

SIEMENS



SIMOTICS 1LE0003 Premium Efficiency Low-voltage Motors

Overview

SIMOTICS 1LE0003 low voltage premium efficiency motor with cast iron housing is Totally Enclosed Fan Cooled (TEFC) or Totally Enclosed Forced Ventilated with IP55 environmental protection, and applicable for general purpose use. These motors are designed and manufactured in accordance with ISO, IEC standards, GB standards.

SIMOTICS 1LE0003 low voltage premium efficiency motor is designed for constant or adjustable speed with continuous duty operation (SI) over a speed range.

Features

- Frame material: grey cast iron.
- Standard color: stone grey (RAL 7030)
- Rated power output: 0.55kW~200kW at 50Hz.
- Available in 2, 4, 6 pole motor (0.75kW and up) with efficiency grade 2. according to GB1 8613-2012 and efficiency class IE3 (50Hz) according to IEC 60034-30.
- Optimized compact style construction.
- Standard mounting construction according to IEC 60034-7: IM B3, IM B5, IM B35 and etc.
- All motors are designed to IP55 degree of protection (IEC 60034-5).
- Re-greasing devices for FS¹⁾ 280 ~ 355 as standard, and for FS100 ~ 250 as option.
- Reinforced bearings for increased cantilever forces for FS100 ~ 355 as option.
- Winding protections with PTC, PT100 and KTY84-130 as option.
- Terminal box on top, and cable entry on right side (viewed from driven end). Variable location of connection boxes and cable entries as option.
- Insulation system is designed for temperature class 155 (F). At rated output with line-fed operation, the motors can be used in temperature class 130 (B).
- Self ventilated motors with radial-flow fans (cooling method IC 411 according to IEC 60034-6) as standard, forced air cool with external separately driven fans as option.
- FS 100 ~ 355 all motors have 2 eyebolts. FS 80 ~ 90 motors do not have eyebolt;

Environmental

- Degrees of motor protection IP55 (IEC 60034-5).
- Altitude shall not exceed 1000m above sea-level (IEC 60034-1).
- Allowed air temperature between -20 °C and 40 °C (IEC 60034-1).
- Permitted relative humidity:
 - -20 °C ≤ T ≤ 20 °C: 100 %
 - 20 °C < T ≤ 30 °C: 95 %
 - 30 °C < T ≤ 40 °C: 55 %

For higher coolant temperatures and / or site altitudes higher than 1000 m above sea level, the specified motor output must be reduced by using the factor k_{HT} . The results in an admissible output (P_{adm}) of the motor:

$$P_{adm} = P_{rated} \bullet k_{HT}$$

¹⁾FS, Frame Size

Technical data table

机座号 Frame Size	电动机型号 Motors Type	订货号 Order No.	额定功率 Rated Output	额定转速 Rated Speed	效率 Efficiency at (50HZ) 4/4 load	效率 Efficiency at (50HZ) 3/4 load	功率因数 Power factor	额定电流 Rated current
			kW	r/m	%	%		A
1500rpm 4-pole 220VD/380VY 50HZ								
80M	OCV3082B	1LE0003-0DB22-1 □□□	0.55	1440	80.8	81.8	0.76	1.36
80M	OCV3083B	1LE0003-0DB32-1 □□□	0.75	1445	82.5	82.9	0.75	1.84
90S	OCV3090B	1LE0003-0EB02-1 □□□	1.1	1430	84.1	85.1	0.79	2.50
90L	OCV3094B	1LE0003-0EB42-1 □□□	1.5	1440	85.3	86.0	0.79	3.40
100L	OCV3102B	1LE0003-1AB42-1 □□□	2.2	1445	86.7	87.1	0.82	4.70
100L	OCV3105B	1LE0003-1AB52-1 □□□	3	1450	87.7	88.1	0.82	6.3
1500rpm 4-pole 380VD/660VY 50HZ								
112M	OCV3112B	1LE0003-1BB23-3 □□□	4	1450	88.6	89.6	0.82	8.4
132S	OCV3130B	1LE0003-1CB03-3 □□□	5.5	1455	89.6	90.9	0.84	11.1
132M	OCV3132B	1LE0003-1CB23-3 □□□	7.5	1455	90.4	91.7	0.85	14.8
160M	OCV3162B	1LE0003-1DB23-3 □□□	11	1460	91.4	92.4	0.86	21.5
160L	OCV3164B	1LE0003-1DB43-3 □□□	15	1460	92.1	92.9	0.86	29.0
180M	OCV3182B	1LE0003-1EB23-3 □□□	18.5	1470	92.6	93.0	0.83	36.5
180L	OCV3184B	1LE0003-1EB43-3 □□□	22	1470	93.0	93.7	0.83	43.5
200L	OCV3204B	1LE0003-2AB43-3 □□□	30	1470	93.6	94.3	0.84	58
225S	OCV3220B	1LE0003-2BB03-3 □□□	37	1478	93.9	94.1	0.85	70
225M	OCV3222B	1LE0003-2BB23-3 □□□	45	1478	94.2	94.2	0.85	85
250M	OCV3252B	1LE0003-2CB23-3 □□□	55	1482	94.6	95.0	0.86	103
280S	OCV3280B	1LE0003-2DB03-3 □□□	75	1485	95.0	95.3	0.86	139
280M	OCV3282B	1LE0003-2DB23-3 □□□	90	1485	95.2	95.6	0.87	165
315S	OCV3310B	1LE0003-3AB03-3 □□□	110	1488	95.4	95.7	0.87	200
315M	OCV3312B	1LE0003-3AB23-3 □□□	132	1488	95.6	95.9	0.87	240
315L	OCV3315B	1LE0003-3AB53-3 □□□	160	1488	95.8	96.1	0.87	290
315L	OCV3316B	1LE0003-3AB63-3 □□□	185	1488	95.9	96.2	0.87	335
315L	OCV3317B	1LE0003-3AB73-3 □□□	200	1490	96.0	96.3	0.88	360
355M	OCV3352B	1LE0003-3BB23-3 □□□	220	1492	96.0	96.0	0.88	395
355M	OCV3353B	1LE0003-3BB33-3 □□□	250	1490	96.0	96.0	0.88	450
355L	OCV3355B	1LE0003-3BB53-3 □□□	280	1490	96.0	96.1	0.88	500
355L	OCV3356B	1LE0003-3BB63-3 □□□	315	1490	96.0	96.1	0.88	570

