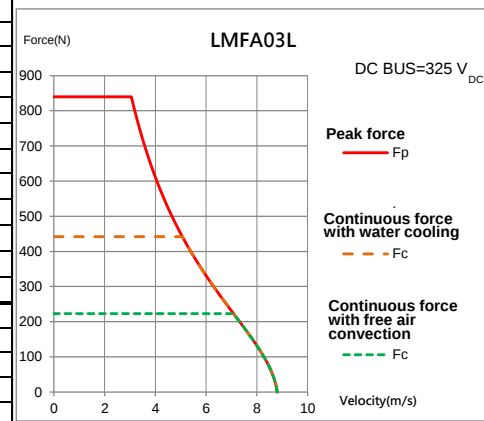
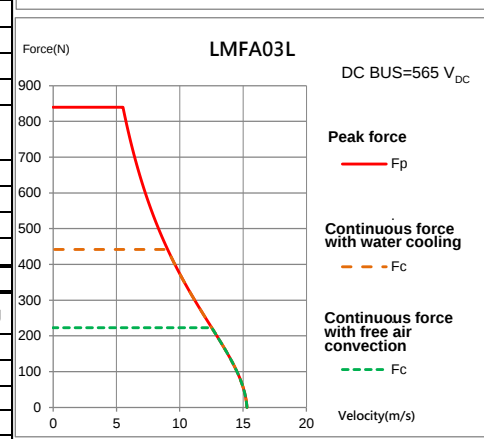
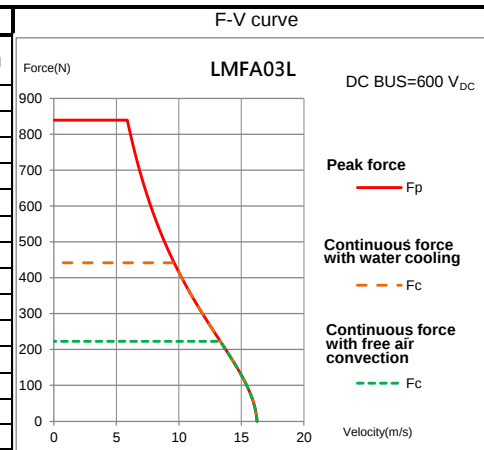


LMFA03L	Linear Motor
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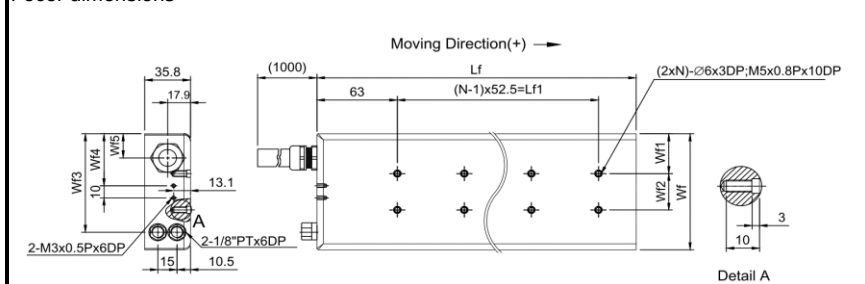
Electrical specifications				
	Symbol	Unit	Free air convection	Water cooling
Continuous force	F_c	N	223	446
Continuous current	I_c	A_{rms}	5.5	10.9
Stall force	F_0	N	-	312
Stall current	I_0	A_{rms}	-	7.7
Peak force (1s)	F_p	N	845	
Peak current (1s)	I_p	A_{rms}	33.9	
Force constant	K_f	N/A_{rms}	40.8	
Attraction force	F_a	N	1372	
Max. winding temperature	T_{max}	°C	120	
Electrical time constant	K_e	ms	7.7	
Resistance (line to line · 25°C)	R_{25}	Ω	2	
Resistance (line to line · 120°C)	R_{120}	Ω	2.6	
Inductance (line to line)	L	mH	15.4	
Pole pair pitch	2τ	mm	30	
Back emf constant(line to line)	K_v	$V_{rms}/(m/s)$	23.5	
Motor constant (25°C)	K_m	$N/\sqrt{W}$	23.5	
Thermal resistance	R_{th}	°C/W	0.8	0.2
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	7.4	
Maximum electric power input	$P_{EL,MAX}$	W	-	10819
Maximum dissipated heat output	$Q_{P,H,MAX}$	W	-	475
Max. DC bus voltage		V_{DC}	750	

Mechanical specifications				
	Symbol	Unit	Free air convection	Water cooling
Mass of forcer	M _f	kg	3.1	
Unit mass of stator	M _s	kg	3.7	
Total installation height	H	mm	48.5	
Minimum flow rate		L/min	-	3.3
Temperature of cooling water		°C	-	20
Pressure drop	ΔP	bar	-	1.1
Water temperature difference	Δθ _{p-H}	K	-	2.1

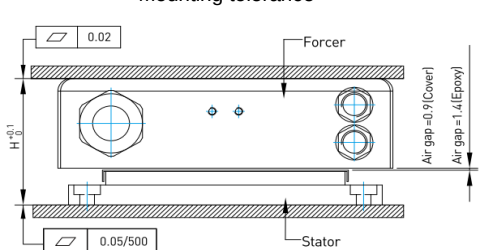
Lf	mm	355	Wf3	mm	55
Lf1	mm	262.5	Wf4	mm	33.75
Wf	mm	67	Wf5	mm	14.4
Wf1	mm	18.5	N	mm	6
Wf2	mm	30	n	mm	-



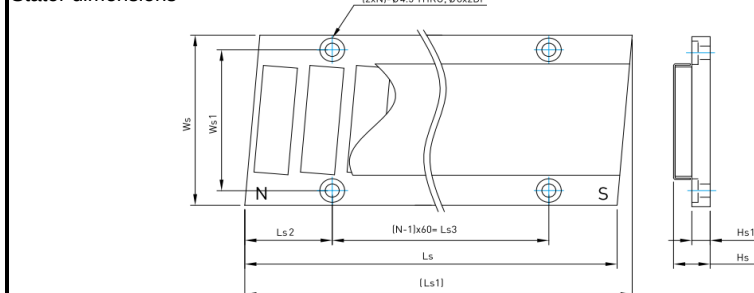
Focer dimensions



Mounting tolerance



Stator dimensions



Type	LS	LS1	LS2	LS3	HS	HS1	WS	WS1	N
LMF0S1	120	124.87	31.25	60	11.8	5.9	58	48	2
LMF0S1E	120	124.87	31.25	60	11.3	5.7	58	48	2
LMF0S2	180	184.87	31.25	120	11.8	5.9	58	48	3
LMF0S2E	180	184.87	31.25	120	11.3	5.7	58	48	3
LMF0S3	300	304.87	31.25	240	11.8	5.9	58	48	5
LMF0S3E	300	304.87	31.25	240	11.3	5.7	58	48	5

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

Version: 2.00

Date: 2020/5/8