IRONCORE LINEAR MOTOR

LMS05-070

		Winding codes	3QA	3TA		
MOTOR PERFORMANCE		UNIT	FREE AIR COOLING	FREE AIR COOLING		
Fp	Peak force	N	692	692		
Fc	Continuous force	N	178	184		
Fs	Standstill force	N	135	139		
Ip	Peak current	Arms	16.3	30.6		
Ic	Continuous current	Arms	1.92	3.73		
Is	Standstill current	Arms	1.46	2.83		
vs	Rated low speed	mm/s	0.15	0.14		
Pc	Power dissipation @ Ic	W	75.6	75.9		
Fd	Max. detent force (average to peak)	N	17	17		
Fa	Attraction force	N	1300	1300		
MOTOR SETTING		UNIT				
Kt	Force constant	N/Arms	97.7	52.0		
Ku	Back EMF constant (*)	Vrms/(m/s)	58.9	31.4		
Km	Motor constant	N/√W	25.8	26.6		
R20	Electrical resistance at 20°C (*)	Ohm	9.53	2.54		
L	Electrical inductance (*)	mH	96.2	27.1		
τth	Thermal time constant	s	2190	2210		
Rth	Thermal resistance	K/W	1.44	1.44		
2τp	Magnetic period	mm	32	32		
mw	Magnetic way mass	kg/m	7.96	7.96		
mm	Motor mass	kg	1.56	1.59		
MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Gm	Mechanical gap	mm	0.90	0.90		
Ss	Stator exchange surface	m²	0.02	0.02		
x	Assumed stroke	m	0.29	0.29		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		

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

Caution: Any use of the motor beyond speed/force 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.

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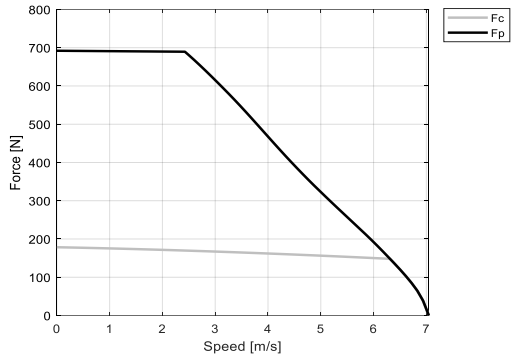
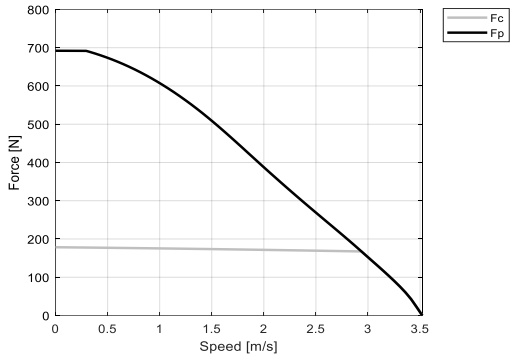
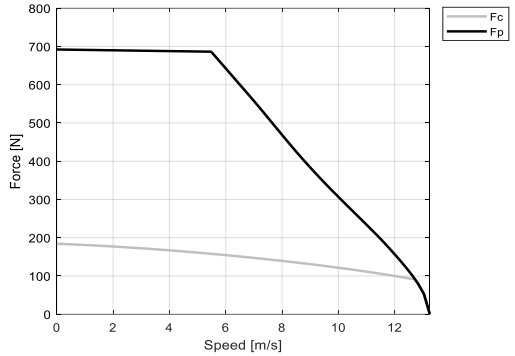
3QA - FREE AIR COOLING - 600V



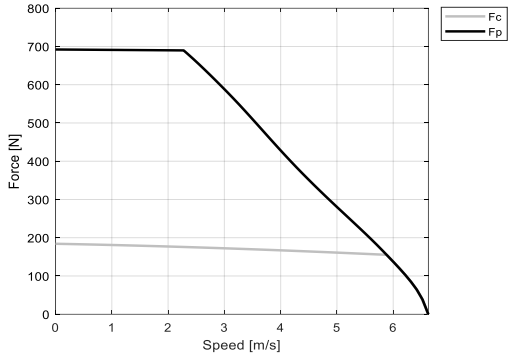
3QA - FREE AIR COOLING - 300V



3TA - FREE AIR COOLING - 600V



3TA - FREE AIR COOLING - 300V



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