

TORQUE MOTOR

TMM0291-070

PERFORMANCE		Winding codes	3UBN	3TDS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	582	582
Tc	Continuous torque	Nm	142	141
Ts	Stall torque	Nm	108	108
Kt	Torque constant	Nm/Arms	15.7	9.92
Ku	Back EMF constant (*)	Vrms/(rad/s)	9.09	5.74
Km	Motor constant	Nm/√W	7.64	7.62
R20	Electrical resistance at 20°C (*)	Ohm	2.82	1.13
L1	Electrical inductance (*)	mH	25.6	10.2
Ip	Peak current	Arms	58.0	91.9
Ic	Continuous current	Arms	9.43	14.9
Is	Stall current	Arms	7.14	11.3
Pc	Max. continuous power dissipation	W	539	539

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2100	2100
Rth	Thermal resistance	K/W	0.204	0.204
2p	Number of poles	-	44	44
J	Rotor inertia	kg.m ²	0.0553	0.0553
Mr	Rotor mass	kg	4.84	4.84
Ms	Stator mass	kg	14.5	14.5
Td	Max. detent torque (average to peak)	Nm	2.6	2.6
ns	Stall speed	rpm	0.013	0.013

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 0.19 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.

