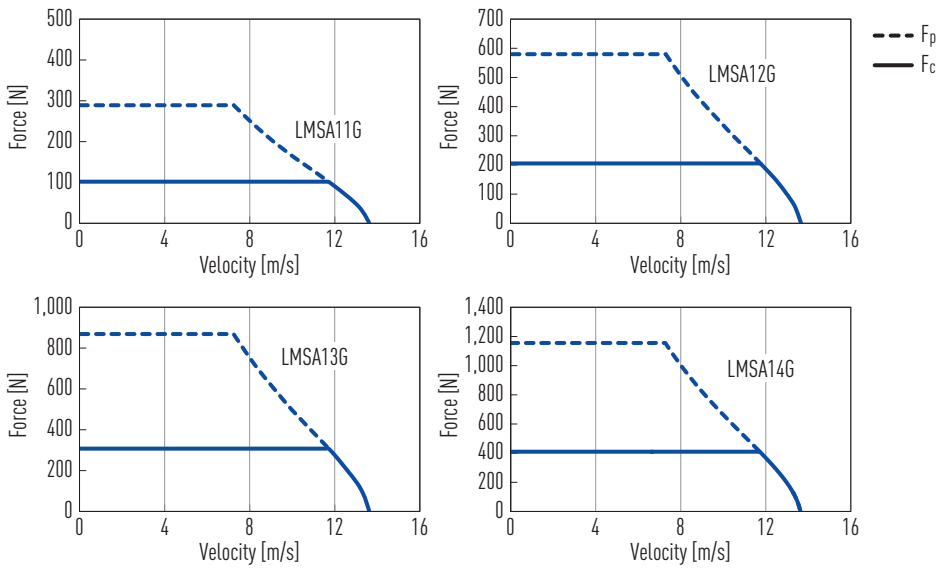


Specifications

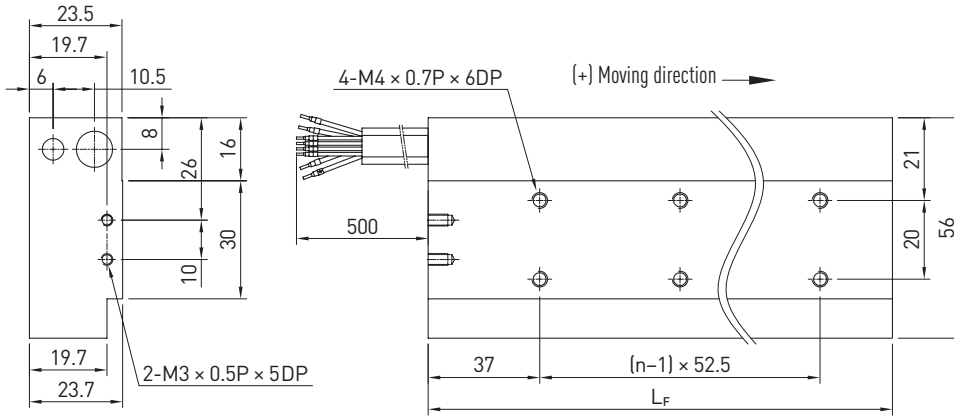
Force-velocity curves (DC bus voltage: 600 VDC)



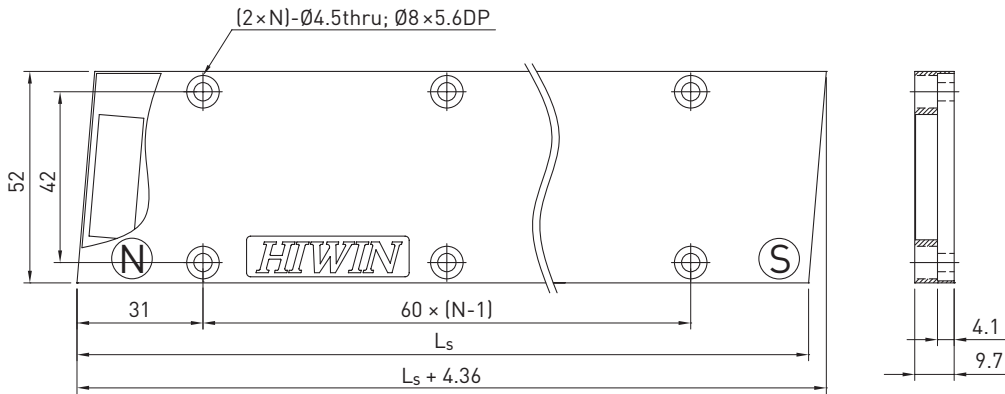
Technical data for LMSA1						
	Symbol	Unit	LMSA11G	LMSA12G	LMSA13G	LMSA14G
Forces and electrical parameters						
Continuous force at T_{max}	F_c	N	103	205	308	410
Continuous current at T_{max}	I_c	A_{eff}	2.1	4.2	6.3	8.4
Peak force (for 1 s)	F_p	N	289	579	868	1,156
Peak current (for 1 s)	I_p	A_{eff}	6.3	12.7	19.0	25.3
Ultimate force (for 0.5 s)	F_u	N	379	759	1,138	1,517
Ultimate current (for 0.5 s)	I_u	A_{eff}	10.6	21.1	31.7	42.2
Force constant	K_f	N/A_{eff}	48.6	48.6	48.6	48.6
Attraction force	F_a	N	481	963	1,444	1,926
Electrical time constant	K_e	ms	4.4	4.5	4.4	4.4
Resistance ¹⁾	R_{25}	Ω	8.4	4.1	2.8	2.1
Inductance ¹⁾	L	mH	37.1	18.5	12.4	9.3
Back EMF constant	K_u	$V_{eff}/(m/s)$	28.1	28.1	28.1	28.1
Motor constant	K_m	N/\sqrt{W}	13.7	19.6	23.7	27.4
Thermal resistance	R_{th}	$^{\circ}C/W$	1.23	0.63	0.41	0.31
Thermal time constant	T_{th}	s	610	890	2,290	
Thermal switch			1 × PT1000 + 1 × {3 PTC SNM 120 in series}			
Max. DC bus voltage	V		750			
Mechanical parameters						
Max. bending radius of motor cable	R_{bend}	mm	69			
Pole pair pitch	2τ	mm	30			
Max. winding temperature	T_{max}	$^{\circ}C$	120			
Mounting holes (forcer)	n		2	4	6	8
Weight of forcer	M_F	kg	0.7	1.4	2.1	2.8
Length of forcer	L_F	mm	118	223	328	433
Unit mass of stator	M_S	kg/m	2.7			
Length of stator/Dimension N	L_S	mm	120 mm/N = 2; 300 mm/N = 5			
Total height (forcer + stator)	H	mm	34			

All the specifications in the table (except dimensions) are in $\pm 10\%$ of tolerance at 25 $^{\circ}C$ ambient temperature ¹⁾ Line to line

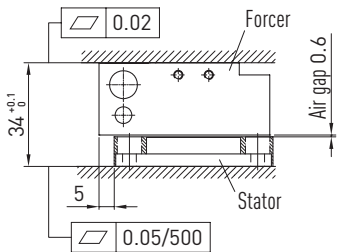
Dimensions of forcer



Dimensions of stator



Mounting tolerances



LMSA1 motor cable assignment			
Motor cable	Signal		Diameter [mm]
1	U		9.2
2	V		
3	W		
Green/Yellow	GND		
Yellow	T1+	PTC SNM 120	5.5
Green	T1-		
Brown	T2+	PT1000	
White	T2-		