

# TORQUE MOTOR

# TML0530-150

PERFORMANCE		Winding codes	3VDN	3VHN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	4990	4990
Tc	Continuous torque	Nm	1070	1070
Ts	Stall torque	Nm	818	818
Kt	Torque constant	Nm/Arms	60.4	30.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	35.0	17.5
Km	Motor constant	Nm/√W	35.1	35.1
R20	Electrical resistance at 20°C (*)	Ohm	1.98	0.494
L1	Electrical inductance (*)	mH	28.9	7.22
Ip	Peak current	Arms	159	318
Ic	Continuous current	Arms	18.0	36.0
Is	Stall current	Arms	13.6	27.3
Pc	Max. continuous power dissipation	W	1370	1370

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2980	2980
Rth	Thermal resistance	K/W	0.0801	0.0801
2p	Number of poles	-	88	88
J	Rotor inertia	kg.m <sup>2</sup>	1.38	1.38
Mr	Rotor mass	kg	28.8	28.8
Ms	Stator mass	kg	62.1	62.1
Td	Max. detent torque (average to peak)	Nm	43	43
ns	Stall speed	rpm	0.0046	0.0046

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 0.75 m<sup>2</sup> and rotor to a total surface of 0.450 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.

