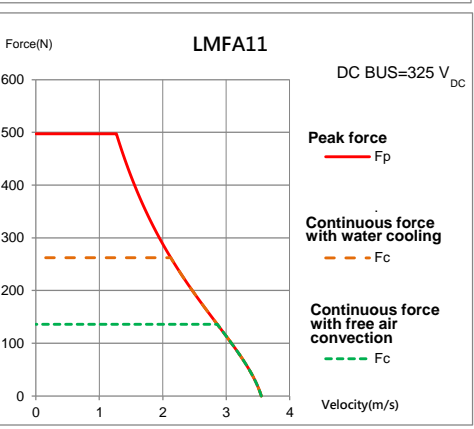
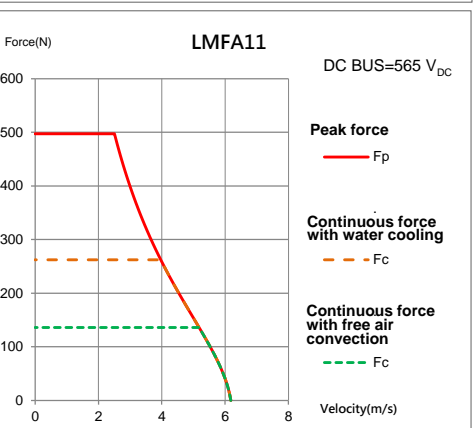
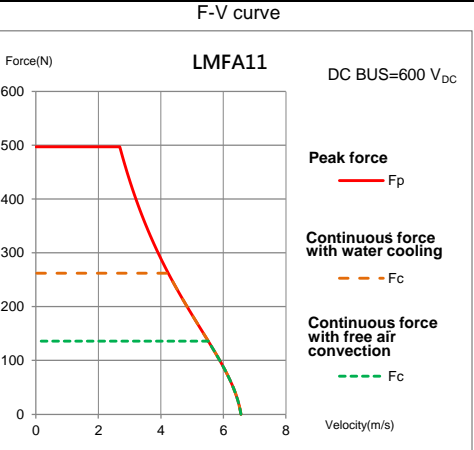


LMFA11 Linear Motor

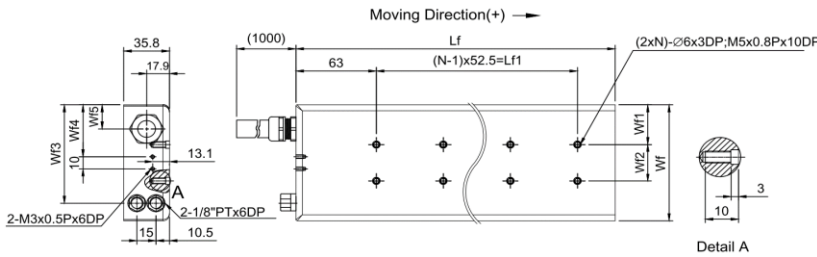
Electrical specifications				
	Symbol	Unit	Free air convection	Water cooling
Continuous force	F_c	N	136	272
Continuous current	I_c	A _{rms}	1.4	2.7
Stall force	F_0	N	-	191
Stall current	I_0	A _{rms}	-	1.9
Peak force (1s)	F_p	N	-	516
Peak current (1s)	I_p	A _{rms}	-	8.4
Force constant	K_f	N/A _{rms}	-	100.8
Attraction force	F_a	N	-	837
Max. winding temperature	T_{max}	°C	-	120
Electrical time constant	K_e	ms	-	7.2
Resistance (line to line · 25°C)	R_{25}	Ω	-	16.9
Resistance (line to line · 120°C)	R_{120}	Ω	-	22.3
Inductance (line to line)	L	mH	-	121.9
Pole pair pitch	2τ	mm	-	30
Back emf constant(line to line)	K_v	V _{rms} /(m/s)	-	58.2
Motor constant (25°C)	K_m	N/√W	-	20
Thermal resistance	R_{th}	°C/W	1.56	0.39
Thermal time constant	t_{th}	s	-	150
Thermal switch			1 x Pt1000 + 1 x (3 PTC SNM 120 In Series)	
Maximum velocity at maximum force	$V_{MAX,FP}$	m/s	-	3.44
Maximum electric power input	$P_{EL,MAX}$	W	-	4115
Maximum dissipated heat output	$Q_{P,H,MAX}$	W	-	244
Max. DC bus voltage	V_{DC}	V	-	750

Mechanical specifications				
	Symbol	Unit	Free air convection	Water cooling
Mass of forcer	M_f	kg	-	2.4
Unit mass of stator	M_s	kg	-	5.8
Total installation height	H	mm	-	48.5
Minimum flow rate		L/min	-	3.7
Temperature of cooling water		°C	-	20
Pressure drop	ΔP	bar	-	0.75
Water temperature difference	$\Delta\theta_{P,H}$	K	-	0.9

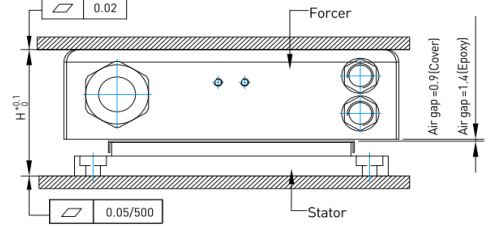
Lf	mm	145	Wf3	mm	81.5
Lf1	mm	52.5	Wf4	mm	43
Wf	mm	96	Wf5	mm	20
Wf1	mm	33	N	mm	2
Wf2	mm	30	n	mm	-



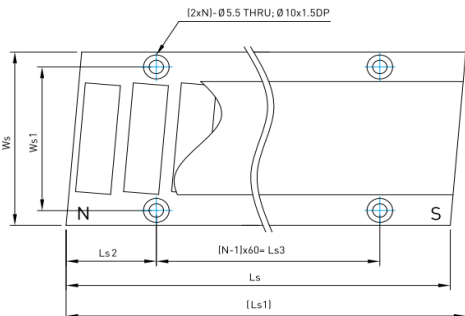
Focer dimensions



Mounting tolerance



Stator dimensions



Type	Ls	Ls1	Ls2	Ls3	Hs	Hs1	Ws	Ws1	N
LMF1S1	120	122.77	30.6	60	11.8	5.9	88	74	2
LMF1S1E	120	122.77	30.6	60	11.3	5.7	88	74	2
LMF1S2	180	182.77	30.6	120	11.8	5.9	88	74	3
LMF1S2E	180	182.77	30.6	120	11.3	5.7	88	74	3
LMF1S3	300	302.77	30.6	240	11.8	5.9	88	74	5
LMF1S3E	300	302.77	30.6	240	11.3	5.7	88	74	5

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

Version: 2.00

Date: 2020/5/8