

Selection and ordering data

Operating values at rated output															Cast-iron series				m_{IM} B3	J	Torque class				
P_{rated} , 50 Hz	P_{rated} , 60 Hz ¹⁾	Frame size	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	$\cos \phi_{rated}$, 50 Hz, 4/4	I_{rated} , 50 Hz, 400 V	T_{LR}/T_{rated} , 50 Hz	I_{LR}/I_{rated} , 50 Hz	T_B/T_{rated} , 50 Hz	L_{pFA} , 50 Hz	L_{WA} , 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 with increased output Article No.									
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A							kg	kgm ²	CL						
• Cooling: self-ventilated (IC411) • 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⁾																									
4	4.55	100 L	2905	13	IE2	IE2	85.8	85.8	84.8	0.86	7.8	2.5	7.6	3.5	67	79	1LE1 01-1AA6	45	0.0054 16						
5.5	6.3	112 M	2945	18	IE2	IE2	87	87.8	87.4	0.88	10.4	2.3	8.5	3.8	69	81	1LE1 01-1BA6	53	0.012 16						
11	12.6	132 M	2950	36	IE2	IE2	89.4	89.4	88.4	0.89	20	2.3	7.9	3.2	68	80	1LE1 01-1CA6	80	0.031 16						
22	25.3	160 L	2955	71	IE2	IE2	91.3	91.3	90.3	0.89	39	3.1	8.4	3.7	70	82	1LE1 01-1DA6	126	0.068 16						
30	33.5	180 L	2940	97.4	IE2	IE2	92	92.5	92.2	0.89	53	2.3	7.8	3.4	76	83	1LE1 01-1EA6	180	0.094 16						
45	51	200 L	2950	145.7	IE2	IE2	92.9	93.4	93.1	0.87	81	2.5	7.1	3.2	77	84	1LE1 01-2AA6	245	0.176 16						
55	62	225 M	2960	177	IE2	IE2	93.2	93.6	93.2	0.86	99	2.5	7	3.3	76	89	1LE1 01-2BA6	320	0.26 16						
75	84	250 M	2970	241	IE2	IE2	93.8	93.6	92.6	0.84	136	2.2	7	3.3	75	89	1LE1 01-2CA6	390	0.463 13						
110	123	280 M	2978	353	IE2	IE2	94.3	94.5	94.1	0.9	187	2.9	8.5	3.6	80	91	1LE1 01-2DA6	650	1.2 16						
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																									
4	4.55	100 L	1460	26	IE2	IE2	86.6	86.6	85.6	0.8	8.3	2.2	7.5	3.5	60	72	1LE1 01-1AB6	46	0.014 16						
5.5	6.3	112 M	1460	36	IE2	IE2	87.7	87.7	86.7	0.81	11.2	2.5	7.1	3.2	58	70	1LE1 01-1BB6	58	0.017 16						
11	12.6	132 M	1465	72	IE2	IE2	89.8	89.8	88.8	0.84	21	2.6	7.7	3.1	64	76	1LE1 01-1CB6	80	0.046 16						
18.5	21.3	160 L	1475	120	IE2	IE2	91.2	91.2	90.2	0.85	34.5	2.5	7.7	3.3	65	77	1LE1 01-1DB6	116	0.099 16						
30	34.5	180 L	1465	195.5	IE2	IE2	92.3	93	92.9	0.81	58	2.5	7.3	3.3	70	77	1LE1 01-1EB6	185	0.159 16						
37	42.5	200 L	1470	240.4	IE2	IE2	92.7	93.6	93.8	0.84	69	2.4	7	3	68	75	1LE1 01-2AB6	240	0.246 16						
55	63	225 M	1475	356	IE2	IE2	93.5	94.2	94.1	0.84	101	2.5	5.8	2.7	69	82	1LE1 01-2BB6	320	0.47 16						
75	86	250 M	1480	484	IE2	IE2	94	94.5	94.3	0.86	134	2.3	6.2	2.8	74	87	1LE1 01-2CB6	440	0.85 13						
110	127	280 M	1485	707	IE2	IE2	94.5	94.9	94.8	0.87	193	2.5	6.9	3	73	87	1LE1 01-2DB6	680	1.7 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 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			2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			Standard	2 2	–		
50 Hz			400 VΔ/690 VY			60 Hz ¹⁾			460 VΔ			2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			Standard	3 4	–		
50 Hz			500 VY									2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			Without add. chrg.	2 7	–		
50 Hz			500 VΔ									2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			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, 4			100 L ... 280 M			1LE1 01-1A ... -2D			Standard		A		–			
With flange			IM B5 ³⁾						2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			With additional charge		F		–			
With standard flange			IM B14 ³⁾						2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			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, 4			100 L ... 280 M			1LE1501-1A ... -2D			Standard		A		–			
PTC thermistor with 3 temperature sensors			Basic Line						2, 4			100 L ... 280 M			1LE1501-1A ... -2D			With additional charge		B		–			
Further motor protection			Performance Line						2, 4			100 L ... 280 M			1LE1601-1A ... -2D			Standard		B		–			
Terminal box position												No. of poles			Frame size			Motor type			Version				Order code(s)
Terminal box at top												2, 4			100 L ... 280 M			1LE1 01-1A ... -2D			Standard		4		–
Further terminal box positions																									...
Special versions												No. of poles			Frame size			Motor type							Order code(s)
Options																				1LE1 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.

