IRONCORE LINEAR MOTOR

LMA11-100

	Winding codes	3TA	3WA
PERFORMANCE	UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Fp Peak force	N	1890	1890
Fc Continuous force	N	504	503
Fs Stall force	N	382	381
Kt Force constant	N/Arms	152	77.4
Ku Back EMF constant (*)	Vrms/(m/s)	87.5	44.7
Km Motor constant	N/√W	50.7	50.6
R20 Electrical resistance at 20°C (*)	Ohm	5.96	1.56
L1 Electrical inductance (*)	mH	73.2	19.1
Ip Peak current	Arms	20.5	40.0
Ic Continuous current	Arms	3.47	6.78
Is Stall current	Arms	2.63	5.13
Pc Max. continuous power dissipation	W	154	154

SPECIFICATIONS	UNIT		
Udc Nominal input voltage	VDC	600	600
τth Thermal time constant	s	2090	2090
Rth Thermal resistance	K/W	0.714	0.714
2τp Magnetic period	mm	32	32
Mw Magnetic way mass	kg/m	12.8	12.8
Mm Motor mass (magnetic way excluded)	kg	6.24	6.24
Fa Attraction force	N	4100	4100
Fd Max. detent force (average to peak)	N	21	21
vs Stall speed	mm/s	0.15	0.15
Gm Mechanical gap	mm	0.80	0.80

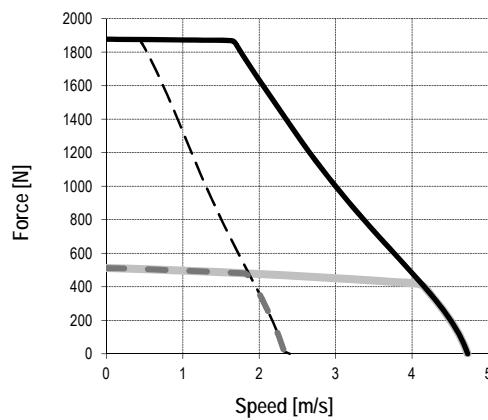Notes: (*) terminal to terminal.   Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
              Hypothesis and tolerances are in ETEL's Handbook.   Carriage's dissipation area is 0.08 m² and minimal stroke is 2 times the motor length.
Caution: Any use of the motor beyond speed/force limit 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.

Force = f(speed) for 3TA

Force = f(speed) for 3WA

Peak force
— Fp @ 600 VDC
- - - Fp @ 300 VDC

Continuous force
— Fc @ 600 VDC
- - - Fc @ 300 VDC