

TMRW75 Torque Motor

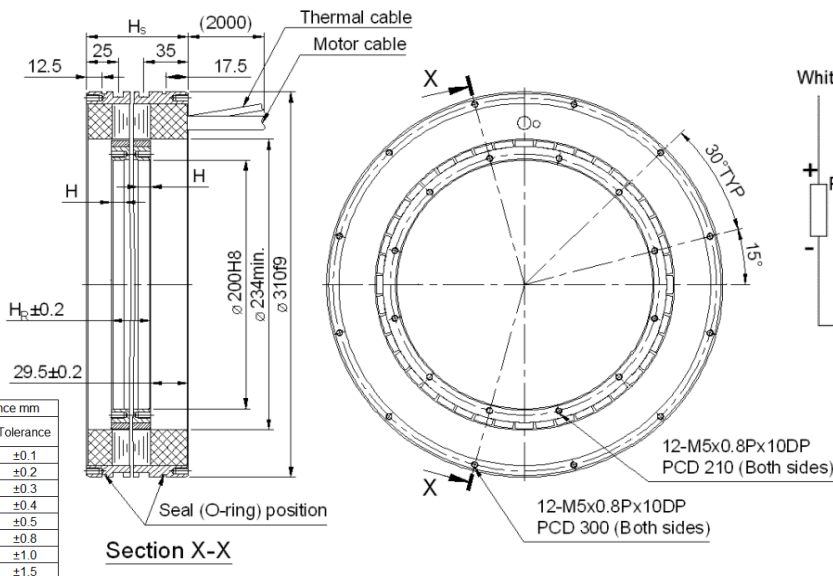
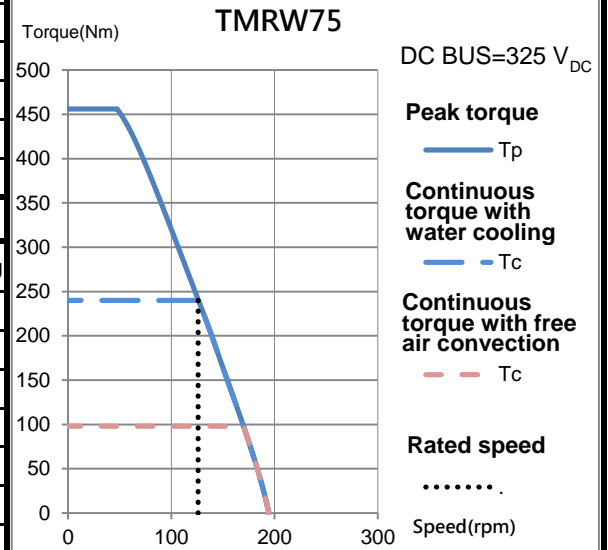
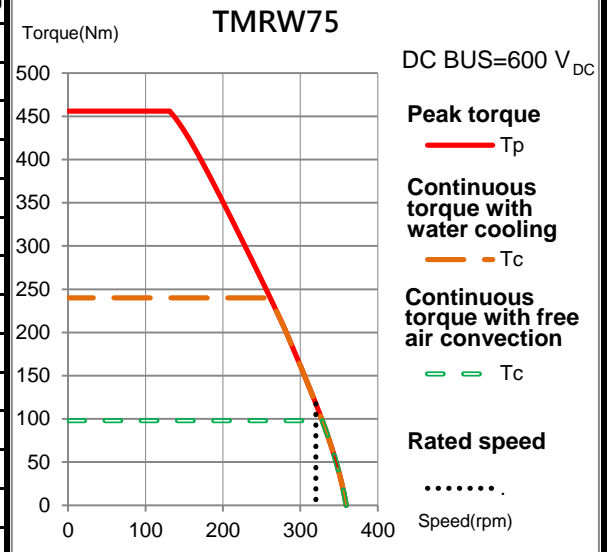
Electrical specifications

Winding code : SA	Symbol	Unit	Free air convection	Water cooling
Continuous torque	T_c	Nm	98	240
Continuous current	I_c	A_{rms}	6	15
Stall torque	T_s	Nm	69	168
Stall current	I_s	A_{rms}	4.2	10.5
Peak torque(for 1sec.)	T_p	Nm	279.7	456
Peak current(for 1sec.)	I_p	A_{rms}	18	40.5
Torque constant	K_t	Nm/Arms	16.3	
Electrical time constant	T_e	ms	5.6	
Resistance (line to line at 25°C)	R_{25}	Ω	4.19	
Inductance (line to line)	L	mH	23.45	
Number of poles	$2p$		44	
Back emf constant (line to line)	K_v	Vrms/rad/s	9.4	
Motor constant (at 25°C)	K_m	Nm/ \sqrt{W}	6.52	
Thermal resistance	R_{th}	K/W	0.42	0.067
Thermal sensor			PTC SNM100+SNM120+Pt1000	
Max. DC BUS		V_{DC}	750	
Inertia of rotor	J	kgm^2	0.039	
Thermal time constant	T_{th}	s	4520	160
Max. continuous power dissipation	P_c	W	310	1940
Max. peak power dissipation	P_p	W	14147	
Rated speed(at 600VDC)		rpm	320	

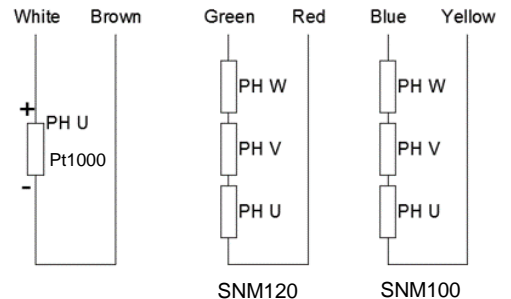
Mechanical specifications

	Symbol	Unit	Free air convection	Water cooling
Mass of rotor	M_r	kg	4.1	
Mass of stator	M_s	kg	18.9	
Height of stator	H_s	mm	100	
Height of rotor	H_r	mm	51	
Length of rotor centring fit	H	mm	15	
Water temperature difference for P_c	$\Delta\theta$	K	-	5
Minimum water flow	q	l/min	-	5.6
Max. pressure drop	Δp	bar	-	1

T-N curve



Thermal sensor



Motor wire table	
Color or wire no.	Signal
U/L1	PH U
V/L2	PH V
W/L3	PH W
Green/Yellow	GND

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