Motors with IE2 High Efficiency

SIMOTICS SD 1LE1 Standard Motors

IE2

Self-ventilated motors · Cast-iron series 1LE1501/1LE1601 Basic/Performance Line with increased output

Selection and ordering data (continued)

Operating values at rated output																Cast-iron series			m _{IM B3} J	Torque class	
P _{rated} , 50 Hz	P _{rated} , 60 Hz 1)	Frame size	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} , 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 with increased output Article No.				
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%		A							kg	kgm ²	CL	
• Cooling: self-ventilated (IC411) • 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)																					
2.2	2.55	100 L	965	22	IE2	IE1	81.8	83.2	82.6	0.76	5.1	1.7	4.9	2.5	59	71		1LE1 01-1AC6	49	0.014	16
3	3.45	112 M	965	30	IE2	IE2	83.3	84	82.7	0.74	7	2.1	5.4	2.7	62	74		1LE1 01-1BC6	53	0.017	16
7.5	8.6	132 M	970	74	IE2	IE2	87.2	88	87.2	0.75	16.6	2	5.6	2.6	63	75		1LE1 01-1CC6	83	0.046	16
15	17.3	160 L	975	147	IE2	IE1	89.7	90.3	89.7	0.75	32	2	5.2	2.4	67	79		1LE1 01-1DC6	147	0.12	16
18.5	22	180 L	975	181.2	IE2	IE2	90.4	91.1	90.8	0.77	38.5	2.3	6	2.9	67	80		1LE1 01-1EC6	165	0.206	16
30	34.5	200 L	975	293.8	IE2	IE2	91.7	92.5	92.5	0.77	61	2.6	6.3	2.7	63	76		1LE1 01-2AC6	240	0.381	16
37	44.5	225 M	978	361	IE2	IE1	92.2	93	92.9	0.83	70	2.5	6.3	2.9	64	77		1LE1 01-2BC6	325	0.67	16
45	54	250 M	985	436	IE2	IE1	92.7	93.7	94	0.84	83	2.4	6.6	2.7	67	81		1LE1 01-2CC6	410	1	13
75	90	280 M	986	726	IE2	IE2	93.7	94.3	94.4	0.85	136	3.2	7	2.9	66	80		1LE1 01-2DC6	570	1.8	16
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz 1)																					
15	18	180 L	720	199	–	–	87.9	88.9	88.2	0.73	33.5	2.2	4.9	2.5	67	75		1LE1 01-1ED6	190	0.263	13
18.5	22	200 L	720	245	–	–	88.6	89.9	90.1	0.78	38.5	2.6	5.8	3	65	72		1LE1 01-2AD6	250	0.416	13
30	36	225 M	732	391	IE2	IE2	90.8	92	92.1	0.76	63	2.8	6.1	3.2	62	76		1LE1 01-2BD6	325	0.67	16
37	44.5	250 M	730	484	IE2	IE2	91.6	92.6	92.7	0.83	70	2.3	5.5	2.6	63	77		1LE1 01-2CD6	405	1	13
55	66	280 M	736	714	IE2	IE2	92.9	93.4	93	0.8	107	2.5	5.9	2.5	70	81		1LE1 01-2DD6	550	1.6	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 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		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		2 2		–		
50 Hz			400 VΔ/690 VY		60 Hz 1)		460 VΔ		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		3 4		–		
50 Hz			500 VY						6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Without add. chrg.		2 7		–		
50 Hz			500 VΔ						6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		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)				6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard				A		–		
With flange			IM B5 3)				6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		With additional charge				F		–		
With standard flange			IM B14 3)				6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		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				6, 8		100 L ... 280 M		1LE1501-1A ... -2D		Standard				A		–		
PTC thermistor with 3 temperature sensors			Basic Line				6, 8		100 L ... 280 M		1LE1501-1A ... -2D		With additional charge				B		–		
			Performance Line				6, 8		100 L ... 280 M		1LE1601-1A ... -2D		Standard				B		–		
Further motor protection																			...		
Terminal box position							No. of poles		Frame size		Motor type		Version						Order code(s)		
Terminal box at top							6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		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)		
Options																			For price information, order codes and descriptions, see from Page 2/80		
																			1LE1 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	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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 specifica- tions	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 construc- tion with order code(s) Article No. with additional identifi- cation 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																							
1LE1...-																									

