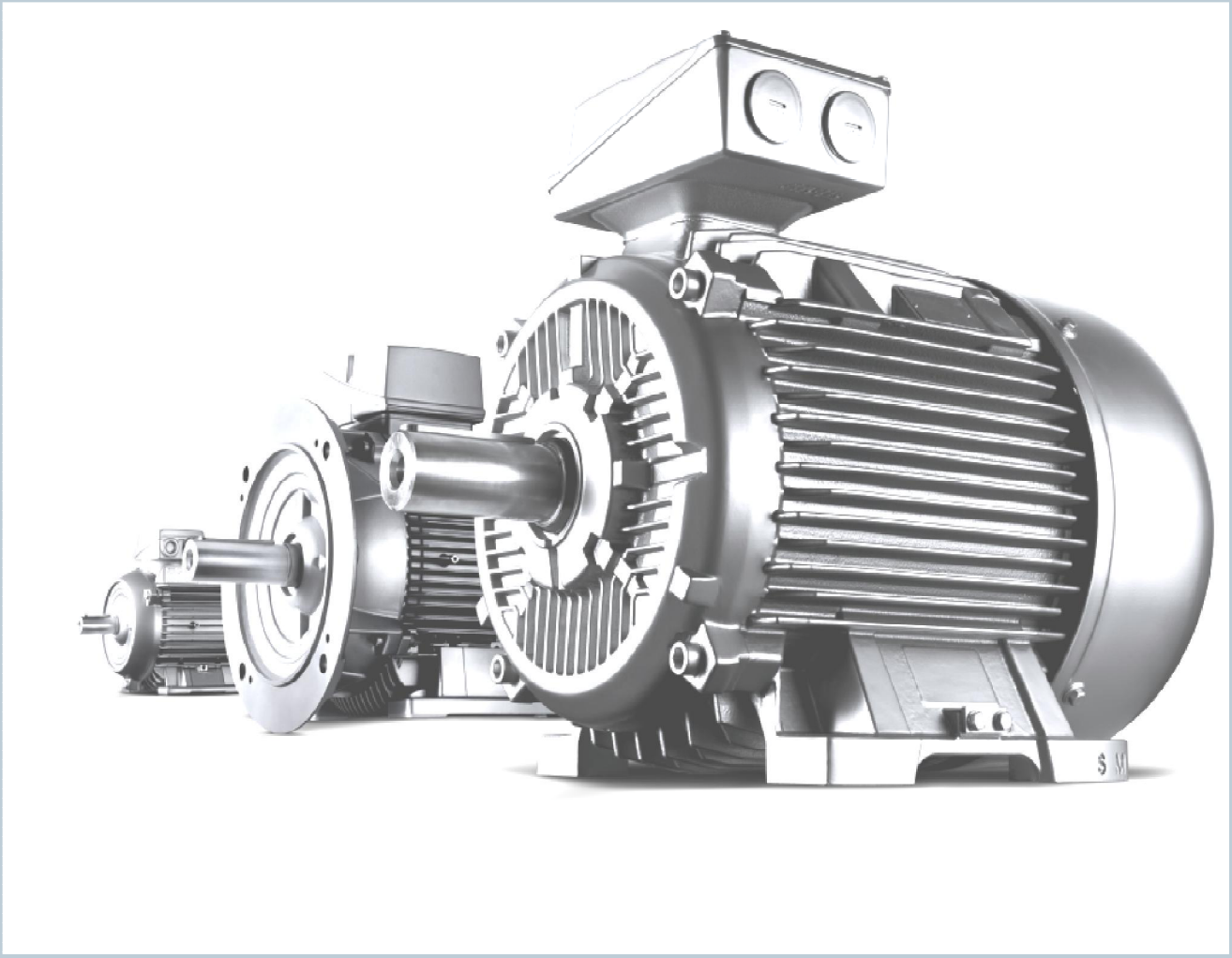
SIEMENS

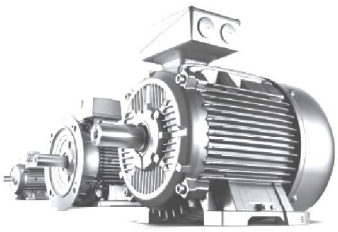


FAQ

Motors Replacement Selection

SIMOTICS GP, SD, DP, XP

DF CS SD TCC MOF

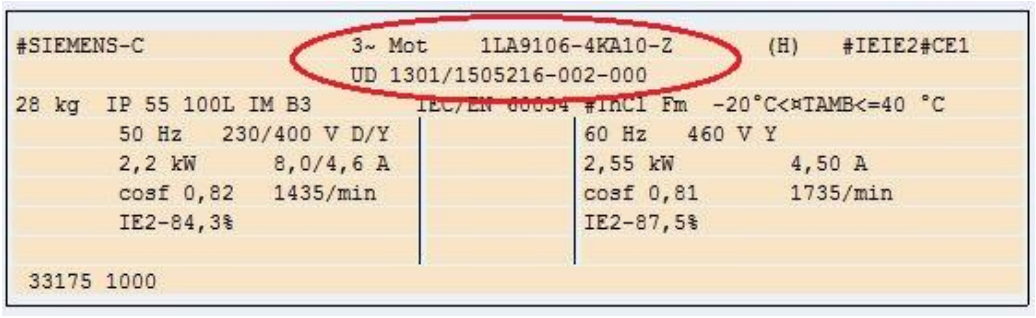


Purpose of the document

This document shall explain SIEMENS collegues how to choose replacement motors SIMOTICS GP, SD, DP, XP serie. An example how to replace a 1LA9 motor with an actual 1LE1 motor with the help of Catalog D81.1 and Drives Technology Configurator (DT-configurator) is provided. The information provided in this reference contains merely general descriptions for information purposes only.

