

TORQUE MOTOR

TML0450-150

PERFORMANCE		Winding codes	3VDN	3VHS
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	3490	3490
Tc	Continuous torque	Nm	748	748
Ts	Stall torque	Nm	571	571
Kt	Torque constant	Nm/Arms	38.8	19.4
Ku	Back EMF constant (*)	Vrms/(rad/s)	22.4	11.2
Km	Motor constant	Nm/√W	26.5	26.5
R20	Electrical resistance at 20°C (*)	Ohm	1.43	0.357
L1	Electrical inductance (*)	mH	14.3	3.58
Ip	Peak current	Arms	184	369
Ic	Continuous current	Arms	20.0	39.9
Is	Stall current	Arms	15.1	30.2
Pc	Max. continuous power dissipation	W	1220	1220

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2710	2710
Rth	Thermal resistance	K/W	0.0901	0.0901
2p	Number of poles	-	88	88
J	Rotor inertia	kg.m ²	0.810	0.810
Mr	Rotor mass	kg	24.5	24.5
Ms	Stator mass	kg	47.2	47.2
Td	Max. detent torque (average to peak)	Nm	23	23
ns	Stall speed	rpm	0.0050	0.0050

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 0.64 m² and rotor to a total surface of 0.370 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.

