

Asynchronous motors

Main spindle motors for SIMODRIVE 611

1PH2 built-in motors for direct drive

Selection and ordering data

Rated speed	Speed, max.	Rated power for duty type in accordance with IEC 60034-1 ¹⁾				1PH2 asynchronous built-in motor for direct drive Water cooling Standard type	Rated torque ¹⁾	
		P_{rated}	P_{rated}	P_{rated}	P_{rated}		M_{rated}	M_{rated}
n_{rated}	n_{max}	S1	S1 $\Delta T=105\text{ K}$	S6-60 %	S6-40 %	Order No.	$\Delta T=105\text{ K}$	
rpm	rpm	kW (HP)	kW (HP)	kW (HP)	kW (HP)		Nm (lb _f -ft)	Nm (lb _f -ft)
1 500	10 000	7.5 (10.1)	9.4 (12.6)	8.2 (11.0)	9 (12.1)	1PH2093 - 6WF4 ■	48 (35.4)	60 (44.3)
		10.1 (13.5)	13 (17.4)	11 (14.8)	12 (16.1)	1PH2095 - 6WF4 ■	64 (47.2)	83 (61.2)
1 500	10 000	15.1 (20.2)	18.5 (24.8)	17 (22.8)	19 (25.5)	1PH2113 - 6WF4 ■	95 (70.1)	118 (87.0)
		16.5 (22.1)	21.5 (28.8)	18.5 (24.8)	21 (28.2)	1PH2115 - 6WF4 ■	105 (77.4)	137 (101)
		18.1 (24.3)	23.7 (31.8)	20.5 (27.5)	23 (30.8)	1PH2117 - 6WF4 ■	115 (84.8)	151 (111)
		23.6 (31.6)	30.9 (41.4)	26 (34.9)	29.5 (39.6)	1PH2118 - 6WF4 ■	146 (108)	197 (145)

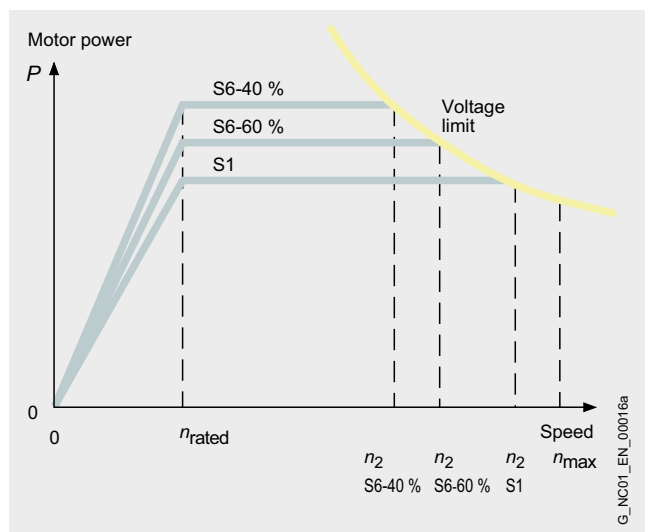
Free cable ends:

Length: 1.5 m (59.1 in)

Length: 0.5 m (19.7 in) (preferred type)

1
2

Characteristic curves

Typical speed/power graph for AC motors²⁾

The graph shows the typical relationship between motor speed and drive power for 1PH2 motors for the following duty types in accordance with IEC60034-1:

S1: Continuous duty

S6: Continuous duty with intermittent loading and a relative duty factor of 60 % (S6-60 %) or 40 % (S6-40 %) with a maximum duty cycle time of 10 minutes.

1PH2 motor	Rated speed	Attainable speed for rated power in duty type in accordance with IEC 60034-1		
		n_2 ³⁾	n_2 ³⁾	n_2 ³⁾
Type	n_{rated}	S1	S6-60 %	S6-40 %
	rpm	rpm	rpm	rpm
1PH2093	1 500	4 700	4 200	3 900
1PH2095	1 500	4 000	3 600	3 300
1PH2113	1 500	5 400	4 800	4 400
1PH2115	1 500	4 500	4 100	3 700
1PH2117	1 500	4 700	4 200	3 800
1PH2118	1 500	5 300	4 700	4 300

¹⁾ Data for $\Delta T = 70\text{ K}$, unless specified otherwise.

²⁾ For further configuration information, see the 1PH Motors Configuration Manual.

³⁾ Values taken from the speed/power graph with regulated infeed. When using unregulated infeed modules, proceed in accordance with the 1PH Motors Configuration Manual.

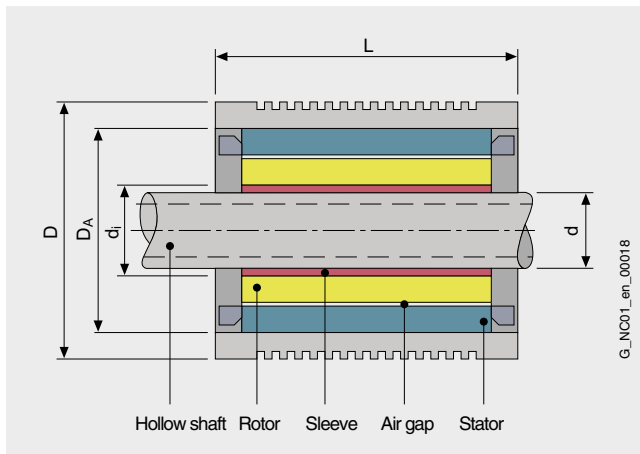
⁴⁾ With default setting of the pulse frequency.

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Motor type (continued)	Moment of inertia of rotor J kgm^2 ($\text{lb}_f\text{-in-s}^2$)	Weight (rotor and stator), approx. kg (lb)	Rated current for duty type in accordance with IEC 60034-1 ¹⁾			SIMODRIVE 611 power module	
			I_{rated}			Required rated output current I_{rated}	Order No.
			S1	S6-60 %	S6-40 %		
A	A	A	A	A			
1PH2093-6W...	0.028 (0.25)	33 (72.8)	24	26	28	30	For ordering data, see Converter system.
1PH2095-6W...	0.036 (0.32)	42 (92.6)	30	32	34	30	
1PH2113-6W...	0.066 (0.58)	51 (112)	56	61	67	60	
1PH2115-6W...	0.073 (0.65)	56 (123)	55	60	66	60	
1PH2117-6W...	0.079 (0.70)	62 (137)	60	67	74	60	
1PH2118-6W...	0.100 (0.89)	78 (172)	82	90	100	85	

Dimensional drawings


1PH2 motor	Standard spindle diameter	Rotor internal diameter	Stator outer diameter	Total outer diameter	Total length
Type	d	d_i	D_A	D	L
	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
1PH2093	67 (2.64)	85 (3.35)	180 (7.09)	205 (8.07)	250 (9.84)
1PH2095					300 (11.81)
1PH2113	82 (3.23)	100 (3.94)	220 (8.66)	250 (9.84)	290 (11.42)
1PH2115					310 (12.20)
1PH2117					330 (12.99)
1PH2118					390 (15.35)