

IRONCORE LINEAR MOTOR

LMA22-070

PERFORMANCE		Winding codes	3TA	3TB
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Fp	Peak force	N	2560	2560
Fc	Continuous force	N	705	705
Fs	Stall force	N	535	535
Kt	Force constant	N/Arms	210	105
Ku	Back EMF constant (*)	Vrms/(m/s)	122	60.8
Km	Motor constant	N/√W	57.2	57.2
R20	Electrical resistance at 20°C (*)	Ohm	9.01	2.25
L1	Electrical inductance (*)	mH	113	28.2
Ip	Peak current	Arms	20.2	40.5
Ic	Continuous current	Arms	3.49	6.97
Is	Stall current	Arms	2.64	5.28
Pc	Max. continuous power dissipation	W	235	235

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τ_{th}	Thermal time constant	s	1870	1870
Rth	Thermal resistance	K/W	0.468	0.468
2 τ_p	Magnetic period	mm	32	32
Mw	Magnetic way mass	kg/m	8.12	8.12
Mm	Motor mass (magnetic way excluded)	kg	8.58	8.58
Fa	Attraction force	N	5500	5500
Fd	Max. detent force (average to peak)	N	19	19
vs	Stall speed	mm/s	0.17	0.17
Gm	Mechanical gap	mm	0.80	0.80

Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
 Hypothesis and tolerances are in ETEL's Handbook. Carriage's dissipation area is 0.13 m² and minimal stroke is 2 times the motor length.
 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.

