

Asynchronous motors

Main spindle motors for SINAMICS S120

1PH2 built-in motors for direct drive Water cooling

Selection and ordering data

Rated speed	Speed, max.	Rated power, for duty type ¹⁾				1PH2 asynchronous built-in motor for direct drive Standard type	Rated torque ¹⁾	
		S1	S1 $\Delta T=105\text{ K}$	S6-60 %	S6-40 %		M_{rated}	$\Delta T=105\text{ K}$
n_{rated}	n_{max}	P_{rated}				Order No.	Nm (lb _f -ft)	Nm (lb _f -ft)
rpm	rpm	kW (HP)	kW (HP)	kW (HP)	kW (HP)			
Water cooling – Line voltage 400 V 3 AC, operation on Active Line Module								
1500	10000	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)
1500	10000	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

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

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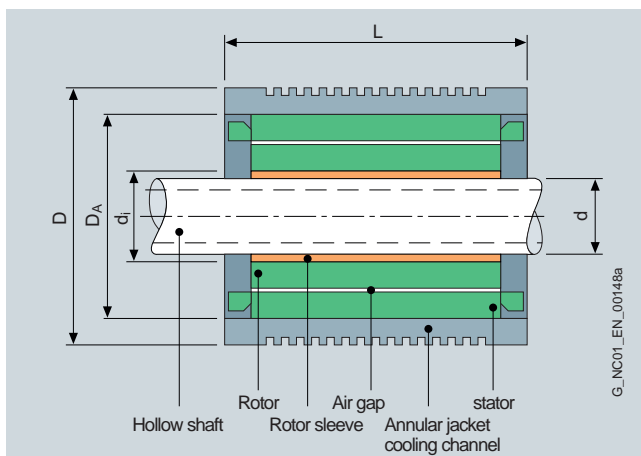
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Motor type (repeated)	Moment of inertia of rotor J kgm^2 ($\text{lb}_f\text{-in-s}^2$)	Weight (rotor and stator), approx. m kg (lb)	Rated current for duty type ¹⁾			SINAMICS S120 Motor Module	
						Required rated output current for S1 duty I_{rated} A	Booksize format For additional versions and components, see SINAMICS S120 drive system Order No.
			I_{rated} S1	S6-60 %	S6-40 %		
1PH2093-6W...	0.028 (0.25)	33 (72.8)	24	26	28	30	6SL312-1TE23-0AA3
1PH2095-6W...	0.036 (0.32)	42 (92.6)	30	32	34	30	6SL312-1TE23-0AA3
1PH2113-6W...	0.066 (0.58)	51 (112)	56	61	67	60	6SL312-1TE26-0AA3
1PH2115-6W...	0.073 (0.65)	56 (123)	55	60	66	60	6SL312-1TE26-0AA3
1PH2117-6W...	0.079 (0.70)	62 (137)	60	67	74	60	6SL312-1TE26-0AA3
1PH2118-6W...	0.100 (0.89)	78 (172)	82	90	100	85	6SL312-1TE28-5AA3

Cooling:	
Internal air cooling	0
External air cooling	1
Motor Module:	
Single Motor Module	1

Dimensional drawing



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)