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 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
			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 special flange next smaller			Acc. to EN 50347 Acc. to DIN 42948		–	–	–	FF165	FF165	FF215	FF265	–	–	–	–	–	–	–	–			
					–	–	–	A 200	A 200	A 250	A 300	–	–	–	–	–	–	–	–			
IM B5 2) 6)		F	P02	All	All	–	–	–	O.R.	O.R.	O.R.	O.R.	–	–	–	–	–	–	–			
IM V1 without protective cover 2)		G	P02	All	All	–	–	–	O.R.	O.R.	O.R.	O.R.	–	–	–	–	–	–	–			
IM V1 with protective 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	FT100	FT115	FT130	FT130	FT165	FT215	–	–	–	–	–	–	–	–			
					C 105	C 120	C 140	C 160	C 160	C 200	C 250	–	–	–	–	–	–	–	–			
IM B14 2) 7)		K	–	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–			
IM V19 2)		L	–	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–			
IM V18 without protective cover 2)		M	–	All	All	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–			
IM V18 with protective 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

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

Selection and ordering data

Motor protection	Motor protection letter 15th position in 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		
Motor protection (winding protection)																				
Without motor protection ¹⁾	A	–	All except ②, ⑤, ⑦, ⑨, ⑪ and ⑬	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
Motor protection by PTC thermistors with 1 or 3 embedded temperature sensors for tripping ^{1) 2)}	B	–	Standard version for Performance Line ②, ⑤, ⑦, ⑨, ⑪ and ⑬	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Motor protection by PTC thermistors with 2 or 6 embedded temperature sensors for alarm and tripping ²⁾	C	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Motor temperature detection with embedded temperature sensor KTY 84-130 ²⁾	F	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Motor temperature detection with embedded temperature sensor 2 × KTY 84-130 ²⁾	G	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Installation of 3 Pt100 resistance thermometers	H	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Installation of 6 Pt100 resistance thermometers	J	–	All	All	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
NTC thermistors for tripping	Z	Q2A	All	All	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–		
Temperature detectors for tripping ²⁾	Z	Q3A	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

- Standard version
 ✓ With additional charge
 – Not possible

Note:

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

¹⁾ For the Performance Line, motor protection by means of PTC thermistors with 3 built-in temperature sensors for tripping (motor protection code B) is already included in the basic price. For the Performance Line, the option "without motor protection" (motor protection code A) is not possible.

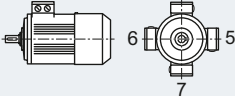
²⁾ Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.

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												
			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																	
			Motor version	Motor type	Frame size														
					71	80	90	100	112	132	160	180	200	225	250	280	315		
1LE1.....			Order code																
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.		
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.		
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.		
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

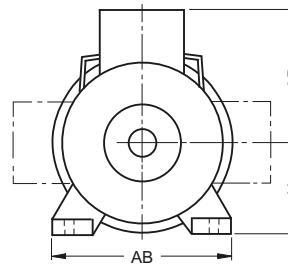
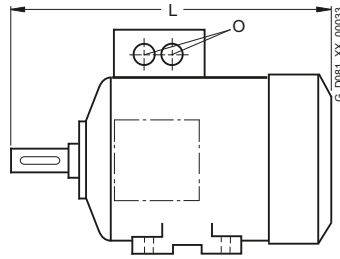
Options · Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

