

IRONCORE LINEAR MOTOR

LMA11-050

		Winding codes	3TA	3WA
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Fp	Peak force	N	945	945
Fc	Continuous force	N	277	277
Fs	Stall force	N	210	210
Kt	Force constant	N/Arms	75.7	38.7
Ku	Back EMF constant (*)	Vrms/(m/s)	43.8	22.4
Km	Motor constant	N/√W	32.9	33.0
R20	Electrical resistance at 20°C (*)	Ohm	3.53	0.920
L1	Electrical inductance (*)	mH	36.5	9.53
Ip	Peak current	Arms	20.5	40.0
Ic	Continuous current	Arms	3.79	7.42
Is	Stall current	Arms	2.87	5.63
Pc	Max. continuous power dissipation	W	109	109

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	1540	1540
Rth	Thermal resistance	K/W	1.01	1.01
2τp	Magnetic period	mm	32	32
Mw	Magnetic way mass	kg/m	6.34	6.34
Mm	Motor mass (magnetic way excluded)	kg	3.32	3.32
Fa	Attraction force	N	2000	2000
Fd	Max. detent force (average to peak)	N	10	10
vs	Stall speed	mm/s	0.21	0.21
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 0.07 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.

