

Squirrel-cage motors

1LA/1LG · Cast iron housing · Basic version

Selection and ordering data

Rated output	Size	Order No. Order No. supplement for voltage and type of construction, see table below	Efficiency class 	Operating data at rated output						Starting torque For direct-on-line starting as multiple of the rated torque	Starting current current	Stalling torque torque	Torque class KL	Moment of inertia J kg m²	Weight Type of constr. IM B 3 approx. kg
				Rated speed	Efficiency η at		Power factor p.f.	Rated current at 400 V	Rated torque Nm						
					4/4-load %	3/4-load %									
kW				rpm	%	%	A								
Energy-saving motor to CEMEP "Improved Efficiency" eff2, IP55 degree of protection, temperature class F 															
	3000 rpm, 2-pole, 50 Hz														
3	100 L	1LA6 106-2AA . .	2	2890	84.0	84.0	0.85	6.1	9.9	2.8	6.8	3.0	16	0.0035	34
4	112 M	1LA6 113-2AA . .	2	2905	86.0	86.0	0.86	7.8	13	2.6	7.2	2.9	16	0.0059	43
5.5	132 S	1LA6 130-2AA . .	2	2925	86.5	86.5	0.89	10.4	18	2.0	5.9	2.8	16	0.015	53
7.5		1LA6 131-2AA . .	2	2930	88.0	88.0	0.89	13.8	24	2.3	6.9	3.0	16	0.019	58
11	160 M	1LA6 163-2AA . .	2	2940	89.5	89.5	0.88	20.0	36	2.1	6.5	2.9	16	0.034	96
15	160 M	1LA6 164-2AA . .	2	2940	90.0	90.2	0.90	26.5	49	2.2	6.6	3.0	16	0.043	105
18.5	160 L	1LA6 166-2AA . .	2	2940	91.0	91.2	0.91	32.0	60	2.4	7.0	3.1	16	0.051	115
22	180 M	1LG4 183-2AA . .	2	2945	91.6	91.6	0.86	40.5	71	2.5	6.4	3.4	16	0.068	145
30	200 L	1LG4 206-2AA . .	2	2950	91.8	91.9	0.88	54.0	97	2.3	6.5	3.0	16	0.13	205
37		1LG4 207-2AA . .	2	2955	92.9	93.2	0.89	65.0	120	2.5	7.2	3.3	16	0.15	225
45	225 M	1LG4 223-2AA . .	2	2960	93.6	93.9	0.88	79.0	145	2.4	6.7	3.1	16	0.22	285
55	250 M	1LG4 253-2AB . .	2	2970	93.6	93.8	0.88	96.0	177	2.1	6.7	3.1	13	0.40	375
75	280 S	1LG4 280-2AB . .	2	2975	94.5	94.3	0.88	130	241	2.5	7.5	3.1	13	0.72	500
90	280 M	1LG4 283-2AB . .	2	2975	95.1	95.2	0.89	154	289	2.6	7.2	3.1	13	0.83	540
110	315 S	1LG4 310-2AB . .		2982	94.6	93.8	0.88	190	352	2.4	7.2	3.1	13	1.2	720
132	315 M	1LG4 313-2AB . .		2982	95.1	94.8	0.90	225	423	2.4	6.9	3.0	13	1.4	775
160	315 L	1LG4 316-2AB . .		2982	95.5	95.3	0.91	265	512	2.4	7.0	3.0	13	1.6	900
200	315 L	1LG4 317-2AB . .		2982	95.9	95.8	0.92	325	641	2.3	6.7	2.9	13	2.1	1015
250	315	1LA8 315-2AC . .		2979	96.2	96.2	0.90	415	801	1.8	7.0	2.8	10	2.7	1300
315		1LA8 317-2AC . .		2979	96.6	96.6	0.91	520	1010	1.8	7.0	2.8	10	3.3	1500
355	355	1LA8 353-2AC . . ▲		2980	96.6	96.6	0.90	590	1140	1.7	6.5	2.5	10	4.8	1900
400		1LA8 355-2AC . . ▲		2980	96.7	96.7	0.91	660	1280	1.7	6.5	2.5	10	5.3	2000
500		1LA8 357-2AC . . ▲		2982	97.1	97.1	0.91	820	1600	1.8	6.5	2.6	10	6.4	2200
560	400	1LA8 403-2AC . . ▲		2985	97.1	97.1	0.91	910	1790	1.6	7.0	2.8	10	8.6	2800
630		1LA8 405-2AC . . ▲		2985	97.1	97.1	0.91	1020	2020	1.6	7.0	2.8	10	9.6	3000
710		1LA8 407-2AC . . ▲		2985	97.3	97.3	0.91	670 ●●	2270	1.7	7.0	2.8	10	11	3200
800	450	1LA8 453-2AE . . ▲		2986	97.2	97.2	0.91	760 ●	2560	0.9	7.0	3.0	5	19	4000
900		1LA8 455-2AE . . ▲		2986	97.3	97.3	0.92	840 ●	2880	0.9	7.0	2.8	5	21	4200
1000		1LA8 457-2AE . . ▲		2986	97.4	97.4	0.93	920 ●	3200	0.9	7.0	2.7	5	23	4400

- Rated current at 690 V.

