

TM-2-2A-PA0

Torque Motor

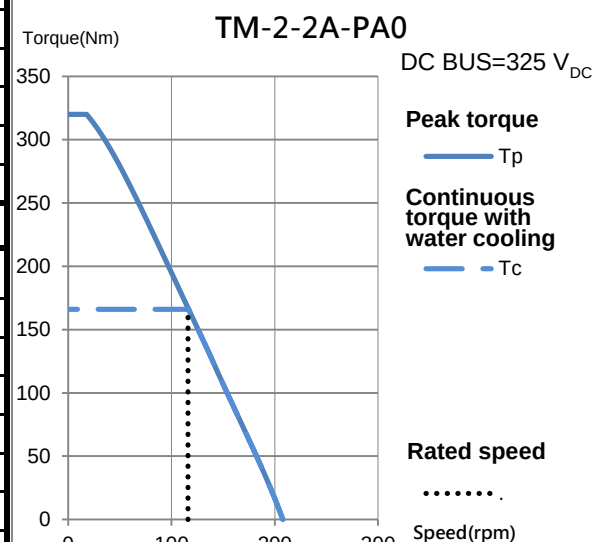
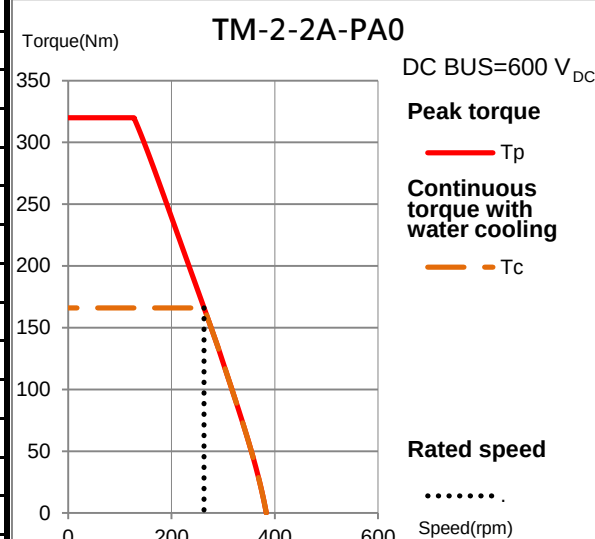
Electrical specifications

Winding code : PA0	Symbol	Unit	Water cooling
Continuous torque	T_c	Nm	166
Continuous current	I_c	A_{rms}	10.2
Stall torque	T_s	Nm	136
Stall current	I_s	A_{rms}	8.2
Peak torque(for 1sec.)	T_p	Nm	320
Peak current(for 1sec.)	I_p	A_{rms}	25.5
Torque constant	K_t	Nm/ A_{rms}	16.63
Electrical time constant	T_e	ms	7.2
Resistance (line to line at 25°C)	R_{25}	Ω	9.4
Inductance (line to line)	L	mH	68
Number of poles	2p		22
Back emf constant (line to line)	K_v	Vrms/rad/s	9.6
Motor constant (at 25°C)	K_m	Nm/ $\sqrt{W}$	4.43
Thermal resistance	R_{th}	K/W	0.072
Thermal sensor			PTC 100+PTC 130+Pt1000
Max. DC BUS		V_{DC}	750
Inertia of rotor	J	kgm^2	0.0092
Thermal time constant	T_{th}	s	96
Max. continuous power dissipation	P_c	W	2070
Max. peak power dissipation	P_p	W	12943
Rated speed(at 600VDC)		rpm	263

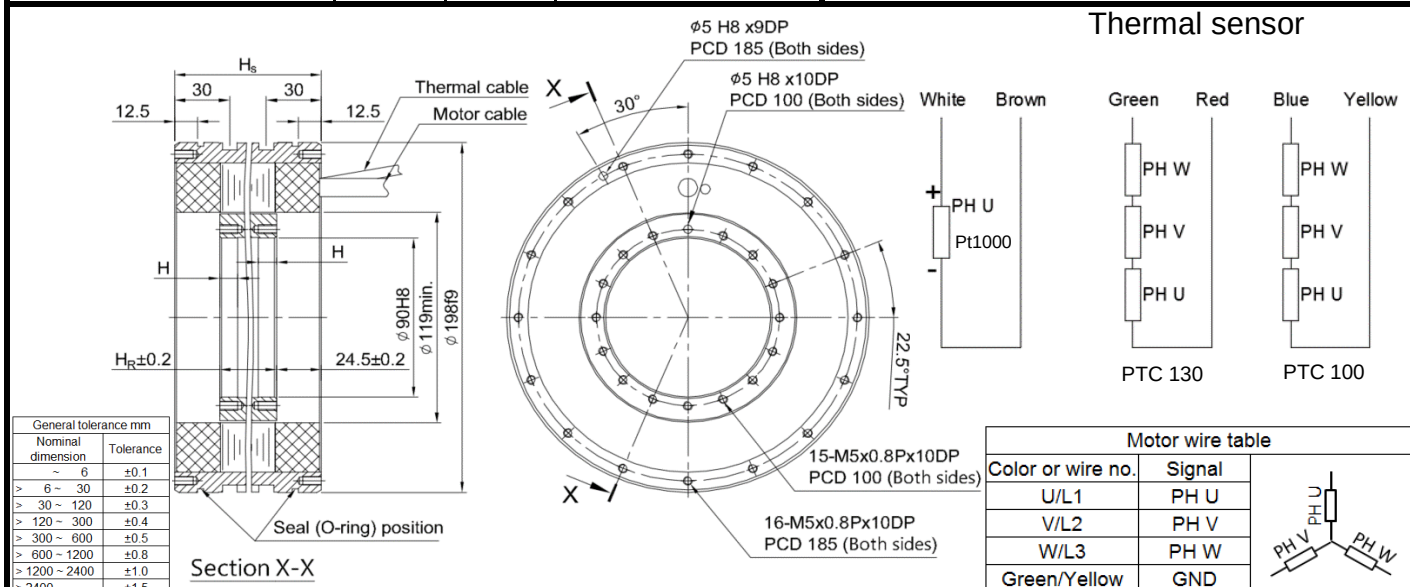
Mechanical specifications

	Symbol	Unit	Water cooling
Mass of rotor	M_r	kg	3.3
Mass of stator	M_s	kg	16.7
Height of stator	H_s	mm	150
Height of rotor	H_r	mm	101
Length of rotor centring fit	H	mm	15
Water temperture difference for P_c	$\Delta\theta$	K	5
Minimum water flow	q	l/min	6
Max. pressure drop	Δp	bar	1

T-N curve



Thermal sensor



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

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

Version: 2.00a

Date: 2021/12/14