.60	47.0	2400
1450	1PQ4 504-4CV ■■■	1493	97.1	0.88	148	9275	2.50	54.0	2400
1600	1PQ4 560-4CV ■■■	1494	97.2	0.86	168	10228	2.60	79.0	2200
1850	1PQ4 562-4CV ■■■	1494	97.4	0.87	190	11826	2.60	92.0	2200
2100	1PQ4 564-4CV ■■■	1494	97.5	0.87	215	13424	2.60	104.0	2200
2400	1PQ4 632-4CV ■ 0	1494	97.3	0.88	245	15341	2.40	157.0	O.R. ²⁾
2700	1PQ4 634-4CV ■ 0	1494	97.4	0.87	280	17259	2.40	171.0	O.R. ²⁾
2950	1PQ4 636-4CV ■ 0	1494	97.5	0.87	305	18857	2.40	186.0	O.R. ²⁾
6-pole									
920	1PQ4 500-6CV ■■■	995	96.6	0.86	97	8830	2.50	82.0	2200
1030	1PQ4 502-6CV ■■■	995	96.7	0.87	108	9886	2.40	92.0	2200
1120	1PQ4 504-6CV ■■■	995	96.8	0.87	116	10750	2.40	103.0	2200
1400	1PQ4 560-6CV ■■■	996	97.1	0.86	146	13424	2.70	142.0	2000
1550	1PQ4 562-6CV ■■■	996	97.2	0.86	162	14862	2.70	162.0	2000
1700	1PQ4 564-6CV ■■■	996	97.3	0.87	176	16300	2.50	189.0	2000
2050	1PQ4 632-6CV ■■■	995	97.0	0.88	210	19676	2.40	269.0	O.R. ²⁾
2300	1PQ4 634-6CV ■■■	995	97.1	0.89	235	22075	2.40	297.0	O.R. ²⁾
2500	1PQ4 636-6CV ■■■	995	97.1	0.88	255	23995	2.40	323.0	O.R. ²⁾
8-pole									
720	1PQ4 500-8CV ■■■	746	96.0	0.80	82	9217	2.30	82.0	2200
760	1PQ4 502-8CV ■■■	746	96.2	0.81	85	9729	2.30	92.0	2200
820	1PQ4 504-8CV ■■■	746	96.3	0.81	92	10497	2.30	102.0	2200
1050	1PQ4 560-8CV ■■■	745	96.6	0.82	116	13460	2.40	142.0	2000
1180	1PQ4 562-8CV ■■■	745	96.7	0.82	130	15126	2.40	162.0	2000
1350	1PQ4 564-8CV ■■■	745	96.8	0.83	146	17305	2.40	189.0	2000
1500	1PQ4 632-8CV ■■■	746	96.5	0.83	164	19202	2.50	265.0	O.R. ²⁾
1700	1PQ4 634-8CV ■■■	746	96.6	0.83	186	21763	2.50	294.0	O.R. ²⁾
1850	1PQ4 636-8CV ■■■	746	96.7	0.83	200	23683	2.50	320.0	O.R. ²⁾

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1PQ4

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{max} kW	T_{max} Nm	η %	$\cos \varphi$ [-]	P_{max} kW	T_{max} Nm	η %	$\cos \varphi$ [-]	P_{max} kW	T_{max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1PQ4 500-4...	1180	7548	96.8	0.87	1180	7548	96.8	0.87	1070	6844	96.7	0.86
1PQ4 502-4...	1300	8315	96.9	0.87	1300	8315	96.9	0.87	1200	7676	96.8	0.87
1PQ4 504-4...	1450	9275	97.1	0.88	1450	9275	97.1	0.88	1370	8763	97.0	0.88
1PQ4 560-4...	1600	10228	97.2	0.86	1600	10228	97.2	0.86	1450	9269	97.1	0.84
1PQ4 562-4...	1850	11826	97.4	0.87	1850	11826	97.4	0.87	1700	10867	97.3	0.86
1PQ4 564-4...	2100	13424	97.5	0.87	2100	13424	97.5	0.87	1950	12465	97.4	0.87
1PQ4 632-4...	2400	15341	97.3	0.88	2400	15341	97.3	0.88	2100	13424	97.3	0.87
1PQ4 634-4...	2700	17259	97.4	0.87	2700	17259	97.4	0.87	2450	15661	97.4	0.86
1PQ4 636-4...	2950	18857	97.5	0.87	2950	18857	97.5	0.87	2750	17579	97.5	0.86
6-pole												
1PQ4 500-6...	920	8830	96.6	0.86	920	8830	96.6	0.86	920	8830	96.6	0.86
1PQ4 502-6...	1030	9886	96.7	0.87	1030	9886	96.7	0.87	1030	9886	96.7	0.87
1PQ4 504-6...	1120	10750	96.8	0.87	1120	10750	96.8	0.87	1120	10750	96.8	0.87
1PQ4 560-6...	1400	13424	97.1	0.86	1400	13424	97.1	0.86	1400	13424	97.2	0.86
1PQ4 562-6...	1550	14862	97.2	0.86	1550	14862	97.2	0.86	1550	14862	97.3	0.86
1PQ4 564-6...	1700	16300	97.3	0.87	1700	16300	97.3	0.87	1700	16300	97.4	0.87
1PQ4 632-6...	2050	19676	97.0	0.88	2050	19676	97.0	0.88	2050	19676	97.0	0.88
1PQ4 634-6...	2300	22075	97.1	0.89	2300	22075	97.1	0.89	2300	22075	97.0	0.89
1PQ4 636-6...	2500	23995	97.1	0.88	2500	23995	97.1	0.88	2500	23995	97.1	0.88
8-pole												
1PQ4 500-8...	720	9217	96.0	0.80	720	9217	96.0	0.80	720	9217	96.1	0.81
1PQ4 502-8...	760	9729	96.2	0.81	760	9729	96.2	0.81	760	9729	96.2	0.81
1PQ4 504-8...	820	10497	96.3	0.81	820	10497	96.3	0.81	820	10497	96.3	0.81
1PQ4 560-8...	1050	13460	96.6	0.82	1050	13460	96.6	0.82	1050	13460	96.6	0.82
1PQ4 562-8...	1180	15126	96.7	0.82	1180	15126	96.7	0.82	1180	15126	96.8	0.82
1PQ4 564-8...	1350	17305	96.8	0.83	1350	17305	96.8	0.83	1350	17305	96.8	0.82
1PQ4 632-8...	1500	19202	96.5	0.83	1500	19202	96.5	0.83	1500	19202	96.5	0.83
1PQ4 634-8...	1700	21763	96.6	0.83	1700	21763	96.6	0.83	1700	21763	96.6	0.83
1PQ4 636-8...	1850	23683	96.7	0.83	1850	23683	96.7	0.83	1850	23683	96.7	0.83

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 60 Hz									
4-pole									
1550	1PQ4 500-4CV1 ■	1793	97.5	0.88	455	8256	2.50	42.3	2400
1700	1PQ4 502-4CV1 ■	1793	97.5	0.88	495	9055	2.50	47.0	2400
1850	1PQ4 504-4CV1 ■	1793	97.5	0.88	540	9854	2.50	54.2	2400
2000	1PQ4 560-4CV1 ■	1794	97.7	0.87	590	10647	2.40	79.0	2200
2300	1PQ4 562-4CV1 ■	1794	97.7	0.87	680	12244	2.40	92.0	2200
2600	1PQ4 564-4CV1 ■	1794	97.7	0.87	770	13841	2.40	104.0	2200
6-pole									
1270	1PQ4 500-6CV1 ■	1195	97.1	0.87	375	10149	2.25	82.1	2200
1420	1PQ4 502-6CV1 ■	1196	97.3	0.87	420	11339	2.25	92.4	2200
1600	1PQ4 504-6CV1 ■	1195	97.4	0.87	475	12787	2.25	102.6	2200
1850	1PQ4 560-6CV1 ■	1195	97.5	0.87	550	14785	2.40	141.5	2000
2050	1PQ4 562-6CV1 ■	1195	97.5	0.87	610	16383	2.40	162.1	2000
2350	1PQ4 564-6CV1 ■	1195	97.6	0.87	690	18780	2.40	188.5	2000
8-pole									
1000	1PQ4 500-8CV1 ■	895	96.7	0.81	320	10670	2.10	81.7	2200
1100	1PQ4 502-8CV1 ■	895	96.7	0.81	355	11737	2.10	91.9	2200
1200	1PQ4 504-8CV1 ■	895	96.7	0.81	385	12804	2.10	102.2	2200
1400	1PQ4 560-8CV1 ■	894	96.9	0.84	430	14955	1.90	141.6	2000
1630	1PQ4 562-8CV1 ■	894	97.0	0.84	500	17412	1.90	162.3	2000
1860	1PQ4 564-8CV1 ■	894	97.1	0.84	570	19869	2.10	188.8	2000
2000	1PQ4 634-8CV1 ■	895	96.7	0.86	600	21341	2.00	294.0	O.R. ²⁾
2160	1PQ4 636-8CV1 ■	895	96.8	0.86	650	23048	2.10	320.0	O.R. ²⁾

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

**Air-cooled motors
H-compact 1PQ4**

Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1PQ4 500-4...	1550	8256	97.5	0.88	1550	8256	97.5	0.88	1480	7883	97.5	0.88
1PQ4 502-4...	1700	9055	97.5	0.88	1700	9055	97.5	0.88	1620	8629	97.5	0.88
1PQ4 504-4...	1850	9854	97.5	0.88	1850	9854	97.5	0.88	1780	9481	97.5	0.88
1PQ4 560-4...	2000	10647	97.7	0.87	1940	10327	97.7	0.87	1900	10114	97.7	0.87
1PQ4 562-4...	2300	12244	97.7	0.87	2300	12244	97.7	0.87	2250	11977	97.7	0.87
1PQ4 564-4...	2600	13841	97.7	0.87	2600	13841	97.7	0.87	2550	13574	97.7	0.87
6-pole												
1PQ4 500-6...	1270	10149	97.1	0.87	1270	10149	97.1	0.87	1200	9590	97.1	0.87
1PQ4 502-6...	1420	11339	96.9	0.87	1420	11339	96.9	0.87	1350	10780	96.9	0.87
1PQ4 504-6...	1600	12787	97.4	0.87	1600	12787	97.4	0.87	1530	12227	97.4	0.87
1PQ4 560-6...	1850	14785	97.5	0.87	1850	14785	97.5	0.87	1750	13985	97.5	0.87
1PQ4 562-6...	2050	16383	97.5	0.87	2050	16383	97.5	0.87	1950	15584	97.5	0.87
1PQ4 564-6...	2350	18780	97.6	0.87	2350	18780	97.6	0.87	2250	17981	97.6	0.87
8-pole												
1PQ4 500-8...	1000	10670	96.7	0.81	1000	10670	96.7	0.81	950	10137	96.7	0.81
1PQ4 502-8...	1100	11737	96.7	0.81	1100	11737	96.7	0.81	1050	11204	96.7	0.81
1PQ4 504-8...	1200	12804	96.7	0.81	1200	12804	96.7	0.81	1150	12271	96.7	0.81
1PQ4 560-8...	1400	14955	96.9	0.84	1400	14955	96.9	0.84	1350	14421	96.9	0.84
1PQ4 562-8...	1630	17412	97.0	0.84	1630	17412	97.0	0.84	1580	16878	97.0	0.84
1PQ4 564-8...	1860	19869	97.1	0.84	1860	19869	97.1	0.84	1800	19228	97.1	0.84
1PQ4 634-8...	1940	20701	96.6	0.85	1580	16859	96.4	0.84	1480	15792	96.4	0.84
1PQ4 636-8...	2095	22354	96.6	0.85	1705	18193	96.5	0.84	1598	17051	96.4	0.84

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 60 Hz									
4-pole									
1550	1PQ4 500-4CV5	1793	97.5	0.88	250	8256	2.50	42.3	2400
1700	1PQ4 502-4CV5	1793	97.5	0.88	275	9055	2.50	47.0	2400
1850	1PQ4 504-4CV5	1793	97.5	0.88	300	9854	2.50	54.2	2400
2000	1PQ4 560-4CV5	1794	97.7	0.87	325	10647	2.40	79.0	2200
2300	1PQ4 562-4CV5	1794	97.7	0.87	375	12244	2.40	92.0	2200
2600	1PQ4 564-4CV5	1794	97.7	0.87	425	13841	2.40	104.0	2200
2950	1PQ4 632-4CV5 0	1794	97.2	0.87	485	15704	2.40	157.0	O.R. ²⁾
3320	1PQ4 634-4CV5 0	1794	97.3	0.87	540	17673	2.20	171.0	O.R. ²⁾
3600	1PQ4 636-4CV5 0	1795	97.5	0.87	590	19153	2.40	186.0	O.R. ²⁾
6-pole									
1270	1PQ4 500-6CV5	1195	97.1	0.87	210	10149	2.25	82.1	2200
1420	1PQ4 502-6CV5	1196	97.3	0.87	235	11339	2.25	92.4	2200
1600	1PQ4 504-6CV5	1195	97.4	0.87	260	12787	2.25	102.6	2200
1850	1PQ4 560-6CV5	1195	97.5	0.87	305	14785	2.40	141.5	2000
2050	1PQ4 562-6CV5	1195	97.5	0.87	335	16383	2.40	162.1	2000
2350	1PQ4 564-6CV5	1195	97.6	0.87	385	18780	2.40	188.5	2000
2400	1PQ4 632-6CV5	1195	96.8	0.89	385	19180	2.40	269.0	O.R. ²⁾
2700	1PQ4 634-6CV5	1195	96.9	0.89	435	21577	2.20	297.0	O.R. ²⁾
2900	1PQ4 636-6CV5	1195	97.0	0.89	465	23176	2.20	323.0	O.R. ²⁾
8-pole									
1000	1PQ4 500-8CV5	895	96.7	0.81	178	10670	2.10	81.7	2200
1100	1PQ4 502-8CV5	895	96.7	0.81	194	11737	2.10	91.9	2200
1200	1PQ4 504-8CV5	895	96.7	0.81	215	12804	2.10	102.2	2200
1400	1PQ4 560-8CV5	894	96.9	0.84	240	14955	1.90	141.6	2000
1630	1PQ4 562-8CV5	894	97.0	0.84	280	17412	1.90	162.3	2000
1860	1PQ4 564-8CV5	894	97.1	0.84	315	19869	2.10	188.8	2000
1960	1PQ4 634-8CV5	895	96.7	0.86	325	20914	2.00	294.0	O.R. ²⁾
2160	1PQ4 636-8CV5	895	96.8	0.86	360	23048	2.10	320.0	O.R. ²⁾

Type of construction:

IM B3	0
IM V1 (with canopy)	4
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1PQ4

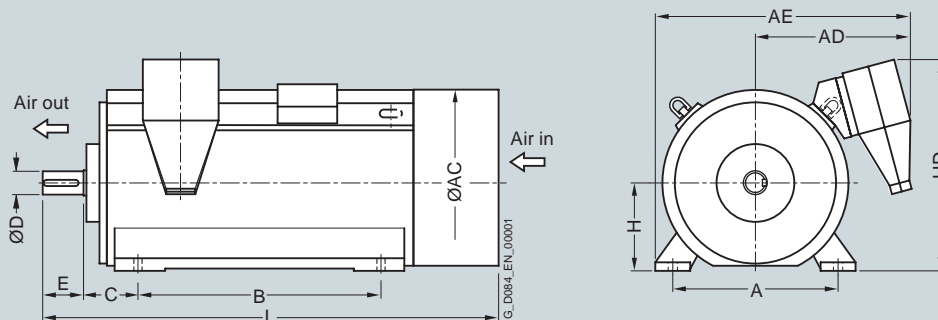
Motor type (repeated)	Constant-torque drive, speed range											
	1:2				1:5				1:10			
	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]	P_{\max} kW	T_{\max} Nm	η %	$\cos \varphi$ [-]
	Constant torque drive											
4-pole												
1PQ4 500-4...	1550	8256	97.5	0.88	1550	8256	97.5	0.88	1480	7883	97.5	0.88
1PQ4 502-4...	1700	9055	97.5	0.88	1700	9055	97.5	0.88	1620	8629	97.5	0.88
1PQ4 504-4...	1850	9854	97.5	0.88	1850	9854	97.5	0.88	1780	9481	97.5	0.88
1PQ4 560-4...	2000	10647	97.7	0.87	1940	10327	97.7	0.87	1900	10114	97.7	0.87
1PQ4 562-4...	2300	12244	97.7	0.87	2300	12244	97.7	0.87	2250	11977	97.7	0.87
1PQ4 564-4...	2600	13841	97.7	0.87	2600	13841	97.7	0.87	2550	13574	97.7	0.87
1PQ4 632-4...	2860	15225	97.2	0.87	2330	12403	97.0	0.86	2185	11631	96.9	0.85
1PQ4 634-4...	3220	17141	97.3	0.87	2625	13974	97.1	0.86	2455	13069	97.1	0.85
1PQ4 636-4...	3490	18568	97.4	0.87	2845	15136	97.2	0.86	2665	14179	97.2	0.85
6-pole												
1PQ4 500-6...	1270	10149	97.1	0.87	1270	10149	97.1	0.87	1200	9590	97.1	0.87
1PQ4 502-6...	1420	11339	96.9	0.87	1420	11339	96.9	0.87	1350	10780	96.9	0.87
1PQ4 504-6...	1600	12787	97.4	0.87	1600	12787	97.4	0.87	1530	12227	97.4	0.87
1PQ4 560-6...	1850	14785	97.5	0.87	1850	14785	97.5	0.87	1750	13985	97.5	0.87
1PQ4 562-6...	2050	16383	97.5	0.87	2050	16383	97.5	0.87	1950	15584	97.5	0.87
1PQ4 564-6...	2350	18780	97.6	0.87	2350	18780	97.6	0.87	2250	17981	97.6	0.87
1PQ4 632-6...	2330	18621	96.7	0.89	1895	15144	96.5	0.88	1775	14185	96.4	0.88
1PQ4 634-6...	2620	20938	96.9	0.89	2135	17062	96.8	0.89	2000	15983	96.7	0.88
1PQ4 636-6...	2815	22496	97.0	0.89	2290	18301	96.9	0.89	2145	17142	96.8	0.88
8-pole												
1PQ4 500-8...	1000	10670	96.7	0.81	1000	10670	96.7	0.81	950	10137	96.7	0.81
1PQ4 502-8...	1100	11737	96.7	0.81	1100	11737	96.7	0.81	1050	11204	96.7	0.81
1PQ4 504-8...	1200	12804	96.7	0.81	1200	12804	96.7	0.81	1150	12271	96.7	0.81
1PQ4 560-8...	1400	14955	96.9	0.84	1400	14955	96.9	0.84	1350	14421	96.9	0.84
1PQ4 562-8...	1630	17412	97.0	0.84	1630	17412	97.0	0.84	1580	16878	97.0	0.84
1PQ4 564-8...	1860	19869	97.1	0.84	1860	19869	97.1	0.84	1800	19228	97.1	0.84
1PQ4 634-8...	1901	20284	96.5	0.85	1548	16518	96.4	0.84	1450	15472	96.3	0.83
1PQ4 636-8...	2095	22354	96.6	0.85	1706	18204	96.5	0.84	1598	17051	96.4	0.83

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Dimension drawings



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾³⁾ mm	AE ¹⁾²⁾³⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ⁴⁾ mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction												
2-pole												
1PQ4454-2CM00	5350	850	960	920	1440	1250	280	95	130	450	1100	2800
4-pole												
1PQ4454-4AM00	5300	850	960	920	1440	1250	475	130	200	450	1100	3050
1PQ4500-4C..0	6400	950	1070	875	1440	1320	500	140	200	500	1200	3230
1PQ4502-4C..0	6800	950	1070	875	1440	1320	500	140	200	500	1200	3230
1PQ4504-4C..0	7300	950	1070	875	1440	1320	500	140	200	500	1200	3230
1PQ4560-4C..0	8600	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4562-4C..0	9300	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4564-4C..0	10100	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4632-4C..0	12700	1120	1350	945	1560	1600	560	170	240	630	1410	3800
1PQ4634-4C..0	13300	1120	1350	945	1560	1600	560	170	240	630	1410	3800
1PQ4636-4C..0	14200	1120	1350	945	1560	1600	560	170	240	630	1410	3800
6-pole												
1PQ4454-6AM00	5400	850	960	920	1440	1250	475	130	200	450	1100	3050
1PQ4500-6C..0	6700	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4502-6C..0	7100	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4504-6C..0	7600	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4560-6C..0	8900	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4562-6C..0	9600	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4564-6C..0	10500	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4632-6C..0	12800	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4634-6C..0	13800	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4636-6C..0	14600	1120	1350	960	1630	1600	560	180	240	630	1410	3800
8-pole												
1PQ4454-8AM00	5400	850	960	920	1630	1250	475	130	200	450	1100	3050
1PQ4500-8C..0	6700	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4502-8C..0	7000	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4504-8C..0	7500	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4560-8C..0	8900	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4562-8C..0	9600	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4564-8C..0	10400	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4632-8C..0	12800	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4634-8C..0	13400	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4636-8C..0	14300	1120	1350	960	1630	1600	560	180	240	630	1410	3800

¹⁾ For $V_{\text{rated}} = 690$ V, the dimension changes by + 100 mm.

²⁾ For $V_{\text{rated}} = 690$ V and $I_{\text{rated}} > 1230$ A, the dimension changes by + 475 mm (a second main terminal box is required).

³⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

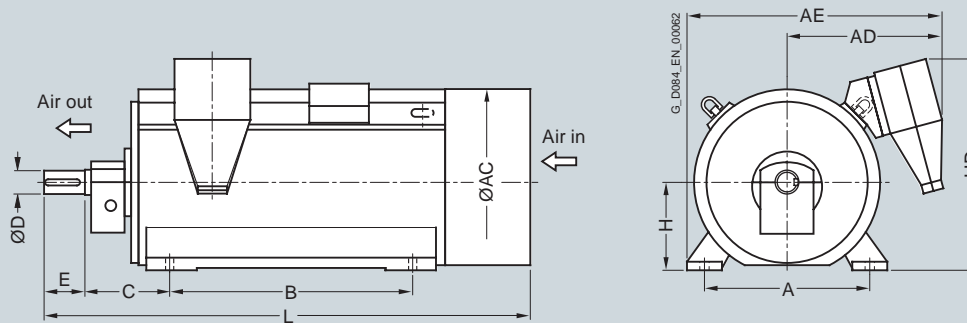
⁴⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 70 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact 1PQ4

Dimension drawings



Motor type	Weight kg	Dimensions										
		A mm	AC mm	AD ¹⁾³⁾ mm	AE ¹⁾²⁾³⁾ mm	B mm	C mm	D mm	E mm	H mm	HD ⁴⁾ mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction												
2-pole												
1PQ4454-2CM00-Z K96	5400	850	960	920	1440	1250	400	95	130	450	1100	2910
4-pole												
1PQ4454-4AM00-Z K96	5300	850	960	920	1440	1250	475	130	200	450	1100	3050
1PQ4500-4C..0-Z K96	6400	950	1070	875	1440	1320	500	140	200	500	1200	3230
1PQ4502-4C..0-Z K96	6800	950	1070	875	1440	1320	500	140	200	500	1200	3230
1PQ4504-4C..0-Z K96	7300	950	1070	875	1440	1320	500	140	200	500	1200	3230
1PQ4560-4C..0-Z K96	8600	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4562-4C..0-Z K96	9300	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4564-4C..0-Z K96	10100	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4632-4C..0-Z K96	12700	1120	1350	945	1560	1600	560	170	240	630	1410	3800
1PQ4634-4C..0-Z K96	13300	1120	1350	945	1560	1600	560	170	240	630	1410	3800
1PQ4636-4C..0-Z K96	14200	1120	1350	945	1560	1600	560	170	240	630	1410	3800
6-pole												
1PQ4454-6AM00-Z K96	5400	850	960	920	1440	1250	475	130	200	450	1100	3050
1PQ4500-6C..0-Z K96	6700	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4502-6C..0-Z K96	7100	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4504-6C..0-Z K96	7600	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4560-6C..0-Z K96	8900	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4562-6C..0-Z K96	9600	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4564-6C..0-Z K96	10500	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4632-6C..0-Z K96	12800	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4634-6C..0-Z K96	13800	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4636-6C..0-Z K96	14600	1120	1350	960	1630	1600	560	180	240	630	1410	3800
8-pole												
1PQ4454-8AM00-Z K96	5400	850	960	920	1630	1250	475	130	200	450	1100	3050
1PQ4500-8C..0-Z K96	6700	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4502-8C..0-Z K96	7000	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4504-8C..0-Z K96	7500	950	1070	875	1440	1320	530	140	200	500	1200	3260
1PQ4560-8C..0-Z K96	8900	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4562-8C..0-Z K96	9600	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4564-8C..0-Z K96	10400	1060	1210	925	1560	1400	560	160	240	560	1310	3560
1PQ4632-8C..0-Z K96	12800	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4634-8C..0-Z K96	13400	1120	1350	960	1630	1600	560	180	240	630	1410	3800
1PQ4636-8C..0-Z K96	14300	1120	1350	960	1630	1600	560	180	240	630	1410	3800

1) For $V_{\text{rated}} = 690$ V, the dimension changes by + 100 mm.

2) For $V_{\text{rated}} = 690$ V and $I_{\text{rated}} > 1230$ A, the dimension changes by + 475 mm (a second main terminal box is required).

3) For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

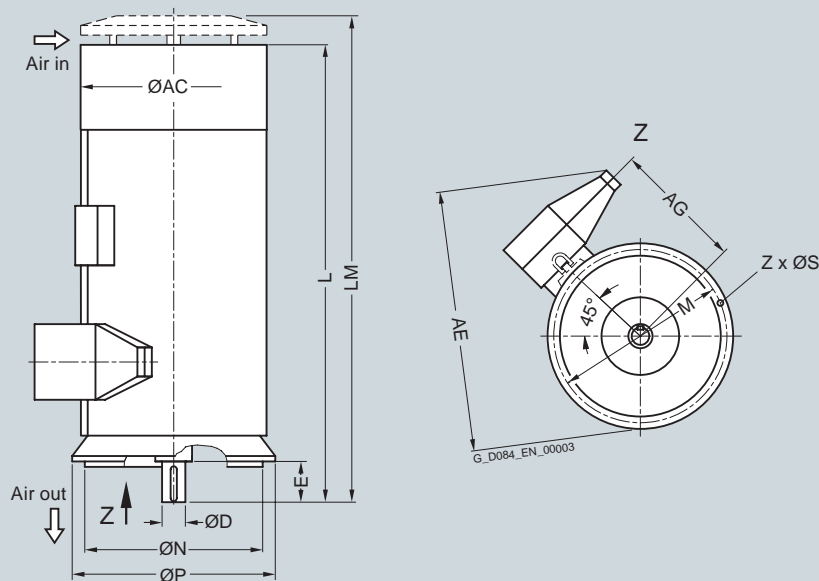
4) For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 70 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact 1PQ4

Dimension drawings



Motor type	Weight kg	Dimensions											
		AC mm	AG ¹⁾²⁾ mm	AE ³⁾ mm	D mm	E mm	L mm	LM mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction													
4-pole													
1PQ4454-4AM04	5200	960	770	1550	130	200	2900	3050	1150	1000	1080	26	8
1PQ4500-4C..4	6200	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4502-4C..4	6600	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4504-4C..4	7100	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4560-4C..4	8400	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4562-4C..4	9100	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4564-4C..4	9800	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
6-pole													
1PQ4454-6AM04	5500	960	770	1550	130	200	2900	3050	1150	1000	1080	26	8
1PQ4500-6C..4	6500	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4502-6C..4	6900	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4504-6C..4	7400	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4560-6C..4	8600	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4562-6C..4	9400	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4564-6C..4	10200	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4632-6C..4	13100	1350	980	1820	180	240	3650	3700	1400	1250	1320	26	16
1PQ4634-6C..4	13800	1350	980	1820	180	240	3650	3700	1400	1250	1320	26	16
1PQ4636-6C..4	14600	1350	980	1820	180	240	3650	3700	1400	1250	1320	26	16
8-pole													
1PQ4454-8AM04	5500	960	770	1550	130	200	2900	3050	1000	1150	1080	26	8
1PQ4500-8C..4	6500	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4502-8C..4	6900	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4504-8C..4	7300	1070	840	1660	140	200	3050	3100	1250	1120	1180	26	16
1PQ4560-8C..4	8600	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4562-8C..4	9300	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4564-8C..4	10100	1210	910	1800	160	240	3330	3380	1400	1250	1320	26	16
1PQ4632-8C..4	13100	1350	980	1820	180	240	3650	3700	1400	1250	1320	26	16
1PQ4634-8C..4	13800	1350	980	1820	180	240	3650	3700	1400	1250	1320	26	16
1PQ4636-8C..4	14600	1350	980	1820	180	240	3650	3700	1400	1250	1320	26	16

¹⁾ For $V_{rated} = 690$ V, the dimension changes by - 50 mm.

³⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 180 mm.

²⁾ For currents $I_{rated} > 315$ A, the dimension changes by + 45 mm.

Motors for converter operation

With non-sinusoidal output

**Air-cooled motors
H-compact PLUS 1RA4**

Overview



Technical data

Technical data at a glance

H-compact PLUS 1RA4	
Rated voltage	2.3 ... 6.6 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP23
Cooling method	IC01
Stator winding insulation	Insulation system, thermal class 155 (F), utilized to 155 (F)
Shaft height	450 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 mm	Frame: Steel Top cover: Steel

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Technical data (continued)

Power ranges for IEC motors with reinforced insulation for SINAMICS drive converters without sine-wave filter

1RA4 series

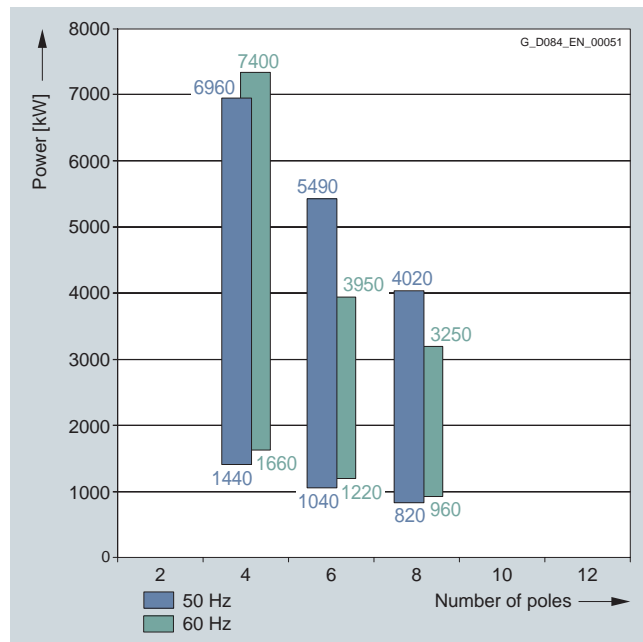
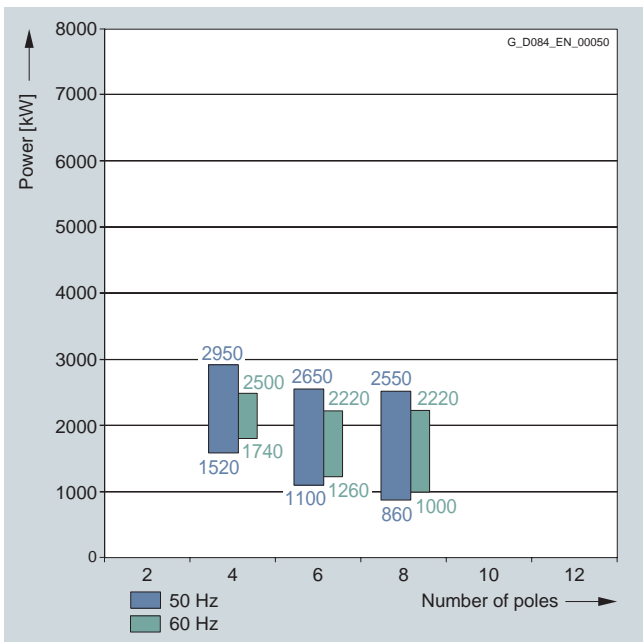
Insulation system, thermal class 155 (F), utilized to 155 (F)

The power data listed here apply for an ambient temperature of 40 °C and an installation altitude ≤ 1000 m.

2.3 kV; 50 and 60 Hz

3.4 kV to 4.16 kV; 50 and 60 Hz

3



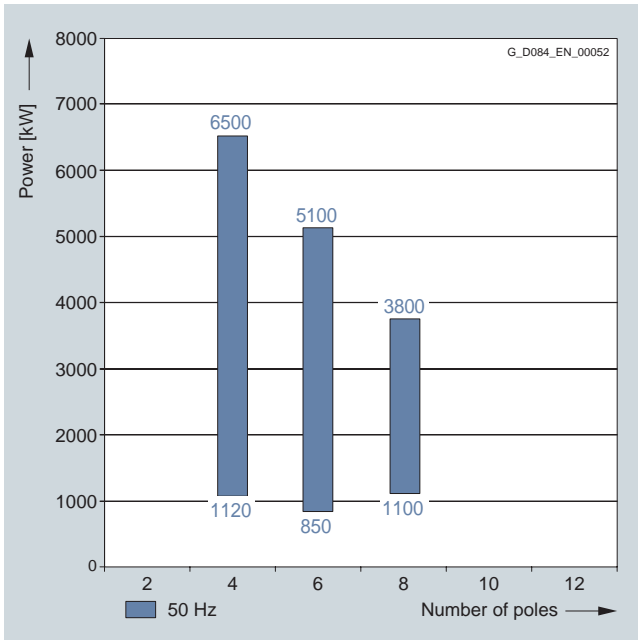
Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Technical data (continued)

6 to 6.6 kV; 50 Hz



Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 50 Hz									
4-pole									
1520	1RA4 450-4HV0	1480	96.2	0.89	445	9807	2.00	21	1800
1700	1RA4 452-4HV0	1482	96.3	0.89	500	10954	2.00	23	1800
1920	1RA4 454-4HV0	1482	96.4	0.89	560	12372	1.90	26	1800
2180	1RA4 456-4HV0	1483	96.6	0.89	640	14037	2.00	29	1800
2400	1RA4 500-4HV0	1484	96.2	0.89	700	15445	2.00	39	1800
2550	1RA4 502-4HV0	1484	96.5	0.89	750	16410	2.00	42	1800
2950	1RA4 504-4HV0	1484	96.6	0.89	860	18984	2.00	48	1800
6-pole									
1100	1RA4 450-6HV0	985	95.3	0.85	340	10665	1.90	29	1200
1240	1RA4 452-6HV0	986	95.6	0.85	385	12010	1.90	33	1200
1440	1RA4 454-6HV0	985	95.6	0.87	435	13961	1.80	36	1200
1700	1RA4 456-6HV0	986	95.9	0.87	510	16466	1.90	41	1200
1960	1RA4 500-6HV0	988	95.9	0.86	600	18945	1.90	57	1200
2200	1RA4 502-6HV0	988	96.1	0.87	660	21265	1.90	65	1200
2450	1RA4 504-6HV0	989	96.1	0.86	740	23658	1.90	72	1200
2650	1RA4 506-6HV0	989	96.3	0.86	800	25589	1.90	81	1200
8-pole									
860	1RA4 450-8HV0	740	94.9	0.84	270	11099	2.00	37	900
960	1RA4 452-8HV0	740	95.3	0.84	300	12389	2.00	41	900
1080	1RA4 454-8HV0	741	95.4	0.83	340	13919	2.00	46	900
1220	1RA4 456-8HV0	741	95.5	0.83	385	15723	2.00	52	900
1440	1RA4 500-8HV0	741	95.6	0.83	455	18559	1.90	70	900
1600	1RA4 502-8HV0	742	95.8	0.83	510	20593	1.90	80	900
1780	1RA4 504-8HV0	742	96.0	0.84	550	22910	1.90	88	900
1960	1RA4 506-8HV0	742	96.0	0.84	610	25226	1.90	99	900
2250	1RA4 560-8HV0	743	96.0	0.82	720	28920	1.90	123	900
2550	1RA4 562-8HV0	743	96.2	0.82	810	32776	1.90	141	900

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
Fan/pump/compressor drive												
4-pole												
1RA4 450-4...	1140	1347	96.2	0.89	760	1174	96.4	0.87	380	933	96.3	0.80
1RA4 452-4...	1275	1348	96.4	0.88	850	1175	96.6	0.86	425	933	96.3	0.78
1RA4 454-4...	1440	1348	96.5	0.88	960	1175	96.8	0.87	480	933	96.7	0.79
1RA4 456-4...	1635	1349	96.7	0.88	1090	1176	96.9	0.87	545	934	96.8	0.79
1RA4 500-4...	1800	1348	96.5	0.89	1200	1178	96.8	0.88	600	935	96.8	0.82
1RA4 502-4...	1913	1348	96.5	0.89	1275	1178	96.8	0.88	638	935	96.8	0.82
1RA4 504-4...	2213	1348	96.7	0.90	1475	1178	96.9	0.89	738	935	96.9	0.82
6-pole												
1RA4 450-6...	825	895	95.6	0.84	550	782	95.9	0.81	275	621	95.6	0.72
1RA4 452-6...	930	896	95.8	0.84	620	783	96.1	0.82	310	621	95.8	0.73
1RA4 454-6...	1080	895	95.9	0.87	720	782	96.2	0.85	360	621	96.0	0.78
1RA4 456-6...	1275	896	96.1	0.86	850	783	96.3	0.84	425	621	96.1	0.76
1RA4 500-6...	1470	898	96.1	0.86	980	784	96.2	0.83	490	622	96.0	0.74
1RA4 502-6...	1650	898	96.4	0.87	1100	784	96.5	0.85	550	622	96.4	0.77
1RA4 504-6...	1838	899	96.4	0.87	1225	785	96.5	0.84	613	623	96.4	0.77
1RA4 506-6...	1988	899	96.5	0.87	1325	785	96.6	0.84	663	623	96.4	0.77
8-pole												
1RA4 450-8...	645	672	95.3	0.81	430	587	95.4	0.77	215	466	94.8	0.66
1RA4 452-8...	720	672	95.5	0.82	480	587	95.6	0.78	240	466	95.1	0.68
1RA4 454-8...	810	673	95.6	0.80	540	588	95.7	0.76	270	467	95.1	0.64
1RA4 456-8...	915	673	95.8	0.80	610	588	95.8	0.76	305	467	95.3	0.64
1RA4 500-8...	1080	673	95.9	0.82	720	588	95.9	0.78	360	467	95.5	0.67
1RA4 502-8...	1200	674	96.1	0.83	800	589	96.1	0.80	400	467	95.7	0.69
1RA4 504-8...	1335	674	96.2	0.83	890	589	96.2	0.80	445	467	95.9	0.70
1RA4 506-8...	1470	674	96.2	0.83	980	589	96.2	0.81	490	467	95.9	0.71
1RA4 560-8...	1688	675	96.2	0.82	1125	590	96.2	0.79	563	468	95.9	0.69
1RA4 562-8...	1913	675	96.3	0.82	1275	590	96.3	0.79	638	468	96.0	0.69

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency h	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ²⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
4-pole									
1440	1RA4 450-4HV	1481	96.1	0.89	295	9285	2.00	21	1800
1620	1RA4 452-4HV	1482	96.2	0.89	330	10439	2.00	23	1800
1840	1RA4 454-4HV	1483	96.4	0.89	375	11848	2.00	26	1800
2100	1RA4 456-4HV	1484	96.5	0.89	430	13513	2.10	29	1800
2300	1RA4 500-4HV	1485	96.4	0.88	475	14790	2.00	39	1800
2500	1RA4 502-4HV	1485	96.4	0.89	510	16076	2.00	42	1800
2900	1RA4 504-4HV	1485	96.7	0.89	590	18648	2.00	48	1800
3260 ¹⁾	1RA4 506-4HV	1485	96.8	0.89	660	20965	2.00	53	1800
3920 ¹⁾	1RA4 560-4HV	1486	96.8	0.90	790	25192	2.00	76	1800
4500 ¹⁾	1RA4 562-4HV	1486	96.9	0.90	900	28920	2.00	84	O.R. ³⁾
5000 ¹⁾	1RA4 564-4HV	1487	97.1	0.90	1000	32112	2.00	96	O.R. ³⁾
5500 ¹⁾	1RA4 566-4HV	1487	97.1	0.90	1100	35323	2.00	105	O.R. ³⁾
5880 ¹⁾	1RA4 632-4HV	1490	97.2	0.89	1180	37687	2.20	150	1800
6470 ¹⁾	1RA4 634-4HV	1490	97.3	0.90	1300	41469	2.20	168	1800
6960 ¹⁾	1RA4 636-4HV	1491	97.4	0.90	1390	44579	2.40	197	1800
6-pole									
1040	1RA4 450-6HV	985	95.2	0.85	225	10083	1.90	29	1200
1180	1RA4 452-6HV	985	95.2	0.85	255	11440	1.80	33	1200
1380	1RA4 454-6HV	986	95.6	0.87	290	13365	2.00	36	1200
1620	1RA4 456-6HV	987	95.8	0.86	345	15674	2.00	41	1200
1860	1RA4 500-6HV	988	95.7	0.86	395	17977	1.90	57	1200
2100	1RA4 502-6HV	989	96.1	0.87	440	20277	2.00	65	1200
2340	1RA4 504-6HV	990	96.2	0.87	490	22571	2.00	72	1200
2560	1RA4 506-6HV	990	96.4	0.87	530	24693	2.00	81	1200
3000	1RA4 560-6HV	990	96.5	0.86	630	28939	1.90	105	1200
3380 ¹⁾	1RA4 562-6HV	991	96.7	0.86	710	32572	1.90	120	1200
3750 ¹⁾	1RA4 564-6HV	991	96.7	0.87	780	36138	2.00	135	1200
4300 ¹⁾	1RA4 566-6HV	991	97.0	0.87	890	41438	2.00	147	O.R. ³⁾
4610 ¹⁾	1RA4 632-6HV	993	97.0	0.86	970	44336	2.10	202	1200
5000 ¹⁾	1RA4 634-6HV	993	97.1	0.86	1040	48087	2.30	223	1200
5490 ¹⁾	1RA4 636-6HV	994	97.2	0.86	1140	52746	2.30	246	1200

Voltage code:

4.16 kV, 50 Hz

4

Other voltage

9

Type of construction:

IM B3

0

IM V1 (without canopy)

8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ Rated voltage less than 4.16 kV on request.

