

# TORQUE MOTOR

# TMM0175-030

PERFORMANCE		Winding codes	3TAS	3UBS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	67.9	67.9
Tc	Continuous torque	Nm	14.7	14.8
Ts	Stall torque	Nm	11.1	11.2
Kt	Torque constant	Nm/Arms	3.58	1.45
Ku	Back EMF constant (*)	Vrms/(rad/s)	2.07	0.836
Km	Motor constant	Nm/√W	1.39	1.40
R20	Electrical resistance at 20°C (*)	Ohm	4.44	0.710
L1	Electrical inductance (*)	mH	22.2	3.63
Ip	Peak current	Arms	27.1	66.9
Ic	Continuous current	Arms	4.36	10.9
Is	Stall current	Arms	3.30	8.25
Pc	Max. continuous power dissipation	W	178	178

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	1880	1880
Rth	Thermal resistance	K/W	0.590	0.590
2p	Number of poles	-	22	22
J	Rotor inertia	kg.m <sup>2</sup>	0.00273	0.00273
Mr	Rotor mass	kg	0.999	0.999
Ms	Stator mass	kg	3.82	3.83
Td	Max. detent torque (average to peak)	Nm	0.57	0.57
ns	Stall speed	rpm	0.029	0.029

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 0.05 m<sup>2</sup> and rotor to a total surface of 0.026 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.

