HIWIN CONFIDENTIAL
機密文件未經許可，嚴禁複製

LMSA01G Linear Motor

Electrical specifications

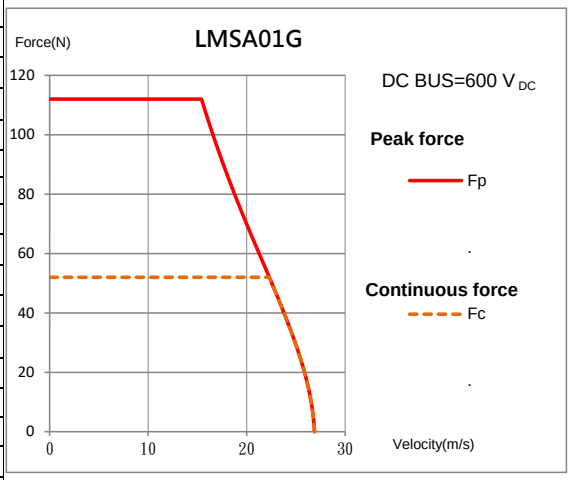
	Symbol	Unit	
Continuous force	F_c	N	52
Continuous current	I_c	A_{rms}	2.1
Peak force (1s)	F_p	N	112
Peak current (1s)	I_p	A_{rms}	6.3
Ultimate force (0.5s)	F_u	N	143
Ultimate current (0.5s)	I_u	A_{rms}	10.6
Force constant	K_f	N/A_{rms}	24.5
Attraction force	F_a	N	241
Max. winding tempurature	T_{max}	℃	120
Electrical time constant	K_e	ms	3
Resistance (line to line · 25℃)	R_{25}	Ω	6.2
Resistance (line to line · 120℃)	R_{120}	Ω	8.5
Inductance (line to line)	L	mH	23
Pole pair pitch	2τ	mm	30
Minimun bending radius of cable	R_{bend}	mm	69
Back emf constant(line to line)	K_v	V_{rms}/(m/s)	14.2
Motor constant (25℃)	K_m	N/√W	8.1
Thermal resistance	R_{th}	℃/W	1.69
Thermal time constant	t_{th}	s	431
Thermal switch			1 x Pt1000 + 1 x (3 PTC SNM 120 In Series)
Max. DC bus voltage		V_{DC}	750

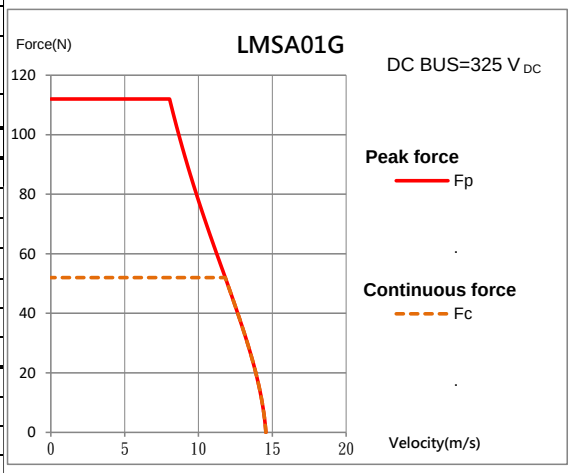
Mechanical specifications

	Symbol	Unit	
Mass of forcer	M_f	kg	0.49
Unit mass of stator	M_S	kg	1.9

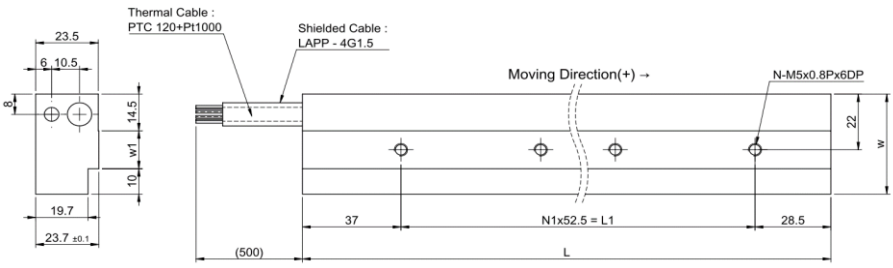
L	mm	118	W3	mm	0
L1	mm	52.5	W4	mm	0
W	mm	39.5	N	mm	2
W1	mm	15	N1	mm	1
W2	mm	0	N2	mm	0

F-V curve

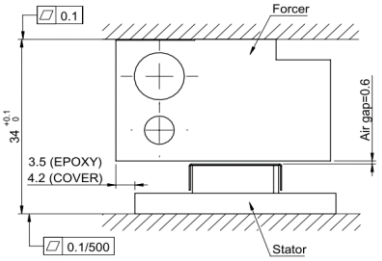




Focer dimensions

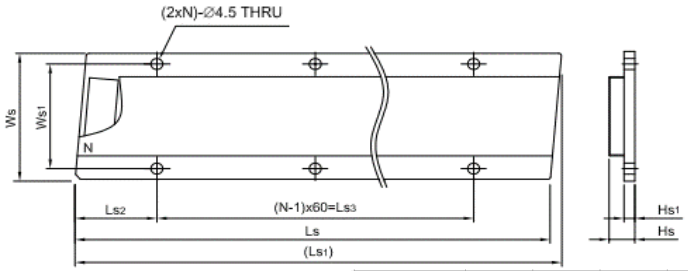


Mounting tolerance

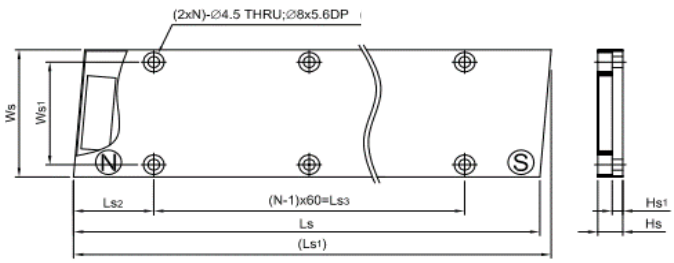


Stator dimensions

Type 1：Cover plate



Type 2：EA (Epoxy)



	Ls	Ls1	Ls2	Ls3	Ws	Ws1	Hs	Hs1	N
LMSA0S1(EA)	120	123.11	31	60	35.6(37)	27	9.7	4	2
LMSA0S2(EA)	180	183.11	31	120	35.6(37)	27	9.7	4	3
LMSA0S3(EA)	300	303.11	31	240	35.6(37)	27	9.7	4	5

Except dimensions, all the specifications in the table are in ±10% of tolerance

Version: 1.00

This drawing is only for reference, detail dimensions please refer to approval drawing.

Date: 2023/3/29