²⁾ For IM B3, rolling-contact bearings.

³⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1RA4 450-4...	1080	1345	96.2	0.88	720	1175	96.4	0.86	360	933	96.2	0.78
1RA4 452-4...	1215	1346	96.4	0.86	810	1176	96.6	0.86	405	933	96.5	0.78
1RA4 454-4...	1380	1346	96.6	0.88	920	1176	96.7	0.85	460	934	96.5	0.77
1RA4 456-4...	1575	1347	96.7	0.88	1050	1176	96.9	0.86	525	934	96.7	0.77
1RA4 500-4...	1725	1351	96.6	0.89	1150	1180	96.7	0.87	575	937	96.6	0.79
1RA4 502-4...	1875	1351	96.6	0.89	1250	1180	96.8	0.88	625	937	96.7	0.81
1RA4 504-4...	2175	1351	96.9	0.89	1450	1180	97.1	0.88	725	938	97.0	0.81
1RA4 506-4...	2445	1349	97.0	0.90	1630	1179	97.1	0.88	815	935	97.1	0.82
1RA4 560-4...	2940	1350	97.0	0.90	1960	1179	97.1	0.88	980	936	97.1	0.82
1RA4 562-4...	3375	1350	97.2	0.90	2250	1179	97.3	0.88	1125	936	97.2	0.82
1RA4 564-4...	3750	1351	97.4	0.90	2500	1180	97.5	0.88	1250	937	97.2	0.82
1RA4 566-4...	4125	1351	97.5	0.90	2750	1180	97.6	0.89	1375	937	97.3	0.83
1RA4 632-4...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RA4 634-4...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RA4 636-4...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
6-pole												
1RA4 450-6...	780	896	95.4	0.84	520	783	95.7	0.82	260	622	95.5	0.72
1RA4 452-6...	885	895	95.8	0.85	590	783	96.0	0.83	295	622	95.8	0.75
1RA4 454-6...	1035	896	95.8	0.86	690	783	96.0	0.83	345	622	95.7	0.74
1RA4 456-6...	1215	897	96.0	0.85	810	783	96.2	0.82	405	622	95.9	0.73
1RA4 500-6...	1395	900	96.2	0.86	930	786	96.3	0.84	465	625	96.1	0.75
1RA4 502-6...	1575	900	96.3	0.86	1050	786	96.5	0.84	525	625	96.3	0.76
1RA4 504-6...	1755	900	96.5	0.86	1170	786	96.6	0.84	585	625	96.3	0.75
1RA4 506-6...	1920	900	96.6	0.86	1280	787	96.6	0.84	640	625	96.4	0.76
1RA4 560-6...	2250	901	96.6	0.85	1500	787	96.7	0.83	750	625	96.4	0.74
1RA4 562-6...	2535	900	96.9	0.86	1690	787	97.0	0.84	845	624	96.8	0.75
1RA4 564-6...	2813	900	96.8	0.86	1875	787	96.9	0.84	938	624	96.7	0.76
1RA4 566-6...	3225	900	97.0	0.86	2150	787	97.0	0.83	1075	624	96.8	0.75
1RA4 632-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RA4 634-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RA4 636-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency h	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ²⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
8-pole									
820	1RA4 450-8HV	740	94.6	0.84	180	10582	2.00	37	900
920	1RA4 452-8HV	740	94.9	0.84	200	11872	1.90	41	900
1020	1RA4 454-8HV	741	95.0	0.83	225	13145	2.00	46	900
1160	1RA4 456-8HV	741	95.4	0.83	255	14949	2.10	52	900
1360	1RA4 500-8HV	741	95.3	0.84	295	17526	1.80	70	900
1520	1RA4 502-8HV	742	95.5	0.85	330	19562	1.90	80	900
1700	1RA4 504-8HV	742	95.6	0.84	370	21878	2.00	88	900
1860	1RA4 506-8HV	742	95.8	0.85	400	23938	1.90	99	900
2120	1RA4 560-8HV	742	95.9	0.83	465	27286	1.80	123	900
2400	1RA4 562-8HV	742	96.1	0.83	530	30889	1.80	141	900
2600	1RA4 564-8HV	743	96.2	0.83	570	33419	1.90	158	900
2830	1RA4 566-8HV	742	96.3	0.85	600	36424	1.80	173	900
3140 ¹⁾	1RA4 630-8HV	743	96.5	0.85	670	40359	1.90	239	900
3430 ¹⁾	1RA4 632-8HV	743	96.7	0.85	730	44087	2.10	265	900
3680 ¹⁾	1RA4 634-8HV	743	96.7	0.85	780	47300	2.00	293	900
4020 ¹⁾	1RA4 636-8HV	744	96.9	0.84	860	51601	2.30	324	900
Voltage code:									
4.16 kV, 50 Hz									
Other voltage									
Type of construction:									
IM B3									
IM V1 (without canopy)									

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ Rated voltage less than 4.16 kV on request.

²⁾ For IM B3, rolling-contact bearings.

³⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

8-pole

1RA4 450-8...	615	672	95.0	0.81	410	587	95.1	0.77	205	466	94.5	0.65
1RA4 452-8...	690	672	95.2	0.82	460	587	95.4	0.79	230	466	95.0	0.68
1RA4 454-8...	765	673	95.3	0.80	510	588	95.4	0.76	255	467	94.8	0.64
1RA4 456-8...	870	673	95.6	0.79	580	588	95.6	0.74	290	467	94.9	0.62
1RA4 500-8...	1020	675	95.7	0.83	680	590	95.8	0.81	340	468	95.5	0.71
1RA4 502-8...	1140	675	95.8	0.83	760	590	95.9	0.80	380	468	95.5	0.69
1RA4 504-8...	1275	675	95.9	0.82	850	590	95.9	0.78	425	468	95.4	0.67
1RA4 506-8...	1395	675	96.1	0.84	930	590	96.1	0.81	465	468	95.8	0.72
1RA4 560-8...	1590	675	96.2	0.82	1060	590	96.2	0.79	530	469	95.9	0.69
1RA4 562-8...	1800	676	96.3	0.83	1200	590	96.4	0.80	600	469	96.0	0.70
1RA4 564-8...	1950	676	96.5	0.82	1300	590	96.5	0.79	650	469	96.2	0.69
1RA4 566-8...	2125	676	96.6	0.84	1415	590	96.7	0.82	710	469	96.4	0.74
1RA4 630-8...	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾
1RA4 632-8...	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾
1RA4 634-8...	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾
1RA4 636-8...	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾	O.R. ³⁾

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
4-pole									
1120	1RA4 450-4HV ■■■	1485	95.6	0.89	116	7203	2.35	21	1800
1300	1RA4 452-4HV ■■■	1487	96.0	0.88	134	8349	2.35	23	1800
1450	1RA4 454-4HV ■■■	1487	96.1	0.88	150	9312	2.35	26	1800
1750	1RA4 456-4HV ■■■	1487	96.4	0.88	180	11239	2.35	29	1800
1900	1RA4 500-4HV ■■■	1488	96.3	0.88	196	12194	2.25	39	1800
2150	1RA4 502-4HV ■■■	1488	96.3	0.88	220	13799	2.25	42	1800
2450	1RA4 504-4HV ■■■	1488	96.5	0.88	250	15724	2.25	48	1800
2700	1RA4 506-4HV ■■■	1488	96.7	0.88	280	17329	2.25	53	1800
3200	1RA4 560-4HV ■■■	1487	96.6	0.90	320	20551	2.10	76	1800
3700	1RA4 562-4HV ■■■	1488	96.8	0.90	370	23747	2.10	84	O.R. ²⁾
4150	1RA4 564-4HV ■■■	1488	96.8	0.90	415	26635	2.10	96	O.R. ²⁾
4450	1RA4 566-4HV ■■■	1488	97.0	0.90	445	28560	2.10	105	O.R. ²⁾
4800	1RA4 630-4HV ■■■	1491	97.0	0.90	480	30744	2.10	134	1800
5300	1RA4 632-4HV ■■■	1491	97.1	0.90	530	33947	2.10	150	1800
5800	1RA4 634-4HV ■■■	1491	97.1	0.90	580	37150	2.10	168	1800
6500	1RA4 636-4HV ■■■	1491	97.4	0.90	650	41633	2.10	197	1800
6-pole									
850	1RA4 450-6HV ■■■	990	95.2	0.83	94	8199	2.30	29	1200
950	1RA4 452-6HV ■■■	990	95.3	0.84	104	9164	2.30	33	1200
1060	1RA4 454-6HV ■■■	990	95.0	0.86	114	10225	2.30	36	1200
1270	1RA4 456-6HV ■■■	990	95.5	0.84	138	12251	2.30	41	1200
1450	1RA4 500-6HV ■■■	991	95.6	0.87	152	13973	2.20	57	1200
1630	1RA4 502-6HV ■■■	991	95.8	0.87	172	15708	2.20	65	1200
1820	1RA4 504-6HV ■■■	991	96.0	0.87	190	17539	2.20	72	1200
2070	1RA4 506-6HV ■■■	991	96.1	0.87	215	19948	2.20	81	1200
2570	1RA4 560-6HV ■■■	992	96.5	0.87	270	24741	2.20	105	1200
2900	1RA4 562-6HV ■■■	992	96.7	0.87	300	27918	2.20	120	1200
3300	1RA4 564-6HV ■■■	992	96.8	0.87	345	31769	2.20	135	1200
3600	1RA4 566-6HV ■■■	992	96.9	0.87	375	34657	2.20	147	O.R. ²⁾
4000	1RA4 630-6HV ■■■	994	97.0	0.84	430	38431	2.10	183	1200
4300	1RA4 632-6HV ■■■	994	97.0	0.84	460	41313	2.10	202	1200
4700	1RA4 634-6HV ■■■	994	97.1	0.85	500	45156	2.10	223	1200
5100	1RA4 636-6HV ■■■	994	97.1	0.86	530	48999	2.10	246	1200

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

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$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RA4 450-4...	840	1349	96.0	0.89	560	1179	96.2	0.87	280	935	96.2	0.80
1RA4 452-4...	975	1351	96.2	0.87	650	1180	96.3	0.84	325	937	96.2	0.75
1RA4 454-4...	1088	1351	96.3	0.87	725	1180	96.4	0.84	363	937	96.2	0.75
1RA4 456-4...	1313	1351	96.5	0.87	875	1180	96.5	0.84	438	937	96.4	0.76
1RA4 500-4...	1425	1352	96.6	0.88	950	1181	96.6	0.85	475	937	96.5	0.78
1RA4 502-4...	1613	1352	96.6	0.89	1075	1181	96.7	0.87	538	937	96.6	0.80
1RA4 504-4...	1838	1352	96.7	0.88	1225	1181	96.8	0.86	613	937	96.7	0.78
1RA4 506-4...	2025	1352	96.8	0.88	1350	1181	96.9	0.86	675	937	96.7	0.78
1RA4 560-4...	2400	1351	96.8	0.91	1600	1180	96.9	0.90	800	937	96.9	0.85
1RA4 562-4...	2775	1352	97.0	0.91	1850	1181	97.1	0.90	925	937	97.1	0.85
1RA4 564-4...	3113	1352	97.1	0.91	2075	1181	97.2	0.90	1038	937	97.2	0.86
1RA4 566-4...	3338	1352	97.2	0.91	2225	1181	97.3	0.90	1113	937	97.3	0.86
1RA4 630-4...	3600	1355	97.1	0.90	2400	1183	97.1	0.89	1200	939	97.0	0.83
1RA4 632-4...	3975	1355	97.2	0.91	2650	1183	97.2	0.90	1325	939	97.2	0.85
1RA4 634-4...	4350	1355	97.2	0.91	2900	1183	97.3	0.91	1450	939	97.2	0.87
1RA4 636-4...	4875	1355	97.3	0.90	3250	1183	97.3	0.89	1625	939	97.2	0.83

6-pole

1RA4 450-6...	638	899	95.4	0.83	425	786	95.4	0.80	213	624	95.1	0.69
1RA4 452-6...	713	899	95.5	0.83	475	786	95.5	0.80	238	624	95.2	0.69
1RA4 454-6...	795	899	95.5	0.85	530	786	95.5	0.82	265	624	95.2	0.71
1RA4 456-6...	953	899	95.6	0.84	635	786	95.6	0.80	318	624	95.2	0.69
1RA4 500-6...	1088	900	95.8	0.87	725	787	95.9	0.84	363	624	95.7	0.76
1RA4 502-6...	1223	900	96.2	0.87	815	787	96.2	0.84	408	624	95.9	0.76
1RA4 504-6...	1365	900	96.4	0.87	910	787	96.3	0.84	455	624	96.1	0.76
1RA4 506-6...	1553	900	96.5	0.87	1035	787	96.4	0.84	518	624	96.2	0.76
1RA4 560-6...	1928	901	96.8	0.87	1285	787	96.9	0.84	643	625	96.8	0.75
1RA4 562-6...	2175	901	96.9	0.87	1450	787	96.9	0.84	725	625	96.8	0.75
1RA4 564-6...	2475	901	97.0	0.87	1650	787	97.0	0.84	825	625	96.9	0.75
1RA4 566-6...	2700	901	97.0	0.87	1800	787	97.0	0.84	900	625	96.9	0.75
1RA4 630-6...	3000	903	96.9	0.83	2000	789	96.9	0.80	1000	626	96.7	0.70
1RA4 632-6...	3225	903	96.9	0.85	2150	789	96.9	0.82	1075	626	96.8	0.72
1RA4 634-6...	3525	903	97.0	0.86	2350	789	97.0	0.84	1175	626	96.9	0.76
1RA4 636-6...	3825	903	97.1	0.86	2550	789	97.1	0.84	1275	626	97.0	0.76

3

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm

6 ... 6.6 kV, 50 Hz

8-pole

1100	1RA4 500-8HV ■■	743	95.3	0.83	122	14139	2.10	70	900
1250	1RA4 502-8HV ■■	743	95.5	0.83	138	16067	2.10	80	900
1350	1RA4 504-8HV ■■	744	95.5	0.81	152	17329	2.20	88	900
1450	1RA4 506-8HV ■■	744	95.6	0.81	164	18612	2.20	99	900
1800	1RA4 560-8HV ■■	744	96.0	0.84	196	23105	2.00	123	900
2000	1RA4 562-8HV ■■	744	96.1	0.84	215	25672	2.00	141	900
2250	1RA4 564-8HV ■■	744	96.3	0.84	245	28881	2.00	158	900
2400	1RA4 566-8HV ■■	744	96.4	0.85	255	30806	2.00	173	900
2900	1RA4 630-8HV ■■	745	96.4	0.83	315	37174	2.15	239	900
3300	1RA4 632-8HV ■■	745	96.6	0.83	360	42302	2.15	265	900
3500	1RA4 634-8HV ■■	745	96.6	0.84	375	44866	2.15	293	900
3800	1RA4 636-8HV ■■	745	96.7	0.84	410	48711	2.15	324	900

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

8-pole

Motor type (repeated)	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
1RA4 500-8...	825	675	95.5	0.82	550	590	95.5	0.78	275	468	95.1	0.68
1RA4 502-8...	938	675	95.6	0.82	625	590	95.6	0.78	313	468	95.2	0.68
1RA4 504-8...	1013	676	95.6	0.80	675	591	95.5	0.74	338	469	95.0	0.63
1RA4 506-8...	1088	676	95.7	0.80	725	591	95.6	0.76	363	469	95.0	0.66
1RA4 560-8...	1350	676	96.2	0.84	900	591	96.3	0.81	450	469	96.1	0.71
1RA4 562-8...	1500	676	96.4	0.84	1000	591	96.4	0.81	500	469	96.2	0.71
1RA4 564-8...	1688	676	96.5	0.84	1125	591	96.5	0.81	563	469	96.3	0.71
1RA4 566-8...	1800	676	96.6	0.85	1200	591	96.6	0.82	600	469	96.5	0.73
1RA4 630-8...	2175	677	96.3	0.82	1450	591	96.3	0.80	725	469	95.9	0.66
1RA4 632-8...	2475	677	96.4	0.83	1650	591	96.4	0.80	825	469	96.1	0.68
1RA4 634-8...	2625	677	96.6	0.83	1750	591	96.6	0.80	875	469	96.4	0.70
1RA4 636-8...	2850	677	96.7	0.83	1900	591	96.7	0.80	950	469	96.4	0.70

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 60 Hz									
4-pole									
1740	1RA4 450-4HV1	1781	96.5	0.89	510	9329	2.00	21	1800
1940	1RA4 452-4HV1	1783	96.6	0.89	570	10390	2.10	23	1800
2200	1RA4 454-4HV1	1782	96.7	0.89	640	11789	2.00	26	1800
2500	1RA4 456-4HV1	1784	96.8	0.89	730	13382	2.10	29	1800
6-pole									
1260	1RA4 450-6HV1	1186	95.7	0.85	390	10145	1.90	29	1200
1420	1RA4 452-6HV1	1186	96.0	0.85	435	11433	1.90	33	1200
1640	1RA4 454-6HV1	1186	96.0	0.87	495	13205	1.90	36	1200
1940	1RA4 456-6HV1	1187	96.3	0.86	590	15607	2.00	41	1200
2220	1RA4 500-6HV1	1189	96.3	0.86	670	17830	2.00	57	1200
8-pole									
1000	1RA4 450-8HV1	889	95.3	0.84	315	10742	1.90	37	900
1120	1RA4 452-8HV1	890	95.7	0.84	350	12017	2.00	41	900
1260	1RA4 454-8HV1	891	95.6	0.83	400	13504	2.00	46	900
1420	1RA4 456-8HV1	891	95.7	0.83	450	15219	2.00	52	900
1640	1RA4 500-8HV1	891	95.9	0.84	510	17577	1.90	70	900
1840	1RA4 502-8HV1	892	96.0	0.84	570	19698	1.90	80	900
2020	1RA4 504-8HV1	892	96.2	0.84	630	21625	1.90	88	900
2220	1RA4 506-8HV1	892	96.4	0.84	690	23766	2.00	99	900

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RA4 450-4... 1305 1618 96.3 0.89 870 1412 96.3 0.87 435 1122 96.0 0.79

1RA4 452-4... 1455 1619 96.4 0.88 970 1413 96.4 0.85 485 1122 96.1 0.77

1RA4 454-4... 1650 1619 96.8 0.89 1100 1413 96.9 0.87 550 1123 96.7 0.79

1RA4 456-4... 1875 1620 96.9 0.88 1250 1413 96.9 0.86 625 1123 96.7 0.78

6-pole

1RA4 450-6... 945 1078 95.9 0.83 630 941 96.0 0.81 315 748 95.6 0.71

1RA4 452-6... 1065 1078 96.1 0.84 710 939 96.1 0.81 355 746 95.7 0.72

1RA4 454-6... 1230 1078 96.1 0.87 820 941 96.1 0.85 410 748 95.8 0.77

1RA4 456-6... 1455 1078 96.3 0.85 970 941 96.3 0.82 485 748 95.9 0.73

1RA4 500-6... 1665 1080 96.3 0.86 1110 942 96.2 0.83 555 750 95.9 0.74

8-pole

1RA4 450-8... 750 808 95.5 0.82 500 705 95.4 0.79 250 561 94.8 0.68

1RA4 452-8... 840 809 95.6 0.82 560 706 95.5 0.78 280 561 94.9 0.67

1RA4 454-8... 945 809 95.7 0.81 630 706 95.6 0.77 315 561 95.0 0.65

1RA4 456-8... 1065 809 95.7 0.81 710 706 95.6 0.77 355 561 95.0 0.65

1RA4 500-8... 1230 810 96.0 0.82 820 706 96.0 0.79 410 563 95.5 0.69

1RA4 502-8... 1380 810 96.2 0.83 920 707 96.2 0.80 460 563 95.8 0.70

1RA4 504-8... 1515 810 96.3 0.84 1010 707 96.3 0.82 505 563 95.9 0.72

1RA4 506-8... 1665 810 96.4 0.84 1110 707 96.3 0.80 555 563 95.8 0.70

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 60 Hz									
4-pole									
1660	1RA4 450-4HV5	1782	96.3	0.89	270	8896	2.10	21	1800
1860	1RA4 452-4HV5	1783	96.4	0.89	300	9962	2.00	23	1800
2120	1RA4 454-4HV5	1784	96.6	0.89	340	11349	2.10	26	1800
2380	1RA4 456-4HV5	1785	96.4	0.89	385	12733	2.30	29	1800
2620	1RA4 500-4HV5	1786	96.6	0.88	430	14010	2.10	39	1800
2880	1RA4 502-4HV5	1785	96.7	0.89	465	15408	2.10	42	1800
3320	1RA4 504-4HV5	1786	96.9	0.89	530	17753	2.10	48	1800
3760	1RA4 506-4HV5	1786	97.1	0.89	600	20105	2.10	53	1800
4320	1RA4 560-4HV5	1786	96.8	0.90	690	23100	1.90	76	1800
5400	1RA4 562-4HV5	1786	97.1	0.90	860	28875	2.00	84	O.R. ²⁾
6000	1RA4 564-4HV5	1787	97.2	0.90	950	32065	2.00	96	O.R. ²⁾
6600	1RA4 566-4HV5	1787	97.3	0.90	1040	35271	2.00	105	O.R. ²⁾
7400 ³⁾	1RA4 632-4HV5	1790	97.3	0.89	1180	39480	1.90	150	1800
6-pole									
1220	1RA4 450-6HV5	1186	95.7	0.85	210	9824	1.90	29	1200
1360	1RA4 452-6HV5	1186	95.8	0.85	230	10951	1.90	33	1200
1580	1RA4 454-6HV5	1187	96.0	0.87	265	12712	2.00	36	1200
1860	1RA4 456-6HV5	1188	96.2	0.86	310	14952	2.10	41	1200
2120	1RA4 500-6HV5	1189	96.2	0.86	355	17028	1.90	57	1200
2400	1RA4 502-6HV5	1188	96.3	0.87	400	19293	1.90	65	1200
2680	1RA4 504-6HV5	1189	96.4	0.87	445	21526	1.90	72	1200
2940	1RA4 506-6HV5	1189	96.6	0.87	485	23614	1.90	81	1200
3400	1RA4 560-6HV5	1190	96.6	0.87	560	27286	1.90	105	1200
3950	1RA4 562-6HV5	1191	96.9	0.86	660	31673	1.90	120	1200
8-pole									
960	1RA4 450-8HV5	890	95.1	0.84	166	10301	2.00	37	900
1060	1RA4 452-8HV5	890	95.5	0.84	184	11374	2.00	41	900
1200	1RA4 454-8HV5	891	95.5	0.83	210	12862	2.00	46	900
1360	1RA4 456-8HV5	891	95.7	0.83	240	14577	2.00	52	900
1560	1RA4 500-8HV5	891	95.6	0.84	270	16721	1.80	70	900
1760	1RA4 502-8HV5	892	95.7	0.84	305	18843	1.90	80	900
1940	1RA4 504-8HV5	892	96.0	0.84	335	20770	2.00	88	900
2120	1RA4 506-8HV5	892	96.2	0.84	365	22697	2.00	99	900
2440	1RA4 560-8HV5	893	96.3	0.84	420	26094	1.90	123	900
2750	1RA4 562-8HV5	893	96.5	0.84	470	29409	1.90	141	900
3000	1RA4 564-8HV5	893	96.6	0.84	510	32083	1.90	158	900
3250	1RA4 566-8HV5	893	96.7	0.85	550	34756	1.90	173	900

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1RA4 450-4...	1245	1619	96.4	0.88	830	1414	96.4	0.85	415	1123	96.1	0.77
1RA4 452-4...	1395	1620	96.5	0.88	930	1415	96.6	0.86	465	1123	96.3	0.78
1RA4 454-4...	1590	1621	96.6	0.88	1060	1416	96.6	0.85	530	1124	96.3	0.77
1RA4 456-4...	1785	1622	96.8	0.88	1190	1417	96.8	0.85	595	1124	96.5	0.76
1RA4 500-4...	1965	1623	96.7	0.88	1310	1418	96.7	0.86	655	1125	96.5	0.78
1RA4 502-4...	2160	1622	96.8	0.89	1440	1417	96.9	0.87	720	1124	96.7	0.80
1RA4 504-4...	2490	1623	97.0	0.89	1660	1418	97.0	0.87	830	1125	96.9	0.80
1RA4 506-4...	2820	1623	97.1	0.89	1880	1418	97.1	0.88	940	1125	97.0	0.81
1RA4 560-4...	3240	1623	96.9	0.90	2160	1418	97.0	0.89	1080	1125	96.9	0.84
1RA4 562-4...	4050	1623	97.2	0.90	2700	1418	97.2	0.87	1350	1125	96.0	0.75
1RA4 564-4...	4500	1624	97.4	0.90	3000	1418	97.3	0.87	1500	1126	96.1	0.75
1RA4 566-4...	4950	1624	97.5	0.90	3300	1418	97.4	0.87	1650	1126	96.3	0.75
1RA4 632-4...	5550	1626	97.5	0.90	3700	1421	97.1	0.87	1850	1128	96.5	0.75
6-pole												
1RA4 450-6...	915	1078	95.8	0.84	610	941	95.9	0.81	305	747	95.5	0.71
1RA4 452-6...	1020	1078	96.0	0.85	680	941	96.1	0.82	340	747	95.8	0.74
1RA44 54-6...	1185	1078	96.0	0.86	790	942	96.0	0.84	395	748	95.6	0.75
1RA44 56-6...	1395	1079	96.2	0.85	930	943	96.2	0.82	465	748	95.8	0.73
1RA4 500-6...	1590	1080	96.4	0.86	1060	944	96.4	0.84	530	749	96.1	0.75
1RA4 502-6...	1800	1079	96.5	0.87	1200	943	96.5	0.85	600	748	96.3	0.78
1RA4 504-6...	2010	1080	96.5	0.87	1340	944	96.5	0.85	670	749	96.3	0.77
1RA4 506-6...	2205	1080	96.6	0.87	1470	944	96.6	0.86	735	749	96.4	0.78
1RA4 560-6...	2550	1081	96.7	0.86	1700	945	96.7	0.84	850	750	96.4	0.76
1RA4 562-6...	2963	1082	96.9	0.85	1975	945	96.8	0.82	988	750	96.5	0.73
8-pole												
1RA4 450-8...	720	809	95.4	0.82	480	706	95.4	0.78	240	561	94.8	0.67
1RA4 452-8...	795	809	95.6	0.82	530	706	95.6	0.78	265	561	95.0	0.67
1RA4 454-8...	900	810	95.6	0.81	600	707	95.6	0.76	300	561	94.9	0.65
1RA4 456-8...	1020	810	95.8	0.81	680	707	95.6	0.76	340	561	94.9	0.64
1RA4 500-8...	1170	810	95.8	0.83	780	707	95.9	0.81	390	561	95.5	0.71
1RA4 502-8...	1320	810	95.9	0.83	880	708	95.9	0.80	440	562	95.5	0.70
1RA4 504-8...	1455	810	96.1	0.83	970	708	96.0	0.80	485	562	95.5	0.69
1RA4 506-8...	1590	810	96.3	0.83	1060	708	96.2	0.80	530	562	95.8	0.70
1RA4 560-8...	1830	811	96.4	0.82	1220	709	96.3	0.79	610	563	95.9	0.69
1RA4 562-8...	2063	811	96.5	0.83	1375	709	96.4	0.80	688	563	96.0	0.70
1RA4 564-8...	2250	811	96.6	0.83	1500	709	96.5	0.80	750	563	96.0	0.70
1RA4 566-8...	2438	811	96.6	0.84	1625	709	96.6	0.82	813	563	96.2	0.73

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

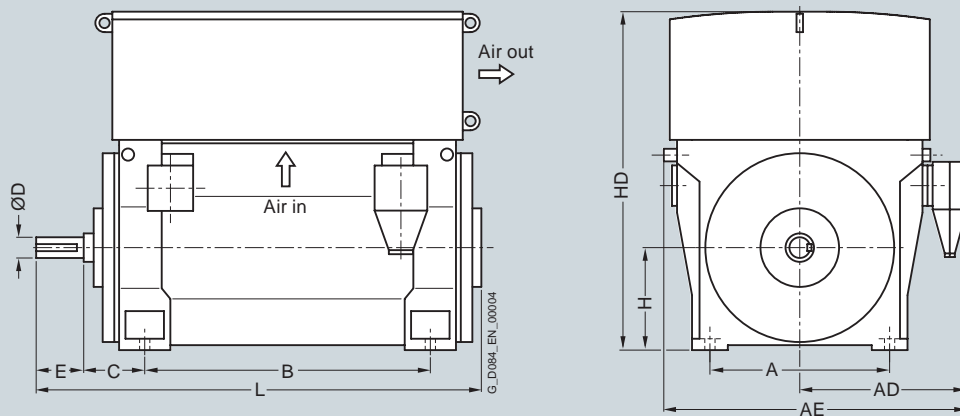
³⁾ Rated voltage less than 4.16 kV on request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Dimension drawings



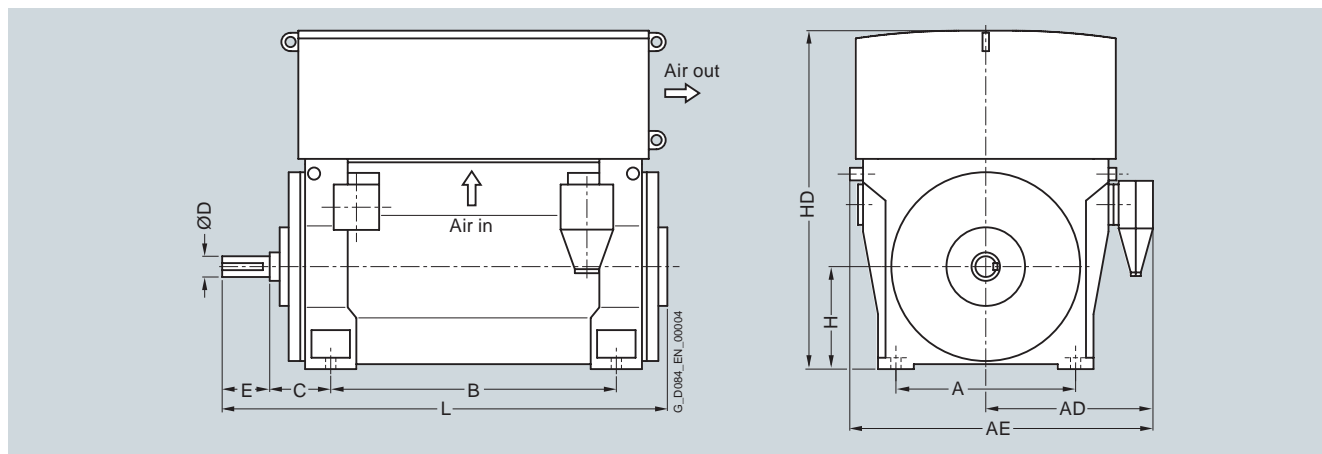
Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
4-pole											
1RA4450-4HV.0	3850	850	930	1620	1180	250	130	200	450	1390	1920
1RA4452-4HV.0	4050	850	930	1620	1180	250	130	200	450	1390	1920
1RA4454-4HV.0	4550	850	930	1620	1400	250	140	200	450	1390	2130
1RA4456-4HV.0	4800	850	930	1620	1400	250	140	200	450	1390	2130
1RA4500-4HV.0	5150	950	1000	1760	1320	280	150	200	500	1520	2230
1RA4502-4HV.0	5350	950	1000	1760	1320	280	150	200	500	1520	2230
1RA4504-4HV.0	6000	950	1000	1760	1500	280	160	240	500	1520	2480
1RA4506-4HV.0	6400	950	1000	1760	1500	280	160	240	500	1520	2480
1RA4560-4HV.0	7100	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4562-4HV.0	7550	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4564-4HV.0	8400	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4566-4HV.0	8900	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4630-4HV.0	9950	1320	1330	2210	1600	335	200	280	630	2400	2500
1RA4632-4HV.0	10650	1320	1330	2210	1600	335	200	280	630	2400	2500
1RA4634-4HV.0	11700	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4636-4HV.0	12250	1320	1330	2210	1800	335	220	280	630	2400	2740
6-pole											
1RA4450-6HV.0	3950	850	930	1620	1180	250	130	200	450	1390	1920
1RA4452-6HV.0	4150	850	930	1620	1180	250	130	200	450	1390	1920
1RA4454-6HV.0	4500	850	930	1620	1400	250	140	200	450	1390	2130
1RA4456-6HV.0	4900	850	930	1620	1400	250	140	200	450	1390	2130
1RA4500-6HV.0	5250	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4502-6HV.0	5650	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4504-6HV.0	6200	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4506-6HV.0	6550	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4560-6HV.0	7200	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4562-6HV.0	7850	1060	1210	2040	1400	315	180	240	560	1750	2300
1RA4564-6HV.0	8650	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4566-6HV.0	9100	1060	1210	2040	1600	315	190	280	560	1750	2570
1RA4630-6HV.0	10250	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4632-6HV.0	10800	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4634-6HV.0	11800	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4636-6HV.0	12550	1320	1330	2210	1800	335	220	280	630	2400	2740