Selection of Replacement Motors

1. Read motor type (MLFB) and serial number from motor name plate



2. Search for Z-options in Spares on Web (SoW)

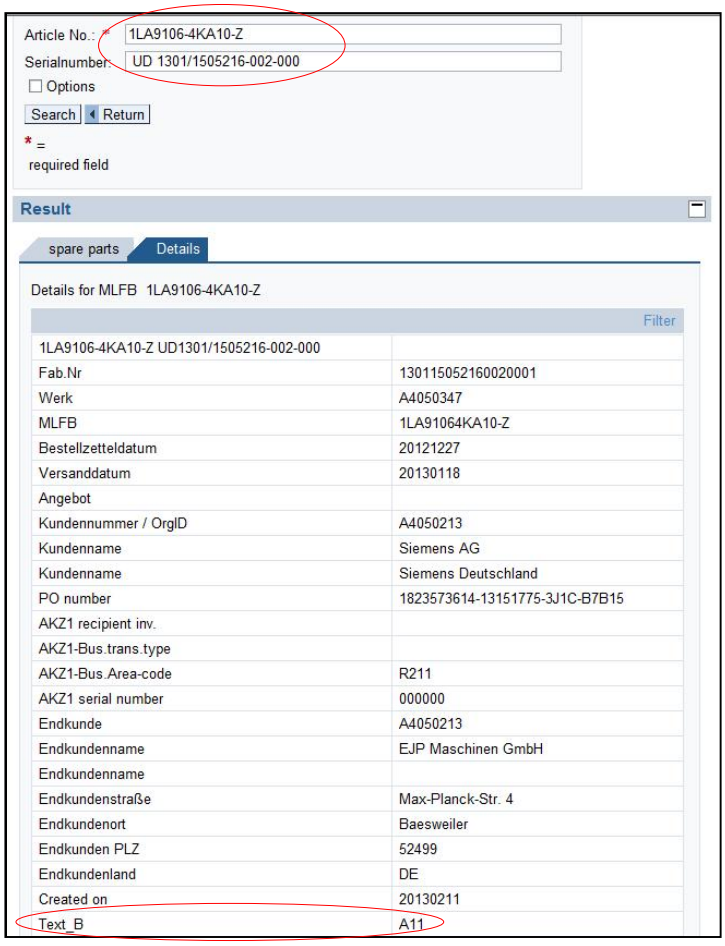
https://www.automation.siemens.com/sow

Please insert motor type (MLFB) and serial number into the Spares on Web. The SoW will return list of spare parts and motor details. Z-options can be found in bookmark „Details“ at line „Text_B“. There can also be an additional text at line „Text_E“.

Z-options stand for additional equipment on motors (for example protection devices, brakes, encoders etc).

Notes: Instructions how to search Z-options are available in document „Spares on web –examples“.

If Z-options are not listed in Spares on Web please contact us via Support Request:
https://support.industry.siemens.com/my/ww/en/requests/



Z-options: A11
Full MLFB: 1LA9106-4KA10-Z A11

3. Obtain technical data of the motor

Please search in Catalog D81.1 and/or Drives Technology Configurator for technical data of the motor.
DT - configurator: http://www.siemens.com/dt-configurator
Catalog D81.1: https://w3app.siemens.com/mcms/infocenter

Catalog D81.1.2008:

1LA9106-4KA

SIMOTICS GP 1LA Standard Motors

Motors with High Efficiency IE2

Self-ventilated motors
Aluminum series 1LA9

IE2

Selection and ordering data (continued)

2.1

Operating values at rated output

P_{rated}, 50 Hz	P_{rated}, 60 Hz 1)	Frame size	n_{rated}, 50 Hz	T_{rated}, 50 Hz	IE class	η_{rated}, 50 Hz, 4/4	η_{rated}, 50 Hz, 3/4	η_{rated}, 50 Hz, 2/4	$\cos\varphi$ rated, 50 Hz, 4/4	I_{rated}, 50 Hz, 400 V	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	L_{pfA}, 50 Hz	L_{WA}, 50 Hz	Aluminum series 1LA9 – *IE2 version in accordance with IEC 60034-30* Order No.	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	▶ For successor 1LE1001 see Page 1/22	kg	kgm²	CL

- **Cooling: Self-ventilated (IC 411)**
- **Efficiency: High Efficiency IE2, service factor (SF) 1.15**
- **Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)**

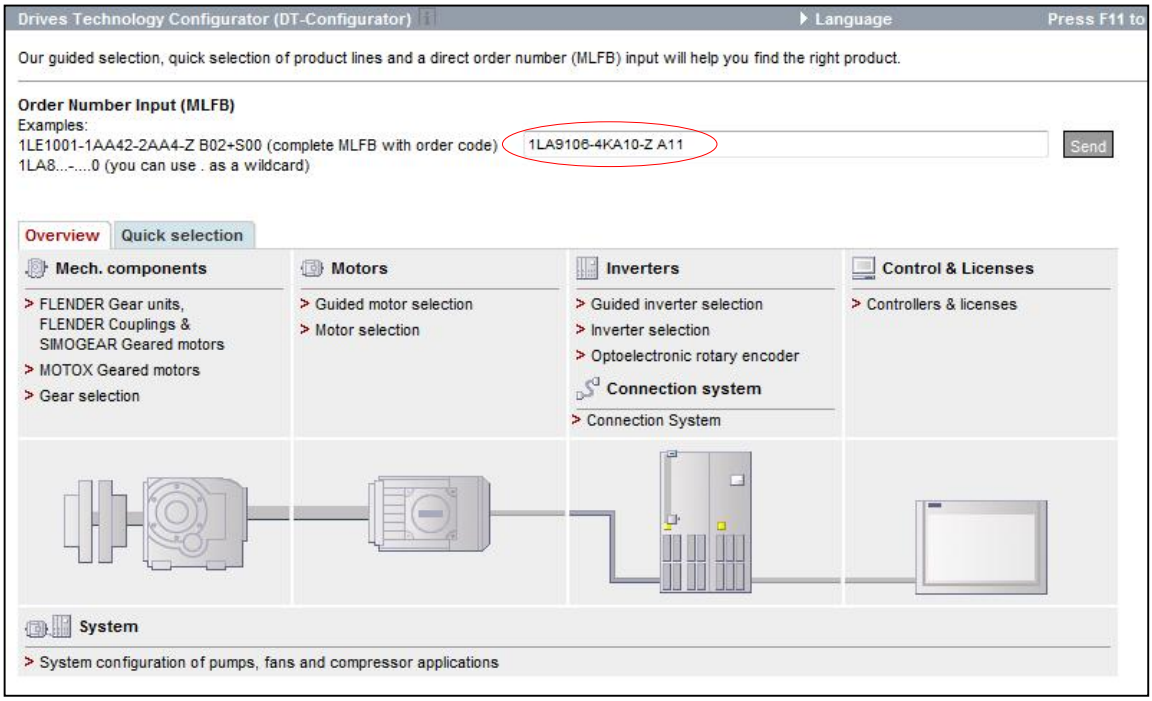
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz 1)

