

DMS14-X0SP00 Direct Drive Motor

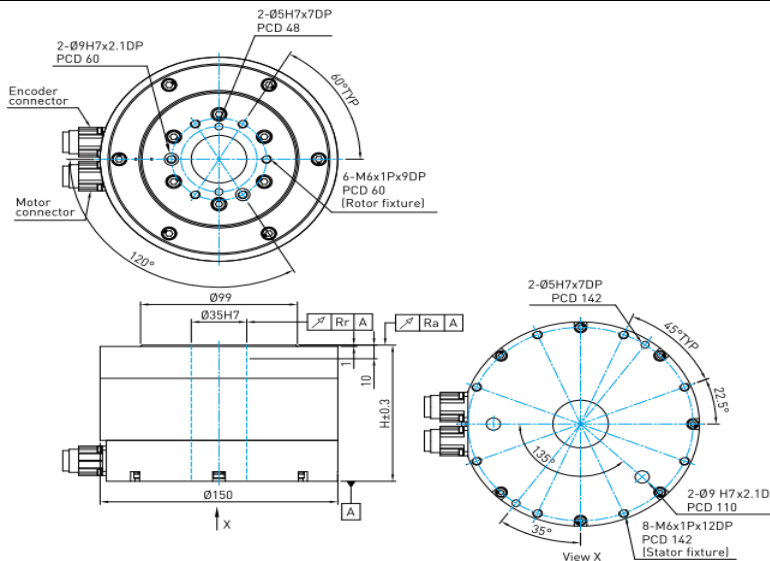
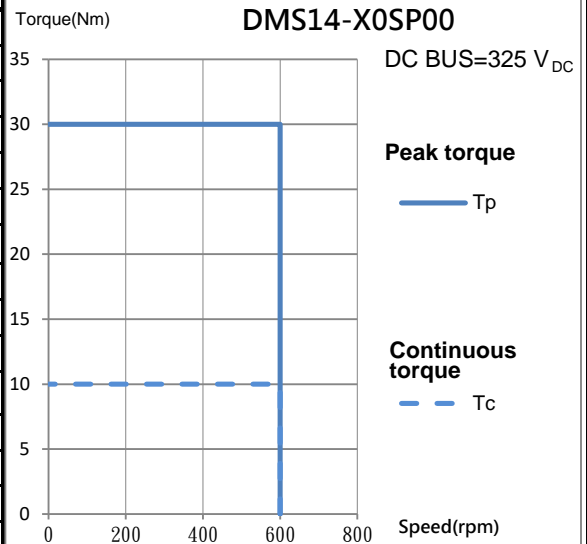
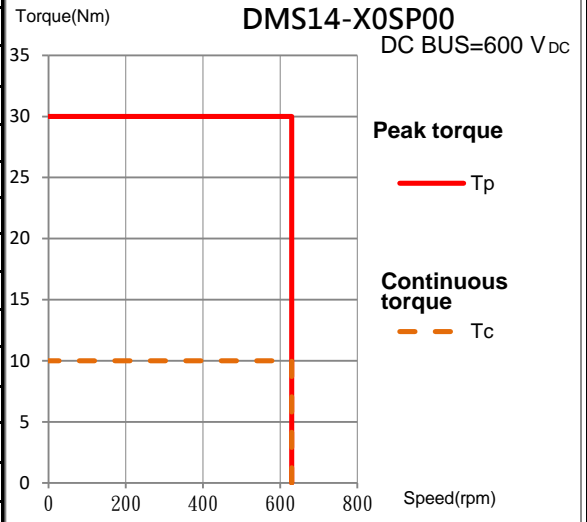
Electrical specifications

Winding code : LA	Symbol	Unit	
Continuous torque	T_c	Nm	10
Continuous current	I_c	A_{rms}	4
Peak torque(for 1sec.)	T_p	Nm	30
Peak current(for 1sec.)	I_p	A_{rms}	12
Torque constant	K_t	Nm/Arms	2.5
Electrical time constant	T_e	ms	3.6
Resistance (line to line at 25°C)	R_{25}	Ω	3.9
Inductance (line to line)	L	mH	14
Number of poles			22
Back emf constant (line to line)	K_v	Vrms/rad/s	1.2
Motor constant (at 25°C)	K_m	Nm/ \sqrt{W}	1
Thermal resistance	R_{th}	K/W	0.8
Thermal sensor			PTC 100
Max. DC BUS		V_{DC}	600

Mechanical specifications

	Symbol	Unit	
Inertia of rotor	J	kgm^2	0.0065
Mass of motor	M_m	kg	8.5
Max. axial load	F_a	N	3700
Max. moment load	M	Nm	60
Max. speed(at 600VDC)		rpm	630
Max. speed(at 325VDC)		rpm	600
Line count			3600 (Sin/Cos 1Vpp)
Repeatability		arc-sec	± 3
Accuracy		arc-sec	± 45
Axial run-out	R_a	μm	30
Radial run-out	R_r	μm	30
Motor dimensions	DxH	mm	$\phi 150 \times 120$

T-N curve



General tolerance mm	
Nominal dimension	Tolerance
~ 6	± 0.1
> 6 ~ 30	± 0.2
> 30 ~ 120	± 0.3
> 120 ~ 300	± 0.4
> 300 ~ 600	± 0.5
> 600 ~ 1200	± 0.8
> 1200 ~ 2400	± 1.0
> 2400	± 1.5

Except dimensions, all the specifications in the table are in $\pm 10\%$ of tolerance

This drawing is only for reference, detail dimensions please refer to approval drawing.

Version: 2.03

Date: 2024/9/18