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
8-pole											
1RA4450-8HV.0	3900	850	930	1620	1180	250	130	200	450	1390	1920
1RA4452-8HV.0	4100	850	930	1620	1180	250	130	200	450	1390	1920
1RA4454-8HV.0	4500	850	930	1620	1400	250	140	200	450	1390	2130
1RA4456-8HV.0	4900	850	930	1620	1400	250	140	200	450	1390	2130
1RA4500-8HV.0	5300	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4502-8HV.0	5700	950	1000	1760	1320	280	160	240	500	1520	2270
1RA4504-8HV.0	6200	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4506-8HV.0	6550	950	1000	1760	1500	280	170	240	500	1520	2480
1RA4560-8HV.0	7200	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4562-8HV.0	7700	1060	1070	1900	1400	315	180	240	560	1750	2300
1RA4564-8HV.0	8550	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4566-8HV.0	9000	1060	1070	1900	1600	315	190	280	560	1750	2570
1RA4630-8HV.0	10150	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4632-8HV.0	10800	1320	1330	2210	1600	335	220	280	630	2400	2500
1RA4634-8HV.0	11700	1320	1330	2210	1800	335	220	280	630	2400	2740
1RA4636-8HV.0	12450	1320	1330	2210	1800	335	220	280	630	2400	2740

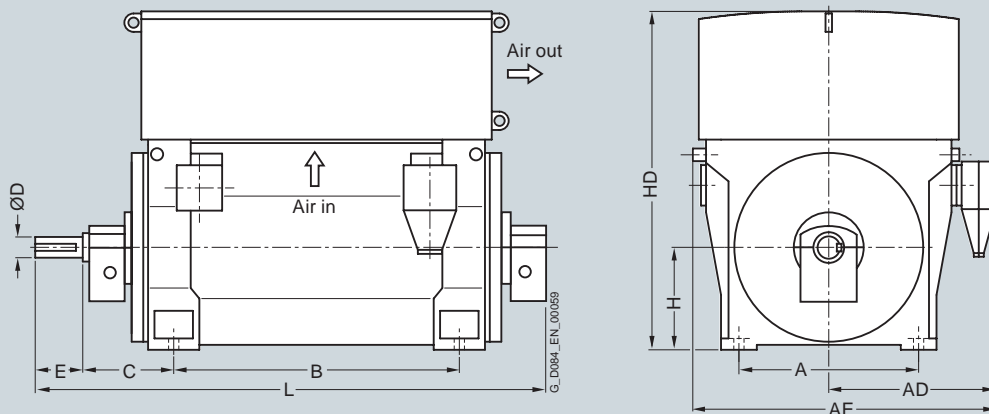
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Dimension drawings



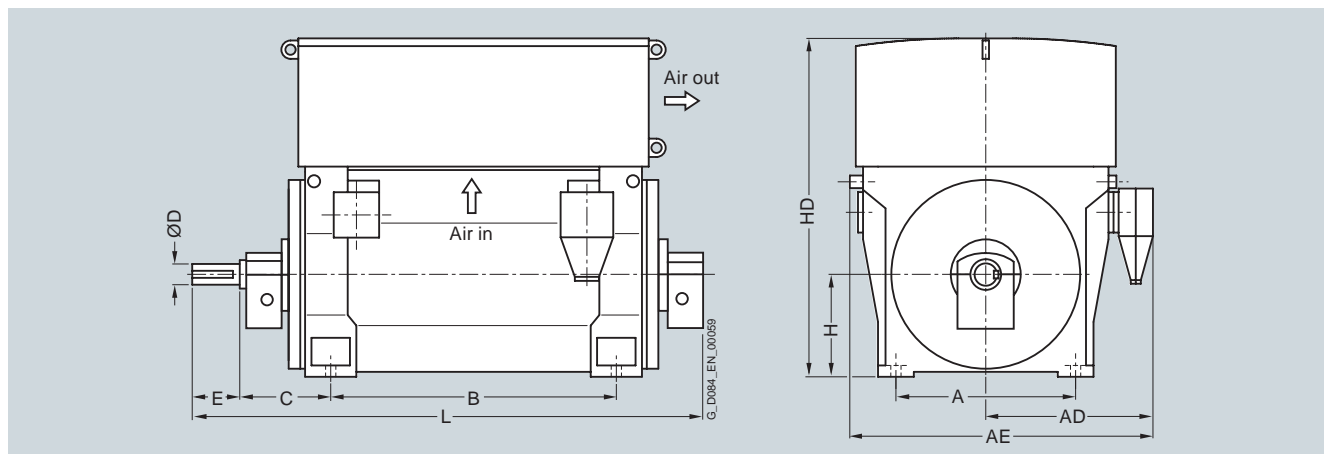
Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
From 6.6 kV, sleeve bearings, IM B3 type of construction											
4-pole											
1RA4450-4HV.0-Z K96	3950	850	930	1620	1180	450	130	200	450	1390	2120
1RA4452-4HV.0-Z K96	4150	850	930	1620	1180	450	130	200	450	1390	2120
1RA4454-4HV.0-Z K96	4600	850	930	1620	1400	450	140	200	450	1390	2330
1RA4456-4HV.0-Z K96	4950	850	930	1620	1400	450	140	200	450	1390	2330
1RA4500-4HV.0-Z K96	5300	950	1000	1760	1320	500	150	200	500	1520	2580
1RA4502-4HV.0-Z K96	5500	950	1000	1760	1320	500	150	200	500	1520	2580
1RA4504-4HV.0-Z K96	6200	950	1000	1760	1500	500	160	240	500	1520	2830
1RA4506-4HV.0-Z K96	6600	950	1000	1760	1500	500	160	240	500	1520	2830
1RA4560-4HV.0-Z K96	7250	1060	1210	2040	1400	530	180	240	560	1750	2630
1RA4562-4HV.0-Z K96	7700	1060	1210	2040	1400	530	180	240	560	1750	2630
1RA4564-4HV.0-Z K96	8600	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4566-4HV.0-Z K96	9100	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4630-4HV.0-Z K96	10250	1320	1330	2210	1600	600	200	280	630	2400	2970
1RA4632-4HV.0-Z K96	10950	1320	1330	2210	1600	600	200	280	630	2400	2970
1RA4634-4HV.0-Z K96	11950	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4636-4HV.0-Z K96	12500	1320	1330	2210	1800	600	220	280	630	2400	3210
6-pole											
1RA4450-6HV.0-Z K96	4050	850	930	1620	1180	450	130	200	450	1390	2120
1RA4452-6HV.0-Z K96	4250	850	930	1620	1180	450	130	200	450	1390	2120
1RA4454-6HV.0-Z K96	4650	850	930	1620	1400	450	140	200	450	1390	2330
1RA4456-6HV.0-Z K96	4950	850	930	1620	1400	450	140	200	450	1390	2330
1RA4500-6HV.0-Z K96	5450	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4502-6HV.0-Z K96	5800	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4504-6HV.0-Z K96	6350	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4506-6HV.0-Z K96	6750	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4560-6HV.0-Z K96	7450	1060	1210	2040	1400	530	180	240	560	1750	2670
1RA4562-6HV.0-Z K96	8050	1060	1210	2040	1400	530	180	240	560	1750	2670
1RA4564-6HV.0-Z K96	8850	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4566-6HV.0-Z K96	9300	1060	1210	2040	1600	530	190	280	560	1750	2940
1RA4630-6HV.0-Z K96	10500	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4632-6HV.0-Z K96	11050	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4634-6HV.0-Z K96	12100	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4636-6HV.0-Z K96	12850	1320	1330	2210	1800	600	220	280	630	2400	3210

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
From 6.6 kV, sleeve bearings, IM B3 type of construction											
8-pole											
1RA4450-8HV.0-Z K96	4000	850	930	1620	1180	450	130	200	450	1390	2120
1RA4452-8HV.0-Z K96	4250	850	930	1620	1180	450	130	200	450	1390	2120
1RA4454-8HV.0-Z K96	4650	850	930	1620	1400	450	140	200	450	1390	2330
1RA4456-8HV.0-Z K96	5000	850	930	1620	1400	450	140	200	450	1390	2330
1RA4500-8HV.0-Z K96	5500	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4502-8HV.0-Z K96	5850	950	1000	1760	1320	500	160	240	500	1520	2620
1RA4504-8HV.0-Z K96	6350	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4506-8HV.0-Z K96	6700	950	1000	1760	1500	500	170	240	500	1520	2830
1RA4560-8HV.0-Z K96	7400	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4562-8HV.0-Z K96	7950	1060	1070	1900	1400	530	180	240	560	1750	2670
1RA4564-8HV.0-Z K96	8750	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4566-8HV.0-Z K96	9250	1060	1070	1900	1600	530	190	280	560	1750	2940
1RA4630-8HV.0-Z K96	10400	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4632-8HV.0-Z K96	11050	1320	1330	2210	1600	600	220	280	630	2400	2970
1RA4634-8HV.0-Z K96	12000	1320	1330	2210	1800	600	220	280	630	2400	3210
1RA4636-8HV.0-Z K96	12700	1320	1330	2210	1800	600	220	280	630	2400	3210

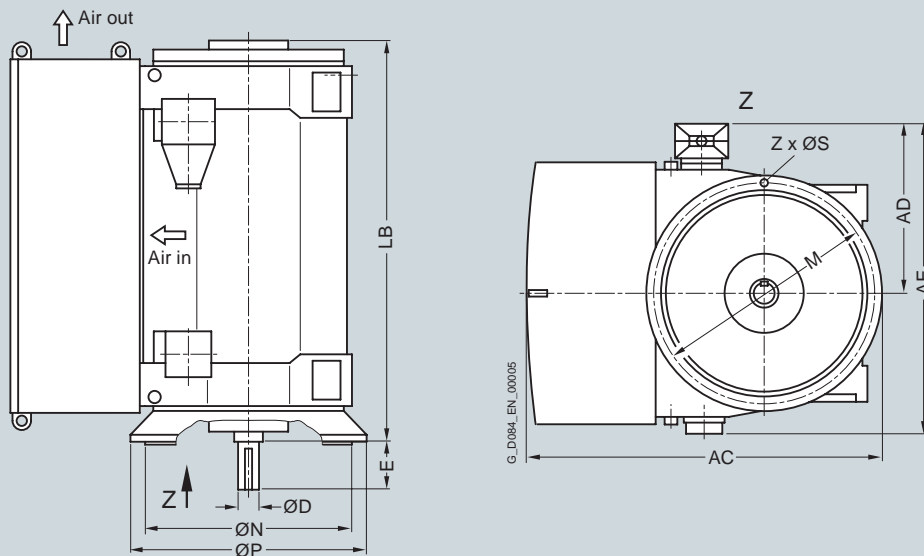
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
4-pole												
1RA4450-4HV.8	3950	1520	930	1670	130	200	1720	1150	1000	1080	26	8
1RA4452-4HV.8	4150	1520	930	1670	130	200	1720	1150	1000	1080	26	8
1RA4454-4HV.8	4650	1520	930	1670	140	200	1930	1150	1000	1080	26	8
1RA4456-4HV.8	4900	1520	930	1670	140	200	1930	1150	1000	1080	26	8
1RA4500-4HV.8	5250	1640	1000	1810	150	200	1910	1250	1120	1180	26	8
1RA4502-4HV.8	5450	1640	1000	1810	150	200	1910	1250	1120	1180	26	8
1RA4504-4HV.8	6150	1640	1000	1810	160	240	2120	1250	1120	1180	26	8
1RA4506-4HV.8	6550	1640	1000	1810	160	240	2120	1250	1120	1180	26	8
1RA4560-4HV.8	7250	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4562-4HV.8	7700	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4564-4HV.8	8600	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4566-4HV.8	9050	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4630-4HV.8	11600	2430	1330	2300	200	280	2470	2000	1800	1900	33	16
1RA4632-4HV.8	12300	2430	1330	2300	200	280	2470	2000	1800	1900	33	16
1RA4634-4HV.8	13350	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4636-4HV.8	13900	2430	1330	2300	220	280	2710	2000	1800	1900	33	16

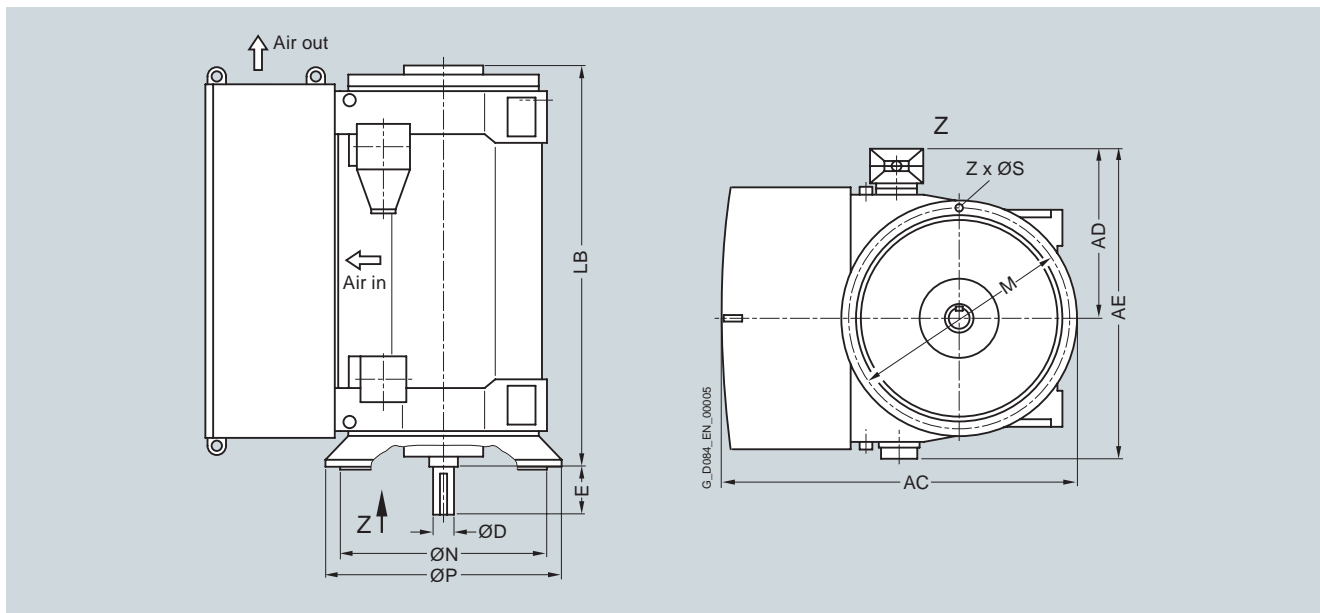
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
6-pole												
1RA4450-6HV.8	4050	1520	930	1670	130	200	1720	1150	1000	1080	26	8
1RA4452-6HV.8	4250	1520	930	1670	130	200	1720	1150	1000	1080	26	8
1RA4454-6HV.8	4650	1520	930	1670	140	200	1930	1150	1000	1080	26	8
1RA4456-6HV.8	5000	1520	930	1670	140	200	1930	1150	1000	1080	26	8
1RA4500-6HV.8	5400	1640	1000	1810	160	240	1910	1250	1120	1180	26	8
1RA4502-6HV.8	5750	1640	1000	1810	160	240	1910	1250	1120	1180	26	8
1RA4504-6HV.8	6300	1640	1000	1810	170	240	2120	1250	1120	1180	26	8
1RA4506-6HV.8	6700	1640	1000	1810	170	240	2120	1250	1120	1180	26	8
1RA4560-6HV.8	7400	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4562-6HV.8	8000	1890	1210	2100	180	240	2090	1400	1250	1320	26	16
1RA4564-6HV.8	8800	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4566-6HV.8	9300	1890	1210	2100	190	280	2320	1400	1250	1320	26	16
1RA4630-6HV.8	11900	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4632-6HV.8	12450	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4634-6HV.8	13450	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4636-6HV.8	14200	2430	1330	2300	220	280	2710	2000	1800	1900	33	16

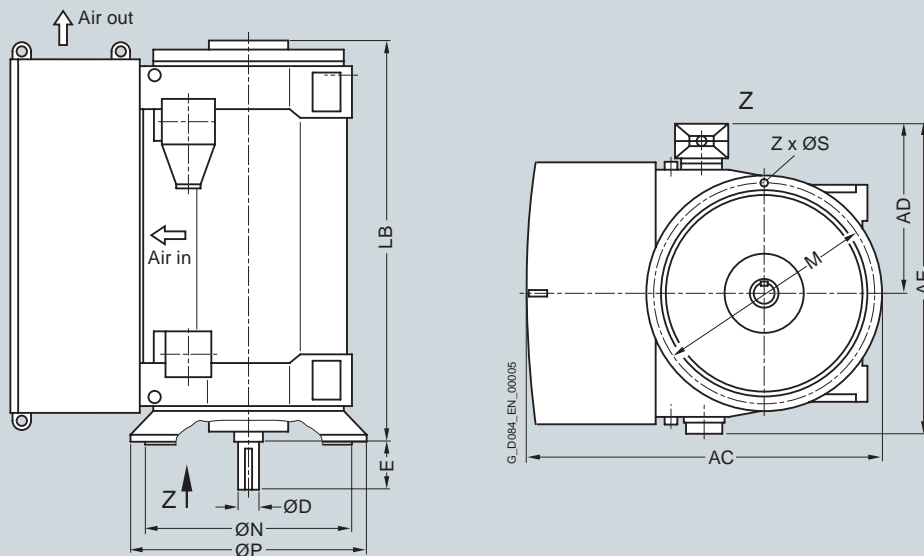
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RA4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
8-pole												
1RA4450-8HV.8	4000	1520	930	1670	130	200	1720	1150	1000	1080	26	8
1RA4452-8HV.8	4200	1520	930	1670	130	200	1720	1150	1000	1080	26	8
1RA4454-8HV.8	4650	1520	930	1670	140	200	1930	1150	1000	1080	26	8
1RA4456-8HV.8	5000	1520	930	1670	140	200	1930	1150	1000	1080	26	8
1RA4500-8HV.8	5450	1640	1000	1810	160	240	1910	1250	1120	1180	26	8
1RA4502-8HV.8	5800	1640	1000	1810	160	240	1910	1250	1120	1180	26	8
1RA4504-8HV.8	6300	1640	1000	1810	170	240	2120	1250	1120	1180	26	8
1RA4506-8HV.8	6700	1640	1000	1810	170	240	2120	1250	1120	1180	26	8
1RA4560-8HV.8	7350	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4562-8HV.8	7900	1890	1070	1960	180	240	2090	1400	1250	1320	26	16
1RA4564-8HV.8	8700	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4566-8HV.8	9200	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4566-8HV.8	9200	1890	1070	1960	190	280	2320	1400	1250	1320	26	16
1RA4630-8HV.8	11800	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4632-8HV.8	12450	2430	1330	2300	220	280	2470	2000	1800	1900	33	16
1RA4634-8HV.8	13350	2430	1330	2300	220	280	2710	2000	1800	1900	33	16
1RA4636-8HV.8	14100	2430	1330	2300	220	280	2710	2000	1800	1900	33	16

¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

**Air-cooled motors
H-compact PLUS 1RQ4**

Overview



Technical data

Technical data at a glance

H-compact PLUS 1RQ4	
Rated voltage	2.3 ... 6.6 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC611 / IC616
Stator winding insulation	Insulation system, thermal class 155 (F), utilized to 155 (F)
Shaft height	450 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 mm	Frame: Steel Top cover: Steel

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Technical data (continued)

Power ranges for IEC motors with reinforced insulation for SINAMICS drive converters without sine-wave filter

1RQ4 series

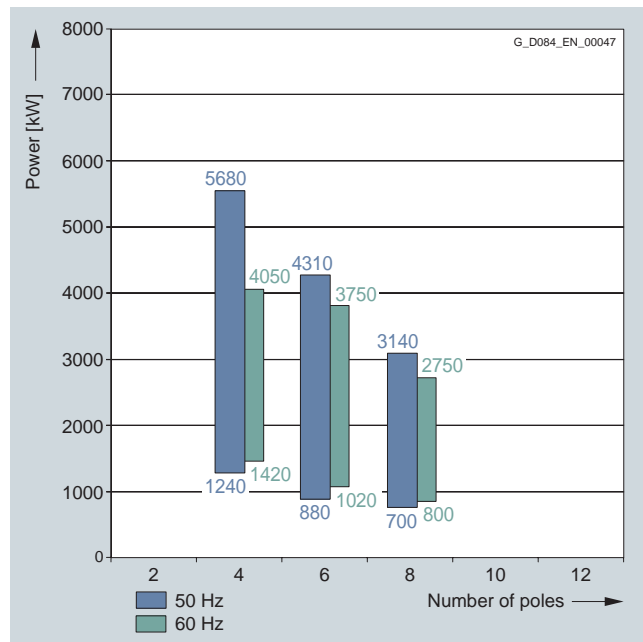
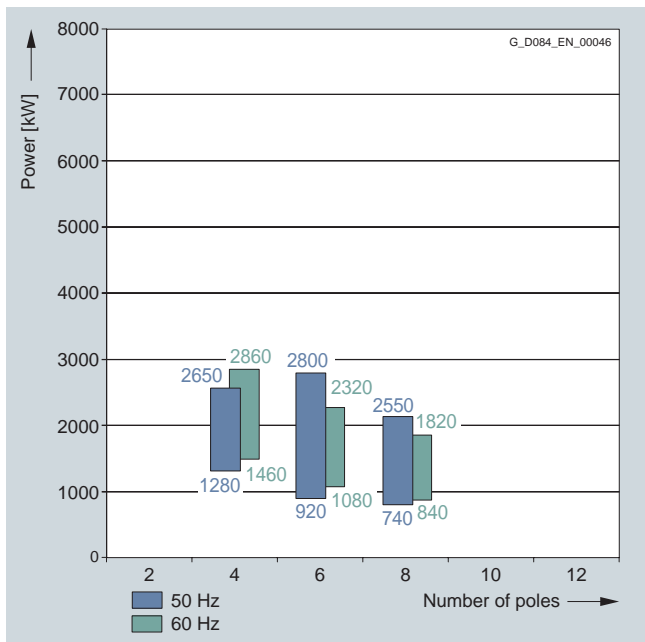
Insulation system, thermal class 155 (F), utilized to 155 (F)

The power data listed here apply for an ambient temperature of 40 °C and an installation altitude ≤ 1000 m.

2.3 kV; 50 and 60 Hz

3.4 kV to 4.16 kV; 50 and 60 Hz

3



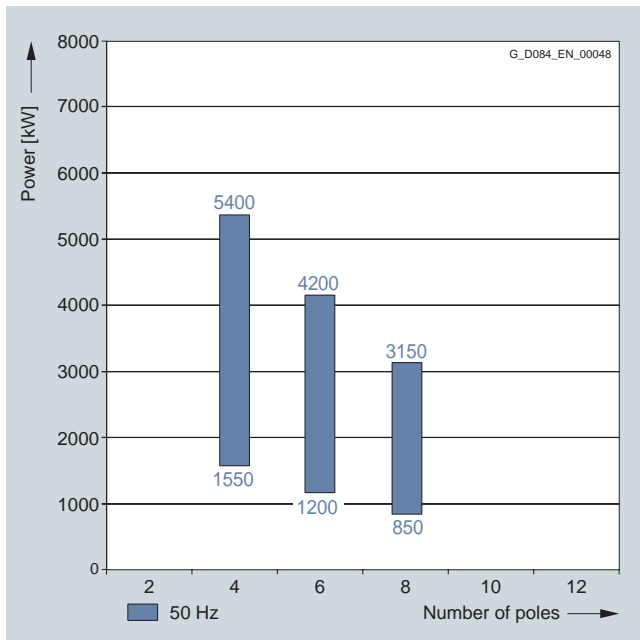
Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Technical data (continued)

6 kV to 6.6 kV; 50 Hz



Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 50 Hz									
4-pole									
1280	1RQ4 450-4JV0	1482	96.10	0.88	380	8248	2.20	22	1800
1420	1RQ4 452-4JV0	1484	96.30	0.88	420	9138	2.10	24	1800
1580	1RQ4 454-4JV0	1485	96.40	0.88	470	10161	2.20	27	1800
1780	1RQ4 456-4JV0	1486	96.60	0.87	530	11439	2.10	30	1800
1980	1RQ4 500-4JV0	1485	96.30	0.89	580	12733	2.10	42	1800
2200	1RQ4 502-4JV0	1486	96.50	0.89	640	14139	2.20	45	1800
2500	1RQ4 504-4JV0	1487	96.60	0.89	730	16056	2.10	51	1800
2650	1RQ4 506-4JV0	1487	96.60	0.89	770	17019	2.10	56	1800
6-pole									
920	1RQ4 450-6JV0	987	95.50	0.85	285	8902	2.00	31	1200
1040	1RQ4 452-6JV0	987	95.60	0.86	320	10063	2.00	35	1200
1220	1RQ4 454-6JV0	988	95.70	0.86	370	11793	2.10	38	1200
1380	1RQ4 456-6JV0	989	96.10	0.85	425	13326	2.10	43	1200
1600	1RQ4 500-6JV0	989	95.90	0.87	480	15450	2.00	62	1200
1820	1RQ4 502-6JV0	990	96.30	0.87	550	17557	2.10	70	1200
2040	1RQ4 504-6JV0	990	96.40	0.87	610	19679	2.10	77	1200
2220	1RQ4 506-6JV0	990	96.50	0.87	660	21415	2.10	85	1200
2500	1RQ4 560-6JV0	991	96.40	0.86	760	24092	2.00	108	1200
2800	1RQ4 562-6JV0	991	96.70	0.86	850	26983	2.00	123	1200
8-pole									
740	1RQ4 450-8JV0	741	95.10	0.82	240	9537	2.10	39	900
820	1RQ4 452-8JV0	741	95.40	0.82	265	10568	2.10	43	900
900	1RQ4 454-8JV0	742	95.50	0.82	290	11584	2.20	48	900
1020	1RQ4 456-8JV0	742	95.70	0.82	325	13128	2.20	54	900
1180	1RQ4 500-8JV0	742	95.60	0.83	375	15187	2.10	74	900
1320	1RQ4 502-8JV0	743	96.00	0.83	415	16966	2.10	84	900
1460	1RQ4 504-8JV0	742	95.90	0.84	455	18791	1.90	92	900
1600	1RQ4 506-8JV0	742	96.10	0.85	490	20593	1.90	103	900
1850	1RQ4 560-8JV0	743	96.00	0.83	580	23779	2.00	128	900
2100	1RQ4 562-8JV0	743	96.10	0.83	660	26992	2.00	146	900
2350	1RQ4 564-8JV0	743	96.30	0.83	740	30205	2.00	163	900
2550	1RQ4 566-8JV0	743	96.40	0.83	800	32776	2.00	178	900

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RQ4 450-4...	960	1346	96.1	0.88	640	1176	96.2	0.85	320	934	95.9	0.77
1RQ4 452-4...	1065	1348	96.3	0.87	710	1178	96.3	0.84	355	935	96.0	0.75
1RQ4 454-4...	1185	1349	96.5	0.86	790	1179	96.6	0.83	395	935	96.2	0.74
1RQ4 456-4...	1335	1350	96.6	0.85	890	1179	96.7	0.82	445	936	96.3	0.71
1RQ4 500-4...	1485	1349	96.4	0.89	990	1179	96.5	0.87	495	935	96.4	0.80
1RQ4 502-4...	1650	1350	96.6	0.89	1100	1179	96.6	0.87	550	936	96.4	0.79
1RQ4 504-4...	1875	1351	96.7	0.89	1250	1180	96.8	0.86	625	937	96.7	0.79
1RQ4 506-4...	1988	1351	96.8	0.89	1325	1180	96.8	0.86	663	937	96.7	0.80

6-pole

1RQ4 450-6...	690	897	95.6	0.84	460	783	95.8	0.81	230	622	95.4	0.71
1RQ4 452-6...	780	897	95.8	0.84	520	783	96.0	0.81	260	622	95.6	0.72
1RQ4 454-6...	915	898	95.9	0.85	610	784	96.0	0.83	305	622	95.7	0.73
1RQ4 456-6...	1035	899	96.2	0.83	690	785	96.3	0.80	345	623	96.0	0.69
1RQ4 500-6...	1200	899	96.0	0.87	800	785	96.1	0.84	400	623	95.8	0.76
1RQ4 502-6...	1365	899	96.2	0.86	910	786	96.2	0.83	455	624	95.9	0.74
1RQ4 504-6...	1530	899	96.4	0.86	1020	786	96.4	0.83	510	624	96.1	0.74
1RQ4 506-6...	1665	899	96.6	0.86	1110	786	96.6	0.84	555	624	96.3	0.76
1RQ4 560-6...	1875	900	96.6	0.86	1250	787	96.7	0.84	625	624	96.4	0.76
1RQ4 562-6...	2100	900	96.9	0.87	1400	787	96.9	0.84	700	624	96.8	0.77

8-pole

1RQ4 450-8...	555	673	95.2	0.78	370	588	95.1	0.73	185	467	94.3	0.61
1RQ4 452-8...	615	673	95.4	0.79	410	588	95.4	0.75	205	467	94.7	0.62
1RQ4 454-8...	675	674	95.5	0.77	450	589	95.4	0.71	225	467	94.5	0.58
1RQ4 456-8...	765	674	95.7	0.77	510	589	95.6	0.71	255	467	94.7	0.58
1RQ4 500-8...	885	674	95.6	0.82	590	589	95.6	0.78	295	467	95.1	0.66
1RQ4 502-8...	990	675	96.0	0.80	660	590	95.9	0.75	330	468	95.2	0.63
1RQ4 504-8...	1095	674	96.0	0.83	730	589	96.1	0.80	365	467	95.7	0.70
1RQ4 506-8...	1200	674	96.1	0.84	800	589	96.1	0.81	400	467	95.8	0.71
1RQ4 560-8...	1388	675	96.1	0.83	925	590	96.2	0.80	463	468	95.8	0.70
1RQ4 562-8...	1575	675	96.3	0.83	1050	590	96.3	0.80	525	468	96.0	0.70
1RQ4 564-8...	1763	675	96.4	0.83	1175	590	96.4	0.80	588	468	96.1	0.70
1RQ4 566-8...	1913	675	96.5	0.83	1275	590	96.4	0.80	638	468	96.1	0.70

3

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break- down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechani- cal limit speed ²⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
4-pole									
1240	1RQ4 450-4JV	1483	95.90	0.88	255	7985	2.20	22	1800
1360	1RQ4 452-4JV	1484	96.10	0.88	280	8751	2.10	24	1800
1520	1RQ4 454-4JV	1484	96.20	0.88	315	9781	2.10	27	1800
1700	1RQ4 456-4JV	1487	96.50	0.86	360	10917	2.20	30	1800
1920	1RQ4 500-4JV	1486	96.30	0.89	390	12338	2.20	42	1800
2100	1RQ4 502-4JV	1487	96.30	0.88	435	13886	2.20	45	1800
2400	1RQ4 504-4JV	1488	96.60	0.88	495	15402	2.20	51	1800
2680	1RQ4 506-4JV	1487	96.70	0.88	550	17211	2.10	56	1800
3200	1RQ4 560-4JV	1488	96.70	0.90	640	20538	2.10	77	1800
3500 ¹⁾	1RQ4 562-4JV	1489	96.90	0.90	700	22448	2.20	86	1800
4000 ¹⁾	1RQ4 564-4JV	1489	97.10	0.89	810	25655	2.20	97	1800
4400 ¹⁾	1RQ4 566-4JV	1489	97.20	0.89	890	28220	2.10	106	O.R. ³⁾
4800 ¹⁾	1RQ4 632-4JV	1491	97.00	0.89	970	30744	2.50	154	1800
5190 ¹⁾	1RQ4 634-4JV	1492	97.20	0.89	1040	33220	2.40	174	1800
5680 ¹⁾	1RQ4 636-4JV	1492	97.20	0.88	1160	36357	2.40	186	1800
6-pole									
880	1RQ4 450-6JV	986	95.30	0.85	190	8523	2.00	31	1200
1000	1RQ4 452-6JV	987	95.60	0.86	215	9675	2.10	35	1200
1160	1RQ4 454-6JV	988	95.70	0.86	245	11212	2.10	38	1200
1320	1RQ4 456-6JV	989	95.90	0.85	285	12745	2.20	43	1200
1540	1RQ4 500-6JV	989	95.80	0.87	325	14869	2.10	62	1200
1760	1RQ4 502-6JV	990	96.10	0.87	370	16977	2.10	70	1200
1960	1RQ4 504-6JV	990	96.30	0.87	410	18906	2.20	77	1200
2140	1RQ4 506-6JV	991	96.40	0.87	445	20621	2.20	85	1200
2430	1RQ4 560-6JV	992	96.50	0.86	510	23394	2.00	108	1200
2750	1RQ4 562-6JV	992	96.60	0.86	580	26474	2.00	123	1200
3000	1RQ4 564-6JV	992	96.70	0.86	630	28881	2.10	137	1200
3240 ¹⁾	1RQ4 566-6JV	993	96.90	0.85	690	31160	2.10	149	1200
3480 ¹⁾	1RQ4 630-6JV	993	96.80	0.86	730	33468	2.20	188	1200
3770 ¹⁾	1RQ4 632-6JV	993	96.90	0.87	780	36257	2.20	207	1200
4020 ¹⁾	1RQ4 634-6JV	994	96.90	0.86	840	38623	2.30	228	1200
4310 ¹⁾	1RQ4 636-6JV	994	97.10	0.86	900	41409	2.40	251	1200

Voltage code:

4.16 kV, 50 Hz	4
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ Rated voltage less than 4.16 kV on request.

²⁾ For IM B3, rolling-contact bearings.

³⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1RQ4 450-4...	930	1346	96.0	0.88	620	1176	96.2	0.85	310	934	96.0	0.76
1RQ4 452-4...	1020	1346	96.2	0.87	680	1176	96.4	0.85	340	934	96.1	0.76
1RQ4 454-4...	1140	1350	96.4	0.87	760	1177	96.5	0.85	380	934	96.2	0.76
1RQ4 456-4...	1275	1352	96.6	0.84	850	1178	96.6	0.80	425	935	96.2	0.69
1RQ4 500-4...	1440	1352	96.4	0.89	960	1181	96.5	0.86	480	938	96.2	0.78
1RQ4 502-4...	1575	1352	96.4	0.88	1050	1181	96.5	0.86	525	938	96.2	0.77
1RQ4 504-4...	1800	1353	96.7	0.88	1200	1182	96.8	0.85	600	938	96.5	0.76
1RQ4 506-4...	2010	1353	96.9	0.88	1340	1181	96.9	0.86	670	938	96.7	0.78
1RQ4 560-4...	2400	1353	96.9	0.90	1600	1181	96.9	0.88	800	938	96.8	0.81
1RQ4 562-4...	2625	1353	97.1	0.90	1750	1182	97.3	0.88	875	938	97.2	0.81
1RQ4 564-4...	3000	1353	97.2	0.89	2000	1182	97.2	0.87	1000	938	97.0	0.79
1RQ4 566-4...	3300	1353	97.3	0.89	2200	1182	97.2	0.86	1100	938	97.0	0.78
1RQ4 632-4...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 634-4...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 636-4...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
6-pole												
1RQ4 450-6...	660	896	95.6	0.84	440	783	95.7	0.82	220	622	95.3	0.72
1RQ4 452-6...	750	897	95.7	0.84	500	784	95.8	0.80	250	622	95.3	0.70
1RQ4 454-6...	870	897	95.8	0.85	580	784	95.9	0.81	290	622	95.5	0.71
1RQ4 456-6...	990	898	96.0	0.83	660	784	96.0	0.79	330	623	95.4	0.68
1RQ4 500-6...	1155	900	96.1	0.86	770	787	96.1	0.83	385	625	95.8	0.74
1RQ4 502-6...	1320	900	96.2	0.86	880	787	96.3	0.83	440	625	95.9	0.74
1RQ4 504-6...	1470	901	96.4	0.86	980	787	96.4	0.83	490	625	96.0	0.74
1RQ4 506-6...	1605	901	96.5	0.86	1070	787	96.5	0.83	535	625	96.1	0.74
1RQ4 560-6...	1825	902	96.6	0.85	1215	788	96.6	0.82	610	625	96.2	0.72
1RQ4 562-6...	2065	902	96.7	0.85	1375	788	96.7	0.82	690	626	96.3	0.72
1RQ4 564-6...	2250	902	96.8	0.86	1500	788	96.8	0.83	750	626	96.5	0.74
1RQ4 566-6...	2430	902	96.9	0.84	1620	788	96.8	0.81	810	626	96.4	0.71
1RQ4 630-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 632-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 634-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 636-6...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Selection and ordering data (continued)

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ²⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
8-pole									
700	1RQ4 450-8JV	741	94.80	0.82	156	9021	2.10	39	900
780	1RQ4 452-8JV	741	95.10	0.82	174	10052	2.10	43	900
860	1RQ4 454-8JV	742	95.20	0.82	192	11068	2.30	48	900
980	1RQ4 456-8JV	743	95.50	0.80	225	12595	2.20	54	900
1140	1RQ4 500-8JV	743	95.50	0.83	250	14652	2.10	74	900
1280	1RQ4 502-8JV	743	95.80	0.83	280	16451	2.10	84	900
1400	1RQ4 504-8JV	742	95.80	0.84	305	18018	2.00	92	900
1540	1RQ4 506-8JV	742	95.90	0.85	330	19819	2.00	103	900
1800	1RQ4 560-8JV	743	95.90	0.84	390	23136	1.90	128	900
2000	1RQ4 562-8JV	743	96.10	0.84	435	25707	1.90	146	900
2180	1RQ4 564-8JV	744	96.30	0.84	470	27983	2.00	163	900
2400	1RQ4 566-8JV	744	96.40	0.84	520	30806	2.00	178	900
2600 ¹⁾	1RQ4 630-8JV	744	96.50	0.84	560	33374	2.40	246	900
2790 ¹⁾	1RQ4 632-8JV	745	96.60	0.83	610	35764	2.50	272	900
2940 ¹⁾	1RQ4 634-8JV	745	96.60	0.84	630	37687	2.50	300	900
3140 ¹⁾	1RQ4 636-8JV	745	96.70	0.85	670	40251	2.50	331	900

Voltage code:

4.16 kV, 50 Hz	4
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ Rated voltage < 4.16 kV on request

²⁾ For IM B3, rolling-contact bearings.

³⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

8-pole

1RQ4 450-8...	525	673	94.9	0.78	350	588	94.8	0.73	175	467	94.0	0.59
1RQ4 452-8...	585	673	95.2	0.80	390	588	95.2	0.75	195	467	94.5	0.62
1RQ4 454-8...	645	674	95.2	0.77	430	588	95.1	0.72	215	467	94.2	0.59
1RQ4 456-8...	735	674	95.4	0.76	490	588	95.3	0.70	245	467	94.3	0.56
1RQ4 500-8...	855	675	95.6	0.81	570	590	95.6	0.77	285	469	95.0	0.66
1RQ4 502-8...	960	676	95.9	0.80	640	590	95.8	0.76	320	469	95.2	0.63
1RQ4 504-8...	1050	675	95.9	0.82	700	590	95.9	0.78	350	469	95.4	0.68
1RQ4 506-8...	1155	675	96.1	0.83	770	590	96.1	0.80	385	469	95.7	0.70
1RQ4 560-8...	1350	676	96.1	0.83	900	590	96.2	0.79	450	469	95.8	0.69
1RQ4 562-8...	1500	676	96.2	0.84	1000	590	96.3	0.81	500	469	95.9	0.71
1RQ4 564-8...	1635	676	96.4	0.82	1090	591	96.4	0.79	545	469	95.9	0.67
1RQ4 566-8...	1800	676	96.5	0.83	1200	591	96.5	0.80	600	469	96.1	0.69
1RQ4 630-8...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 632-8...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 634-8...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾
1RQ4 636-8...	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾	O.R. ⁽³⁾

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
4-pole									
1550	1RQ4 500-4JV	1489	95.90	0.88	160	9941	2.35	42	1800
1700	1RQ4 502-4JV	1489	96.00	0.88	176	10903	2.35	45	1800
2050	1RQ4 504-4JV	1489	96.40	0.88	210	13148	2.35	51	1800
2250	1RQ4 506-4JV	1490	96.50	0.87	235	14421	2.35	56	1800
2700	1RQ4 560-4JV	1489	96.50	0.90	270	17317	2.35	77	1800
3050	1RQ4 562-4JV	1490	96.70	0.89	310	19549	2.35	86	1800
3400	1RQ4 564-4JV	1490	96.80	0.90	340	21792	2.35	97	1800
3650	1RQ4 566-4JV	1491	97.00	0.89	370	23379	2.35	106	O.R. ²⁾
4100	1RQ4 630-4JV	1492	96.80	0.90	410	26243	2.40	139	1800
4700	1RQ4 632-4JV	1492	97.00	0.90	470	30084	2.40	154	1800
5100	1RQ4 634-4JV	1493	97.10	0.89	520	32622	2.40	174	1800
5400	1RQ4 636-4JV	1494	97.20	0.88	550	34518	2.40	186	1800
6-pole									
1200	1RQ4 500-6JV	990	95.20	0.87	126	11576	2.20	62	1200
1300	1RQ4 502-6JV	991	95.50	0.87	136	12528	2.20	70	1200
1450	1RQ4 504-6JV	992	95.70	0.87	152	13959	2.20	77	1200
1700	1RQ4 506-6JV	993	96.00	0.85	182	16349	2.30	85	1200
2200	1RQ4 560-6JV	992	96.40	0.86	230	21179	2.20	108	1200
2350	1RQ4 562-6JV	993	96.60	0.85	250	22601	2.20	123	1200
2650	1RQ4 564-6JV	994	96.80	0.85	280	25460	2.20	137	1200
3000	1RQ4 566-6JV	994	96.90	0.84	320	28823	2.20	149	1200
3300	1RQ4 630-6JV	994	96.70	0.85	350	31705	2.20	188	1200
3700	1RQ4 632-6JV	994	96.80	0.85	395	35548	2.20	207	1200
3900	1RQ4 634-6JV	995	96.90	0.85	415	37432	2.20	228	1200
4200	1RQ4 636-6JV	995	97.00	0.85	445	40312	2.20	251	1200
8-pole									
850	1RQ4 500-8JV	744	95.00	0.80	98	10911	2.30	74	900
1000	1RQ4 502-8JV	744	95.30	0.82	112	12836	2.30	84	900
1100	1RQ4 504-8JV	744	95.40	0.82	124	14120	2.30	92	900
1200	1RQ4 506-8JV	744	95.40	0.83	132	15403	2.30	103	900
1500	1RQ4 560-8JV	744	96.00	0.83	164	19254	2.10	128	900
1700	1RQ4 562-8JV	744	96.10	0.83	186	21821	2.10	146	900
1900	1RQ4 564-8JV	744	96.20	0.83	210	24388	2.10	163	900
2100	1RQ4 566-8JV	745	96.40	0.83	230	26919	2.10	178	900
2500	1RQ4 630-8JV	745	96.30	0.82	275	32047	2.40	246	900
2700	1RQ4 632-8JV	745	96.40	0.82	300	34611	2.40	272	900
2900	1RQ4 634-8JV	745	96.50	0.82	320	37174	2.40	300	900
3150	1RQ4 636-8JV	745	96.60	0.83	345	40379	2.40	331	900

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1RQ4 500-4...	1163	1353	96.1	0.88	775	1182	96.1	0.85	388	938	96.0	0.76
1RQ4 502-4...	1275	1353	96.2	0.88	850	1182	96.2	0.85	425	938	96.1	0.76
1RQ4 504-4...	1538	1353	96.4	0.88	1025	1182	96.4	0.85	513	938	96.2	0.76
1RQ4 506-4...	1688	1354	96.5	0.86	1125	1183	96.5	0.83	563	939	96.2	0.73
1RQ4 560-4...	2025	1353	96.7	0.90	1350	1182	96.8	0.88	675	938	96.7	0.81
1RQ4 562-4...	2288	1354	96.8	0.89	1525	1183	96.9	0.87	763	939	96.8	0.79
1RQ4 564-4...	2550	1354	96.8	0.89	1700	1183	96.9	0.87	850	939	96.9	0.80
1RQ4 566-4...	2738	1355	96.7	0.89	1825	1183	96.9	0.88	913	939	97.0	0.82
1RQ4 630-4...	3075	1356	96.8	0.90	2050	1184	96.8	0.89	1025	940	96.8	0.84
1RQ4 632-4...	3525	1356	97.0	0.90	2350	1184	97.0	0.88	1175	940	96.8	0.82
1RQ4 634-4...	3825	1356	97.1	0.88	2550	1185	97.1	0.86	1275	941	96.8	0.79
1RQ4 636-4...	4050	1357	97.1	0.88	2700	1186	97.0	0.85	1350	941	96.9	0.77
6-pole												
1RQ4 500-6...	900	899	95.4	0.87	600	786	95.6	0.85	300	624	95.4	0.78
1RQ4 502-6...	975	900	95.7	0.87	650	787	95.8	0.84	325	624	95.6	0.77
1RQ4 504-6...	1088	901	95.8	0.87	725	787	95.9	0.84	363	625	95.6	0.76
1RQ4 506-6...	1275	902	96.0	0.85	850	788	96.0	0.82	425	626	95.6	0.72
1RQ4 560-6...	1650	901	96.5	0.85	1100	787	96.6	0.83	550	625	96.4	0.72
1RQ4 562-6...	1763	902	96.6	0.84	1175	788	96.7	0.81	588	626	96.4	0.72
1RQ4 564-6...	1988	903	96.7	0.84	1325	789	96.6	0.81	663	626	96.4	0.71
1RQ4 566-6...	2250	903	96.9	0.84	1500	789	96.9	0.81	750	626	96.5	0.70
1RQ4 630-6...	2475	903	96.7	0.85	1650	789	96.6	0.82	825	626	96.2	0.72
1RQ4 632-6...	2775	903	96.8	0.85	1850	789	96.7	0.82	925	626	96.3	0.72
1RQ4 634-6...	2925	904	96.9	0.85	1950	790	96.8	0.82	975	627	96.3	0.71
1RQ4 636-6...	3150	904	97.0	0.85	2100	790	96.9	0.82	1050	627	96.6	0.70
8-pole												
1RQ4 500-8...	638	676	95.1	0.80	425	591	95.0	0.75	213	469	94.2	0.63
1RQ4 502-8...	750	676	95.5	0.81	500	591	95.4	0.77	250	469	94.7	0.65
1RQ4 504-8...	825	676	95.6	0.81	550	591	95.5	0.77	275	469	94.8	0.65
1RQ4 506-8...	900	676	95.6	0.82	600	591	95.5	0.79	300	469	95.1	0.68
1RQ4 560-8...	1125	676	96.2	0.83	750	591	96.2	0.81	375	469	96.0	0.70
1RQ4 562-8...	1275	676	96.2	0.83	850	591	96.2	0.81	425	469	96.0	0.70
1RQ4 564-8...	1425	676	96.3	0.83	950	591	96.3	0.81	475	469	96.1	0.70
1RQ4 566-8...	1575	677	96.4	0.82	1050	591	96.4	0.79	525	469	96.1	0.68
1RQ4 630-8...	1875	677	96.3	0.81	1250	591	96.1	0.78	625	469	95.5	0.65
1RQ4 632-8...	2025	677	96.3	0.81	1350	591	96.1	0.76	675	469	95.4	0.63
1RQ4 634-8...	2175	677	96.5	0.81	1450	591	96.4	0.78	725	469	95.8	0.66
1RQ4 636-8...	2363	677	96.6	0.82	1575	591	96.5	0.78	788	469	96.0	0.68

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			IEC η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 60 Hz									
4-pole									
1460	1RQ4 450-4JV1	1783	96.10	0.88	435	7819	2.20	22	1800
1620	1RQ4 452-4JV1	1785	96.30	0.88	480	8667	2.20	24	1800
1820	1RQ4 454-4JV1	1785	96.40	0.88	540	9737	2.30	27	1800
2040	1RQ4 456-4JV1	1787	96.60	0.87	610	10901	2.20	30	1800
2280	1RQ4 500-4JV1	1786	96.30	0.89	670	12191	2.20	42	1800
2500	1RQ4 502-4JV1	1787	96.50	0.89	730	13359	2.30	45	1800
2860	1RQ4 504-4JV1	1787	96.70	0.89	835	15283	2.30	51	1800
6-pole									
1080	1RQ4 450-6JV1	1187	95.50	0.85	335	8688	2.00	31	1200
1180	1RQ4 452-6JV1	1187	95.80	0.86	360	9493	2.00	35	1200
1380	1RQ4 454-6JV1	1187	95.90	0.86	420	11102	2.00	38	1200
1560	1RQ4 456-6JV1	1189	96.10	0.85	480	12529	2.10	43	1200
1820	1RQ4 500-6JV1	1189	96.00	0.87	550	14617	2.00	62	1200
2100	1RQ4 502-6JV1	1190	96.40	0.87	630	16852	2.20	70	1200
2320	1RQ4 504-6JV1	1190	96.40	0.87	690	18617	2.10	77	1200
8-pole									
840	1RQ4 450-8JV1	891	95.30	0.82	270	9003	2.10	39	900
940	1RQ4 452-8JV1	892	95.50	0.82	300	10063	2.20	43	900
1040	1RQ4 454-8JV1	892	95.60	0.82	335	11134	2.30	48	900
1160	1RQ4 456-8JV1	892	95.80	0.82	370	12418	2.00	54	900
1360	1RQ4 500-8JV1	892	95.90	0.83	430	14559	2.10	74	900
1520	1RQ4 502-8JV1	893	96.10	0.83	480	16254	2.10	84	900
1680	1RQ4 504-8JV1	892	96.10	0.84	520	17985	2.00	92	900
1820	1RQ4 506-8JV1	893	96.30	0.85	560	19462	2.10	103	900

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

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$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RQ4 450-4...	1095	1619	96.0	0.88	730	1413	95.9	0.85	365	1123	95.5	0.77
1RQ4 452-4...	1215	1620	96.1	0.87	810	1414	96.0	0.84	405	1123	95.6	0.74
1RQ4 454-4...	1365	1621	96.4	0.87	910	1414	96.3	0.84	455	1123	95.9	0.74
1RQ4 456-4...	1530	1625	96.6	0.85	1020	1418	96.5	0.81	510	1124	96.1	0.70
1RQ4 500-4...	1710	1622	96.4	0.89	1140	1415	96.4	0.87	570	1127	96.1	0.80
1RQ4 502-4...	1875	1622	96.4	0.88	1250	1415	96.3	0.86	625	1127	96.0	0.78
1RQ4 504-4...	2145	1623	96.7	0.88	1430	1415	96.6	0.86	715	1127	96.3	0.77

6-pole

1RQ4 450-6...	810	1078	95.7	0.84	540	941	95.7	0.81	270	748	95.3	0.72
1RQ4 452-6...	885	1078	95.9	0.85	590	941	95.9	0.82	295	748	95.5	0.73
1RQ4 454-6...	1035	1078	95.9	0.86	690	941	95.9	0.84	345	748	95.5	0.75
1RQ4 456-6...	1170	1080	96.0	0.84	780	942	95.9	0.81	390	749	95.3	0.71
1RQ4 500-6...	1365	1080	95.9	0.87	910	942	95.9	0.85	455	751	95.5	0.77
1RQ4 502-6...	1575	1081	96.3	0.86	1050	943	96.2	0.83	525	751	95.7	0.74
1RQ4 504-6...	1740	1081	96.4	0.86	1160	943	96.3	0.84	580	751	95.9	0.75

8-pole

1RQ4 450-8...	630	809	95.3	0.79	420	706	95.1	0.74	210	561	94.2	0.62
1RQ4 452-8...	705	810	95.4	0.79	470	706	95.2	0.74	235	561	94.3	0.61
1RQ4 454-8...	780	810	95.5	0.77	520	707	95.2	0.72	260	561	94.3	0.59
1RQ4 456-8...	870	810	95.7	0.80	580	707	95.5	0.76	290	561	94.8	0.64
1RQ4 500-8...	1020	810	95.9	0.81	680	707	95.7	0.77	340	563	95.0	0.66
1RQ4 502-8...	1140	811	96.0	0.81	760	707	95.8	0.77	380	563	95.2	0.65
1RQ4 504-8...	1260	810	96.1	0.83	840	707	95.9	0.79	420	563	95.4	0.69
1RQ4 506-8...	1365	811	96.3	0.83	910	707	96.2	0.79	455	563	95.6	0.69

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 60 Hz									
4-pole									
1420	1RQ4 450-4JV5	1783	96.00	0.88	235	7605	2.20	22	1800
1560	1RQ4 452-4JV5	1784	96.20	0.88	255	8350	2.20	24	1800
1760	1RQ4 454-4JV5	1785	96.40	0.88	290	9416	2.20	27	1800
1940	1RQ4 456-4JV5	1787	96.50	0.86	325	10367	2.20	30	1800
2200	1RQ4 500-4JV5	1787	96.20	0.89	355	11756	2.30	42	1800
2400	1RQ4 502-4JV5	1787	96.40	0.89	390	12825	2.20	45	1800
2780	1RQ4 504-4JV5	1788	96.70	0.88	455	14847	2.30	51	1800
3080	1RQ4 506-4JV5	1788	96.90	0.88	500	16450	2.30	56	1800
3650	1RQ4 560-4JV5	1788	96.70	0.90	580	19497	2.20	77	1800
4050	1RQ4 562-4JV5	1788	96.80	0.90	650	21631	2.20	86	1800
6-pole									
1020	1RQ4 450-6JV5	1187	95.50	0.85	174	8206	2.10	31	1200
1140	1RQ4 452-6JV5	1188	95.80	0.85	194	9163	2.20	35	1200
1340	1RQ4 454-6JV5	1188	95.80	0.86	225	10771	2.10	38	1200
1520	1RQ4 456-6JV5	1189	96.10	0.85	260	12208	2.20	43	1200
1760	1RQ4 500-6JV5	1190	96.00	0.87	290	14123	2.20	62	1200
2000	1RQ4 502-6JV5	1190	96.20	0.87	330	16049	2.20	70	1200
2240	1RQ4 504-6JV5	1191	96.40	0.87	370	17960	2.30	77	1200
2440	1RQ4 506-6JV5	1191	96.50	0.87	405	19564	2.30	85	1200
2800	1RQ4 560-6JV5	1191	96.50	0.86	470	22448	2.00	108	1200
3190	1RQ4 562-6JV5	1192	96.70	0.85	540	25553	2.10	123	1200
3500	1RQ4 564-6JV5	1193	96.80	0.85	590	28024	2.20	137	1200
3750	1RQ4 566-6JV5	1193	96.90	0.85	630	30019	2.20	149	1200
8-pole									
800	1RQ4 450-8JV5	891	95.10	0.82	142	8574	2.20	39	900
900	1RQ4 452-8JV5	892	95.40	0.82	160	9635	2.20	43	900
1000	1RQ4 454-8JV5	892	95.60	0.82	178	10705	2.20	48	900
1120	1RQ4 456-8JV5	893	95.70	0.81	200	11977	2.30	54	900
1300	1RQ4 500-8JV5	892	95.70	0.83	225	13917	2.10	74	900
1460	1RQ4 502-8JV5	893	96.10	0.83	255	15613	2.20	84	900
1600	1RQ4 504-8JV5	893	95.90	0.84	275	17110	2.10	92	900
1760	1RQ4 506-8JV5	893	96.20	0.85	300	18821	2.10	103	900
2060	1RQ4 560-8JV5	893	96.30	0.84	355	22029	2.00	128	900
2310	1RQ4 562-8JV5	893	96.40	0.85	390	24702	2.00	146	900
2500	1RQ4 564-8JV5	894	96.50	0.85	425	26704	2.10	163	900
2750	1RQ4 566-8JV5	894	96.60	0.85	465	29374	2.10	178	900

Type of construction:

IM B3	0
IM V1 (with canopy)	4

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

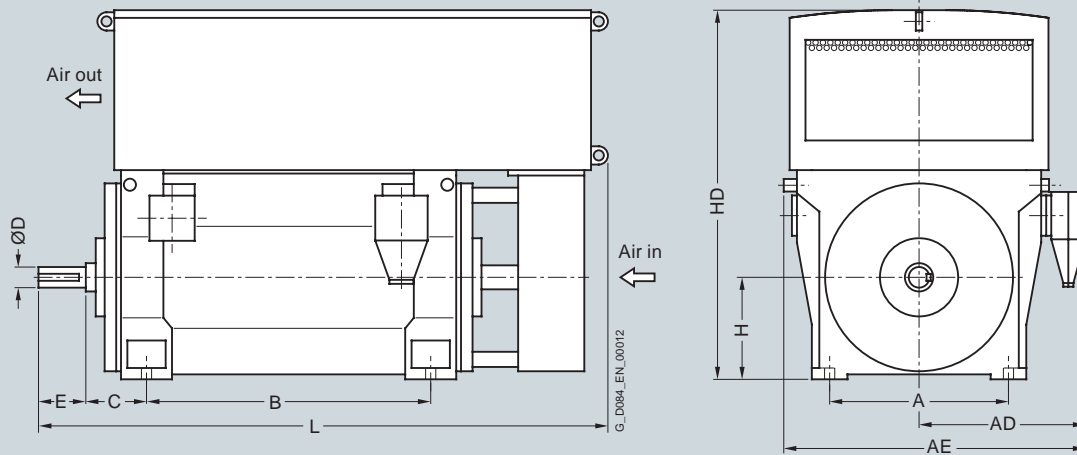
Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
Fan/pump/compressor drive												
4-pole												
1RQ4 450-4...	1065	1620	96.0	0.87	710	1413	96.0	0.85	355	1123	95.6	0.76
1RQ4 452-4...	1170	1620	96.2	0.87	780	1414	96.1	0.84	390	1123	95.7	0.75
1RQ4 454-4...	1320	1624	96.3	0.87	880	1417	96.3	0.84	440	1123	95.8	0.74
1RQ4 456-4...	1455	1625	96.5	0.85	970	1418	96.4	0.82	485	1124	96.0	0.71
1RQ4 500-4...	1650	1622	96.2	0.89	1100	1415	96.1	0.86	550	1127	95.8	0.78
1RQ4 502-4...	1800	1622	96.4	0.89	1200	1415	96.4	0.86	600	1127	96.1	0.78
1RQ4 504-4...	2085	1623	96.6	0.88	1390	1416	96.5	0.85	695	1127	96.1	0.75
1RQ4 506-4...	2310	1623	96.8	0.88	1540	1416	96.7	0.85	770	1127	96.3	0.76
1RQ4 560-4...	2740	1626	96.7	0.90	1825	1416	96.6	0.88	915	1130	96.4	0.81
1RQ4 562-4...	3040	1626	97.0	0.90	2025	1416	96.9	0.88	1015	1130	96.7	0.82
6-pole												
1RQ4 450-6...	765	1079	95.6	0.84	510	941	95.6	0.81	255	748	95.1	0.71
1RQ4 452-6...	855	1079	95.8	0.83	570	942	95.7	0.80	285	748	95.2	0.69
1RQ4 454-6...	1005	1080	95.8	0.85	670	942	95.8	0.82	335	748	95.2	0.72
1RQ4 456-6...	1140	1080	96.0	0.83	760	942	96.0	0.80	380	749	95.4	0.69
1RQ4 500-6...	1320	1081	96.0	0.86	880	943	95.9	0.82	440	751	95.5	0.73
1RQ4 502-6...	1500	1081	96.2	0.86	1000	943	96.1	0.83	500	751	95.7	0.74
1RQ4 504-6...	1680	1081	96.3	0.85	1120	943	96.2	0.82	560	751	95.6	0.72
1RQ4 506-6...	1830	1081	96.4	0.86	1220	943	96.3	0.83	610	751	95.8	0.74
1RQ4 560-6...	2100	1084	96.5	0.85	1400	944	96.4	0.83	700	753	96.0	0.74
1RQ4 562-6...	2395	1084	96.7	0.84	1595	944	96.6	0.81	800	754	96.1	0.71
1RQ4 564-6...	2625	1085	96.8	0.84	1750	944	96.6	0.80	875	754	96.1	0.70
1RQ4 566-6...	2815	1085	96.8	0.84	1875	944	96.6	0.80	940	754	96.1	0.70
8-pole												
1RQ4 450-8...	600	810	95.2	0.79	400	706	95.0	0.74	200	561	94.1	0.61
1RQ4 452-8...	675	810	95.4	0.79	450	707	95.2	0.74	225	561	94.4	0.62
1RQ4 454-8...	750	810	95.4	0.78	500	707	95.2	0.72	250	562	94.2	0.59
1RQ4 456-8...	840	810	95.5	0.77	560	707	95.2	0.71	280	562	94.2	0.58
1RQ4 500-8...	975	810	95.7	0.82	650	707	95.5	0.77	325	563	94.8	0.66
1RQ4 502-8...	1095	811	95.9	0.81	730	707	95.7	0.77	365	563	95.0	0.65
1RQ4 504-8...	1200	811	95.9	0.81	800	707	95.8	0.77	400	563	95.2	0.65
1RQ4 506-8...	1320	811	96.2	0.83	880	707	96.1	0.79	440	563	95.5	0.68
1RQ4 560-8...	1545	812	96.3	0.83	1030	707	96.3	0.79	515	565	95.9	0.69
1RQ4 562-8...	1733	812	96.3	0.83	1155	707	96.2	0.80	578	565	95.7	0.69
1RQ4 564-8...	1875	813	96.4	0.83	1250	707	96.3	0.80	625	565	95.7	0.70
1RQ4 566-8...	2063	813	96.5	0.83	1375	707	96.3	0.79	688	565	95.7	0.68

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
4-pole											
1RQ4450-4JV.0	4300	850	930	1620	1180	250	120	165	450	1810	2430
1RQ4452-4JV.0	4500	850	930	1620	1180	250	120	165	450	1810	2430
1RQ4454-4JV.0	4950	850	930	1620	1400	250	130	200	450	1810	2680
1RQ4456-4JV.0	5250	850	930	1620	1400	250	130	200	450	1810	2680
1RQ4500-4JV.0	5900	950	1000	1760	1320	280	140	200	500	2000	2660
1RQ4502-4JV.0	6100	950	1000	1760	1320	280	140	200	500	2000	2660
1RQ4504-4JV.0	6800	950	1000	1760	1500	280	150	200	500	2000	2870
1RQ4506-4JV.0	7150	950	1000	1760	1500	280	150	200	500	2000	2870
1RQ4560-4JV.0	8000	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4562-4JV.0	8450	1060	1210	2040	1400	315	170	240	560	2260	2950
1RQ4564-4JV.0	9350	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4566-4JV.0	9800	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4630-4JV.0	11100	1320	1330	2210	1600	335	190	280	630	2340	3140
1RQ4632-4JV.0	11800	1320	1330	2210	1600	335	190	280	630	2340	3140
1RQ4634-4JV.0	12900	1320	1330	2210	1800	335	200	280	630	2340	3380
1RQ4636-4JV.0	13450	1320	1330	2210	1800	335	200	280	630	2340	3380
6-pole											
1RQ4450-6JV.0	4400	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4452-6JV.0	4600	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4454-6JV.0	5050	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4456-6JV.0	5350	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4500-6JV.0	6000	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4502-6JV.0	6400	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4504-6JV.0	6950	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4506-6JV.0	7350	950	1000	1760	1500	280	160	240	500	2000	2910

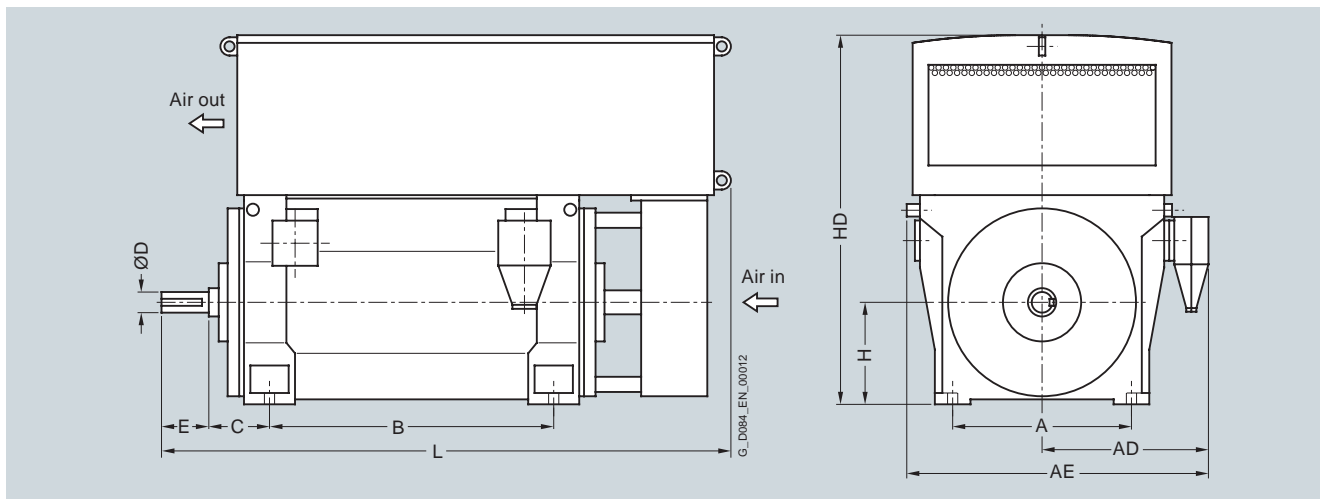
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
6-pole											
1RQ4560-6JV.0	8100	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4562-6JV.0	8650	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4564-6JV.0	9600	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4566-6JV.0	10050	1060	1210	2040	1600	315	180	240	560	2260	3180
1RQ4630-6JV.0	11400	1320	1330	2210	1600	335	200	280	630	2340	3140
1RQ4632-6JV.0	12000	1320	1330	2210	1600	335	200	280	630	2340	3140
1RQ4634-6JV.0	12900	1320	1330	2210	1800	335	200	280	630	2340	3380
1RQ4636-6JV.0	13750	1320	1330	2210	1800	335	200	280	630	2340	3380
8-pole											
1RQ4450-8JV.0	4350	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4452-8JV.0	4600	850	930	1620	1180	250	130	200	450	1810	2470
1RQ4454-8JV.0	5050	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4456-8JV.0	5350	850	930	1620	1400	250	140	200	450	1810	2680
1RQ4500-8JV.0	6050	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4502-8JV.0	6400	950	1000	1760	1320	280	150	200	500	2000	2660
1RQ4504-8JV.0	6950	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4506-8JV.0	7350	950	1000	1760	1500	280	160	240	500	2000	2910
1RQ4560-8JV.0	8100	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4562-8JV.0	8650	1060	1070	1900	1400	315	170	240	560	2260	2950
1RQ4564-8JV.0	9500	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4566-8JV.0	9950	1060	1070	1900	1600	315	180	240	560	2260	3180
1RQ4630-8JV.0	11200	1320	1180	2060	1600	335	200	280	630	2340	3140
1RQ4632-8JV.0	11950	1320	1330	2210	1600	335	200	280	630	2340	3140
1RQ4634-8JV.0	12900	1320	1330	2210	1800	335	200	280	630	2340	3380
1RQ4636-8JV.0	13650	1320	1330	2210	1800	335	200	280	630	2340	3380

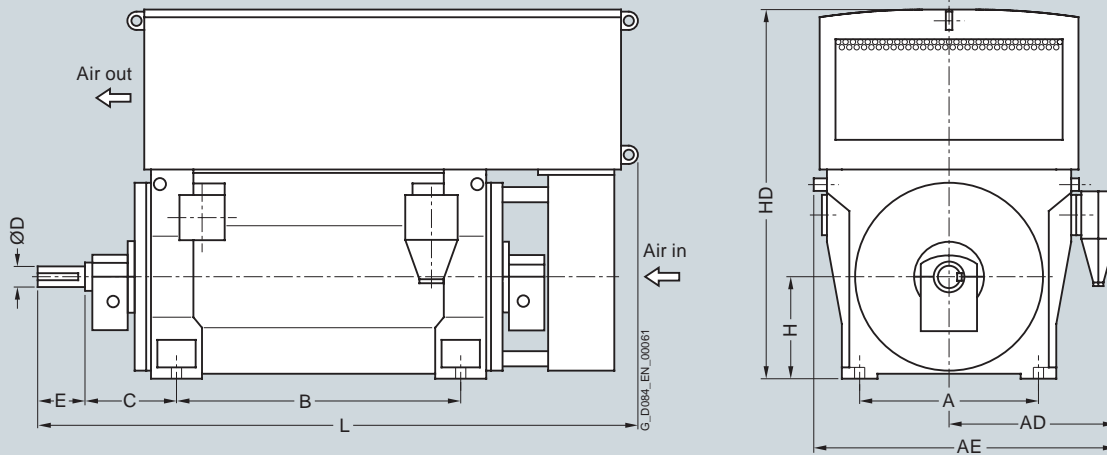
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction											
4-pole											
1RQ4450-4JV.0-Z K96	4400	850	930	1620	1180	450	120	165	450	1810	2630
1RQ4452-4JV.0-Z K96	4600	850	930	1620	1180	450	120	165	450	1810	2630
1RQ4454-4JV.0-Z K96	5100	850	930	1620	1400	450	130	200	450	1810	2880
1RQ4456-4JV.0-Z K96	5350	850	930	1620	1400	450	130	200	450	1810	2880
1RQ4500-4JV.0-Z K96	6000	950	1000	1760	1320	500	140	200	500	2000	2880
1RQ4502-4JV.0-Z K96	6250	950	1000	1760	1320	500	140	200	500	2000	2880
1RQ4504-4JV.0-Z K96	6950	950	1000	1760	1500	500	150	200	500	2000	3090
1RQ4506-4JV.0-Z K96	7300	950	1000	1760	1500	500	150	200	500	2000	3090
1RQ4560-4JV.0-Z K96	8150	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4562-4JV.0-Z K96	8600	1060	1210	2040	1400	530	170	240	560	2260	3170
1RQ4564-4JV.0-Z K96	9500	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4566-4JV.0-Z K96	9950	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4630-4JV.0-Z K96	11350	1320	1330	2210	1600	600	190	280	630	2340	3400
1RQ4632-4JV.0-Z K96	12050	1320	1330	2210	1600	600	190	280	630	2340	3400
1RQ4634-4JV.0-Z K96	13150	1320	1330	2210	1800	600	200	280	630	2340	3640
1RQ4636-4JV.0-Z K96	13700	1320	1330	2210	1800	600	200	280	630	2340	3640
6-pole											
1RQ4450-6JV.0-Z K96	4500	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4452-6JV.0-Z K96	4700	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4454-6JV.0-Z K96	5150	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4456-6JV.0-Z K96	5450	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4500-6JV.0-Z K96	6200	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4502-6JV.0-Z K96	6500	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4504-6JV.0-Z K96	7150	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4506-6JV.0-Z K96	7550	950	1000	1760	1500	500	160	240	500	2000	3130

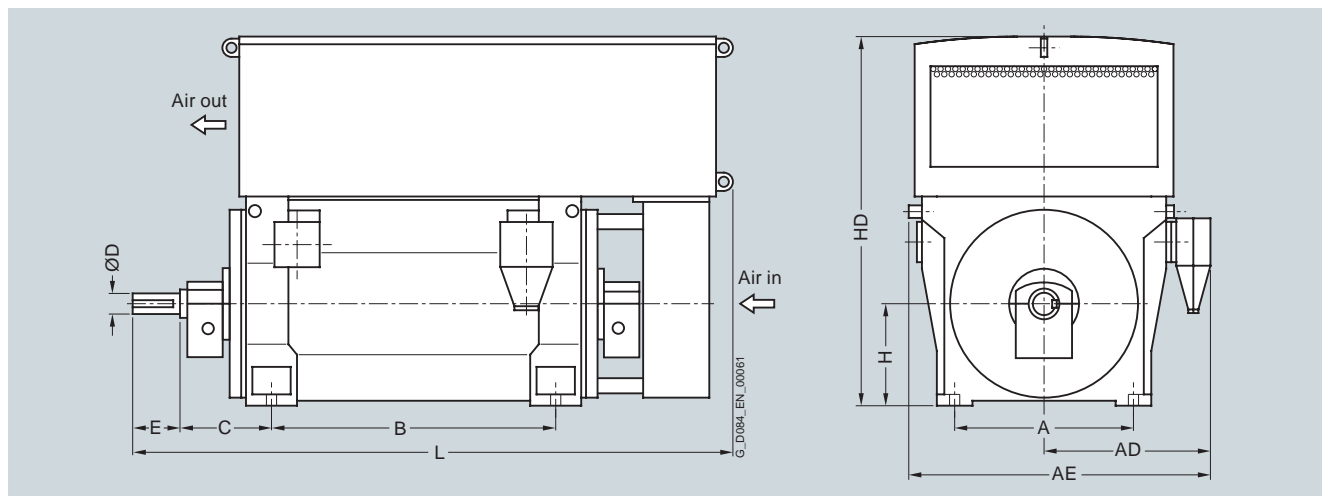
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction											
6-pole											
1RQ4560-6JV.0-Z K96	8250	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4562-6JV.0-Z K96	8800	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4564-6JV.0-Z K96	9750	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4566-6JV.0-Z K96	10200	1060	1210	2040	1600	530	180	240	560	2260	3400
1RQ4630-6JV.0-Z K96	11650	1320	1330	2210	1600	600	200	280	630	2340	3400
1RQ4632-6JV.0-Z K96	12250	1320	1330	2210	1600	600	200	280	630	2340	3400
1RQ4634-6JV.0-Z K96	13150	1320	1330	2210	1800	600	200	280	630	2340	3640
1RQ4636-6JV.0-Z K96	14000	1320	1330	2210	1800	600	200	280	630	2340	3640
8-pole											
1RQ4450-8JV.0-Z K96	4500	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4452-8JV.0-Z K96	4700	850	930	1620	1180	450	130	200	450	1810	2670
1RQ4454-8JV.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4456-8JV.0-Z K96	5450	850	930	1620	1400	450	140	200	450	1810	2880
1RQ4500-8JV.0-Z K96	6200	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4502-8JV.0-Z K96	6550	950	1000	1760	1320	500	150	200	500	2000	2880
1RQ4504-8JV.0-Z K96	7050	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4506-8JV.0-Z K96	7450	950	1000	1760	1500	500	160	240	500	2000	3130
1RQ4560-8JV.0-Z K96	8250	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4562-8JV.0-Z K96	8800	1060	1070	1900	1400	530	170	240	560	2260	3170
1RQ4564-8JV.0-Z K96	9650	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4566-8JV.0-Z K96	10100	1060	1070	1900	1600	530	180	240	560	2260	3400
1RQ4630-8JV.0-Z K96	11450	1320	1180	2060	1600	600	200	280	630	2340	3400
1RQ4632-8JV.0-Z K96	12200	1320	1330	2210	1600	600	200	280	630	2340	3400
1RQ4634-8JV.0-Z K96	13150	1320	1330	2210	1800	600	200	280	630	2340	3640
1RQ4636-8JV.0-Z K96	13900	1320	1330	2210	1800	600	200	280	630	2340	3640

