

MOTOR PERFORMANCE		Winding codes	3VDS	3VHS		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	1320	1320		
Ti	Intermittent torque	Nm	1080	1080		
Tc	Continuous torque	Nm	831	834		
Ts	Standstill torque	Nm	682	685		
Ip	Peak current	Arms	151	302		
Ii	Intermittent current	Arms	107	215		
Ic	Continuous current	Arms	67.4	136		
Is	Standstill current	Arms	51.1	103		
ns	Rated low speed	rpm	0.28	0.28		
nm	Maximum speed without flux weakening	rpm	442	883		
nm,FW	Maximum speed with flux weakening	rpm	1610	2730		
ton,p	Maximum ON time for peak cycle	s	15	15		
ton,i	Maximum ON time for intermittent cycle	s	5.0	5.0		
Pp	Power dissipation @ Ip	W	28700	28300		
Pi	Power dissipation @ Ii	W	18500	18500		
Pc	Power dissipation @ Ic	W	7410	7410		
Td	Max. detent torque (average to peak)	Nm	6.0	6.0		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	15.5	7.76		
Ku	Back EMF constant (*)	Vrms/(rad/s)	9.00	4.50		
Km	Motor constant	Nm/√W	14.4	14.5		
R20	Electrical resistance at 20°C (*)	Ohm	0.770	0.190		
Ld/Lq	Electrical inductance (*)	mH	8.91 / 6.89	2.23 / 1.72		
Isc	Maximum short-circuit current	Arms	53.0	106		
nb	Base speed	rpm	294	634		
nb,i	Base speed at intermittent duty cycle	rpm	230	507		
nb,p	Base speed at peak duty cycle	rpm	200	439		
nn	Rated speed	rpm	260	564		
Tn	Rated torque	Nm	832	816		
In	Rated current	Arms	67.8	132		
rth	Thermal time constant	s	98.1	98.1		
Rth	Thermal resistance	K/W	0.0138	0.0138		
2p	Number of poles	-	44	44		
J	Rotor inertia	kg·m²	0.266	0.266		
mr	Rotor mass	kg	30.2	30.2		
ms	Stator mass	kg	40.5	40.5		

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	0.117	0.117		
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	21	21		
Δpw	Max. pressure drop at qw	bar	1.7	1.7		

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.

