

MOTOR PERFORMANCE		Winding codes	3UAS	3UBS		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	121	121		
Ti	Intermittent torque	Nm	105	105		
Tc	Continuous torque	Nm	80.5	80.5		
Ts	Standstill torque	Nm	66.0	66.0		
Ip	Peak current	Arms	25.1	50.2		
Ii	Intermittent current	Arms	20.9	41.7		
Ic	Continuous current	Arms	13.2	26.4		
Is	Standstill current	Arms	10.0	20.0		
ns	Rated low speed	rpm	0.49	0.49		
nm	Maximum speed without flux weakening	rpm	880	1760		
nm,FW	Maximum speed with flux weakening	rpm	3200	5450		
ton,p	Maximum ON time for peak cycle	s	29	29		
ton,i	Maximum ON time for intermittent cycle	s	3.1	3.1		
Pp	Power dissipation @ Ip	W	4440	4440		
Pi	Power dissipation @ Ii	W	4110	4110		
Pc	Power dissipation @ Ic	W	1640	1640		
Td	Max. detent torque (average to peak)	Nm	1.0	1.0		

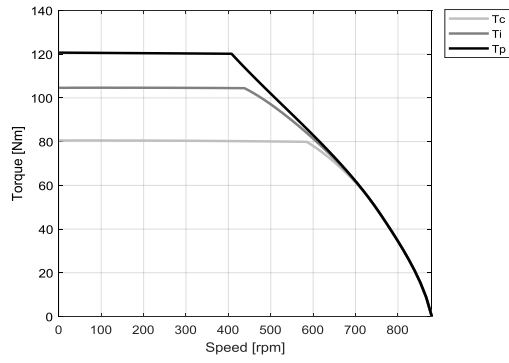
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	7.72	3.86		
Ku	Back EMF constant (*)	Vrms/(rad/s)	4.51	2.26		
Km	Motor constant	Nm/√W	3.00	3.00		
R20	Electrical resistance at 20°C (*)	Ohm	4.40	1.10		
Ld/Lq	Electrical inductance (*)	mH	45.9 / 33.4	11.5 / 8.34		
Isc	Maximum short-circuit current	Arms	10.3	20.6		
nb	Base speed	rpm	585	1280		
nb,i	Base speed at intermittent duty cycle	rpm	438	982		
nb,p	Base speed at peak duty cycle	rpm	407	890		
nn	Rated speed	rpm	517	1140		
Tn	Rated torque	Nm	80.1	78.1		
In	Rated current	Arms	13.1	25.5		
rth	Thermal time constant	s	111	111		
Rth	Thermal resistance	K/W	0.0653	0.0653		
2p	Number of poles	-	22	22		
J	Rotor inertia	kg·m²	0.00805	0.00805		
mr	Rotor mass	kg	4.28	4.28		
ms	Stator mass	kg	10.4	10.4		

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	0.026	0.026		
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	4.7	4.7		
Δpw	Max. pressure drop at qw	bar	0.1	0.1		

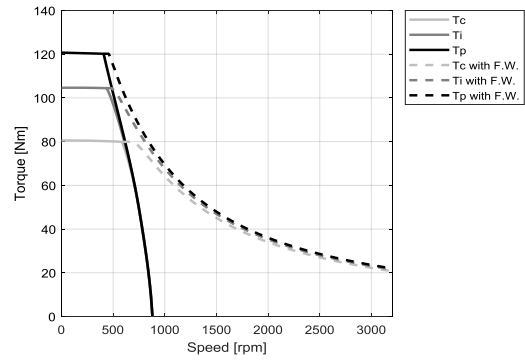
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

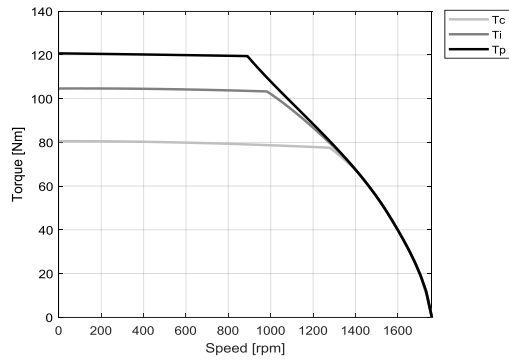
3UAS - WATER COOLING



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3UBS - WATER COOLING



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