

Selection and ordering data

Operating values at rated output															Cast-iron series				m _M B3 J	Torque class
P _{ra} - ted, 50 Hz	P _{ra} - ted, 60 Hz 1)	Frame size	η _{ra} - ted, 50 Hz	T _{ra} - ted, 50 Hz	IE class	η _{ra} - ted, 50 Hz, 4/4	η _{ra} - ted, 50 Hz, 3/4	η _{ra} - ted, 50 Hz, 2/4	COS φ _{rated} , 4/4	I _{rated} , 50 Hz, 400 V	T _{LR} / T _{ra} - ted, 50 Hz	I _{LR} / I _{ra} - ted, 50 Hz	T _B / T _{ra} - ted, 50 Hz	L _{pfA} , 50 Hz	L _{WA} , 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 Article No.				
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A	dB(A)				dB(A)	kg	kgm ²	CL		
• Cooling: self-ventilated (IC411) or with order code F90 forced-air cooled without external fan and fan cover (IC416) • Efficiency: IE2 High Efficiency, 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⁾																				
0.37	0.43	71 M	2770	1.3	IE2	IE2	69.5	70.5	68.5	0.81	0.95	2.5	4.1	2.5	52	63	1LE1 5 01-0CA2	11.5	0.00035	16
0.55	0.63	71 M	2780	1.9	IE2	IE2	74.1	75	73.1	0.8	1.34	2.6	4.6	2.6	52	63	1LE1 5 01-0CA3	13	0.00045	16
0.75	0.86	80 M	2805	2.6	IE2	IE2	77.4	77.9	74.4	0.84	1.67	1.9	4.9	2.3	60	71	1LE1 5 01-0DA2	16	0.0008	16
1.1	1.27	80 M	2835	3.7	IE2	IE2	79.6	79.6	78.6	0.83	2.4	2.7	6	3.1	60	71	1LE1 5 01-0DA3	18	0.0011	16
1.5	1.75	90 S	2885	5	IE2	IE2	81.3	81.3	80.3	0.84	3.15	2.7	6.9	3.6	65	77	1LE1 5 01-0EA0	23	0.0017	16
2.2	2.55	90 L	2890	7.3	IE2	IE2	83.2	83.2	82.2	0.85	4.5	2.5	7.1	3.7	65	77	1LE1 5 01-0EA4	25.5	0.0021	16
3	3.45	100 L	2905	9.9	IE2	IE2	84.6	84.6	83.6	0.84	6.1	2.3	7	3.3	67	79	1LE1 1 01-1AA4	32	0.0044	16
4	4.55	112 M	2945	13	IE2	IE2	85.8	86.2	85.1	0.85	7.9	2.1	8	3.6	69	81	1LE1 1 01-1BA2	39	0.0092	16
5.5	6.3	132 S	2950	18	IE2	IE2	87	87	86	0.87	10.5	1.8	6.6	2.9	68	80	1LE1 1 01-1CA0	57	0.02	16
7.5	8.6	132 S	2950	24	IE2	IE2	88.1	88.1	87.1	0.87	14.1	2.2	7.5	3.1	68	80	1LE1 1 01-1CA1	61	0.024	16
11	12.6	160 M	2955	36	IE2	IE2	89.4	89.4	88.4	0.87	20.5	2.1	7.4	3.2	70	82	1LE1 1 01-1DA2	96	0.045	16
15	17.3	160 M	2955	48	IE2	IE2	90.3	90.3	89.3	0.88	27	2.4	7.6	3.4	70	82	1LE1 1 01-1DA3	104	0.053	16
18.5	21.3	160 L	2955	60	IE2	IE2	90.9	90.9	89.9	0.88	33.5	2.9	7.9	3.6	70	82	1LE1 1 01-1DA4	113	0.061	16
22	24.5	180 M	2940	71	IE2	IE2	91.3	91.8	91.4	0.87	40	2.7	7.4	3.6	77	84	1LE1 1 01-1EA2	145	0.069	16
30	33.5	200 L	2960	97	IE2	IE2	92	92.3	91.7	0.87	54	2.5	6.9	3.3	78	85	1LE1 1 01-2AA4	200	0.13	16
37	41.5	200 L	2960	119	IE2	IE2	92.5	92.8	92.3	0.88	66	2.7	7.4	3.5	78	85	1LE1 1 01-2AA5	225	0.15	16
45	51	225 M	2965	145	IE2	IE2	92.9	93.1	92.5	0.88	79	2.7	7.8	3.7	76	89	1LE1 1 01-2BA2	295	0.23	16
55	62	250 M	2970	177	IE2	IE2	93.2	93.3	92.4	0.88	97	2.3	6.8	3.1	76	89	1LE1 1 01-2CA2	360	0.4	13
75	84	280 S	2978	240	IE2	IE2	93.8	93.6	92.4	0.86	134	2.5	7.2	3.2	76	89	1LE1 1 01-2DA0	490	0.71	13
90	101	280 M	2975	289	IE2	IE2	94.1	94.2	93.5	0.88	157	2.5	7.1	3.1	76	89	1LE1 1 01-2DA2	530	0.83	13
110	123	315 S	2982	352	IE2	IE2	94.3	94.2	93.3	0.9	187	2.4	7.3	3	77	91	1LE1 1 01-3AA0	720	1.3	13
132	148	315 M	2982	423	IE2	IE2	94.6	94.7	94.1	0.91	220	2.4	7.2	3.1	77	91	1LE1 1 01-3AA2	880	1.6	13
160	180	315 L	2982	512	IE2	IE2	94.8	94.9	94.3	0.92	265	2.3	7	3.1	80	95	1LE1 1 01-3AA4	930	1.8	13
200	224	315 L	2982	640	IE2	IE2	95	95.2	94.8	0.92	330	2.5	7.3	3	80	95	1LE1 1 01-3AA5	1130	2.2	13
Relubrication			Motor protection		Fan cover		Bearing size		Liability for defects											
Basic Line			Optional (standard from FS 280 upwards)		Optional		Plastic		62 (63 from FS 280 upwards)		12 months		5							
Performance Line			Standard from FS 160 (optional for FS 100 to 132)		Standard		Steel		63		36 months		6							
Voltages ²⁾					No. of poles		Frame size		Motor type		Version								Order code(s)	
50 Hz			230 VΔ/400 VY		60 Hz ¹⁾		460 VY		2		71 M ... 315 L		1LE1 1 01-0C ... -3A		Standard		2 2		–	
50 Hz			400 VΔ/690 VY		60 Hz ¹⁾		460 VΔ		2		71 M ... 315 L		1LE1 1 01-0C ... -3A		Standard		3 4		–	
50 Hz			500 VY						2		71 M ... 315 L		1LE1 1 01-0C ... -3A		Without add. chrg.		2 7		–	
50 Hz			500 VΔ						2		100 L ... 315 L		1LE1 1 01-1A ... -3A		Without add. chrg.		4 0		–	
Further voltages ¹⁾																	9 0		...	
Types of construction					No. of poles		Frame size		Motor type		Version								Order code(s)	
Without flange			IM B3 ³⁾		2		71 M ... 315 L		1LE1 1 01-0C ... -3A		Standard		A						–	
With flange			IM B5 ³⁾		2		71 M ... 315 M		1LE1 1 01-0C ... -3A		With additional charge		F						–	
With standard flange			IM B14 ³⁾		2		71 M ... 160 L		1LE1 1 01-0C ... -1D		With additional charge		K						–	
Further types of construction																			...	
Motor protection			Line		No. of poles		Frame size		Motor type		Version								Order code(s)	
Without			Only possible for Basic Line		2		71 M ... 315 L		1LE1501-0C ... -3A		Standard		A						–	
PTC thermistor with 3 temperature sensors			Basic Line		2		71 M ... 315 L		1LE1501-0C ... -3A		With additional charge		B						–	
			Performance Line		2		100 L ... 315 L		1LE1601-1A ... -3A		Standard		B						–	
Further motor protection																			...	
Terminal box position					No. of poles		Frame size		Motor type		Version								Order code(s)	
Terminal box at top					2		71 M ... 315 L		1LE1 1 01-0C ... -3A		Standard		4						–	
Further terminal box positions																				
Special versions					No. of poles		Frame size		Motor type										Order code(s)	
Forced-air cooled motors without ext. fan/fan cover (IC 416)			2		71 M ... 315 L		1LE1 1 01-0C ... -3A		1LE1 1 01- ... -Z F90+ ... + ...											
Options																			1LE1 1 01- ... -Z ... + ... + ...	

Motors with IE2 High Efficiency

SIMOTICS SD 1LE1 Standard Motors

IE2

Self-ventilated or forced-air cooled motors · Cast-iron series 1LE1501/1LE1601 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output																Cast-iron series				m _{MM} B3 J		Torque class
P _{ra} - ted, 50 Hz	P _{ra} - ted, 60 Hz 1)	Frame size	η _{ra} - ted, 50 Hz	T _{ra} - ted, 50 Hz	IE class	η _{ra} - ted, 50 Hz	η _{ra} - ted, 50 Hz	η _{ra} - ted, 50 Hz	COS φ _{rated} , 50 Hz	I _{ra} - ted, 50 Hz	T _{LR} / T _{ra} - ted, 50 Hz	I _{LR} / I _{ra} - ted, 50 Hz	T _B / T _{ra} - ted, 50 Hz	L _p fA, 50 Hz	L _{WA} , 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 Article No.						
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A	dB(A)				dB(A)			kg	kgm ²	CL		
• Cooling: self-ventilated (IC411) or with order code F90 forced-air cooled without external fan and fan cover (IC416)																						
• Efficiency: IE2 High Efficiency, 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⁾																						
0.25	0.29	71 M	1395	1.7	IE2	IE2	68.5	68.2	63.8	0.69	0.76	2.4	3.7	2.5	44	55	1LE1 5 01-0CB2 ■-■■■■■	12	0.00076	16		
0.37	0.43	71 M	1380	2.6	IE2	IE2	72.7	73.2	70.2	0.72	1.02	2.3	3.8	2.4	44	55	1LE1 5 01-0CB3 ■-■■■■■	13	0.00095	16		
0.55	0.63	80 M	1440	3.6	–	–	78.1	78.6	75.6	0.74	1.37	2.2	5.3	3.1	53	64	1LE1 5 01-0DB2 ■-■■■■■	17	0.0017	16		
0.75	0.86	80 M	1440	5	IE2	IE2	79.6	79.6	78.6	0.76	1.79	2.2	5.6	3.1	53	64	1LE1 5 01-0DB3 ■-■■■■■	18.5	0.0021	16		
1.1	1.27	90 S	1425	7.4	IE2	IE2	81.4	81.4	80.4	0.78	2.5	2.3	5.6	2.9	56	68	1LE1 5 01-0EB0 ■-■■■■■	23	0.0028	16		
1.5	1.75	90 L	1435	10	IE2	IE2	82.8	82.8	81.8	0.79	3.3	2.6	6.4	3.4	56	68	1LE1 5 01-0EB4 ■-■■■■■	25	0.0036	16		
2.2	2.55	100 L	1455	14	IE2	IE2	84.3	84.3	83.3	0.81	4.65	2.1	6.9	3.3	60	72	1LE1 ■ 01-1AB4 ■-■■■■■	32	0.0086	16		
3	3.45	100 L	1455	20	IE2	IE2	85.5	85.5	84.5	0.82	6.2	2	6.9	3.1	60	72	1LE1 ■ 01-1AB5 ■-■■■■■	37	0.011	16		
4	4.55	112 M	1460	26	IE2	IE2	86.6	86.6	85.6	0.81	8.2	2.5	7.1	3.2	58	70	1LE1 ■ 01-1BB2 ■-■■■■■	46	0.014	16		
5.5	6.3	132 S	1465	36	IE2	IE2	87.7	87.7	86.7	0.8	11.3	2.3	6.9	2.9	64	76	1LE1 ■ 01-1CB0 ■-■■■■■	61	0.027	16		
7.5	8.6	132 M	1465	49	IE2	IE2	88.7	88.7	87.7	0.83	14.7	2.3	6.9	2.9	64	76	1LE1 ■ 01-1CB2 ■-■■■■■	75	0.034	16		
11	12.6	160 M	1470	71	IE2	IE2	89.8	89.8	88.8	0.85	21	2.1	6.7	2.8	65	77	1LE1 ■ 01-1DB2 ■-■■■■■	96	0.065	16		
15	17.3	160 L	1475	97	IE2	IE2	90.6	90.6	89.6	0.85	28	2.3	7.3	3	65	77	1LE1 ■ 01-1DB4 ■-■■■■■	104	0.083	16		
18.5	21.3	180 M	1465	121	IE2	IE2	91.2	92	91.9	0.84	35	2.5	7.2	3.4	61	74	1LE1 ■ 01-1EB2 ■-■■■■■	160	0.12	16		
22	25.3	180 L	1465	143	IE2	IE2	91.6	92.2	91.9	0.84	41.5	2.6	7.3	3.5	69	76	1LE1 ■ 01-1EB4 ■-■■■■■	170	0.13	16		
30	34.5	200 L	1470	195	IE2	IE2	92.3	92.8	92.6	0.84	56	2.5	6.7	3.3	70	77	1LE1 ■ 01-2AB5 ■-■■■■■	230	0.2	16		
37	42.5	225 S	1470	240	IE2	IE2	92.7	93.5	93.5	0.88	65	2.3	6.6	2.9	66	79	1LE1 ■ 01-2BB0 ■-■■■■■	280	0.42	16		
45	52	225 M	1475	291	IE2	IE2	93.1	93.8	93.7	0.87	80	2.5	6.9	3.1	66	79	1LE1 ■ 01-2BB2 ■-■■■■■	305	0.46	16		
55	63	250 M	1480	355	IE2	IE2	93.5	93.9	93.5	0.85	100	2.7	6.8	3	66	79	1LE1 ■ 01-2CB2 ■-■■■■■	385	0.75	16		
75	86	280 S	1485	482	IE2	IE2	94	94.2	93.8	0.87	132	2.5	6.8	3	71	85	1LE1 ■ 01-2DB0 ■-■■■■■	550	1.3	16		
90	104	280 M	1486	578	IE2	IE2	94.2	94.3	93.6	0.87	159	2.6	7.3	3.1	71	85	1LE1 ■ 01-2DB2 ■-■■■■■	570	1.4	16		
110	127	315 S	1490	705	IE2	IE2	94.5	94.6	94	0.86	195	2.7	7.4	3	72	86	1LE1 ■ 01-3AB0 ■-■■■■■	740	2	16		
132	152	315 M	1490	846	IE2	IE2	94.7	94.9	94.6	0.87	230	2.7	7.1	2.9	75	89	1LE1 ■ 01-3AB2 ■-■■■■■	870	2.3	16		
160	184	315 L	1490	1025	IE2	IE2	94.9	95	94.5	0.87	280	2.8	7.2	3.1	76	91	1LE1 ■ 01-3AB4 ■-■■■■■	940	2.8	16		
200	230	315 L	1490	1282	IE2	IE2	95.1	95.3	94.7	0.87	350	3.1	7.5	3.2	77	92	1LE1 ■ 01-3AB5 ■-■■■■■	1140	3.5	16		
Relubrication						Motor protection		Fan cover	Bearing size		Liability for defects				5							
Optional (standard from FS 280 upwards)						Optional		Plastic	62 (63 from FS 280 upwards)		12 months				6							
Standard from FS 160 (optional for FS 100 to 132)						Standard PTC		Steel	63		36 months				6							
Voltages ²⁾								No. of poles	Frame size		Motor type				Version						Order code(s)	
50 Hz						230 VΔ/400 VY		60 Hz ¹⁾		460 VY		4		71 M ... 315 L		1LE1■01-0C ... -3A		Standard		2 2	–	
50 Hz						400 VΔ/690 VY		60 Hz ¹⁾		460 VΔ		4		71 M ... 315 L		1LE1■01-0C ... -3A		Standard		3 4	–	
50 Hz						500 VY						4		71 M ... 315 L		1LE1■01-0C ... -3A		Without add. chrg.		2 7	–	
50 Hz						500 VΔ						4		100 L ... 315 L		1LE1■01-1A ... -3A		Without add. chrg.		4 0	–	
Further voltages ¹⁾																				9 0	...	
Types of construction								No. of poles	Frame size		Motor type				Version						Order code(s)	
Without flange						IM B3 ³⁾		4		71 M ... 315 L		1LE1■01-0C ... -3A				Standard			A	–		
With flange						IM B5 ³⁾		4		71 M ... 315 M		1LE1■01-0C ... -3A				With additional charge			F	–		
With standard flange						IM B14 ³⁾		4		71 M ... 160 L		1LE1■01-0C ... -1D				With additional charge			K	–		
Further types of construction																					...	
Motor protection						Line		No. of poles	Frame size		Motor type				Version						Order code(s)	
Without						Only possible for Basic Line		4		71 M ... 315 L		1LE1501-0C ... -3A				Standard			A	–		
PTC thermistor with 3 temperature sensors						Basic Line		4		71 M ... 315 L		1LE1501-0C ... -3A				With additional charge			B	–		
Further motor protection						Performance Line		4		100 L ... 315 L		1LE1601-1A ... -3A				Standard			B	–		
Further motor protection																					...	
Terminal box position								No. of poles	Frame size		Motor type				Version						Order code(s)	
Terminal box at top								4		71 M ... 315 L		1LE1■01-0C ... -3A				Standard			4	–		
Further terminal box positions																						
Special versions								No. of poles	Frame size		Motor type										Order code(s)	
Forced-air cooled motors without ext. fan/fan cover (IC 416)								4		71 M ... 315 L		1LE1■01-0C ... -3A				1LE1■01-.... ■-■■■■■		-Z		F90+...+...+...		
Options																1LE1■01-.... ■-■■■■■		-Z		...+...+...+...		

