Standard

TORQUE MOTOR TMM0291-100

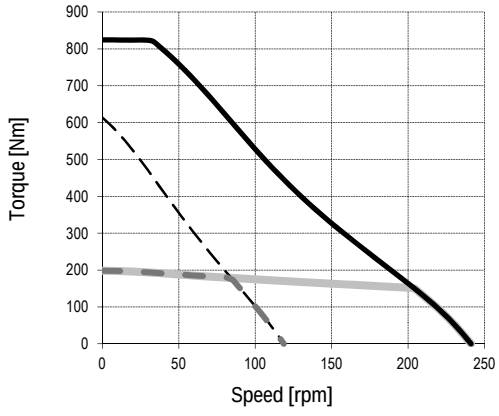
PERFORMANCE		Winding codes	3TBN	3TDS
		UNIT	FREE AIR CONVECTION (with glued stator)	FREE AIR CONVECTION (with glued stator)
Tp	Peak torque	Nm	831	831
Tc	Continuous torque	Nm	196	196
Ts	Stall torque	Nm	149	149
Kt	Torque constant	Nm/Arms	28.3	14.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	16.4	8.20
Km	Motor constant	Nm/√W	9.46	9.46
R20	Electrical resistance at 20°C (*)	Ohm	5.98	1.50
L1	Electrical inductance (*)	mH	58.2	14.6
Ip	Peak current	Arms	46.0	91.9
Ic	Continuous current	Arms	7.23	14.5
Is	Stall current	Arms	5.48	11.0
Pc	Max. continuous power dissipation	W	671	671

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	2080	2080
Rth	Thermal resistance	K/W	0.164	0.164
2p	Number of poles	-	44	44
J	Rotor inertia	$kg.m^2$	0.0791	0.0791
Mr	Rotor mass	kg	6.91	6.91
Ms	Stator mass	kg	19.4	19.4
Td	Max. detent torque (average to peak)	Nm	3.8	3.8
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 0.28 m² and rotor to a total surface of 0.140 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.

Force = f(speed) for 3TBN



Force = f(speed) for 3TDS