▲ With axial fan for clockwise rotation. ■ Also supplied for 400 VΔ (voltage identifier "9" and order code L1Y).

Order No. supplements

Motor type	Penultimate position: Voltage identifier							Final position: Type of construction identifier						
	50 Hz					60 Hz		IM B 3	Price supplement					
	230 VΔ / 400 VΔ / 500 VY	500 VΔ	690 VΔ	460 VY	460 VΔ	IM B 5	IM V 1		IM V 1	IM B 14	IM B 14	IM B 35		
	400 VY	690 VY			(Outputs at 60 Hz see "Technical information")		With- out protective cover		With protective cover	With stand-ard flange	With special flange			
1LA6 106 to 1LA6 166	1	6	3	5	–	1	6	0	1	1	4	2	3	6
1LG4 183 to 1LG4 313	1	6	3	5	–	1	6	0	1	1	4	–	–	6
1LG4 316 to 1LG4 317	–	6	–	5	–	–	6	0	–	8	4	–	–	6
1LA8 315 to 1LA8 405	–	6	–	5	–	–	9 L2F	0	–	8	4	–	–	6
1LA8 407 to 1LA8 457	–	–	–	5	0	–	On request	0	–	8	4	–	–	6

Other voltage and/or frequency, voltage identifier **"9"**.
Order codes are required for this purpose (see "Technical information", "Voltages, currents and frequencies").

For other types of construction, see "Technical information", "Types of construction".

For possible 2-pole motors, see "Technical information", "Outputs at 60 Hz".

■ **Parallel supply cables required** (see "Technical information", "Connections, circuits and terminal blocks")

[illegible]

1LA/1LG · Cast iron housing · Basic version

Selection and ordering data

Rated output	Size	Order No. Order No. supplement for volt- age and type of con- struction, see table below	Effi- ciency class	Operating data at rated output						Starting torque For direct-on-line starting as multiple of the rated torque	Starting current current	Stalling torque torque	Torque class	Moment of inertia J	Weight of constr. IM B 3 approx.
				Rated speed	Efficiency η at		Power factor p.f.	Rated current at 400 V	Rated torque						
					4/4- load %	3/4- load %									
kW			EFF2	rpm	%	%		A	Nm				KL	kg m²	kg
Energy-saving motor to CEMEP "Improved Efficiency" eff2, IP55 degree of protection, temperature class F															EFF 2
	1500 rpm, 4-pole, 50 Hz														
2.2 3	100 L	1LA6 106-4AA .. 1LA6 107-4AA ..	2 2	1420 1420	82.0 83.0	82.5 83.5	0.82 0.82	4.7 6.4	15 20	2.5 2.7	5.6 5.6	2.8 3.0	16 16	0.0047 0.0055	33 36
4	112 M	1LA6 113-4AA ..	2	1440	85.0	85.5	0.83	8.2	27	2.7	6.0	3.0	16	0.012	45
5.5 7.5	132 S 132 M	1LA6 130-4AA .. 1LA6 133-4AA ..	2 2	1455 1455	86.0 87.0	86.0 87.5	0.81 0.82	11.4 15.2	36 49	2.5 2.7	6.3 6.7	3.1 3.2	16 16	0.018 0.023	55 62
11 15	160 M 160 L	1LA6 163-4AA .. 1LA6 166-4AA ..	2 2	1460 1460	88.5 90.0	89.0 90.2	0.84 0.84	21.5 28.5	72 98	2.2 2.6	6.2 6.5	2.7 3.0	16 16	0.043 0.055	100 114
18.5 22	180 M 180 L	1LG4 183-4AA .. 1LG4 186-4AA ..	2 2	1465 1465	90.4 91.0	90.8 91.5	0.84 0.84	35.0 41.5	121 143	2.4 2.5	6.7 6.9	3.1 3.2	16 16	0.099 0.12	140 155
30	200 L	1LG4 207-4AA ..	2	1465	91.6	92.0	0.85	56.0	196	2.5	6.7	3.4	16	0.19	205
37 45	225 S 225 M	1LG4 220-4AA .. 1LG4 223-4AA ..	2 2	1475 1475	92.2 93.1	92.6 93.6	0.85 0.86	68.0 81.0	240 291	2.5 2.7	6.7 7.2	3.1 3.2	16 16	0.37 0.45	265 300
55	250 M	1LG4 253-4AA ..	2	1480	93.5	93.8	0.85	100	355	2.4	6.1	2.8	16	0.69	390
75 90	280 S 280 M	1LG4 280-4AA .. 1LG4 283-4AA ..	2 2	1485 1485	94.2 94.6	94.1 94.6	0.85 0.86	136 160	482 579	2.5 2.5	7.1 7.4	3.0 3.0	16 16	1.2 1.4	535 580
110 132 160 200	315 S 315 M 315 L 315 L	1LG4 310-4AA .. 1LG4 313-4AA .. 1LG4 316-4AA .. 1LG4 317-4AA ..		1488 1488 1486 1486	94.6 95.2 95.7 95.9	94.6 95.2 95.8 96.2	0.85 0.85 0.86 0.88	198 235 280 340	706 847 1028 1285	2.5 2.7 2.7 2.6	6.4 6.8 6.8 6.5	2.8 2.9 2.8 2.8	16 16 16 16	1.9 2.3 2.9 3.5	730 810 955 1060
250 315	315 315	▲ 1LA8 315-4AB .. ▲ 1LA8 317-4AB ..		1488 1488	96.0 96.3	96.0 96.3	0.88 0.88	425 540	1600 2020	1.9 2.0	6.5 6.8	2.8 2.8	13 13	3.6 4.4	1300 1500
355 400 500	355 355 355	▲ 1LA8 353-4AB .. ▲ 1LA8 355-4AB .. ▲ 1LA8 357-4AB ..		1488 1488 1488	96.3 96.4 96.8	96.3 96.4 96.8	0.87 0.87 0.88	610 690 850	2280 2570 3210	2.1 2.1 2.1	6.5 6.5 6.5	2.6 2.6 2.4	13 13 13	6.1 6.8 8.5	1900 2000 2200
560 630 710	400 400 400	1LA8 403-4AB .. 1LA8 405-4AB .. 1LA8 407-4AB ..		1492 1492 1492	96.8 97.0 97.0	96.8 97.0 97.0	0.88 0.88 0.89	950 1060 690 ■■	3580 4030 4540	1.9 1.9 1.9	6.5 6.8 6.8	2.7 2.7 2.7	13 13 13	13 14 16	2800 3000 3200
800 900 1000	450 450 450	1LA8 453-4AC .. 1LA8 455-4AC .. 1LA8 457-4AC ..		1492 1492 1492	97.0 97.1 97.1	97.0 97.1 97.1	0.88 0.88 0.89	780 ■■ 880 ■■ 970 ■■	5120 5760 6400	1.6 1.6 1.7	7.0 7.0 7.0	2.6 2.6 2.6	10 10 10	23 26 28	4000 4200 4400

