

MOTOR PERFORMANCE		Winding codes	3UBS	3XBS		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	242	242		
Ti	Intermittent torque	Nm	215	214		
Tc	Continuous torque	Nm	167	166		
Ts	Standstill torque	Nm	138	137		
Ip	Peak current	Arms	50.2	96.0		
Ii	Intermittent current	Arms	44.1	83.7		
Ic	Continuous current	Arms	27.9	52.9		
Is	Standstill current	Arms	21.1	40.1		
ns	Rated low speed	rpm	0.61	0.60		
nm	Maximum speed without flux weakening	rpm	880	1680		
nm,FW	Maximum speed with flux weakening	rpm	3200	5450		
ton,p	Maximum ON time for peak cycle	s	28	27		
ton,i	Maximum ON time for intermittent cycle	s	6.7	6.7		
Pp	Power dissipation @ Ip	W	6880	7030		
Pi	Power dissipation @ Ii	W	7020	7070		
Pc	Power dissipation @ Ic	W	2810	2830		
Td	Max. detent torque (average to peak)	Nm	2.0	2.0		

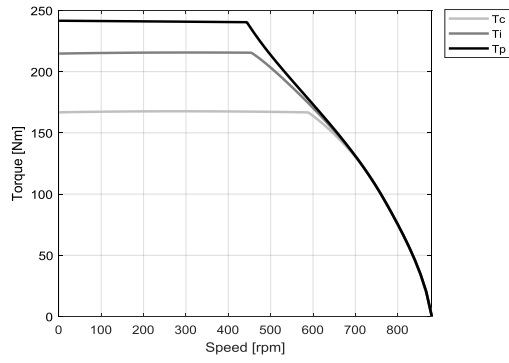
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	7.72	4.04		
Ku	Back EMF constant (*)	Vrms/(rad/s)	4.51	2.36		
Km	Motor constant	Nm/√W	4.80	4.76		
R20	Electrical resistance at 20°C (*)	Ohm	1.72	0.480		
Ld/Lq	Electrical inductance (*)	mH	21.5 / 16.3	5.89 / 4.45		
Isc	Maximum short-circuit current	Arms	22.0	42.1		
nb	Base speed	rpm	589	1230		
nb,i	Base speed at intermittent duty cycle	rpm	455	950		
nb,p	Base speed at peak duty cycle	rpm	444	901		
nn	Rated speed	rpm	522	1090		
Tn	Rated torque	Nm	167	161		
In	Rated current	Arms	28.2	51.3		
rth	Thermal time constant	s	89.8	90.4		
Rth	Thermal resistance	K/W	0.0357	0.0354		
2p	Number of poles	-	22	22		
J	Rotor inertia	kg·m²	0.0146	0.0146		
mr	Rotor mass	kg	7.63	7.63		
ms	Stator mass	kg	16.5	16.6		

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	0.036	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	8.1	8.1		
Δpw	Max. pressure drop at qw	bar	0.3	0.3		

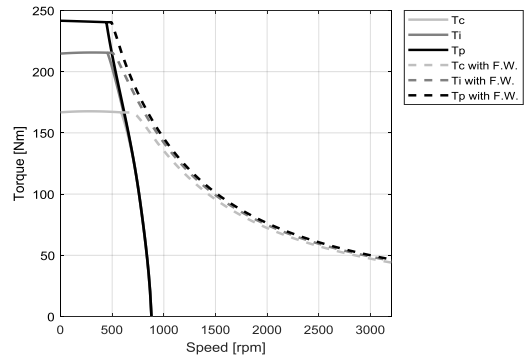
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

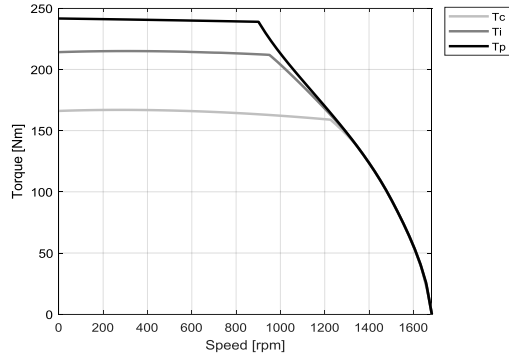
3UBS - WATER COOLING



3UBS - WATER COOLING



3XBS - WATER COOLING



3XBS - WATER COOLING