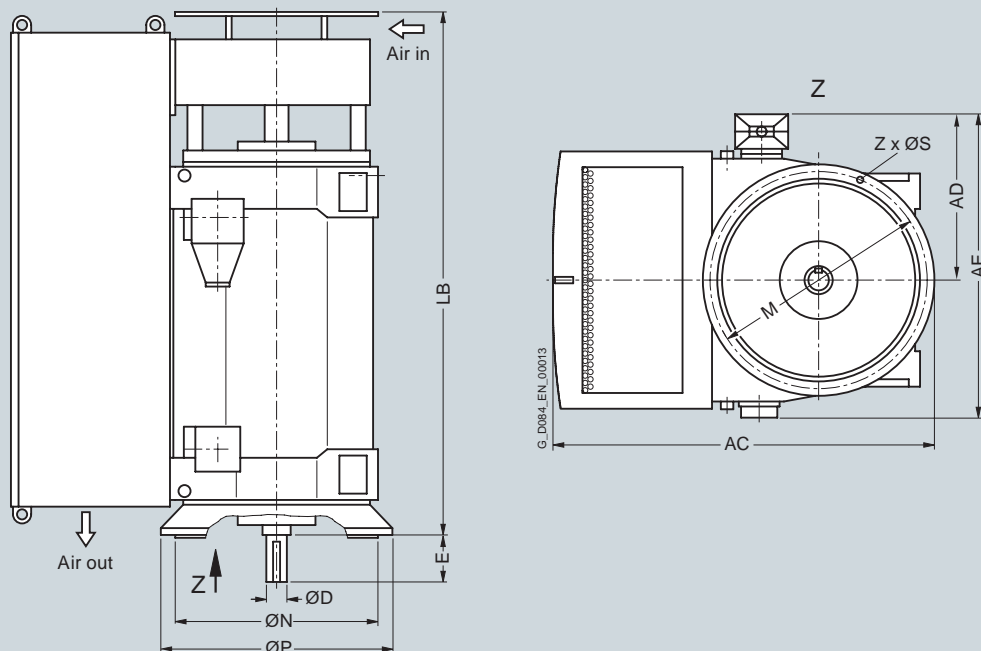
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity

Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction

4-pole

1RQ4450-4JV.4	4450	1940	930	1670	120	165	2360	1150	1000	1080	26	8
1RQ4452-4JV.4	4650	1940	930	1670	120	165	2360	1150	1000	1080	26	8
1RQ4454-4JV.4	5100	1940	930	1670	130	200	2570	1150	1000	1080	26	8
1RQ4456-4JV.4	5400	1940	930	1670	130	200	2570	1150	1000	1080	26	8
1RQ4500-4JV.4	6050	2130	1000	1810	140	200	2560	1250	1120	1180	26	8
1RQ4502-4JV.4	6250	2130	1000	1810	140	200	2560	1250	1120	1180	26	8
1RQ4504-4JV.4	6950	2130	1000	1810	150	200	2770	1250	1120	1180	26	8
1RQ4506-4JV.4	7300	2130	1000	1810	150	200	2770	1250	1120	1180	26	8
1RQ4560-4JV.4	8200	2400	1210	2100	170	240	2800	1400	1250	1320	26	16
1RQ4562-4JV.4	8600	2400	1210	2100	170	240	2800	1400	1250	1320	26	16
1RQ4564-4JV.4	9500	2400	1210	2100	180	240	3030	1400	1250	1320	26	16
1RQ4566-4JV.4	9950	2400	1210	2100	180	240	3030	1400	1250	1320	26	16
1RQ4630-4JV.4	12750	2840	1330	2300	200	280	3170	2000	1800	1900	33	16
1RQ4632-4JV.4	13450	2840	1330	2300	200	280	3170	2000	1800	1900	33	16
1RQ4634-4JV.4	14550	2840	1330	2300	200	280	3410	2000	1800	1900	33	16
1RQ4636-4JV.4	15100	2840	1330	2300	200	280	3410	2000	1800	1900	33	16

¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

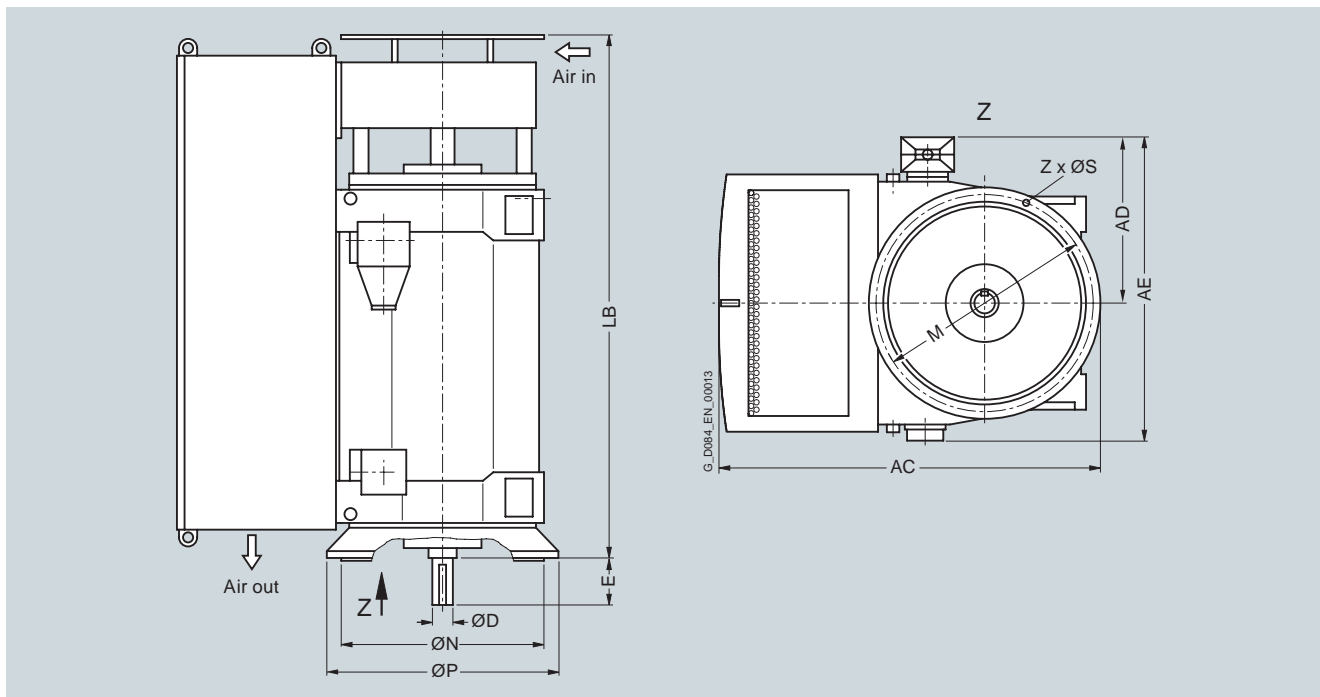
Motors for converter operation

With non-sinusoidal output

Air-cooled motors
H-compact PLUS 1RQ4

Dimension drawings (continued)

1RQ4, up to 6.6 kV 50/60 Hz, rolling-contact bearings, IM V1 type of construction



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
6-pole												
1RQ4450-6JV.4	4500	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4452-6JV.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4454-6JV.4	5200	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4456-6JV.4	5500	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4500-6JV.4	6200	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4502-6JV.4	6550	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4504-6JV.4	7100	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4506-6JV.4	7500	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4560-6JV.4	8300	2400	1070	1960	170	240	2800	1400	1250	1320	26	16
1RQ4562-6JV.4	8800	2400	1070	1960	170	240	2800	1400	1250	1320	26	16
1RQ4564-6JV.4	9750	2400	1210	2100	180	240	3030	1400	1250	1320	26	16
1RQ4566-6JV.4	10200	2400	1210	2100	180	240	3030	1400	1250	1320	26	16
1RQ4630-6JV.4	13050	2840	1330	2300	200	280	3170	2000	1800	1900	33	16
1RQ4632-6JV.4	13650	2840	1330	2300	200	280	3170	2000	1800	1900	33	16
1RQ4634-6JV.4	14550	2840	1330	2300	200	280	3410	2000	1800	1900	33	16
1RQ4636-6JV.4	15400	2840	1330	2300	200	280	3410	2000	1800	1900	33	16

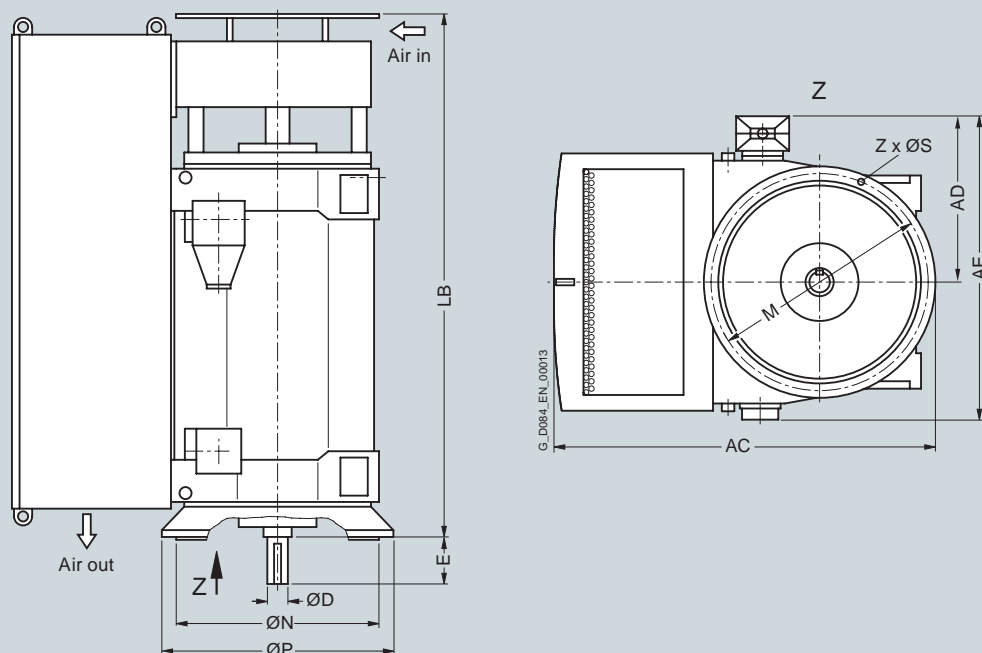
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Air-cooled motors H-compact PLUS 1RQ4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
8-pole												
1RQ4450-8JV.4	4500	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4452-8JV.4	4700	1940	930	1670	130	200	2360	1150	1000	1080	26	8
1RQ4454-8JV.4	5150	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4456-8JV.4	5500	1940	930	1670	140	200	2570	1150	1000	1080	26	8
1RQ4500-8JV.4	6200	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4502-8JV.4	6600	2130	1000	1810	150	200	2560	1250	1120	1180	26	8
1RQ4504-8JV.4	7100	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4506-8JV.4	7500	2130	1000	1810	160	240	2770	1250	1120	1180	26	8
1RQ4560-8JV.4	8250	2400	1070	1960	170	240	2800	1400	1250	1320	26	16
1RQ4562-8JV.4	8800	2400	1070	1960	170	240	2800	1400	1250	1320	26	16
1RQ4564-8JV.4	9650	2400	1070	1960	180	240	3030	1400	1250	1320	26	16
1RQ4566-8JV.4	10100	2400	1070	1960	180	240	3030	1400	1250	1320	26	16
1RQ4566-8JV.4	10100	2400	1070	1960	180	240	3030	1400	1250	1320	26	16
1RQ4630-8JV.4	12850	2840	1180	2150	200	280	3170	2000	1800	1900	33	16
1RQ4632-8JV.4	13600	2840	1330	2300	200	280	3170	2000	1800	1900	33	16
1RQ4634-8JV.4	14550	2840	1330	2300	200	280	3410	2000	1800	1900	33	16
1RQ4636-8JV.4	15300	2840	1330	2300	200	280	3410	2000	1800	1900	33	16

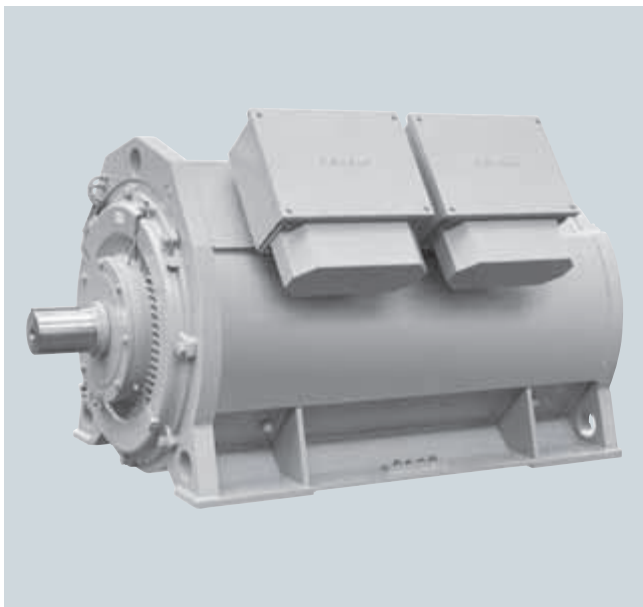
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact 1LH4

Overview



Technical data (continued)

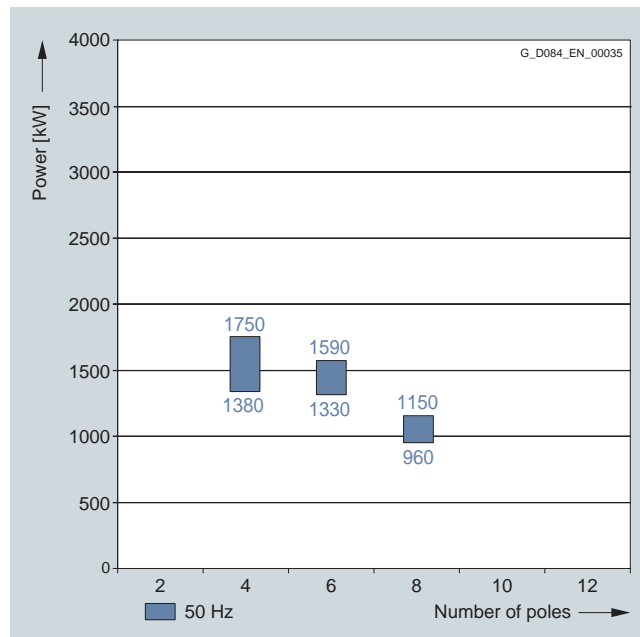
Power ranges for IEC motors with reinforced insulation for SINAMICS drive converters without sine-wave filter

1LH4 series (water-jacket-cooled)

Insulation system, thermal class 155 (F), utilized to 155 (F)

The power data listed here apply for a water inlet temperature of 38 °C and an installation altitude ≤ 1000 m.

690 V; 50 Hz

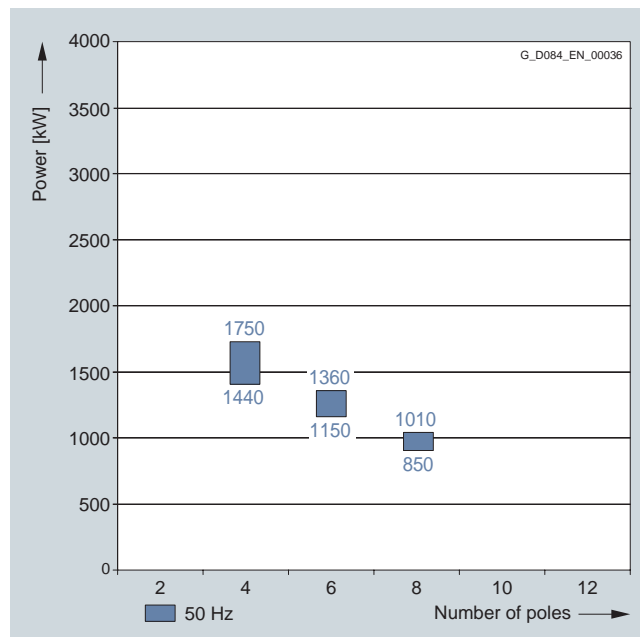


Technical data

Technical data at a glance

H-compact 1LH4	
Rated voltage	690 V ... 4.16 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM B35 and IM V1
Degree of protection	IP55
Cooling method	IC71W
Stator winding insulation	Insulation system, thermal class 155 (F), utilized to 155 (F)
Shaft height	500 mm
Bearings	Rolling-contact bearings
Cage material	Copper
Standards	IEC, EN
Frame design	Steel frame with water jacket

2.3 to 4.16 kV; 50 Hz



Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact 1LH4

Selection and ordering data

Rated power IEC P_{rated} kW	Low voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 690 V I_{rated} A	Rated torque T_{rated} Nm	Breakdown torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
690 V, 50 Hz									
4-pole									
1380	1LH4500-4CM0	1490	96.8	0.88	1360	8844	2.00	44	1800
1590	1LH4502-4CM0	1491	97.1	0.87	1580	10183	2.20	49	1800
1750	1LH4504-4CM0	1490	97.1	0.88	1720	11216	2.00	56	1800
6-pole									
1330	1LH4500-6CM0	994	97.0	0.85	1350	12777	2.20	82	1800
1440	1LH4502-6CM0	994	97.0	0.86	1450	13834	2.20	92	1800
1590	1LH4504-6CM0	994	97.1	0.86	1600	15275	2.20	102	1800
8-pole									
960	1LH4500-8CM0	745	96.5	0.80	1040	12305	2.00	82	1800
1030	1LH4502-8CM0	745	96.6	0.80	1120	13202	2.10	92	1800
1150	1LH4504-8CM0	745	96.7	0.80	1250	14741	2.10	102	1800

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

Rated power IEC P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Breakdown torque T_B/T_{rated} [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 ... 4.16 kV, 50 Hz									
4-pole									
1440	1LH4500-4CV	1492	97.0	0.87	235	9216	2.3	42	1800
1590	1LH4502-4CV	1492	97.1	0.87	260	10177	2.4	47	1800
1750	1LH4504-4CV	1492	97.2	0.88	285	11201	2.4	54	1800
6-pole									
1150	1LH4500-6CV	994	96.9	0.86	192	11048	2.2	82	1800
1250	1LH4502-6CV	994	97.0	0.87	205	12009	2.2	92	1800
1360	1LH4504-6CV	994	97.0	0.87	225	13065	2.2	102	1800
8-pole									
850	1LH4500-8CV	745	96.3	0.80	154	10895	2.0	82	1800
910	1LH4502-8CV	745	96.4	0.80	164	11664	2.1	92	1800
1010	1LH4504-8CV	745	96.5	0.81	180	12946	2.1	102	1800

Voltage code:

3.3 kV, 50 Hz	2
4.16 kV, 50 Hz	4
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note: Partial load values for H-compact 1LH4 are available on request.

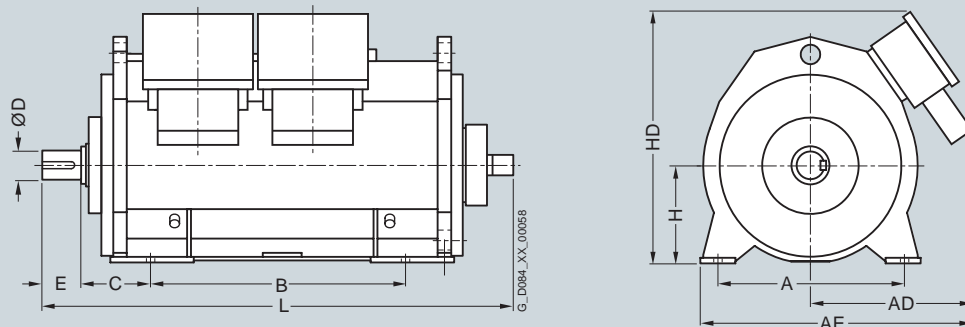
¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact 1LH4

Dimension drawings



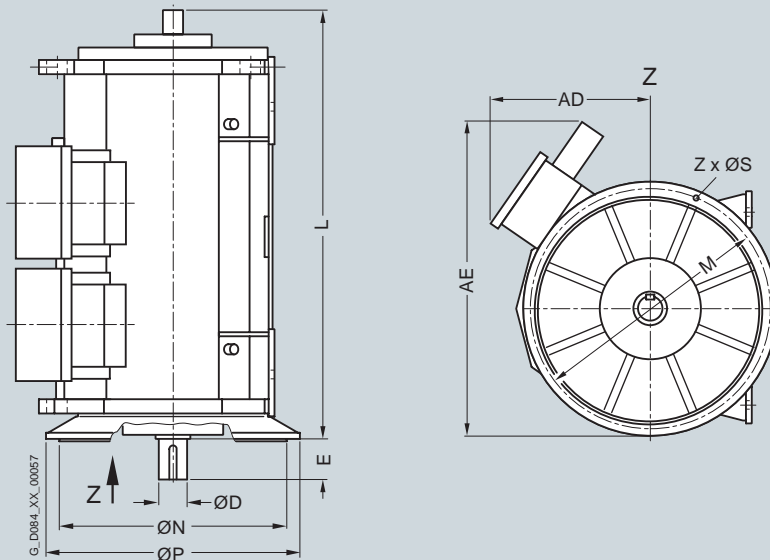
Motor type	Weight kg	Dimensions									
		A mm	AD mm	AE mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
4-pole											
1LH4500-4C..0	5910	950	820	1390	1320	355	150	200	500	1280	2250
1LH4502-4C..0	6310	950	820	1390	1320	355	150	200	500	1280	2250
1LH4504-4C..0	6810	950	820	1390	1320	355	150	200	500	1280	2250
6-pole											
1LH4500-6C..0	6210	950	820	1390	1320	355	150	200	500	1280	2250
1LH4502-6C..0	6610	950	820	1390	1320	355	150	200	500	1280	2250
1LH4504-6C..0	7110	950	820	1390	1320	355	150	200	500	1280	2250
8-pole											
1LH4500-8C..0	6210	950	820	1390	1320	355	150	200	500	1280	2250
1LH4502-8C..0	6510	950	820	1390	1320	355	150	200	500	1280	2250
1LH4504-8C..0	7010	950	820	1390	1320	355	150	200	500	1280	2250

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact 1LH4

Dimension drawings



Motor type	Weight kg	Dimensions									
		AD mm	AE mm	D mm	E mm	L mm	P mm	N mm	M mm	S mm	Z mm

Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction

4-pole

1LH4500-4C..8	5910	780	1450	150	200	2100	1250	1120	1180	26	16
1LH4502-4C..8	6310	780	1450	150	200	2100	1250	1120	1180	26	16
1LH4504-4C..8	6810	780	1450	150	200	2100	1250	1120	1180	26	16

6-pole

1LH4500-6C..8	6210	780	1450	150	200	2100	1250	1120	1180	26	16
1LH4502-6C..8	6610	780	1450	150	200	2100	1250	1120	1180	26	16
1LH4504-6C..8	7110	780	1450	150	200	2100	1250	1120	1180	26	16

8-pole

1LH4500-8C..8	6210	780	1450	150	200	2100	1250	1120	1180	26	16
1LH4502-8C..8	6510	780	1450	150	200	2100	1250	1120	1180	26	16
1LH4504-8C..8	7010	780	1450	150	200	2100	1250	1120	1180	26	16

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Overview



Technical data

Technical data at a glance

H-compact PLUS 1RN4	
Rated voltage	2.3 ... 6.6 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Cooling method	IC81W
Stator winding insulation	Insulation system, thermal class 155 (F), utilized to 155 (F)
Shaft height	450 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 mm	Frame: Steel Top cover: Steel

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Technical data (continued)

Power ranges for IEC motors with reinforced insulation for SINAMICS converters without sine-wave filter

1RN4 series, 1SL4 (Ex nA), SQ4 (Ex p)

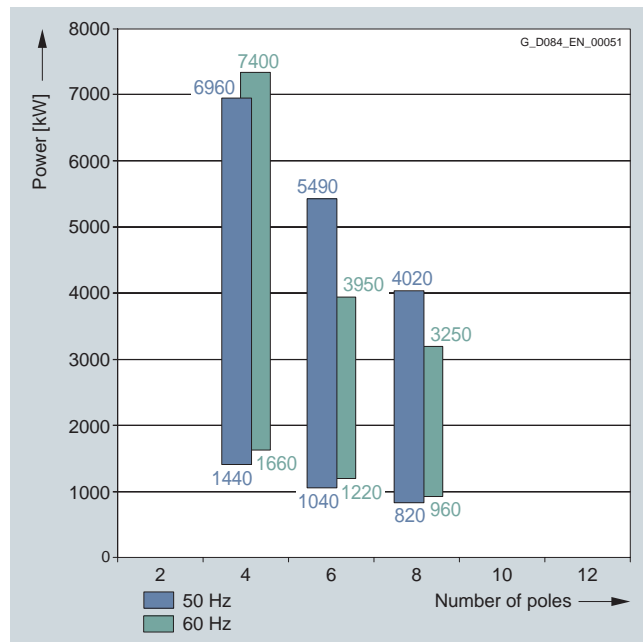
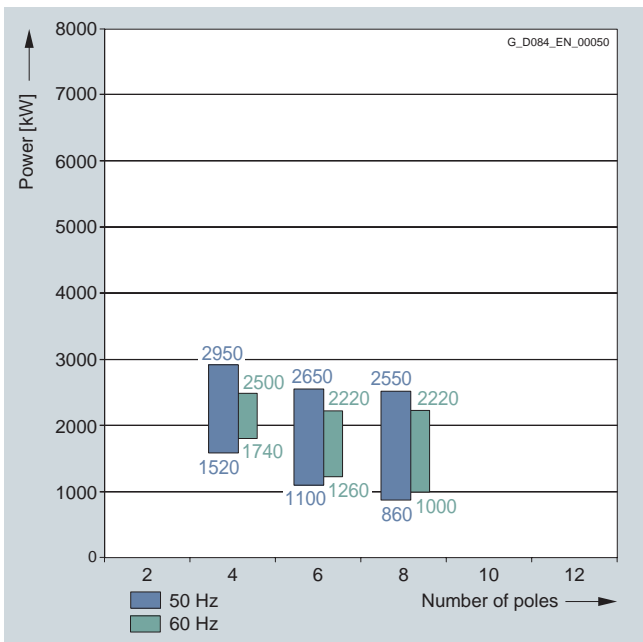
Insulation system, thermal class 155 (F), utilized to 155 (F)

The power data listed here apply for a water inlet temperature of 25 °C and an installation altitude ≤ 1000 m.

2.3 kV; 50 and 60 Hz

3.4 kV to 4.16 kV; 50 and 60 Hz

3



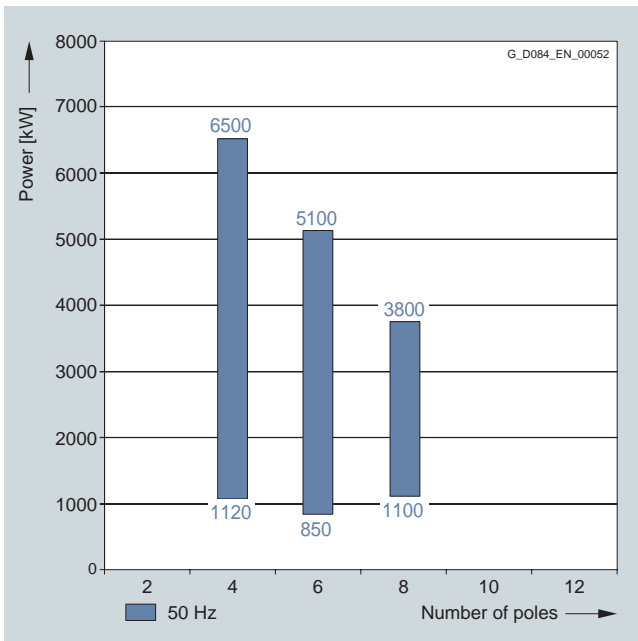
Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Technical data (continued)

6 to 6.6 kV; 50 Hz



Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at the rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 50 Hz									
4-pole									
1520	1RN4 450-4HV0	1480	96.2	0.89	445	9807	2.00	21	1800
1700	1RN4 452-4HV0	1482	96.3	0.89	500	10954	2.00	23	1800
1920	1RN4 454-4HV0	1482	96.4	0.89	560	12372	1.90	26	1800
2180	1RN4 456-4HV0	1483	96.6	0.89	640	14037	2.00	29	1800
2400	1RN4 500-4HV0	1484	96.2	0.89	700	15445	2.00	39	1800
2550	1RN4 502-4HV0	1484	96.5	0.89	750	16410	2.00	42	1800
2950	1RN4 504-4HV0	1484	96.6	0.89	860	18984	2.00	48	1800
6-pole									
1100	1RN4 450-6HV0	985	95.3	0.85	340	10665	1.90	29	1200
1240	1RN4 452-6HV0	986	95.6	0.85	385	12010	1.90	33	1200
1440	1RN4 454-6HV0	985	95.6	0.87	435	13961	1.80	36	1200
1700	1RN4 456-6HV0	986	95.9	0.87	510	16466	1.90	41	1200
1960	1RN4 500-6HV0	988	95.9	0.86	600	18945	1.90	57	1200
2200	1RN4 502-6HV0	988	96.1	0.87	660	21265	1.90	65	1200
2450	1RN4 504-6HV0	989	96.1	0.86	740	23658	1.90	72	1200
2650	1RN4 506-6HV0	989	96.3	0.86	800	25589	1.90	81	1200
8-pole									
860	1RN4 450-8HV0	740	94.9	0.84	270	11099	2.00	37	900
960	1RN4 452-8HV0	740	95.3	0.84	300	12389	2.00	41	900
1080	1RN4 454-8HV0	741	95.4	0.83	340	13919	2.00	46	900
1220	1RN4 456-8HV0	741	95.5	0.83	385	15723	2.00	52	900
1440	1RN4 500-8HV0	741	95.6	0.83	455	18559	1.90	70	900
1600	1RN4 502-8HV0	742	95.8	0.83	510	20593	1.90	80	900
1780	1RN4 504-8HV0	742	96.0	0.84	550	22910	1.90	88	900
1960	1RN4 506-8HV0	742	96.0	0.84	610	25226	1.90	99	900
2250	1RN4 560-8HV0	743	96.0	0.82	720	28920	1.90	123	900
2550	1RN4 562-8HV0	743	96.2	0.82	810	32776	1.90	141	900

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RN4 450-4...	1140	1347	96.2	0.89	760	1174	96.4	0.87	380	933	96.3	0.80
1RN4 452-4...	1275	1348	96.4	0.88	850	1175	96.6	0.86	425	933	96.3	0.78
1RN4 454-4...	1440	1348	96.5	0.88	960	1175	96.8	0.87	480	933	96.7	0.79
1RN4 456-4...	1635	1349	96.7	0.88	1090	1176	96.9	0.87	545	934	96.8	0.79
1RN4 500-4...	1800	1348	96.5	0.89	1200	1178	96.8	0.88	600	935	96.8	0.82
1RN4 502-4...	1913	1348	96.5	0.89	1275	1178	96.8	0.88	638	935	96.8	0.82
1RN4 504-4...	2213	1348	96.7	0.90	1475	1178	96.9	0.89	738	935	96.9	0.82

6-pole

1RN4 450-6...	825	895	95.6	0.84	550	782	95.9	0.81	275	621	95.6	0.72
1RN4 452-6...	930	896	95.8	0.84	620	783	96.1	0.82	310	621	95.8	0.73
1RN4 454-6...	1080	895	95.9	0.87	720	782	96.2	0.85	360	621	96.0	0.78
1RN4 456-6...	1275	896	96.1	0.86	850	783	96.3	0.84	425	621	96.1	0.76
1RN4 500-6...	1470	898	96.1	0.86	980	784	96.2	0.83	490	622	96.0	0.74
1RN4 502-6...	1650	898	96.4	0.87	1100	784	96.5	0.85	550	622	96.4	0.77
1RN4 504-6...	1838	899	96.4	0.87	1225	785	96.5	0.84	613	623	96.4	0.77
1RN4 506-6...	1988	899	96.5	0.87	1325	785	96.6	0.84	663	623	96.4	0.77

8-pole

1RN4 450-8...	645	672	95.3	0.81	430	587	95.4	0.77	215	466	94.8	0.66
1RN4 452-8...	720	672	95.5	0.82	480	587	95.6	0.78	240	466	95.1	0.68
1RN4 454-8...	810	673	95.6	0.80	540	588	95.7	0.76	270	467	95.1	0.64
1RN4 456-8...	915	673	95.8	0.80	610	588	95.8	0.76	305	467	95.3	0.64
1RN4 500-8...	1080	673	95.9	0.82	720	588	95.9	0.78	360	467	95.5	0.67
1RN4 502-8...	1200	674	96.1	0.83	800	589	96.1	0.80	400	467	95.7	0.69
1RN4 504-8...	1335	674	96.2	0.83	890	589	96.2	0.80	445	467	95.9	0.70
1RN4 506-8...	1470	674	96.2	0.83	980	589	96.2	0.81	490	467	95.9	0.71
1RN4 560-8...	1688	675	96.2	0.82	1125	590	96.2	0.79	563	468	95.9	0.69
1RN4 562-8...	1913	675	96.3	0.82	1275	590	96.3	0.79	638	468	96.0	0.69

3

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ²⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
4-pole									
1440	1RN4 450-4HV ■■■	1481	96.1	0.89	295	9285	2.00	21	1800
1620	1RN4 452-4HV ■■■	1482	96.2	0.89	330	10439	2.00	23	1800
1840	1RN4 454-4HV ■■■	1483	96.4	0.89	375	11848	2.00	26	1800
2100	1RN4 456-4HV ■■■	1484	96.5	0.89	430	13513	2.10	29	1800
2300	1RN4 500-4HV ■■■	1485	96.4	0.88	475	14790	2.00	39	1800
2500	1RN4 502-4HV ■■■	1485	96.4	0.89	510	16076	2.00	42	1800
2900	1RN4 504-4HV ■■■	1485	96.7	0.89	590	18648	2.00	48	1800
3260 ¹⁾	1RN4 506-4HV ■■■	1485	96.8	0.89	660	20965	2.00	53	1800
3920 ¹⁾	1RN4 560-4HV ■■■	1486	96.8	0.90	790	25192	2.00	76	1800
4500 ¹⁾	1RN4 562-4HV ■■■	1486	96.9	0.90	900	28920	2.00	84	O.R. ³⁾
5000 ¹⁾	1RN4 564-4HV ■■■	1487	97.1	0.90	1000	32112	2.00	96	O.R. ³⁾
5500 ¹⁾	1RN4 566-4HV ■■■	1487	97.1	0.90	1100	35323	2.00	105	O.R. ³⁾
5880 ¹⁾	1RN4 632-4HV ■■■	1490	97.2	0.89	1180	37687	2.20	150	1800
6470 ¹⁾	1RN4 634-4HV ■■■	1490	97.3	0.90	1300	41469	2.20	168	1800
6960 ¹⁾	1RN4 636-4HV ■■■	1491	97.4	0.90	1390	44579	2.40	197	1800
6-pole									
1040	1RN4 450-6HV ■■■	985	95.2	0.85	225	10083	1.90	29	1200
1180	1RN4 452-6HV ■■■	985	95.2	0.85	255	11440	1.80	33	1200
1380	1RN4 454-6HV ■■■	986	95.6	0.87	290	13365	2.00	36	1200
1620	1RN4 456-6HV ■■■	987	95.8	0.86	345	15674	2.00	41	1200
1860	1RN4 500-6HV ■■■	988	95.7	0.86	395	17977	1.90	57	1200
2100	1RN4 502-6HV ■■■	989	96.1	0.87	440	20277	2.00	65	1200
2340	1RN4 504-6HV ■■■	990	96.2	0.87	490	22571	2.00	72	1200
2560	1RN4 506-6HV ■■■	990	96.4	0.87	530	24693	2.00	81	1200
3000	1RN4 560-6HV ■■■	990	96.5	0.86	630	28939	1.90	105	1200
3380 ¹⁾	1RN4 562-6HV ■■■	991	96.7	0.86	710	32572	1.90	120	1200
3750 ¹⁾	1RN4 564-6HV ■■■	991	96.7	0.87	780	36138	2.00	135	1200
4300 ¹⁾	1RN4 566-6HV ■■■	991	97.0	0.87	890	41438	2.00	147	O.R. ³⁾
4610 ¹⁾	1RN4 632-6HV ■■■	993	97.0	0.86	970	44336	2.10	202	1200
5000 ¹⁾	1RN4 634-6HV ■■■	993	97.1	0.86	1040	48087	2.30	223	1200
5490 ¹⁾	1RN4 636-6HV ■■■	994	97.2	0.86	1140	52746	2.30	246	1200

Voltage code:

4.16 kV, 50 Hz

4
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ Rated voltage < 4.16 kV on request.

²⁾ For IM B3, rolling-contact bearings.

