SIMOTICS XP 1LA/1LG Explosion-Proof Motors

Motors for Zone 2 or 21/22 in type of protection Ex n or Ex tD

Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1LA6, 1LG4 with order code for explosion protection

IE1

Selection and ordering data

P_{rated}, 50 Hz	P_{rated}, 60 Hz 1)	Frame size	Operating values at rated output: 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-φ_{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	Cast-iron series 1LA6/1LG4 – *IE1 version for Zone 2 or 21/22 in type of protection Ex n or Ex tD*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No. with order code for Ex prot.	kg	kgm^2	CL
• Cooling: Self-ventilated (IC 411) • Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30 • 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)																			
3	3.45	100 L	2890	9.9	IE1	81.5	81.5	80.5	0.85	6.3	2.8	6.8	3.0	62	74	1LA6106-2AA■■-Z	34	0.0035	16
4	4.55	112 M	2905	13	IE1	83.1	83.1	82.1	0.86	8.1	2.6	7.2	2.9	63	75	1LA6113-2AA■■-Z	43	0.0059	16
5.5	6.3	132 S	2925	18	IE1	84.7	84.7	83.7	0.89	10.5	2.0	5.9	2.8	68	80	1LA6130-2AA■■-Z	53	0.015	16
7.5	8.6	132 S	2930	24	IE1	86.0	86.0	85.0	0.89	14.1	2.3	6.9	3.0	68	80	1LA6131-2AA■■-Z	58	0.019	16
11	12.6	160 M	2940	36	IE1	87.6	87.6	86.6	0.88	20.5	2.1	6.5	2.9	70	82	1LA6163-2AA■■-Z	96	0.034	16
15	17.3	160 M	2940	49	IE1	88.7	88.7	87.7	0.90	27	2.2	6.6	3.0	70	82	1LA6164-2AA■■-Z	105	0.043	16
18.5	21.3	160 L	2940	60	IE1	89.3	89.3	88.3	0.91	33	2.4	7.0	3.1	70	82	1LA6166-2AA■■-Z	115	0.051	16
22	24.5	180 M	2945	71	IE1	89.9	90.0	89.6	0.86	41 2)	2.5	6.4	3.4	69	82	1LG4183-2AA■■-Z	145	0.068	16
30	33.5	200 L	2950	97	IE1	90.7	90.8	90.1	0.88	54 2)	2.3	6.5	3.0	73	86	1LG4206-2AA■■-Z	205	0.13	16
37	41.5	200 L	2955	120	IE1	91.2	91.5	90.8	0.89	66 2)	2.5	7.2	3.3	73	86	1LG4207-2AA■■-Z	225	0.15	16
45	51	225 M	2960	145	IE1	91.7	92.0	91.6	0.88	80 2)	2.4	6.7	3.1	73	86	1LG4223-2AA■■-Z	285	0.22	16
55	62	250 M	2970	177	IE1	92.1	92.2	91.4	0.88	98	2.1	6.7	3.1	75	88	1LG4253-2AB■■-Z	375	0.40	13
75	84	280 S	2975	241	IE1	92.7	92.5	91.5	0.87	134 2)	2.5	7.5	3.1	74	87	1LG4280-2AB■■-Z	500	0.72	13
90	101	280 M	2975	289	IE1	93.0	93.1	92.5	0.89	157 2)	2.6	7.2	3.1	74	87	1LG4283-2AB■■-Z	540	0.83	13
110	123	315 S	2982	352	IE1	93.3	92.9	91.5	0.87	196 2)	2.4	7.2	3.1	79	92	1LG4310-2AB■■-Z	720	1.2	13
132	148	315 M	2982	423	IE1	93.5	93.2	92.5	0.90	225 2)	2.4	6.9	3.0	79	92	1LG4313-2AB■■-Z	775	1.4	13
160	180	315 L	2982	512	IE1	93.8	93.6	93.1	0.91	270 3)	2.4	7.0	3.0	79	92	1LG4316-2AB■■-Z	900	1.6	13
200	224	315 L	2982	641	IE1	94.0	93.9	93.5	0.92	335 3)	2.3	6.7	2.9	79	92	1LG4317-2AB■■-Z	1015	2.1	13

