

# IRONCORE LINEAR MOTOR

## LMA11-030

		Winding codes	3TA	3WA
PERFORMANCE		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Fp	Peak force	N	567	567
Fc	Continuous force	N	175	174
Fs	Stall force	N	133	132
Kt	Force constant	N/Arms	45.4	23.2
Ku	Back EMF constant (*)	Vrms/(m/s)	26.3	13.4
Km	Motor constant	N/√W	23.2	23.0
R20	Electrical resistance at 20°C (*)	Ohm	2.56	0.680
L1	Electrical inductance (*)	mH	21.8	5.71
Ip	Peak current	Arms	20.5	40.0
Ic	Continuous current	Arms	3.98	7.72
Is	Stall current	Arms	3.02	5.85
Pc	Max. continuous power dissipation	W	87.1	87.1

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	1230	1230
Rth	Thermal resistance	K/W	1.26	1.26
2τp	Magnetic period	mm	32	32
Mw	Magnetic way mass	kg/m	3.61	3.61
Mm	Motor mass (magnetic way excluded)	kg	2.16	2.17
Fa	Attraction force	N	1200	1200
Fd	Max. detent force (average to peak)	N	6.2	6.2
vs	Stall speed	mm/s	0.26	0.26
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 0.06 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.