Selection and ordering data (continued)

Operating values at rated output																	Cast-iron series								
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} , 4/4	I_{rated} , 50 Hz, 400 V	T_{LR} , 50 Hz	I_{LR} , 50 Hz	T_B , 50 Hz	L_{pFA} , 50 Hz	L_{WA} , 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 Article No.	m_{MB3} J	Torque class							
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A							kg	kgm ²	CL						
• Cooling: self-ventilated (IC411) or with order code F90 forced-air cooled without external fan and fan cover (IC416) • Efficiency: IE2 High Efficiency, 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)																									
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																									
0.18	0.21	71 M	875	2	IE2	IE2	56.6	57	53.5	0.68	0.68	2.2	2.5	2.3	39	50	1LE1 5 01-0CC2	11.5	0.0008	16					
0.25	0.29	71 M	870	2.7	IE2	IE2	61.6	62.7	60	0.7	0.84	2.3	2.6	2.3	39	50	1LE1 5 01-0CC3	12.5	0.001	16					
0.37	0.43	80 M	925	3.85	–	–	71.4	71.5	66.5	0.69	1.09	2.1	4	2.4	42	53	1LE1 5 01-0DC2	16.5	0.0017	16					
0.55	0.63	80 M	935	5.6	–	–	74	74	70.5	0.66	1.63	2.5	4.4	2.9	42	53	1LE1 5 01-0DC3	18.5	0.0025	16					
0.75	0.86	90 S	925	7.7	IE2	IE2	75.9	76	73	0.7	2.05	2	4.1	2.5	43	55	1LE1 5 01-0EC0	23	0.003	16					
1.1	1.27	90 L	935	11	IE2	IE1	78.1	78.5	75	0.7	2.9	2.2	4.4	2.6	43	55	1LE1 5 01-0EC4	26.5	0.004	16					
1.5	1.75	100 L	970	15	IE2	IE2	79.8	80.5	79	0.73	3.7	2	5.4	2.8	59	71	1LE1 5 01-1AC4	36	0.011	16					
2.2	2.55	112 M	965	22	IE2	IE2	81.8	82.6	81.4	0.75	5.2	2	5	2.8	62	74	1LE1 5 01-1BC2	41	0.014	16					
3	3.45	132 S	970	30	IE2	IE2	83.3	83.4	80.9	0.72	7.2	1.6	5	2.5	63	75	1LE1 5 01-1CC0	56	0.024	13					
4	4.55	132 M	970	39	IE2	IE2	84.6	85.5	84.5	0.75	9.1	1.6	5	2.3	63	75	1LE1 5 01-1CC2	61	0.029	13					
5.5	6.3	132 M	970	54	IE2	IE2	86	87	86.5	0.76	12.1	1.9	5.6	2.6	63	75	1LE1 5 01-1CC3	70	0.037	16					
7.5	8.6	160 M	975	73	IE2	IE2	87.2	88	87.3	0.74	16.8	1.9	4.7	2.2	67	79	1LE1 5 01-1DC2	106	0.075	16					
11	12.6	160 L	975	108	IE2	IE2	88.7	89.6	89.2	0.76	23.5	1.9	4.8	2.2	67	79	1LE1 5 01-1DC4	122	0.098	16					
15	18	180 L	975	147	IE2	IE2	89.7	90.1	89.5	0.78	31	2.5	6	3.1	57	70	1LE1 5 01-1EC4	155	0.17	16					
18.5	22	200 L	978	181	IE2	IE1	90.4	91.3	91.2	0.82	36	2.4	5.8	2.6	63	76	1LE1 5 01-2AC4	200	0.25	16					
22	26.5	200 L	978	215	IE2	IE1	90.9	91.6	91.2	0.82	42.5	2.5	6.2	2.6	63	76	1LE1 5 01-2AC5	220	0.3	16					
30	36	225 M	980	292	IE2	IE1	91.7	92.5	92.3	0.83	57	2.5	5.6	2.7	65	78	1LE1 5 01-2BC2	300	0.58	16					
37	44.5	250 M	982	360	IE2	IE1	92.2	93.1	93.1	0.83	70	2.8	6	2.5	62	77	1LE1 5 01-2CC2	370	0.86	16					
45	54	280 S	985	436	IE2	IE1	92.7	93.4	93.2	0.84	83	2.7	6.3	2.6	65	79	1LE1 5 01-2DC0	460	1.1	16					
55	66	280 M	985	533	IE2	IE1	93.1	93.9	94	0.86	99	2.5	6.4	2.6	65	79	1LE1 5 01-2DC2	510	1.37	16					
75	90	315 S	988	725	IE2	IE1	93.7	94	93.6	0.84	138	2.5	6.7	2.8	65	79	1LE1 5 01-3AC0	660	2.1	16					
90	108	315 M	988	870	IE2	IE1	94	94.3	93.6	0.84	165	2.6	6.9	2.8	65	79	1LE1 5 01-3AC2	730	2.5	16					
110	132	315 L	988	1063	IE2	IE1	94.3	94.6	94.5	0.86	196	2.7	7	2.8	68	82	1LE1 5 01-3AC4	940	3.6	16					
132	158	315 L	988	1276	IE2	IE2	94.6	94.9	94.7	0.86	235	3	7.5	2.9	69	84	1LE1 5 01-3AC5	990	4.02	16					
160	192	315 L	988	1546	IE2	IE2	94.8	94.7	94.4	0.86	285	3.1	7.7	3.3	69	84	1LE1 5 01-3AC6	1160	4.7	16					
Relubrication					Motor protection		Fan cover		Bearing size		Liability for defects														
Basic Line		Optional (standard from FS 280 upwards)					Optional		Plastic		62 (63 from FS 280 upwards)		12 months		5										
Performance Line		Standard from FS 160 (optional for FS 100 to 132)					Standard		Steel		63		36 months		6										
Voltages ²⁾							No. of poles		Frame size		Motor type		Version						Order code(s)						
50 Hz			230 VΔ/400 VY			60 Hz ¹⁾		460 VY		6		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard		2 2		–					
50 Hz			400 VΔ/690 VY			60 Hz ¹⁾		460 VΔ		6		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard		3 4		–					
50 Hz			500 VY							6		71 M ... 315 L		1LE1 5 01-0C ... -3A		Without add. chrg.		2 7		–					
50 Hz			500 VΔ							6		100 L ... 315 L		1LE1 5 01-1A ... -3A		Without add. chrg.		4 0		–					
Further voltages ¹⁾			For price information, code numbers, order codes and descriptions, see from Page 2/60																	9 0		...			
Types of construction							No. of poles		Frame size		Motor type		Version						Order code(s)						
Without flange			IM B3 ³⁾			6		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard				A		–							
With flange			IM B5 ³⁾			6		71 M ... 315 M		1LE1 5 01-0C ... -3A		With additional charge				F		–							
With standard flange			IM B14 ³⁾			6		71 M ... 160 L		1LE1 5 01-0C ... -1D		With additional charge				K		–							
Further types of construction					For price information, code letters and descriptions, see from Page 2/66																	...			
Motor protection			Line				No. of poles		Frame size		Motor type		Version						Order code(s)						
Without			Only possible for Basic Line		6		71 M ... 315 L		1LE1501-0C ... -3A		Standard				A		–								
PTC thermistor with 3 temperature sensors			Basic Line		6		71 M ... 315 L		1LE1501-0C ... -3A		With additional charge				B		–								
Further motor protection			Performance Line		6		100 L ... 315 L		1LE1601-1A ... -3A		Standard				B		–								
Further motor protection					For price information, code letters and descriptions, see from Page 2/71																	...			
Terminal box position							No. of poles		Frame size		Motor type		Version						Order code(s)						
Terminal box at top						6		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard				4		–							
Further terminal box positions					For price information, code numbers and descriptions, see from Page 2/73																				
Special versions							No. of poles		Frame size		Motor type								Order code(s)						
Forced-air cooled motors without ext. fan/fan cover (IC 416)					6		71 M ... 315 L		1LE1 5 01-0C ... -3A		1LE1 5 01- ... -Z		F90+ ... + ... + ...												
Options					For price information, order codes and descriptions, see from Page 2/80																	1LE1 5 01- ... -Z		... + ... + ... + ...	

