ETEL

TMB Standard

CONVENTIONAL TORQUE MOTOR TMB+0760-200

		Winding codes	WF	WL		
MOTOR PERFORMANCE		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	15500	15500		
Ti	Intermittent torque	Nm	11900	11900		
Tc	Continuous torque	Nm	8840	8840		
Ts	Standstill torque	Nm	7140	7140		
Ip	Peak current	Arms	224	448		
Ii	Intermittent current	Arms	138	275		
Ic	Continuous current	Arms	87.0	174		
Is	Standstill current	Arms	65.9	132		
ns	Rated low speed	rpm	0.069	0.069		
nm	Maximum speed without flux weakening	rpm	55.6	111		
nm,FW	Maximum speed with flux weakening	rpm	135	211		
τon,p	Maximum ON time for peak cycle	s	7.8	7.8		
τon,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	102000	102000		
Pi	Power dissipation @ Ii	W	48200	48200		
Pc	Power dissipation @ Ic	W	19300	19300		
Td	Max. detent torque (average to peak)	Nm	41	41		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	125	62.3		
Ku	Back EMF constant (*)	Vrms/(rad/s)	71.4	35.7		
Km	Motor constant	Nm/√W	91.8	91.8		
R20	Electrical resistance at 20°C (*)	Ohm	1.23	0.306		
Ld/Lq	Electrical inductance (*)	mH	20.1 / 16.9	5.03 / 4.22		
Isc	Maximum short-circuit current	Arms	62.2	124		
nb	Base speed	rpm	40.0	96.1		
nb,i	Base speed at intermittent duty cycle	rpm	28.5	77.3		
nb,p	Base speed at peak duty cycle	rpm	16.8	49.8		
nn	Rated speed	rpm	34.5	87.6		
Tn	Rated torque	Nm	5970	3890		
In	Rated current	Arms	55.3	70.5		
τth	Thermal time constant	s	131	131		
Rth	Thermal resistance	K/W	0.00500	0.00500		
2p	Number of poles	-	132	132		
J	Rotor inertia	kg·m²	6.64	6.64		
mr	Rotor mass	kg	59.5	59.5		
ms	Stator mass	kg	211	211		

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Di	Intermittent duty cycle	%	40	40		
Dp	Peak duty cycle	%	5.0	5.0		
Sr	Rotor exchange surface	m²	0.880	0.880		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		
θw	Inlet water temperature	°C	20	20		
Δθw	Water temperature difference for Pc	K	5.0	5.0		
qw	Minimum water flow for Δθw	l/min	60	60		
Δpw	Max. pressure drop at qw	bar	6.2	6.2		

Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

Caution: Any use of the motor beyond speed/torque 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.

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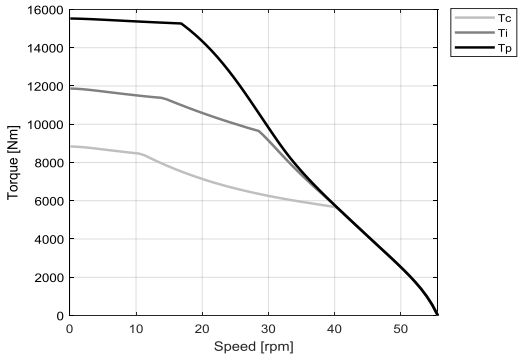
WF - WATER COOLING



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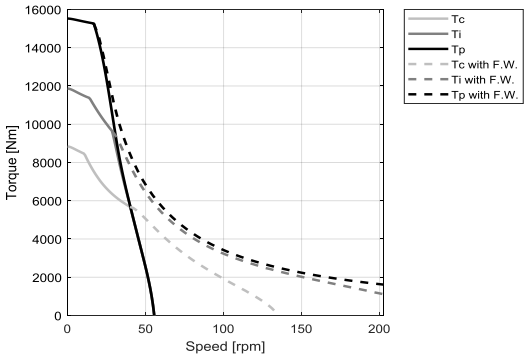

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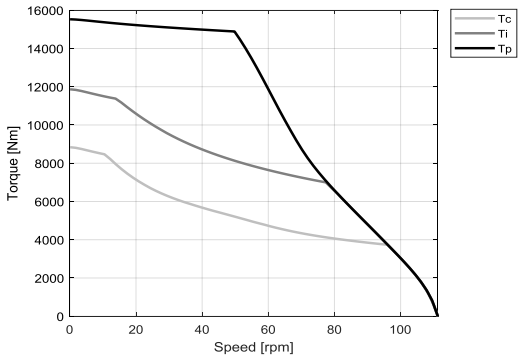

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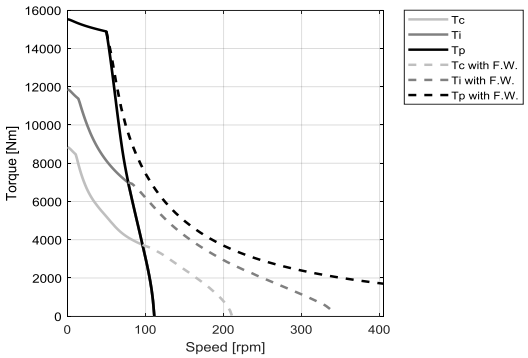

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