Voltages				No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
50 Hz	230 VΔ/400 VY	60 Hz 1)	460 VY	2	1LA6106 ... 166	1LG4183 ... 313	**Standard**	1	–
50 Hz	400 VΔ/690 VY	60 Hz 1)	460 VΔ	2	1LA6106 ... 166	1LG4183 ... 317	**Standard**	6	–
50 Hz	500 VY			2	1LA6106 ... 166	1LG4183 ... 313	Without additional charge	3	–
	500 VΔ			2	1LA6106 ... 166	1LG4183 ... 317	Without additional charge	5	–
Further voltages 1)		For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.						9	. . .

Types of construction		No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
Without flange	IM B3/6/7/8 4) 5)	2	1LA6106 ... 166	1LG4183 ... 317	**Standard**	0	–
	IM V6 4) 5)	2	1LA6106 ... 166	1LG4183 ... 313	**Standard**	0	–
		2	–	1LG4316 ... 317	With additional charge	9	**M1E**
With flange	IM B5 4) 6)	2	1LA6106 ... 166	1LG4183 ... 317	With additional charge	1	–
	IM V3 4) 6)	2	1LA6106 ... 166	–	With additional charge	1	–
		2	–	1LG4183 ... 313	With additional charge	9	**M1G**
	IM V1 with prot. cover 4) 6) 7)	2	1LA6106 ... 166	1LG4183 ... 317 8)	With additional charge	4	–
	IM B35	2	1LA6106 ... 166	1LG4183 ... 317	With additional charge	6	–
With standard flange	IM B14, IM V19 4)	2	1LA6106 ... 166	–	With additional charge	2	–
	IM B34	2	1LA6106 ... 166	–	With additional charge	7	–
With special flange	IM B14, IM V19 4)	2	1LA6106 ... 166	–	With additional charge	3	–
Further types of constr.	For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.					9	. . .

Design according to ATEX		No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
Zone 2	Mains-fed operation	2	1LA6106 ... 166	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M72**
	Converter-fed operation (FC)	2	1LA6106 ... 166	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M73**
Zone 21	Mains-fed operation	2	–	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M34**
	Converter-fed operation (FC)	2	–	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M38**
Zone 22	Mains-fed operation	2	1LA6106 ... 166	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M35**
	Converter-fed operation (FC)	2	1LA6106 ... 166	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M39**
Zone 2/22 (IP55)	Mains-fed operation	2	1LA6106 ... 166	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M74**
	Converter-fed operation (FC)	2	1LA6106 ... 166	1LG4183 ... 317	With add. charge	1L. . . . . -. . . ■■-Z	**M75**

Special versions			Order code(s)
Options	For add. charges, order codes and descriptions, see suppl. and special versions.	1L. . . . . -. . . ■■-Z	. . .+. . .+. . .+. . .

1) Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.

2) For connection to 230 V, parallel feeders are necessary.

3) For connection to 400 V, parallel feeders are necessary.

4) The following applies for explosion-proof motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.

5) If 1LG4 motors in types of construction with feet IM B6, IM B7, IM V6 or IM V5 without protective cover are fixed to the wall, it is recommended that the motor feet are supported.

6) 1LG4220 to 1LG4318 motors are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

7) The "Second shaft extension" option, order code K16 is not possible.