Motors with IE2 High Efficiency

SIMOTICS SD 1LE1 Standard Motors

IE2

Self-ventilated or forced-air cooled motors · Cast-iron series 1LE1501/1LE1601 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output																Cast-iron series		m _M B3 J	Torque class		
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 φ _{rated} , 50 Hz, 4/4	I _{rated} , 50 Hz, 400 V	T _{LR} , 50 Hz	I _{LR} /I _{rated} , 50 Hz	T _B /I _{rated} , 50 Hz	L _p , 50 Hz	L _{WA} , 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 Article No.					
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A								kg	kgm ²	CL	
• Cooling: self-ventilated (IC411) or with order code F90 forced-air cooled without external fan and fan cover (IC416) • Efficiency: IE2 High Efficiency, 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)																					
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾																					
0.09	0.11	71 M	630	1.4	–	–	40.1	40.6	35.8	0.67	0.50	1.7	1.6	1.7	59	63	▲ 1LE1 5 01-0CD2	–	11.5	0.00077	13
0.12	0.14	71 M	640	1.8	IE2	IE2	40.1	39.6	34.7	0.66	0.65	1.8	1.8	1.8	48	59	▲ 1LE1 5 01-0CD3	–	12.5	0.00100	13
0.18	0.21	80 M	690	2.5	IE2	IE2	45.9	43.6	37.8	0.60	0.93	1.7	2.2	2.1	51	62	▲ 1LE1 5 01-0DD2	–	16.5	0.00175	13
0.25	0.29	80 M	705	3.4	IE2	IE2	50.6	48.1	41.9	0.55	1.30	2.0	2.5	2.5	51	62	▲ 1LE1 5 01-0DD3	–	18.5	0.00246	16
0.37	0.43	90 S	675	5.2	IE2	IE2	56.1	55.6	49.6	0.71	1.34	1.4	2.6	1.7	53	65	▲ 1LE1 5 01-0ED0	–	20	0.00225	10
0.55	0.63	90 L	665	7.9	IE2	IE2	61.7	63.4	59.8	0.74	1.74	1.5	2.7	1.7	53	65	▲ 1LE1 5 01-0ED4	–	21.5	0.00305	13
0.75	0.86	100 L	705	10	IE2	IE2	66.2	66.2	62	0.61	2.7	1.5	3.2	2.1	60	72	1LE1 5 01-1AD4	–	32	0.0086	13
1.1	1.27	100 L	695	15	IE2	IE2	70.8	72.3	70.2	0.65	3.45	1.4	3.2	1.9	60	72	1LE1 5 01-1AD5	–	36	0.011	13
1.5	1.75	112 M	725	20	IE2	IE2	74.1	74.1	71	0.63	4.65	1.6	4	2.4	63	75	1LE1 5 01-1BD2	–	53	0.017	13
2.2	2.55	132 S	725	29	IE2	IE2	77.6	78.2	76.6	0.62	6.6	1.4	3.5	2	63	75	1LE1 5 01-1CD0	–	64	0.034	10
3	3.45	132 M	720	40	IE2	IE1	80	80.7	79.2	0.62	8.7	1.4	3.7	2	63	75	1LE1 5 01-1CD2	–	67	0.037	10
4	4.55	160 M	730	52	IE2	IE2	81.9	82.6	81.7	0.67	10.5	1.6	3.7	1.9	63	75	1LE1 5 01-1DD2	–	98	0.065	13
5.5	6.3	160 M	730	72	IE2	IE2	83.8	84.3	83.1	0.67	14.1	1.7	3.9	2	63	75	1LE1 5 01-1DD3	–	111	0.083	13
7.5	8.6	160 L	725	99	IE2	IE2	85.3	86.5	86.1	0.7	18.1	1.6	3.8	1.9	63	75	1LE1 5 01-1DD4	–	123	0.098	13
11	13.2	180 L	720	146	–	–	86.6	87.6	87.1	0.7	26	2.3	4.9	2.6	72	80	1LE1 5 01-1ED4	–	155	0.195	13
15	18	200 L	718	200	–	–	88.9	90.8	91.2	0.76	32	2.4	5.4	2.8	58	65	1LE1 5 01-2AD5	–	220	0.344	13
18.5	22	225 S	730	242	–	–	89	89.9	89.5	0.78	38.5	2.2	5.4	2.7	59	72	1LE1 5 01-2BD0	–	250	0.43	13
22	26.5	225 M	730	288	–	–	90.3	91.3	91.1	0.8	44	2.3	5.5	2.7	58	71	1LE1 5 01-2BD2	–	270	0.5	13
30	36	250 M	732	391	–	–	91.3	92.2	92	0.8	59	2.4	5.6	2.7	60	73	1LE1 5 01-2CD2	–	370	0.86	13
37	44.5	280 S	736	480	–	–	91.9	92.5	92.1	0.78	75	2.3	5.4	2.4	63	77	1LE1 5 01-2DD0	–	460	1.1	13
45	54	280 M	738	582	–	–	92.4	92.8	92.4	0.79	89	2.5	5.7	2.5	66	80	1LE1 5 01-2DD2	–	510	1.4	13
55	66	315 S	740	710	–	–	92.9	93.3	92.9	0.8	107	2.2	5.8	2.6	69	83	1LE1 5 01-3AD0	–	640	2	13
75	90	315 M	738	971	–	–	93.5	94.4	94.5	0.81	143	2.3	5.9	2.7	69	84	1LE1 5 01-3AD2	–	720	2.5	13
90	108	315 L	740	1161	–	–	93.5	94.3	94.4	0.83	167	2.2	5.8	2.5	69	84	1LE1 5 01-3AD4	–	860	3.1	13
110	132	315 L	740	1419	–	–	94.2	95	95.1	0.82	205	2.7	6.7	2.9	74	88	1LE1 5 01-3AD5	–	980	3.9	13
132	158	315 L	740	1703	–	–	94.4	94.8	94.4	0.81	250	2.9	7.2	3.3	76	90	1LE1 5 01-3AD6	–	1070	4.5	16
			Relubrication					Motor protection		Fan cover		Bearing size		Liability for defects							
Basic Line			Optional (standard from FS 280 upwards)					Optional		Plastic		62 (63 from FS 280 upwards)		12 months		5					
Performance Line			Standard from FS 160 (optional for FS 100 to 132)					Standard PTC		Steel		63		36 months		6					
Voltages ²⁾										No. of poles		Frame size		Motor type		Version				Order code(s)	
50 Hz			230 VΔ/400 VY			60 Hz ¹⁾		460 VY		8		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard		2		–	
50 Hz			400 VΔ/690 VY			60 Hz ¹⁾		460 VΔ		8		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard		3		–	
50 Hz			500 VY							8		71 M ... 315 L		1LE1 5 01-0C ... -3A		Without add. chrg.		2		–	
50 Hz			500 VΔ							8		100 L ... 315 L		1LE1 5 01-1A ... -3A		Without add. chrg.		4		–	
Further voltages ¹⁾			For price information, code numbers, order codes and descriptions, see from Page 2/60															9		0	
Types of construction										No. of poles		Frame size		Motor type		Version				Order code(s)	
Without flange			IM B3 ³⁾							8		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard		A		–	
With flange			IM B5 ³⁾							8		71 M ... 315 M		1LE1 5 01-0C ... -3A		With additional charge		F		–	
With standard flange			IM B14 ³⁾							8		71 M ... 160 L		1LE1 5 01-0C ... -1D		With additional charge		K		–	
Further types of construction			For price information, code letters and descriptions, see from Page 2/66																	...	
Motor protection			Line							No. of poles		Frame size		Motor type		Version				Order code(s)	
Without			Only possible for Basic Line							8		71 M ... 315 L		1LE1501-0C ... -3A		Standard		A		–	
PTC thermistor with 3 temperature sensors			Basic Line							8		71 M ... 315 L		1LE1501-0C ... -3A		With additional charge		B		–	
			Performance Line							8		100 L ... 315 L		1LE1601-1A ... -3A		Standard		B		–	
Further motor protection			For price information, code letters and descriptions, see from Page 2/71																	...	
Terminal box position										No. of poles		Frame size		Motor type		Version				Order code(s)	
Terminal box at top										8		71 M ... 315 L		1LE1 5 01-0C ... -3A		Standard		4		–	
Further terminal box positions			For price information, code numbers and descriptions, see from Page 2/73																		
Special versions										No. of poles		Frame size		Motor type						Order code(s)	
Forced-air cooled motors without ext. fan/fan cover (IC 416)										8		71 M ... 315 L		1LE1 5 01-0C ... -3A		1LE1 5 01- ... -Z		F90+ ... + ...			
Options			For price information, order codes and descriptions, see from Page 2/80													1LE1 5 01- ... -Z		... + ... + ...			

¹⁾ Operating values at rated output for 60 Hz are stored in the Drive Technology (DT) Configurator.

²⁾ Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

³⁾ 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.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Voltages · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Voltages	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Motor category																
			Motor version	Motor type (cast-iron)	Motor type – frame size														
					71	80	90	100	112	132	160	180	200	225	250	280	315		
			IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①														
				1LE1601	1LE1601 Performance Line ②														
				1LE1541	1LE1541 APAC Line ③														
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④														
				1LE1603	1LE1603 Performance Line ⑤														
				1LE1543	1LE1543 Basic Line ⑥														
				1LE1643	1LE1643 Performance Line ⑦														
IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																	
	1LE1604	1LE1604 Performance Line ⑨																	
NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																	
	1LE1621	1LE1621 Eagle Line Performance ⑪																	
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																	
	1LE1623	1LE1623 Eagle Line Performance ⑬																	
1LE1.....-...-... Order code			Motor version	Motor type	Frame size														
					71	80	90	100	112	132	160	180	200	225	250	280	315		
Voltage at 50 Hz or 60 Hz																			
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY	2	2	–	All	All	□	□	□	□	□	□	□	□	□	□	□	□		
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ ¹⁾	3	4	–	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		□	□	□	□	□	□	□	□	□	□	□	□		
50 Hz 400 VΔ, 60 Hz 460 VΔ ¹⁾				Only applicable for ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		□	□	□	□	□	□	□	□	□	□	□	□		
50 Hz 500 VY/575 VY	2	7	–	All, not possible for ⑧ and ⑨ frame sizes 100 ... 160		○	○	○	○	○	○	○	○	○	○	○	○		
50 Hz 500 VΔ, 60 Hz 575 VΔ	4	0	–	All	All	–	–	–	○	○	○	○	○	○	○	○	○		
50 Hz 220 VΔ/380 VY, 60 Hz 440 VY	2	1	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ ¹⁾	3	3	–	All except ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
50 Hz 380 VΔ ¹⁾				Only applicable for ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
50 Hz 240 VΔ/415 VY, 60 Hz 480 VY	2	3	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Voltage at 60 Hz and required output																			
220 VΔ/380 VY; 50 Hz output	9	0	M2A	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
220 VΔ/380 VY; 60 Hz output ²⁾	9	0	M1A	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
380 VΔ/660 VY; 50 Hz output ¹⁾	9	0	M2B	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
380 VΔ; 50 Hz output ¹⁾				Only applicable for ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
380 VΔ/660 VY; 60 Hz output ^{1) 2)}	9	0	M1B	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
440 VY; 50 Hz output	9	0	M2C	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		

For legends and footnotes, see Page 2/61.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Voltages · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Voltages	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Motor category															
			Motor version	Motor type (cast- iron)	Motor type – frame size													
					71	80	90	100	112	132	160	180	200	225	250	280	315	
			IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①													
				1LE1601	1LE1601 Performance Line ②													
				1LE1541	1LE1541 APAC Line ③													
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④													
				1LE1603	1LE1603 Performance Line ⑤													
				1LE1543	1LE1543 Basic Line ⑥													
				1LE1643	1LE1643 Performance Line ⑦													
IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																
	1LE1604	1LE1604 Performance Line ⑨																
NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																
	1LE1621	1LE1621 Eagle Line Performance ⑪																
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																
	1LE1623	1LE1623 Eagle Line Performance ⑬																
1LE1.....-...-...-...			Order code	Motor version	Motor type	Frame size												
						71	80	90	100	112	132	160	180	200	225	250	280	315
Voltage at 60 Hz and required output (continued)																		
440 VY; 60 Hz output ²⁾	9	0	M1C	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
440 VΔ; 50 Hz output	9	0	M2D	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	
440 VΔ; 60 Hz output ²⁾	9	0	M1D	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
460 VY; 50 Hz output	9	0	M2E	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	
460 VY; 60 Hz output ²⁾	9	0	M1E	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬	–	–	–	○	○	○	○	○	○	○	○	○	○	
460 VΔ; 50 Hz output	9	0	M2F	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	
460 VΔ; 60 Hz output ²⁾	9	0	M1F	All except ③, ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬	–	–	–	○	○	○	○	○	○	○	○	○	○	
575 VY; 50 Hz output	9	0	M2G	All, not possible for ⑧ and ⑨ frame sizes 100 ... 160	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
575 VY; 60 Hz output ²⁾	9	0	M1G	All except ③, ⑩, ⑪, ⑫ and ⑬; not possible for ⑧ and ⑨ frame sizes 100 ... 160	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
575 VΔ; 50 Hz output	9	0	M2H	All, not possible for ⑧ and ⑨ frame sizes 100 ... 160	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
575 VΔ; 60 Hz output ²⁾	9	0	M1H	All except ③, ⑩, ⑪, ⑫ and ⑬; not possible for ⑧ and ⑨ frame sizes 100 ... 160	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Voltage at 87 Hz and 87 Hz output																		
400 VΔ ³⁾	9	0	M3A	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Non-standard voltage and/or frequencies																		
Non-standard winding ⁴⁾	9	0	M1Y • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.
- ✓ With additional charge
- O. R. Possible on request

¹⁾ For North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient, voltages above 600 V will not be stamped.

²⁾ Not admissible for North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient.

³⁾ Only possible for 4-pole, 6-pole and 8-pole motors. The operating data for converter operation is also provided in a table on the rating plate.

⁴⁾ Plain text must be specified in the order: Voltage between 200 and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated output in kW.

