

MOTOR PERFORMANCE		Winding codes	UB	UC		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	1290	1290		
Ti	Intermittent torque	Nm	877	877		
Tc	Continuous torque	Nm	627	627		
Ts	Standstill torque	Nm	494	494		
Ip	Peak current	Arms	59.4	89.1		
Ii	Intermittent current	Arms	31.3	46.9		
Ic	Continuous current	Arms	19.8	29.7		
Is	Standstill current	Arms	15.0	22.5		
ns	Rated low speed	rpm	0.29	0.29		
nm	Maximum speed without flux weakening	rpm	192	288		
nm,FW	Maximum speed with flux weakening	rpm	700	901		
ton,p	Maximum ON time for peak cycle	s	5.5	5.5		
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	30500	30500		
Pi	Power dissipation @ Ii	W	10300	10300		
Pc	Power dissipation @ Ic	W	4120	4120		
Td	Max. detent torque (average to peak)	Nm	3.1	3.1		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	35.3	23.6		
Ku	Back EMF constant (*)	Vrms/(rad/s)	20.7	13.8		
Km	Motor constant	Nm/√W	12.9	12.9		
R20	Electrical resistance at 20°C (*)	Ohm	4.98	2.22		
Ld/Lq	Electrical inductance (*)	mH	77.1 / 71.7	34.3 / 31.9		
Isc	Maximum short-circuit current	Arms	20.7	31.0		
nb	Base speed	rpm	117	196		
nb,i	Base speed at intermittent duty cycle	rpm	86.5	156		
nb,p	Base speed at peak duty cycle	rpm	48.5	111		
nn	Rated speed	rpm	101	172		
Tn	Rated torque	Nm	615	605		
In	Rated current	Arms	19.7	29.3		
rth	Thermal time constant	s	136	136		
Rth	Thermal resistance	K/W	0.0247	0.0247		
2p	Number of poles	-	30	30		
J	Rotor inertia	kg·m²	0.114	0.114		
mr	Rotor mass	kg	11.9	11.9		
ms	Stator mass	kg	31.1	31.1		

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	0.147	0.147		
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	13	13		
Δpw	Max. pressure drop at qw	bar	0.9	0.9		

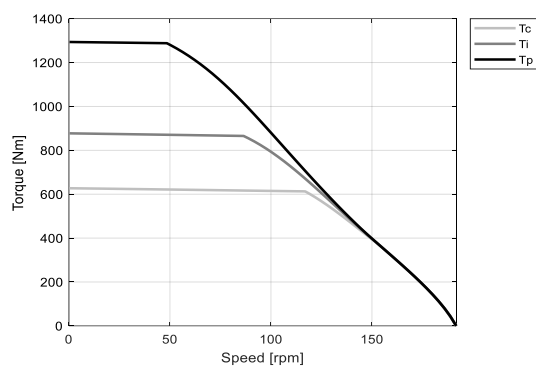
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

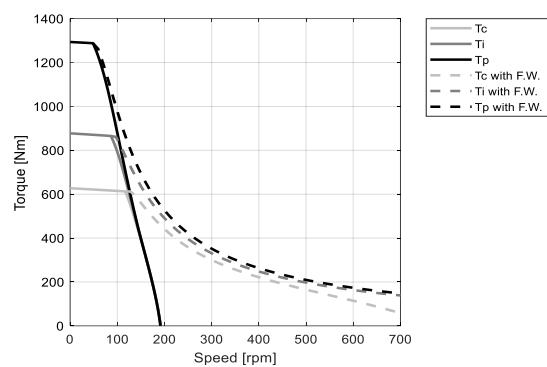
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

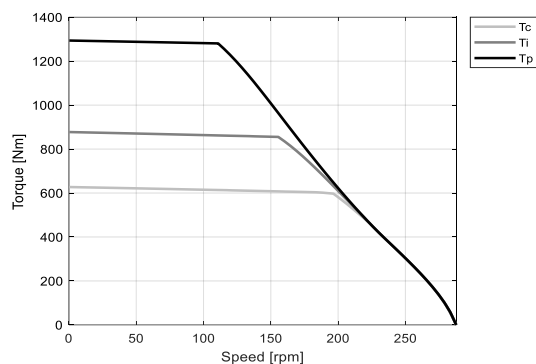
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