

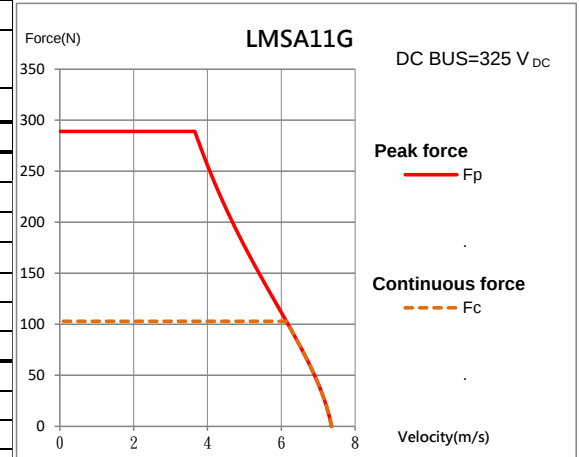
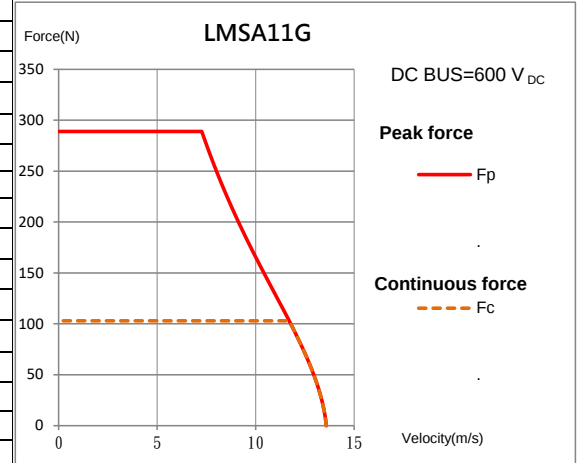
LMSA11G

Linear Motor

Electrical specifications

	Symbol	Unit	
Continuous force	F_c	N	103
Continuous current	I_c	A_{rms}	2.1
Peak force (1s)	F_p	N	289
Peak current (1s)	I_p	A_{rms}	6.3
Ultimate force (0.5s)	F_u	N	379
Ultimate current (0.5s)	I_u	A_{rms}	10.6
Force constant	K_f	N/A_{rms}	48.6
Attraction force	F_a	N	481
Max. winding temperature	T_{max}	$^{\circ}C$	120
Electrical time constant	K_e	ms	4.4
Resistance (line to line · 25 $^{\circ}C$)	R_{25}	Ω	8.4
Resistance (line to line · 120 $^{\circ}C$)	R_{120}	Ω	11.6
Inductance (line to line)	L	mH	37.1
Pole pair pitch	2τ	mm	30
Minimum bending radius of cable	R_{bend}	mm	69
Back emf constant(line to line)	K_v	$V_{rms}/(m/s)$	28.1
Motor constant (25 $^{\circ}C$)	K_m	$N/\sqrt{W}$	13.7
Thermal resistance	R_{th}	$^{\circ}C/W$	1.23
Thermal time constant	t_{th}	s	610
Thermal switch			1 x Pt1000 + 1 x (3 PTC SNM 120 In Series)
Max. DC bus voltage		V_{DC}	750

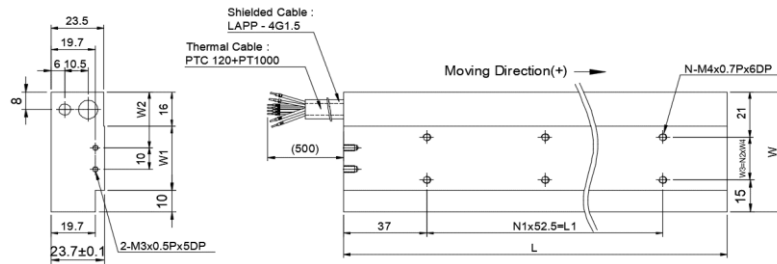
F-V curve



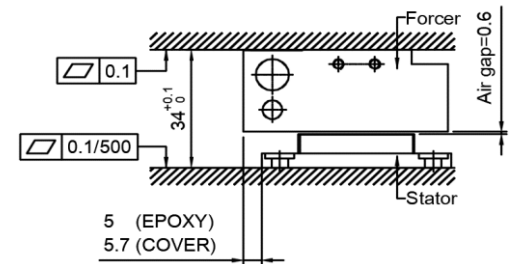
Mechanical specifications

		Symbol	Unit		
Mass of forcer		M _f	kg	0.7	
Unit mass of stator		M _s	kg	2.7	
L	mm	118	W3	mm	20
L1	mm	52.5	W4	mm	20
W	mm	56	N	mm	4
W1	mm	30	N1	mm	1
W2	mm	26	N2	mm	1

Forcer dimensions

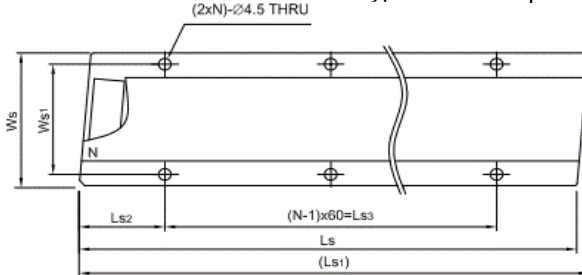


Mounting tolerance

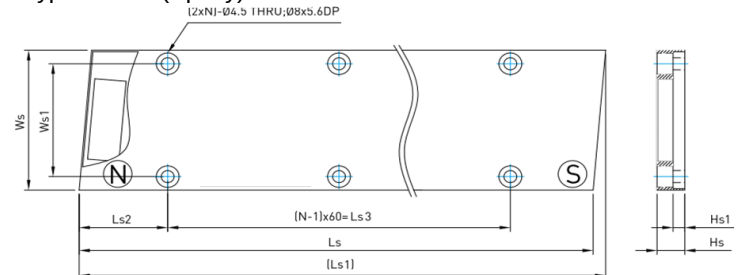


Stator dimensions

Type 1 : Cover plate



Type 2 : EA (Epoxy)



	Ls	Ls1	Ls2	Ls3	Ws	W1	Hs	Hs1	N
LMSA1S1(EA)	120	124.36	31	60	50.6(52)	42	9.7	4	2
LMSA1S2(EA)	180	184.36	31	120	50.6(52)	42	9.7	4	3
LMSA1S3(EA)	300	304.34	31	240	50.6(52)	42	9.7	4	5

Except dimensions, all the specifications in the table are in $\pm 10\%$ of tolerance

Version: 1.00

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

Date: 2023/3/29