

TORQUE MOTOR

TMM0450-150

PERFORMANCE		Winding codes	3VDN	3VHS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	3490	3490
Tc	Continuous torque	Nm	809	809
Ts	Stall torque	Nm	620	620
Kt	Torque constant	Nm/Arms	38.8	19.4
Ku	Back EMF constant (*)	Vrms/(rad/s)	22.4	11.2
Km	Motor constant	Nm/ \sqrt{W}	26.5	26.5
R20	Electrical resistance at 20°C (*)	Ohm	1.43	0.358
L1	Electrical inductance (*)	mH	14.3	3.58
Ip	Peak current	Arms	184	369
Ic	Continuous current	Arms	21.7	43.4
Is	Stall current	Arms	16.4	32.9
Pc	Max. continuous power dissipation	W	1440	1440

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τ_{th}	Thermal time constant	s	2300	2300
Rth	Thermal resistance	K/W	0.0762	0.0762
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	0.0059	0.0059

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.

