

SIMOTICS SD 1LG Standard Motors

Motors for converter-fed operation only

Self-ventilated motors

Cast-iron series 1LG6 with special insulation

Selection and ordering data

Operating values at rated output															Cast-iron series 1LG6 – Version only for converter-fed operation with special insulation Order No.	$m_{IM\ B3}$ J	Torque class			
P_{rated} 50 Hz	P_{rated} 60 Hz	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	I_{rated} 50 Hz, 690 V	$T_{LR}/$ I_{ra-} ted	$I_{LR}/$ I_{ra-} ted	$T_B/$ I_{ra-} ted				L_{pfa} 50 Hz	L_{WA} 50 Hz	
kW	kW	FS	rpm	Nm	%	%	%		A	A					dB(A)	dB(A)	kg	kgm ²	CL	
<ul style="list-style-type: none"> • Cooling: Self-ventilated (IC 411) • Converter-fed operation: Only for operation on SINAMICS or SIMOVERT MASTERDRIVES with special insulation for voltages of > 500 to 690 V • 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																				
22	–	180 M	2955	71	–	90.9	91.3	91.2	0.88	39.7	23	2.5	7.2	3.4	67	80	1LG6183-2PM	180	0.086	16
30	–	200 L	2960	97	–	91.6	91.5	90.6	0.88	53.5	31	2.4	7.0	3.3	71	84	1LG6206-2PM	225	0.15	16
37	–	200 L	2960	119	–	92.0	91.9	91.2	0.89	65.6	38	2.5	7.2	3.3	71	84	1LG6207-2PM	255	0.18	16
45	–	225 M	2965	145	–	92.4	92.6	92.3	0.89	79.4	46	2.5	7.3	3.2	71	84	1LG6223-2PM	330	0.27	16
55	–	250 M	2975	177	–	92.9	92.9	92.5	0.90	94.9	55	2.4	6.8	3.0	71	84	1LG6253-2PM	420	0.47	16
75	–	280 S	2975	241	–	93.6	93.6	92.8	0.89	129	75	2.5	7.0	3.0	73	86	1LG6280-2PM	530	0.83	13
90	–	280 M	2978	289	–	93.8	93.9	93.3	0.90	154	89	2.6	7.6	3.1	73	86	1LG6283-2PM	615	1.0	13
110	–	315 S	2982	352	–	94.0	93.9	93.0	0.91	186	108	2.4	6.9	2.8	76	89	1LG6310-2PM	790	1.4	13
132	–	315 M	2982	423	–	94.4	94.3	93.7	0.91	223	129	2.6	7.1	2.9	76	89	1LG6313-2PM	915	1.6	13
160	–	315 L	2982	512	–	94.6	94.6	94.2	0.92	266	154	2.5	7.1	2.9	76	89	1LG6316-2PM	1055	2.1	13
200	–	315 L	2982	641	–	94.7	94.7	94.4	0.93	328	190	2.5	6.9	2.8	76	89	1LG6317-2PM	1245	2.5	13
4-pole: 1500 rpm at 50 Hz																				
18.5	–	180 M	1470	120	–	90.7	91.3	90.9	0.83	35.4	20.5	2.5	6.4	3.0	60	73	1LG6183-4PM	155	0.12	16
22	–	180 L	1470	143	–	91.1	91.4	91.1	0.84	41.4	24	2.5	6.7	3.1	60	73	1LG6186-4PM	180	0.14	16
30	–	200 L	1470	195	–	91.7	91.8	91.2	0.85	55.2	32	2.6	6.7	3.3	62	75	1LG6207-4PM	225	0.23	16
37	–	225 S	1480	239	–	92.3	92.7	92.4	0.85	68.1	39.5	2.7	6.8	3.0	60	73	1LG6220-4PM	290	0.40	16
45	–	225 M	1480	290	–	92.7	92.9	92.7	0.85	82.8	48	2.8	6.9	3.0	60	73	1LG6223-4PM	330	0.49	16
55	–	250 M	1485	354	–	93.2	93.4	93.1	0.87	98.3	57	2.6	7.5	3.0	65	78	1LG6253-4PM	460	0.86	16
