HIWIN CONFIDENTIAL
機密文件未經許可，嚴禁複製

LMSA21G Linear Motor

Electrical specifications

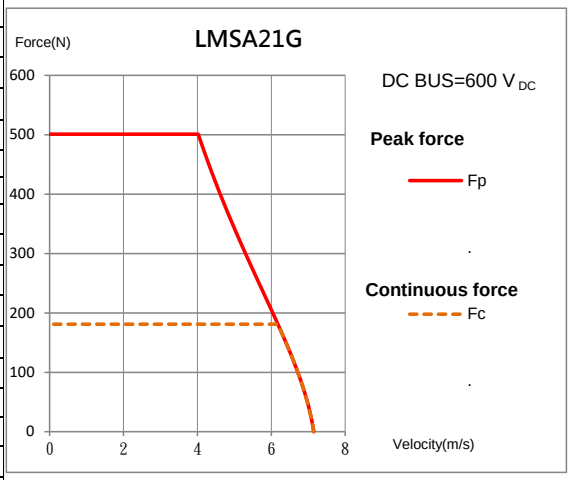
	Symbol	Unit	
Continuous force	F_c	N	181
Continuous current	I_c	A_{rms}	2
Peak force (1s)	F_p	N	512
Peak current (1s)	I_p	A_{rms}	5.9
Ultimate force (0.5s)	F_u	N	670
Ultimate current (0.5s)	I_u	A_{rms}	9.8
Force constant	K_f	N/A_{rms}	92.5
Attraction force	F_a	N	963
Max. winding tempurature	T_{max}	℃	120
Electrical time constant	K_e	ms	4.6
Resistance (line to line · 25℃)	R_{25}	Ω	13.8
Resistance (line to line · 120℃)	R_{120}	Ω	19
Inductance (line to line)	L	mH	64
Pole pair pitch	2τ	mm	30
Minimun bending radius of cable	R_{bend}	mm	69
Back emf constant(line to line)	K_v	$V_{rms}/(m/s)$	53.4
Motor constant (25℃)	K_m	$N/\sqrt{W}$	20.3
Thermal resistance	R_{th}	℃/W	0.87
Thermal time constant	t_{th}	s	975
Thermal switch			1 x Pt1000 + 1 x (3 PTC SNM 120 In Series)
Max. DC bus voltage		V_{DC}	750

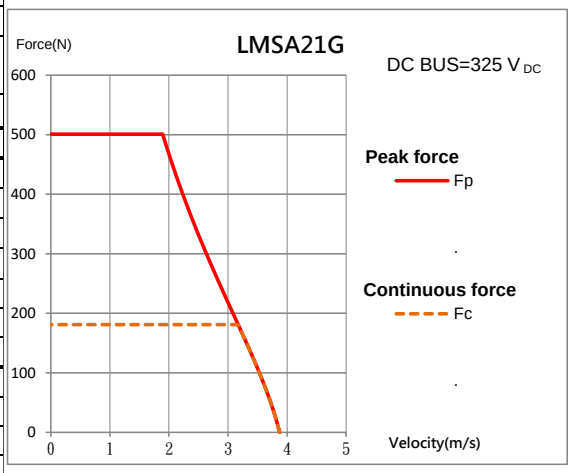
Mechanical specifications

	Symbol	Unit	
Mass of forcer	M_f	kg	1.1
Unit mass of stator	M_S	kg	4.8

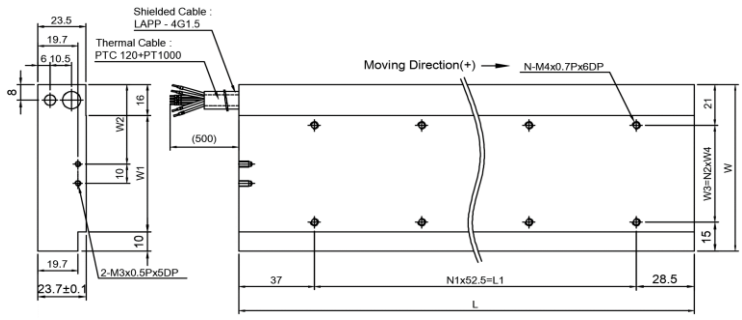
L	mm	118	W3	mm	50
L1	mm	52.5	W4	mm	50
W	mm	86	N	mm	4
W1	mm	60	N1	mm	1
W2	mm	41	N2	mm	1

F-V curve

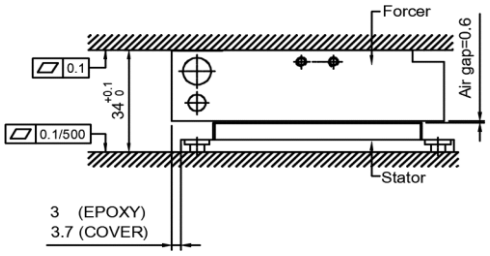




Focer dimensions

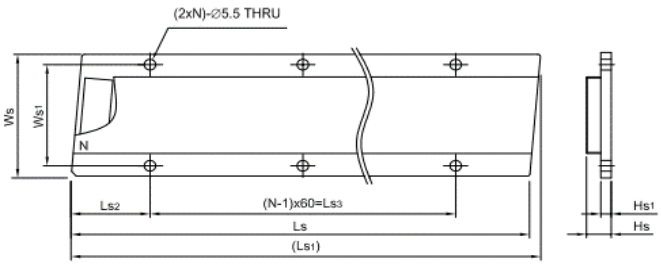


Mounting tolerance

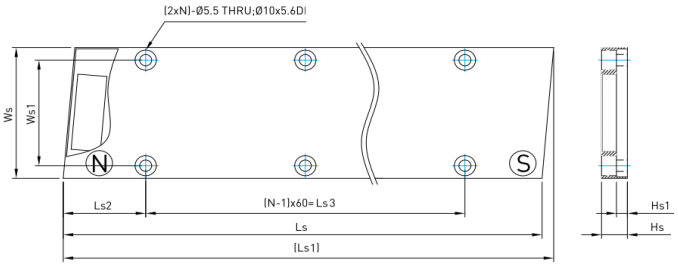


Stator dimensions

Type 1：Cover plate



Type 2：EA (Epoxy)



	Ls	Ls1	Ls2	Ls3	Ws	Ws1	Hs	Hs1	N
LMSA2S1(EA)	120	122.7	30.57	60	84.6(86)	74	9.7	4	2
LMSA2S2(EA)	180	182.7	30.57	120	84.6(86)	74	9.7	4	3
LMSA2S3(EA)	300	302.7	30.57	240	84.6(86)	74	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