SIMOTICS SD 1LE1 Standard Motors

Selection and ordering data

For legends and footnotes, see Page 2/69.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Types of construction · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

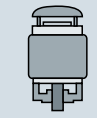
Types of construction	Type of construc- tion letter 14th pos. of Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category																												
			Motor version	Motor type (cast-iron)	Motor type – frame size																315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole								
					71	80	90	100	112	132	160	180	200	225	250	280															
			IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①																										
				1LE1601	1LE1601 Performance Line ②																										
				1LE1541	1LE1541 APAC Line ③																										
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④																										
				1LE1603	1LE1603 Performance Line ⑤																										
				1LE1543	1LE1543 Basic Line ⑥																										
			1LE1643	1LE1643 Performance Line ⑦																											
IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																													
	1LE1604	1LE1604 Performance Line ⑨																													
NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																													
	1LE1621	1LE1621 Eagle Line Performance ⑪																													
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																													
	1LE1623	1LE1623 Eagle Line Performance ⑬																													
1LE1.....-Z... Order code			Motor version	Motor type	Frame size																315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole								
					71	80	90	100	112	132	160	180	200	225	250	280															
With flange			Acc. to EN 50347			FF130	FF165	FF165												FF215	FF215	FF265	FF300	FF300	FF350	FF400	FF500	FF500	FF600	FF600	FF600
			Acc. to DIN 42948			A 160	A 200	A 200												A 250	A 250	A 300	A 350	A 350	A 400	A 450	A 550	A 550	A 660	A 660	A 660
IM B5 2) 6)		F	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	–												
IM V1 without protective cover 2)		G	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
IM V1 with protective cover 2) 4) 5)		G	H00	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
IM V3 5)		H	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	–												
IM B35 3)		J	–	All except ③, ⑩, ⑪ 2, 4, 6-pole ≤ 200 hp and ⑫, ⑬ 8-pole ≤ 200 hp		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
With special flange next larger			Acc. to EN 50347			–	–	–	FF265 FF265 FF300											–	–	–	–	–	–	–	–	–	–	–	
			Acc. to DIN 42948			–	–	–	A 300 A 300 A 350											–	–	–	–	–	–	–	–	–	–	–	
IM B5 2) 6)		F	P01	All	All	–	–	–	✓	✓	✓	–	–	–	–	–	–	–	–												
IM V1 without protective cover 2)		G	P01	All	All	–	–	–	✓	✓	✓	–	–	–	–	–	–	–	–												
IM V1 with protective cover 2) 4) 5)		G	P01+ H00	All	All	–	–	–	✓	✓	✓	–	–	–	–	–	–	–	–												
IM V3 5)		H	P01	All	All	–	–	–	✓	✓	✓	–	–	–	–	–	–	–	–												
IM B35 3)		J	P01	All except ③, ⑩, ⑪ 2, 4, 6-pole ≤ 200 hp and ⑫, ⑬ 8-pole ≤ 200 hp; for ⑧ and ⑨ on request		–	–	–	✓	✓	✓	–	–	–	–	–	–	–	–												

For legends and footnotes, see Page 2/69.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Types of construction · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Types of construction	Type of construc- tion letter 14th pos. of Article No.	For types of construc- tion with order code(s) Article No. with addi- tional identi- fication code -Z	Motor category																				
			Motor version	Motor type (cast- iron)	Motor type – frame size																315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole
			IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①																		
				1LE1601	1LE1601 Performance Line ②																		
				1LE1541													1LE1541 APAC Line ③						
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④																		
				1LE1603	1LE1603 Performance Line ⑤																		
				1LE1543													1LE1543 Basic Line ⑥						
			1LE1643													1LE1643 Performance Line ⑦							
			IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																		
				1LE1604	1LE1604 Performance Line ⑨																		
			NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																		
				1LE1621	1LE1621 Eagle Line Performance ⑪																		
			NEMA Pre- mium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																		
				1LE1623	1LE1623 Eagle Line Performance ⑬																		
			Motor version	Motor type	Frame size																315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole
					71	80	90	100	112	132	160	180	200	225	250	280							
1LE1.....-Z) Order code																							
With special flange next smaller		Acc. to EN 50347 Acc. to DIN 42948			-	-	-	FF165 A 200	FF165 A 200	FF215 A 250	FF265 A 300	-	-	-	-	-	-	-	-				
IM B5 2) 6)		F	P02	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	-	-	-	-	-	-	-				
IM V1 without protec- tive cover 2)		G	P02	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	-	-	-	-	-	-	-				
IM V1 with protec- tive cover 2) 4) 5)		G	P02+ H00	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	-	-	-	-	-	-	-				
IM V3 5)		H	P02	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	-	-	-	-	-	-	-				
IM B35 3)		J	P02	All except ③, ⑩, ⑪ 2, 4, 6-pole ≤ 200 hp and ⑫, ⑬ 8-pole ≤ 200 hp		-	-	-	O.R.	O.R.	O.R.	O.R.	-	-	-	-	-	-	-				
With flange		Acc. to EN 50347 Acc. to DIN 42948			FT85 C 105	FT100 C 120	FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT215 C 250	-	-	-	-	-	-	-	-				
IM B14 2) 7)		K	-	All	All	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-				
IM V19 2)		L	-	All	All	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-				
IM V18 without protec- tive cover 2)		M	-	All	All	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-				
IM V18 with protec- tive cover 2) 4) 5)		M	H00	All	All	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-				
IM B34 3)		N	-	All except ③, ⑩, ⑪ 2, 4, 6-pole ≤ 200 hp and ⑫, ⑬ 8-pole ≤ 200 hp		✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-				

For legends and footnotes, see Page 2/69.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Types of construction · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Types of construction		Type of construction letter 14th pos. of Article No.	For types of construction with order code(s)	Motor category																			
				Motor version	Motor type (cast-iron)	Motor type – frame size															315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole
						71	80	90	100	112	132	160	180	200	225	250	280						
				IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①																	
					1LE1601	1LE1601 Performance Line ②																	
					1LE1541	1LE1541 APAC Line ③																	
				IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④																	
					1LE1603	1LE1603 Performance Line ⑤																	
					1LE1543	1LE1543 Basic Line ⑥																	
				IE4 Super Premium Efficiency	1LE1643	1LE1643 Performance Line ⑦																	
					1LE1504	1LE1504 Basic Line ⑧																	
					1LE1604	1LE1604 Performance Line ⑨																	
				NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																	
1LE1621	1LE1621 Eagle Line Performance ⑪																						
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																					
	1LE1623	1LE1623 Eagle Line Performance ⑬																					
Motor version				Motor type	Frame size															315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole	
					71	80	90	100	112	132	160	180	200	225	250	280							
1LE1.....-Z				Order code																			

With special flange next larger		Acc. to EN 50347	Acc. to DIN 42948	FT100 FT115 FT130			FT165 FT165 FT215 –			–	–	–	–	–	–	–	–	–	–
				C 120	C 140	C 160	C 200	C 200	C 250										
IM B14 2) 7) 8)		K	P01	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
IM V19 2) 8)		L	P01	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
IM V18 without protective cover 2) 8)		M	P01	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
IM V18 with protective cover 2) 4) 5) 8)		M	P01+H00	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
IM B34 3) 8)		N	P01	All except ③, ⑩, ⑪ 2, 4, 6-pole ≤ 200 hp and ⑩, ⑬ 8-pole ≤ 200 hp		✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–

Selection and ordering data

- Standard version
- ✓ With additional charge
- Not possible

Options are available specifically for bearing protection –
For order codes and descriptions, see from Page 2/80.

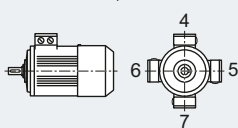
²⁾ Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Terminal box position · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Terminal box position			Terminal box position code 16th position of the Article No.		Additional identification code with order code and plain text if required		Motor category														
	Terminal box position	Terminal box position code 16th position of the Article No.	Additional identification code with order code and plain text if required	Motor version	Motor type (cast-iron)	Motor type – frame size															
						71	80	90	100	112	132	160	180	200	225	250	280	315			
				IE2 High Efficiency	1LE1501	1LE1501 Basic Line															
					1LE1601	1LE1601 Performance Line															
					1LE1541	1LE1541 APAC Line															
				IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line															
					1LE1603	1LE1603 Performance Line															
					1LE1543	1LE1543 Basic Line															
					1LE1643	1LE1643 Performance Line															
				IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line															
					1LE1604	1LE1604 Performance Line															
				NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic															
					1LE1621	1LE1621 Eagle Line Performance															
				NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic															
1LE1623	1LE1623 Eagle Line Performance																				
1LE1.....				Motor version	Motor type	Frame size															
						71	80	90	100	112	132	160	180	200	225	250	280	315			
Terminal box position																					
Terminal box top ¹⁾	4	–	All	All	□	□	□	□	□	□	□	□	□	□	□	□	□	□			
Terminal box on RHS ²⁾	5	–	All	All	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Terminal box on LHS ²⁾	6	–	All	All	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Terminal box at bottom ³⁾	7	–	All	All	–	–	–	–	✓	✓	✓	✓	–	–	–	–	–	–			
□ Standard version																					
✓ With additional charge																					
– Not possible																					

- Standard version
 ✓ With additional charge
 – Not possible

¹⁾ For types of construction with feet and flange-mounted with feet, cast feet are standard. Screwed-on feet are available with order code **H01**.

²⁾ For types of construction with feet and flange-mounted with feet, screwed-on feet are standard. Except for frame sizes 225, 250, 280 and 315: in which case for types of construction with feet and flange-mounted with feet, cast feet are standard. Screwed-on feet are available with order code **H01**.

³⁾ Not generally possible for motors with feet.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Motor category																		
		Motor version	Motor type (cast-iron)	Motor type – frame size																
				71	80	90	100	112	132	160	180	200	225	250	280	315				
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①																
			1LE1601	1LE1601 Performance Line ②																
			1LE1541	1LE1541 APAC Line ③																
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④																
			1LE1603	1LE1603 Performance Line ⑤																
			1LE1543	1LE1543 Basic Line ⑥																
			1LE1643	1LE1643 Performance Line ⑦																
IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																		
	1LE1604	1LE1604 Performance Line ⑨																		
NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																		
	1LE1621	1LE1621 Eagle Line Performance ⑪																		
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																		
	1LE1623	1LE1623 Eagle Line Performance ⑬																		
1LE1.....-Z Order code		Motor version	Motor type	Frame size			71	80	90	100	112	132	160	180	200	225	250	280	315	
Motor protection (bearing protection)																				
Prepared for mounting a SIPLUS CMS 1000 vibration sensor	Q05	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor protection with PTC thermistor with 3 embedded temperature sensors for tripping	Q11 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor protection with PTC thermistor with 6 embedded temperature sensors for tripping and alarm	Q12 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor KTY 84-130	Q23 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor temperature detection with 2 × embedded temperature sensors KTY 84-130	Q25 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature detectors for tripping	Q31 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2 × 3 temperature detectors for alarm and tripping	Q32	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 3 Pt100 resistance thermometers in stator winding (2-wire circuit)	Q60 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 6 Pt100 resistance thermometers in stator winding (2-wire circuit) ²⁷⁾	Q61 <i>New!</i>	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 1 Pt100 resistance thermometer in stator winding, 2-wire circuit	Q62	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 3 Pt100 resistance thermometers in stator winding, three-wire circuit ³⁰⁾	Q63	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 6 Pt100 resistance thermometers in stator winding, three-wire circuit ³⁰⁾	Q64	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 2 Pt100 screw-in resistance thermometers in basic circuit for monitoring bearing temperature with rolling-contact bearings ²⁾	Q72	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 2 Pt100 screw-in resistance thermometers in 3-wire circuit for monitoring bearing temperature with rolling-contact bearings	Q78	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 2 Pt100 double screw-in resistance thermometers in 3-wire circuit for monitoring bearing temperature with rolling-contact bearings	Q79	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor connection and terminal box																				
External grounding	H04	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box on NDE ²⁷⁾	H08	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second external grounding	H70	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of the terminal box through 90°, entry from DE	R10	All	All	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of the terminal box through 90°, entry from NDE	R11	All	All	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

For legends and footnotes, see Page 2/87.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Special versions	Additional identification code -Z with order code and plain text if required	Motor category																		
		Motor version	Motor type (cast-iron)	Motor type – frame size																
				71	80	90	100	112	132	160	180	200	225	250	280	315				
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①																
			1LE1601	1LE1601 Performance Line ②																
			1LE1541	1LE1541 APAC Line ③																
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④																
			1LE1603	1LE1603 Performance Line ⑤																
			1LE1543	1LE1543 Basic Line ⑥																
			1LE1643	1LE1643 Performance Line ⑦																
		IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																
			1LE1604	1LE1604 Performance Line ⑨																
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																
			1LE1621	1LE1621 Eagle Line Performance ⑪																
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																
			1LE1623	1LE1623 Eagle Line Performance ⑬																
1LE1...-.....-Z Order code		Motor version	Motor type	Frame size																
				71	80	90	100	112	132	160	180	200	225	250	280	315				
Motor connection and terminal box (continued)																				
Rotation of the terminal box through 180°	R12	All	All	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
One EMC cable gland	R14	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
One metal cable gland	R15	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EMC cable gland, maximum configuration	R16	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stud terminal for cable connection, accessories pack (3 items)	R17	All	All	–	–	–	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓
Cable gland, maximum configuration	R18	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Saddle terminal for connection without cable lug, accessories pack	R19	All	All	–	–	–	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓
3 cables protruding, 0,5 m long	R20	All	All	✓	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–
3 cables protruding, 1,5 m long	R21	All	All	✓	✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
6 cables protruding, 0,5 m long	R22	All	All	✓	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–
6 cables protruding, 1,5 m long	R23	All	All	✓	✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
6 cables protruding, 3 m long	R24	All	All	✓	✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Reduction piece for M cable gland in accordance with British Standard, mounted on both cable entry openings	R30	All	All	–	–	–	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–	–
Larger terminal box	R50	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box without cable entry opening	R51	All	All	–	–	–	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Drilled removable entry plate	R52	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Undrilled removable entry plate	R53	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cast-iron auxiliary terminal box (small 27)	R62	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Silicon-free version	R74	All	All	–	–	–	□	□	□	□	□	□	□	□	✓	✓	✓	✓	✓	✓
Non-standard threaded through hole (NPT or G thread)	Y61 • and customer specifications	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Windings and insulation																				
Temperature class 155 (F), utilized acc. to 155 (F), with service factor	N01	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 155 (F), with increased output	N02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 155 (F), with increased coolant temperature	N03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Special versions	Additional identification code -Z with order code and plain text if required	Motor category															
		Motor version	Motor type (cast-iron)	Motor type – frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①													
			1LE1601	1LE1601 Performance Line ②													
			1LE1541	1LE1541 APAC Line ③													
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④													
			1LE1603	1LE1603 Performance Line ⑤													
			1LE1543	1LE1543 Basic Line ⑥													
			1LE1643	1LE1643 Performance Line ⑦													
		IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧													
			1LE1604	1LE1604 Performance Line ⑨													
NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩															
	1LE1621	1LE1621 Eagle Line Performance ⑪															
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫															
	1LE1623	1LE1623 Eagle Line Performance ⑬															
1LE1...-.....-Z Order code		Motor version	Motor type	Frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
Windings and insulation (continued)																	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 180 (H)	N10	All except ③, ⑥, ⑦, ⑧, ⑨, ⑩, ⑪, ⑫		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 180 (H) at rated output and max. CT 60 °C 4) 5)	N11	All except ⑧ and ⑨		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N20	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Increased air humidity/temperature with 60 to 100 g water per m ³ of air	N21	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or installation altitude	Y50 • and specified output, CT ... °C or IA m above sea level	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 155 (F), other requirements 5)	Y52 • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 180 (H), utilized according to 155 (F)	Y75 • and specified output, CT ... °C or IA m above sea level	All except ⑧ and ⑨		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Colors and paint finish																	
Standard finish in RAL 7030 stone gray		Only possible for ①, ③, ④, ⑥, ⑧, ⑩ and ⑫		□	□	□	□	□	□	□	□	□	□	□	□	□	
Unpainted (only cast-iron parts primed)	S00	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	
Unpainted, only primed	S01	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Special finish	S02 <i>New!</i>	All, standard version for Performance Line ②, ⑤, ⑦, ⑨, ⑪ and ⑬		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Special finish sea air resistant	S03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Special paint for use offshore	S04	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Internal coating	S05	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Top coat polyurethane 33)	S06 <i>New!</i>	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and finish RAL....	Only possible for ①, ③, ④, ⑥, ⑧, ⑩ and ⑫		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Finish in special RAL colors: For RAL colors, see "Special finish in special RAL colors" (see Catalog Section 1 "Introduction")	Y56 • <i>New!</i> and finish RAL	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

