

MOTOR PERFORMANCE		Winding codes	3SLN	3ULN	3UXN	
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	
Tp	Peak torque	Nm	11800	11800	11800	
Ti	Intermittent torque	Nm	8880	8840	8790	
Tc	Continuous torque	Nm	6750	6710	6650	
Ts	Standstill torque	Nm	5470	5430	5380	
Ip	Peak current	Arms	243	392	796	
Ii	Intermittent current	Arms	131	209	420	
Ic	Continuous current	Arms	82.8	132	265	
Is	Standstill current	Arms	62.7	100	201	
ns	Rated low speed	rpm	0.051	0.051	0.051	
nm	Maximum speed without flux weakening	rpm	71.8	116	235	
nm,FW	Maximum speed with flux weakening	rpm	261	421	855	
ton,p	Maximum ON time for peak cycle	s	9.4	9.1	8.6	
ton,i	Maximum ON time for intermittent cycle	s	3.0	3.0	3.0	
Pp	Power dissipation @ Ip	W	117000	119000	122000	
Pi	Power dissipation @ Ii	W	41700	41600	41600	
Pc	Power dissipation @ Ic	W	16700	16600	16600	
Td	Max. detent torque (average to peak)	Nm	32	32	32	

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	95.8	59.4	29.3	
Ku	Back EMF constant (*)	Vrms/(rad/s)	55.3	34.3	16.9	
Km	Motor constant	Nm/√W	73.5	72.9	72.0	
R20	Electrical resistance at 20°C (*)	Ohm	1.13	0.443	0.110	
Ld/Lq	Electrical inductance (*)	mH	16.0 / 13.2	6.17 / 5.11	1.50 / 1.24	
Isc	Maximum short-circuit current	Arms	60.4	97.3	198	
nb	Base speed	rpm	39.3	70.2	156	
nb,i	Base speed at intermittent duty cycle	rpm	28.1	53.7	122	
nb,p	Base speed at peak duty cycle	rpm	17.1	38.7	92.0	
nn	Rated speed	rpm	34.2	62.1	139	
Tn	Rated torque	Nm	6730	6660	6460	
In	Rated current	Arms	82.4	131	255	
rth	Thermal time constant	s	179	180	179	
Rth	Thermal resistance	K/W	0.00630	0.00632	0.00632	
2p	Number of poles	-	132	132	132	
J	Rotor inertia	kg·m²	14.0	14.0	14.0	
mr	Rotor mass	kg	140	140	140	
ms	Stator mass	kg	200	200	200	

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600	600	
Di	Intermittent duty cycle	%	40	40	40	
Dp	Peak duty cycle	%	5.0	5.0	5.0	
Sr	Rotor exchange surface	m²	0.720	0.720	0.720	
θamb	Ambient temperature	°C	20	20	20	
θmax	Maximum coil temperature	°C	130	130	130	
θw	Inlet water temperature	°C	20	20	20	
Δθw	Water temperature difference for Pc	K	10	10	10	
qw	Minimum water flow for Δθw	l/min	24	24	24	
Δpw	Max. pressure drop at qw	bar	1.0	1.0	1.0	

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.