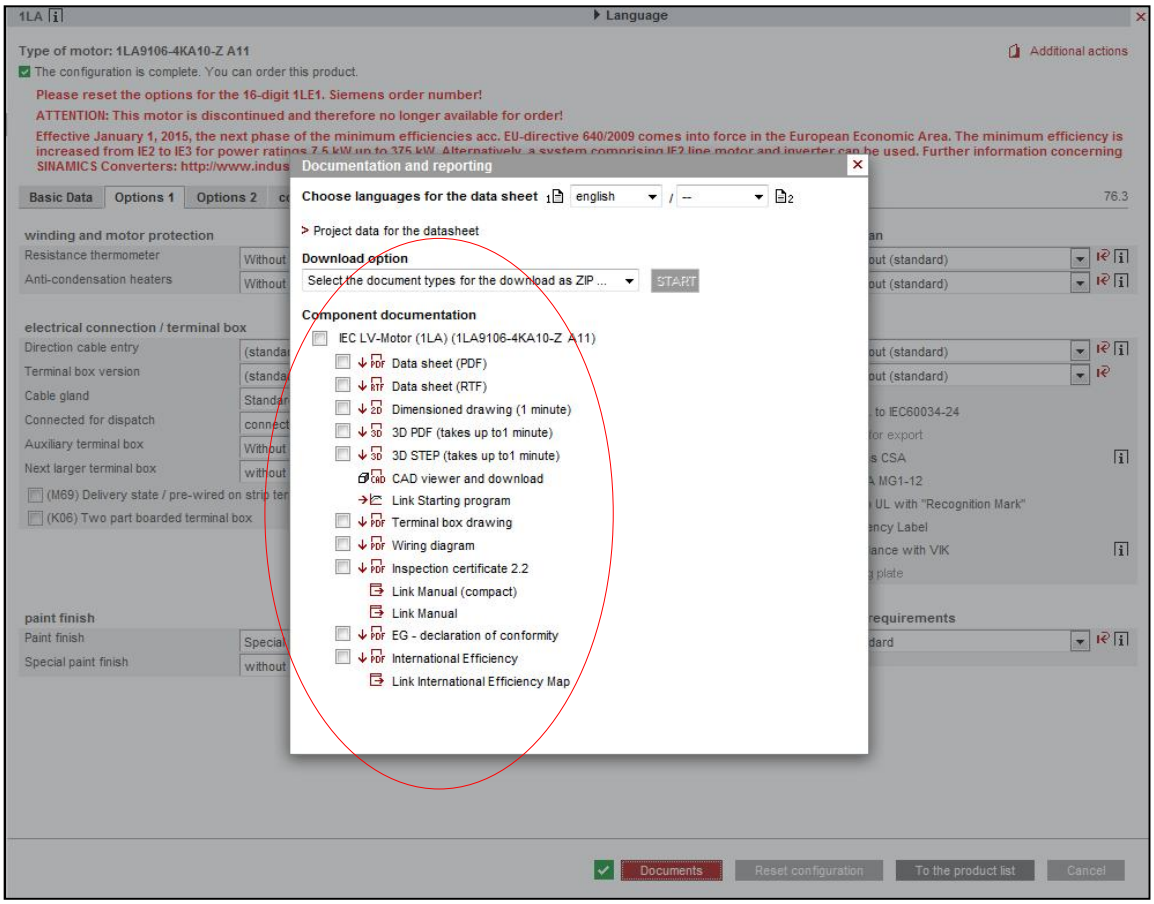
0.12	0.14	63 M	1395	0.82	–	53.6	52.1	47.6	0.65	0.50	2.6	3.5	2.6	42	53	1LA9060-4KA ■■	4.0	0.00037	16
0.18	0.21	63 M	1395	1.2	–	72.1	72.1	68.1	0.68	0.53	2.8	3.6	2.7	42	53	1LA9063-4KA ■■	4.7	0.00045	16
0.25	0.29	71 M	1410	1.7	–	74.0	74.0	71.0	0.64	0.76	3.2	4.3	3.1	44	55	1LA9070-4KA ■■	6.0	0.00076	16
0.37	0.43	71 M	1385	2.6	–	76.1	76.1	73.1	0.73	0.96	2.8	4.2	3.0	44	55	1LA9073-4KA ■■	7.0	0.00095	16
0.55	0.63	80 M	1410	3.7	–	78.1	78.6	75.6	0.77	1.32	2.8	5.6	2.9	47	58	▶ 1LA9080-4KA ■■	10.7	0.0017	16
0.75	0.86	80 M	1400	5.1	IE2	79.6	79.6	78.6	0.75	1.81	3.6	5.8	3.5	47	58	▶ 1LA9083-4KA ■■	12.4	0.0024	16
1.1	1.27	90 S	1440	7.3	IE2	81.4	81.4	80.4	0.77	2.55	2.7	6.4	3.2	48	60	▶ 1LA9090-4KA ■■	16.2	0.0033	16
1.5	1.75	90 L	1440	9.9	IE2	82.8	82.8	81.8	0.77	3.4	3.1	6.7	3.4	48	60	▶ 1LA9096-4KA ■■	18.6	0.0040	16
2.2	2.55	100 L	1435	15	IE2	84.3	84.3	83.3	0.82	4.6	3.1	7.0	3.6	53	65	▶ 1LA9106-4KA ■■	26	0.0052	16
3	3.45	100 L	1435	20	IE2	85.5	85.5	84.5	0.81	6.3	3.5	7.0	3.9	53	65	▶ 1LA9107-4KA ■■	31	0.0077	16
4	4.55	112 M	1440	27	IE2	86.6	86.6	85.6	0.81	8.2	2.8	6.9	3.2	53	65	▶ 1LA9113-4KA ■■	38.7	0.014	16
5.5	6.3	132 S	1455	36	IE2	87.7	87.7	86.7	0.84	10.8	2.9	7.0	3.6	62	74	▶ 1LA9130-4KA ■■	49.2	0.023	16
7.5	8.6	132 M	1455	49	IE2	88.7	88.7	87.7	0.84	14.5	3.0	7.0	3.6	62	74	▶ 1LA9133-4KA ■■	62.1	0.029	16
11	12.6	160 M	1460	72	IE2	89.8	89.8	88.8	0.85	21	2.7	6.9	3.2	66	78	▶ 1LA9163-4KA ■■	86.6	0.055	16
15	17.3	160 L	1460	98	IE2	90.6	90.6	89.6	0.86	28	2.9	7.0	3.3	66	78	▶ 1LA9166-4KA ■■	115.4	0.072	16
18.5	21.3	180 M	1465	121	IE2	91.2	91.2	90.2	0.84	35 2)	2.5	7.0	3.2	63	76	1LA9183-4WA ■■	126	0.15	16
22	25.3	180 L	1470	143	IE2	91.6	91.6	90.6	0.84	41.5 2)	2.6	7.3	3.4	63	76	1LA9186-4WA ■■	146	0.19	16
30	34.5	200 L	1465	196	IE2	92.3	92.3	91.3	0.87	54	2.6	7.0	3.2	65	78	1LA9207-4WA ■■	196	0.32	16

Voltages			No. of poles	Motor type	Version		Order code(s)
50 Hz	230 VΔ/400 VY	60 Hz 1) 460 VY	4	1LA9060 ... 207	**Standard**	1	–
50 Hz	400 VΔ/690 VY	60 Hz 1) 460 VΔ	4	1LA9060 ... 207	**Standard**	6	–
50 Hz	500 VY		4	1LA9060 ... 207	Without additional charge	3	–
50 Hz	500 VΔ		4	1LA9106 ... 207	Without additional charge	5	–
Further voltages 1)		For additional charges, code numbers and descriptions, see from Page 2/76				9	...
Types of construction			No. of poles	Motor type	Version		Order code(s)
Without flange		IM B3/6/7/8, IM V6, IM V5 without protective cover	4	1LA9060 ... 207	**Standard**	0	–
With flange		IM B5, IM V1 without protective cover	4	1LA9060 ... 207	With additional charge	1	–
		IM V3	4	1LA9060 ... 166	With additional charge	1	–
			4	1LA9183 ... 207	With additional charge	9	M1G
		IM V1 with protective cover 3)	4	1LA9060 ... 207	With additional charge	4	–
		IM B35	4	1LA9060 ... 207	With additional charge	6	–
With standard flange		IM B14, IM V19, IM V18 without protective cover	4	1LA9060 ... 166	With additional charge	2	–
		IM B34	4	1LA9060 ... 166	With additional charge	7	–
With special flange		IM B14, IM V19, IM V18 without protective cover	4	1LA9060 ... 166	With additional charge	3	–
Further types of construction		For additional charges, code numbers and descriptions, see from Page 2/80				9	...
Special versions							Order code(s)
Options		For additional charges, code numbers and descriptions, see from Page 2/87			1LA9 ... -... ■■ -Z		...+...+...+...

