

# TORQUE MOTOR

# TML0360-050

PERFORMANCE		Winding codes	3VAN	3XBS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	707	707
Tc	Continuous torque	Nm	161	164
Ts	Stall torque	Nm	123	125
Kt	Torque constant	Nm/Arms	29.7	9.64
Ku	Back EMF constant (*)	Vrms/(rad/s)	17.1	5.57
Km	Motor constant	Nm/√W	9.51	9.68
R20	Electrical resistance at 20°C (*)	Ohm	6.48	0.660
L1	Electrical inductance (*)	mH	45.6	4.82
Ip	Peak current	Arms	37.9	117
Ic	Continuous current	Arms	5.53	17.3
Is	Stall current	Arms	4.19	13.1
Pc	Max. continuous power dissipation	W	413	413

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2820	2820
Rth	Thermal resistance	K/W	0.239	0.239
2p	Number of poles	-	66	66
J	Rotor inertia	kg.m <sup>2</sup>	0.109	0.109
Mr	Rotor mass	kg	5.50	5.50
Ms	Stator mass	kg	14.2	14.2
Td	Max. detent torque (average to peak)	Nm	4.4	4.4
ns	Stall speed	rpm	0.0065	0.0065

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 0.17 m<sup>2</sup> and rotor to a total surface of 0.110 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.

