

TMRW2A Torque Motor

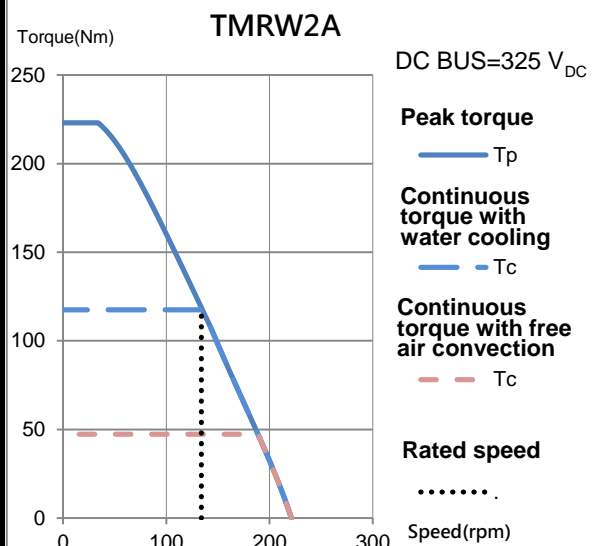
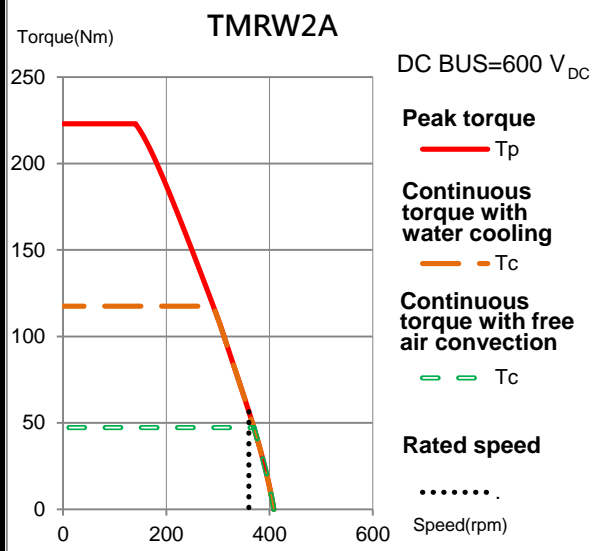
Electrical specifications

Winding code : PA	Symbol	Unit	Free air convection	Water cooling
Continuous torque	T_c	Nm	47.3	117.5
Continuous current	I_c	A_{rms}	3.3	8.3
Stall torque	T_s	Nm	33	82
Stall current	I_s	A_{rms}	2.3	5.8
Peak torque(for 1sec.)	T_p	Nm	136.3	223
Peak current(for 1sec.)	I_p	A_{rms}	9.9	22.3
Torque constant	K_t	Nm/Arms	14.32	
Electrical time constant	T_e	ms	7.4	
Resistance (line to line at 25°C)	R_{25}	Ω	9.6	
Inductance (line to line)	L	mH	70.8	
Number of poles	2p		22	
Back emf constant (line to line)	K_v	Vrms/rad/s	8.27	
Motor constant (at 25°C)	K_m	Nm/ \sqrt{W}	3.78	
Thermal resistance	R_{th}	K/W	0.61	0.096
Thermal sensor			PTC SNM100+SNM120+Pt1000	
Max. DC BUS		V_{DC}	750	
Inertia of rotor	J	kgm^2	0.009	
Thermal time constant	T_{th}	s	2410	75
Max. continuous power dissipation	P_c	W	215	1361
Max. peak power dissipation	P_p	W	9831	
Rated speed(at 600VDC)		rpm	360	

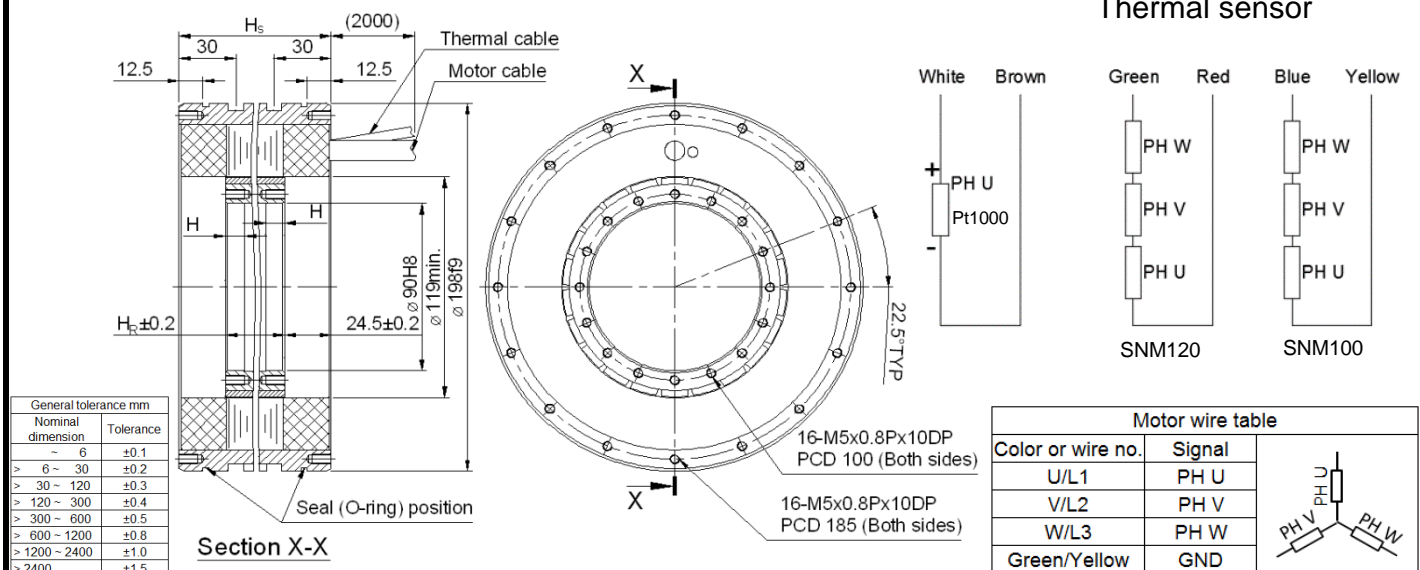
Mechanical specifications

	Symbol	Unit	Free air convection	Water cooling
Mass of rotor	M_r	kg	3.2	
Mass of stator	M_s	kg	14.2	
Height of stator	H_s	mm	150	
Height of rotor	H_r	mm	101	
Length of rotor centring fit	H	mm	15	
Water temperature difference for P_c	$\Delta\theta$	K	-	5
Minimum water flow	q	l/min	-	3.9
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: 2020/10/23