³⁾ On request.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1RN4 450-4...	1080	1345	96.2	0.88	720	1175	96.4	0.86	360	933	96.2	0.78
1RN4 452-4...	1215	1346	96.4	0.86	810	1176	96.6	0.86	405	933	96.5	0.78
1RN4 454-4...	1380	1346	96.6	0.88	920	1176	96.7	0.85	460	934	96.5	0.77
1RN4 456-4...	1575	1347	96.7	0.88	1050	1176	96.9	0.86	525	934	96.7	0.77
1RN4 500-4...	1725	1351	96.6	0.89	1150	1180	96.7	0.87	575	937	96.6	0.79
1RN4 502-4...	1875	1351	96.6	0.89	1250	1180	96.8	0.88	625	937	96.7	0.81
1RN4 504-4...	2175	1351	96.9	0.89	1450	1180	97.1	0.88	725	938	97.0	0.81
1RN4 506-4...	2445	1349	97.0	0.90	1630	1179	97.1	0.88	815	935	97.1	0.82
1RN4 560-4...	2940	1350	97.0	0.90	1960	1179	97.1	0.88	980	936	97.1	0.82
1RN4 562-4...	3375	1350	97.2	0.90	2250	1179	97.3	0.88	1125	936	97.2	0.82
1RN4 564-4...	3750	1351	97.4	0.90	2500	1180	97.5	0.88	1250	937	97.2	0.82
1RN4 566-4...	4125	1351	97.5	0.90	2750	1180	97.6	0.89	1375	937	97.3	0.83
1RN4 632-4...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 634-4...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 636-4...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
6-pole												
1RN4 450-6...	780	896	95.4	0.84	520	783	95.7	0.82	260	622	95.5	0.72
1RN4 452-6...	885	895	95.8	0.85	590	783	96.0	0.83	295	622	95.8	0.75
1RN4 454-6...	1035	896	95.8	0.86	690	783	96.0	0.83	345	622	95.7	0.74
1RN4 456-6...	1215	897	96.0	0.85	810	783	96.2	0.82	405	622	95.9	0.73
1RN4 500-6...	1395	900	96.2	0.86	930	786	96.3	0.84	465	625	96.1	0.75
1RN4 502-6...	1575	900	96.3	0.86	1050	786	96.5	0.84	525	625	96.3	0.76
1RN4 504-6...	1755	900	96.5	0.86	1170	786	96.6	0.84	585	625	96.3	0.75
1RN4 506-6...	1920	900	96.6	0.86	1280	787	96.6	0.84	640	625	96.4	0.76
1RN4 560-6...	2250	901	96.6	0.85	1500	787	96.7	0.83	750	625	96.4	0.74
1RN4 562-6...	2535	900	96.9	0.86	1690	787	97.0	0.84	845	624	96.8	0.75
1RN4 564-6...	2813	900	96.8	0.86	1875	787	96.9	0.84	938	624	96.7	0.76
1RN4 566-6...	3225	900	97.0	0.86	2150	787	97.0	0.83	1075	624	96.8	0.75
1RN4 632-6...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 634-6...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 636-6...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾

¹⁾ On request.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data (continued)

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 3.4 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ²⁾ n_{max} rpm
3.4 ... 4.16 kV, 50 Hz									
8-pole									
820	1RN4 450-8HV ■■	740	94.6	0.84	180	10582	2.00	37	900
920	1RN4 452-8HV ■■	740	94.9	0.84	200	11872	1.90	41	900
1020	1RN4 454-8HV ■■	741	95.0	0.83	225	13145	2.00	46	900
1160	1RN4 456-8HV ■■	741	95.4	0.83	255	14949	2.10	52	900
1360	1RN4 500-8HV ■■	741	95.3	0.84	295	17526	1.80	70	900
1520	1RN4 502-8HV ■■	742	95.5	0.85	330	19562	1.90	80	900
1700	1RN4 504-8HV ■■	742	95.6	0.84	370	21878	2.00	88	900
1860	1RN4 506-8HV ■■	742	95.8	0.85	400	23938	1.90	99	900
2120	1RN4 560-8HV ■■	742	95.9	0.83	465	27286	1.80	123	900
2400	1RN4 562-8HV ■■	742	96.1	0.83	530	30889	1.80	141	900
2600	1RN4 564-8HV ■■	743	96.2	0.83	570	33419	1.90	158	900
2830	1RN4 566-8HV ■■	742	96.3	0.85	600	36424	1.80	173	900
3140 ¹⁾	1RN4 630-8HV ■■	743	96.5	0.85	670	40359	1.90	239	900
3430 ¹⁾	1RN4 632-8HV ■■	743	96.7	0.85	730	44087	2.10	265	900
3680 ¹⁾	1RN4 634-8HV ■■	743	96.7	0.85	780	47300	2.00	293	900
4020 ¹⁾	1RN4 636-8HV ■■	744	96.9	0.84	860	51601	2.30	324	900
Voltage code:									
4.16 kV, 50 Hz									4
Other voltage									9
Type of construction:									
IM B3									0
IM V1 (without canopy)									8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ Rated voltage < 4.16 kV on request.

²⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

8-pole

Motor type	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
1RN4 450-8...	615	672	95.0	0.81	410	587	95.1	0.77	205	466	94.5	0.65
1RN4 452-8...	690	672	95.2	0.82	460	587	95.4	0.79	230	466	95.0	0.68
1RN4 454-8...	765	673	95.3	0.80	510	588	95.4	0.76	255	467	94.8	0.64
1RN4 456-8...	870	673	95.6	0.79	580	588	95.6	0.74	290	467	94.9	0.62
1RN4 500-8...	1020	675	95.7	0.83	680	590	95.8	0.81	340	468	95.5	0.71
1RN4 502-8...	1140	675	95.8	0.83	760	590	95.9	0.80	380	468	95.5	0.69
1RN4 504-8...	1275	675	95.9	0.82	850	590	95.9	0.78	425	468	95.4	0.67
1RN4 506-8...	1395	675	96.1	0.84	930	590	96.1	0.81	465	468	95.8	0.72
1RN4 560-8...	1590	675	96.2	0.82	1060	590	96.2	0.79	530	469	95.9	0.69
1RN4 562-8...	1800	676	96.3	0.83	1200	590	96.4	0.80	600	469	96.0	0.70
1RN4 564-8...	1950	676	96.5	0.82	1300	590	96.5	0.79	650	469	96.2	0.69
1RN4 566-8...	2125	676	96.6	0.84	1415	590	96.7	0.82	710	469	96.4	0.74
1RN4 630-8...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 632-8...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 634-8...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾
1RN4 636-8...	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾	O.R. ¹⁾

3

¹⁾ On request.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break- down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechani- cal limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
4-pole									
1120	1RN4 450-4HV	1485	95.6	0.89	116	7203	2.35	21	1800
1300	1RN4 452-4HV	1487	96.0	0.88	134	8349	2.35	23	1800
1450	1RN4 454-4HV	1487	96.1	0.88	150	9312	2.35	26	1800
1750	1RN4 456-4HV	1487	96.4	0.88	180	11239	2.35	29	1800
1900	1RN4 500-4HV	1488	96.3	0.88	196	12194	2.25	39	1800
2150	1RN4 502-4HV	1488	96.3	0.88	220	13799	2.25	42	1800
2450	1RN4 504-4HV	1488	96.5	0.88	250	15724	2.25	48	1800
2700	1RN4 506-4HV	1488	96.7	0.88	280	17329	2.25	53	1800
3200	1RN4 560-4HV	1487	96.6	0.90	320	20551	2.10	76	1800
3700	1RN4 562-4HV	1488	96.8	0.90	370	23747	2.10	84	O.R. ²⁾
4150	1RN4 564-4HV	1488	96.8	0.90	415	26635	2.10	96	O.R. ²⁾
4450	1RN4 566-4HV	1488	97.0	0.90	445	28560	2.10	105	O.R. ²⁾
4800	1RN4 630-4HV	1491	97.0	0.90	480	30744	2.10	134	1800
5300	1RN4 632-4HV	1491	97.1	0.90	530	33947	2.10	150	1800
5800	1RN4 634-4HV	1491	97.1	0.90	580	37150	2.10	168	1800
6500	1RN4 636-4HV	1491	97.4	0.90	650	41633	2.10	197	1800
6-pole									
850	1RN4 450-6HV	990	95.2	0.83	94	8199	2.30	29	1200
950	1RN4 452-6HV	990	95.3	0.84	104	9164	2.30	33	1200
1060	1RN4 454-6HV	990	95.0	0.86	114	10225	2.30	36	1200
1270	1RN4 456-6HV	990	95.5	0.84	138	12251	2.30	41	1200
1450	1RN4 500-6HV	991	95.6	0.87	152	13973	2.20	57	1200
1630	1RN4 502-6HV	991	95.8	0.87	172	15708	2.20	65	1200
1820	1RN4 504-6HV	991	96.0	0.87	190	17539	2.20	72	1200
2070	1RN4 506-6HV	991	96.1	0.87	215	19948	2.20	81	1200
2570	1RN4 560-6HV	992	96.5	0.87	270	24741	2.20	105	1200
2900	1RN4 562-6HV	992	96.7	0.87	300	27918	2.20	120	1200
3300	1RN4 564-6HV	992	96.8	0.87	345	31769	2.20	135	1200
3600	1RN4 566-6HV	992	96.9	0.87	375	34657	2.20	147	O.R. ²⁾
4000	1RN4 630-6HV	994	97.0	0.84	430	38431	2.10	183	1200
4300	1RN4 632-6HV	994	97.0	0.84	460	41313	2.10	202	1200
4700	1RN4 634-6HV	994	97.1	0.85	500	45156	2.10	223	1200
5100	1RN4 636-6HV	994	97.1	0.86	530	48999	2.10	246	1200

Voltage code:

6 kV, 50 Hz
6.6 kV, 50 Hz
Other voltage

6
7
9

Type of construction:

IM B3
IM V1 (without canopy)

0
8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

²⁾ On request.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RN4 450-4...	840	1349	96.0	0.89	560	1179	96.2	0.87	280	935	96.2	0.80
1RN4 452-4...	975	1351	96.2	0.87	650	1180	96.3	0.84	325	937	96.2	0.75
1RN4 454-4...	1088	1351	96.3	0.87	725	1180	96.4	0.84	363	937	96.2	0.75
1RN4 456-4...	1313	1351	96.5	0.87	875	1180	96.5	0.84	438	937	96.4	0.76
1RN4 500-4...	1425	1352	96.6	0.88	950	1181	96.6	0.85	475	937	96.5	0.78
1RN4 502-4...	1613	1352	96.6	0.89	1075	1181	96.7	0.87	538	937	96.6	0.80
1RN4 504-4...	1838	1352	96.7	0.88	1225	1181	96.8	0.86	613	937	96.7	0.78
1RN4 506-4...	2025	1352	96.8	0.88	1350	1181	96.9	0.86	675	937	96.7	0.78
1RN4 560-4...	2400	1351	96.8	0.91	1600	1180	96.9	0.90	800	937	96.9	0.85
1RN4 562-4...	2775	1352	97.0	0.91	1850	1181	97.1	0.90	925	937	97.1	0.85
1RN4 564-4...	3113	1352	97.1	0.91	2075	1181	97.2	0.90	1038	937	97.2	0.86
1RN4 566-4...	3338	1352	97.2	0.91	2225	1181	97.3	0.90	1113	937	97.3	0.86
1RN4 630-4...	3600	1355	97.1	0.90	2400	1183	97.1	0.89	1200	939	97.0	0.83
1RN4 632-4...	3975	1355	97.2	0.91	2650	1183	97.2	0.90	1325	939	97.2	0.85
1RN4 634-4...	4350	1355	97.2	0.91	2900	1183	97.3	0.91	1450	939	97.2	0.87
1RN4 636-4...	4875	1355	97.3	0.90	3250	1183	97.3	0.89	1625	939	97.2	0.83

6-pole

1RN4 450-6...	638	899	95.4	0.83	425	786	95.4	0.80	213	624	95.1	0.69
1RN4 452-6...	713	899	95.5	0.83	475	786	95.5	0.80	238	624	95.2	0.69
1RN4 454-6...	795	899	95.5	0.85	530	786	95.5	0.82	265	624	95.2	0.71
1RN4 456-6...	953	899	95.6	0.84	635	786	95.6	0.80	318	624	95.2	0.69
1RN4 500-6...	1088	900	95.8	0.87	725	787	95.9	0.84	363	624	95.7	0.76
1RN4 502-6...	1223	900	96.2	0.87	815	787	96.2	0.84	408	624	95.9	0.76
1RN4 504-6...	1365	900	96.4	0.87	910	787	96.3	0.84	455	624	96.1	0.76
1RN4 506-6...	1553	900	96.5	0.87	1035	787	96.4	0.84	518	624	96.2	0.76
1RN4 560-6...	1928	901	96.8	0.87	1285	787	96.9	0.84	643	625	96.8	0.75
1RN4 562-6...	2175	901	96.9	0.87	1450	787	96.9	0.84	725	625	96.8	0.75
1RN4 564-6...	2475	901	97.0	0.87	1650	787	97.0	0.84	825	625	96.9	0.75
1RN4 566-6...	2700	901	97.0	0.87	1800	787	97.0	0.84	900	625	96.9	0.75
1RN4 630-6...	3000	903	96.9	0.83	2000	789	96.9	0.80	1000	626	96.7	0.70
1RN4 632-6...	3225	903	96.9	0.85	2150	789	96.9	0.82	1075	626	96.8	0.72
1RN4 634-6...	3525	903	97.0	0.86	2350	789	97.0	0.84	1175	626	96.9	0.76
1RN4 636-6...	3825	903	97.1	0.86	2550	789	97.1	0.84	1275	626	97.0	0.76

3

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data (continued)

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 6.6 kV I_{rated} A	Rated torque T_{rated} Nm	Break-down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
6 ... 6.6 kV, 50 Hz									
8-pole									
1100	1RN4 500-8HV	743	95.3	0.83	122	14139	2.10	70	900
1250	1RN4 502-8HV	743	95.5	0.83	138	16067	2.10	80	900
1350	1RN4 504-8HV	744	95.5	0.81	152	17329	2.20	88	900
1450	1RN4 506-8HV	744	95.6	0.81	164	18612	2.20	99	900
1800	1RN4 560-8HV	744	96.0	0.84	196	23105	2.00	123	900
2000	1RN4 562-8HV	744	96.1	0.84	215	25672	2.00	141	900
2250	1RN4 564-8HV	744	96.3	0.84	245	28881	2.00	158	900
2400	1RN4 566-8HV	744	96.4	0.85	255	30806	2.00	173	900
2900	1RN4 630-8HV	745	96.4	0.83	315	37174	2.15	239	900
3300	1RN4 632-8HV	745	96.6	0.83	360	42302	2.15	265	900
3500	1RN4 634-8HV	745	96.6	0.84	375	44866	2.15	293	900
3800	1RN4 636-8HV	745	96.7	0.84	410	48711	2.15	324	900

Voltage code:

6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

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kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

8-pole

Motor type	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
1RN4 500-8...	825	675	95.5	0.82	550	590	95.5	0.78	275	468	95.1	0.68
1RN4 502-8...	938	675	95.6	0.82	625	590	95.6	0.78	313	468	95.2	0.68
1RN4 504-8...	1013	676	95.6	0.80	675	591	95.5	0.74	338	469	95.0	0.63
1RN4 506-8...	1088	676	95.7	0.80	725	591	95.6	0.76	363	469	95.0	0.66
1RN4 560-8...	1350	676	96.2	0.84	900	591	96.3	0.81	450	469	96.1	0.71
1RN4 562-8...	1500	676	96.4	0.84	1000	591	96.4	0.81	500	469	96.2	0.71
1RN4 564-8...	1688	676	96.5	0.84	1125	591	96.5	0.81	563	469	96.3	0.71
1RN4 566-8...	1800	676	96.6	0.85	1200	591	96.6	0.82	600	469	96.5	0.73
1RN4 630-8...	2175	677	96.3	0.82	1450	591	96.3	0.80	725	469	95.9	0.66
1RN4 632-8...	2475	677	96.4	0.83	1650	591	96.4	0.80	825	469	96.1	0.68
1RN4 634-8...	2625	677	96.6	0.83	1750	591	96.6	0.80	875	469	96.4	0.70
1RN4 636-8...	2850	677	96.7	0.83	1900	591	96.7	0.80	950	469	96.4	0.70

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact PLUS Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current I_{rated} A	Rated torque T_{rated} Nm	Breakdown torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
2.3 kV, 60 Hz									
4-pole									
1740	1RN4 450-4HV1 ■	1781	96.5	0.89	510	9329	2.00	21	1800
1940	1RN4 452-4HV1 ■	1783	96.6	0.89	570	10390	2.10	23	1800
2200	1RN4 454-4HV1 ■	1782	96.7	0.89	640	11789	2.00	26	1800
2500	1RN4 456-4HV1 ■	1784	96.8	0.89	730	13382	2.10	29	1800
6-pole									
1260	1RN4 450-6HV1 ■	1186	95.7	0.85	390	10145	1.90	29	1200
1420	1RN4 452-6HV1 ■	1186	96.0	0.85	435	11433	1.90	33	1200
1640	1RN4 454-6HV1 ■	1186	96.0	0.87	495	13205	1.90	36	1200
1940	1RN4 456-6HV1 ■	1187	96.3	0.86	590	15607	2.00	41	1200
2220	1RN4 500-6HV1 ■	1189	96.3	0.86	670	17830	2.00	57	1200
8-pole									
1000	1RN4 450-8HV1 ■	889	95.3	0.84	315	10742	1.90	37	900
1120	1RN4 452-8HV1 ■	890	95.7	0.84	350	12017	2.00	41	900
1260	1RN4 454-8HV1 ■	891	95.6	0.83	400	13504	2.00	46	900
1420	1RN4 456-8HV1 ■	891	95.7	0.83	450	15219	2.00	52	900
1640	1RN4 500-8HV1 ■	891	95.9	0.84	510	17577	1.90	70	900
1840	1RN4 502-8HV1 ■	892	96.0	0.84	570	19698	1.90	80	900
2020	1RN4 504-8HV1 ■	892	96.2	0.84	630	21625	1.90	88	900
2220	1RN4 506-8HV1 ■	892	96.4	0.84	690	23766	2.00	99	900

Type of construction:

IM B3	0
IM V1 (without canopy)	8

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

¹⁾ For IM B3, rolling-contact bearings.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type
(repeated)

Partial load values for fan/pump/compressor drive

$P/P_{\text{rated}} = 75\%$

$P/P_{\text{rated}} = 50\%$

$P/P_{\text{rated}} = 25\%$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

P

n

η

$\cos \varphi$

kW

rpm

%

[-]

kW

rpm

%

[-]

kW

rpm

%

[-]

Fan/pump/compressor drive

4-pole

1RN4 450-4...	1305	1618	96.3	0.89	870	1412	96.3	0.87	435	1122	96.0	0.79
1RN4 452-4...	1455	1619	96.4	0.88	970	1413	96.4	0.85	485	1122	96.1	0.77
1RN4 454-4...	1650	1619	96.8	0.89	1100	1413	96.9	0.87	550	1123	96.7	0.79
1RN4 456-4...	1875	1620	96.9	0.88	1250	1413	96.9	0.86	625	1123	96.7	0.78

6-pole

1RN4 450-6...	945	1078	95.9	0.83	630	941	96.0	0.81	315	748	95.6	0.71
1RN4 452-6...	1065	1078	96.1	0.84	710	939	96.1	0.81	355	746	95.7	0.72
1RN4 454-6...	1230	1078	96.1	0.87	820	941	96.1	0.85	410	748	95.8	0.77
1RN4 456-6...	1455	1078	96.3	0.85	970	941	96.3	0.82	485	748	95.9	0.73
1RN4 500-6...	1665	1080	96.3	0.86	1110	942	96.2	0.83	555	750	95.9	0.74

8-pole

1RN4 450-8...	750	808	95.5	0.82	500	705	95.4	0.79	250	561	94.8	0.68
1RN4 452-8...	840	809	95.6	0.82	560	706	95.5	0.78	280	561	94.9	0.67
1RN4 454-8...	945	809	95.7	0.81	630	706	95.6	0.77	315	561	95.0	0.65
1RN4 456-8...	1065	809	95.7	0.81	710	706	95.6	0.77	355	561	95.0	0.65
1RN4 500-8...	1230	810	96.0	0.82	820	706	96.0	0.79	410	563	95.5	0.69
1RN4 502-8...	1380	810	96.2	0.83	920	707	96.2	0.80	460	563	95.8	0.70
1RN4 504-8...	1515	810	96.3	0.84	1010	707	96.3	0.82	505	563	95.9	0.72
1RN4 506-8...	1665	810	96.4	0.84	1110	707	96.3	0.80	555	563	95.8	0.70

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Selection and ordering data

Rated power P_{rated} kW	High voltage motor H-compact Order No.	Rated speed n_{rated} rpm	Operating values at rated power						
			Efficiency η %	Power factor $\cos \varphi$ [-]	Rated current at 4.16 kV I_{rated} A	Rated torque T_{rated} Nm	Breakdown torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Moment of inertia J kgm ²	Mechanical limit speed ¹⁾ n_{max} rpm
3.4 ... 4.16 kV, 60 Hz									
4-pole									
1660	1RN4 450-4HV5	1782	96.3	0.89	270	8896	2.10	21	1800
1860	1RN4 452-4HV5	1783	96.4	0.89	300	9962	2.00	23	1800
2120	1RN4 454-4HV5	1784	96.6	0.89	340	11349	2.10	26	1800
2380	1RN4 456-4HV5	1785	96.4	0.89	385	12733	2.30	29	1800
2620	1RN4 500-4HV5	1786	96.6	0.88	430	14010	2.10	39	1800
2880	1RN4 502-4HV5	1785	96.7	0.89	465	15408	2.10	42	1800
3320	1RN4 504-4HV5	1786	96.9	0.89	530	17753	2.10	48	1800
3760	1RN4 506-4HV5	1786	97.1	0.89	600	20105	2.10	53	1800
4320	1RN4 560-4HV5	1786	96.8	0.90	690	23100	1.90	76	1800
5400	1RN4 562-4HV5	1786	97.1	0.90	860	28875	2.00	84	O.R. ²⁾
6000	1RN4 564-4HV5	1787	97.2	0.90	950	32065	2.00	96	O.R. ²⁾
6600	1RN4 566-4HV5	1787	97.3	0.90	1040	35271	2.00	105	O.R. ²⁾
7400	1RN4 632-4HV5	1790	97.3	0.89	1180	39480	1.90	150	1800
6-pole									
1220	1RN4 450-6HV5	1186	95.7	0.85	210	9824	1.90	29	1200
1360	1RN4 452-6HV5	1186	95.8	0.85	230	10951	1.90	33	1200
1580	1RN4 454-6HV5	1187	96.0	0.87	265	12712	2.00	36	1200
1860	1RN4 456-6HV5	1188	96.2	0.86	310	14952	2.10	41	1200
2120	1RN4 500-6HV5	1189	96.2	0.86	355	17028	1.90	57	1200
2400	1RN4 502-6HV5	1188	96.3	0.87	400	19293	1.90	65	1200
2680	1RN4 504-6HV5	1189	96.4	0.87	445	21526	1.90	72	1200
2940	1RN4 506-6HV5	1189	96.6	0.87	485	23614	1.90	81	1200
3400	1RN4 560-6HV5	1190	96.6	0.87	560	27286	1.90	105	1200
3950	1RN4 562-6HV5	1191	96.9	0.86	660	31673	1.90	120	1200
8-pole									
960	1RN4 450-8HV5	890	95.1	0.84	166	10301	2.00	37	900
1060	1RN4 452-8HV5	890	95.5	0.84	184	11374	2.00	41	900
1200	1RN4 454-8HV5	891	95.5	0.83	210	12862	2.00	46	900
1360	1RN4 456-8HV5	891	95.7	0.83	240	14577	2.00	52	900
1560	1RN4 500-8HV5	891	95.6	0.84	270	16721	1.80	70	900
1760	1RN4 502-8HV5	892	95.7	0.84	305	18843	1.90	80	900
1940	1RN4 504-8HV5	892	96.0	0.84	335	20770	2.00	88	900
2120	1RN4 506-8HV5	892	96.2	0.84	365	22697	2.00	99	900
2440	1RN4 560-8HV5	893	96.3	0.84	420	26094	1.90	123	900
2750	1RN4 562-8HV5	893	96.5	0.84	470	29409	1.90	141	900
3000	1RN4 564-8HV5	893	96.6	0.84	510	32083	1.90	158	900
3250	1RN4 566-8HV5	893	96.7	0.85	550	34756	1.90	173	900

Type of construction:

IM B3 **0**
IM V1 (without canopy) **8**

Note:

The motors for converter operation with non-sinusoidal output have, among other things, a reinforced winding insulation. For further details see Page 3/2.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Motor type (repeated)	Partial load values for fan/pump/compressor drive											
	$P/P_{\text{rated}} = 75\%$				$P/P_{\text{rated}} = 50\%$				$P/P_{\text{rated}} = 25\%$			
	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$	P	n	η	$\cos \varphi$
	kW	rpm	%	[-]	kW	rpm	%	[-]	kW	rpm	%	[-]
	Fan/pump/compressor drive											
4-pole												
1RN4 450-4...	1245	1619	96.4	0.88	830	1414	96.4	0.85	415	1123	96.1	0.77
1RN4 452-4...	1395	1620	96.5	0.88	930	1415	96.6	0.86	465	1123	96.3	0.78
1RN4 454-4...	1590	1621	96.6	0.88	1060	1416	96.6	0.85	530	1124	96.3	0.77
1RN4 456-4...	1785	1622	96.8	0.88	1190	1417	96.8	0.85	595	1124	96.5	0.76
1RN4 500-4...	1965	1623	96.7	0.88	1310	1418	96.7	0.86	655	1125	96.5	0.78
1RN4 502-4...	2160	1622	96.8	0.89	1440	1417	96.9	0.87	720	1124	96.7	0.80
1RN4 504-4...	2490	1623	97.0	0.89	1660	1418	97.0	0.87	830	1125	96.9	0.80
1RN4 506-4...	2820	1623	97.1	0.89	1880	1418	97.1	0.88	940	1125	97.0	0.81
1RN4 560-4...	3240	1623	96.9	0.90	2160	1418	97.0	0.89	1080	1125	96.9	0.84
1RN4 562-4...	4050	1623	97.2	0.90	2700	1418	97.2	0.87	1350	1125	96.0	0.75
1RN4 564-4...	4500	1624	97.4	0.90	3000	1418	97.3	0.87	1500	1126	96.1	0.75
1RN4 566-4...	4950	1624	97.5	0.90	3300	1418	97.4	0.87	1650	1126	96.3	0.75
1RN4 632-4...	5550	1626	97.5	0.90	3700	1421	97.1	0.87	1850	1128	96.5	0.75
6-pole												
1RN4 450-6...	915	1078	95.8	0.84	610	941	95.9	0.81	305	747	95.5	0.71
1RN4 452-6...	1020	1078	96.0	0.85	680	941	96.1	0.82	340	747	95.8	0.74
1RN4 454-6...	1185	1078	96.0	0.86	790	942	96.0	0.84	395	748	95.6	0.75
1RN4 456-6...	1395	1079	96.2	0.85	930	943	96.2	0.82	465	748	95.8	0.73
1RN4 500-6...	1590	1080	96.4	0.86	1060	944	96.4	0.84	530	749	96.1	0.75
1RN4 502-6...	1800	1079	96.5	0.87	1200	943	96.5	0.85	600	748	96.3	0.78
1RN4 504-6...	2010	1080	96.5	0.87	1340	944	96.5	0.85	670	749	96.3	0.77
1RN4 506-6...	2205	1080	96.6	0.87	1470	944	96.6	0.86	735	749	96.4	0.78
1RN4 560-6...	2550	1081	96.7	0.86	1700	945	96.7	0.84	850	750	96.4	0.76
1RN4 562-6...	2963	1082	96.9	0.85	1975	945	96.8	0.82	988	750	96.5	0.73
8-pole												
1RN4 450-8...	720	809	95.4	0.82	480	706	95.4	0.78	240	561	94.8	0.67
1RN4 452-8...	795	809	95.6	0.82	530	706	95.6	0.78	265	561	95.0	0.67
1RN4 454-8...	900	810	95.6	0.81	600	707	95.6	0.76	300	561	94.9	0.65
1RN4 456-8...	1020	810	95.8	0.81	680	707	95.6	0.76	340	561	94.9	0.64
1RN4 500-8...	1170	810	95.8	0.83	780	707	95.9	0.81	390	561	95.5	0.71
1RN4 502-8...	1320	810	95.9	0.83	880	708	95.9	0.80	440	562	95.5	0.70
1RN4 504-8...	1455	810	96.1	0.83	970	708	96.0	0.80	485	562	95.5	0.69
1RN4 506-8...	1590	810	96.3	0.83	1060	708	96.2	0.80	530	562	95.8	0.70
1RN4 560-8...	1830	811	96.4	0.82	1220	709	96.3	0.79	610	563	95.9	0.69
1RN4 562-8...	2063	811	96.5	0.83	1375	709	96.4	0.80	688	563	96.0	0.70
1RN4 564-8...	2250	811	96.6	0.83	1500	709	96.5	0.80	750	563	96.0	0.70
1RN4 566-8...	2438	811	96.6	0.84	1625	709	96.6	0.82	813	563	96.2	0.73

1) For IM B3, rolling-contact bearings.

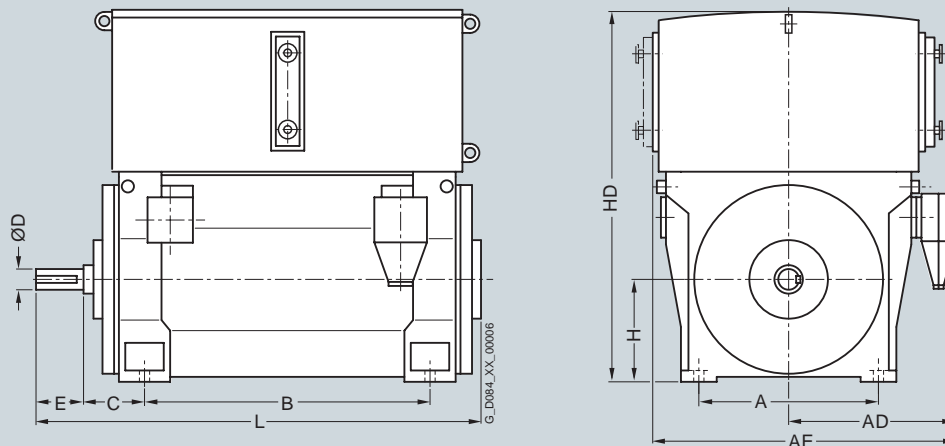
2) On request.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Dimension drawings



Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
4-pole											
1RN4450-4HV.0	4050	850	930	1620	1180	250	130	200	450	1620	1920
1RN4452-4HV.0	4200	850	930	1620	1180	250	130	200	450	1620	1920
1RN4454-4HV.0	4700	850	930	1620	1400	250	140	200	450	1620	2130
1RN4456-4HV.0	4950	850	930	1620	1400	250	140	200	450	1620	2130
1RN4500-4HV.0	5400	950	1000	1790	1320	280	150	200	500	1830	2230
1RN4502-4HV.0	5600	950	1000	1790	1320	280	150	200	500	1830	2230
1RN4504-4HV.0	6250	950	1000	1790	1500	280	160	240	500	1830	2480
1RN4506-4HV.0	6650	950	1000	1790	1500	280	160	240	500	1830	2480
1RN4560-4HV.0	7400	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4562-4HV.0	7850	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4564-4HV.0	8750	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4566-4HV.0	9200	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4630-4HV.0	10400	1320	1330	2290	1600	335	200	280	630	2400	2500
1RN4632-4HV.0	11100	1320	1330	2290	1600	335	200	280	630	2400	2500
1RN4634-4HV.0	12150	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4636-4HV.0	12700	1320	1330	2290	1800	335	220	280	630	2400	2740
6-pole											
1RN4450-6HV.0	4100	850	930	1620	1180	250	130	200	450	1620	1920
1RN4452-6HV.0	4300	850	930	1620	1180	250	130	200	450	1620	1920
1RN4454-6HV.0	4700	850	930	1620	1400	250	140	200	450	1620	2130
1RN4456-6HV.0	5050	850	930	1620	1400	250	140	200	450	1620	2130
1RN4500-6HV.0	5550	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4502-6HV.0	5900	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4504-6HV.0	6450	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4506-6HV.0	6850	950	1000	1790	1500	280	170	240	500	1830	2480

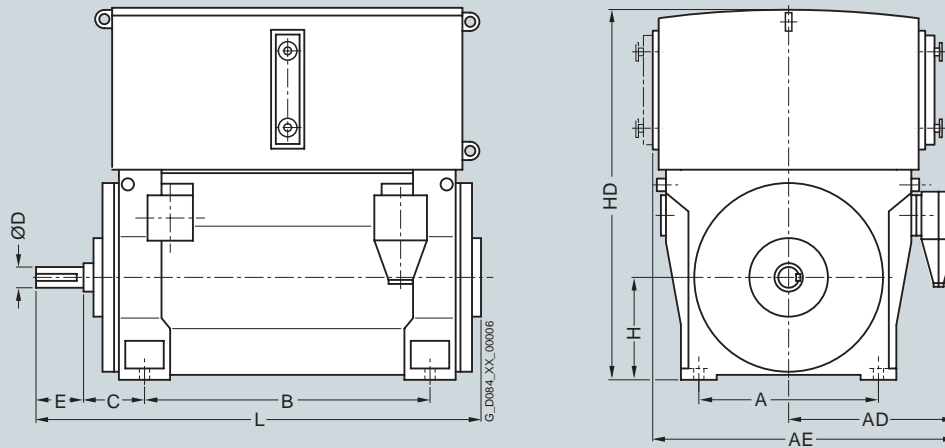
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A	AD ¹⁾	AE ¹⁾	B	C	D	E	H	HD	L
Up to 6.6 kV, rolling-contact bearings, IM B3 type of construction											
6-pole											
1RN4560-6HV.0	7500	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4562-6HV.0	8150	1060	1210	2060	1400	315	180	240	560	2040	2300
1RN4564-6HV.0	8950	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4566-6HV.0	9400	1060	1210	2060	1600	315	190	280	560	2040	2570
1RN4630-6HV.0	10650	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4632-6HV.0	11200	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4634-6HV.0	12300	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4636-6HV.0	13000	1320	1330	2290	1800	335	220	280	630	2400	2740
8-pole											
1RN4450-8HV.0	4100	850	930	1620	1180	250	130	200	450	1620	1920
1RN4452-8HV.0	4250	850	930	1620	1180	250	130	200	450	1620	1920
1RN4454-8HV.0	4700	850	930	1620	1400	250	140	200	450	1620	2130
1RN4456-8HV.0	5050	850	930	1620	1400	250	140	200	450	1620	2130
1RN4500-8HV.0	5550	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4502-8HV.0	5950	950	1000	1790	1320	280	160	240	500	1830	2270
1RN4504-8HV.0	6450	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4506-8HV.0	6800	950	1000	1790	1500	280	170	240	500	1830	2480
1RN4560-8HV.0	7500	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4562-8HV.0	8000	1060	1070	1920	1400	315	180	240	560	2040	2300
1RN4564-8HV.0	8850	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4566-8HV.0	9350	1060	1070	1920	1600	315	190	280	560	2040	2570
1RN4630-8HV.0	10600	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4632-8HV.0	11200	1320	1330	2290	1600	335	220	280	630	2400	2500
1RN4634-8HV.0	12150	1320	1330	2290	1800	335	220	280	630	2400	2740
1RN4636-8HV.0	12900	1320	1330	2290	1800	335	220	280	630	2400	2740

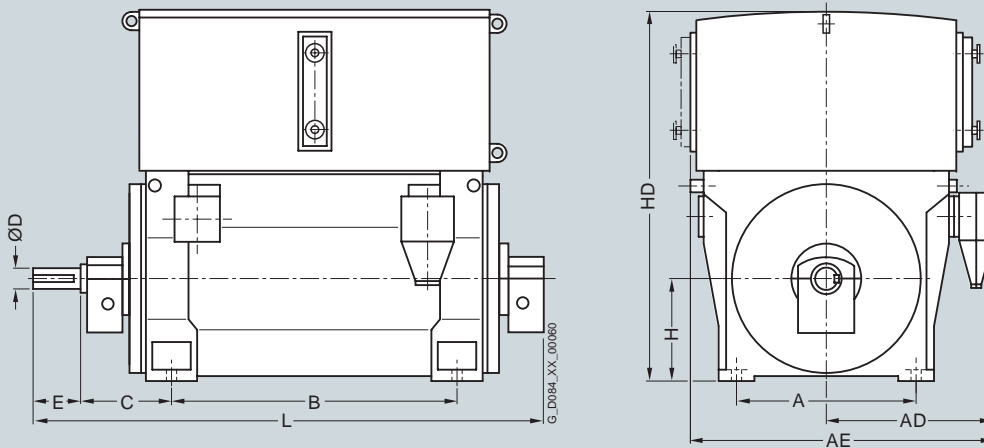
¹⁾ For $V_{\text{rated}} \geq 2.0 \text{ kV}$ and current $I_{\text{rated}} > 315 \text{ A}$, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Dimension drawings