- 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-, 1LE1523-0CA2, 0CB2, 0CC2	240	148	71	132	2 × M25 × 1.5		
	1LE1503-, 1LE1523-0CA3, 0CB3, 0CC3	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-, 1LE1523-0DA2, 0DB2, 0DC2	292	158	80	150	2 × M25 × 1.5		
	1LE1503-, 1LE1523-0DA3, 0DB3, 0DC3	327	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-, 1LE1523-0EA0, 0EB0, 0EC0		347	163	90	165	2 × M25 × 1.5		
1LE1503-, 1LE1523-0EA4, 0EB4, 0EC4		387	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	
1CA1, 1CB0, 1CB2, 1CC3	515	202	132	256	2 × M32 × 1.5	
132 S/M	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, 1LE1002, 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	668 698 668 698	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	668 698 668 698	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	721 746 721 746 721 746	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	721 746 721 746	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	721 746 721 746	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	818 848 818 848	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	887 957 887	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 960 1070	433	280	540	2 × M63 × 1.5
280 S	Cast-iron series, self-ventilated					
	1LE15.1-, 1LE16.1- 3AA0 3AB0, 3AC0, 3AD0 1LE15.3-, 1LE16.3- 3AA0 3AB0, 3AC0	1052 1082 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 1247	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
280 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 1217 1247 1372 1402	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	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 1217 1247 1372 1402	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated					
	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 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

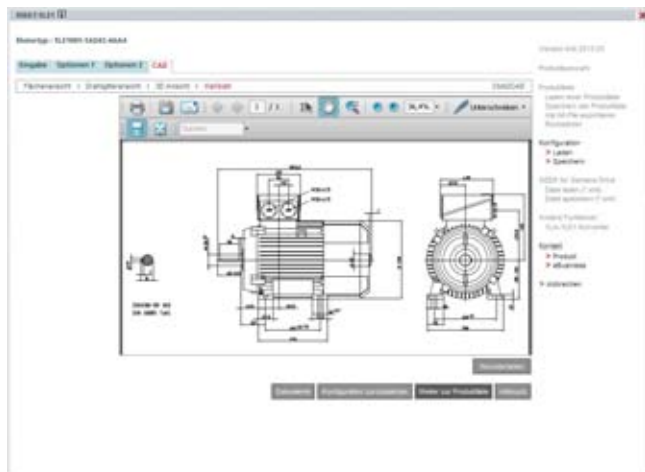
Keyways and feather keyways (dimensions GA, GC, F and FA) are made in compliance with DIN 6885 Part 1.

- 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

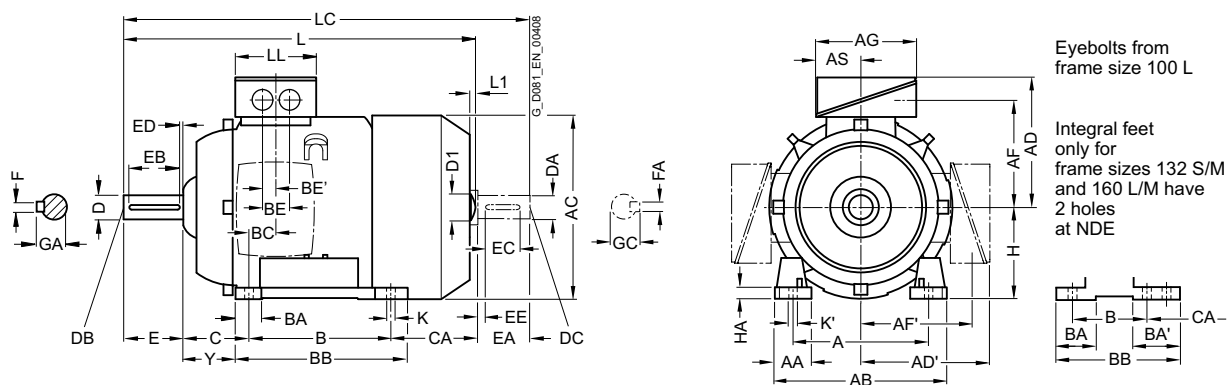
The DT Configurator is also part of the Interactive Catalog CA 01 on DVD – the offline version of Siemens Industry Mall. CA 01 can be ordered from the relevant Siemens sales office or via the Internet: www.siemens.com/automation/CA01