Motor protection												
Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping 1)	A11		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

DT-configurator:





Data sheet of 1LA9106-4KA10-Z

SIEMENS

Data sheet for three-phase Squirrel-Cage-Motors

Datenblatt für Drehstrom-Käfigläufermotoren

Ordering data **1LA9106-4KA10-Z**
Bestelldaten: **A11**

Client order no. / *Kunden-Auftrags-Nr.:*
Order no. / *Siemens-Auftrags-Nr.:*
Offer no. / *Angebots-Nr.:*
Remarks / *Bemerkung:*

Item no. / *Item-Nr.:*
Consignment no. / *Komm.-Nr.:*
Project / *Projekt:*

Electrical data / Elektrische Daten:

Rated motor voltage *Bemessungsspannung*	(1) 230 VD/400 VY, 50 Hz, 460 VY, 60 Hz *(1) 230 VD/400 VY, 50 Hz, 460 VY, 60 Hz*					
Frequency *Frequenz*	50 Hz			60 Hz		
Rated power *Bemessungsleistung*	2.20 kW			2.55 kW		
Rated motor speed *Bemessungsdrehzahl*	1435 1/ min			1740 1/ min		
Rated motor torque *Bemessungsmoment*	14.6 Nm			14.0 Nm		
Rated motor current (IE) *Bemessungsstrom (IE)*	VD 8.00 A	VY 4.60 A			VY 4.50 A	
Starting / rated motor current *Anzugs-/ Bemessungsstrom*	7.0			7.5		
Breakdown / rated motor	3.6			3.7		
Starting / rated motor torque *Anzugs-/Bemessungsmoment*	3.4			2.9		
	4/4	3/4	2/4	4/4	3/4	2/4
Efficiency % *Wirkungsgrad %*	84.3%	84.3%	83.3%	87.5%	87.5%	86.5%
Power factor *Leistungsfaktor*	0.82	0.77	0.67	0.81	0.76	0.66
Efficiency class /	IE2			IE2		

Mechanical data / Mechanische Daten:

Sound pressure level 50 Hz/60Hz (load) *Schalldruckpegel (LpfA) 50 Hz/60Hz (Last)*	53 dB(A)	57 dB(A)
Moment of inertia *Trägheitsmoment*	0.0062 kg*m²	
Bearing DE *Lager AS*	6206 2ZC3	
Bearing NDE *Lager BS*	6205 2ZC3	
Type of bearing *Art der Lagerung*	Floating bearings pre-loaded DE (standard) *Schwimmende Lagerung mit Anstellung AS*	
Condensate drainage holes *Kondenswasserlöcher*	No *Nein*	
Regreasing device *Nachschmiereinrichtung*	No *Nein*	
Lubricants *Schmiermittel*	Esso Unirex N3	
Grease lifetime/Relubrication interval *Fettgebrauchsdauer/Nachschmierintervall*	40000 h	
Quantity of grease for relubrication *Fettmenge Nachschmierung*	null g	
External earthing terminal *Äußere Erdungsklemme*	No *Nein*	
Coating *Anstrich*	Special paint finish RAL 7030 stone gray *Sonderanstrich RAL7030 steingrau*	

Explosion protection / Explosionsschutz:

Type of protection *Zündschutzart*	without (standard) *ohne (Standard)*

Environmental conditions /

Ambient temperature *Umgebungstemperatur*	-20 °C - +40 °C
Altitude above sea level *Höhe über Meeresspiegel*	1000 m
Standards and specifications *Normen und Vorschriften*	IEC, DIN, ISO, VDE, EN

General data / Allgemeine Daten:

Frame size *Baugröße*	100 L
Type of construction *Bauform*	(0) IM B3 / B6 / B7 / B8 / V5 without canopy
Weight in kg, without optional accessories *Gewicht in kg , ohne optionale Anbauten*	25.00 kg
Frame material *Gehäusematerial*	Aluminium *Aluminium*
Degree of protection *Schutzart*	IP 55
Method of cooling, TEFC *Kühlart, TEFC,*	IC 411
Vibration class *Vibrationsklasse*	A (Standard)
Insulation *Isolation*	155(F) to 130(B) *155(F) nach 130(B)*
Duty type *Betriebsart*	S1 - continuous duty *S1 - Dauerbetrieb*
Direction of rotation *Drehrichtung*	Bi-directional *bidirektional*

Terminal box / Anschlusskasten:

Material of terminal box *Klemmenkastenmaterial*	Aluminum *Aluminium*
Type of terminal box *Klemmenkastentyp*	gk 130
Contact screw thread *Gewinde Kontaktschraube*	M4
Max. cross-sectional area *Max. Leiterquerschnitt*	4.00 mm²
Cable diameter from ... to ... *Kabeldurchmesser von ... bis ...*	11.00 mm - 21.00 mm
Cable entry *Kabeleinführung*	2xM32x1,5
Cable gland *Kabelverschraubung*	2 plugs *2 Verschlussstopfen*

Special design / Sonderausführung:

A11	PTC thermistor motor protection using 3 integrated temperature sensors for shutdown *Motorschutz durch Kaltleiter mit 3 eingebauten Temperaturfühlern für Abschaltung*

Technical data are subject to change! There may be discrepancies between calculated and rating plate values.
Technische Änderungen vorbehalten! Es könnte Unterschiede zwischen Datenblatt und Leistungsschild geben.