IE1

Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1LA6, 1LG4 with order code for explosion protection

Selection and ordering data (continued)

P_{rated}, 50 Hz	P_{rated}, 60 Hz [1]	Frame size	Operating values at rated output: 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-φ_{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	**Cast-iron series 1LA6/1LG4** – *IE1 version for Zone 2 or 21/22 in type of protection Ex n or Ex tD*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No. with order code for Ex prot.	kg	kgm²	CL

- **Cooling: Self-ventilated (IC 411)**
- **Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30**
- **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]

2.2	**2.55**	**100 L**	1420	15	IE1	79.7	79.7	78.7	0.82	4.85	2.5	5.6	2.8	53	68	**1LA6106-4AA■■-Z**	33	0.0047	16
3	**3.45**	**100 L**	1420	20	IE1	81.5	81.5	80.5	0.82	6.5	2.7	5.6	3.0	53	68	**1LA6107-4AA■■-Z**	36	0.0055	16
4	**4.55**	**112 M**	1440	27	IE1	83.1	83.1	82.1	0.83	8.4	2.7	6.0	3.0	53	65	**1LA6113-4AA■■-Z**	45	0.012	16
5.5	**6.3**	**132 S**	1455	36	IE1	84.7	84.7	83.7	0.81	11.6	2.5	6.3	3.1	62	74	**1LA6130-4AA■■-Z**	55	0.018	16
7.5	**8.6**	**132 M**	1455	49	IE1	86.0	86.0	85.0	0.82	15.4	2.7	6.7	3.2	62	74	**1LA6133-4AA■■-Z**	62	0.023	16
11	**12.6**	**160 M**	1460	72	IE1	87.6	87.6	86.6	0.84	21.5	2.2	6.2	2.7	66	78	**1LA6163-4AA■■-Z**	100	0.043	16
15	**17.3**	**160 L**	1460	98	IE1	88.7	88.7	87.7	0.84	29	2.6	6.5	3.8	66	78	**1LA6166-4AA■■-Z**	114	0.055	16
18.5	**21.3**	**180 M**	1465	121	IE1	89.3	89.7	89.2	0.84	35.5 [2]	2.4	6.7	3.1	65	78	**1LG4183-4AA■■-Z**	140	0.10	16
22	**25.3**	**180 L**	1465	143	IE1	89.9	90.4	90.0	0.84	42 [2]	2.5	6.9	3.2	65	78	**1LG4186-4AA■■-Z**	155	0.12	16
30	**34.5**	**200 L**	1465	196	IE1	90.7	91.1	90.6	0.85	56 [2]	2.5	6.7	3.4	66	79	**1LG4207-4AA■■-Z**	205	0.19	16
37	**42.5**	**225 S**	1475	240	IE1	91.2	91.6	91.0	0.85	69 [2]	2.3	6.7	3.1	66	79	**1LG4220-4AA■■-Z**	265	0.37	16
45	**52**	**225 M**	1475	291	IE1	91.7	92.2	91.8	0.86	82 [2]	2.6	7.2	3.2	66	79	**1LG4223-4AA■■-Z**	300	0.45	16
55	**63**	**250 M**	1480	355	IE1	92.1	92.4	92.0	0.85	101	2.4	6.1	2.8	67	80	**1LG4253-4AA■■-Z**	390	0.69	16
75	**86**	**280 S**	1485	482	IE1	92.7	92.6	91.6	0.85	137 [2]	2.5	7.1	3.0	70	83	**1LG4280-4AA■■-Z**	535	1.2	16
90	**104**	**280 M**	1485	579	IE1	93.0	92.9	92.0	0.86	162 [2]	2.5	7.4	3.0	70	83	**1LG4283-4AA■■-Z**	580	1.4	16
110	**127**	**315 S**	1488	706	IE1	93.3	93.3	92.7	0.85	200 [2]	2.5	6.4	2.8	70	83	**1LG4310-4AA■■-Z**	730	1.9	16
132	**152**	**315 M**	1488	847	IE1	93.5	93.5	92.9	0.85	240 [2]	2.7	6.8	2.9	70	83	**1LG4313-4AA■■-Z**	810	2.3	16
160	**184**	**315 L**	1486	1028	IE1	93.8	93.9	93.5	0.86	285 [3]	2.7	6.8	2.8	70	83	**1LG4316-4AA■■-Z**	955	2.9	16
200	**230**	**315 L**	1486	1285	IE1	94.0	94.2	94.0	0.88	350 [3]	2.6	6.5	2.8	70	83	**1LG4317-4AA■■-Z**	1060	3.5	16