SIMOTICS SD 1LE1 Standard Motors

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

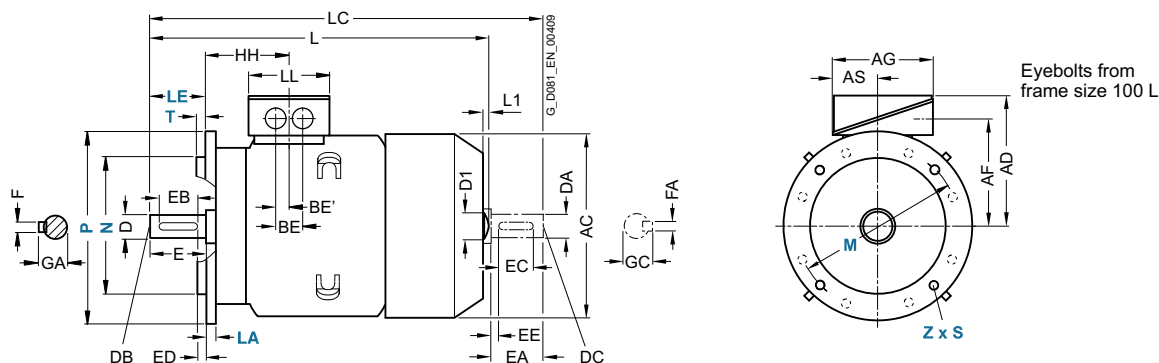
Dimensional drawings

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	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y	
71 M	1LE15.1, 1LE16.1	2, 4, 6	112	27	132	138.5	148	148	112	112	126	62	90	–	–	106	20.5	36	18	45	–	71	7	37	
80 M	1LE15.1	2, 4, 6	125	27	150	156	158	158	122	122	129	62	100	–	–	118	21.5	36	18	50	–	80	8.5	41	
90 S	1LE15.1	2, 4, 6	140	30.5	165	173.5	163	163	127	127	129	62	100	–	–	143	23.5	36	18	56	–	90	11	47	
90 L	1LE15.1	2, 4, 6	140	30.5	165	173.5	163	163	127	127	129	62	125	–	–	143	23.5	36	18	56	–	90	11	47	
100 L	All	2, 4, 6, 8	160	42	196	198	193	193	147	147	163	80.5	140	40	–	176	37.5	48	24	63	141	100	12	45	
112 M	All	2, 4, 6, 8	190	46	226	222	195	195	150	150	163	80.5	140	40	–	176	30	48	24	70	129.7	112	12	52	
132 S	All	2, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	140	44	81 ¹⁾	218 ³⁾	26.5	48	24	89	–	132	15	69	
132 M	All	2, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	178	44	81 ¹⁾	218	26.5	48	24	89	–	132	15	69	
160 M	All	2, 4, 6, 8	254	60	300	314	265	265	213	213	190	92	210	51	95 ²⁾	300 ⁴⁾	37	60	30	108	–	160	18	85	
160 L	All	2, 4, 6, 8	254	60	300	314	265	265	213	213	190	92	254	51	95 ²⁾	300	37	60	30	108	–	160	18	85	

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

1) With screwed-on feet, dimension BA' is 43 mm.

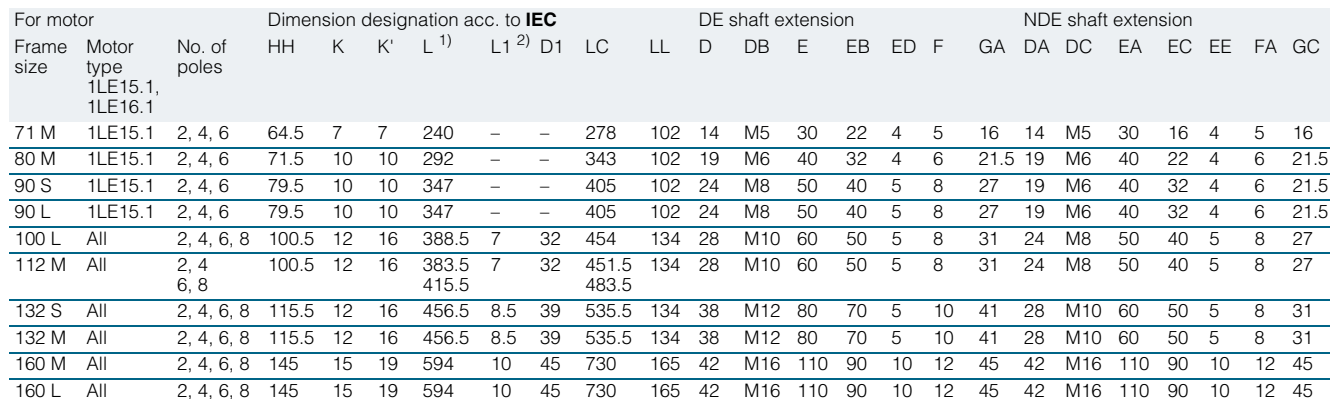
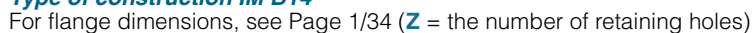
2) With screwed-on feet, dimension BA' is 51 mm.