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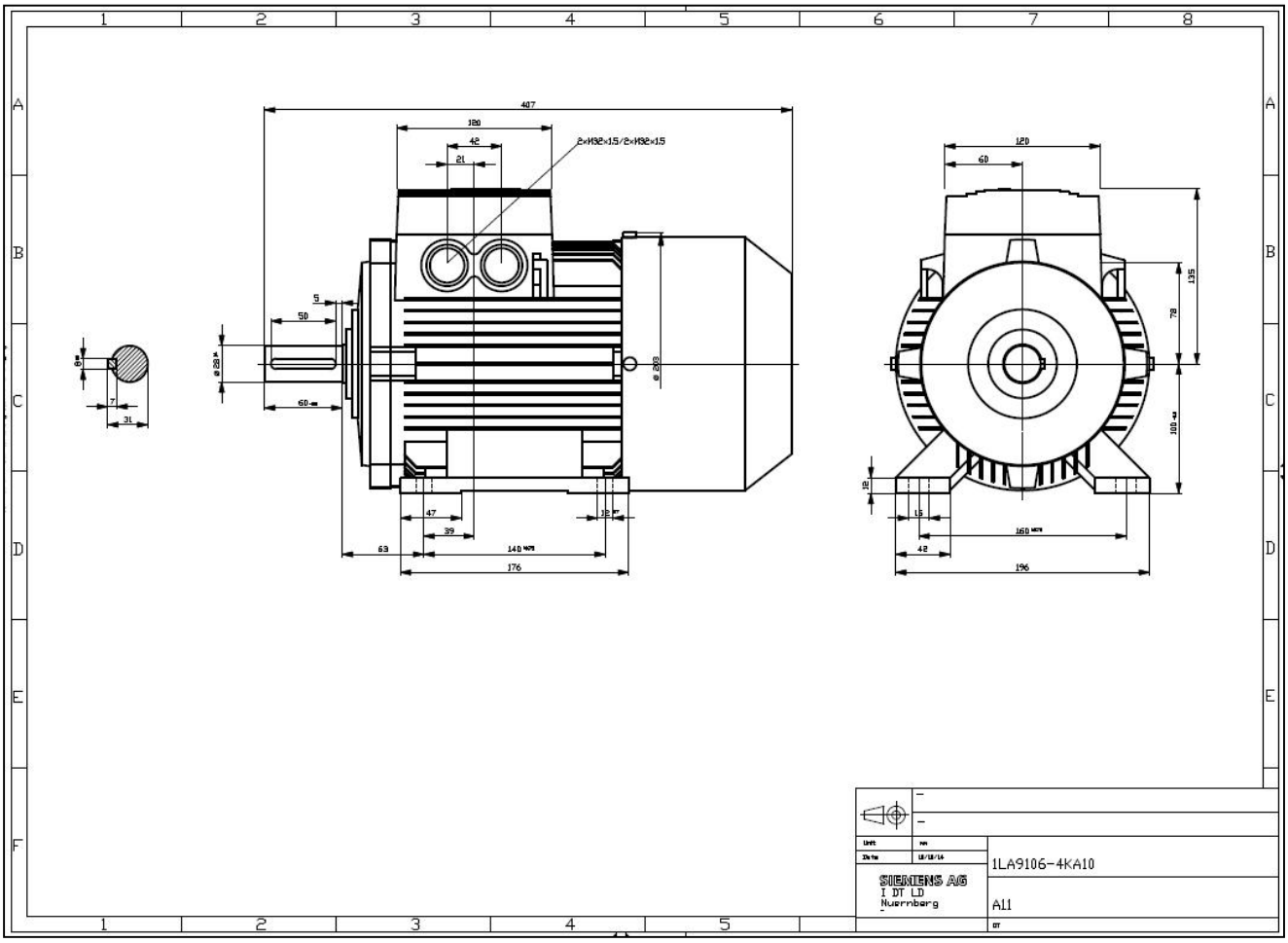
Dimensional drawing of 1LA9106-4KA10-Z



For motor 1LA9106-4KA10-Z A11 we can read main techical features from Catalog D81.1.2008 and/or DT-configurator:

- type of explosion protection: without (safe zone)
- design: aluminium motor, self ventilated (IC411)
- efficiency: high efficiency (IE2)
- power: 2.2kW (50Hz), 2.55 (60Hz)
- shaft height: 100L
- number of poles: 4 (synchronous speed 1500 rpm)
- voltage: 230VD/400VY (50Hz), 460VY (60Hz)
- insulation: F/B
- type of construction: IMB3 (feet)
- ambient conditions: -20 to +40°C, altitude <1000m, IP55
- Z-options: A11 (motor protection with PTC thermistors with 3 embedded temperature sensors for tripping)
- dimensions: please see dimensional drawing

3. Select new motor

Please select replacement motor from 1LE serie (with regard to coutry regulations and standards) from Catalog D81.1.or DT-configurator.

Catalog D81.1.2014:

SIMOTICS GP 1LE1 Standard Motors

Motors with Premium Efficiency IE3

Self-ventilated motors
Aluminum series 1LE1003

IE3

Selection and ordering data

Operating values at rated output

P_{rated} 50 Hz	P_{rated} 60 Hz 1)	Frame size	n_{rated} 50 Hz	T_{rated} 50 Hz	IE class		η_{rated} 50 Hz, 4/4	η_{rated} 50 Hz, 3/4	η_{rated} 50 Hz, 2/4	$\cos\varphi$ rated, 50 Hz, 4/4	I_{rated} 50 Hz, 400 V	I_{LR}/I_{rated} 50 Hz	I_{LR}/I_{rated} 50 Hz	T_B/T_{rated} 50 Hz	L_{pfA} 50 Hz	L_{WA} 50 Hz	Aluminum series 1LE1003 – IE3 version in accordance with IEC 60034-30 Article No.	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%		A				dB(A)	dB(A)	▲ New	kg	kgm²	CL
• Cooling: self-ventilated (IC 411) • Efficiency: Premium Efficiency IE3, service factor (SF) 1.15 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																				
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz 1)																				
0.75	0.86	80 M	2850	2.5	IE3	IE3	80.7	82.0	81.5	0.86	1.56	2.6	6.2	3.0	60	71	1LE1003-0DA2■-■■■■	11	0.0011	16
1.1	1.3	80 M	2885	3.6	IE3	IE3	82.7	82.7	81.7	0.85	2.25	2.8	7.4	3.8	60	71	1LE1003-0DA3■-■■■■	12	0.0013	16
1.5	1.75	90 S	2910	4.9	IE3	IE3	84.2	84.5	83.5	0.86	3.00	2.7	8.1	4.2	65	77	1LE1003-0EA0■-■■■■	15	0.0021	16
2.2	2.55	90 L	2920	7.2	IE3	IE3	85.9	86.8	86.1	0.88	4.2	2.6	8.3	4.0	65	77	1LE1003-0EA4■-■■■■	19	0.0031	16
3	3.45	100 L	2920	9.8	IE3	IE2	87.1	87.1	86.1	0.88	5.6	2.8	8.0	4.3	67	79	1LE1003-1AA4■-■■■■	26	0.0054	16
4	4.55	112 M	2950	12.9	IE3	IE2	88.1	88.1	87.1	0.89	7.4	1.9	7.5	3.9	69	81	1LE1003-1BA2■-■■■■	34	0.012	16
5.5	6.3	132 S	2950	17.8	IE3	IE3	89.2	89.2	88.2	0.90	9.9	1.8	7.4	3.6	68	80	1LE1003-1CA0■-■■■■	43	0.024	16
7.5	8.6	132 S	2950	24.3	IE3	IE3	90.1	90.1	89.1	0.92	13.1	1.9	8.3	3.9	68	80	1LE1003-1CA1■-■■■■	57	0.031	16
11	12.6	160 M	2955	35.5	IE3	IE3	91.2	91.2	90.2	0.89	19.6	2.4	7.9	3.8	70	82	1LE1003-1DA2■-■■■■	75	0.053	16
15	18	160 M	2960	48.4	IE3	IE3	91.9	91.9	90.9	0.87	27.0	2.7	8.7	4.3	70	82	1LE1003-1DA3■-■■■■	84	0.061	16
18.5	22	160 L	2955	60.0	IE3	IE3	92.4	92.4	91.4	0.90	32.0	2.8	9.0	4.2	70	82	1LE1003-1DA4■-■■■■	94	0.068	16
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz 1)																				
0.55	0.63	80 M	1440	3.6	–	–	81.3	82.0	80.2	0.78	1.25	2.1	5.9	3.1	53	64	1LE1003-0DB2■-■■■■	11	0.0021	16
0.75	0.86	80 M	1450	4.9	IE3	IE3	82.5	82.3	80.0	0.75	1.75	2.7	7.1	3.9	53	64	1LE1003-0DB3■-■■■■	14	0.0029	16
1.1	1.3	90 S	1440	7.3	IE3	IE3	84.1	84.6	83.5	0.78	2.4	2.9	6.9	3.6	56	68	1LE1003-0EB0■-■■■■	16	0.0036	16
1.5	1.75	90 L	1445	9.9	IE3	IE3	85.3	85.9	84.9	0.80	3.15	2.6	7.2	2.7	56	68	1LE1003-0EB4■-■■■■	19	0.0049	16
2.2	2.55	100 L	1465	14.3	IE3	IE2	86.7	86.7	85.7	0.83	4.4	2.1	7.6	3.6	60	72	1LE1003-1AB4■-■■■■	30	0.014	16
3	3.45	100 L	1460	19.6	IE3	IE3	87.7	87.7	86.7	0.83	5.9	2.3	7.3	3.7	60	72	1LE1003-1AB5■-■■■■	30	0.014	16
4	4.55	112 M	1460	26.0	IE3	IE3	88.6	88.6	87.6	0.82	7.9	2.4	7.1	3.7	58	70	1LE1003-1BB2■-■■■■	34	0.017	16
5.5	6.3	132 S	1470	35.7	IE3	IE2	89.6	89.6	88.6	0.84	10.5	2.1	7.2	3.4	64	76	1LE1003-1CB0■-■■■■	64	0.046	16
7.5	8.6	132 M	1470	48.7	IE3	IE2	90.4	90.4	89.4	0.84	14.3	2.4	7.4	3.5	64	76	1LE1003-1CB2■-■■■■	64	0.046	16
11	12.6	160 M	1475	71.0	IE3	IE3	91.4	91.4	90.4	0.84	20.5	2.2	6.9	3.2	65	77	1LE1003-1DB2■-■■■■	83	0.083	16
15	17.3	160 L	1475	97.0	IE3	IE3	92.1	92.1	91.1	0.82	28.5	2.5	8.5	3.8	65	77	1LE1003-1DB4■-■■■■	100	0.99	16