Voltages				No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
50 Hz	230 VΔ/400 VY	60 Hz [1]	460 VY	4	1LA6106 ... 166	1LG4183 ... 313	**Standard**	1	–
50 Hz	400 VΔ/690 VY	60 Hz [1]	460 VΔ	4	1LA6106 ... 166	1LG4183 ... 317	**Standard**	6	–
50 Hz	500 VY			4	1LA6106 ... 166	1LG4183 ... 313	Without additional charge	3	–
	500 VΔ			4	1LA6106 ... 166	1LG4183 ... 317	Without additional charge	5	–
Further voltages [1]		For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.						9	. . .

Types of construction		No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
Without flange	IM B3/6/7/8 [4] [5]	4	1LA6106 ... 166	1LG4183 ... 317	**Standard**	0	–
	IM V6 [4] [5]	4	1LA6106 ... 166	1LG4183 ... 317	**Standard**	0	–
		4	–	1LG4183 ... 317	Without additional charge	9	**M1E**
With flange	IM B5 [4] [6]	4	1LA6106 ... 166	1LG4183 ... 317	With additional charge	1	–
	IM V3 [4] [6]	4	1LA6106 ... 166	–	With additional charge	1	–
		4	–	1LG4183 ... 313	With additional charge	9	**M1G**
	IM V1 with prot. cover [4] [6] [7]	4	1LA6106 ... 166	1LG4183 ... 317	With additional charge	4	–
	IM B35	4	1LA6106 ... 166	1LG4183 ... 317	With additional charge	6	–
With standard flange	IM B14, IM V19 [4]	4	1LA6106 ... 166	–	With additional charge	2	–
	IM B34	4	1LA6106 ... 166	–	With additional charge	7	–
With special flange	IM B14, IM V19 [4]	4	1LA6106 ... 166	–	With additional charge	3	–
Further types of constr.	For add . charges, code numbers, order codes and descriptions, see suppl. and special versions.					9	. . .

Design according to ATEX		No. of poles	Motor type 1LA6	Motor type 1LG4	Version	Order code(s)
Zone 2	Mains-fed operation	4	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M72**
	Converter-fed operation (FC)	4	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M73**
Zone 21	Mains-fed operation	4	–	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M34**
	Converter-fed operation (FC)	4	–	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M38**
Zone 22	Mains-fed operation	4	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M35**
	Converter-fed operation (FC)	4	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M39**
Zone 2/22 (IP55)	Mains-fed operation	4	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M74**
	Converter-fed operation (FC)	4	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L. . . . . -. . . ■■-Z**	**M75**

Special versions			Order code(s)
Options	For add. charges, order codes and descriptions, see suppl. and special versions.	**1L. . . . . -. . . ■■-Z**	**. . .+. . .+. . .+. . .**

1) Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.

2) For connection to 230 V, parallel feeders are necessary.

3) For connection to 400 V, parallel feeders are necessary.

4) The following applies for explosion-proof motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.

5) If 1LG4 motors in types of construction with feet IM B6, IM B7, IM V6 or IM V5 without protective cover are fixed to the wall, it is recommended that the motor feet are supported.

6) 1LG4220 to 1LG4318 motors are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

7) The "Second shaft extension" option, order code K16 is not possible.

