

# TORQUE MOTOR

# TMM0291-150

PERFORMANCE		Winding codes	3TBN	3TDN
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	1250	1250
Tc	Continuous torque	Nm	288	288
Ts	Stall torque	Nm	219	219
Kt	Torque constant	Nm/Arms	42.5	21.3
Ku	Back EMF constant (*)	Vrms/(rad/s)	24.6	12.3
Km	Motor constant	Nm/√W	12.1	12.1
R20	Electrical resistance at 20°C (*)	Ohm	8.26	2.07
L1	Electrical inductance (*)	mH	87.3	21.8
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	7.08	14.2
Is	Stall current	Arms	5.37	10.7
Pc	Max. continuous power dissipation	W	890	890

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2050	2050
Rth	Thermal resistance	K/W	0.124	0.124
2p	Number of poles	-	44	44
J	Rotor inertia	kg.m <sup>2</sup>	0.119	0.119
Mr	Rotor mass	kg	10.4	10.4
Ms	Stator mass	kg	27.5	27.5
Td	Max. detent torque (average to peak)	Nm	5.6	5.6
ns	Stall speed	rpm	0.013	0.013

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 0.41 m<sup>2</sup> and rotor to a total surface of 0.210 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.

