

MOTOR PERFORMANCE		Winding codes	XA	XB		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	401	401		
Ti	Intermittent torque	Nm	325	325		
Tc	Continuous torque	Nm	242	242		
Ts	Standstill torque	Nm	194	194		
Ip	Peak current	Arms	49.5	99.0		
Ii	Intermittent current	Arms	35.6	71.1		
Ic	Continuous current	Arms	22.5	45.0		
Is	Standstill current	Arms	17.0	34.1		
ns	Rated low speed	rpm	0.57	0.57		
nm	Maximum speed without flux weakening	rpm	552	1100		
nm,FW	Maximum speed with flux weakening	rpm	2030	4060		
ton,p	Maximum ON time for peak cycle	s	13	13		
ton,i	Maximum ON time for intermittent cycle	s	3.0	3.0		
Pp	Power dissipation @ Ip	W	12200	12200		
Pi	Power dissipation @ Ii	W	7990	7990		
Pc	Power dissipation @ Ic	W	3200	3200		
Td	Max. detent torque (average to peak)	Nm	3.0	3.0		

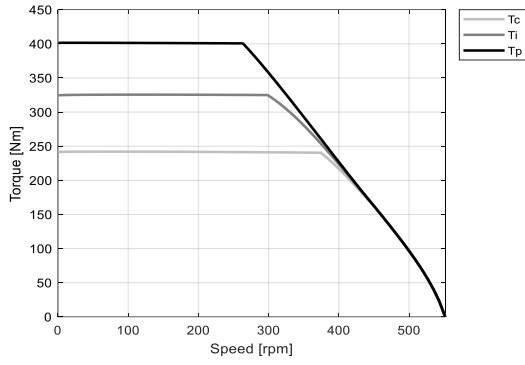
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	12.4	6.20		
Ku	Back EMF constant (*)	Vrms/(rad/s)	7.20	3.60		
Km	Motor constant	Nm/√W	5.76	5.76		
R20	Electrical resistance at 20°C (*)	Ohm	3.09	0.771		
Ld/Lq	Electrical inductance (*)	mH	33.0 / 28.3	8.24 / 7.07		
Isc	Maximum short-circuit current	Arms	22.9	45.9		
nb	Base speed	rpm	374	827		
nb,i	Base speed at intermittent duty cycle	rpm	299	689		
nb,p	Base speed at peak duty cycle	rpm	263	609		
nn	Rated speed	rpm	329	735		
Tn	Rated torque	Nm	241	236		
In	Rated current	Arms	22.4	44.2		
rth	Thermal time constant	s	95.2	95.2		
Rth	Thermal resistance	K/W	0.0284	0.0284		
2p	Number of poles	-	22	22		
J	Rotor inertia	kg·m²	0.0209	0.0209		
mr	Rotor mass	kg	10.9	10.9		
ms	Stator mass	kg	23.6	23.6		

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	0.046	0.046		
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	10	10		
Δpw	Max. pressure drop at qw	bar	0.6	0.6		

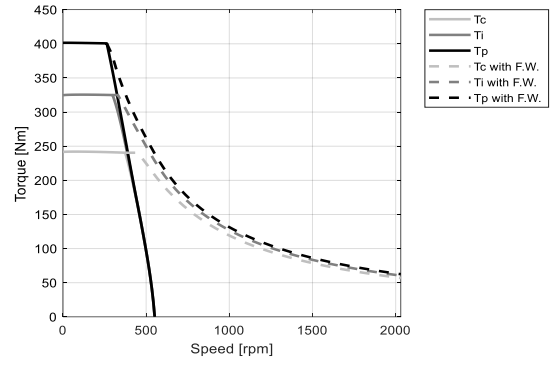
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

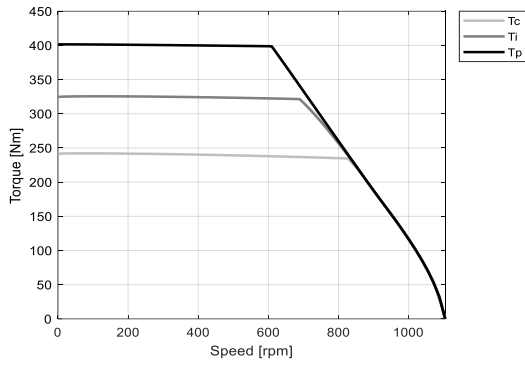
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