

TM-2-7B-PB0(J0) Torque Motor

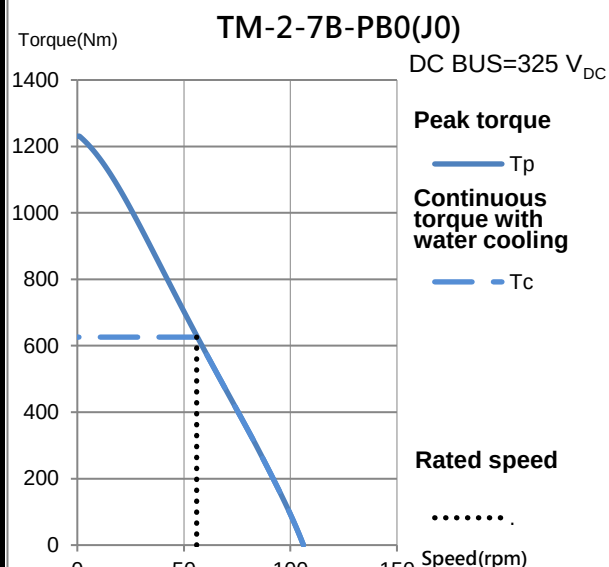
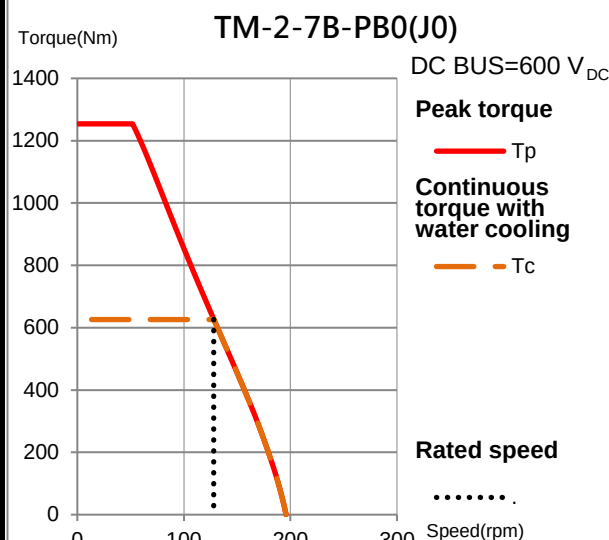
Electrical specifications

Winding code : PB0	Symbol	Unit	Water cooling
Continuous torque	T_c	Nm	626
Continuous current	I_c	A_{rms}	20.5
Stall torque	T_s	Nm	515
Stall current	I_s	A_{rms}	16.4
Peak torque(for 1sec.)	T_p	Nm	1254
Peak current(for 1sec.)	I_p	A_{rms}	56
Torque constant	K_t	Nm/Arms	32.56
Electrical time constant	T_e	ms	7.7
Resistance (line to line at 25°C)	R_{25}	Ω	4.9
Inductance (line to line)	L	mH	37.6
Number of poles	2p		44
Back emf constant (line to line)	K_v	Vrms/rad/s	18.8
Motor constant (at 25°C)	K_m	Nm/ $\sqrt{W}$	12.03
Thermal resistance	R_{th}	K/W	0.034
Thermal sensor			PTC 100+PTC 130+Pt1000
Max. DC BUS		V_{DC}	750
Inertia of rotor	J	kgm^2	0.089
Thermal time constant	T_{th}	s	120
Max. continuous power dissipation	P_c	W	4362
Max. peak power dissipation	P_p	W	32551
Rated speed(at 600VDC)		rpm	128

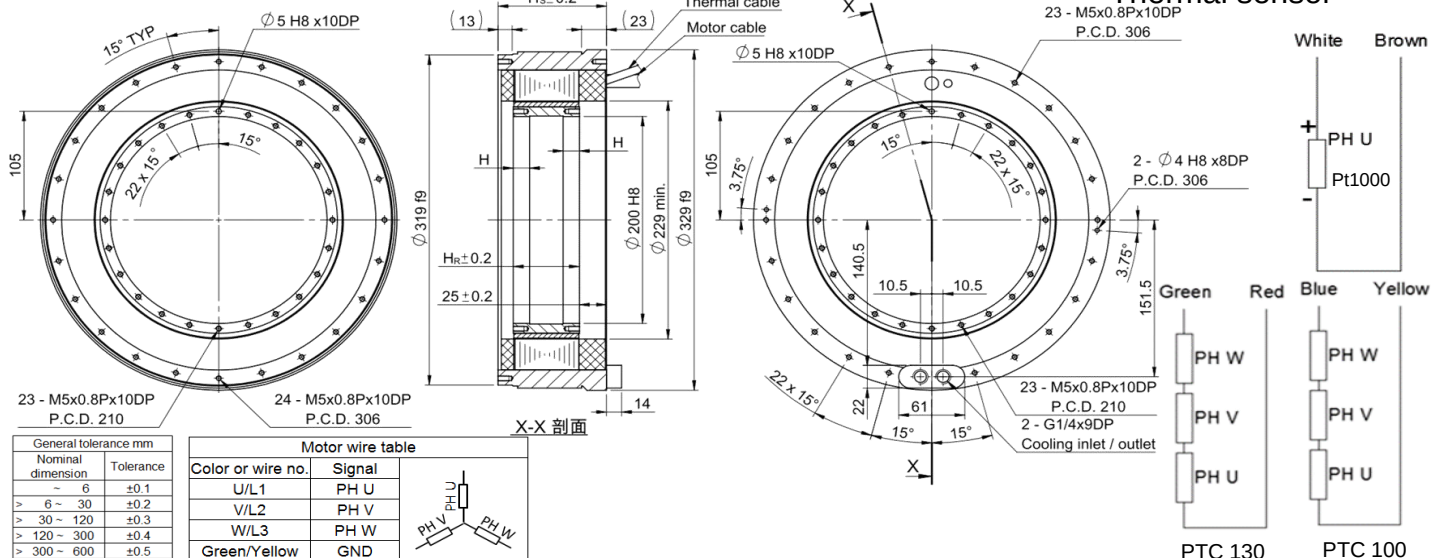
Mechanical specifications

	Symbol	Unit	Water cooling
Mass of rotor	M_r	kg	7.8
Mass of stator	M_s	kg	39.5
Height of stator	H_s	mm	150
Height of rotor	H_r	mm	111
Length of rotor centring fit	H	mm	15
Water temperture difference for P_c	$\Delta\theta$	K	5
Minimum water flow	q	l/min	11.1
Max. pressure drop	Δp	bar	1

T-N curve



Thermal sensor



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

Version: 2.00

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

Date: 2023/6/8