

TMRW17 Torque Motor

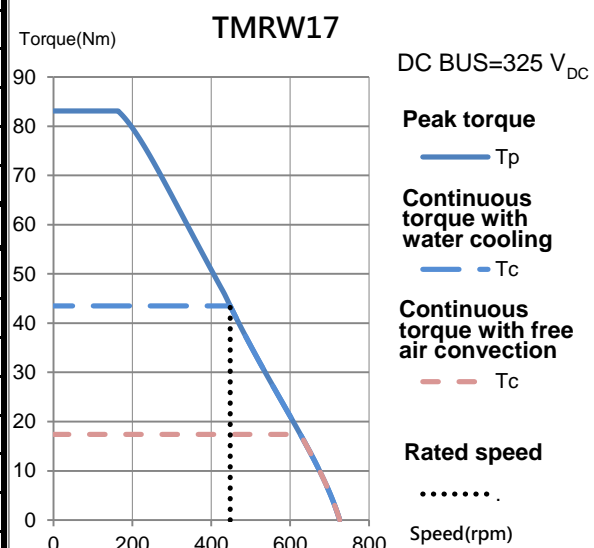
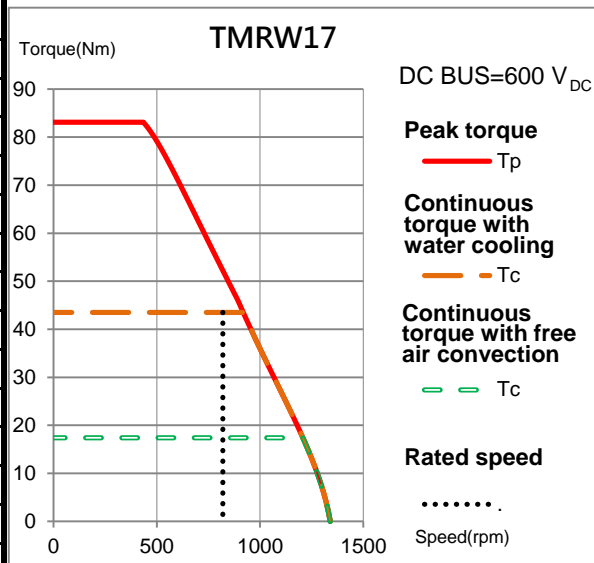
Electrical specifications

Winding code : LA	Symbol	Unit	Free air convection	Water cooling
Continuous torque	T_c	Nm	17.4	43.8
Continuous current	I_c	A_{rms}	4	10
Stall torque	T_s	Nm	12	31
Stall current	I_s	A_{rms}	2.8	7
Peak torque(for 1sec.)	T_p	Nm	51.1	83.1
Peak current(for 1sec.)	I_p	A_{rms}	12	27
Torque constant	K_t	Nm/Arms	4.36	
Electrical time constant	T_e	ms	3.6	
Resistance (line to line at 25°C)	R_{25}	Ω	6.2	
Inductance (line to line)	L	mH	22.5	
Number of poles	2p		22	
Back emf constant (line to line)	K_v	Vrms/rad/s	2.52	
Motor constant (at 25°C)	K_m	Nm/ \sqrt{W}	1.43	
Thermal resistance	R_{th}	K/W	0.64	0.102
Thermal sensor			PTC SNM100+SNM120+Pt1000	
Max. DC BUS		V_{DC}	750	
Inertia of rotor	J	kgm^2	0.0023	
Thermal time constant	T_{th}	s	2910	110
Max. continuous power dissipation	P_c	W	204	1276
Max. peak power dissipation	P_p	W	9305	
Rated speed(at 600VDC)		rpm	820	

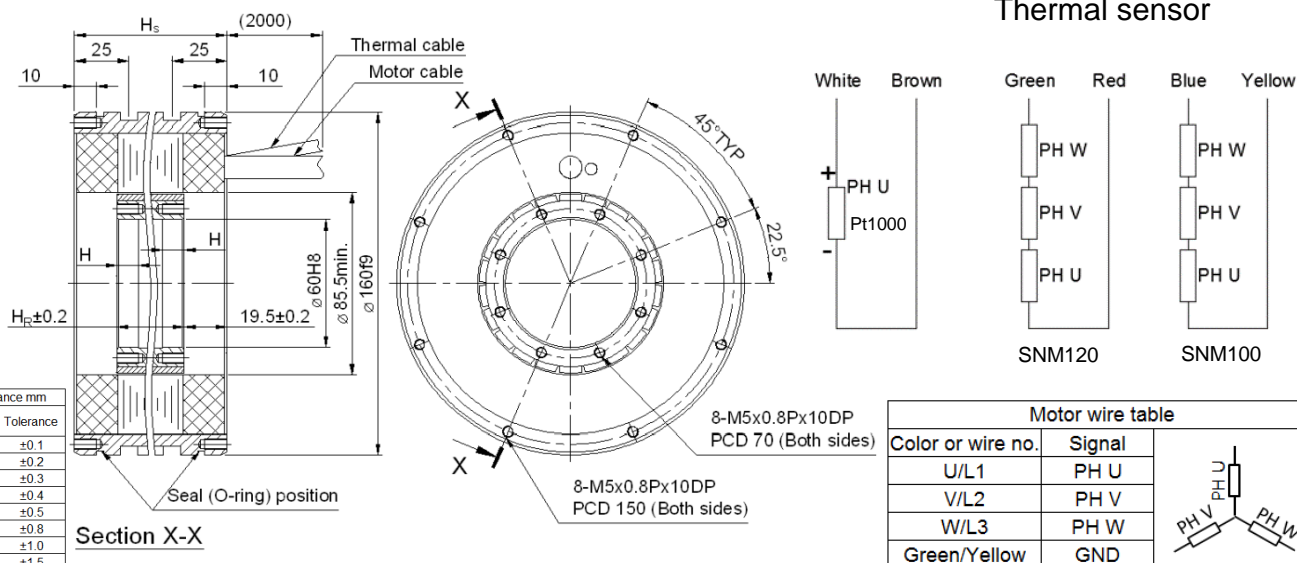
Mechanical specifications

	Symbol	Unit	Free air convection	Water cooling
Mass of rotor	M_r	kg	1.4	
Mass of stator	M_s	kg	6.2	
Height of stator	H_s	mm	110	
Height of rotor	H_r	mm	71	
Length of rotor centring fit	H	mm	15	
Water temperature difference for P_c	$\Delta\theta$	K	-	5
Minimum water flow	q	l/min	-	3.7
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: 2.00

Date: 2020/10/23