1LE1003-1AB4x-xxxx (2.2kW, 100L, 4p, IE3)

Voltages				Motor protection	No. of poles	Frame size	Motor type	Version				Order code(s)
Frame sizes 80 M to 90 L: use of the 360° freely rotatable terminal box for 2 and 4-pole motors 2)												
50 Hz	230 VΔ/400 VY	60 Hz 1)	460 VY	PTC thermis-	2, 4	80 M ... 90 L	1LE1003-0D ... -0E	**Standard**	2	2		–
50 Hz	400 VΔ/690 VY	60 Hz 1)	460 VΔ	tor with 1 temp. sensor	2, 4	80 M ... 90 L	1LE1003-0D ... -0E	**Standard**	3	4		–
50 Hz	400 VY	60 Hz 1)	460 VY	Without	2, 4	80 M ... 90 L	1LE1003-0D ... -0E	**Standard**	0	2	A	–
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box												
50 Hz	230 VΔ/400 VY	60 Hz 1)	460 VY	Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	**Standard**	2	2		–
50 Hz	400 VΔ/690 VY	60 Hz 1)	460 VΔ	Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	**Standard**	3	4		–
50 Hz	500 VY			Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	Without add. charge	2	7		–
50 Hz	500 VΔ			Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	Without add. charge	4	0		–
Further voltages 1)				For price information, code numbers, order codes and descriptions, see from Page 2/38					9	0		...

1LE1003-1AB42-2xxx (230VD/400Y 50Hz, 460VY 60Hz)

Types of construction		No. of poles	Frame size	Motor type	Version		Order code(s)
Without flange	IM B3 3)	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	**Standard**	A	–
With flange	IM B5 3)	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	With add. charge	F	–
With standard flange	IM B14 3)	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	With add. charge	K	–
Further types of construction		For price information, code letters and descriptions, see from Page 2/41				■	...

1LE1003-1AB42-2Ax (IM B3)

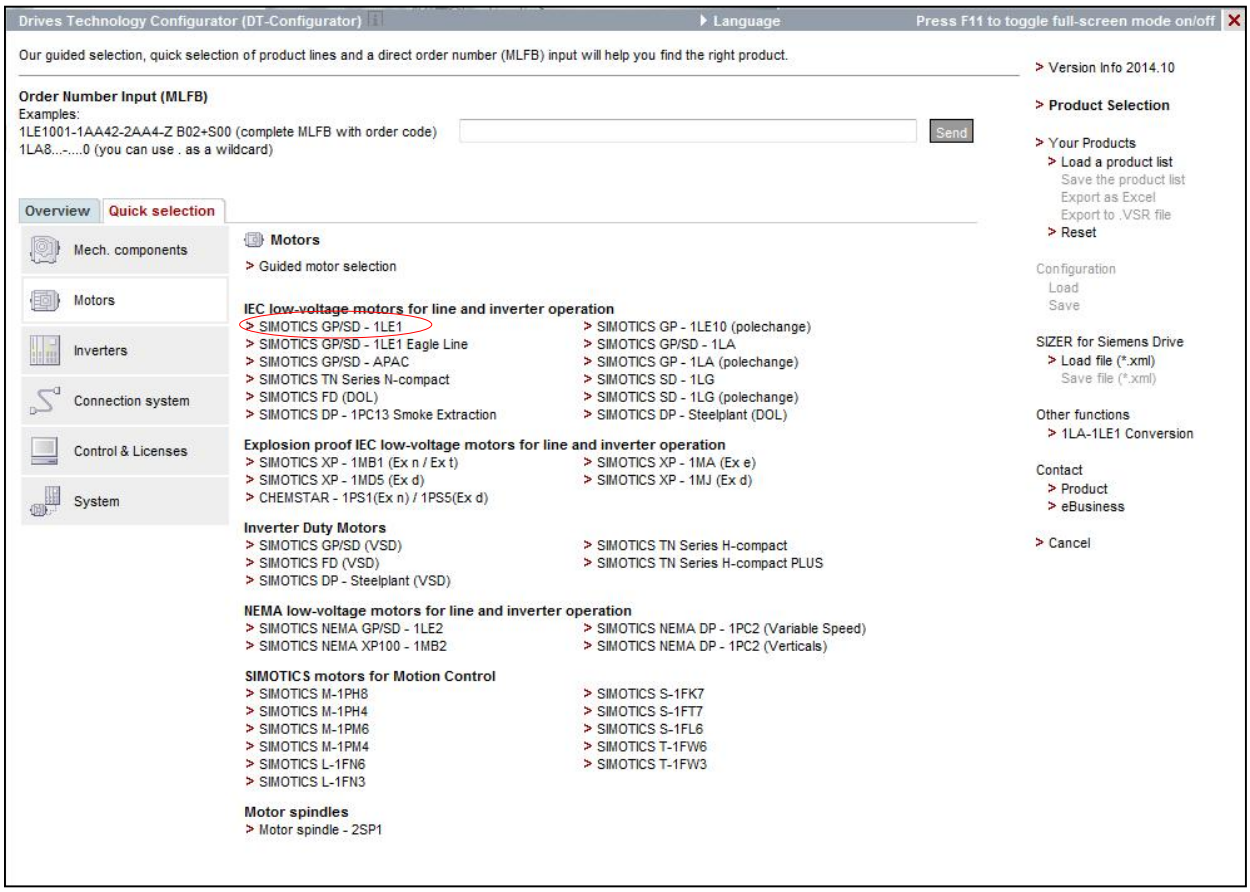
Motor protection	No. of poles	Frame size	Motor type	Version		Order code(s)
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box						
Without	2, 4	80 L ... 160 L	1LE1003-0D ... -1D	**Standard**	A	–
PTC thermistor with 3 temperature sensors	2, 4	80 L ... 160 L	1LE1003-0D ... -1D	With add. charge	B	–
Further motor protection	For price information, code letters and descriptions, see from Page 2/49				■	...