For legends and footnotes, see Page 2/87.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Special versions	Additional identification code -Z with order code and plain text if required	Motor category																			
		Motor version	Motor type (cast-iron)	Motor type – frame size																	
				71	80	90	100	112	132	160	180	200	225	250	280	315					
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①																	
			1LE1601	1LE1601 Performance Line ②																	
			1LE1541	1LE1541 APAC Line ③																	
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④																	
			1LE1603	1LE1603 Performance Line ⑤																	
			1LE1543																	1LE1543 Basic Line ⑥	
			1LE1643																	1LE1643 Performance Line ⑦	
		IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧																	
			1LE1604	1LE1604 Performance Line ⑨																	
NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩																			
	1LE1621	1LE1621 Eagle Line Performance ⑪																			
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫																			
	1LE1623	1LE1623 Eagle Line Performance ⑬																			
1LE1...-...-...-Z Order code		Motor version	Motor type	Frame size																	
				71	80	90	100	112	132	160	180	200	225	250	280	315					
Modular technology – Basic versions ④																					
Mounting of holding brake (standard assignment) 7) 31) 32)	F01	Possible only for ⑧ and ⑨, except in combination with order code F90		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of separately driven fan 28) 34)	F70	Possible only for ⑧ and ⑨, except in combination with order code F90		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of 1XP8012-10 (HTL) rotary pulse encoder 8) 9)	G01	Possible only for ⑧ and ⑨, except in combination with order code F90		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of 1XP8012-20 (TTL) rotary pulse encoder 8) 9)	G02	Possible only for ⑧ and ⑨, except in combination with order code F90		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Modular technology – Additional versions																					
Brake supply voltage 24 V DC	F10	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Brake supply voltage 230 V AC, 50/60 Hz	F11	All	All	–	–	–	○	○	○	○	○	○	○	○	○	○	○				
Brake supply voltage 400 V AC, 50/60 Hz 32)	F12	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mechanical manual brake release with lever (no locking)	F50	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Special technology ⑤																					
Mounting of LL 861 900 220 rotary pulse encoder 10)	G04	Possible only for ⑧ and ⑨, except in combination with order code F90		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of HOG 9 D 1024 I rotary pulse encoder 10)	G05	Possible only for ⑧ and ⑨, except in combination with order code F90		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of HOG 10 D 1024 I rotary pulse encoder 10)	G06	Possible only for ⑧ and ⑨, except in combination with order code F90		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of POG10D rotary pulse encoder (only in combination with separately driven fan or brake) 11)	G07	Possible only for ⑧ and ⑨, except in combination with order code F90		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓				
Mounting of POG9 rotary pulse encoder (only in combination with separately driven fan or brake) 11)	G08	Possible only for ⑧ and ⑨, except in combination with order code F90		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓				
Mounting of rotary pulse encoder HOG 10 DN 1024 I, terminal box moisture protection	G15	All except in combination with order code F90		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of rotary pulse encoder HOG 10 DN 1024 I, terminal box dust protection	G16	All except in combination with order code F90		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (integrated centrifugal switch, speed ... rpm), terminal box moisture protection	Y74 • and requ. speed rpm	All except in combination with order code F90		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓				
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (integrated centrifugal switch, speed ... rpm), terminal box dust protection	Y76 • and requ. speed rpm	All except in combination with order code F90		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓				
Mounting of rotary pulse encoder HOG 10 DN 1024 I + ESL 93, (integrated electronic speed switch, speed ... rpm), terminal box dust protection	Y79 • and requ. speed (max 3) rpm	All except in combination with order code F90		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓				

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Special versions	Additional identification code -Z with order code and plain text if required	Motor category															
		Motor version	Motor type (cast-iron)	Motor type – frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①													
			1LE1601	1LE1601 Performance Line ②													
			1LE1541	1LE1541 APAC Line ③													
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④													
			1LE1603	1LE1603 Performance Line ⑤													
			1LE1543	1LE1543 Basic Line ⑥													
			1LE1643	1LE1643 Performance Line ⑦													
		IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧													
			1LE1604	1LE1604 Performance Line ⑨													
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩													
1LE1621	1LE1621 Eagle Line Performance ⑪																
NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫															
	1LE1623	1LE1623 Eagle Line Performance ⑬															
1LE1...-.....-Z Order code		Motor version	Motor type	Frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
Mechanical design and degrees of protection																	
Low-noise version for 2-pole motors with clockwise direction of rotation	F77	Possible only for ⑧ and ⑨, except in combination with order code F90 and only for 2-pole motors		–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78	Possible only for ⑧ and ⑨, except in combination with order code F90 and only for 2-pole motors		–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mountings, center hole only	G40	Possible only for ⑧ and ⑨, except in combination with order code F90		–	✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	
Prepared for mountings with D12 shaft	G41	Possible only for ⑧ and ⑨, except in combination with order code F90		–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mountings with D16 shaft	G42	Possible only for ⑧ and ⑨, except in combination with order code F90		–	O. R.	O. R.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Protective cover for encoder (pre-assembled or supplied loose depending on frame size)	G43	Possible only for ⑧ and ⑨, except in combination with order code F90		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Protective cover ^{8) 10) 12)}	H00	Possible only for ⑧ and ⑨, except in combination with order code F90		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Screwed-on (instead of cast) feet	H01	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3	H02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□	
Condensation drainage holes	H03	All	All	✓	✓	✓	□	□	□	□	□	□	□	□	□	□	
Rust-resistant screws (externally)	H07	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IP65 degree of protection ¹⁴⁾	H20	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IP54 degree of protection	H21	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
IP56 degree of protection ¹⁵⁾	H22	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ^{13) 29)}	H23	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Grounding brush for converter operation	L52	All	All	–	–	–	–	–	–	–	–	–	–	–	✓	✓	
Coolant temperature and installation altitude																	
Coolant temperature –50 to +40 °C (degree of protection IP54)	D02	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Coolant temperature –40 to +40 °C ¹⁶⁾	D03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Coolant temperature –30 to +40 °C ¹⁷⁾	D04	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Designs in accordance with standards and specifications																	
VIK version	C02	Not possible for ⑧ and ⑨		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Motor without CE marking for export outside EEA (see EU Directive 640/2009)	D22	Not possible for ⑧ and ⑨		○	○	○	○	○	○	○	○	○	○	○	○	○	
Electrical according to NEMA MG1-12 ¹⁸⁾	D30	All, standard version for Eagle Line ⑩, ⑪, ⑫ and ⑬		○	○	○	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Version according to UL with "Recognition Mark" ¹⁸⁾	D31	All, standard version for Eagle Line ⑩, ⑪, ⑫ and ⑬		○	○	○	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
KEMCO Korea Energy Efficiency Label	D33	Only possible for ⑥ and ⑦		–	–	–	–	–	–	–	○	○	○	○	○	○	
China Energy Efficiency Label	D34	All, for Eagle Line ①, ②, ④, ⑤, ⑩, ⑪, ⑫ and ⑬ from frame size 80 upwards		○	○	○	○	○	○	○	○	○	○	○	○	○	
Canadian regulations (CSA) ¹⁷⁾	D40	All, standard version for Eagle Line ⑥, ⑦, ⑩, ⑪, ⑫ and ⑬		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TR CU product safety certificate EAC for Eurasian customs union ³⁵⁾	D47	<i>New!</i> All	All	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

For legends and footnotes, see Page 2/87.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Special versions	Additional identification code -Z with order code and plain text if required	Motor category																
		Motor version	Motor type (cast-iron)	Motor type – frame size														
				71	80	90	100	112	132	160	180	200	225	250	280	315		
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①														
			1LE1601		1LE1601 Performance Line ②													
			1LE1541		1LE1541 APAC Line ③													
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④														
			1LE1603		1LE1603 Performance Line ⑤													
			1LE1543														1LE1543 Basic Line ⑥	
			1LE1643														1LE1643 Performance Line ⑦	
		IE4 Super Premium Efficiency	1LE1504		1LE1504 Basic Line ⑧													
			1LE1604		1LE1604 Performance Line ⑨													
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩														
			1LE1621		1LE1621 Eagle Line Performance ⑪													
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫														
			1LE1623		1LE1623 Eagle Line Performance ⑬													
1LE1...-.....-Z Order code		Motor version	Motor type	Frame size														
				71	80	90	100	112	132	160	180	200	225	250	280	315		
Bearings and lubrication																		
Regreasing device with M10 x 1 grease nipple according to DIN 71412-A	L19	All, for ②, ⑤, ⑪ and ⑬ from frame size 160 upwards, for ⑨ from frame size 180 upwards and for ⑧ without additional charge		–	–	–	–	–	–	–	✓	✓	✓	✓	○	○		
Located bearing DE	L20	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Located bearing NDE	L21	All	All	✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	□		
Bearing design for increased cantilever forces 36)	L22	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Regreasing device 1)	L23	All, for ②, ⑤, ⑪ and ⑬ from frame size 160 upwards, for ⑨ from frame size 180 upwards and for ⑧ from frame size 280 upwards without additional charge		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	□	□		
Deep-groove bearings reinforced at both ends for DE and NDE, bearing size 63 19)	L25	All, standard version for ②, ⑤, ⑪ and ⑬, for ⑧ from frame size 280 upwards, for ⑨ from frame size 160 upwards		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□		
Reinforced bearings at both DE and NDE, DE bearing for increased cantilever forces	L28	All	All	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
Bearing insulation DE	L50	All	All	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓		
Bearing insulation NDE	L51	All	All	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓		
Measuring nipple for SPM shock pulse measurement for bearing inspection 1)	Q01	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Balance and vibration quantity																		
Vibration quantity level A		All	All	□	□	□	□	□	□	□	□	□	□	□	□	□		
Vibration quantity level B 20)	L00	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Half-key balancing (standard)		All	All	□	□	□	□	□	□	□	□	□	□	□	□	□		
Balancing without feather key, feather key is supplied	L01	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Full-key balancing	L02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Shaft and rotor																		
Shaft extension with standard dimensions, without feather keyway	L04	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Standard cylindrical shaft extension	L05	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Standard shaft made of stainless steel (e.g. 1.4021)	L06	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	L07	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard shaft extension, DE 21)	Y58 • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard shaft extension, NDE 21)	Y59 • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special shaft steel as requested by customer	Y60 • and customer specifications	All	All	–	–	–	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Special versions	Additional identification code -Z with order code and plain text if required	Motor category															
		Motor version	Motor type (cast-iron)	Motor type – frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
		IE2 High Efficiency	1LE1501	1LE1501 Basic Line ①													
			1LE1601	1LE1601 Performance Line ②													
			1LE1541	1LE1541 APAC Line ③													
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ④													
			1LE1603	1LE1603 Performance Line ⑤													
			1LE1543	1LE1543 Basic Line ⑥													
			1LE1643	1LE1643 Performance Line ⑦													
		IE4 Super Premium Efficiency	1LE1504	1LE1504 Basic Line ⑧													
			1LE1604	1LE1604 Performance Line ⑨													
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑩													
			1LE1621	1LE1621 Eagle Line Performance ⑪													
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑫													
			1LE1623	1LE1623 Eagle Line Performance ⑬													
1LE1.....-.....-Z Order code		Motor version	Motor type	Frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
Heating and ventilation																	
Sheet metal fan cover	F74	All, standard version for Performance Line ②, ⑤, ⑦, ⑨, ⑪, ⑬ and frame sizes 71 to 90		□	□	□	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Metal external fan ^{22) 28)}	F76	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Without external fan and without fan cover	F90	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti-condensation heating for 230 V	Q02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti-condensation heating for 115 V	Q03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Separately driven fan with non-standard voltage and/or frequency	Y81 • and customer specifications	All	All	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓
Rating plate and extra rating plates																	
Extra rating plate for voltage tolerance ²³⁾	B07	All, with the exception of 8-pole motors		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second rating plate, loose	M10	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rating plate, stainless steel	M11	All, for ②, ⑤, ⑪ and ⑬ without additional charge, for ⑨ normal version		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	Y80 • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extra rating plate with customer specifications	Y82 • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Additional information on rating plate and on package label (max. 20 characters)	Y84 • and customer specifications	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Adhesive label, supplied loose (Printed with: Article No., Serial No.: 2 lines of text)	Y85 • and customer specifications	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extension of the liability for defects																	
Extension of the liability for defects by 12 months to a total of 24 months (2 years) from delivery ²⁴⁾	Q80	All, for Performance Line ②, ⑤, ⑦, ⑨, ⑪ and ⑬ 36 months standard		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Extension of the liability for defects by 24 months to a total of 36 months (3 years) from delivery ²⁴⁾	Q82	All, for Performance Line ②, ⑤, ⑦, ⑨, ⑪ and ⑬ 36 months standard		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Packaging, safety notes, documentation and test certificates																	
Acceptance test certificate 3.1 according to EN 10204 ²⁵⁾	B02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Printed German/English Operating Instructions enclosed ²⁶⁾	B04	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Document - Electrical data sheet	B60	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Document - Order dimensional drawing	B61	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Standard test (routine test) with acceptance	B65	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type test with heat run for horizontal motors, without acceptance	B82	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type test with heat run for horizontal motors, with acceptance	B83	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Connected in star for dispatch	M01	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Connected in delta for dispatch	M02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

For legends and footnotes, see Page 2/87.

