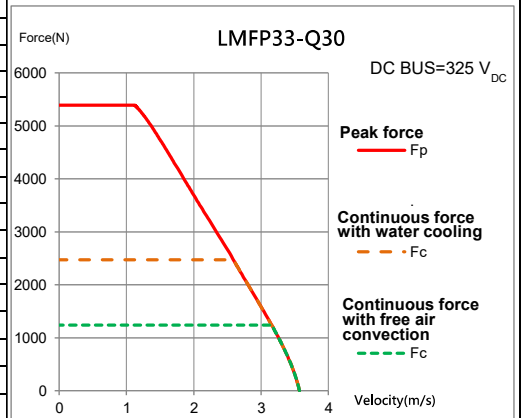
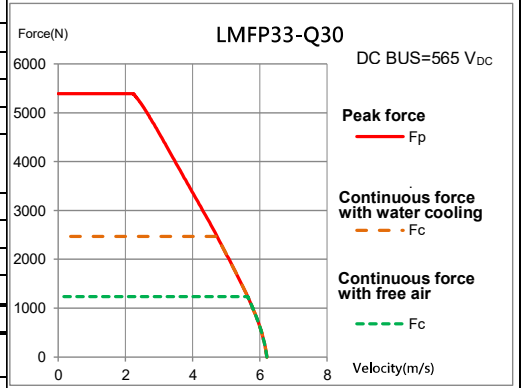
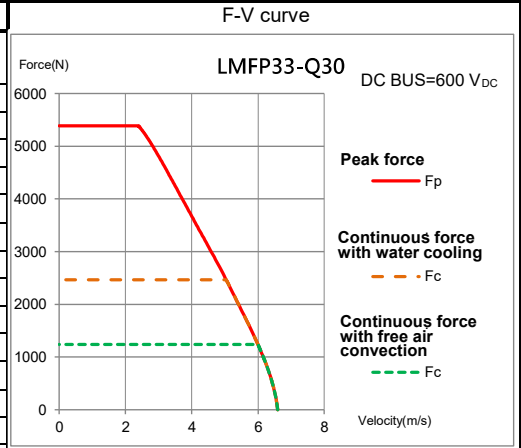


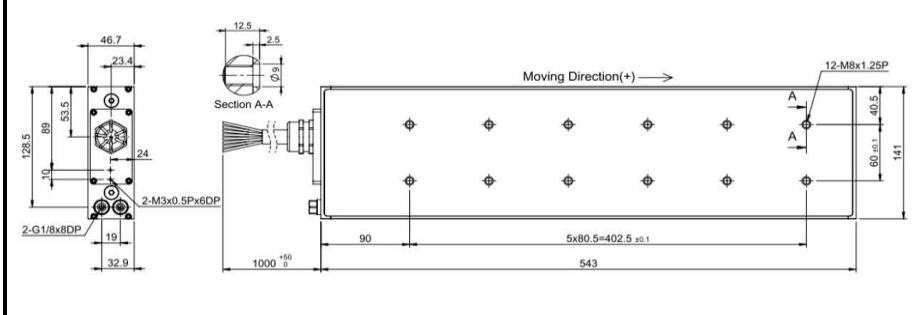
LMFP33-Q30 Linear Motor DB100199-V1.00

Electrical specifications				
	Symbol	Unit	Free air convection	Water cooling
Continuous force	F_c	N	1240	2480
Continuous current	I_c	A_{rms}	12.4	24.7
Stall force	F_0	N	-	1730
Stall current	I_0	A_{rms}	-	17.3
Peak force (1s)	F_p	N		5390
Peak current (1s)	I_p	A_{rms}		76.8
Force constant	K_f	N/A_{rms}		100.3
Attraction force	F_a	N		9364
Max. winding temperature	T_{max}	$^{\circ}C$		120
Electrical time constant	K_e	ms		12
Resistance (line to line · 25 $^{\circ}C$)	R_{25}	Ω		1.2
Resistance (line to line · 120 $^{\circ}C$)	R_{120}	Ω		1.6
Inductance (line to line)	L	mH		14.4
Pole pair pitch	2τ	mm		46
Back emf constant(line to line)	K_v	$V_{rms}/(m/s)$		57.9
Motor constant (25 $^{\circ}C$)	K_m	$N/A_{rms}/W$		74.5
Thermal resistance	R_{th}	$^{\circ}C/W$	0.26	0.06
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		2.4
Maximum electric power input	$P_{EL,MAX}$	W	-	27092
Maximum dissipated heat output	$Q_{P,H,MAX}$	W	-	1464
Max. DC bus voltage	V_{DC}			750