- Rated current at 690 V.

■ Also supplied for 400 VΔ (voltage identifier "9" and order code **L1Y**).

▲ **Standardline for 1LA8 motors** is a standard offer for certain designs and can be ordered with Order Code **B20**. It decreases the price by 10% for the basic machine. The delivery time is 4 weeks. Scope of supply for Standardline:

– 4-pole design

- Design designator 0 (IM B3)

- Available for operation with converter, but not in 690 V design

Available Order No.: A12, A23, A61, A72, H70, H73, K09, K10, K45, L97, L98, M58 and Y53

Order No. supplements

Motor type	Penultimate position: Voltage identifier								Final position: Type of construction identifier						
	50 Hz					60 Hz			IM B 3 Price supplement						
	230 VΔ / 400 VΔ / 500 VΥ 500 VΔ 690 VΔ					460 VΥ 460 VΔ			IM B 5 IM V 1 IM V 1 IM B 14 IM B 14 IM B 35						
	400 VΥ 690 VΥ					(Outputs at 60 Hz see "Technical information")			With- out pro- tec- tive cover With protec- tive cover With stan- dard flange With special flange						
1LA6 106 to 1LA6 166	1	6	3	5	–	1	6	0	1	1	4	2	3	6	
1LG4 183 to 1LG4 313	1	6	3	5	–	1	6	0	1	1	4	–	–	6	
1LG4 316 to 1LG4 317	–	6	–	5	–	–	6	0	–	8	4	–	–	6	
1LA8 315 to 1LA8 405	–	6	–	5	–	–	9 L2F	0	–	8	4	–	–	6	
1LA8 407 to 1LA8 457	–	–	–	5	0	–	On request	0	–	8	4	–	–	6	

Other voltage and/or frequency, voltage identifier "9".
Order codes are required for this purpose (see "Technical information", "Voltages, currents and frequencies").

For other types of construction, see "Technical information", "Types of construction".

■ **Parallel supply cables required** (see "Technical information", "Connections, circuits and terminal blocks")

Number of parallel supply cables required (see "Technical information", "Connections, circuits and terminal blocks")																								
Voltage	1LG4										1LA8													
	183	186	207	220	223	253	280	283	310	313	316	317	315	317	353	355	357	403	405	407	453	455	457	
230 V	■	■	■	■	■		■	■	■	■														
400 V											■		■	■	■	■	■	■	■					
500 V															■	■			■	■		■	■	
690 V																						■	■	