Supplements to article numbers and special versions

SIMOTICS SD 1LE1 Standard Motors

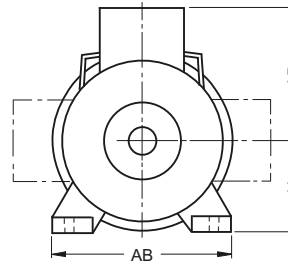
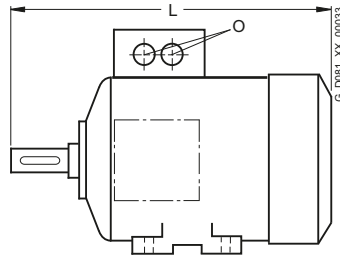
Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required
- ✓ With additional charge
- O. R. Possible on request
- Not possible

2

- 1) Up to frame size 160 not possible when brake is mounted.
- 2) Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.
- 3) Parallel Whitworth threaded pipe ISO 228 (DIN 259) BSPP (British Standard Pipe Parallel) Threaded pipe for connections not sealed in the thread (cylindrical), external = G.
- 4) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in Catalog Section 1 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease service lifetime or relubrication interval is halved.
- 5) Not possible for 1LE15 and 1LE16 motors with increased output.
- 6) A second shaft extension is not possible. Please inquire for mounted brakes.
- 7) For order codes **F10**, **F11** and **F12**, the brake supply voltage must be specified or ordered.
- 8) The 1XP8 rotary pulse encoders are fitted with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover.
- 9) In combination with a separately driven fan (order code **F70**) the 1XP8032-10 rotary pulse encoder is used instead of 1XP8012-10 or 1XP8032-20 is used instead of 1XP8012-20.
- 10) The LL and HOG rotary pulse encoders up to frame size 160 are fitted with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover.
- 11) Option (encoder mounting) is only possible for motors with a mounted separately driven fan or for naturally cooled motors (without a separately driven fan). This option can be used in combination with brakes of type KFB. This option cannot be used in combination with brakes of type 2LM8.
- 12) Order code **H00** provides mechanical protection for encoders.
- 13) Not possible for type of construction IM V3.
- 14) Not possible in combination with HOG 9 D 1024I rotary pulse encoder (order code **G05**) and/or brake 2LM8 (order code **F01**).
- 15) Not possible in combination with brake 2LM8 – order code **F01**.
- 16) In connection with mountings, the respective technical specifications must be observed, please inquire before ordering.
- 17) The rated voltage is indicated on the rating plate without voltage range. Order code **D40** does not authorize importing into Canada. The North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient are available for this purpose.
- 18) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range. Order codes **D30** and **D31** do not authorize importing into USA and Mexico. The North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient are available for this purpose.
- 19) For Performance Line motors (all frame sizes) and Basic Line motors (from frame size 280) in the standard version.
- 20) On request for 2-pole motors (concerns frame sizes 225 to 315).
- 21) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the feather keyway must be specified in a sketch. It must be ensured that only feather keys in accordance with DIN 6885, Form A are permitted to be used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer in accordance with the appropriate standard. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The feather keys are supplied in every case. For order codes **Y58**, **Y59** and **L05**:
 - Dimensions D and DA ≤ Inner diameter of roller bearing (see tables under "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (normal) of the shaft extension.
- 22) Converter operation is permitted for 1LE1 motors with metal external fans.
- 23) Can be ordered for 230 VΔ/400 VY or 400 VΔ/690 VY (voltage code **22** or **34**). Not possible for 8-pole motors and in combination with order code **D34**.
- 24) Wear parts (bearings) are excluded from the warranty extension.
- 25) The delivery time for the factory test certificate may differ from the delivery time for the motor.
- 26) The Operating Instructions (compact) are available in PDF format for all official EU languages at <http://support.automation.siemens.com/WW/view/en/10803948/133300>.
- 27) With **H08**, feet dimensions C and CA differ from EN 50347! Further information is available in DT Configurator (see Appendix, "Tools and Configuring").
- 28) Order codes **F70** and **F76** cannot be combined.
- 29) Not possible in combination with order codes **Q72** and **Q78**.
- 30) For frame sizes 100 to 132 only possible in combination with order code **R50**.
- 31) Not possible in combination with order codes **N05**, **N06**, **N07**, **N08** and **N11**.
- 32) For frame size 315, when combining order codes **F01** and **F12**, the rectifier for the brake will be supplied separately as a single part.
- 33) Order code **S06** cannot be combined with order code **S00**, **S01** and **S02**. It can be combined with **Y53** and **Y56** on request.
- 34) Order codes **F70** (separately driven fan) and **H02** (vibration-proof version) cannot be combined for motors in frame sizes 71, 80 and 90.
- 35) Please note the additional use of order code **D22** "Motor without CE marking for export outside EEA (see EU Directive 640/2009)".
- 36) A minimum cantilever force $F_{\min}$ of $0.5 \cdot F_{\max}$ is required for NU bearings (cylindrical roller bearings) in contrast to bearings. Cylindrical roller bearings are not suitable for coupling output or for brief periods of no-load operation without cantilever force.

Overview



Frame size	Type	Dimension	L	AD	H	AB	O
71 M	Cast-iron series, self-ventilated						
	1LE1501, 1LE1521, 1LE1503-, 1LE1523-OCA2, OCB2, OCC2		240	148	71	132	2 × M25 × 1.5
	1LE1503-, 1LE1523-OCA3, OCB3, OCC3		280	148	71	132	2 × M25 × 1.5
80 M	Aluminum series, self-ventilated						
	1LE1001		292	121	80	150	1 × M25 × 1.5
	Aluminum series, forced-air cooled or naturally cooled						
	1LE1001		253	121	80	150	1 × M25 × 1.5
	Cast-iron series, self-ventilated						
	1LE1501, 1LE1521, 1LE1503-, 1LE1523-ODA2, ODB2, ODC2		292	158	80	150	2 × M25 × 1.5
90 S/ 90 L	Aluminum series, self-ventilated						
	1LE1001		347	126	90	165	1 × M25 × 1.5
	Aluminum series, forced-air cooled or naturally cooled						
	1LE1001		295	126	90	165	1 × M25 × 1.5
	Cast-iron series, self-ventilated						
	1LE1501, 1LE1521, 1LE1503-, 1LE1523-OEA0, OEB0, OEC0		347	163	90	165	2 × M25 × 1.5
100 L	Aluminum series, self-ventilated						
	1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021		396 ¹⁾	166	100	196	2 × M32 × 1.5
	Aluminum series, self-ventilated with increased output						
	1LE1001, 1LE1002		431 ¹⁾	166	100	196	2 × M32 × 1.5
	Aluminum series, forced-air cooled or naturally cooled						
	1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021		322	166	100	196	2 × M32 × 1.5
	Aluminum series, self-ventilated						
	1LE1003, 1LE1023		431	166	100	196	2 × M32 × 1.5
	Aluminum series, forced-air cooled						
	1LE1023		357	166	100	196	2 × M32 × 1.5
	Cast-iron series, self-ventilated						
	1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621		389	193	100	196	2 × M32 × 1.5
	1LE1523, 1LE1623		425	193	100	196	2 × M32 × 1.5

Frame size	Type	Dimension	L	AD	H	AB	O
112 M	Aluminum series, self-ventilated						
	1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021		389 ¹⁾	177	112	226	2 × M32 × 1.5
	Aluminum series, self-ventilated with increased output						
	1LE1001, 1LE1002		414 ¹⁾	177	112	226	2 × M32 × 1.5
	Aluminum series, forced-air cooled or naturally cooled						
	1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021		311	177	112	226	2 × M32 × 1.5
	Aluminum series, self-ventilated						
	1LE1003, 1LE1023		414	177	112	226	2 × M32 × 1.5
	Aluminum series, forced-air cooled						
	1LE1023		336	177	112	226	2 × M32 × 1.5
132 S/M	Cast-iron series, self-ventilated						
	1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621		382	195	112	226	2 × M32 × 1.5
	1LE1523, 1LE1623		409	195	112	226	2 × M32 × 1.5
	Aluminum series, self-ventilated						
	1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021		465 ¹⁾	202	132	256	2 × M32 × 1.5
	Aluminum series, self-ventilated with increased output						
	1LE1001, 1LE1002		515 ¹⁾	202	132	256	2 × M32 × 1.5
	Aluminum series, forced-air cooled or naturally cooled						
	1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021		381	202	132	256	2 × M32 × 1.5
	Aluminum series, self-ventilated						
	1LE1003-, 1LE1023-1CA0, 1CC0, 1CC2		465	202	132	256	2 × M32 × 1.5
	Aluminum series, forced-air cooled						
	1CA1, 1CB0, 1CB2, 1CC3		515	202	132	256	2 × M32 × 1.5
	Aluminum series, forced-air cooled						
	1LE1023-1CA0, 1CC0, 1CC2		381	202	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3		431	202	132	256	2 × M32 × 1.5
	Cast-iron series, self-ventilated						
	1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621		457	215	132	256	2 × M32 × 1.5
	1LE1523-, 1LE1623-1CA0, 1CC0, 1CC2		458	215	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3		508	215	132	256	2 × M32 × 1.5

¹⁾ The length is specified as far as the tip of the fan cover.²⁾ Only for pole-changing types 1LE1011-1DP6 and 1LE1012-1DQ6 the dimension L is 664 mm.

Dimensions

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Overall dimensions

Overview (continued)

Frame size	Type	Dimension				
		L	AD	H	AB	O
160 M/L	Aluminum series, self-ventilated					
	1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021	604 ^{1) 2)}	237	160	300	2 × M40 × 1.5
	Aluminum series, self-ventilated with increased output					
	1LE1001, 1LE1002	664 ¹⁾	237	160	300	2 × M40 × 1.5
	Aluminum series, forced-air cooled or naturally cooled					
160 M	1LE1001, 1PC1001, 1LE1021, 1PC1002, 1LE1021	510	237	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated					
	1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621	594	265	160	300	2 × M40 × 1.5
	Aluminum series, self-ventilated					
	1LE1003, 1LE1023	604	237	160	300	2 × M40 × 1.5
160 M	Aluminum series, forced-air cooled					
	1LE1023	510	237	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated					
	1LE1523, 1LE1623	596	261	160	300	2 × M40 × 1.5
160 L	Aluminum series, self-ventilated					
	1LE1003, 1LE1023	664	237	160	300	2 × M40 × 1.5
	Aluminum series, forced-air cooled					
	1LE1023	570	237	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated					
160 L	1LE1523, 1LE1623	656	261	160	300	2 × M40 × 1.5
	Aluminum series, self-ventilated					
	1LE1001					
	1EA2, 1EB2	668	286	180	339	2 × M40 × 1.5
	Cast-iron series, self-ventilated					
160 L	1LE15.1-, 1LE16.1- 1EA2, 1EB2 1EA6 1LE15.3-, 1LE16.3- 1EB2 1EA2	668 698	286	180	339	2 × M40 × 1.5
	Aluminum series, self-ventilated					
	1LE1001					
	1EB4, 1EC4, 1ED4 1EA6, 1EB6, 1EC6, 1ED6	668 698	286	180	339	2 × M40 × 1.5
	Cast-iron series, self-ventilated					
160 L	1LE15.1-, 1LE16.1- 1EC4, 1EC6 1EB6 1LE15.3-, 1LE16.3- 1EC4 1EB4	668 698	286	180	339	2 × M40 × 1.5
	Aluminum series, self-ventilated					
	1LE1001					
	2AA4, 2AA5, 2AB5, 2AC4, 2AC5, 2AD5 2AA6, 2AB6, 2AC6, 2AD6	721 746	315	200	378	2 × M50 × 1.5
	Cast-iron series, self-ventilated					
160 L	1LE15.1-, 1LE16.1- 2AA4, 2AA5, 2AB5, 2AC4, 2AC5 2AA6 1LE15.3-, 1LE16.3- 2AA4, 2AC4 2AA5, 2AB5, 2AC5	721 746	315	200	378	2 × M50 × 1.5
	Aluminum series, self-ventilated					
	1LE1001					
	2AA4, 2AA5, 2AB5, 2AC4, 2AC5 2AA6 1LE15.3-, 1LE16.3- 2AA4, 2AC4 2AA5, 2AB5, 2AC5	721 746	315	200	378	2 × M50 × 1.5
	Cast-iron series, self-ventilated					
160 L	1LE15.1-, 1LE16.1- 2AA4, 2AA5, 2AB5, 2AC4, 2AC5 2AA6 1LE15.3-, 1LE16.3- 2AA4, 2AC4 2AA5, 2AB5, 2AC5	721 746	315	200	378	2 × M50 × 1.5

Frame size	Type	Dimension				
		L	AD	H	AB	O
225 S	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 2BB0, 2BD0 1LE15.3-, 1LE16.3- 2BB0	788	338	225	436	2 × M50 × 1.5
	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 2BA2, 2BA6 2BB2, 2BB6, 2BC2, 2BC6, 2BD6 1LE15.3-, 1LE16.3- 2BA2 2BB2, 2BC2	818 848	338	225	436	2 × M50 × 1.5
	Cast-iron series, self-ventilated					
225 M	1LE15.1-, 1LE16.1- 2CA2, 2CA6, 2CB2, 2CC2, 2CC6, 2CD2, 2CD6 2CB6 1LE15.3-, 1LE16.3- 2CA2, 2CB2, 2CC2	887 957	410	250	490	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 2DA0, 2DB0, 2DC0, 2DD0 1LE15.3, 1LE16.3 2DA0, 2DB0, 2DC0	960 960	433	280	540	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 2DA2, 2DB2, 2DC2, 2DC6, 2DD2, 2DD6 2DA6, 2DB6 1LE15.3-, 1LE16.3- 2DC2 2DA2, 2DB2	960 1070	433	280	540	2 × M63 × 1.5
225 M	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 3AA0 3AB0, 3AC0, 3AD0 1LE15.3-, 1LE16.3- 3AA0 3AB0, 3AC0	1052 1082	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 3AC2, 3AD2 3AA2 3AB2 1LE15.3-, 1LE16.3- 3AA2 3AB2, 3AC2	1082 1217 1247	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
225 M	1LE15.1-, 1LE16.1- 3AB4, 3AC4, 3AC5, 3AD4, 3AD5, 3AD6 3AA5, 3AA6 3AB5, 3AB6, 3AC6 1LE15.3-, 1LE16.3- 3AA4 3AB4, 3AC4 3AA5 3AB5, 3AC5, 3AC6	1217 1247 1372 1402	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 3AB4, 3AC4 3AA5 3AB5, 3AC5, 3AC6	1217 1247 1372 1402	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 3AB4, 3AC4 3AA5 3AB5, 3AC5, 3AC6	1217 1247 1372 1402	515	315	610	2 × M63 × 1.5

Overview

- Dimensional drawings according to EN 50347 and IEC 60072.