3) With screwed-on feet, dimension BB is 180 mm.

4) With screwed-on feet, dimension BB is 256 mm.

Dimensional drawings (continued)

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



2) Only for 1LE15 motors.

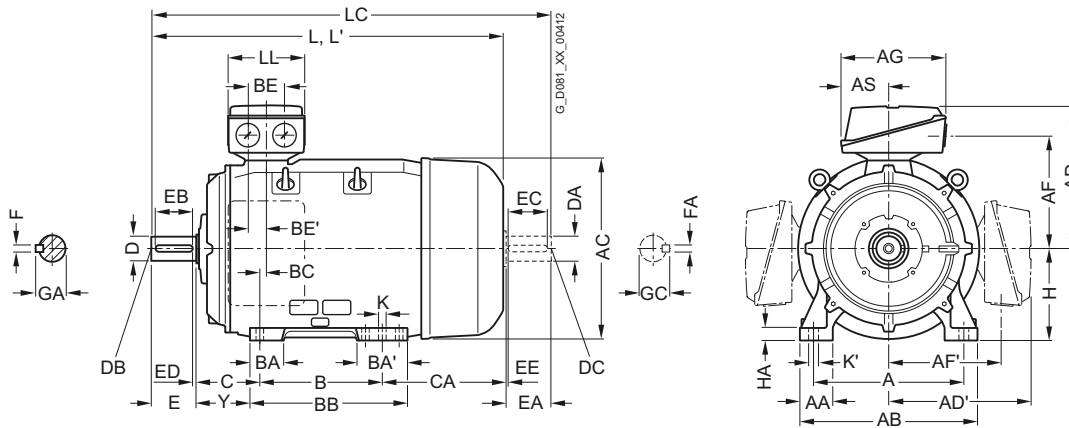
Dimensions

SIMOTICS SD 1LE1 Standard Motors

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

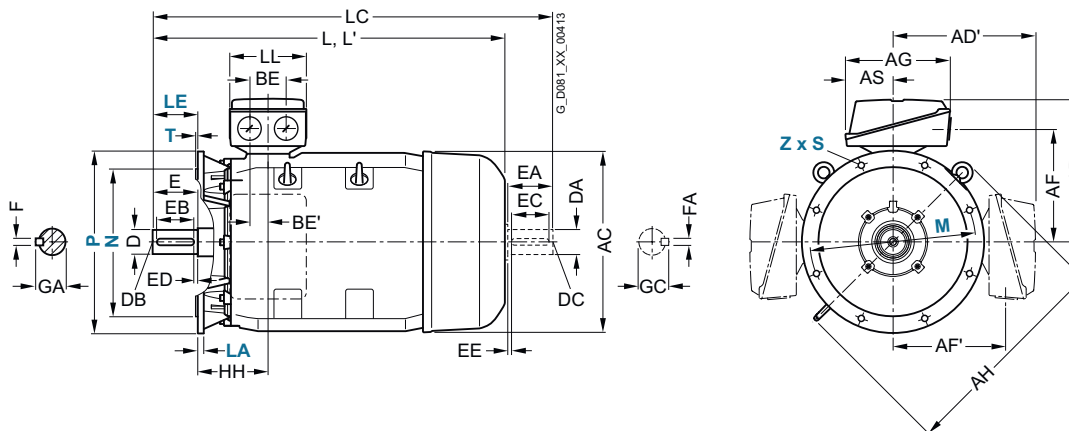
Dimensional drawings

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	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																					
250 M	2BA2, 2BA6	2																				
	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