Technical data table

机座号 Frame Size	电动机型号 Motors Type	订货号 Order No.	额定转矩 Rated torque	起动电流 Starting Current	起动转矩 Starting torque	最大转矩 Max torque	转动惯量 Moment of inertia (J) (EFF2)	重量 Weight IMB3
			Nm				kgm²	kg
1500rpm 4-pole 220VD/380VY 50HZ								
80M	OCV3082B	1LE0003-0DB22-1 □□□	3.6	5.5	2.2	3.2	0.00216	16.5
80M	OCV3083B	1LE0003-0DB32-1 □□□	5.0	6.0	2.7	3.7	0.00250	18.0
90S	OCV3090B	1LE0003-0EB02-1 □□□	7.3	6.5	2.7	3.7	0.00389	24
90L	OCV3094B	1LE0003-0EB42-1 □□□	9.9	6.5	2.7	3.8	0.00499	27
100L	OCV3102B	1LE0003-1AB42-1 □□□	14.5	8.3	3.7	4.6	0.01125	42
100L	OCV3105B	1LE0003-1AB52-1 □□□	19.8	8.3	3.7	4.6	0.01313	46
1500rpm 4-pole 380VD/660VY 50HZ								
112M	OCV3112B	1LE0003-1BB23-3 □□□	26.3	8.3	3.7	4.6	0.0149	52
132S	OCV3130B	1LE0003-1CB03-3 □□□	36.1	7.8	2.4	3.8	0.0285	71
132M	OCV3132B	1LE0003-1CB23-3 □□□	49.2	7.8	2.4	3.8	0.0356	83
160M	OCV3162B	1LE0003-1DB23-3 □□□	72.0	7.8	2.4	3.8	0.0648	110
160L	OCV3164B	1LE0003-1DB43-3 □□□	98.1	7.8	2.6	3.8	0.0811	134
180M	OCV3182B	1LE0003-1EB23-3 □□□	120	7.8	2.6	3.6	0.126	170
180L	OCV3184B	1LE0003-1EB43-3 □□□	143	7.8	2.6	3.6	0.146	192
200L	OCV3204B	1LE0003-2AB43-3 □□□	195	7.8	2.6	3.6	0.220	255
225S	OCV3220B	1LE0003-2BB03-3 □□□	239	8.3	3.3	3.6	0.461	315
225M	OCV3222B	1LE0003-2BB23-3 □□□	291	8.3	3.3	3.6	0.479	342
250M	OCV3252B	1LE0003-2CB23-3 □□□	354	7.6	2.6	3.3	0.820	440
280S	OCV3280B	1LE0003-2DB03-3 □□□	482	7.6	2.6	3.0	1.310	580
280M	OCV3282B	1LE0003-2DB23-3 □□□	579	7.6	2.6	3.0	1.690	685
315S	OCV3310B	1LE0003-3AB03-3 □□□	706	7.9	3.3	3.0	2.770	800
315M	OCV3312B	1LE0003-3AB23-3 □□□	847	7.9	3.3	3.0	3.000	1035
315L	OCV3315B	1LE0003-3AB53-3 □□□	1027	7.9	3.3	3.0	3.140	1065
315L	OCV3316B	1LE0003-3AB63-3 □□□	1187	7.9	3.3	3.0	3.460	1115
315L	OCV3317B	1LE0003-3AB73-3 □□□	1282	7.9	3.3	3.0	3.790	1175
355M	OCV3352B	1LE0003-3BB23-3 □□□	1408	8.0	2.0	3.2	6.9	1670
355M	OCV3353B	1LE0003-3BB33-3 □□□	1602	7.8	1.8	2.9	6.9	1670
355L	OCV3355B	1LE0003-3BB53-3 □□□	1795	7.8	1.8	2.9	7.7	1700
355L	OCV3356B	1LE0003-3BB63-3 □□□	2019	8.0	1.8	2.9	8.5	1790