Fits

The shaft extensions specified in the dimension tables (DIN 748) and centering spigot diameters (EN 50347) are machined with the following fits:

Dimension designation D, DA	ISO fit ISO 286-2	
	to 30	j6
	over 30 to 50	k6
	over 50	m6
N	to 250	j6
	over 250	h6
F, FA		h9
K		H17
S	Flange (FF)	H17

The drilled holes of couplings and belt pulleys should have an ISO fit of at least H7.

Dimension tolerances

For the following dimensions, the admissible deviations are given below:

Dimension designation	Dimension	Admissible deviation
H	to 250	– 0.5
	over 250	– 1.0
E, EA		– 0.5

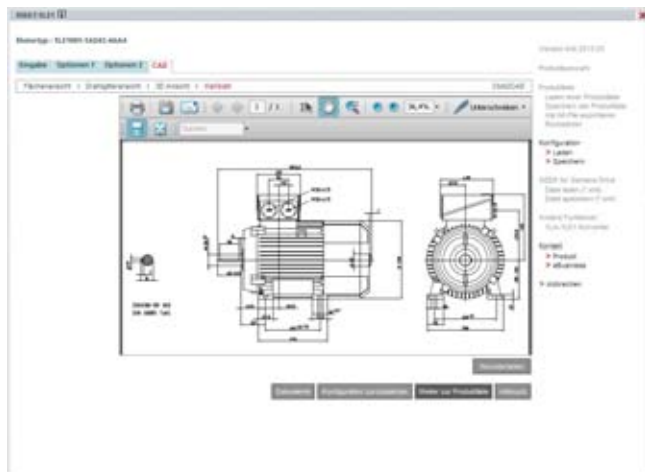
Keyways and feather keyways (dimensions GA, GC, F and FA) are made in compliance with DIN 6885 Part 1.

- All dimensions are specified in mm.

Dimension sheet generator (within the Drive Technology Configurator)

Overview

A dimensional drawing can be created in the Drive Technology (DT) Configurator for every configurable motor. A dimensional drawing can be requested for every other motor.



When a complete Article No. is entered with or without order codes, a dimensional drawing can be called up under the "Documentation" tab.

These dimensional drawings can be presented in different views and sections and printed.

The corresponding dimension sheets can be exported, saved and processed further in DXF format (interchange/import format for CAD systems) or as bitmap graphics.

Online access in the Siemens Industry Mall

The DT Configurator is integrated into the Siemens Industry Mall and can be used on the Internet without installation.

English: www.siemens.com/dt-configurator

Offline access in the Interactive Catalog CA 01

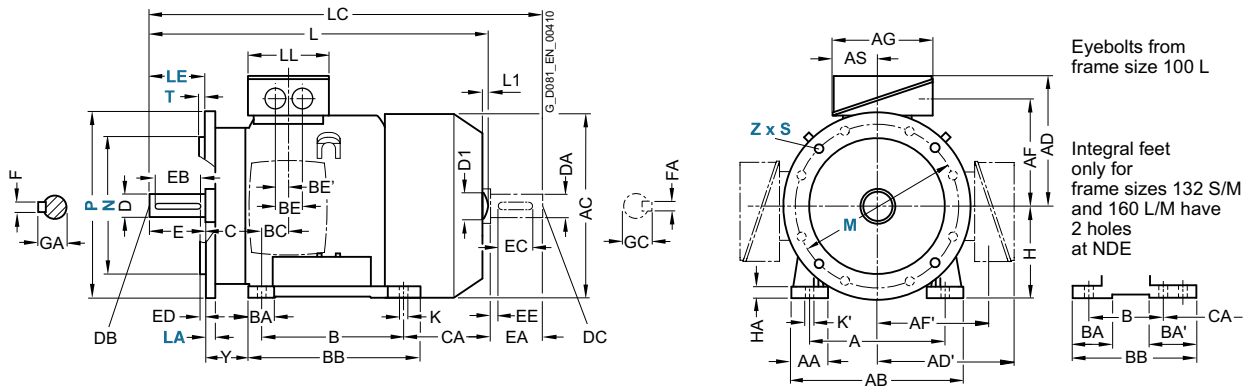
The DT Configurator is also part of the Interactive Catalog CA 01 on DVD – the offline version of Siemens Industry Mall. CA 01 can be ordered from the relevant Siemens sales office or via the Internet: www.siemens.com/automation/CA01

Cast-iron series 1LE1501, 1LE1521, 1LE1601, 1LE1621 · Self-ventilated, frame sizes 71 M to 160 L

Dimensional drawings (continued)

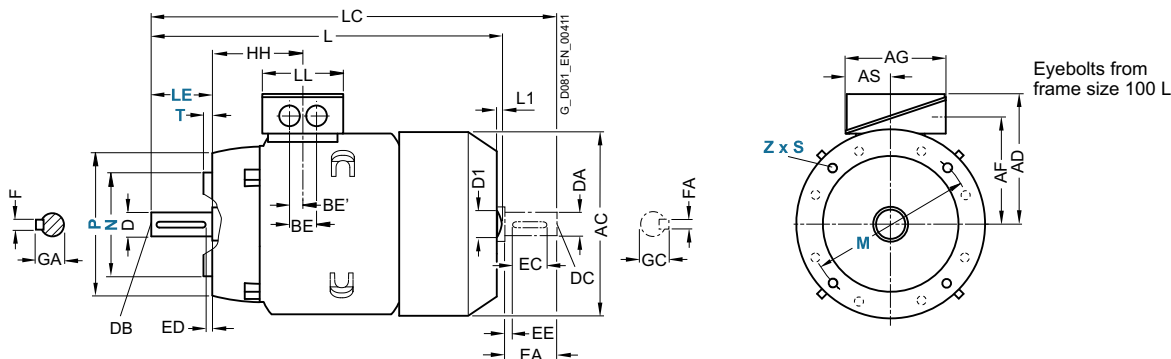
Type of construction IM B35

For flange dimensions, see Page 1/34 (**Z** = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 1/34 (**Z** = the number of retaining holes)



For motor			Dimension designation acc. to IEC								DE shaft extension								NDE shaft extension							
Frame size	Motor type 1LE15.1, 1LE16.1	No. of poles	HH	K	K'	L ¹⁾	L1 ²⁾	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC		
71 M	1LE15.1	2, 4, 6	64.5	7	7	240	–	–	278	102	14	M5	30	22	4	5	16	14	M5	30	16	4	5	16		
80 M	1LE15.1	2, 4, 6	71.5	10	10	292	–	–	343	102	19	M6	40	32	4	6	21.5	19	M6	40	22	4	6	21.5		
90 S	1LE15.1	2, 4, 6	79.5	10	10	347	–	–	405	102	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5		
90 L	1LE15.1	2, 4, 6	79.5	10	10	347	–	–	405	102	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5		
100 L	All	2, 4, 6, 8	100.5	12	16	388.5	7	32	454	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27		
112 M	All	2, 4, 6, 8	100.5	12	16	383.5 415.5	7	32	451.5 483.5	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27		
132 S	All	2, 4, 6, 8	115.5	12	16	456.5	8.5	39	535.5	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31		
132 M	All	2, 4, 6, 8	115.5	12	16	456.5	8.5	39	535.5	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31		
160 M	All	2, 4, 6, 8	145	15	19	594	10	45	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45		
160 L	All	2, 4, 6, 8	145	15	19	594	10	45	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45		

1) For 1LE15 motors, plus dimension L1.

2) Only for 1LE15 motors.

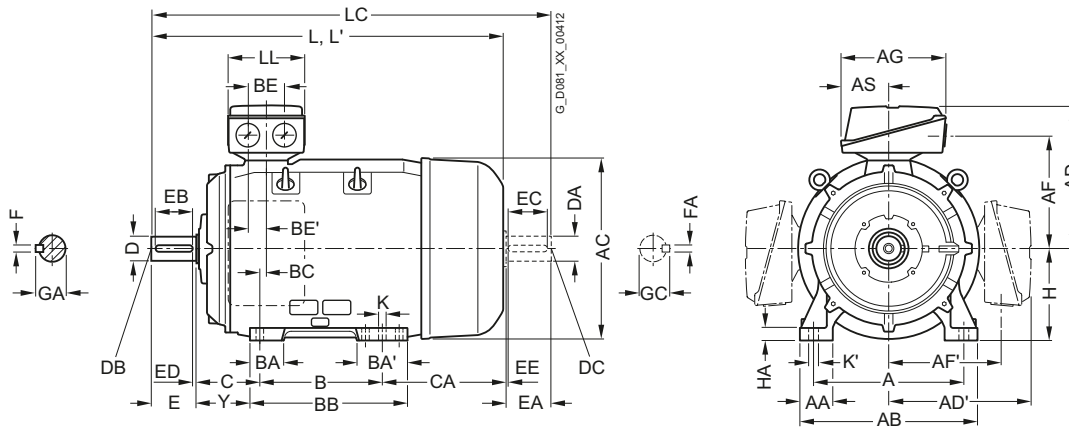
Dimensions

SIMOTICS SD 1LE1 Standard Motors

Cast-iron series 1LE1501, 1LE1521, 1LE1541, 1LE1601, 1LE1621 · Self-ventilated, frame sizes 180 M to 250 M

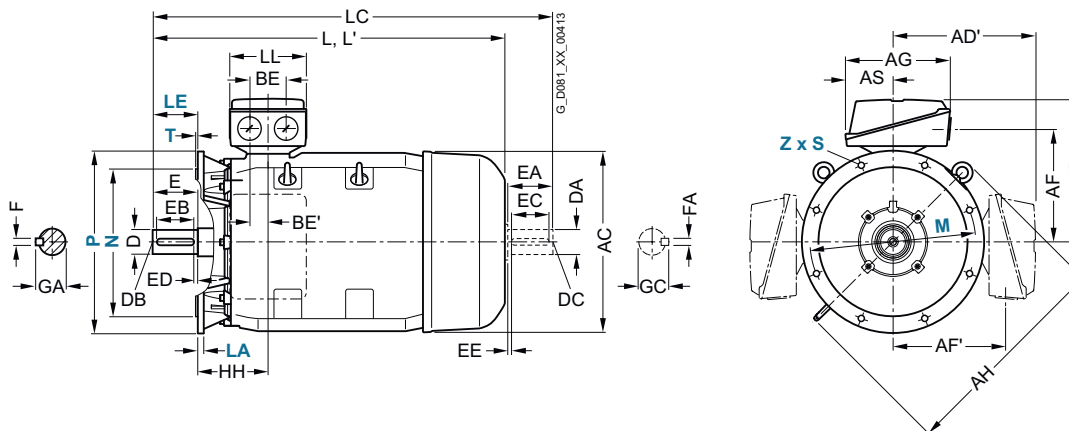
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 1/34 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC																			
Frame size	Motor type 1LE1501-, 1LE1521-, 1LE1541- 1LE1601-, 1LE1621-	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*
180 M/ 180 L	1EA2, 1EB2, 1EC6	2, 4, 6	279	65	339	356	286	286	234	234	190	468	92	241	85	120	328	34	60	30	121	202
	1EB4, 1EC4, 1EA6, 1EB6	2, 4, 6												279								
200 L	2AA4,2AA5, 2AB5, 2AC4,2AC5	2, 4, 6	318	70	378	396	315	315	259	259	266	533	112	305	104	104	355	31	85	42.5	133	177
	2AA6, 2AB6, 2AC6	2, 4, 6																				
225 S/ 225 M	2BB0, 2BD0,	4, 8	356	80	436	449	338	338	282	282	266	556	112	311	92	117	361	15	85	42.5	149	253
	2BB2, 2BC2, 2BD2, 2BB6,	4, 6, 8																				
	2BC6, 2BD6																					
	2BA2, 2BA6	2																				
250 M	2CA2, 2CA6	2	406	100	490	497	410	410	322	322	319	620	145	349	102	102	409	24	110	55	168	230
	2CB2, 2CC2, 2CD2, 2CC6,	4, 6, 8																				
	2CD6,																					
	2CB6	4																				300

300

* This dimension is assigned in EN 50347 to the frame size listed.