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

Dimensions

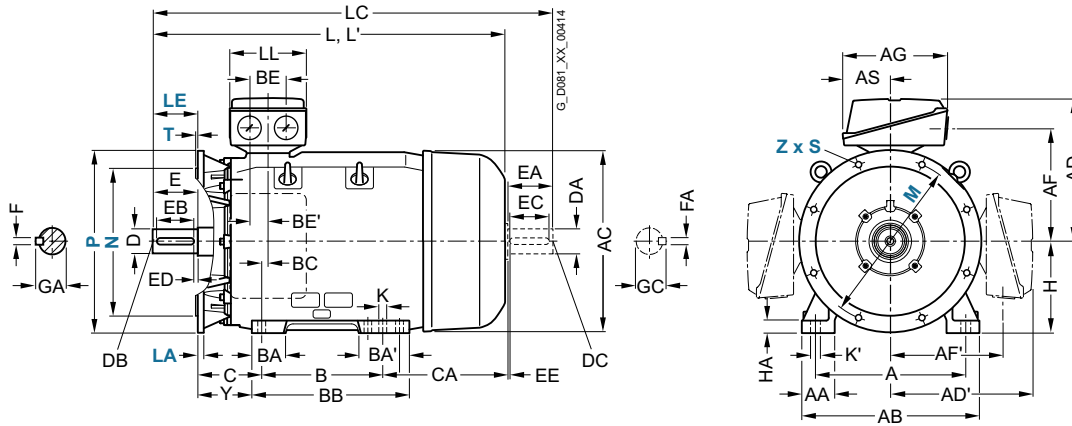
SIMOTICS SD 1LE1 Standard Motors

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.