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction											
4-pole											
1RN4450-4HV.0-Z K96	4100	850	930	1620	1180	450	130	200	450	1620	2120
1RN4452-4HV.0-Z K96	4300	850	930	1620	1180	450	130	200	450	1620	2120
1RN4454-4HV.0-Z K96	4800	850	930	1620	1400	450	140	200	450	1620	2330
1RN4456-4HV.0-Z K96	5100	850	930	1620	1400	450	140	200	450	1620	2330
1RN4500-4HV.0-Z K96	5550	950	1000	1790	1320	500	150	200	500	1830	2580
1RN4502-4HV.0-Z K96	5750	950	1000	1790	1320	500	150	200	500	1830	2580
1RN4504-4HV.0-Z K96	6450	950	1000	1790	1500	500	160	240	500	1830	2830
1RN4506-4HV.0-Z K96	6850	950	1000	1790	1500	500	160	240	500	1830	2830
1RN4560-4HV.0-Z K96	7550	1060	1210	2060	1400	530	180	240	560	2040	2630
1RN4562-4HV.0-Z K96	8000	1060	1210	2060	1400	530	180	240	560	2040	2630
1RN4564-4HV.0-Z K96	8950	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4566-4HV.0-Z K96	9400	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4630-4HV.0-Z K96	10650	1320	1330	2290	1600	600	200	280	630	2400	2970
1RN4632-4HV.0-Z K96	11350	1320	1330	2290	1600	600	200	280	630	2400	2970
1RN4634-4HV.0-Z K96	12400	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4636-4HV.0-Z K96	13000	1320	1330	2290	1800	600	220	280	630	2400	3210
6-pole											
1RN4450-6HV.0-Z K96	4200	850	930	1620	1180	450	130	200	450	1620	2120
1RN4452-6HV.0-Z K96	4450	850	930	1620	1180	450	130	200	450	1620	2120
1RN4454-6HV.0-Z K96	4850	850	930	1620	1400	450	140	200	450	1620	2330
1RN4456-6HV.0-Z K96	5150	850	930	1620	1400	450	140	200	450	1620	2330
1RN4500-6HV.0-Z K96	5700	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4502-6HV.0-Z K96	6100	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4504-6HV.0-Z K96	6600	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4506-6HV.0-Z K96	7000	950	1000	1790	1500	500	170	240	500	1830	2830

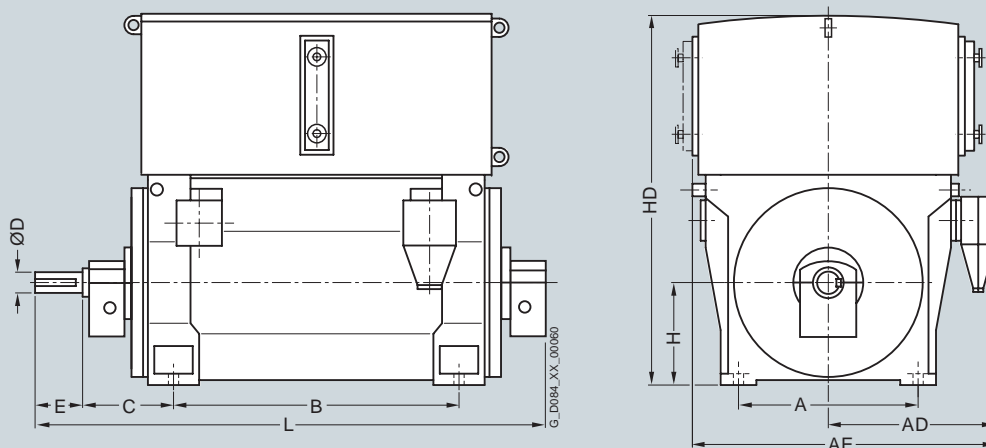
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions									
		A mm	AD ¹⁾ mm	AE ¹⁾ mm	B mm	C mm	D mm	E mm	H mm	HD mm	L mm
Up to 6.6 kV, sleeve bearings, IM B3 type of construction											
6-pole											
1RN4560-6HV.0-Z K96	7750	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4562-6HV.0-Z K96	8350	1060	1210	2060	1400	530	180	240	560	2040	2670
1RN4564-6HV.0-Z K96	9150	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4566-6HE.0-Z K96	9650	1060	1210	2060	1600	530	190	280	560	2040	2940
1RN4630-6HV.0-Z K96	10950	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4632-6HV.0-Z K96	11500	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4634-6HV.0-Z K96	12550	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4636-6HV.0-Z K96	13300	1320	1330	2290	1800	600	220	280	630	2400	3210
8-pole											
1RN4450-8HV.0-Z K96	4200	850	930	1620	1180	450	130	200	450	1620	2120
1RN4452-8HV.0-Z K96	4400	850	930	1620	1180	450	130	200	450	1620	2120
1RN4454-8HV.0-Z K96	4850	850	930	1620	1400	450	140	200	450	1620	2330
1RN4456-8HV.0-Z K96	5150	850	930	1620	1400	450	140	200	450	1620	2330
1RN4500-8HV.0-Z K96	5750	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4502-8HV.0-Z K96	6100	950	1000	1790	1320	500	160	240	500	1830	2620
1RN4504-8HV.0-Z K96	6600	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4506-8HV.0-Z K96	7000	950	1000	1790	1500	500	170	240	500	1830	2830
1RN4560-8HV.0-Z K96	7700	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4562-8HV.0-Z K96	8250	1060	1070	1920	1400	530	180	240	560	2040	2670
1RN4564-8HV.0-Z K96	9050	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4566-8HV.0-Z K96	9550	1060	1070	1920	1600	530	190	280	560	2040	2940
1RN4630-8HV.0-Z K96	10850	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4632-8HV.0-Z K96	11500	1320	1330	2290	1600	600	220	280	630	2400	2970
1RN4634-8HV.0-Z K96	12450	1320	1330	2290	1800	600	220	280	630	2400	3210
1RN4636-8HV.0-Z K96	13150	1320	1330	2290	1800	600	220	280	630	2400	3210

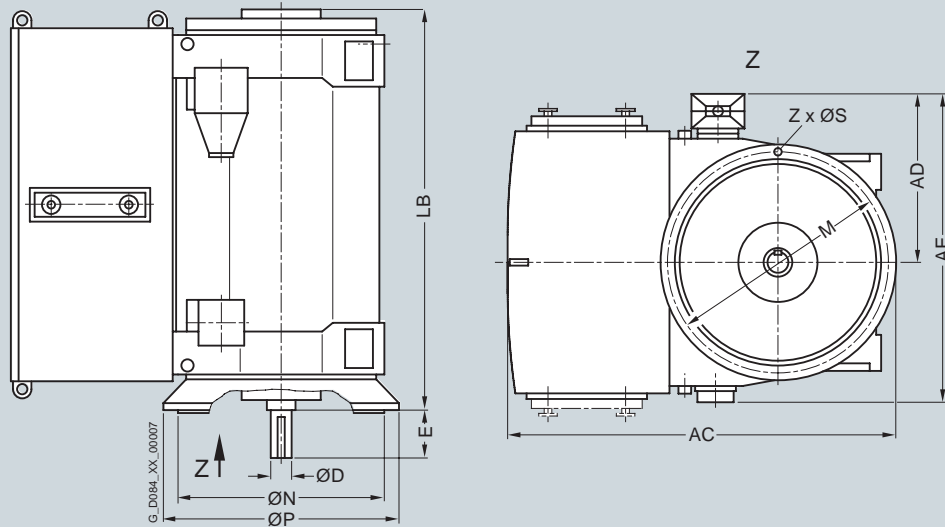
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors H-compact PLUS 1RN4

Dimension drawings



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
4-pole												
1RN4450-4HV.8	4150	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4452-4HV.8	4350	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4454-4HV.8	4850	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4456-4HV.8	5100	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4500-4HV.8	5500	1960	1000	1810	150	200	1910	1250	1120	1180	26	8
1RN4502-4HV.8	5700	1960	1000	1810	150	200	1910	1250	1120	1180	26	8
1RN4504-4HV.8	6400	1960	1000	1810	160	240	2120	1250	1120	1180	26	8
1RN4506-4HV.8	6800	1960	1000	1810	160	240	2120	1250	1120	1180	26	8
1RN4560-4HV.8	7550	2180	1210	2100	180	240	2090	1400	1250	1320	26	16
1RN4562-4HV.8	8000	2180	1210	2100	180	240	2090	1400	1250	1320	26	16
1RN4564-4HV.8	8900	2180	1210	2100	190	280	2320	1400	1250	1320	26	16
1RN4566-4HV.8	9350	2180	1210	2100	190	280	2320	1400	1250	1320	26	16
1RN4630-4HV.8	12050	2875	1330	2300	200	280	2400	2000	1800	1900	33	16
1RN4632-4HV.8	12750	2875	1330	2300	200	280	2400	2000	1800	1900	33	16
1RN4634-4HV.8	13800	2875	1330	2300	220	280	2640	2000	1800	1900	33	16
1RN4636-4HV.8	14350	2875	1330	2300	220	280	2640	2000	1800	1900	33	16
6-pole												
1RN4450-6HV.8	4250	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4452-6HV.8	4400	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4454-6HV.8	4850	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4456-6HV.8	5150	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4500-6HV.8	5650	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4502-6HV.8	6050	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4504-6HV.8	6550	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4506-6HV.8	6950	1960	1000	1810	170	240	2120	1250	1120	1180	26	8

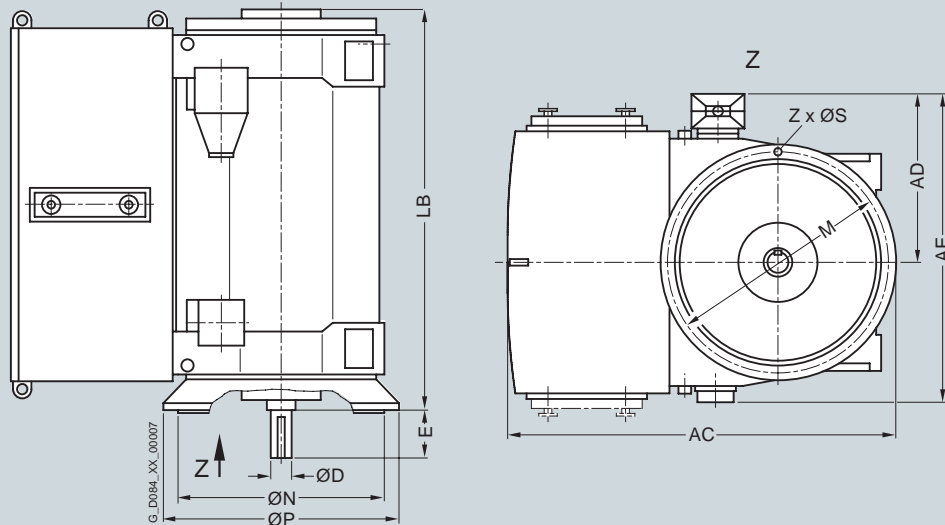
¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

With non-sinusoidal output

Water-cooled motors
H-compact PLUS 1RN4

Dimension drawings (continued)



Motor type	Weight kg	Dimensions										
		AC mm	AD ¹⁾ mm	AE ¹⁾ mm	D mm	E mm	LB mm	P mm	N mm	M mm	S mm	Z Quantity
Up to 6.6 kV, rolling-contact bearings, IM V1 type of construction												
6-pole												
1RN4560-6HV.8	7650	2180	1210	2100	180	240	2090	1400	1250	1320	26	16
1RN4562-6HV.8	8250	2180	1210	2100	180	240	2090	1400	1250	1320	26	16
1RN4564-6HV.8	9100	2180	1210	2100	190	280	2320	1400	1250	1320	26	16
1RN4566-6HV.8	9550	2180	1210	2100	190	280	2320	1400	1250	1320	26	16
1RN4630-6HV.8	12300	2875	1330	2300	220	280	2400	2000	1800	1900	33	16
1RN4632-6HV.8	12850	2875	1330	2300	220	280	2400	2000	1800	1900	33	16
1RN4634-6HV.8	13950	2875	1330	2300	220	280	2640	2000	1800	1900	33	16
1RN4636-6HV.8	14650	2875	1330	2300	220	280	2640	2000	1800	1900	33	16
8-pole												
1RN4450-8HV.8	4200	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4452-8HV.8	4400	1750	930	1670	130	200	1720	1150	1000	1080	26	8
1RN4454-8HV.8	4800	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4456-8HV.8	5200	1750	930	1670	140	200	1930	1150	1000	1080	26	8
1RN4500-8HV.8	5700	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4502-8HV.8	6050	1960	1000	1810	160	240	1910	1250	1120	1180	26	8
1RN4504-8HV.8	6550	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4506-8HV.8	6950	1960	1000	1810	170	240	2120	1250	1120	1180	26	8
1RN4560-8HV.8	7650	2180	1070	1960	180	240	2090	1400	1250	1320	26	16
1RN4562-8HV.8	8150	2180	1070	1960	180	240	2090	1400	1250	1320	26	16
1RN4564-8HV.8	9000	2180	1070	1960	190	280	2320	1400	1250	1320	26	16
1RN4566-8HV.8	9450	2180	1070	1960	190	280	2320	1400	1250	1320	26	16
1RN4630-8HV.8	12250	2875	1330	2300	220	280	2400	2000	1800	1900	33	16
1RN4632-8HV.8	12850	2875	1330	2300	220	280	2400	2000	1800	1900	33	16
1RN4634-8HV.8	13800	2875	1330	2300	220	280	2640	2000	1800	1900	33	16
1RN4636-8HV.8	14550	2875	1330	2300	220	280	2640	2000	1800	1900	33	16

¹⁾ For $V_{\text{rated}} \geq 2.0$ kV and current $I_{\text{rated}} > 315$ A, the dimension changes by + 140 mm.

Motors for converter operation

Options and tests

Description of the options

Overview

Order code	Option description	Remark
K26	Special paint finish in the standard color RAL 7030	
Y53	Normal paint finish not in the standard color	
Y54	Special paint finish not in the standard color	
Documentation		
B00	No motor manual	
B21	Motor manual on CD instead of paper (PDF format)	
B22	Motor manual as e-mail (PDF format) instead of paper	
B23	Motor manual printed on paper, 3x	
B34	Document standard inspection and test plan	
B35	Document balance report	
B36	Document test and inspection description	
B37	Document load characteristics	
B38	Document recommended spare parts	
B41	Document instrumentation list	
B43	Document production schedule: Generated once	
B44	Document production schedule: Updated biweekly	
B45	Document production schedule: Updated monthly	
B48	Document order-specific inspection and test plan	
Document language		
D00	Documentation in German	
D54	Documentation in Czech	
D55	Documentation in Polish	
D56	Documentation in Russian	
D72	Documentation in Italian	
D73	Documentation in Finnish	
D74	Documentation in Dutch	
D75	Documentation in Turkish	
D76	Documentation in English	Standard
D77	Documentation in French	
D78	Documentation in Spanish	
D79	Documentation in Portuguese	
D80	Documentation in Bulgarian	
D81	Documentation in Norwegian	
D82	Documentation in Hungarian	
D83	Documentation in Swedish	
D84	Documentation in Chinese	
Speed monitoring		
H70	Rotary pulse encoder LL 861 900 220 (Leine+Linde)	
H73	Rotary pulse encoder HOG 10 D1024 I (16 mm)	
H76	Rotary pulse encoder HOG 10 D1024 I with integrated shaft grounding	
H88	Rotary pulse encoder HOG 11 DN 1024 I (16 mm) with special anti-corrosion protection	For marine applications
H89	Rotary pulse encoder HOG 11 DN 1024 I (16 mm) with integrated shaft grounding and special anti-corrosion protection	For marine applications
Direction of rotation		
K97	Clockwise rotation	Standard
K98	Anticlockwise rotation	

Overview (continued)

Order code	Option description	Remark
Noise reduction		
L20	Silencer for air inlet	
L21	Silencer for air outlet	Only for H-compact PLUS
L22	Lining of interior space	Only for H-compact PLUS
L23	External metal fan, unique directional	Only for H-compact
L25	Rustless grid at inlet silencer	
Terminal box mounting position		
K09	Terminal box on right-hand side, view from D.E.	Standard
K10	Terminal box on left-hand side, view from D.E.	
K83	Terminal box turned through 90°, cable from D.E.	
K84	Terminal box turned through 90°, cable from N.D.E.	
K85	Terminal box turned through 180°	
M00	Terminal box on left, D.E., cable from D.E.	
M01	Terminal box on left, D.E., cable from top	
Terminal box, main and auxiliary terminal box		
L54	Terminal box 1XB8 751, 6 terminals with 2 cable entries for connection to power supply, rated current > 315 A	
L59	Terminal box 1XB8 911 for 1 cable entry for power supply	
L55	Star-point terminal box 1XA8 711, up to 6 kV, 3 terminals	
L56	Star-point terminal box 1XB8 911, up to 10 kV, 3 terminals	
L57	Star-point terminal box 1XB8 751, up to 6 kV, 6 terminals	
L58	Star-point terminal box 1XB9 011, for installing current transformer (without current transformer)	
M50	Auxiliary terminal box material: Cast iron	
M51	Auxiliary terminal box material: Stainless steel	
M52	Separate auxiliary terminal box for anti-condensation heater	Standard for H-compact PLUS
Terminal box - accessories/equipping		
K59	Cable plug connection, rated voltage 2 to 6.6 kV	
L79	Gland plate for 3 winding ends to connect to the line supply via separately mounted terminal box, 3 m free cable length from the frame	
L80	Gland plate for 3 winding ends to connect to the line supply via separately mounted terminal box, 3 m free cable length from the frame	
L83	Cable plug connection, rated voltage 9 to 11 kV	
Cooling air monitoring		
A44	1 resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box for cold air temperature	
A45	1 resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box for hot air temperature	
A46	1 double resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box, for cold air temperature	
A47	1 double resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box, for hot air temperature	
A86	1 dial-type thermometer with 2 NO-Contacts for cold air temperature incl. terminal box	
A87	1 dial-type thermometer with 2 NO-Contacts for hot air temperature incl. terminal box	

Motors for converter operation

Options and tests

Description of the options

Overview (continued)

Order code	Option description	Remark
Bearing version / instrumentation		
H09 + H11	DIN flange type for forced oil lubrication for oil inlet with flowmeter, manometer and throttle valve (incl. counter flange) + DIN flange type forced oil lubrication for oil outlet with sight glass (incl. counter flange)	
H10 + H12	ANSI flange type for forced oil lubrication for oil inlet with flowmeter, manometer and throttle valve (incl. counter flange) + ANSI flange type for forced oil lubrication for oil outlet with sight glass (incl. counter flange)	
H43	DIN flange type for forced oil lubrication for in- and outlet without instruments (with counter flanges)	
H44	ANSI flange type for forced oil lubrication for in- and outlet without instruments (with counter flanges)	
K94	Fixed bearing at D.E. for sleeve bearing	
K96	Sleeve bearing instead of rolling-contact bearing	
L18	D.E. insulation	
L27	N.D.E. insulation	
L60	Forced-circulation oil lubrication (with oil cooling) instead of oil-ring lubrication	
L66	Air cooling, but prepared for future conversion to forced-circulation oil lubrication	
P44	Oil manifold; connections with counter flange; flange flush with the axial shaft face	
Bearing monitoring – sleeve bearings		
A02	Shaft vibration monitoring for sleeve bearings, Bently Nevada system	
A03	Speed monitoring using an inductive proximity switch, Pepperl + Fuchs, incl. terminal box, without evaluation unit	
A39	Prepared for shaft vibration monitoring for sleeve bearings (without monitoring system)	
A41	2 resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for sleeve bearing	
A43	2 double resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for sleeve bearing	
A70	2 dial-type thermometers without contacts	
A71	2 dial-type thermometers with contacts	
Bearing monitoring – rolling-contact bearings		
A40	2 resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box for rolling-contact bearings	
A42	2 double resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for rolling-contact bearing	
G50	Shock pulse measuring nipple (SPM) at D.E. and N.D.E.	Standard
H05	Shock pulse measurement (SPM), fixed sensors and distributor box	
H07	Shock pulse measurement (SPM), complete alarm box	
Mechanical versions		
K16	Second shaft extension up to 50 % rated torque	
L81	Reduced vibration severity	
Y55	Non-standard cylindrical shaft extension (an inquiry must be sent to the factory)	
Y85	Oil shrink fit for cylindrical, single-stage shaft extension instead of a key connection	

Overview (continued)

Order code	Option description	Remark
Certified for pump drives		
E88	Construction supervision for motors for seawater desalination plants where Siemens AG commissions the acceptance authority	
E89	Construction supervision for motors for seawater desalination plants where a third party commissions the acceptance authority	
E90	Pump drive for seawater desalination plants certified according to Lloyds Register	
Marine applications		
E09	Individual acceptance by the classification society (Essential Service)	
E10	Individual acceptance by the classification society (Non-Essential Service)	
E11	Motor for marine applications in accordance with Germanischer Lloyd (Germany), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E21	Motor for marine applications in accordance with Lloyds Registry of Shipping (England), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E31	Motor for marine applications in accordance with Bureau Veritas (France), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E51	Motor for marine applications in accordance with Det Norske Veritas (Scandinavia), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E61	Motor for marine applications in accordance with American Bureau of Shipping (US), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E71	Motor for marine applications in accordance with China Classification Society (China), KT (air) = 45 °C, temp. class 155 (F) utilized to 155 (F)	
E80	Motor for marine equipment, higher KT (air) and/or temp. class 155 (F) utilized to 130 (B), classification society:	
Others / additional options		
H08	Leakage water detection for water cooler	
K52	Degree of protection IP56 non-heavy-sea	
L15	Supporting ring for coupling guard	
L17	Mounting a coupling provided (finish machined and balanced)	
L31	Motor mounting materials for mounting on a steel foundation: Bolts, shims and taper dowels	
L32	Motor mounting materials for mounting on a concrete foundation or concrete base: Threaded bolts, armature plates, sole plates, shims, leveling plates and taper dowels	
L33	Motor mounting materials to mount on a concrete foundation or concrete base: T-head bolts, foundation bolt sleeves, sole plates, shims, leveling plates and taper dowels	
L91	Higher number of starts, > 1000 ... 10000 starts per year, for Cu rotors	
L92	Higher number of starts, > 5000 ... 10000 starts per year, for Al rotors	
P45	External screws made of stainless steel	
Anti-condensation heating		
L08	Anti-condensation heater, rated voltage 400 V	
L09	Anti-condensation heater, rated voltage 500 V	
M12	Anti-condensation heater 110-120 V (min. 100 V, max. 132 V)	
M13	Anti-condensation heater 220-240 V (min. 200 V, max. 264 V)	Standard for H-compact PLUS
Y83	Anti-condensation heater with other rated voltages, $U =$	
Ambient conditions		
D04	Ambient temperature – 21 ... – 30 °C	
M06	For use in sulfurous or hydrogenous atmosphere	

Motors for converter operation

Options and tests

Description of the options

Overview (continued)

Order code	Option description	Remark
Winding and motor protection		
A12	6 PTC thermistors without lightning arresters	
A23	1 Temperature sensor KTY 84-130	
A65	6 embedded resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box without lightning arresters	Standard
A66	6 embedded resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box with lightning arresters	
Tests with acceptance		
F01	All standard tests (routine test), with acceptance	
F15	Recording of no-load characteristic and determination of core and friction losses, with acceptance	
F17	Recording of short-circuit characteristic and determination of short-circuit losses, with acceptance	
F19	Recording of load characteristic, with acceptance	
F23	Dissipation factor test (tan delta) on 2 (test) coils, with acceptance	In addition, specify order code F90
F29	No-load noise measurement, without noise analysis, with acceptance	
F31	Cooling air flow and pressure drop measurement, with acceptance	
F35	Recording of current and torque characteristics during acceleration, with acceptance	
F37	Determination of moment of inertia by retardation method, with acceptance	
F39	Overspeed test, with acceptance	
F41	Recording of residual voltage curve, with acceptance	
F53	Locked-rotor torque and current measurement, with acceptance	
F55	Polarization index measurement, with acceptance	
F61	Impulse or AC voltage test on 2 (test) coils, with acceptance	In addition, specify order code F90
F63	Noise analysis, with acceptance	
F83	Type test for horizontal motors with temperature rise test, if necessary as equivalent load test, with acceptance	
F90	2 test coils	
F93	Type test for vertical motors with temperature rise test, if necessary as equivalent load test, with acceptance	
Tests without acceptance		
F14	Recording of no-load characteristic and determination of core and friction losses, without acceptance	
F16	Recording of short-circuit characteristic and determination of short-circuit losses, without acceptance	
F18	Recording of load characteristic, without acceptance	
F22	Dissipation factor test (tan delta) on 2 (test) coils, without acceptance	In addition, specify order code F90
F28	No-load noise measurement, without noise analysis, without acceptance	
F30	Cooling air flow and pressure drop measurement, without acceptance	
F34	Recording of current and torque characteristics during acceleration, without acceptance	
F36	Determination of moment of inertia by retardation method, without acceptance	
F38	Overspeed test, without acceptance	
F42	"Conformance Test (Wet Test)" to NEMA Standard, without acceptance	
F52	Locked-rotor torque and current measurement, without acceptance	
F54	Polarization index measurement, without acceptance	
F60	Impulse or AC voltage test on 2 (test) coils, without acceptance	In addition, specify order code F90
F62	Noise analysis, without acceptance	
F82	Type test for horizontal motors with temperature rise test, if necessary as equivalent load test, without acceptance	
F90	2 test coils	
F92	Type test for vertical motors with temperature rise test, if necessary as equivalent load test, without acceptance	

Explosion-proof motors



4/2	Overview
4/2	Zone classification
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4/4	Certification
4/5	Type of protection Ex nA
4/5	Air-cooled motors H-compact 1MS4
4/6	Air-cooled motors H-compact PLUS 1SG4 and 1SG6
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4/9	Air-cooled motors H-compact 1MG4
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4/12	Type of protection Ex e
4/12	Air-cooled motors H-compact 1MA4
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Explosion-proof motors

Overview

Zone classification

Overview

In many industries, the manufacture, processing, transport or storage of combustible materials results in the creation or release of gases, vapors or mist into the environment. Combustible dusts are created in other processes.

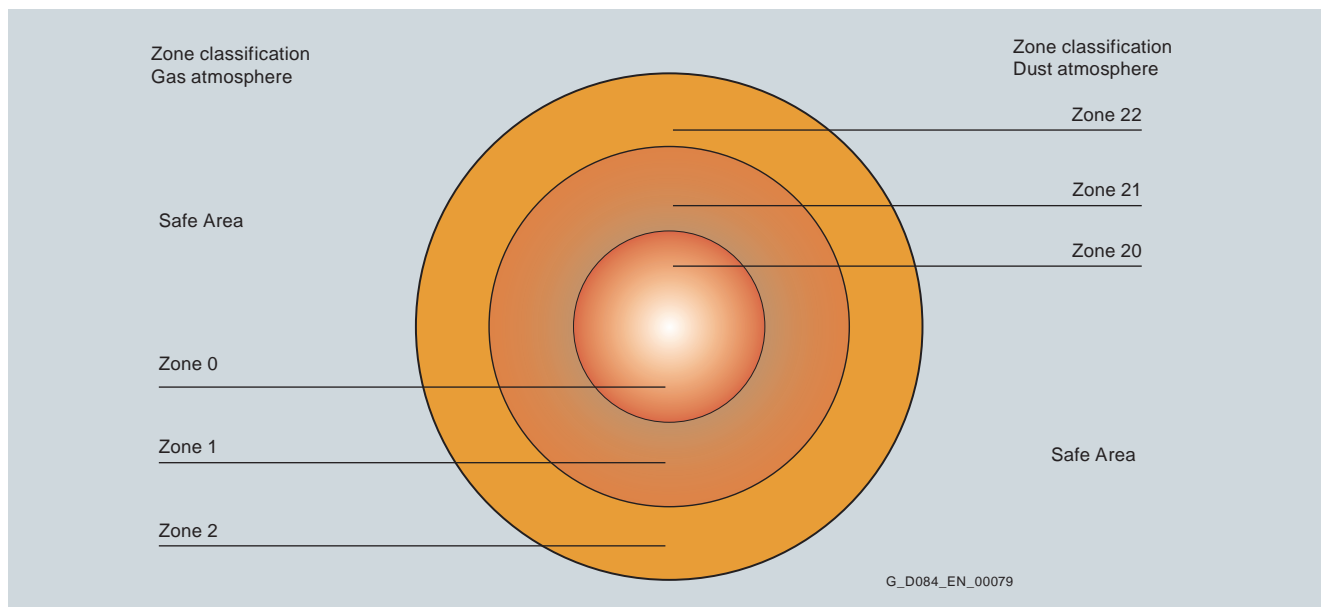
Potentially explosive atmospheres are formed when gases, vapors, or mist come into contact with oxygen in the air. If ignited, this can result in an explosion. In the chemical and petrochemical industries in particular, when crude oil and natural gas are transported, in mining or in milling (e.g. grain and granular solids), this can result in serious injury to personnel and damage to equipment.

To ensure maximum safety in these areas, legislators in most countries have implemented appropriate obligations in the form

of laws and regulations based on national and international standards.

Potentially explosive atmospheres are divided into zones. Division into zones depends on the chronological and geographical probability of the presence of a hazardous, potentially explosive atmosphere.

Information and specifications for zone subdivision can be found in EN 60079-10 / IEC 60079-10 for gas atmospheres and in EN 61241-10 / IEC 61241-10 for potentially explosive atmospheres as a result of dust. Further, a distinction is made between various explosion groups as well as temperature classes and these are included in the hazard assessment.



Depending on the particular zone and therefore the associated hazard, operating equipment must comply with defined minimum requirements regarding the type of protection. The different types of protection require corresponding measures to prevent

ignition that should be implemented at the motor in order to prevent that a surrounding potentially explosive atmosphere is ignited.

Zone	Gas ¹⁾²⁾	Dust ¹⁾²⁾	Zone definition acc. to EN 60079-10 / IEC 60079-10 for gas atmospheres EN 61241-10 / IEC 61241-10 for dust atmospheres	Assigned types of protection	Category according to 94/9/EC
22	-	-	An area in which in normal operation it is not expected that a potentially explosive atmosphere in the form of a cloud of combustible dust in the air occurs, and if it does occur then only briefly.	Ex td	3
-	2	-	An area in which in normal operation it is not expected that a potentially explosive gas atmosphere occurs and if so, only infrequently and only briefly.	Ex nA	3
-	1	-	An area in which it is expected that a potentially explosive gas atmosphere occurs during normal operation.	Ex e Ex px Ex d	2
-	0	-	An area in which it is expected that a potentially explosive gas atmosphere is constantly present or for long periods of time	Motors are not permitted	

¹⁾ Motors for Zone 1 may also be used in Zone 2.

²⁾ Motors, which are certified for gas or dust protection, must not be used in hybrid mixtures! Hybrid mixtures: When potentially explosive gas and dust atmospheres occur simultaneously.

Overview (continued)

Type of protection pressurized enclosure Ex px acc. to EN 60079-2 / IEC 60079-2

In the motor, an ignition protection gas is kept under pressure in relation to the surrounding atmosphere to prevent the penetration of potentially explosive atmospheres. The inside of the motor must be flushed with an ignition protection gas before it is switched on.

H-compact motors fulfill this type of protection (type series 1MG4) and H-compact PLUS (air-cooled, type series 1SB4/1SB6 and water-cooled, type series 1SQ4/1SQ6).

Type of protection increased safety Ex e acc. to EN 60079-7 / IEC 60079-7

Additional measures are taken to prevent the possibility of high temperatures and to prevent sparks or arcs from occurring inside the motor and at external motor components.

Increased safety can be ensured by H-compact motors (type series 1MA4) and H-compact PLUS (air-cooled, type series 1SJ4/1SJ6 and water-cooled (type series 1SN4/1SN6) (an inquiry must be sent to the factory).

Type of protection explosion-proof enclosure Ex d acc. to EN 60079-1 / IEC 60079-1

The components that can ignite a potentially explosive atmosphere are located in an enclosure that is not damaged by an internal explosion and flameproof joints prevent flames from escaping to the potentially explosive atmosphere on the outside.

LOHER GmbH manufactures motors with flameproof enclosures.

Type of protection Ex nA acc. to EN 60079-15 / IEC 60079-15

The type of protection **Ex nA** ensures that a motor in normal operation as well as when operated under deviating conditions as specified in the standard is not in a position to ignite a surrounding potentially explosive gas atmosphere.

The series of H-compact (type series 1MS4) and H-compact PLUS motors (air-cooled, type series 1SG4/1SG6 and water-cooled, type series 1SL4/1SL6) are available in **Ex nA**.

Type of protection Ex td acc. to EN 61241-1 / IEC 61241-1

This type of protection applies for electrical equipment protected using an enclosure and with limited surface temperature for use in areas in which combustible dust can occur in concentration levels that could cause a fire or an explosion.

H-compact motors (type series 1MS4) are available in **Ex td**.

Explosion-proof motors for converter operation

Principally, explosion-proof motors can be fed from drive converters. As a result of the different design, system analyses, system tests etc. for the various types of protection, an inquiry is required to check whether these motors can be actually realized.

Explosion-proof motors

Overview

Certification

Overview (continued)

Certification

IEC motors for use in hazardous zones are certified according to the EU Directive 94/9/EC (ATEX) and are marked according to the following schematic.

Example of pressurized enclosure:	CE	XXXX	Ex	II	2	G	Ex	px	II	T3	X
CE marking											
Number of the certifying "notified" body											
Ex-protection marking											
Device group: • I = firedamp area • II = other areas than firedamp											
Category: • 2 (Zone 1/21) • 3 (Zone 2/22)											
Ex-atmosphere • G = gas • D = dust											
Explosion-proof equipment											
Type of protection nA, d, e, px or td Note: Additional types of protection for accessories are alphabetically listed											
Explosion group, where relevant, restricted (IIA, IIB, IIC)											
Temperature class with max. surface temperature • T1 = 450 °C • T2 = 300 °C • T3 = 200 °C (standard for motors from LD I) • T4 = 135 °C											
Special conditions according to the operating instructions or type examination certificate											

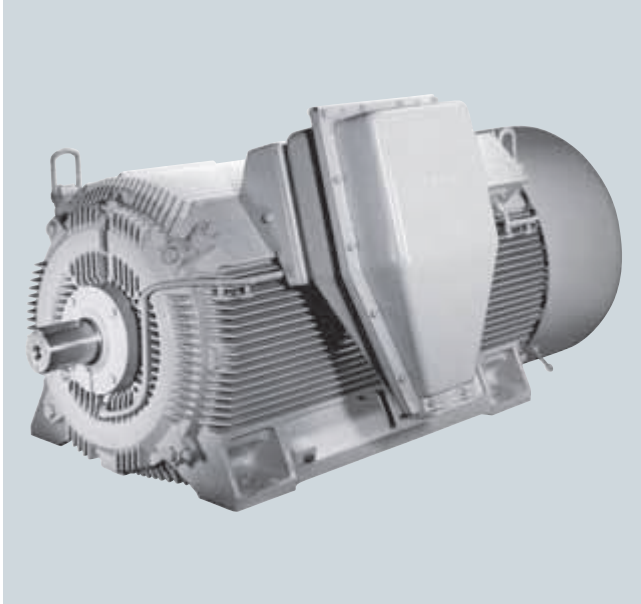
Additional information on the subject of explosion protection, types of protection and zones is provided in the Siemens brochure *Explosion Protection*.

Explosion-proof motors

Type of protection Ex nA

Air-cooled motors
H-compact 1MS4

Overview



Technical data

Technical data at a glance

H-compact 1MS4	
Rated voltage	2.0 ... 11 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex nA, Ex td
Operation in hazardous zones	Zone 2
Cooling method	IC411
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	315 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Die-cast aluminum or copper (dependent on the shaft height and number of poles)
Standards	IEC, EN
Frame design	Cast iron with cooling ribs

The series of H-compact motors (IC411 cooling method), developed for Zone 2 in type of protection **Ex nA** or for Zone 22 in type of protection **Ex td** are available as 1MS4 motors. The order number schematic is shown in Chapter 1.

These **Ex nA** or **Ex td** measures do not affect the performance data or main dimensions with respect to H-compact motors (1LA4 type series). This is the reason that the values of the 1LA4 type series from Chapter 2 and Chapter 3 can also be used for 1MS4 motors.

An extensive range of options and tests are available for H-compact motors, type of protection **Ex nA** or **Ex td** (--> Options and tests).

Explosion-proof motors

Type of protection Ex nA

Air-cooled motors
H-compact PLUS 1SG4 and 1SG6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1SG4/1SG6	
Rated voltage	3.3 ... 11 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex nA
Operation in hazardous zones	Zone 2
Cooling method	IC611 / IC616
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

These H-compact PLUS motors, developed for Zone 2 (type series 1SG4 and 1SG6) in type of protection **Ex nA** are available as modular motors with air/air heat exchanger. The Order No. schematic is shown in Chapter 1.

These **Ex nA** measures have no effect on the performance data or main dimensions with respect to the H-compact PLUS motors. Therefore the values of the 1RQ4 or 1RQ6 type series from Chapter 2 can be taken for 1SG4 and 1SG6 motors.

An extensive range of options and tests is available for H-compact PLUS motors, type of protection **Ex nA** (--> Options and tests).

Explosion-proof motors

Type of protection Ex nA

Water-cooled motors
H-compact PLUS 1SL4 and 1SL6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1SL4/1SL6	
Rated voltage	3.3 ... 11 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex nA
Operation in hazardous zones	Zone 2
Cooling method	IC81W
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

These H-compact PLUS motors, developed for Zone 2 (type series 1SL4 and 1SL6) in type of protection **Ex nA** are available as modular motors with air/water heat exchanger (IC81W cooling method). The Order No. schematic is shown in Chapter 1.

These **Ex nA** measures have no effect on the performance data or main dimensions with respect to the H-compact PLUS motors. Therefore the values of the 1RN4 or 1RN6 type series from Chapter 2 can be used for 1SL4 and 1SL6 motors.

An extensive range of options and tests is available for H-compact PLUS motors, type of protection **Ex nA** (--> Options and tests).

Explosion-proof motors

Type of protection Ex px

Overview

Overview

Type of protection **Ex pxe** consists of the type of protection classes **Ex px** and **Ex e**. **Ex px** defines the motor type of protection, **Ex e** that of the terminal box.