Motors for Zone 2 or 21/22 in type of protection Ex n or Ex tD

Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1LA6, 1LG4 with order code for explosion protection

IE1

Selection and ordering data (continued)

P_{rated}, 50 Hz	P_{rated}, 60 Hz [1]	Frame size	Operating values at rated output: 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-φ_{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	Cast-iron series 1LA6/1LG4 – *IE1 version for Zone 2 or 21/22 in type of protection Ex n or Ex tD*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No. with order code for Ex prot.	kg	kgm²	CL
• Cooling: Self-ventilated (IC 411) • Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30 • Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) [1]																			
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz [1]																			
1.5	1.75	100 L	925	15	IE1	75.2	75.2	72.2	0.75	3.85	2.3	4.0	2.3	47	59	1LA6106-6AA■■-Z	33	0.0047	16
2.2	2.55	112 M	940	22	IE1	77.7	78.2	75.2	0.78	5.2	2.2	4.6	2.5	52	64	1LA6113-6AA■■-Z	40	0.0091	16
3	3.45	132 S	950	30	IE1	79.7	79.7	78.7	0.76	7.1	1.9	4.2	2.2	63	75	1LA6130-6AA■■-Z	50	0.015	16
4	4.55	132 M	950	40	IE1	81.4	81.4	80.4	0.76	9.3	2.1	4.5	2.4	63	75	1LA6133-6AA■■-Z	57	0.019	16
5.5	6.3	132 M	950	55	IE1	83.1	83.1	82.1	0.76	12.6	2.3	5.0	2.6	63	75	1LA6134-6AA■■-Z	66	0.025	16
7.5	8.6	160 M	960	75	IE1	84.7	84.7	83.7	0.74	17.3	2.1	4.6	2.5	66	78	1LA6163-6AA■■-Z	103	0.044	16
11	12.6	160 L	960	109	IE1	86.4	86.4	85.4	0.74	25	2.3	4.8	2.6	66	78	1LA6166-6AA■■-Z	122	0.063	16
15	18	180 L	965	148	IE1	87.7	88.1	88.3	0.83	29.5	2.3	5.3	2.5	59	72	1LG4186-6AA■■-Z	150	0.18	16
18.5	22	200 L	975	181	IE1	88.6	89.0	88.6	0.81	37	2.5	5.6	2.5	59	72	1LG4206-6AA■■-Z	195	0.24	16
22	26.5	200 L	975	215	IE1	89.2	89.9	88.8	0.81	44	2.6	5.7	2.5	59	72	1LG4207-6AA■■-Z	205	0.29	16
30	36	225 M	978	293	IE1	90.2	91.2	91.3	0.83	58 [2]	2.7	5.6	2.5	60	73	1LG4223-6AA■■-Z	280	0.49	16
37	44.5	250 M	980	361	IE1	90.8	91.5	91.3	0.83	71	2.7	6.0	2.3	61	74	1LG4253-6AA■■-Z	370	0.76	16
45	54	280 S	985	436	IE1	91.4	92.1	92.0	0.85	84	2.4	6.1	2.4	61	74	1LG4280-6AA■■-Z	475	1.1	16
55	66	280 M	985	533	IE1	91.9	92.5	92.6	0.86	100	2.5	6.3	2.5	61	74	1LG4283-6AA■■-Z	510	1.4	16
75	90	315 S	988	725	IE1	92.6	92.8	92.1	0.84	139	2.5	6.5	2.8	65	78	1LG4310-6AA■■-Z	685	2.1	16
90	108	315 M	988	870	IE1	92.9	93.2	92.8	0.84	166 [2]	2.6	6.8	2.9	65	78	1LG4313-6AA■■-Z	750	2.5	16
110	132	315 L	988	1063	IE1	93.3	93.6	93.4	0.86	198	2.5	6.8	2.9	65	78	1LG4316-6AA■■-Z	890	3.2	16
132	158	315 L	988	1276	IE1	93.5	93.7	93.4	0.86	235	3.1	7.3	3.0	65	78	1LG4317-6AA■■-Z	980	4.0	16
160	192	315 L	988	1547	IE1	93.8	93.9	93.6	0.86	285 [3]	3.0	7.5	3.0	65	78	1LG4318-6AA■■-Z	1180	4.7	16

