

MOTOR PERFORMANCE		Winding codes	TB	UB		
		UNIT	WATER COOLING	WATER COOLING		
<b>Tp</b>	Peak torque	Nm	2090	2090		
<b>Ti</b>	Intermittent torque	Nm	1560	1510		
<b>Tc</b>	Continuous torque	Nm	1070	1020		
<b>Ts</b>	Standstill torque	Nm	817	781		
<b>Ip</b>	Peak current	Arms	55.1	74.8		
<b>Ii</b>	Intermittent current	Arms	38.1	49.5		
<b>Ic</b>	Continuous current	Arms	24.1	31.3		
<b>Is</b>	Standstill current	Arms	18.3	23.7		
<b>ns</b>	Rated low speed	rpm	0.46	0.47		
<b>nm</b>	Maximum speed without flux weakening	rpm	145	197		
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	281	353		
<b>ton,p</b>	Maximum ON time for peak cycle	s	3.5	2.9		
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.7	2.7		
<b>Pp</b>	Power dissipation @ Ip	W	33200	36000		
<b>Pi</b>	Power dissipation @ Ii	W	19700	19300		
<b>Pc</b>	Power dissipation @ Ic	W	7880	7710		
<b>Td</b>	Max. detent torque (average to peak)	Nm	5.2	5.2		

MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	47.7	35.1		
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	27.3	20.1		
<b>Km</b>	Motor constant	Nm/√W	15.0	14.4		
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	6.78	3.95		
<b>Ld/Lq</b>	Electrical inductance (*)	mH	28.3 / 26.3	15.3 / 14.4		
<b>Isc</b>	Maximum short-circuit current	Arms	33.8	46.0		
<b>nb</b>	Base speed	rpm	83.9	148		
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	41.5	87.4		
<b>nb,p</b>	Base speed at peak duty cycle	rpm	24.3	61.5		
<b>nn</b>	Rated speed	rpm	64.7	125		
<b>Tn</b>	Rated torque	Nm	1020	801		
<b>In</b>	Rated current	Arms	23.9	25.4		
<b>rth</b>	Thermal time constant	s	39.4	38.6		
<b>Rth</b>	Thermal resistance	K/W	0.0105	0.0105		
<b>2p</b>	Number of poles	-	66	66		
<b>J</b>	Rotor inertia	kg·m²	0.252	0.252		
<b>mr</b>	Rotor mass	kg	18.0	18.0		
<b>ms</b>	Stator mass	kg	37.0	36.8		

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600		
<b>Di</b>	Intermittent duty cycle	%	40	40		
<b>Dp</b>	Peak duty cycle	%	5.0	5.0		
<b>Sr</b>	Rotor exchange surface	m²	0.275	0.275		
<b>θamb</b>	Ambient temperature	°C	20	20		
<b>θmax</b>	Maximum coil temperature	°C	130	130		
<b>θw</b>	Inlet water temperature	°C	20	20		
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0		
<b>qw</b>	Minimum water flow for Δθw	l/min	25	24		
<b>Δpw</b>	Max. pressure drop at qw	bar	3.7	3.6		

**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.

