

# TM-2-1A-LA0 Torque Motor

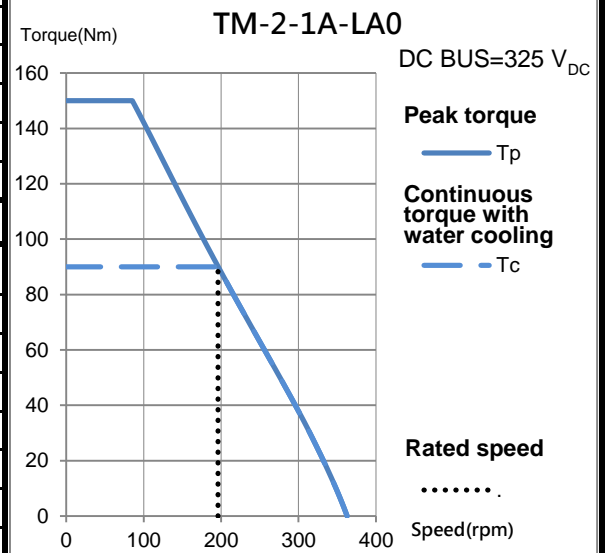
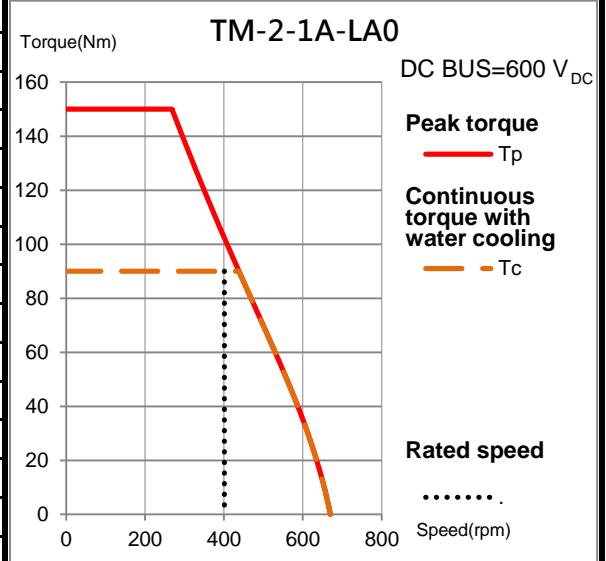
## Electrical specifications

Winding code : LA	Symbol	Unit	Water cooling
Continuous torque	$T_c$	Nm	90
Continuous current	$I_c$	$A_{rms}$	10.3
Stall torque	$T_s$	Nm	74
Stall current	$I_s$	$A_{rms}$	8.2
Peak torque(for 1sec.)	$T_p$	Nm	150
Peak current(for 1sec.)	$I_p$	$A_{rms}$	20
Torque constant	$K_t$	Nm/Arms	9.53
Electrical time constant	$T_e$	ms	4.9
Resistance (line to line at 25°C)	$R_{25}$	$\Omega$	9.2
Inductance (line to line)	L	mH	45.5
Number of poles	2p		22
Back emf constant (line to line)	$K_v$	Vrms/rad/s	5.5
Motor constant (at 25°C)	$K_m$	Nm/ $\sqrt{W}$	2.57
Thermal resistance	$R_{th}$	K/W	0.072
Thermal sensor			PTC SNM100+SNM130+Pt1000
Max. DC BUS		$V_{DC}$	750
Inertia of rotor	J	$kgm^2$	0.0033
Thermal time constant	$T_{th}$	s	110
Max. continuous power dissipation	$P_c$	W	2067
Max. peak power dissipation	$P_p$	W	7794
Rated speed(at 600VDC)		rpm	401

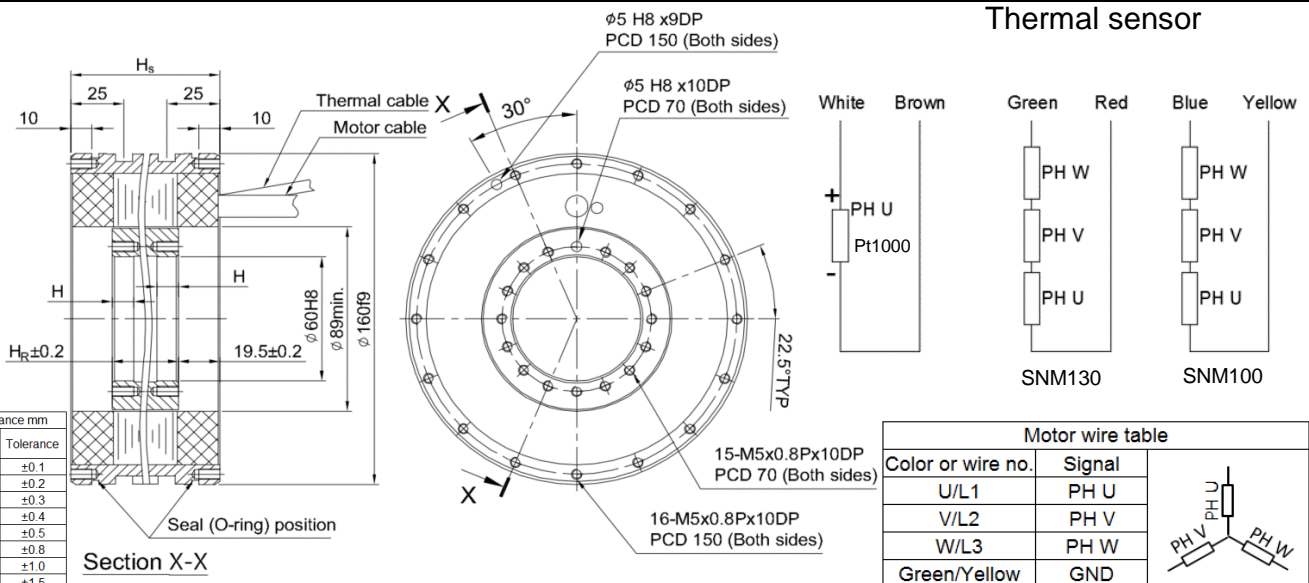
## Mechanical specifications

	Symbol	Unit	Water cooling
Mass of rotor	$M_r$	kg	2.3
Mass of stator	$M_s$	kg	11.1
Height of stator	$H_s$	mm	140
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	6
Max. pressure drop	$\Delta p$	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