

TORQUE MOTOR

TMM0450-100

PERFORMANCE		Winding codes	3VBN	3VDN
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	2330	2330
Tc	Continuous torque	Nm	557	557
Ts	Stall torque	Nm	427	427
Kt	Torque constant	Nm/Arms	51.7	25.9
Ku	Back EMF constant (*)	Vrms/(rad/s)	29.9	15.0
Km	Motor constant	Nm/ \sqrt{W}	21.0	21.0
R20	Electrical resistance at 20°C (*)	Ohm	4.04	1.01
L1	Electrical inductance (*)	mH	38.2	9.55
Ip	Peak current	Arms	92.2	184
Ic	Continuous current	Arms	11.2	22.4
Is	Stall current	Arms	8.50	17.0
Pc	Max. continuous power dissipation	W	1090	1090

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τ_{th}	Thermal time constant	s	2310	2310
Rth	Thermal resistance	K/W	0.101	0.101
2p	Number of poles	-	88	88
J	Rotor inertia	kg.m ²	0.540	0.540
Mr	Rotor mass	kg	16.3	16.3
Ms	Stator mass	kg	33.2	33.2
Td	Max. detent torque (average to peak)	Nm	15	15
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 0.43 m² and rotor to a total surface of 0.260 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.

