

MOTOR PERFORMANCE		Winding codes	UD	WE	WJ	WT
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	14000	14900	14900	14900
<b>Ti</b>	Intermittent torque	Nm	10300	10500	10500	10500
<b>Tc</b>	Continuous torque	Nm	7580	7730	7730	7730
<b>Ts</b>	Standstill torque	Nm	6080	6220	6220	6220
<b>Ip</b>	Peak current	Arms	103	216	432	865
<b>Ii</b>	Intermittent current	Arms	57.7	108	216	431
<b>Ic</b>	Continuous current	Arms	36.5	68.2	136	273
<b>Is</b>	Standstill current	Arms	27.7	51.6	103	207
<b>ns</b>	Rated low speed	rpm	0.031	0.031	0.031	0.031
<b>nm</b>	Maximum speed without flux weakening	rpm	27.6	50.1	100	201
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	101	147	213	270
<b>ton,p</b>	Maximum ON time for peak cycle	s	9.2	6.2	6.2	6.2
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
<b>Pp</b>	Power dissipation @ Ip	W	73800	98100	98100	98100
<b>Pi</b>	Power dissipation @ Ii	W	29200	29300	29300	29300
<b>Pc</b>	Power dissipation @ Ic	W	11700	11700	11700	11700
<b>Td</b>	Max. detent torque (average to peak)	Nm	38	38	38	38

MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	250	138	68.8	34.4
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	144	79.2	39.6	19.8
<b>Km</b>	Motor constant	Nm/√W	101	103	103	103
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	4.11	1.18	0.296	0.0740
<b>Ld/Lq</b>	Electrical inductance (*)	mH	59.3 / 51.4	18.0 / 15.5	4.51 / 3.86	1.13 / 0.966
<b>Isc</b>	Maximum short-circuit current	Arms	25.4	46.1	92.2	184
<b>nb</b>	Base speed	rpm	12.4	33.1	82.8	195
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	7.33	23.6	62.2	152
<b>nb,p</b>	Base speed at peak duty cycle	rpm	0.00	14.1	40.5	89.4
<b>nn</b>	Rated speed	rpm	10.4	28.4	74.0	130
<b>Tn</b>	Rated torque	Nm	7250	5940	3920	2740
<b>In</b>	Rated current	Arms	36.1	51.6	65.3	93.9
<b>rth</b>	Thermal time constant	s	174	178	178	178
<b>Rth</b>	Thermal resistance	K/W	0.00901	0.00898	0.00898	0.00898
<b>2p</b>	Number of poles	-	220	220	220	220
<b>J</b>	Rotor inertia	kg·m²	23.4	23.4	23.4	23.4
<b>mr</b>	Rotor mass	kg	76.2	76.2	76.2	76.2
<b>ms</b>	Stator mass	kg	242	243	243	243

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600	600	600
<b>Di</b>	Intermittent duty cycle	%	40	40	40	40
<b>Dp</b>	Peak duty cycle	%	5.0	5.0	5.0	5.0
<b>Sr</b>	Rotor exchange surface	m²	0.740	0.740	0.740	0.740
<b>θamb</b>	Ambient temperature	°C	20	20	20	20
<b>θmax</b>	Maximum coil temperature	°C	130	130	130	130
<b>θw</b>	Inlet water temperature	°C	20	20	20	20
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0	5.0	5.0
<b>qw</b>	Minimum water flow for Δθw	l/min	36	37	37	37
<b>Δpw</b>	Max. pressure drop at qw	bar	1.9	1.9	1.9	1.9

**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.