Dimensions

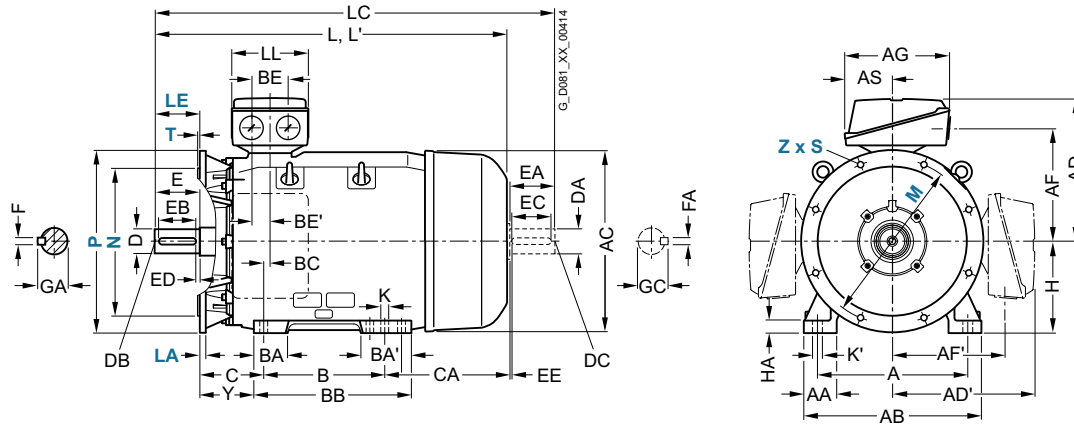
SIMOTICS SD 1LE1 Standard Motors

Cast-iron series 1LE1501, 1LE1521, 1LE1541, 1LE1601, 1LE1621 · Self-ventilated, frame sizes 180 M to 250 M

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 1/34 (**Z** = the number of retaining holes)



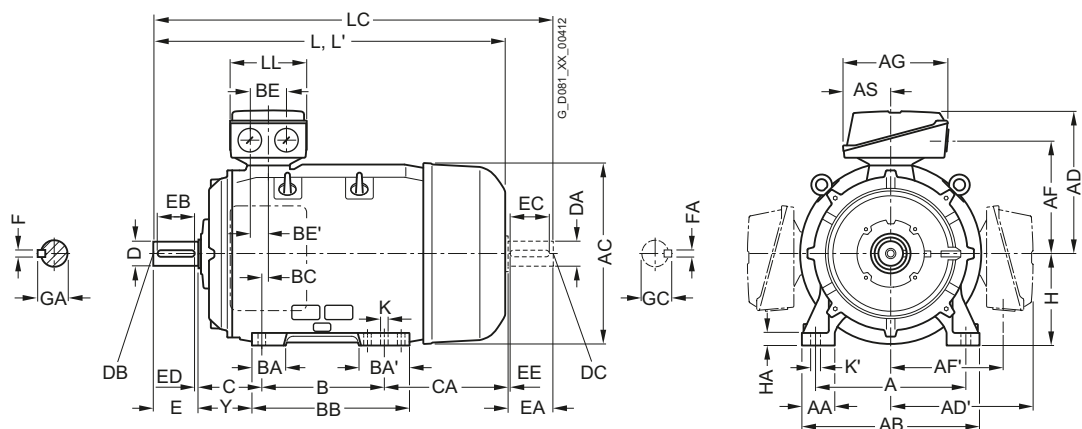
For motor Motor type 1LE1501-, 1LE1521-, 1LE1541- 1LE1601-, 1LE1621-	Dimension designation acc. to IEC										DE shaft extension						NDE shaft extension							
	H	HA	Y	HH	K	K'	L	L' ¹⁾	LC ²⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
1EA2, 1EB2, 1EC6	180	20	95	155	15	19	668	668	784	165	48	M16	110	100	5	14	52	48	M16	110	100	5	14	51.5
1EB4, 1EC4, 1EA6, 1EB6							698	698	814															
2AA4,2AA5, 2AB5, 2AC4,2AC5	200	25	108	164	19	25	721	755	835	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59
2AA6, 2AB6, 2AC6							746	780	860															
2BB0, 2BD0	225	34	124	164	19	25	788	–	903	197	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
2BB2, 2BC2, 2BD2, 2BB6, 2BC6, 2BD6							848		963															
2BA2, 2BA6							818	852	933		55		110	100	5	16	59	48	M16				14	51.5
2CA2, 2CA6	250	40	138	192	24	30	887	924	1002	233	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
2CB2, 2CC2, 2CD2, 2CC6, 2CD6							–		1032		65						69	60		140	125	10	18	64
2CB6							957		1072															

¹⁾ For version with low-noise fan for 2-pole motors.

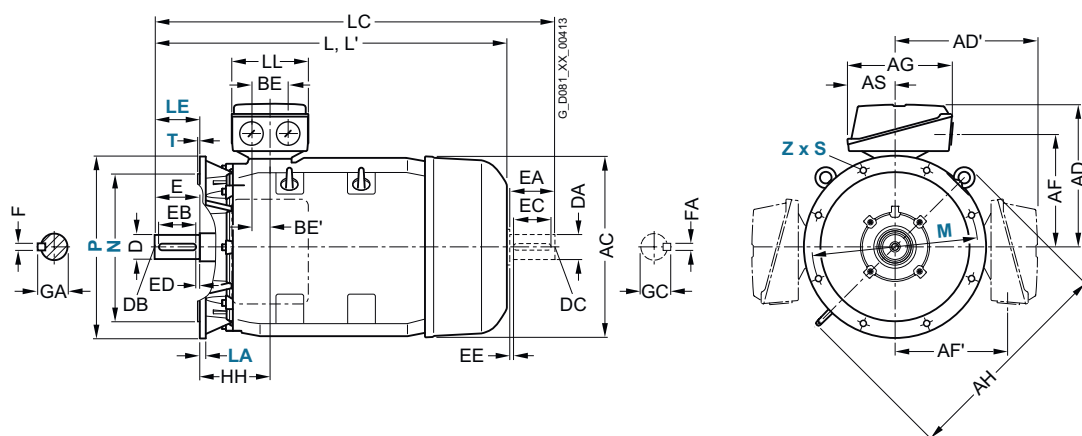
²⁾ In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

SIMOTICS SD 1LE1 Standard Motors

Type of construction IM B3



For flange dimensions, see Page 1/34 (**Z** = the number of retaining holes)



* This dimension is assigned in EN 50347 to the frame size listed.

1) With terminal box position right, terminal box left, and with order code **H01** only screwed-on feet with 3 drilled holes with dimension "B" (406, 457 and 508 mm). The dimension "BB" will then be 666 mm.

Dimensions

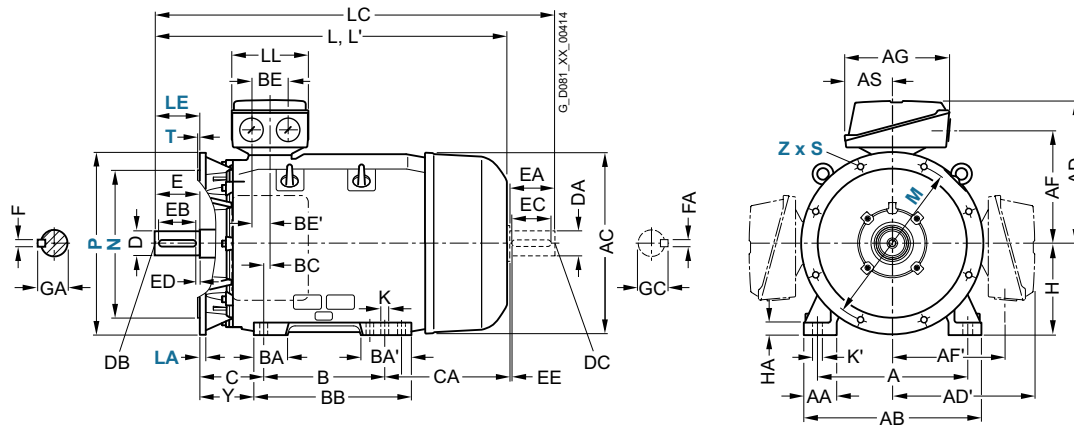
SIMOTICS SD 1LE1 Standard Motors

Cast-iron series 1LE1501, 1LE1521, 1LE1541, 1LE1601, 1LE1621 · Self-ventilated, frame sizes 280 S to 315 L

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 1/34 (Z = the number of retaining holes)



For motor	Dimension designation acc. to IEC										DE shaft extension						NDE shaft extension							
Motor type	H	HA	Y	HH	K	K'	L	L' ¹⁾	LC ²⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
1LE1501-, 1LE1521-, 1LE1541- 1LE1601-, 1LE1621-																								
2DA0	280	40	160	210	24	30	960	998	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
2DB0, 2DC0, 2DD0								–			75					20	79.5	65						69
2DA6							1070	1108	1215		65					18	69	60						64
2DA2							960	998	1105															
2DB2, 2DC2, 2DD2, 2DC6, 2DD6								–			75					20	79.5	65						69
2DB6							1070		1215															
3AA0	315	50	181	238	28	35	1052	1122	1197	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
3AB0, 3AC0, 3AD0							1082	–	1227		80		170	140	25	22	85	70					20	74.5
3AA2							1217	1287	1362		65		140	125	10	18	69	60					18	64
3AB2							1247	–	1392		80		170	140	25	22	85	70					20	74.5
3AC2, 3AD2							1082		1227															
3AA4							1217	1287	1362		65		140	125	10	18	69	60					18	64
3AB4, 3AC4, 3AD4, 3AC5, 3AD5, 3AD6							1247	–	1392		80		170	140	25	22	85	70					20	74.5
3AA5, 3AA6			146				1372	1442	1517		65		140	125	10	18	69	60					18	64
3AB5, 3AB6, 3AC6							1402	–	1547		80		170	140	25	22	85	70					20	74.5

¹⁾ For version with low-noise fan for 2-pole motors.

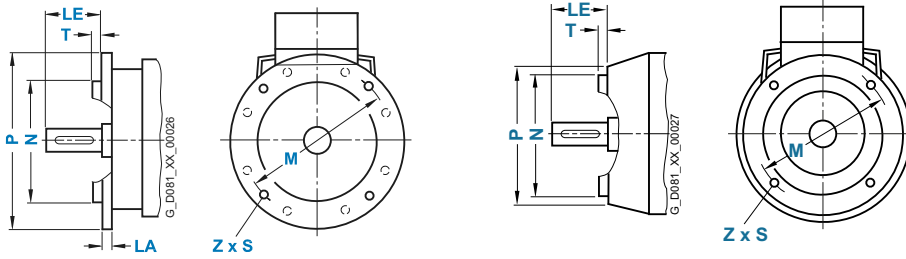
²⁾ In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

Introduction

General technical specifications

Flange dimensions

Overview (continued)



In EN 50347, the frame sizes are allocated flange FF with through holes and flange FT with tapped holes.

The designation of flange A and C according to DIN 42948 (invalid since September 2003) are also listed for information purposes. See the table below. (**Z** = the number of retaining holes)

Frame size	Type of construction	Flange type	Flange with through holes (FF/A) Flange with tapped holes (FT/C)		Dimension designation acc. to IEC							
			Acc. to EN 50347	Acc. to DIN 42948	LA	LE	M	N	P	S	T	Z
71 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF130	A 160	9	30	130	110	160	10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT85	C 105	–	30	85	70	105	M6	2.5	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT115	C 140	–	30	115	95	140	M8	3	4
80 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF165	A 200	10	40	165	130	200	12	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT100	C 120	–	40	100	80	120	M6	3	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT130	C 160	–	40	130	110	160	M8	3.5	4
90 S/L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF165	A 200	10	50	165	130	200	12	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT115	C 140	–	50	115	95	140	M8	3	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT130	C 160	–	50	130	110	160	M8	3.5	4
100 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF215	A 250	11	60	215	180	250	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next larger standard flange – Order code P01	FF265	A 300	12	60	265	230	300	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF165	A 200	11	60	165	130	200	12	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT130	C 160	–	60	130	110	160	M8	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT165	C 200	–	60	165	130	200	M10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT165	C 200	–	60	165	130	200	M10	3.5	4
112 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF215	A 250	11	60	215	180	250	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next larger standard flange – Order code P01	FF265	A 300	12	60	265	230	300	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF165	A 200	11	60	165	130	200	12	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT130	C 160	–	60	130	110	160	M8	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT165	C 200	–	60	165	130	200	M10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT165	C 200	–	60	165	130	200	M10	3.5	4
132 S/M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF265	A 300	12	80	265	230	300	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next larger standard flange – Order code P01	FF300	A 350	13	80	300	250	350	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF215	A 250	11	80	215	180	250	14.5	4	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT165	C 200	–	80	165	130	200	M10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT215	C 250	–	80	215	180	250	M12	4	4
	IM B14, IM B34, IM V18, IM V19	Next larger standard flange – Order code P01	FT215	C 250	–	80	215	180	250	M12	4	4
160 M/L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF300	A 350	13	110	300	250	350	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF265	A 300	12	110	265	230	300	14.5	4	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT215	C 250	–	110	215	180	250	M12	4	4
180 M/L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF300	A 350	13	110	300	250	350	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF 265	A 300	12	110	265	230	300	14.5	4	4
200 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF350	A 400	15	110	350	300	400	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF300	A 350	13	110	300	250	350	18.5	5	4
225 S/M 2-pole 4- ... 8-pole	IM B5, IM B35, IM V1, IM V3	Standard flange	FF400	A 450	16	110	400	350	450	18.5	5	8
250 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF500	A 550	18	140	500	450	550	18.5	5	8
280 S/M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF500	A 550	18	140	500	450	550	18.5	5	8
315 S/M/L 2-pole 4- ... 8-pole	IM B5, IM B35, IM V1, IM V3	Standard flange	FF600	A 660	22	140	600	550	660	24	6	8