Voltages			No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
50 Hz	230 VΔ/400 VY	60 Hz [1] 460 VY	6	1LA6106 ... 166	1LG4183 ... 313	**Standard**	1	–
50 Hz	400 VΔ/690 VY	60 Hz [1] 460 VΔ	6	1LA6106 ... 166	1LG4183 ... 318	**Standard**	6	–
50 Hz	500 VY		6	1LA6106 ... 166	1LG4183 ... 313	Without additional charge	3	–
	500 VΔ		6	1LA6106 ... 166	1LG4183 ... 318	Without additional charge	5	–
Further voltages [1]		For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.					9	. . .

Types of construction		No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
Without flange	IM B3/6/7/8 [4] [5]	6	1LA6106 ... 166	1LG4183 ... 318	**Standard**	0	–
	IM V6 [4] [5]	6	1LA6106 ... 166	1LG4183 ... 318	**Standard**	0	–
		6	–	1LG4183 ... 318	Without additional charge	9	**M1E**
With flange	IM B5 [4] [6]	6	1LA6106 ... 166	1LG4183 ... 318	With additional charge	1	–
	IM V3 [4] [6]	6	1LA6106 ... 166	–	With additional charge	1	–
		6	–	1LG4183 ... 313	With additional charge	9	**M1G**
	IM V1 with prot. cover [4] [6] [7]	6	1LA6106 ... 166	1LG4183 ... 318	With additional charge	4	–
	IM B35	6	1LA6106 ... 166	1LG4183 ... 318	With additional charge	6	–
With standard flange	IM B14, IM V19 [4]	6	1LA6106 ... 166	–	With additional charge	2	–
	IM B34	6	1LA6106 ... 166	–	With additional charge	7	–
With special flange	IM B14, IM V19 [4]	6	1LA6106 ... 166	–	With additional charge	3	–
Further types of constr.	For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.					9	. . .

Design according to ATEX		No. of poles	Motor type 1LA6	Motor type 1LG4	Version	Order code(s)
Zone 2	Mains-fed operation	6	1LA6106 ... 166	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M72**
	Converter-fed operation (FC)	6	1LA6106 ... 166	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M73**
Zone 21	Mains-fed operation	6	–	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M34**
	Converter-fed operation (FC)	6	–	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M38**
Zone 22	Mains-fed operation	6	1LA6106 ... 166	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M35**
	Converter-fed operation (FC)	6	1LA6106 ... 166	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M39**
Zone 2/22 (IP55)	Mains-fed operation	6	1LA6106 ... 166	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M74**
	Converter-fed operation (FC)	6	1LA6106 ... 166	1LG4183 ... 317	With add. charge 1L . . . . . -. . . ■■-Z	**M75**

Special versions			Order code(s)
Options	For add. charges, order codes and descriptions, see suppl. and special versions.	1L . . . . . -. . . ■■-Z	. . .+. . .+. . .+. . .

1) Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.

2) For connection to 230 V, parallel feeders are necessary.

3) For connection to 400 V, parallel feeders are necessary.

4) The following applies for explosion-proof motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.

5) If 1LG4 motors in types of construction with feet IM B6, IM B7, IM V6 or IM V5 without protective cover are fixed to the wall, it is recommended that the motor feet are supported.

6) 1LG4220 to 1LG4318 motors are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

7) The "Second shaft extension" option, order code K16 is not possible.

