

MOTOR PERFORMANCE		Winding codes	XA	XB		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	263	263		
Ti	Intermittent torque	Nm	214	214		
Tc	Continuous torque	Nm	161	161		
Ts	Standstill torque	Nm	130	130		
Ip	Peak current	Arms	49.7	99.4		
Ii	Intermittent current	Arms	35.7	71.4		
Ic	Continuous current	Arms	22.6	45.2		
Is	Standstill current	Arms	17.1	34.2		
ns	Rated low speed	rpm	0.56	0.56		
nm	Maximum speed without flux weakening	rpm	828	1660		
nm,FW	Maximum speed with flux weakening	rpm	3050	4480		
ton,p	Maximum ON time for peak cycle	s	15	15		
ton,i	Maximum ON time for intermittent cycle	s	3.1	3.1		
Pp	Power dissipation @ Ip	W	8890	8890		
Pi	Power dissipation @ Ii	W	5890	5890		
Pc	Power dissipation @ Ic	W	2360	2360		
Td	Max. detent torque (average to peak)	Nm	2.0	2.0		

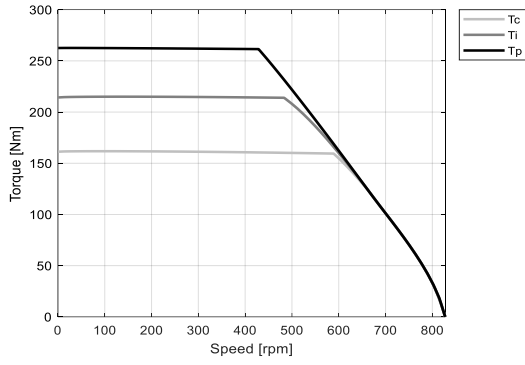
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	8.31	4.16		
Ku	Back EMF constant (*)	Vrms/(rad/s)	4.80	2.40		
Km	Motor constant	Nm/√W	4.56	4.56		
R20	Electrical resistance at 20°C (*)	Ohm	2.22	0.554		
Ld/Lq	Electrical inductance (*)	mH	22.2 / 19.1	5.55 / 4.78		
Isc	Maximum short-circuit current	Arms	22.7	45.4		
nb	Base speed	rpm	589	1280		
nb,i	Base speed at intermittent duty cycle	rpm	483	1070		
nb,p	Base speed at peak duty cycle	rpm	429	938		
nn	Rated speed	rpm	522	1140		
Tn	Rated torque	Nm	160	154		
In	Rated current	Arms	22.4	43.5		
rth	Thermal time constant	s	98.2	98.2		
Rth	Thermal resistance	K/W	0.0410	0.0410		
2p	Number of poles	-	22	22		
J	Rotor inertia	kg·m²	0.0144	0.0144		
mr	Rotor mass	kg	7.56	7.56		
ms	Stator mass	kg	16.7	16.7		

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	0.036	0.036		
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	7.4	7.4		
Δpw	Max. pressure drop at qw	bar	0.4	0.4		

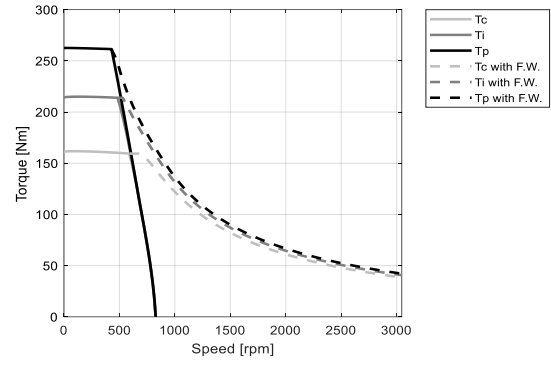
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

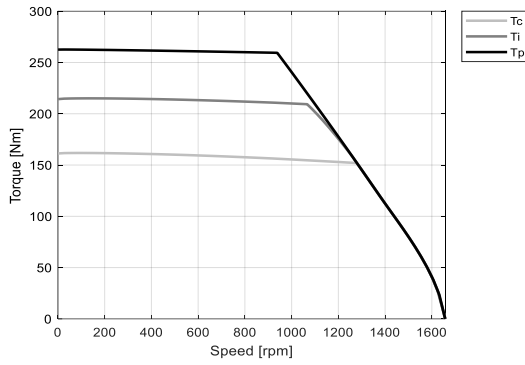
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