1LE1003-1AB42-2ABx (3x PTC for tripping)

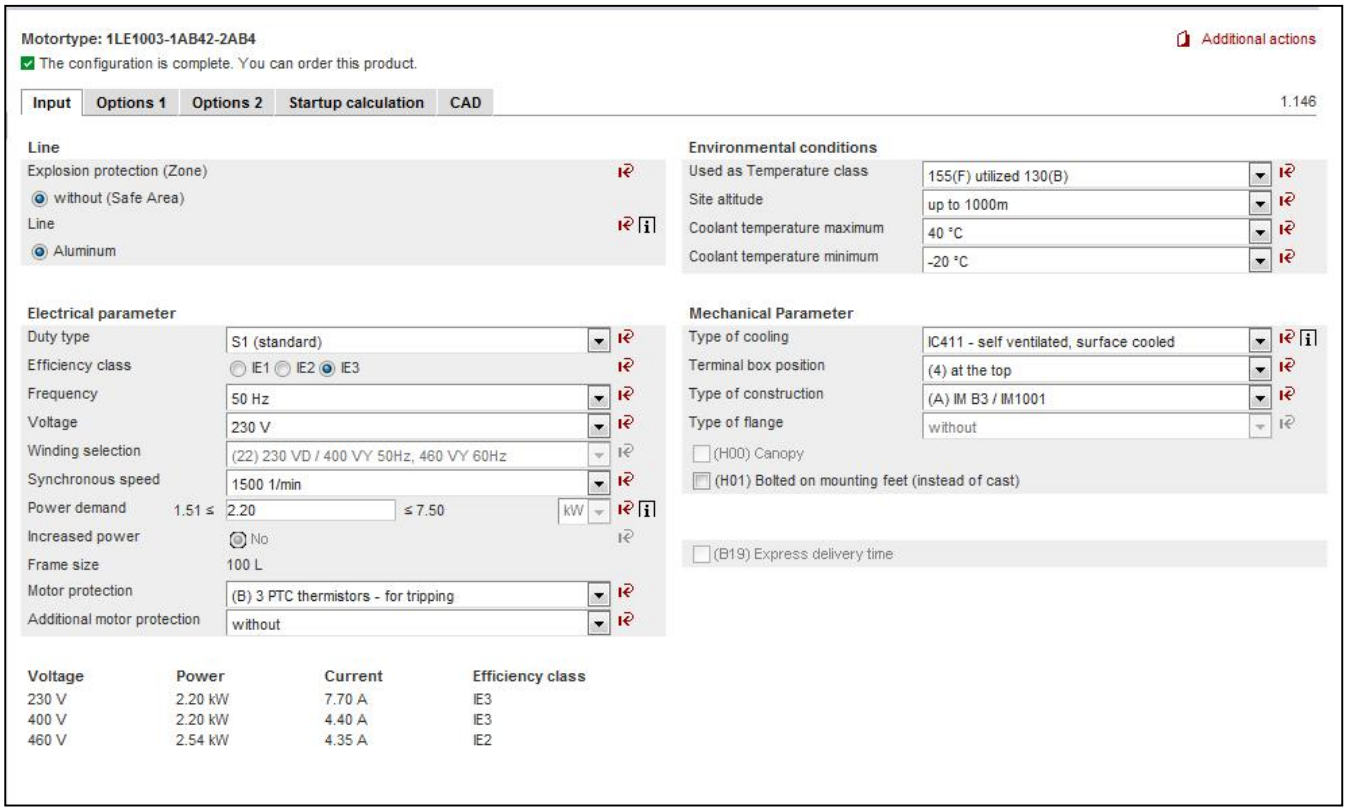
Terminal box position	No. of poles	Frame size	Motor type	Version		Order code(s)
Terminal box at top	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	**Standard**	4	–
Further terminal box positions	For price information, code numbers and descriptions, see from Page 2/51					

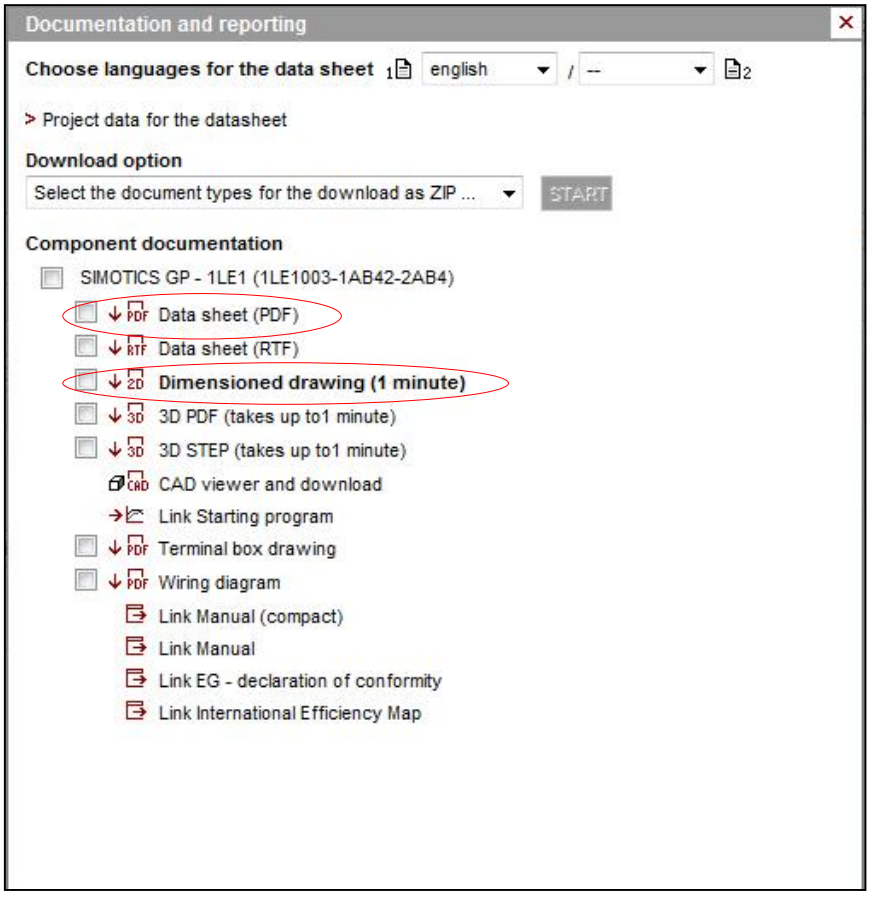
1LE1003-1AB42-2AB4 (terminal box on top)

DT-configurator:



Please select electrical and mechanical parameters, working conditions etc.