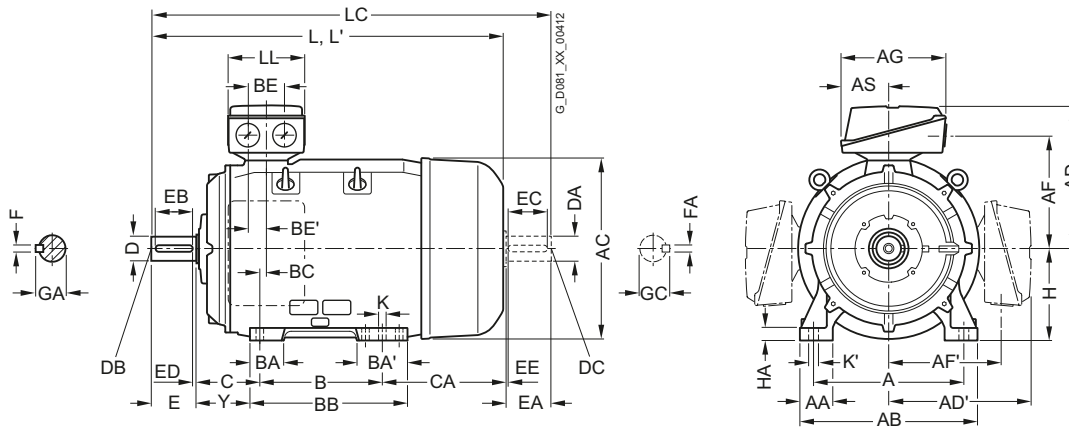
Dimensions

SIMOTICS SD 1LE1 Standard Motors

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

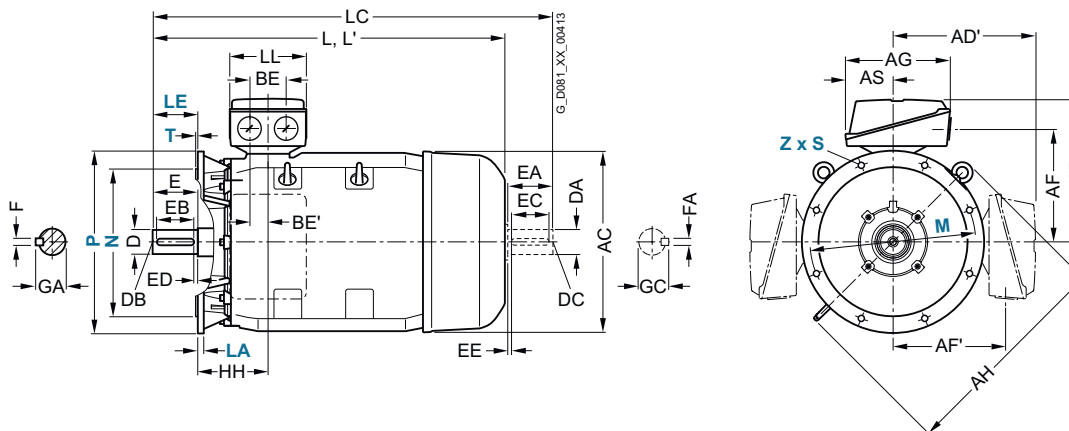
Dimensional drawings

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*			
280 S	2DA0	2	457	100	540	551	433	433	345	345	319	672	145	368	101	152	479	20	110	55	190	267			
	2DB0, 2DC0, 2DD0	4, 6, 8												368								267			
280 M	2DA6	2												419								326			
	2DA2																					216			
	2DB2, 2DC2, 2DD2, 2DC6, 2DD6	4, 6, 8																							
	2DB6	4																				326			
315 S	3AA0	2	508	120	610	616	515	515	404	404	374	780	164	406	113	170	527	22	110	55	216	295			
	3AB0, 3AC0, 3AD0	4, 6, 8																							
315 M	3AA2 ¹⁾	2												457			578					409			
	3AB2 ¹⁾	4																							
	3AC2, 3AD2	6, 8												406			527					244			
315 L ¹⁾	3AA4	2												508			578					358			
	3AB4, 3AC4, 3AD4, 3AC5, 3AD5, 3AD6	4, 6, 8																							
	3AA5, 3AA6	2												508	176	227	648					513			
	3AB5, 3AB6, 3AC6	4, 6																							

* 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

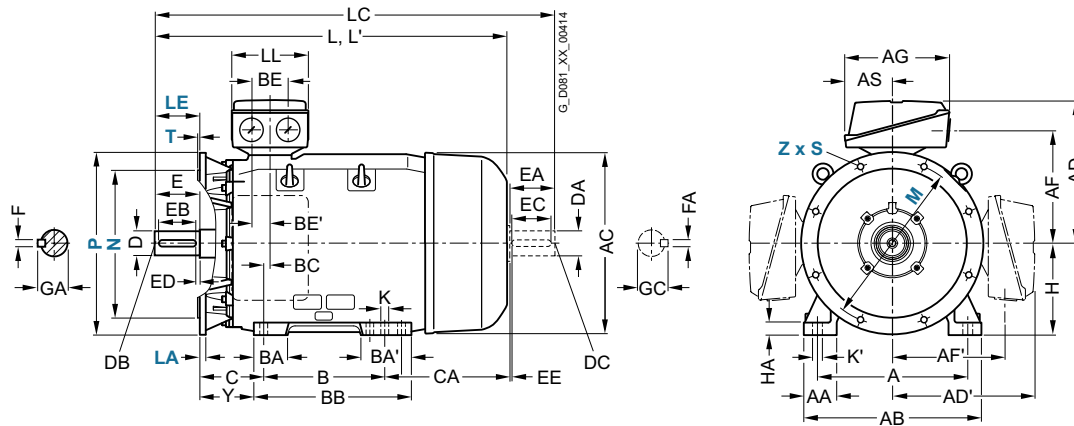
SIMOTICS SD 1LE1 Standard Motors

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.

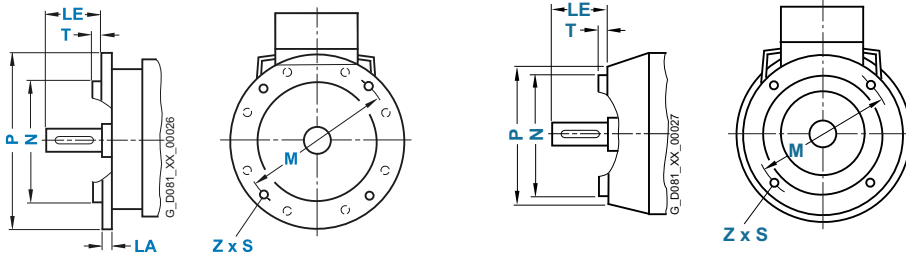
²⁾ In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

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