

TORQUE MOTOR

TMM0140-070

PERFORMANCE		Winding codes	3RBS	3UBS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	89.1	89.1
Tc	Continuous torque	Nm	19.5	19.7
Ts	Stall torque	Nm	14.9	15.0
Kt	Torque constant	Nm/Arms	3.61	1.83
Ku	Back EMF constant (*)	Vrms/(rad/s)	2.09	1.06
Km	Motor constant	Nm/ \sqrt{W}	1.64	1.66
R20	Electrical resistance at 20°C (*)	Ohm	3.23	0.810
L1	Electrical inductance (*)	mH	19.7	5.05
Ip	Peak current	Arms	39.5	78.1
Ic	Continuous current	Arms	5.48	10.9
Is	Stall current	Arms	4.15	8.29
Pc	Max. continuous power dissipation	W	205	205

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τ_{th}	Thermal time constant	s	1690	1690
Rth	Thermal resistance	K/W	0.507	0.507
2p	Number of poles	-	22	22
J	Rotor inertia	kg.m ²	0.00233	0.00233
Mr	Rotor mass	kg	1.66	1.66
Ms	Stator mass	kg	4.69	4.72
Td	Max. detent torque (average to peak)	Nm	0.46	0.46
ns	Stall speed	rpm	0.032	0.032

Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
 Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.09 m² and rotor to a total surface of 0.033 m²

Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

