

TORQUE MOTOR

TMM0530-100

PERFORMANCE		Winding codes	3VDN	3VHS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	3320	3320
Tc	Continuous torque	Nm	814	814
Ts	Stall torque	Nm	625	625
Kt	Torque constant	Nm/Arms	40.3	20.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	23.3	11.7
Km	Motor constant	Nm/ \sqrt{W}	28.0	28.0
R20	Electrical resistance at 20°C (*)	Ohm	1.38	0.345
L1	Electrical inductance (*)	mH	19.3	4.83
Ip	Peak current	Arms	159	318
Ic	Continuous current	Arms	20.7	41.3
Is	Stall current	Arms	15.6	31.3
Pc	Max. continuous power dissipation	W	1260	1260

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τ_{th}	Thermal time constant	s	2480	2480
Rth	Thermal resistance	K/W	0.0872	0.0872
2p	Number of poles	-	88	88
J	Rotor inertia	kg.m ²	0.921	0.921
Mr	Rotor mass	kg	19.2	19.2
Ms	Stator mass	kg	43.6	43.6
Td	Max. detent torque (average to peak)	Nm	28	28
ns	Stall speed	rpm	0.0055	0.0055

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 0.50 m² and rotor to a total surface of 0.320 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.