75	–	280 S	1485	482	–	93.6	93.7	93.1	0.87	133	77	2.5	6.8	2.9	67	80	1LG6280-4PM	575	1.4	16
90	–	280 M	1486	578	–	93.9	94.0	93.5	0.86	160	93	2.7	7.5	3.1	67	80	1LG6283-4PM	675	1.7	16
110	–	315 S	1488	706	–	94.2	94.3	93.9	0.87	193	112	2.7	7.1	2.9	68	81	1LG6310-4PM	810	2.3	16
132	–	315 M	1488	847	–	94.5	94.6	94.3	0.88	229	133	2.7	7.3	2.9	68	81	1LG6313-4PM	965	2.9	16
160	–	315 L	1490	1026	–	94.7	94.8	94.5	0.88	278	161	3.0	7.4	3.0	68	81	1LG6316-4PM	1105	3.5	16
200	–	315 L	1490	1282	–	94.8	94.9	94.6	0.88	345	200	3.2	7.6	3.0	68	81	1LG6317-4PM	1305	4.2	16
Voltages				No. of poles	Motor type		Version										Order code(s)			
50 Hz		500 VY		2, 4	1LG6183 ... 317		Standard		3		–						–			
		500 VA		2, 4	1LG6183 ... 317		Without add. charge		5		–						–			
		690 VY		2, 4	1LG6183 ... 317		Without add. charge		8		–						–			
Further voltages		For additional charges, code numbers and descriptions, see supplements and special versions.						9			
Types of construction				No. of poles	Motor type		Version										Order code(s)			
Without flange		IM B3/6/7/8 ¹⁾		2, 4	1LG6183 ... 317		Standard		0		–						–			
		IM V6 ¹⁾		2, 4	1LG6183 ... 313		Standard		0		–						–			
				2	1LG6316, 1LG6317		With add. charge		9		M1E						M1E			
				4	1LG6316, 1LG6317		Without add. charge		9		M1E						M1E			
		IM V5 without protective cover ¹⁾		2, 4	1LG6183 ... 313		Standard		0		–						–			
				2	1LG6316, 1LG6317		With add. charge		9		M1D						M1D			
				4	1LG6316, 1LG6317		Without add. charge		9		M1D						M1D			
With flange		IM B5		2, 4	1LG6183 ... 317		With add. charge		1		–						–			
		IM V1 without protective cover ²⁾		2, 4	1LG6183 ... 313		With add. charge		1		–						–			
				2, 4	1LG6316, 1LG6317		With add. charge		8		–						–			
		IM V3		2, 4	1LG6183 ... 313		With add. charge		9		M1G						M1G			
		IM V1 with protective cover ^{2) 3) 4)}		2, 4	1LG6183 ... 317		With add. charge		4		–						–			
		IM B35		2, 4	1LG6183 ... 317		With add. charge		6		–						–			
With standard flange		IM B14, IM V19, IM V18 without prot. cover		2, 4	–		–		2		–						–			
		IM B34		2, 4	–		–		7		–						–			
With special flange		IM B14, IM V19, IM V18 without prot. cover		2, 4	–		–		3		–						–			
Further types of construct.		For additional charges, code numbers and descriptions, see supplements and special versions.						9			
Special versions																		Order code(s)		
Options		For add. charges, code numbers and descr., see suppl. and special versions.				1LG6 ... -PM		-Z			