Motors for Zone 2 or 21/22 in type of protection Ex n or Ex tD

IE1

Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1LA6, 1LG4 with order code for explosion protection

Selection and ordering data (continued)

P_{rated}, 50 Hz	P_{rated}, 60 Hz [1]	Frame size	Operating values at rated output: 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-φ_{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	Cast-iron series 1LA6/1LG4 – *IE1 version for Zone 2 or 21/22 in type of protection Ex n or Ex tD*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No. with order code for Ex prot.	kg	kgm²	CL

- **Cooling: Self-ventilated (IC 411)**
- **Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30**
- **Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)** [1]

8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz [1]

0.75	**0.86**	**100 L**	680	11	–	64.0	63.0	59.0	0.76	2.25	1.6	3.0	1.9	45	57	**1LA6106-8AB■■-Z**	29	0.0051	13
1.1	**1.27**	**100 L**	680	15	–	70.0	70.0	66.0	0.76	3.0	1.8	3.3	2.1	45	57	**1LA6107-8AB■■-Z**	32	0.0063	13
1.5	**1.75**	**112 M**	705	20	–	72.1	72.1	68.1	0.76	3.95	1.8	3.7	2.1	49	61	**1LA6113-8AB■■-Z**	39	0.013	13
2.2	**2.55**	**132 S**	700	30	–	73.2	73.2	70.2	0.74	5.9	1.9	3.9	2.3	53	65	**1LA6130-8AB■■-Z**	50	0.014	13
3	**3.45**	**132 M**	700	41	–	75.2	75.2	72.2	0.74	7.8	2.1	4.1	2.4	53	65	**1LA6133-8AB■■-Z**	57	0.019	13
4	**4.55**	**160 M**	715	53	–	78.3	78.8	75.8	0.72	10.2	2.2	4.5	2.6	63	75	**1LA6163-8AB■■-Z**	91	0.036	13
5.5	**6.3**	**160 M**	710	74	–	81.9	81.9	80.9	0.73	13.3	2.3	4.7	2.7	63	75	**1LA6164-8AB■■-Z**	102	0.046	13
7.5	**8.6**	**160 L**	715	100	–	83.9	83.9	82.9	0.72	17.9	2.7	5.3	3.0	63	75	**1LA6166-8AB■■-Z**	122	0.064	13
11	**13.2**	**180 L**	725	145	–	85.6	86.4	86.1	0.73	25.5	1.7	4.2	2.1	67	80	**1LG4186-8AB■■-Z**	150	0.17	13
15	**18**	**200 L**	725	198	–	87.0	87.7	87.3	0.76	32.5	2.2	4.9	2.6	57	70	**1LG4207-8AB■■-Z**	205	0.29	13
18.5	**22**	**225 S**	730	242	–	88.0	88.9	88.7	0.78	39	2.3	5.5	2.7	57	70	**1LG4220-8AB■■-Z**	270	0.48	13
22	**26.5**	**225 M**	730	288	–	88.6	89.4	89.3	0.79	45.5	2.3	5.6	2.8	61	74	**1LG4223-8AB■■-Z**	290	0.55	13
30	**36**	**250 M**	730	392	–	89.7	90.3	90.3	0.81	60	2.3	5.5	2.6	55	68	**1LG4253-8AB■■-Z**	385	0.84	13
37	**44.5**	**280 S**	735	481	–	90.4	91.3	91.3	0.81	73	2.2	5.0	2.1	58	71	**1LG4280-8AB■■-Z**	475	1.1	13
45	**54**	**280 M**	735	585	–	91.0	91.8	91.8	0.81	88	2.2	5.1	2.1	58	71	**1LG4283-8AB■■-Z**	515	1.4	13
55	**66**	**315 S**	740	710	–	91.6	92.0	91.6	0.81	107	2.2	5.8	2.6	64	77	**1LG4310-8AB■■-Z**	680	2.1	13
75	**90**	**315 M**	738	971	–	92.3	93.0	92.8	0.83	141	2.2	5.7	2.6	64	77	**1LG4313-8AB■■-Z**	745	2.5	13
90	**108**	**315 L**	738	1165	–	92.6	93.2	93.2	0.83	169	2.2	5.8	2.7	64	77	**1LG4316-8AB■■-Z**	865	3.1	13
110	**132**	**315 L**	738	1423	–	93.1	93.5	93.2	0.83	205	2.4	6.1	2.8	64	77	**1LG4317-8AB■■-Z**	1020	3.9	13
132	**158**	**315 L**	738	1708	–	93.3	93.7	93.5	0.83	245	2.5	6.5	2.9	64	77	**1LG4318-8AB■■-Z**	1100	4.5	13

