

Asynchronous motors

Main spindle motors for SIMODRIVE 611

1PM4/1PM6 standard type motors SH 100/SH 132

Selection and ordering data

Shaft height	Rated speed		Con- tinu- ous speed, max.	Speed, max. ¹⁾		Rated power for star $n_{ratedY} = 1\,500\text{ rpm}$		Rated power for delta $n_{rated\Delta} = 4\,000\text{ rpm}$		1PM4 asynchronous motor with hollow shaft Standard type	1PM6 asynchronous motor with hollow shaft Standard type
	star	delta		$n_{S1cont.}$	n_{max}	P_{rated}	P_{rated}	P_{rated}	P_{rated}		
SH	rpm	rpm	rpm	rpm	kW (HP)	kW (HP)	kW (HP)	kW (HP)	Order No.	Order No.	

SH	Rated speed		Con- tinu- ous speed, max.	Speed, max. ¹⁾		Rated power for star $n_{ratedY} = 1\,500\text{ rpm}$		Rated power for delta $n_{rated\Delta} = 4\,000\text{ rpm}$		Oil cooling ²⁾	Forced ventilation
	star	delta		$n_{S1cont.}$	n_{max}	P_{rated}	P_{rated}	P_{rated}	P_{rated}	Order No.	Order No.
100	1 500	4 000	12 000	12 000	3.7 (5)	5.25 (7.04)	3.7 (5)	6 (8)	1PM4101-2LF86-1 ■ S1	1PM6101-2LF8■-1 ■ ■ 1	
	1 500	4 000	18 000	18 000	3.7 (5)	5.25 (7.04)	3.7 (5)	6 (8)	1PM4101-2LF86-1 ■ S1-Z ³⁾	1PM6101-2LF8■-1 ■ ■ 1-Z ³⁾	
	1 500	4 000	12 000	12 000	7.5 (10.1)	11 (15)	7.5 (10.1)	13 (17)	1PM4105-2LF86-1 ■ S1	1PM6105-2LF8■-1 ■ ■ 1	
	1 500	4 000	18 000	18 000	7.5 (10.1)	11 (15)	7.5 (10.1)	13 (17)	1PM4105-2LF86-1 ■ S1-Z ³⁾	1PM6105-2LF8■-1 ■ ■ 1-Z ³⁾	
132	1 500	4 000	10 000	10 500	11 (15)	16.5 (22.1)	11 (15)	19.5 (26.2)	1PM4133-2LF86-1 ■ S1	1PM6133-2LF8■-1 ■ ■ 1	
	1 500	4 000	15 000	15 000	11 (15)	16.5 (22.1)	11 (15)	19.5 (26.2)	1PM4133-2LF86-1 ■ S1-Z ³⁾	1PM6133-2LF8■-1 ■ ■ 1-Z ³⁾	
	1 500	4 000	10 000	10 500	18.5 (24.8)	28 (38)	18.5 (24.8)	32 (43)	1PM4137-2LF86-1 ■ S1	1PM6137-2LF8■-1 ■ ■ 1	
	1 500	4 000	12 000	12 000	18.5 (24.8)	28 (38)	18.5 (24.8)	32 (43)	1PM4137-2LF86-1 ■ S1-Z ³⁾	1PM6137-2LF8■-1 ■ ■ 1-Z ³⁾	
	1 500	4 000	10 000	10 500	22 (30)	33 (44)	22 (30)	39 (52)	–	1PM6138-2LF8■-1 ■ ■ 1	
	1 500	4 000	11 000	11 000	22 (30)	33 (44)	22 (30)	39 (52)	–	1PM6138-2LF8■-1 ■ ■ 1-Z ³⁾	

SH	Rated speed		Con- tinu- ous speed, max.	Speed, max. ¹⁾		Rated power for star $n_{ratedY} = 1\,500\text{ rpm}$		Rated power for delta $n_{rated\Delta} = 4\,000\text{ rpm}$		Water cooling ⁴⁾
	star	delta		$n_{S1cont.}$	n_{max}	P_{rated}	P_{rated}	P_{rated}	P_{rated}	Order No.
100	1 500	–	12 000	12 000	5 (7)	6.5 (8.7)	–	–	1PM4101-2LW26-1 ■ S1	
	1 500	–	18 000	18 000	5 (7)	6.5 (8.7)	–	–	1PM4101-2LW26-1 ■ S1-Z ³⁾	
	1 500	–	12 000	12 000	11 (15)	14.75 (19.78)	–	–	1PM4105-2LW26-1 ■ S1	
	1 500	–	18 000	18 000	11 (15)	14.75 (19.78)	–	–	1PM4105-2LW26-1 ■ S1-Z ³⁾	
132	1 500	–	10 000	10 500	15 (20)	21 (28)	–	–	1PM4133-2LW26-1 ■ S1	
	1 500	–	15 000	15 000	15 (20)	21 (28)	–	–	1PM4133-2LW26-1 ■ S1-Z ³⁾	
	1 500	–	10 000	10 500	27 (36)	38 (51)	–	–	1PM4137-2LW26-1 ■ S1	
	1 500	–	12 000	12 000	27 (36)	38 (51)	–	–	1PM4137-2LW26-1 ■ S1-Z ³⁾	

Type of construction:	IM B35, IM V15, IM V35	IM B5	1
		IM V1	4
		IM V3	5
Fans:			
Without fan combined with terminal box/metric cable entry	Top/right Top/DE Top/NDE Top/left	A B C D	
Axial fan/Blow-out direction below/Direction of air flow DE → NDE combined with terminal box/metric cable entry		Top/from right Top/from DE Top/from NDE Top/from left	A R B R C R D R
Radial fan/Blow-out direction NDE/Direction of air flow DE → NDE combined with terminal box/metric cable entry		Right side/below Right side/DE Right side/NDE ⁷⁾	E D F D G D

To select the type of construction, see Selection guides.

