

# TORQUE MOTOR

# TMM0140-150

PERFORMANCE		Winding codes	3RBS	3UBS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	191	191
Tc	Continuous torque	Nm	39.8	40.4
Ts	Stall torque	Nm	30.3	30.8
Kt	Torque constant	Nm/Arms	7.74	3.92
Ku	Back EMF constant (*)	Vrms/(rad/s)	4.48	2.27
Km	Motor constant	Nm/√W	2.55	2.59
R20	Electrical resistance at 20°C (*)	Ohm	6.15	1.53
L1	Electrical inductance (*)	mH	42.2	10.8
Ip	Peak current	Arms	39.5	78.1
Ic	Continuous current	Arms	5.21	10.5
Is	Stall current	Arms	3.95	7.93
Pc	Max. continuous power dissipation	W	352	352

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	1660	1660
Rth	Thermal resistance	K/W	0.294	0.294
2p	Number of poles	-	22	22
J	Rotor inertia	kg.m <sup>2</sup>	0.00499	0.00499
Mr	Rotor mass	kg	3.57	3.57
Ms	Stator mass	kg	9.10	9.15
Td	Max. detent torque (average to peak)	Nm	0.98	0.98
ns	Stall speed	rpm	0.033	0.033

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 0.20 m<sup>2</sup> and rotor to a total surface of 0.063 m<sup>2</sup>

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.