SIEMENS

Data sheet for three-phase Squirrel-Cage-Motors

Ordering data: **1LE1003-1AB42-2AB4**

Motor type: **1AV3104B**

Client order no.: Item no.:
Order no.: Consignment no.:
Offer no.: Project:
Remarks:

U [V]	Δ / Y	f [Hz]	P [kW]	P [hp]	I [A]	n [1/min]	M [Nm]	NOM. EFF at ... load [%] 4/4	3/4	2/4	Power factor at ... load 4/4	3/4	2/4	I_a/I_N I/I_N	M_a/M_N T/T_N	M_s/M_N T_s/T_N	IE-CL
230	Δ	50	2.20	- / -	7.70	1465	14.3	86.7	86.7	85.7	0.83	0.79	0.69	7.6	2.1	3.6	IE3
400	Y	50	2.20	- / -	4.40	1465	14.3	86.7	86.7	85.7	0.83	0.79	0.69	7.6	2.1	3.6	IE3
460	Y	60	2.54	- / -	4.35	1760	13.8	87.5	87.5	86.5	0.84	0.80	0.71	7.7	2.2	3.7	IE2

IM B3 / IM 1001		FS 100 L	30 kg	IP55	IEC/EN 60034	IEC, DIN, ISO, VDE, EN

Mechanical data

Sound pressure level 50 Hz/60Hz (load)	60 db(A)	62 db(A)
Moment of inertia	0.014 kg m²	
Bearing DE | NDE	6206 2ZC3	6206 2ZC3
Bearing lifetime	40000 h	
Lubricants	Esso Unirex N3	
Regreasing device	No	
Grease nipple	- / -	
Type of bearing	Preloaded bearing NDE	
Condensate drainage holes	No	
External earthing terminal	No	
Vibration class	A	
Insulation	155(F) to 130(B)	
Duty type	S1	
Direction of rotation	bidirectional	
Frame material	aluminum	
Data of anti condensation heating	-/-	
Coating	Special paint finish	
Color	RAL7030	
Motor protection	(B) 3 PTC thermistors - for tripping	
Method of cooling	IC411 - self ventilated, surface cooled	

Environmental conditions

Ambient temperature	-20 °C - +40 °C
Altitude above sea level	1000 m

Explosion protection

Type of protection	- / -

Terminal box

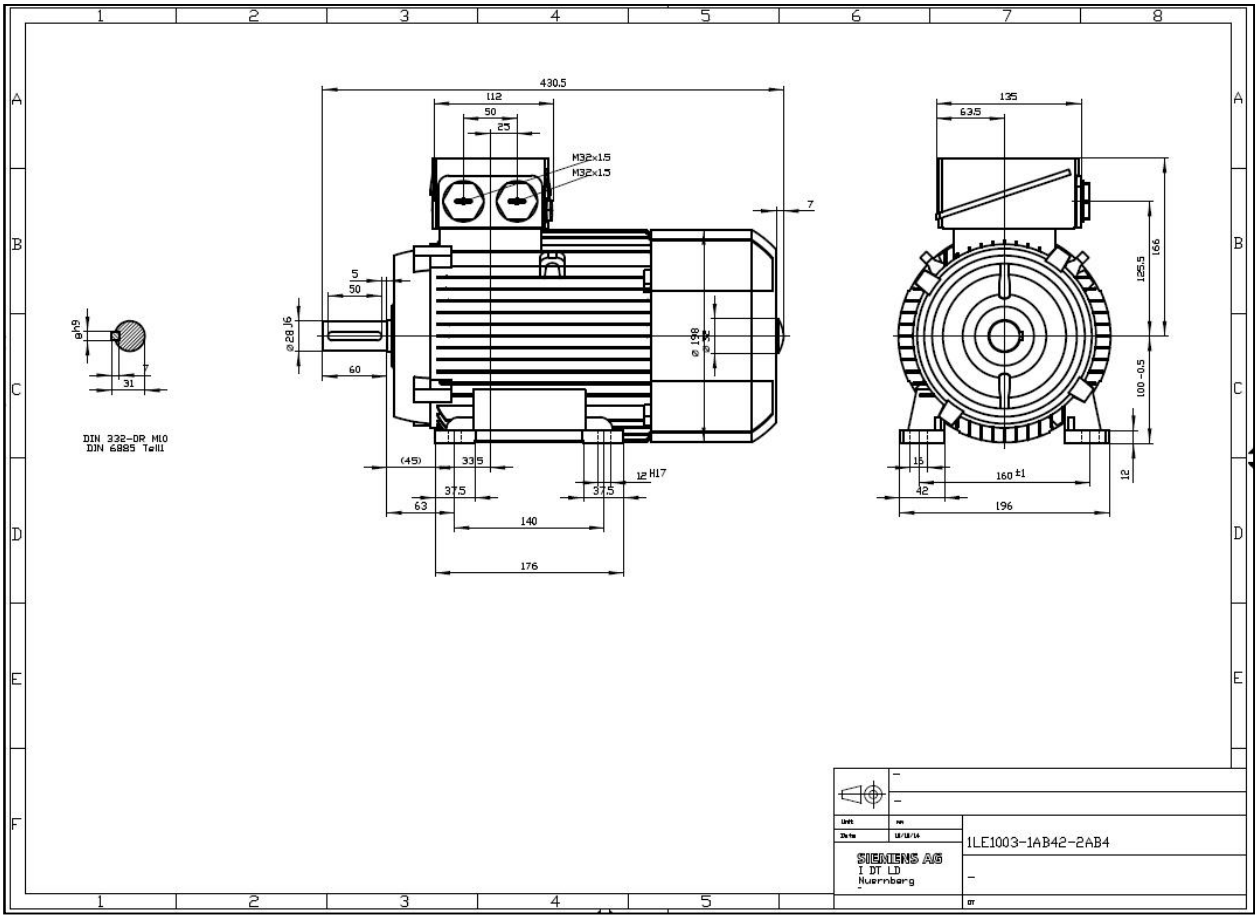
Terminal box position	top
Material of terminal box	Aluminium
Type of terminal box	TB1 F00
Contact screw thread	M4
Max. cross-sectional area	4.0 mm²
Cable diameter from ... to ...	11.0 mm - 21.0 mm
Cable entry	2xM32x1,5-1xM16x1,5
Cable gland	3 plugs

Special design

Technical data are subject to change! There may be discrepancies between calculated and rating plate values.

Version: 2014.06
generated: 10.10.2014 10:04:20

Dimensional drawing of 1LE1003-1AB42-2AB4



5. Notes

Mating dimensions of our motors are according to IEC standards. This means mating dimensions of the old 1LA9 motor and the new 1LE1 motor are the same. Other dimensions and electrical characteristics can differ because of development and continuous improvement of our products. Therefore please check with your customer if the replacement motor is suitable for his machine.

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Customer Services DF&PD
DF CS SD TCC MOF 1

Order No: none
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