

MOTOR PERFORMANCE		Winding codes	TA	WA		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	56.2	51.9		
Ti	Intermittent torque	Nm	40.3	38.6		
Tc	Continuous torque	Nm	27.7	26.2		
Ts	Standstill torque	Nm	21.3	20.1		
Ip	Peak current	Arms	23.2	42.9		
Ii	Intermittent current	Arms	15.0	29.8		
Ic	Continuous current	Arms	9.52	18.9		
Is	Standstill current	Arms	7.21	14.3		
ns	Rated low speed	rpm	0.89	0.89		
nm	Maximum speed without flux weakening	rpm	2150	3120		
nm,FW	Maximum speed with flux weakening	rpm	3120	3120		
ton,p	Maximum ON time for peak cycle	s	8.5	10		
ton,i	Maximum ON time for intermittent cycle	s	2.6	2.6		
Pp	Power dissipation @ Ip	W	3340	2850		
Pi	Power dissipation @ Ii	W	1810	1790		
Pc	Power dissipation @ Ic	W	723	717		
Td	Max. detent torque (average to peak)	Nm	0.39	0.39		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	3.13	1.49		
Ku	Back EMF constant (*)	Vrms/(rad/s)	1.85	0.880		
Km	Motor constant	Nm/√W	1.32	1.25		
R20	Electrical resistance at 20°C (*)	Ohm	3.74	0.946		
Ld/Lq	Electrical inductance (*)	mH	22.3 / 22.5	5.05 / 5.13		
Isc	Maximum short-circuit current	Arms	12.0	25.1		
nb	Base speed	rpm	1720	N/A		
nb,i	Base speed at intermittent duty cycle	rpm	1320	N/A		
nb,p	Base speed at peak duty cycle	rpm	1090	2580		
nn	Rated speed	rpm	1500	2300		
Tn	Rated torque	Nm	24.4	17.7		
In	Rated current	Arms	8.62	13.2		
rth	Thermal time constant	s	84.2	84.1		
Rth	Thermal resistance	K/W	0.146	0.147		
2p	Number of poles	-	16	16		
J	Rotor inertia	kg·m²	0.00131	0.00131		
mr	Rotor mass	kg	0.867	0.867		
ms	Stator mass	kg	4.60	4.62		

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	0.017	0.017		
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	2.3	2.2		
Δpw	Max. pressure drop at qw	bar	0.1	0.1		

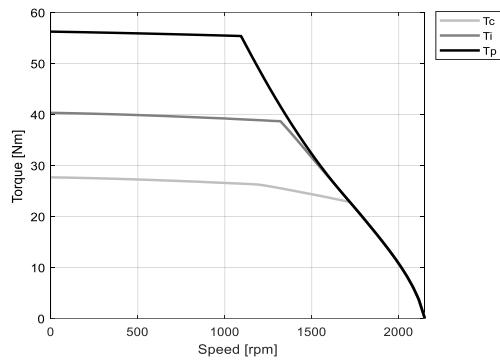
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

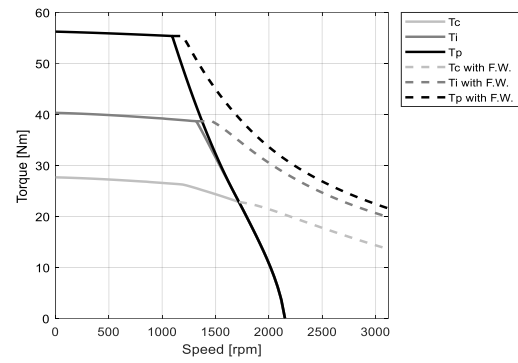
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

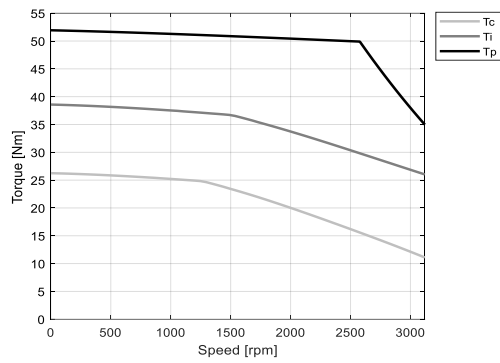
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