

MOTOR PERFORMANCE		Winding codes	3SLN	3ULN	3UXN	
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	
Tp	Peak torque	Nm	3950	3950	3940	
Ti	Intermittent torque	Nm	2930	2930	2910	
Tc	Continuous torque	Nm	2220	2210	2190	
Ts	Standstill torque	Nm	1790	1790	1770	
Ip	Peak current	Arms	243	392	796	
Ii	Intermittent current	Arms	128	205	411	
Ic	Continuous current	Arms	80.8	130	260	
Is	Standstill current	Arms	61.2	98.3	197	
ns	Rated low speed	rpm	0.042	0.042	0.042	
nm	Maximum speed without flux weakening	rpm	215	347	704	
nm,FW	Maximum speed with flux weakening	rpm	784	909	909	
ton,p	Maximum ON time for peak cycle	s	15	14	14	
ton,i	Maximum ON time for intermittent cycle	s	3.1	3.1	3.1	
Pp	Power dissipation @ Ip	W	50200	50600	52300	
Pi	Power dissipation @ Ii	W	17000	17000	17000	
Pc	Power dissipation @ Ic	W	6810	6810	6810	
Td	Max. detent torque (average to peak)	Nm	11	11	11	

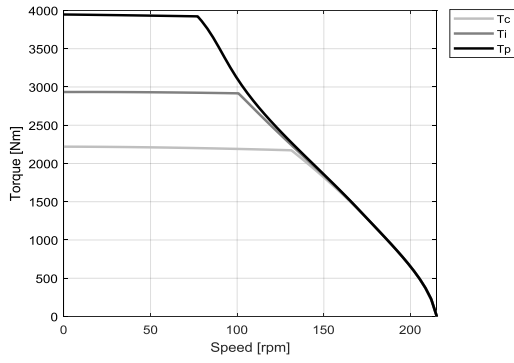
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	31.9	19.8	9.75	
Ku	Back EMF constant (*)	Vrms/(rad/s)	18.4	11.4	5.64	
Km	Motor constant	Nm/√W	37.4	37.3	36.7	
R20	Electrical resistance at 20°C (*)	Ohm	0.486	0.188	0.0470	
Ld/Lq	Electrical inductance (*)	mH	5.82 / 4.83	2.24 / 1.86	0.543 / 0.452	
Isc	Maximum short-circuit current	Arms	55.4	89.4	181	
nb	Base speed	rpm	131	224	531	
nb,i	Base speed at intermittent duty cycle	rpm	101	171	373	
nb,p	Base speed at peak duty cycle	rpm	77.2	133	281	
nn	Rated speed	rpm	117	199	460	
Tn	Rated torque	Nm	2180	2110	1760	
In	Rated current	Arms	79.0	123	203	
rth	Thermal time constant	s	216	216	216	
Rth	Thermal resistance	K/W	0.0158	0.0158	0.0158	
2p	Number of poles	-	132	132	132	
J	Rotor inertia	kg·m²	5.81	5.81	5.81	
mr	Rotor mass	kg	58.5	58.5	58.5	
ms	Stator mass	kg	100	100	100	

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	0.328	0.328	0.328	
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	5.0	5.0	5.0	
qw	Minimum water flow for Δθw	l/min	20	20	20	
Δpw	Max. pressure drop at qw	bar	0.7	0.7	0.7	

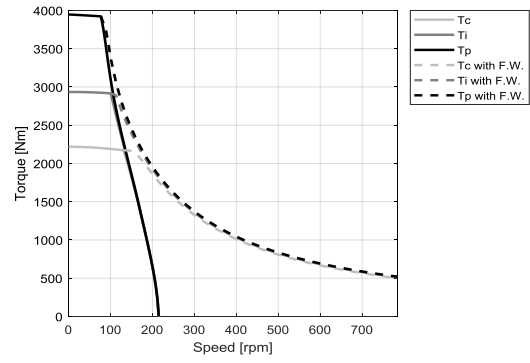
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

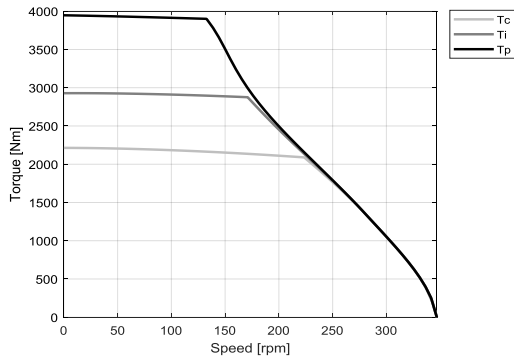
3SLN - WATER COOLING



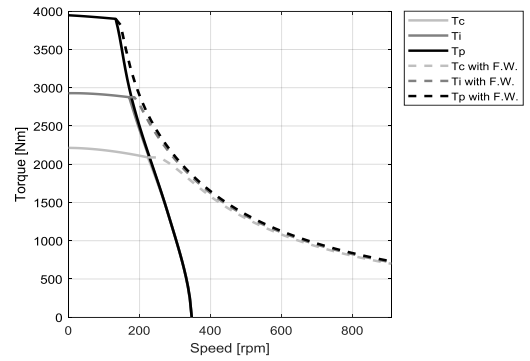
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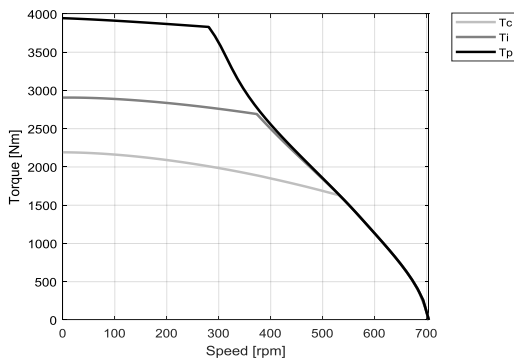
3JLN - WATER COOLING



3JLN - WATER COOLING



3UXN - WATER COOLING



3UXN - WATER COOLING