Voltages			No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
50 Hz	230 VΔ/400 VY	60 Hz [1] 460 VY	8	1LA6106 ... 166	1LG4183 ... 313	**Standard**	**1**	–
50 Hz	400 VΔ/690 VY	60 Hz [1] 460 VΔ	8	1LA6106 ... 166	1LG4183 ... 318	**Standard**	**6**	–
50 Hz	500 VY		8	1LA6106 ... 166	1LG4183 ... 313	Without additional charge	**3**	–
	500 VΔ		8	1LA6106 ... 166	1LG4183 ... 318	Without additional charge	**5**	–
Further voltages [1]		For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.					**9**	. . .

Types of construction		No. of poles	Motor type 1LA6	Motor type 1LG4	Version		Order code(s)
Without flange	IM B3/6/7/8 [2] [3]	8	1LA6106 ... 166	1LG4183 ... 318	**Standard**	**0**	–
	IM V6 [2] [3]	8	1LA6106 ... 166	1LG4183 ... 318	**Standard**	**0**	–
		8	–	1LG4183 ... 318	Without additional charge	**9**	**M1E**
With flange	IM B5 [2] [4]	8	1LA6106 ... 166	1LG4183 ... 318	With additional charge	**1**	–
	IM V3 [2] [4]	8	1LA6106 ... 166	–	With additional charge	**1**	–
		8	–	1LG4183 ... 313	With additional charge	**9**	**M1G**
	IM V1 with prot. cover [2] [4] [5]	8	1LA6106 ... 166	1LG4183 ... 318	With additional charge	**4**	–
	IM B35	8	1LA6106 ... 166	1LG4183 ... 318	With additional charge	**6**	–
With standard flange	IM B14, IM V19 [2]	8	1LA6106 ... 166	–	With additional charge	**2**	–
	IM B34	8	1LA6106 ... 166	–	With additional charge	**7**	–
With special flange	IM B14, IM V19 [2]	8	1LA6106 ... 166	–	With additional charge	**3**	–
Further types of constr.	For add. charges, code numbers, order codes and descriptions, see suppl. and special versions.					**9**	. . .

Design according to ATEX		No. of poles	Motor type 1LA6	Motor type 1LG4	Version	Order code(s)
Zone 2	Mains-fed operation	8	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M72**
	Converter-fed operation (FC)	8	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M73**
Zone 21	Mains-fed operation	8	–	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M34**
	Converter-fed operation (FC)	8	–	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M38**
Zone 22	Mains-fed operation	8	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M35**
	Converter-fed operation (FC)	8	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M39**
Zone 2/22 (IP55)	Mains-fed operation	8	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M74**
	Converter-fed operation (FC)	8	1LA6106 ... 166	1LG4183 ... 317	With add. charge **1L . . . . . -. . . ■■-Z**	**M75**

Special versions			Order code(s)
Options	For add. charges, order codes and descriptions, see suppl. and special versions.	**1L . . . . . -. . . ■■-Z**	. . .+. . .+. . .+. . .

1) Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.

2) The following applies for explosion-proof motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.

3) If 1LG4 motors in types of construction with feet IM B6, IM B7, IM V6 or IM V5 without protective cover are fixed to the wall, it is recommended that the motor feet are supported.

4) 1LG4220 to 1LG4318 motors are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

5) The "Second shaft extension" option, order code K16 is not possible.