

TM-2-78-PB0(J0) Torque Motor

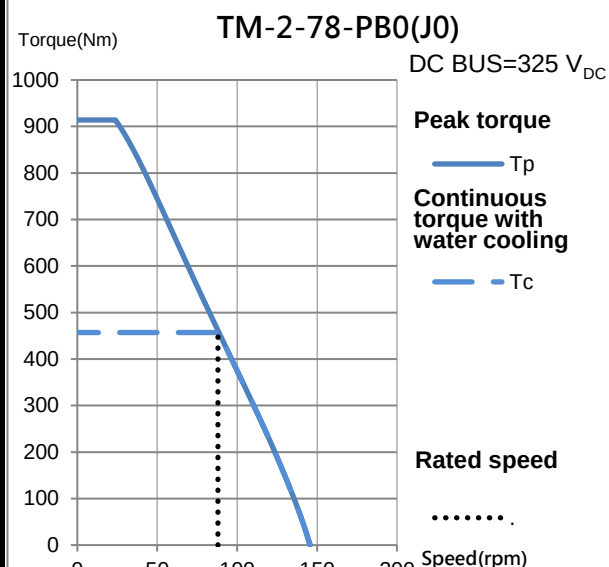
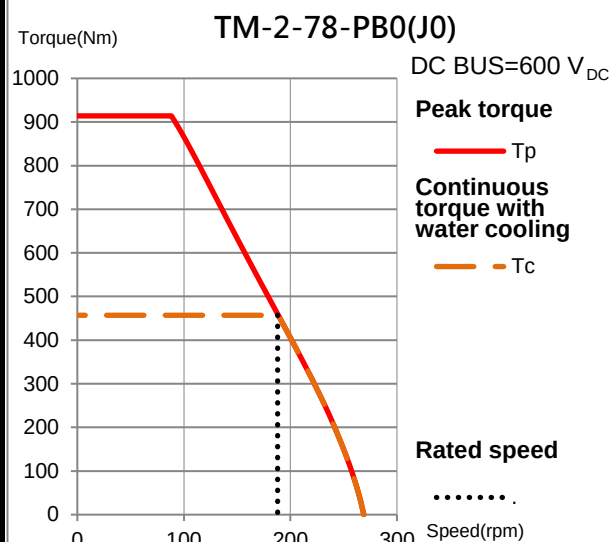
Electrical specifications

Winding code : PB0	Symbol	Unit	Water cooling
Continuous torque	T_c	Nm	457
Continuous current	I_c	A_{rms}	20.5
Stall torque	T_s	Nm	376
Stall current	I_s	A_{rms}	16.4
Peak torque(for 1sec.)	T_p	Nm	914
Peak current(for 1sec.)	I_p	A_{rms}	56
Torque constant	K_t	Nm/Arms	23.73
Electrical time constant	T_e	ms	7
Resistance (line to line at 25°C)	R_{25}	Ω	3.7
Inductance (line to line)	L	mH	25.8
Number of poles	2p		44
Back emf constant (line to line)	K_v	Vrms/rad/s	13.7
Motor constant (at 25°C)	K_m	Nm/ $\sqrt{W}$	10.06
Thermal resistance	R_{th}	K/W	0.045
Thermal sensor			PTC 100+PTC 130+Pt1000
Max. DC BUS		V_{DC}	750
Inertia of rotor	J	kgm^2	0.065
Thermal time constant	T_{th}	s	170
Max. continuous power dissipation	P_c	W	3290
Max. peak power dissipation	P_p	W	24554
Rated speed(at 600VDC)		rpm	188

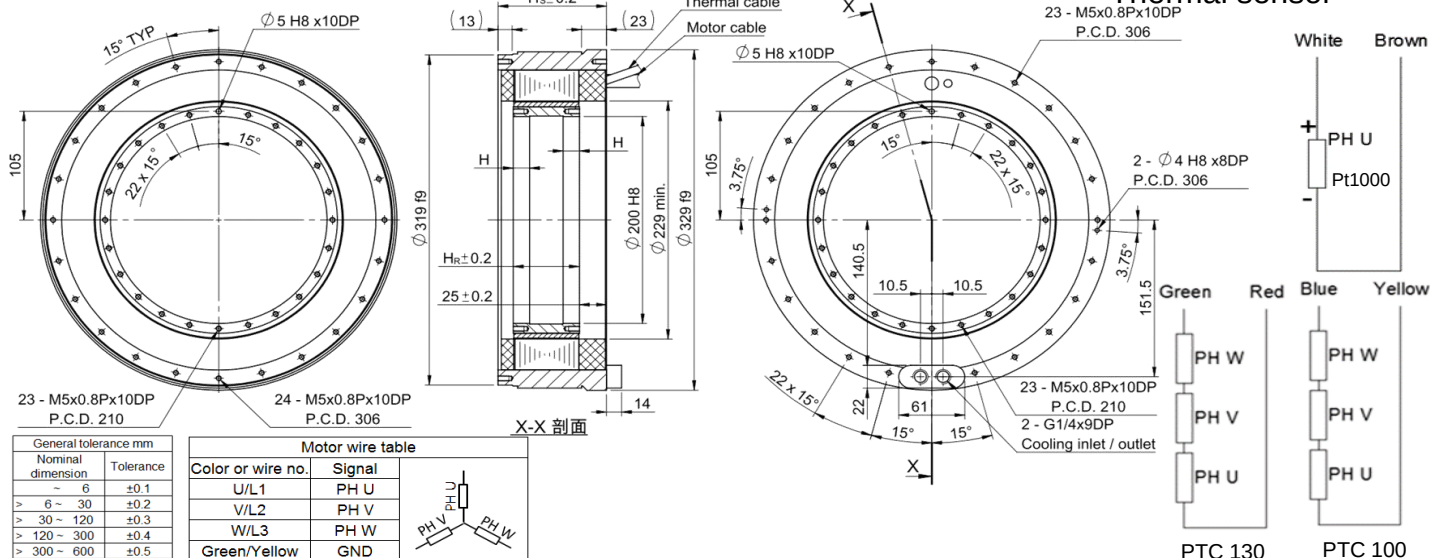
Mechanical specifications

	Symbol	Unit	Water cooling
Mass of rotor	M_r	kg	5.7
Mass of stator	M_s	kg	31.1
Height of stator	H_s	mm	120
Height of rotor	H_r	mm	81
Length of rotor centring fit	H	mm	15
Water temperture difference for P_c	$\Delta\theta$	K	5
Minimum water flow	q	l/min	8.1
Max. pressure drop	Δp	bar	1

T-N curve



Thermal sensor



Except dimensions, all the specifications in the table are in ±10% of tolerance

Version: 2.00

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

Date: 2023/6/8