

# TORQUE MOTOR

# TML0291-100

PERFORMANCE		Winding codes	3TBN	3TDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	831	831
Tc	Continuous torque	Nm	149	149
Ts	Stall torque	Nm	113	113
Kt	Torque constant	Nm/Arms	28.3	14.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	16.4	8.20
Km	Motor constant	Nm/√W	9.46	9.46
R20	Electrical resistance at 20°C (*)	Ohm	5.98	1.50
L1	Electrical inductance (*)	mH	58.2	14.5
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	5.48	11.0
Is	Stall current	Arms	4.15	8.30
Pc	Max. continuous power dissipation	W	385	385

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	4050	4050
Rth	Thermal resistance	K/W	0.286	0.286
2p	Number of poles	-	44	44
J	Rotor inertia	kg.m <sup>2</sup>	0.0791	0.0791
Mr	Rotor mass	kg	6.91	6.91
Ms	Stator mass	kg	21.3	21.3
Td	Max. detent torque (average to peak)	Nm	3.8	3.8
ns	Stall speed	rpm	0.0067	0.0067

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 0.28 m<sup>2</sup> and rotor to a total surface of 0.140 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.

