

MOTOR PERFORMANCE		Winding codes	UC			
		UNIT	WATER COOLING			
Tp	Peak torque	Nm	1950			
Ti	Intermittent torque	Nm	1320			
Tc	Continuous torque	Nm	945			
Ts	Standstill torque	Nm	745			
Ip	Peak current	Arms	88.8			
Ii	Intermittent current	Arms	46.9			
Ic	Continuous current	Arms	29.6			
Is	Standstill current	Arms	22.5			
ns	Rated low speed	rpm	0.29			
nm	Maximum speed without flux weakening	rpm	192			
nm,FW	Maximum speed with flux weakening	rpm	700			
ton,p	Maximum ON time for peak cycle	s	4.8			
ton,i	Maximum ON time for intermittent cycle	s	2.8			
Pp	Power dissipation @ Ip	W	42400			
Pi	Power dissipation @ Ii	W	14300			
Pc	Power dissipation @ Ic	W	5700			
Td	Max. detent torque (average to peak)	Nm	4.7			

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	35.6			
Ku	Back EMF constant (*)	Vrms/(rad/s)	20.7			
Km	Motor constant	Nm/√W	16.5			
R20	Electrical resistance at 20°C (*)	Ohm	3.11			
Ld/Lq	Electrical inductance (*)	mH	51.1 / 47.4			
Isc	Maximum short-circuit current	Arms	31.2			
nb	Base speed	rpm	120			
nb,i	Base speed at intermittent duty cycle	rpm	90.7			
nb,p	Base speed at peak duty cycle	rpm	54.6			
nn	Rated speed	rpm	105			
Tn	Rated torque	Nm	924			
In	Rated current	Arms	29.4			
rth	Thermal time constant	s	136			
Rth	Thermal resistance	K/W	0.0171			
2p	Number of poles	-	30			
J	Rotor inertia	kg·m²	0.171			
mr	Rotor mass	kg	17.8			
ms	Stator mass	kg	44.1			

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600			
Di	Intermittent duty cycle	%	40			
Dp	Peak duty cycle	%	5.0			
Sr	Rotor exchange surface	m²	0.214			
θamb	Ambient temperature	°C	20			
θmax	Maximum coil temperature	°C	130			
θw	Inlet water temperature	°C	20			
Δθw	Water temperature difference for Pc	K	5.0			
qw	Minimum water flow for Δθw	l/min	18			
Δpw	Max. pressure drop at qw	bar	1.7			

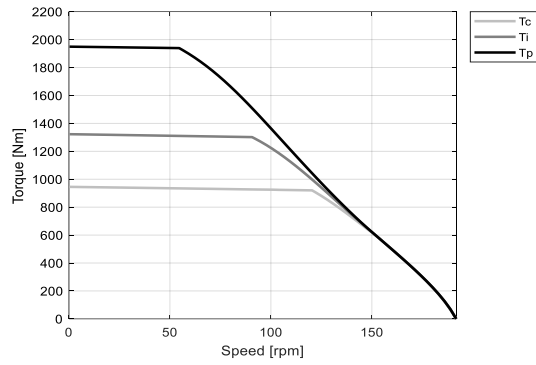
Notes: (*) terminal to terminal.

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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