

TM-5-17-LA0

Torque Motor

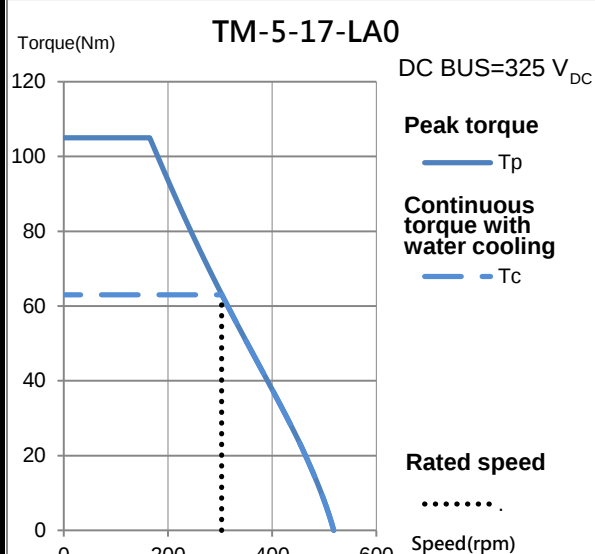
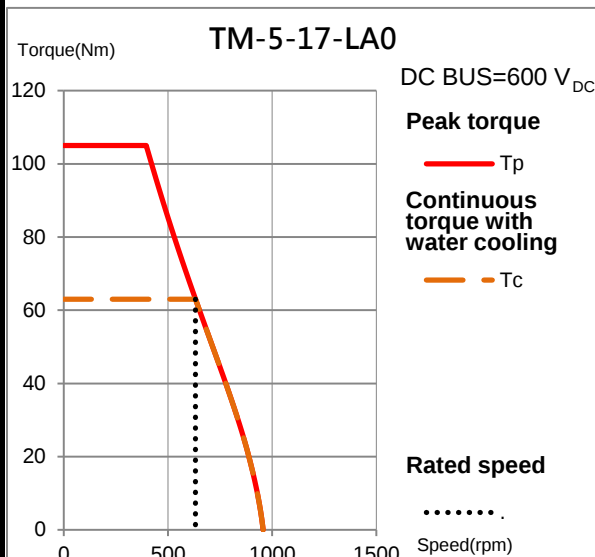
Electrical specifications

Winding code : LA0	Symbol	Unit	Water cooling
Continuous torque	T_c	Nm	63
Continuous current	I_c	A_{rms}	10.3
Stall torque	T_s	Nm	52
Stall current	I_s	A_{rms}	8.2
Peak torque(for 1sec.)	T_p	Nm	105
Peak current(for 1sec.)	I_p	A_{rms}	20
Torque constant	K_t	Nm/Arms	6.67
Electrical time constant	T_e	ms	5.2
Resistance (line to line at 25°C)	R_{25}	Ω	6.8
Inductance (line to line)	L	mH	35.3
Number of poles	2p		22
Back emf constant (line to line)	K_v	Vrms/rad/s	3.85
Motor constant (at 25°C)	K_m	Nm/ $\sqrt{W}$	2.09
Thermal resistance	R_{th}	K/W	0.097
Thermal sensor			PTC 100+PTC 130+Pt1000
Max. DC BUS		V_{DC}	750
Inertia of rotor	J	kgm^2	0.0023
Thermal time constant	T_{th}	s	160
Max. continuous power dissipation	P_c	W	1527
Max. peak power dissipation	P_p	W	5760
Rated speed(at 600VDC)		rpm	632

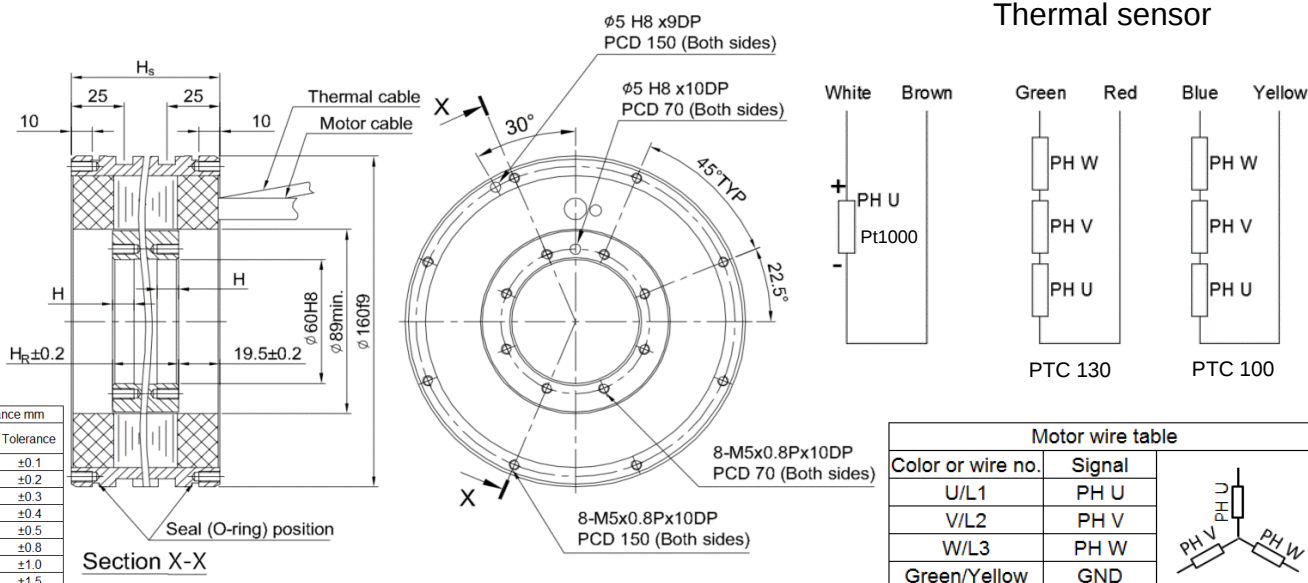
Mechanical specifications

	Symbol	Unit	Water cooling
Mass of rotor	M_r	kg	1.6
Mass of stator	M_s	kg	9
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	4.4
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

The drawing and values are only for reference.

Date: 2024/6/27