

TMRWGA Torque Motor

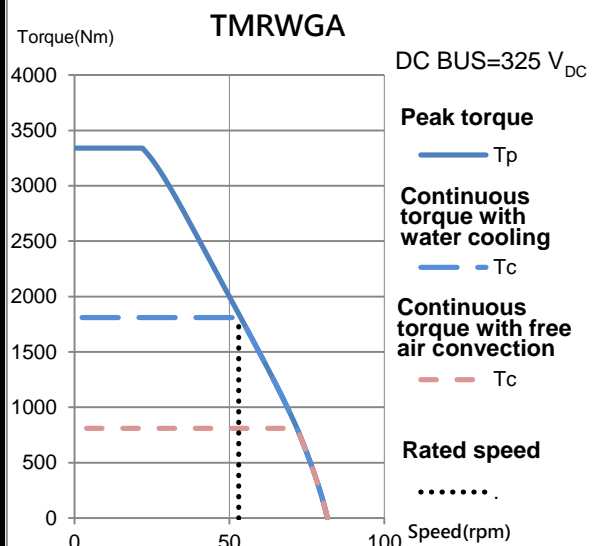
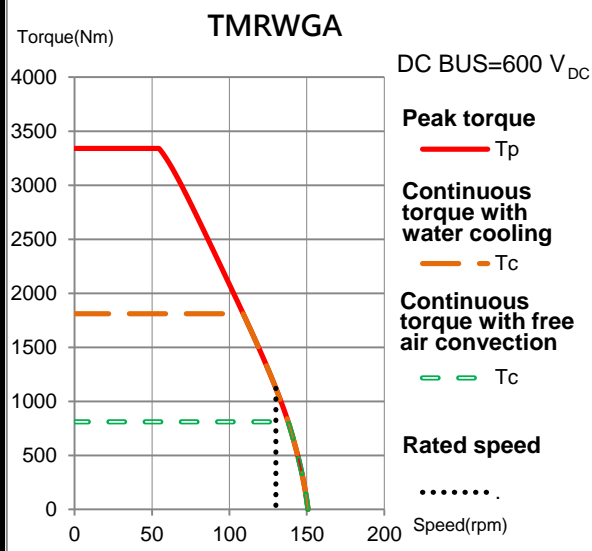
Electrical specifications

Winding code : SD	Symbol	Unit	Free air convection	Water cooling
Continuous torque	T_c	Nm	810	1810
Continuous current	I_c	A_{rms}	21	52.5
Stall torque	T_s	Nm	567	1267
Stall current	I_s	A_{rms}	14.7	36.8
Peak torque(for 1sec.)	T_p	Nm	2089.9	3340
Peak current(for 1sec.)	I_p	A_{rms}	63	142
Torque constant	K_t	Nm/Arms	38.8	
Electrical time constant	T_e	ms	8	
Resistance (line to line at 25°C)	R_{25}	Ω	1.06	
Inductance (line to line)	L	mH	8.5	
Number of poles	2p		88	
Back emf constant (line to line)	K_v	Vrms/rad/s	22.4	
Motor constant (at 25°C)	K_m	Nm/ \sqrt{W}	30.59	
Thermal resistance	R_{th}	K/W	0.14	0.022
Thermal sensor			PTC SNM100+SNM120+Pt1000	
Max. DC BUS		V_{DC}	750	
Inertia of rotor	J	kgm^2	0.904	
Thermal time constant	T_{th}	s	3520	120
Max. continuous power dissipation	P_c	W	959	5994
Max. peak power dissipation	P_p	W	43856	
Rated speed(at 600VDC)		rpm	130	

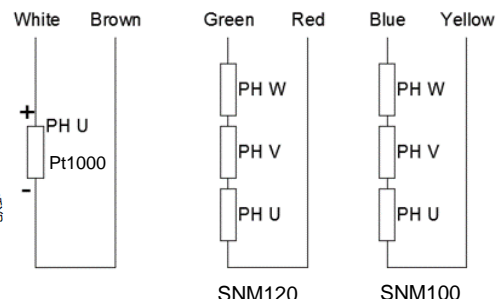
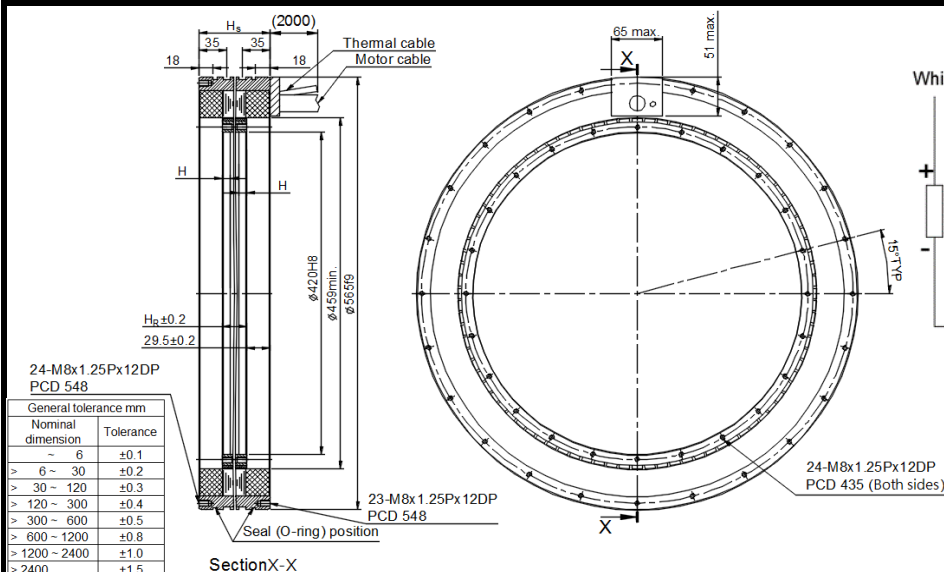
Mechanical specifications

	Symbol	Unit	Free air convection	Water cooling
Mass of rotor	M_r	kg	19	
Mass of stator	M_s	kg	75	
Height of stator	H_s	mm	160	
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	-	17.2
Max. pressure drop	Δp	bar	-	3

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