¹⁾ If 1LG6 motors in types of construction with feet IM B6, IM B7, IM V6 or IM V5 without protective cover are fixed to the wall, it is recommended that the motor feet are supported.

²⁾ 1LG6220 to 1LG6318 motors are supplied with two screw-in eyebolts conforming to IM B5, whereby one can be repositioned to conform to IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

³⁾ 2-pole motors 1LG6316-... to 1LG6317-... (motor series 1LG6 frame size 315 L) in 60 Hz version available on request.

⁴⁾ The "Second shaft extension" option, order code K16 is not possible.

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Motors for converter-fed operation only

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Cast-iron series 1LG6 with special insulation

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	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	I _{rated} 50 Hz, 690 V	T _{LR} /I _{rated}	I _{LR} /I _{rated}	T _B /I _{rated}	L _p /A, 50 Hz	L _{WA} , 50 Hz	1LG6 – Version only for converter-fed operation with special insulation Order No.	kg	kgm ²	CL				
kW	kW	FS	rpm	Nm	%	%	%		A	A														
<ul style="list-style-type: none"> Cooling: Self-ventilated (IC 411) Converter-fed operation: Only for operation on SINAMICS or SIMOVERT MASTERDRIVES with special insulation for voltages of > 500 to 690 V 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																								
15	–	180 L	975	147	–	88.8	89.6	89.5	0.81	30	17.4	2.4	5.5	2.5	56	69	1LG6186-6PM	175	0.20	16				
18.5	–	200 L	978	181	–	89.7	90.3	89.9	0.81	37.1	21.5	2.4	5.6	2.4	59	72	1LG6206-6PM	210	0.29	16				
22	–	200 L	978	215	–	90.4	91.0	91.0	0.82	43.1	25	2.4	5.6	2.4	59	72	1LG6207-6PM	240	0.36	16				
30	–	225 M	980	292	–	91.1	91.6	91.6	0.83	56.9	33	2.8	6.5	2.9	59	72	1LG6223-6PM	325	0.63	16				
37	–	250 M	985	359	–	91.6	92.0	91.8	0.83	69.9	40.5	2.9	6.8	2.5	60	73	1LG6253-6PM	405	0.93	16				
45	–	280 S	988	435	–	92.2	92.4	92.2	0.85	82.8	48	3.0	6.8	2.7	58	71	1LG6280-6PM	520	1.4	16				
55	–	280 M	988	532	–	92.4	92.6	92.3	0.85	102	59	3.3	7.3	2.9	58	71	1LG6283-6PM	570	1.7	16				
75	–	315 S	990	724	–	93.3	93.3	92.9	0.83	140	81	2.8	7.3	3.0	61	74	1LG6310-6PM	760	2.5	16				
90	–	315 M	990	868	–	93.6	93.7	93.3	0.85	164	95	2.7	7.3	2.9	61	74	1LG6313-6PM	935	3.2	16				
110	–	315 L	990	1061	–	93.9	94.0	93.8	0.85	198	115	2.9	7.4	2.9	61	74	1LG6316-6PM	1010	4.0	16				
132	–	315 L	990	1273	–	94.2	94.2	93.8	0.85	238	138	3.1	7.8	3.1	61	74	1LG6317-6PM	1180	4.7	16				
160	–	315 L	990	1543	–	94.4	94.2	93.9	0.86	285	165	3.2	7.8	3.1	64	77	1LG6318-6PM	1245	5.4	16				
8-pole: 750 rpm at 50 Hz																								
11	–	180 L	725	145	–	87.3	88.2	88.1	0.76	24	13.9	1.9	4.6	2.2	66	79	1LG6186-8PM	165	0.21	13				
15	–	200 L	725	198	–	87.9	88.4	88.4	0.80	30.7	17.8	2.3	5.3	2.6	66	79	1LG6207-8PM	235	0.37	13				
18.5	–	225 S	730	242	–	88.6	89.3	89.3	0.81	37.1	21.5	2.3	5.6	2.6	54	67	1LG6220-8PM	295	0.55	13				
22	–	225 M	730	288	–	89.3	89.8	89.8	0.81	44	25.5	2.4	5.8	2.8	58	71	1LG6223-8PM	335	0.66	13				
30	–	250 M	735	390	–	90.3	90.8	90.7	0.82	58.7	34	2.5	6.0	2.8	57	70	1LG6253-8PM	435	1.1	13				