Therefore the explosion protection designation of the motors is **Ex pxe**.

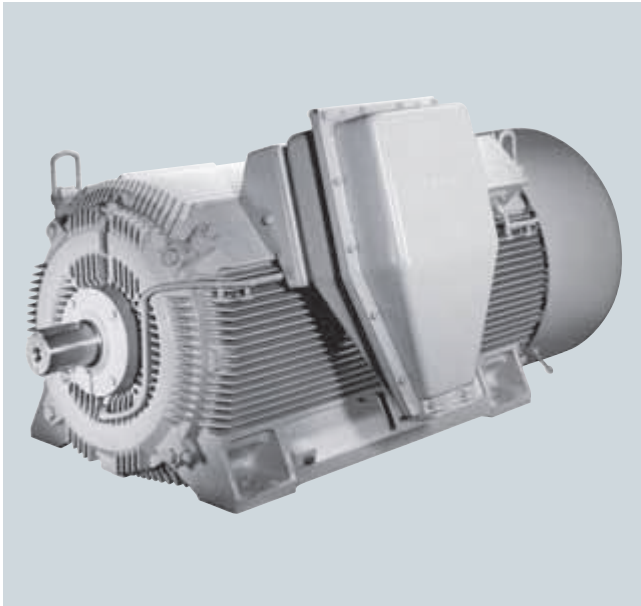
For motors > 11 kV, the terminal box is incorporated in the pressurized enclosure; these motors are designated **Ex px**.

Explosion-proof motors

Type of protection Ex px

Air-cooled motors
H-compact 1MG4

Overview



Technical data

Technical data at a glance

H-compact 1MG4	
Rated voltage	2.0 ... 11 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex px
Operation in hazardous zones	Zone 1 (may also be used in Zone 2)
Cooling method	IC411
Stator winding insulation	Thermal class 155 (F), utilized to 155 (F)
Shaft height	450 ... 630 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Die-cast aluminum or copper (dependent on the shaft height and number of poles)
Standards	IEC, EN
Frame design	Cast iron with cooling ribs

The H-compact motors (IC411 cooling method), developed for Zone 1 in type of protection **Ex px** are available as 1MG4 motors. The Order No. schematic is shown in Chapter 1.

The motors are shipped with a control unit to maintain the internal pressure and to carry out the purging process required each time before the motor is started.

These **Ex px** measures have no effect on the performance data with respect to H-compact motors of the 1LA4 type series. This is the reason that the values of the 1LA4 motors from Chapter 1 can be used for 1MG4 motors. Main dimensions on request.

A wide range of options and tests is available for H-compact motors, type of protection **Ex px**.

Explosion-proof motors

Type of protection Ex px

Air-cooled motors
H-compact PLUS 1SB4 and 1SB6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1SB4/1SB6	
Rated voltage	3.3 ... 13.8 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex px
Operation in hazardous zones	Zone 1 (may also be used in Zone 2)
Cooling method	IC611 / IC616
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

This series of H-compact PLUS motors, developed for Zone 1 (type series 1SB4 and 1SB6) in type of protection **Ex px** are available as modular motors with air/air heat exchanger (IC611 cooling method). The Order No. schematic is shown in Chapter 1.

The motors are shipped with a control unit to maintain the internal pressure and to carry out the purging process required each time before the motor is started.

These **Ex px** measures have no effect on the performance data when compared to H-compact PLUS motors. Therefore the values of 1RQ4 or 1RQ6 motors from Chapter 2 can be taken for 1SB4 and 1SB6 motors. Main dimensions on request.

A wide range of options and tests is available for H-compact PLUS motors, type of protection **Ex px**.

Explosion-proof motors

Type of protection Ex px

Water-cooled motors
H-compact PLUS 1SQ4 and 1SQ6

Overview



Technical data

Technical data at a glance

H-compact PLUS 1SQ4/1SQ6	
Rated voltage	3.3 ... 13.8 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex px
Operation in hazardous zones	Zone 1 (may also be used in Zone 2)
Cooling method	IC81W
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	450 ... 710 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Copper
Standards	IEC, EN
Frame design for shaft heights 450 ... 560 mm	Frame: Cast iron Top cover: Steel
Frame design for shaft heights 630 ... 710 mm	Frame: Steel Top cover: Steel

This series of H-compact PLUS motors, developed for Zone 1 (type series 1SQ4 and 1SQ6) in type of protection **Ex px** is available as modular motors with air/water heat exchanger (IC81W cooling method). The Order No. schematic is shown in Chapter 1.

The motors are shipped with a control unit to maintain the internal pressure and to carry out the purging process required each time before the motor is started.

These **Ex px** measures have no effect on the performance data when compared to H-compact PLUS motors. Therefore the values of 1RN4 or 1RN6 type series from Chapter 2 can be used for 1SQ4 and 1SQ6 motors. Main dimensions on request.

A wide range of options and tests is available for H-compact PLUS motors, type of protection **Ex px**.

Explosion-proof motors

Type of protection Ex e

Air-cooled motors
H-compact 1MA4

Overview



Technical data

Technical data at a glance

H-compact 1MA4	
Rated voltage	3.0 ... 6.6 kV
Rated frequency	50/60 Hz
Motor type	Induction motor with squirrel-cage rotor
Type of construction	IM B3, IM V1
Degree of protection	IP55
Type of protection	Ex e
Operation in hazardous zones	Zone 1 (may also be used in Zone 2)
Cooling method	IC411
Stator winding insulation	Thermal class 155 (F), utilized to 130 (B)
Shaft height	315 ... 400 mm
Bearings	Rolling-contact bearings, sleeve bearings
Cage material	Die-cast aluminum
Standards	IEC, EN
Frame design	Cast iron with cooling ribs

The series of H-compact motors developed for Zone 1 in type of protection **Ex e** is available as 1MA4 motors (IC411 cooling method). The Order No. code is shown in Chapter 1.

Explosion-proof motors

Type of protection Ex e

Air-cooled motors
H-compact 1MA4

Selection and ordering data

For H-compact in **Ex e**, the following power ratings are available as standard:

Rated power kW	High voltage motor H-compact Order No.	Speed rpm	Rated cur- rent at I_{rated} at 6 kV A	Efficiency		Power factor		Torque Nm	Break- down torque $T_{\text{B}}/T_{\text{rated}}$ [-]	Locked- rotor torque $T_{\text{LR}}/T_{\text{rated}}$ [-]	Locked- rotor current $I_{\text{LR}}/I_{\text{rated}}$ [-]	Moment of inertia kgm ²
				4/4 load %	3/4 load %	4/4 load cos φ	3/4 load cos φ					
2.0 ... 6.6 kV, 50 Hz												
2-pole												
185	1MA4312-2AN	2974	22	95.2	95.1	0.86	0.85	594	2.3	0.85	5.1	2.2
230	1MA4314-2AN	2977	26	95.6	95.6	0.88	0.86	738	2.3	0.9	5.5	2.7
280	1MA4316-2AN	2977	32	96	96	0.89	0.88	898	2.2	0.85	5.3	3.1
315	1MA4350-2CN	2982	35	96.2	96.2	0.9	0.88	1009	2.4	0.7	5.5	5.5
355	1MA4352-2CN	2981	39	96.3	96.3	0.91	0.9	1137	2.3	0.7	5.5	6
400	1MA4354-2CN	2981	44	96.6	96.7	0.91	0.9	1281	2.4	0.7	5.5	6.5
4-pole												
170	1MA4310-4AN	1486	21	94.4	94.3	0.82	0.78	1093	2.3	0.8	5.5	2.8
220	1MA4312-4AN	1485	26	95	95.1	0.85	0.82	1415	2.2	0.8	5.4	3.5
260	1MA4314-4AN	1486	31	95.3	95.5	0.85	0.82	1671	2.2	0.8	5.5	4
310	1MA4316-4AN	1486	36	95.6	95.8	0.86	0.84	1992	2.2	0.8	5.5	4.8
335	1MA4350-4AN	1487	40	95.7	95.7	0.84	0.81	2151	2.2	0.75	5.4	6
375	1MA4352-4AN	1487	44	95.9	95.9	0.86	0.84	2408	2.2	0.75	5.4	6.9
440	1MA4354-4AN	1487	51	96.1	96.2	0.87	0.85	2826	2.2	0.8	5.5	8.1
500	1MA4400-4AN	1490	60	96.2	96.1	0.84	0.82	3205	2.2	0.7	5.4	11.6
560	1MA4402-4AN	1490	66	96.3	96.2	0.85	0.82	3589	2.15	0.7	5.3	12.9
630	1MA4404-4AN	1490	73	96.6	96.5	0.86	0.84	4038	2.1	0.7	5.2	14.5

Voltage code:

3.3 kV, 50 Hz	0
3 kV, 50 Hz	3
5 kV, 50 Hz	5
6 kV, 50 Hz	6
6.6 kV, 50 Hz	7
Other voltage	9

Type of construction:

IM B3	0
IM V1 (with canopy)	8

The power data of H-compact 1LA4 motors CANNOT be used here. On the other hand, the main dimensions correspond to those of the 1LA4 motors and can be taken from Chapter 2.

A wide range of options and tests is available for H-compact motors, type of protection **Ex e**.

Explosion-proof motors

Type of protection Ex e

Air-cooled motors
H-compact PLUS 1SJ4 and 1SJ6

Water-cooled motors
H-compact PLUS 1SN4 and 1SN6

Overview

Based on the series of H-compact PLUS motors, air/air-cooled motors, type **1SJ4** and **1SJ6** are available for Zone 1 in **Ex e**.

An inquiry must always be sent to the factory for these motors.

Overview

Based on the series of H-compact PLUS motors, air/water-cooled motors, type **1SN4** and **1SN6** are available for Zone 1 in **Ex e**.

An inquiry must always be sent to the factory for these motors.

Options

Order code	Option description	Remark
Paint finish		
K26	Special paint finish in the standard color RAL 7030	
Y53	Normal paint finish not in the standard color	
Y54	Special paint finish not in the standard color	
Documentation		
B00	No motor manual	
B21	Motor manual on CD instead of paper (PDF format)	
B22	Motor manual as e-mail (PDF format) instead of paper	
B23	Motor manual printed on paper, 3x	
B34	Document standard inspection and test plan	
B35	Document balance report	
B36	Document test and inspection description	
B37	Document load characteristics	
B38	Document recommended spare parts	
B41	Document instrumentation list	
B43	Document production schedule: Generated once	
B44	Document production schedule: Updated biweekly	
B45	Document production schedule: Updated monthly	
B48	Document order-specific inspection and test plan	
Document language		
D00	Documentation in German	
D54	Documentation in Czech	
D55	Documentation in Polish	
D56	Documentation in Russian	
D72	Documentation in Italian	
D73	Documentation in Finnish	
D74	Documentation in Dutch	
D75	Documentation in Turkish	
D76	Documentation in English	Standard
D77	Documentation in French	
D78	Documentation in Spanish	
D79	Documentation in Portuguese	
D80	Documentation in Bulgarian	
D81	Documentation in Norwegian	
D82	Documentation in Hungarian	
D83	Documentation in Swedish	
D84	Documentation in Chinese	
Direction of rotation		
K97	Clockwise rotation	
K98	Anticlockwise rotation	

Explosion-proof motors

Options and tests

Description of the options

Options (continued)

Order code	Option description	Remark
Noise reduction		
L20	Silencer for air inlet	
L21	Silencer for air outlet	Only for H-compact PLUS
L22	Lining of interior space	Only for H-compact PLUS
L23	External metal fan, unique directional	
L25	Rustless grid at inlet silencer	
Terminal box mounting position		
K09	Terminal box on right-hand side, view from D.E.	Standard
K10	Terminal box on left-hand side, view from D.E.	
K83	Terminal box turned through 90°, cable from D.E.	
K84	Terminal box turned through 90°, cable from N.D.E.	
K85	Terminal box turned through 180°	
M00	Terminal box on left, D.E., cable from D.E.	
M01	Terminal box on left, D.E., cable from top	
Terminal box, main and auxiliary terminal box		
L54	Terminal box 1XB8 751, 6 terminals with 2 cable entries for connection to power supply, rated current > 315 A	
L59	Terminal box 1XB8 911 for 1 cable entry for power supply	
L55	Star-point terminal box 1XA8 711, up to 6 kV, 3 terminals	
L56	Star-point terminal box 1XB8 911, up to 10 kV, 3 terminals	
L57	Star-point terminal box 1XB8 751, up to 6 kV, 6 terminals	
M50	Auxiliary terminal box material: Cast iron	
M51	Auxiliary terminal box material: Stainless steel	
M52	Separate auxiliary terminal box for anti-condensation heater	
Terminal box – accessories/equipping		
K59	Cable plug connection, rated voltage 2 to 6.6 kV	
L83	Cable plug connection, rated voltage 9 to 11 kV	
Cooling air monitoring		
A44	1 resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box for cold air temperature	
A45	1 resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box for hot air temperature	
A46	1 double resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box, for cold air temperature	
A47	1 double resistance thermometer Pt 100 for 2-, 3- or 4-wire connection from terminal box, for hot air temperature	
A86	1 dial-type thermometer with 2 NO-Contacts for cold air temperature incl. terminal box	
A87	1 dial-type thermometer with 2 NO-Contacts for hot air temperature incl. terminal box	

Options (continued)

Order code	Option description	Remark
Bearing version / instrumentation		
H09 + H11	DIN flange type for forced oil lubrication for oil inlet with flowmeter, manometer and throttle valve (incl. counter flange) + DIN flange type forced oil lubrication for oil outlet with sight glass (incl. counter flange)	
H10 + H12	ANSI flange type for forced oil lubrication for oil inlet with flowmeter, manometer and throttle valve (incl. counter flange) + ANSI flange type for forced oil lubrication for oil outlet with sight glass (incl. counter flange)	
H43	DIN flange type for forced oil lubrication for in- and outlet without instruments (with counter flanges)	
H44	ANSI flange type for forced oil lubrication for in- and outlet without instruments (with counter flanges)	
K94	Fixed bearing at D.E. for sleeve bearing	
K96	Sleeve bearing instead of rolling-contact bearing	
L18	D.E. insulation	
L27	N.D.E. insulation	Standard for H-compact PLUS
L60	Forced-circulation oil lubrication (with oil cooling) instead of oil-ring lubrication	
L66	Air cooling, but prepared for future conversion to forced-circulation oil lubrication	
P44	Oil manifold; connections with counter flange; flange flush with the axial shaft face	
Bearing monitoring – sleeve bearings		
A02	Shaft vibration monitoring for sleeve bearings, Bently Nevada system	
A03	Speed monitoring using an inductive proximity switch, Pepperl + Fuchs, incl. terminal box, without evaluation unit	
A39	Prepared for shaft vibration monitoring for sleeve bearings (without monitoring system)	
A41	2 resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for sleeve bearing	
A43	2 double resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for sleeve bearing	
A70	2 dial-type thermometers without contacts	
A71	2 dial-type thermometers with contacts	
Bearing monitoring – rolling-contact bearings		
A40	2 resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box for rolling-contact bearings	
A42	2 double resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminals for rolling-contact bearing	
G50	Shock pulse measuring nipple (SPM) at D.E. and N.D.E.	Standard
Mechanical versions		
K16	Second shaft extension up to 50 % rated torque	
L81	Reduced vibration severity	
Y55	Non-standard cylindrical shaft extension (an inquiry must be sent to the factory)	
Y85	Oil shrink fit for cylindrical, single-stage shaft extension instead of a key connection	

Explosion-proof motors

Options and tests

Description of the options

Options (continued)

Order code	Option description	Remark
Others / additional options		
H08	Leakage water detection for water cooler	
K52	Degree of protection IP56 non-heavy-sea	
K35	Metal external fan, bidirectional	
L15	Supporting ring for coupling guard	
L17	Mounting a coupling provided (finish machined and balanced)	
L31	Motor mounting materials for mounting on a steel foundation: Bolts, shims and taper dowels	
L32	Motor mounting materials for mounting on a concrete foundation or concrete base: Threaded bolts, armature plates, sole plates, shims, leveling plates and taper dowels	
L33	Motor mounting materials for mounting on a concrete foundation or concrete base: T-head bolts, foundation bolt sleeves, sole plates, shims, leveling plates and taper dowels	
L91	Higher number of starts > 1000 ... 10000 starts per year, for Cu rotors	
L92	Higher number of starts > 5000 ... 10000 starts per year, for Al rotors	
P45	External screws made of stainless steel	
Anti-condensation heating		
M14	Anti-condensation heater EEx e II T3, 110-120 V (min 100 V, max. 132 V)	
M15	Anti-condensation heater EEx e II T3, 220-240 V (min 200 V, max. 264 V)	Standard
Ambient conditions		
D04	Ambient temperature – 21 ... – 30 °C	
Winding and motor protection		
A12	6 PTC thermistors without lightning arresters	
A23	1 Temperature sensor KTY 84-130	
A65	6 embedded resistance thermometers Pt 100 for 2-, 3- or 4-wire connection from terminal box without lightning arresters	Standard
A67	6 PT100 slot resistance thermometers, shielded version for 2-, 3- or 4-wire circuit from the terminal box without surge arrester, only for EEx i II circuits	

Options (continued)

Order code	Option description	Remark
Tests with acceptance		
F01	All standard tests (routine test), with acceptance	
F15	Recording of no-load characteristic and determination of core and friction losses, with acceptance	
F17	Recording of short-circuit characteristic and determination of short-circuit losses, with acceptance	
F19	Recording of load characteristic, with acceptance	
F23	Dissipation factor test (tan delta) on 2 (test) coils, with acceptance	In addition, specify order code F90
F29	No-load noise measurement, without noise analysis, with acceptance	
F31	Cooling air flow and pressure drop measurement, with acceptance	
F35	Recording of current and torque characteristics during acceleration, with acceptance	
F37	Determination of moment of inertia by retardation method, with acceptance	
F39	Overspeed test, with acceptance	
F41	Recording of residual voltage curve, with acceptance	
F53	Locked-rotor torque and current measurement, with acceptance	
F55	Polarization index measurement, with acceptance	
F61	Impulse or AC voltage test on 2 (test) coils, with acceptance	In addition, specify order code F90
F63	Noise analysis, with acceptance	
F83	Type test for horizontal motors with temperature rise test, if necessary as equivalent load test, with acceptance	
F90	2 test coils	
F93	Type test for vertical motors with temperature rise test, if necessary as equivalent load test, with acceptance	
Tests without acceptance		
F14	Recording of no-load characteristic and determination of core and friction losses, without acceptance	
F16	Recording of short-circuit characteristic and determination of short-circuit losses, without acceptance	
F18	Recording of load characteristic, without acceptance	
F22	Dissipation factor test (tan delta) on 2 (test) coils, without acceptance	In addition, specify order code F90
F28	No-load noise measurement, without noise analysis, without acceptance	
F30	Cooling air flow and pressure drop measurement, without acceptance	
F34	Recording of current and torque characteristics during acceleration, without acceptance	
F36	Determination of moment of inertia by retardation method, without acceptance	
F38	Overspeed test, without acceptance	
F42	"Conformance Test (Wet Test)" to NEMA Standard, without acceptance	
F52	Locked-rotor torque and current measurement, without acceptance	
F54	Polarization index measurement, without acceptance	
F60	Impulse or AC voltage test on 2 (test) coils, without acceptance	In addition, specify order code F90
F62	Noise analysis, without acceptance	
F82	Type test for horizontal motors with temperature rise test, if necessary as equivalent load test, without acceptance	
F90	2 test coils	
F92	Type test for vertical motors with temperature rise test, if necessary as equivalent load test, without acceptance	

Explosion-proof motors

Notes

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Appendix



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1RQ4 504-8JV.0	3/80	1RQ4 566-8JE..	2/33, 2/37, 2/41	1RQ6 714-8CJ..	2/45, 2/46		
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1RQ4 504-8JV.5	3/90	1RQ4 566-8JV.5	3/90				
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1RQ4 506-8JV.0	3/80	1RQ4 632-5JE..	2/34, 2/38				
1RQ4 506-8JV1.	3/88	1RQ4 632-6JE..	2/33, 2/37, 2/41				
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1RQ4 560-2JE..	2/40	1RQ4 632-8JE..	2/33, 2/37				
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1RQ4 560-3JE..	2/34, 2/38, 2/42	1RQ4 634-2JE..	2/40				
1RQ4 560-4JE..	2/32, 2/36, 2/40	1RQ4 634-2JE.0	2/32, 2/36				
1RQ4 560-4JV..	3/82, 3/86	1RQ4 634-3JE..	2/34, 2/38				
1RQ4 560-4JV.0	3/80	1RQ4 634-4JE..	2/32, 2/36, 2/40				
1RQ4 560-4JV1.	3/88	1RQ4 634-4JV..	3/82, 3/86				
1RQ4 560-4JV5.	3/90	1RQ4 634-5JE..	2/34, 2/38				
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1RQ4 560-6JV.0	3/80	1RQ4 634-8JV..	3/84, 3/86				
1RQ4 560-6JV1.	3/88						
1RQ4 560-6JV5.	3/90						
1RQ4 560-8JE..	2/33, 2/37, 2/41						
1RQ4 560-8JV..	3/84, 3/86						
1RQ4 560-8JV.0	3/80						
1RQ4 560-8JV5.	3/90						

Appendix

Siemens Contacts Worldwide

SIEMENS

Local Partners Worldwide

Are you looking for a local contact to help you with questions regarding Siemens Automation and Drives products, solutions and services?

O.K! First, please select the city nearest to your location:

(or to select a different country click here)

Country: [Dropdown]

City: [Dropdown]

Now select the appropriate team who you would like to deal with your enquiry:

Team: [Dropdown]

Next >

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www.local-partners.siemens.com

SIEMENS

Local Partners Worldwide

Please select a sector:

Select an area of expertise | Select a city | Your contacts

Sectors | Search a Sector

Which sector is your question regarding?

Add Sectors

- Drive Systems, Drives and Power Supplies
- Electrical Protection
- Material Flow Control, Robotics and Logistics
- Assembly Control
- Paper Machines
- Production Automation in the Automotive Industry and Transport
- Production Logistics and Control Systems
- Production Machines, Tooling, Plastics, Metal Forming, Metal Shear, Ceramic processing, Stone processing, Packaging, Printing, Coating
- Process Control Systems
- Textile and Apparel

Please select the team who you would like to deal with your enquiry:

Team: [Dropdown]

Next >

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SIEMENS

Local Partners Worldwide

Please select a Siemens product group:

Select an area of expertise | Select a city | Your contacts

Product Catalog | Search a Product

Which product area is your question related to?

Product Catalog

- Drive Technology
- Automation systems
- Communication/Networks
- Low Voltage Control
- Electrical Installation Technology
- Process automation
- Sensor, measuring and testing technology
- Power supplies
- Safety systems - Safety Integrated
- Special industry applications for drives

Please select the team who you would like to deal with your enquiry:

Team: [Dropdown]

Next >

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At

<http://www.siemens.com/automation/partner>

you can find Siemens contacts worldwide for information about specific technologies.

Wherever possible, you will find a local contact partner for:

- Technical support,
- Spare parts/repairs,
- Service,
- Training,
- Sales or
- Consultation/engineering.

You start by selecting

- a country,
- a product or
- a sector.

Once the remaining criteria have been specified, the required contact will be shown along with the associated area of expertise.

Siemens Industry Automation and Drive Technologies in the WWW

Detailed knowledge of the range of products and services available is essential when planning and configuring automation systems. It goes without saying that this information must always be fully up-to-date.

Siemens Industry Automation and Drive Technologies has therefore built up a comprehensive range of information in the World Wide Web, which offers quick and easy access to all data required.

At

<http://www.siemens.com/automation>

you will find everything you need to know about the range of products, systems and services.

Product selection with the Offline Mall from Industry

Detailed information together with convenient interactive functions:

The Offline Mall CA 01 covers more than 80,000 products and this provides an extensive overview of the Siemens Industry Automation and Drive Technologies portfolio.

Here you will find everything you need to solve tasks in the fields of automation, switchgear, installation and drives. All information is integrated into a user interface which is easy to work with and intuitive.

After selecting the product of your choice you can order at the press of a button, by fax or via an online link.

Information on the Offline Mall CA 01 can be found on the Internet at

<http://www.siemens.com/automation/ca01>

or on DVD.

Easy shopping with the Industry Mall

The Industry Mall is the virtual department store of Siemens AG on the Internet. Here you have access to a huge range of products presented in electronic catalogs in an informative and attractive way.

Data transfer via EDIFACT allows the whole procedure from selection through ordering to tracking of the order to be carried out online via the Internet.

Numerous functions are available to support you.

For example, powerful search functions make it easy to find the required products which can be immediately checked for availability. Customer-specific discounts and preparation of quotes can be carried out online as well as order tracking and tracing.

Please visit the Industry Mall on the Internet at:

<http://www.siemens.com/automation/mall>

Appendix

Customer Support

Our services in every phase of your project



In fierce competition optimum qualifications are needed to get ahead and stay ahead: a strong starting position, an ingenious strategy and an excellent support team – at every stage. Service & Support from Siemens provides this support with a complete range of different services for automation and drives.

In every phase: from the planning stage through commissioning to maintenance and modernization.

Our specialists know exactly where they have to act in order to maintain the productivity and efficiency of your plant.

Online Support



The comprehensive Internet-based information system, which is available round the clock, provides product support, services and support tools in the shop.

<http://www.siemens.com/automation/service&support>

Technical Support



Competent advice for technical questions with a broad spectrum of carefully tailored services for all of our products and systems.

Phone: +49 (0)180 50 50 222
Fax: +49 (0)180 50 50 223
 (0.14 €/minute from German landlines, cell phone tariffs can differ)

<http://www.siemens.com/automation/support-request>

Technical Consulting



Support with the planning and design of your project: From detailed analysis of the current situation and definition of objectives through advice on products and systems to designing the automation solution.¹⁾

Configuring and Software Engineering



Support with project engineering and development with services tailored to requirements from configuration through to implementation of an automation project.¹⁾

Service on Site



With service on site we provide services for commissioning and repair which are an important prerequisite for ensuring availability.

In Germany, call:
0180 50 50 444¹⁾
 (0.14 €/minute from German landlines, cell phone tariffs can differ)

Repairs and Spare Parts



During normal operation of a machine or automation system, we provide a comprehensive spare parts and repair service that provides you with the best possible operational reliability.

In Germany, call:
0180 50 50 446¹⁾
 (0.14 €/minute from German landlines, cell phone tariffs can differ)

Optimization and Upgrading



To increase productivity or to save costs in your project, we offer high-quality services for optimization and upgrading.¹⁾

¹⁾ For country-specific telephone numbers, go to our Internet site at <http://www.siemens.com/automation/service&support>

Knowledge Base on CD-ROM



For those applications in which an online link to the Internet is not available, an extract from the information area that can be accessed free of charge is available on CD-ROM (Service & Support Knowledge Base). This CD-ROM contains all the product information (FAQs, downloads, tips and tricks, news) that was available at the time the CD was generated as well as general information about service and technical support.

On the CD-ROM you will also find a full text search and our Knowledge Manager to search for specific solutions. The CD-ROM is updated every 4 months.

As is the case with our online information on the Internet, the Service & Support Knowledge Base CD is available complete in 5 languages (English, German, French, Italian and Spanish).

You can order the CD **Service and Support Knowledge Base** from your Siemens contact.

Order No.: **6ZB5310-0EP30-0BA2**

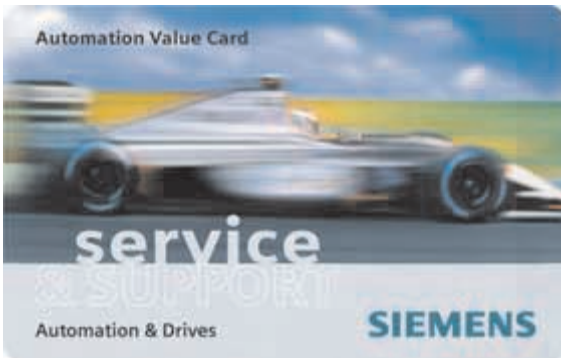
Ordering via the Internet

(with the Automation Value Card or credit card) at:

<http://www.siemens.com/automation/service&support>

in the Shop area.

Automation Value Card



Small card - great support

The Automation Value Card is an integral part of the comprehensive service concept with which Siemens Automation and Drives accompanies you in every phase of your automation project.

Whether you require certain services from our Technical Support or want to buy high-quality support tools in our online shop: You can always pay with the Automation Value Card. No costs for processing invoices, transparent and secure. With the card number that is only known to you and the associated PIN, you can check your current balance at any time as well as all the debits and credits.

Services on the card. This is how it works.

The card number and PIN are printed on the back of the Automation Value Card. When it is supplied, the PIN is covered by a scratch field so the full credit is guaranteed to be on the card.

By specifying the card number and PIN, you have complete access to the current range of service and support. The amount for the service obtained is deducted in the form of credits from the balance on your Automation Value Card.

All the offered services are priced in terms of credits independently of national currencies, so you can use the Automation Value Card worldwide.

Order Numbers for the Automation Value Card

Credits	Order No.
200	6ES7 997-0BA00-0XA0
500	6ES7 997-0BB00-0XA0
1000	6ES7 997-0BC00-0XA0
10000	6ES7 997-0BG00-0XA0

For detailed information about the services we offer, visit our Internet site:

<http://www.siemens.com/automation/service&support>

Service & Support à la Card: Some examples

Technical Support

"Priority"	Priority handling for urgent cases
"24 h"	Availability round-the-clock
"Extended"	Technical advice for complex questions

Support Tools in the Support Shop

"System Utilities"	Ready-to-use tools for design, analysis and checking
"Applications"	Complete topics including fully tested software
"Functions & Samples"	Modifiable function blocks to speed up your developments

Appendix

Conditions of Sale and Delivery/Export Regulations

Terms and Conditions of Sale and Delivery

By using this catalog you can acquire hardware and software products described therein from Siemens AG subject to the following terms. Please note! The scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside of Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. The following terms apply exclusively for orders placed with Siemens AG.

For customers with a seat or registered office in Germany

The "General Terms of Payment" as well as the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry" shall apply.

For software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany" shall apply.

For customers with a seat or registered office outside of Germany

The "General Terms of Payment" as well as the "General Conditions for Supplies of Siemens, Automation and Drives for Customers with a Seat or registered Office outside of Germany" shall apply.

For software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office outside of Germany" shall apply.

General

The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches only apply to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the corresponding pages, - especially with regard to data, dimensions and weights given - these are subject to change without prior notice.

The prices are in € (Euro) ex works, exclusive packaging.

The sales tax (value added tax) is not included in the prices. It shall be debited separately at the respective rate according to the applicable legal regulations.

Prices are subject to change without prior notice. We will debit the prices valid at the time of delivery.

Surcharges will be added to the prices of products that contain silver, copper, aluminum, lead and/or gold if the respective basic official prices for these metals are exceeded. These surcharges will be determined based on the official price and the metal factor of the respective product.

The surcharge will be calculated on the basis of the official price on the day prior to receipt of the order or prior to the release order.

The metal factor determines the official price as of which the metal surcharges are charged and the calculation method used. The metal factor, provided it is relevant, is included with the price information of the respective products.

An exact explanation of the metal factor and the text of the Comprehensive Terms and Conditions of Sale and Delivery are available free of charge from your local Siemens business office under the following Order Nos.:

- 6ZB5310-0KR30-0BA1
(for customers based in Germany)
- 6ZB5310-0KS53-0BA1
(for customers based outside Germany)

or download them from the Internet
<http://www.siemens.com/automation/mall>
(Germany: A&D Mall Online-Help System)

Export regulations

The products listed in this catalog / price list may be subject to European / German and/or US export regulations.

Therefore, any export requiring a license is subject to approval by the competent authorities.

According to current provisions, the following export regulations must be observed with respect to the products featured in this catalog / price list:

AL	<p>Number of the <u>German Export List</u></p> <p>Products marked other than "N" require an export license.</p> <p>In the case of software products, the export designations of the relevant data medium must also be generally adhered to.</p> <p>Goods labeled with an "<u>AL" not equal to "N"</u> are subject to a European or German export authorization when being exported out of the EU.</p>
ECCN	<p><u>Export Control Classification Number</u></p> <p>Products marked other than "N" are subject to a reexport license to specific countries.</p> <p>In the case of software products, the export designations of the relevant data medium must also be generally adhered to.</p> <p>Goods labeled with an "<u>ECCN" not equal to "N"</u> are subject to a US re-export authorization.</p>

Even without a label or with an "AL: N" or "ECCN: N", authorization may be required due to the final destination and purpose for which the goods are to be used.

The deciding factors are the AL or ECCN export authorization indicated on order confirmations, delivery notes and invoices.

Errors excepted and subject to change without prior notice.

A&D/VuL_ohne MZ/En 05.09.06

Industry Automation, Drive Technologies and Electrical Installation Technology

Further information can be obtained from our branch offices listed in the appendix or at www.siemens.com/automation/partner

Interactive catalog on DVD	<i>Catalog</i>		
for Industry Automation, Drive Technologies and Electrical Installation Technology	CA 01		
Drive Systems			
<u>Variable-Speed Drives</u>			
SINAMICS G110/SINAMICS G120 Inverter Chassis Units SINAMICS G120D Distributed Frequency Inverters	D 11.1		
SINAMICS G130 Drive Converter Chassis Units, SINAMICS G150 Drive Converter Cabinet Units	D 11		
SINAMICS GM150/SINAMICS SM150 Medium-Voltage Converters	D 12		
SINAMICS S150 Drive Converter Cabinet Units	D 21.3		
Asynchronous Motors Standardline	D 86.1		
Synchronous Motors with Permanent-Magnet Technology, HT-direct	D 86.2		
DC Motors	DA 12		
SIMOREG DC MASTER 6RA70 Digital Chassis Converters	DA 21.1		
SIMOREG K 6RA22 Analog Chassis Converters	DA 21.2		
<i>PDF: SIMOREG DC MASTER 6RM70 Digital Converter Cabinet Units</i>	DA 22		
SIMOVERT PM Modular Converter Systems	DA 45		
SIEMOSYN Motors	DA 48		
MICROMASTER 420/430/440 Inverters	DA 51.2		
MICROMASTER 411/COMBIMASTER 411	DA 51.3		
SIMOVERT MASTERDRIVES Vector Control	DA 65.10		
SIMOVERT MASTERDRIVES Motion Control	DA 65.11		
Synchronous and asynchronous servomotors for SIMOVERT MASTERDRIVES	DA 65.3		
SIMODRIVE 611 universal and POSMO	DA 65.4		
SIMOTION, SINAMICS S120 and Motors for Production Machines	PM 21		
SINAMICS S110 The Basic Positioning Drive	PM 22		
<u>Low-Voltage Three-Phase-Motors</u>			
IEC Squirrel-Cage Motors	D 81.1		
MOTOX Geared Motors	D 87.1		
<u>Automation Systems for Machine Tools SIMODRIVE</u>	NC 60		
• Motors			
• Converter Systems SIMODRIVE 611/POSMO			
<u>Automation Systems for Machine Tools SINAMICS</u>	NC 61		
• Motors			
• Drive System SINAMICS S120			
<u>Drive and Control Components for Hoisting Equipment</u>	HE 1		
<u>Mechanical Driving Machines</u>			
Flender Standard Couplings	MD 10.1		
Electrical Installation Technology			
<i>PDF: ALPHA Distribution Boards and Terminal Blocks</i>	ETA 1		
<i>PDF: ALPHA 8HP Molded-Plastic Distribution System</i>	ETA 3		
<i>PDF: BETA Low-Voltage Circuit Protection</i>	ET B1		
<i>PDF: DELTA Switches and Socket Outlets</i>	ET D1		
<i>PDF: GAMMA Building Management Systems</i>	ET G1		
Motion Control	<i>Catalog</i>		
SINUMERIK & SIMODRIVE Automation Systems for Machine Tools	NC 60		
SINUMERIK & SINAMICS Automation Systems for Machine Tools	NC 61		
SIMOTION, SINAMICS S120 and Motors for Production Machines	PM 21		
SINAMICS S110 The Basic Positioning Drive	PM 22		
Low-Voltage			
Controls and Distribution – SIRIUS, SENTRON, SIVACON	LV 1		
Controls and Distribution – Technical Information SIRIUS, SENTRON, SIVACON	LV 1 T		
SIDAC Reactors and Filters	LV 60		
SIVENT Fans	LV 65		
SIVACON 8PS Busbar Trunking Systems	LV 70		
Process Instrumentation and Analytics			
Field Instruments for Process Automation	FI 01		
<i>PDF: Indicators for panel mounting</i>	MP 12		
SIREC Recorders and Accessories	MP 20		
SIPART, Controllers and Software	MP 31		
<i>PDF: Products for Weighing Technology</i>	WT 10		
Process Analytical Instruments	PA 01		
<i>PDF: Process Analytics, Components for the System Integration</i>	PA 11		
SIMATIC HMI			
Human Machine Interface Systems	ST 80		
SIMATIC Industrial Automation Systems			
Products for Totally Integrated Automation and Micro Automation	ST 70		
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pc-based Automation	ST PC		
SIMATIC Control Systems	ST DA		
SIMATIC NET			
Industrial Communication	IK PI		
SIMATIC Sensors			
Sensors for Factory Automation	FS 10		
Systems Engineering			
Power supplies SITOP power and LOGO! Power	KT 10.1		
System cabling SIMATIC TOP connect	KT 10.2		
System Solutions			
Applications and Products for Industry are part of the interactive catalog CA 01			
TELEPERM M Process Control System			
<i>PDF: AS 488/TM automation systems</i>	PLT 112		

PDF: These catalogs are only available as pdf files.

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Industry Sector
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GERMANY
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