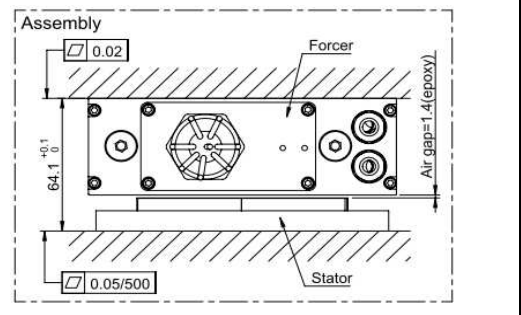


Mechanical specifications				
	Symbol	Unit	Free air convection	Water cooling
Mass of forcer	M_f	kg		17.8
Unit mass of stator	M_s	kg		16.2
Total installation height	H	mm		64.1
Minimum flow rate		L/min	-	5.7
Temperature of cooling water		$^{\circ}C$	-	20
Pressure drop	ΔP	bar	-	0.98
Water temperature difference	$\Delta\theta_{P,H}$	K	-	3.7
Forcer precision cooler				
Maximum dissipated thermal output	$Q_{FC,MAX}$	W	-	120
Pressure drop	ΔP_{FC}	bar	-	1.8
Stator precision cooler				
Maximum dissipated thermal output	$Q_{SC,MAX}$	W	-	359
Pressure drop per meter of cooling pipe	ΔP_s	bar	-	0.16
Pressure drop per combi distributor	ΔP_{sd}	bar	-	0.35
Pressure drop per coupling point	ΔP_{sp}	bar	-	0.17

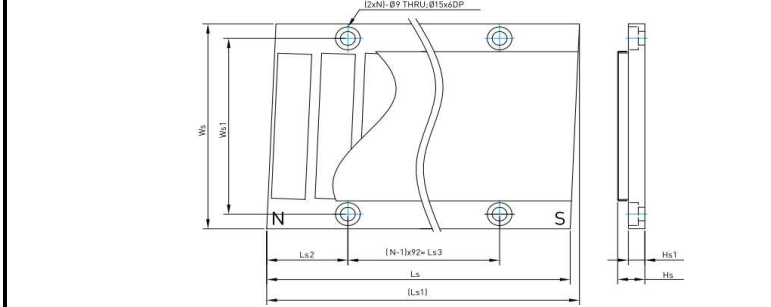
Forcer dimensions



Mounting tolerance



Stator dimensions



Wiring diagram

WIRING DIAGRAM	
Cable	Signal
L1/U	U
L2/V	V
L3/W	W
Yellow/Green	Shield
Red	T1+
Yellow	T1-
Black	T2+
White	T2-

PTC SNM120
Pt1000

Type	Ls	Ls1	Ls2	Ls3	Hs	Hs1	Ws	Ws1	N
LMF3S1	184	189.62	49.2	92	16.5	10	134	115	2
LMF3S1E	184	189.62	49.2	92	16	9.8	134	115	2
LMF3S2	276	281.62	49.2	184	16.5	10	134	115	3
LMF3S2E	276	281.62	49.2	184	16	9.8	134	115	3
LMF3S3	460	465.62	49.2	368	16.5	10	134	115	5
LMF3S3E	460	465.62	49.2	368	16	9.8	134	115	5

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

Version: 1.00

Date: 2021/1/29