Standard

TORQUE MOTOR TML0530-050

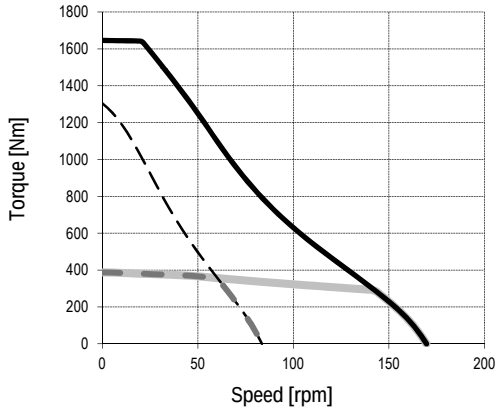
PERFORMANCE		Winding codes	3VBN	3VDN
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Tp	Peak torque	Nm	1660	1660
Tc	Continuous torque	Nm	382	382
Ts	Stall torque	Nm	293	293
Kt	Torque constant	Nm/Arms	40.3	20.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	23.3	11.7
Km	Motor constant	Nm/√W	17.8	17.8
R20	Electrical resistance at 20°C (*)	Ohm	3.40	0.850
L1	Electrical inductance (*)	mH	38.6	9.64
Ip	Peak current	Arms	79.6	159
Ic	Continuous current	Arms	9.66	19.3
Is	Stall current	Arms	7.32	14.6
Pc	Max. continuous power dissipation	W	681	681

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	3260	3260
Rth	Thermal resistance	K/W	0.161	0.161
2p	Number of poles	-	88	88
J	Rotor inertia	$kg.m^2$	0.461	0.461
Mr	Rotor mass	kg	9.59	9.59
Ms	Stator mass	kg	25.4	25.4
Td	Max. detent torque (average to peak)	Nm	14	14
ns	Stall speed	rpm	0.0042	0.0042

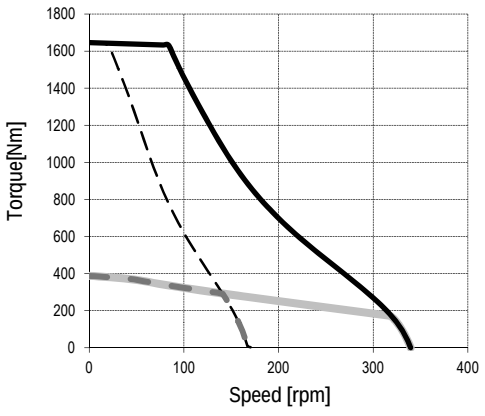
Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.25 m² and rotor to a total surface of 0.180 m²

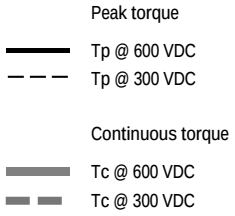
Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

Force = f(speed) for 3VBN



Force = f(speed) for 3VDN





ETEL S.A. Zone Industrielle, CH-2112 Môtiers, Switzerland
T +41 (0)32 862 01 00 • F +41 (0)32 862 01 01 • etel@etel.ch • www.etel.ch