37	–	280 S	738	479	–	91.3	91.5	91.2	0.81	72.5	42	2.3	5.7	2.3	58	71	1LG6280-8PM	510	1.4	13				
45	–	280 M	738	582	–	91.9	92.1	91.8	0.81	88	51	2.6	6.1	2.4	58	71	1LG6283-8PM	560	1.6	13				
55	–	315 S	740	710	–	92.3	92.4	91.9	0.82	105	61	2.5	6.3	2.9	64	77	1LG6310-8PM	750	2.5	13				
75	–	315 M	740	968	–	92.8	93.0	92.6	0.83	140	81	2.5	6.7	2.9	64	77	1LG6313-8PM	840	3.1	13				
90	–	315 L	740	1162	–	93.2	93.6	93.5	0.84	166	96	2.4	6.3	2.8	64	77	1LG6316-8PM	1005	4.0	13				
110	–	315 L	740	1420	–	93.6	93.9	93.8	0.84	202	117	2.4	6.4	2.6	64	77	1LG6317-8PM	1100	4.5	13				
132	–	315 L	740	1704	–	93.9	94.2	94.1	0.84	242	140	2.5	6.7	2.9	64	77	1LG6318-8PM	1270	5.3	13				
Voltages											No. of poles	Motor type		Version				Order code(s)						
50 Hz		500 VY									6, 8	1LG6186 ... 318		Standard		3		–						
		500 VA									6, 8	1LG6186 ... 318		Without add. charge		5		–						
		690 VY									6, 8	1LG6186 ... 318		Without add. charge		8		–						
Further voltages		For additional charges, code numbers and descriptions, see supplements and special versions.																			9		...	
Types of construction											No. of poles	Motor type		Version				Order code(s)						
Without flange		IM B3/6/7/8 ¹⁾									6, 8	1LG6186 ... 318		Standard		0		–						
		IM V6 ¹⁾									6, 8	1LG6186 ... 313		Standard		0		–						
											6, 8	1LG6316 ... 318		Without add. charge		9		M1E						
		IM V5 without protective cover ¹⁾									6, 8	1LG6186 ... 313		Standard		0		–						
											6, 8	1LG6316 ... 318		Without add. charge		9		M1D						
With flange		IM B5									6, 8	1LG6186 ... 318		With add. charge		1		–						
		IM V1 without protective cover ²⁾									6, 8	1LG6186 ... 313		With add. charge		1		–						
											6, 8	1LG6316 ... 318		With add. charge		8		–						
		IM V3									6, 8	1LG6186 ... 313		With add. charge		9		M1G						
		IM V1 with protective cover ^{2) 3)}									6, 8	1LG6186 ... 318		With add. charge		4		–						
		IM B35									6, 8	1LG6186 ... 318		With add. charge		6		–						
With standard flange		IM B14, IM V19, IM V18 without prot. cover									6, 8	–		–		2		–						
		IM B34									6, 8	–		–		7		–						
With special flange		IM B14, IM V19, IM V18 without prot. cover									6, 8	–		–		3		–						
Further types of construction		For additional charges, code numbers and descriptions, see supplements and special versions.																			9		...	
Special versions																			Order code(s)					
Options		For additional charges, code numbers and descriptions, see supplements and special versions.															1LG6 ... - PM		-Z		...+...+...+...			

¹⁾ If 1LG6 motors in types of construction with feet IM B6, IM B7, IM V6 or IM V5 without protective cover are fixed to the wall, it is recommended that the motor feet are supported.

²⁾ 1LG6220 to 1LG6318 motors are supplied with two screw-in eyebolts conforming to IM B5, whereby one can be repositioned to conform to IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

³⁾ The "Second shaft extension" option, order code K16 is not possible.