¹⁾ For continuous duty (with 30 % n_{max} , 60 % $\frac{2}{3} n_{max}$, 10 % standstill) for a duty cycle time of 10 min. For maintenance intervals for motors and components, see 1PM Motors Configuration Manual.

²⁾ Star/delta changeover.

³⁾ With option L37: Version for increased maximum speed.

⁴⁾ Only star connection possible.

⁵⁾ Version for increased maximum speeds includes vibration magnitude grade SR. The following option is not possible: Shaft seal.

⁶⁾ With default setting of the pulse frequency.

⁷⁾ 1PM6101 and 1PM6105 only.

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1PM4/1PM6 standard type motors
SH 100/SH 132

Selection and ordering data

Motor type (continued)	Rated torque for star		Rated torque for delta		Moment of inertia	Weight, approx.		Rated current for star		SIMODRIVE 611 power module	
						1PM4	1PM6			Required rated output current ⁶⁾	Order No.
	M_{rated}		M_{rated}			J	m	m	I_{rated}		
	S1	S6-40 %	S1	S6-40 %				S1	S6-40 %	S1	
	Nm (lb _f -ft)	Nm (lb _f -ft)	Nm (lb _f -ft)	Nm (lb _f -ft)	kgm ² (lb _f -in-s ²)	kg (lb)	kg (lb)	A	A	A	

1PM .101- ...	24 (18)	33 (24)	9 (7)	14 (10)	0.011 (0.097)	42 (93)	45 (99)	13	17.5	24	For ordering data, see Converter system.
1PM .101- ... ³⁾	24 (18)	33 (24)	9 (7)	14 (10)	0.011 (0.097)	42 (93)	45 (99)	13	17.5	24	
1PM .105- ...	48 (35)	70 (52)	18 (13)	31 (23)	0.024 (0.212)	67 (148)	70 (154)	23	31	24	
1PM .105- ... ³⁾	48 (35)	70 (52)	18 (13)	31 (23)	0.024 (0.212)	67 (148)	70 (154)	23	31	24	
1PM .133- ...	70 (52)	105 (77)	26 (19)	47 (35)	0.046 (0.407)	90 (198)	94 (207)	41	58	45	
1PM .133- ... ³⁾	70 (52)	105 (77)	26 (19)	47 (35)	0.046 (0.407)	90 (198)	94 (207)	41	58	45	
1PM .137- ...	118 (87)	178 (131)	44 (32)	76 (56)	0.085 (0.752)	130 (287)	135 (298)	56	79	60	
1PM .137- ... ³⁾	118 (87)	178 (131)	44 (32)	76 (56)	0.085 (0.752)	130 (287)	135 (298)	56	79	60	
1PM6138- ...	140 (103)	210 (155)	53 (39)	93 (69)	0.104 (0.920)	–	156 (344)	58	80	60	
1PM6138- ... ³⁾	140 (103)	210 (155)	53 (39)	93 (69)	0.104 (0.920)	–	156 (344)	58	80	60	

1PM4101- ...	32 (24)	41 (30)	–	–	0.011 (0.097)	42 (93)	–	18	22.5	24	For ordering data, see Converter system.
1PM4101- ... ³⁾	32 (24)	41 (30)	–	–	0.011 (0.097)	42 (93)	–	18	22.5	24	
1PM4105- ...	70 (52)	94 (69)	–	–	0.024 (0.212)	67 (148)	–	38	47	45	
1PM4105- ... ³⁾	70 (52)	94 (69)	–	–	0.024 (0.212)	67 (148)	–	38	47	45	
1PM4133- ...	95 (70)	134 (99)	–	–	0.046 (0.407)	90 (198)	–	55	74	60	
1PM4133- ... ³⁾	95 (70)	134 (99)	–	–	0.046 (0.407)	90 (198)	–	55	74	60	
1PM4137- ...	172 (127)	242 (178)	–	–	0.085 (0.752)	130 (287)	–	85	114	85	
1PM4137- ... ³⁾	172 (127)	242 (178)	–	–	0.085 (0.752)	130 (287)	–	85	114	85	

Options

Designation	Order code
Speed⁵⁾	
• With increased maximum speed	L37

When ordering a motor with options, **-Z** should be added to the order number and the order code should also be specified for each additional required version.

Order codes must not be repeated in plain text in the order.

Order No. **1PM4101-2LF86-1AS1-Z**

Order code **L37**



1PM6 motor (radial fan),
1PM6 motor (axial fan) and 1PM4 motor (liquid-cooled)