

SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2

IE2

Self-ventilated motors

Cast-iron series 1LE1501/1LE1601 with increased output

Selection and ordering data

Operating values at rated output																Cast-iron series		m _{IM} B3 J		Torque class
P _{rated} , 50 Hz	P _{rated} , 60 Hz 1)	Frame size	η _{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} /I _{rated}	I _{LR} /I _{rated}	T _B /I _{rated}	L _p IA, 50 Hz	L _{WA} , 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 with increased output Order No.				
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	▲ New	kg	kgm ²	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)																				
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																				
4	4.55	100 L	2905	13	IE2	85.8	87.2	87.0	0.86	7.8	2.5	7.6	3.5	67	79	▲ 1LE1 ■ 01-1AA6 ■-■■■■■	45	0.0054	16	
5.5	6.3	112 M	2950	18	IE2	87.0	87.5	87.2	0.89	10.3	2.2	7.7	3.3	69	81	▲ 1LE1 ■ 01-1BA6 ■-■■■■■	53	0.012	16	
11	12.6	132 M	2950	36	IE2	89.4	90.2	90.3	0.89	20	2.3	7.9	3.2	68	80	▲ 1LE1 ■ 01-1CA6 ■-■■■■■	80	0.031	16	
22	25.3	160 L	2955	71	IE2	91.3	91.7	91.3	0.89	39	3.1	8.4	3.7	70	82	▲ 1LE1 ■ 01-1DA6 ■-■■■■■	126	0.068	16	
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																				
4	4.55	100 L	1460	26	IE2	86.6	87.4	86.7	0.80	8.3	2.2	7.5	3.5	60	72	▲ 1LE1 ■ 01-1AB6 ■-■■■■■	46	0.014	16	
5.5	6.3	112 M	1460	36	IE2	87.7	88.1	87.4	0.81	11.2	2.5	7.1	3.2	58	70	▲ 1LE1 ■ 01-1BB6 ■-■■■■■	58	0.017	16	
11	12.6	132 M	1465	72	IE2	89.8	90.6	90.4	0.84	21	2.6	7.7	3.1	64	76	▲ 1LE1 ■ 01-1CB6 ■-■■■■■	80	0.046	16	
18.5	21.3	160 L	1475	120	IE2	91.2	91.7	91.6	0.85	34.5	2.5	7.7	3.3	65	77	▲ 1LE1 ■ 01-1DB6 ■-■■■■■	116	0.099	16	
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																				
2.2	2.55	100 L	965	22	IE2	81.8	82.5	81.5	0.76	5.1	1.9	5.7	2.9	59	71	▲ 1LE1 ■ 01-1AC6 ■-■■■■■	49	0.014	16	
3	3.45	112 M	960	30	IE2	83.3	84.1	83.6	0.79	6.6	2.1	6.0	3.1	57	69	▲ 1LE1 ■ 01-1BC6 ■-■■■■■	53	0.017	16	
7.5	8.6	132 M	970	74	IE2	87.2	87.8	87.3	0.77	16.1	2.1	6.5	3.0	63	75	▲ 1LE1 ■ 01-1CC6 ■-■■■■■	87	0.046	16	
15	17.3	160 L	975	147	IE2	89.7	90.6	90.5	0.81	30	1.9	6.5	2.9	67	79	▲ 1LE1 ■ 01-1DC6 ■-■■■■■	147	0.12	16	
Relubrication				Motor prot.	Fan cover	Bearing size		Converter-fed operat.		Warranty										
Basic Line	Optional (standard from FS 280 upwards)				Optional	Plastic	62 (63 from FS 280 upwards)		Up to 460 V 12 months		5									
Performance Line	Standard from FS 160 (optional for FS 100 ... 132)				Standard PTC	Steel	63		Up to 460 V 36 months		6									
Voltages						No. of poles	Frame size	Motor type		Version								Order code(s)		
50 Hz		230 VΔ/400 VY		60 Hz ¹⁾		460 VY	2, 4, 6	100 L ... 160 L		1LE1■01-1A ... -1D		Standard		2 2				–		
50 Hz		400 VΔ/690 VY		60 Hz ¹⁾		460 VΔ	2, 4, 6	100 L ... 160 L		1LE1■01-1A ... -1D		Standard		3 4				–		
50 Hz		500 VY					2, 4, 6	100 L ... 160 L		1LE1■01-1A ... -1D		Without additional charge		2 7				–		
50 Hz		500 VΔ					2, 4, 6	100 L ... 160 L		1LE1■01-1A ... -1D		Without additional charge		4 0				–		
Further voltages ¹⁾		For add. charges, code numbers, order codes and descr., see suppl. and special versions.														9 0		...		
Types of construction						No. of poles	Frame size	Motor type		Version								Order code(s)		
Without flange		IM B3 ²⁾				2, 4, 6	100 L ... 160 L	1LE1■01-1A ... -1D		Standard				A				–		
With flange		IM B5 ²⁾				2, 4, 6	100 L ... 160 L	1LE1■01-1A ... -1D		With additional charge				F				–		
With standard flange		IM B14 ²⁾				2, 4, 6	100 L ... 160 L	1LE1■01-1A ... -1D		With additional charge				K				–		
Further types of construction		For additional charges, code letters and descriptions, see supplements and special versions.														■		...		
Motor protection		Line				No. of poles	Frame size	Motor type		Version								Order code(s)		
Without		Only possible for Basic Line				2, 4, 6	100 L ... 160 L	1LE1501-1A ... -1D		Standard				A				–		
PTC thermistor with 3 temperature sensors		Basic Line				2, 4, 6	100 L ... 160 L	1LE1501-1A ... -1D		With additional charge				B				–		
		Performance Line				2, 4, 6	100 L ... 160 L	1LE1601-1A ... -1D		Standard				B				–		
Further motor protection		For additional charges, code letters and descriptions, see supplements and special versions.														■		...		
Connection box position						No. of poles	Frame size	Motor type		Version								Order code(s)		
Connection box at top						2, 4, 6	100 L ... 160 L	1LE1■01-1A ... -1D		Standard				4				–		
Further connection box positions		For additional charges, code numbers and descriptions, see supplements and special versions.																		
Special versions						No. of poles	Frame size	Motor type										Order code(s)		
Forced-air cooled without external fan/ fan cover (IC 416)						2, 4, 6	100 L ... 160 L	1LE1■01-1A ... -1D		1LE1■01-.... ■-■■■■■-Z		F90 +.+.+.+.+.+								
Options										1LE1■01-.... ■-■■■■■-Z		+.+.+.+.+.+.+.+								
		For additional charges, order codes and descriptions, see supplements and special versions.																		

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.