

TORQUE MOTOR

TML0450-030

PERFORMANCE		Winding codes	3VBS	3VDS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	699	699
Tc	Continuous torque	Nm	172	172
Ts	Stall torque	Nm	132	132
Kt	Torque constant	Nm/Arms	15.5	7.76
Ku	Back EMF constant (*)	Vrms/(rad/s)	8.98	4.49
Km	Motor constant	Nm/√W	9.61	9.61
R20	Electrical resistance at 20°C (*)	Ohm	1.74	0.435
L1	Electrical inductance (*)	mH	11.5	2.87
Ip	Peak current	Arms	92.2	184
Ic	Continuous current	Arms	11.6	23.1
Is	Stall current	Arms	8.77	17.5
Pc	Max. continuous power dissipation	W	500	500

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2900	2900
Rth	Thermal resistance	K/W	0.220	0.220
2p	Number of poles	-	88	88
J	Rotor inertia	kg.m ²	0.162	0.162
Mr	Rotor mass	kg	4.89	4.89
Ms	Stator mass	kg	13.7	13.7
Td	Max. detent torque (average to peak)	Nm	4.5	4.5
ns	Stall speed	rpm	0.0047	0.0047

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 0.13 m² and rotor to a total surface of 0.110 m²

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.

