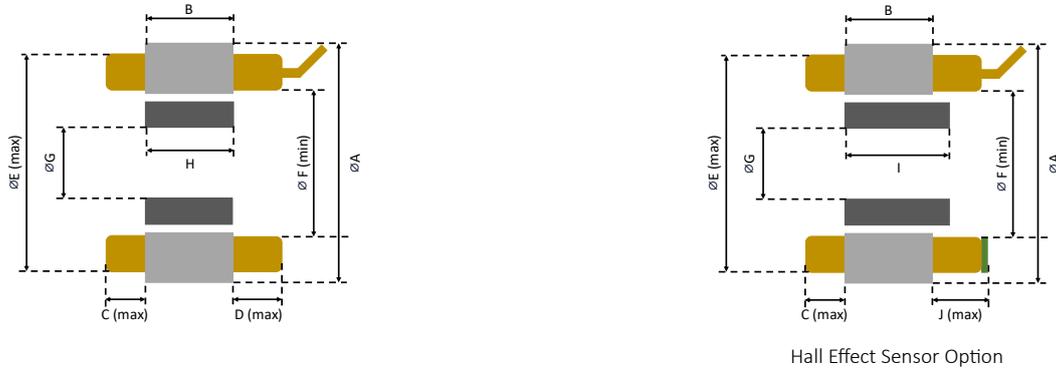


Motor Parameters		Symbols	Units	LFTM-110-025			LFTM-110-050			LFTM-110-100			
PERFORMANCE	DC Bus Voltage	V_{DC}	V	24	48	310	24	48	310	24	48	310	
	Rated Torque	T_r	Nm	4.05			7.17			12.43	12.52		
	Peak Torque	T_p	Nm	7.5		12.5	15		25.0	28.35		50.0	
	Rated Speed	N_r	rpm	180	475	890	135	350	790	95	240	620	
	No-Load Speed	$N_{no-load}$	rpm	330	655	1110	230	460	940	155	310	720	
	Torque Constant	K_t	Nm/A	0.73		2.81	1.05		3.33	1.55		4.35	
	Voltage Constant	K_v	V/rpm	0.063		0.241	0.09		0.286	0.133		0.373	
	Max. Cogging Torque	T_{cog}	%	<1									
	Torque Ripple	T_{ripple}	%	<1									
ELECTRICAL	Number of Pole	2p	--		16								
	Rated Current	I_r	A_{rms}	5.51		1.44	6.87		2.15	8.0		2.88	
	Peak Current	I_p	A_{rms}	10.6		5.55	14.93		9.35	19.0		14.4	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	1.28 ($\pm 20\%$)		16.4 ($\pm 20\%$)	0.92 ($\pm 20\%$)		9.6 ($\pm 20\%$)	0.8 ($\pm 20\%$)		6.48 ($\pm 20\%$)	
	Line Inductance	L_{LL}	mH	5.42 ($\pm 30\%$)		84.2 ($\pm 30\%$)	5.3 ($\pm 30\%$)		53.7 ($\pm 30\%$)	5.7 ($\pm 30\%$)		44.8 ($\pm 30\%$)	
MECHANICAL & THERMAL	Stator Weight	W_s	kg	1.52			2.49			4.44			
	Rotor Weight	W_r	kg	0.32			0.63			1.26			
	Total Weight	W_{total}	kg	1.84			3.13			5.7			
	Mech. Time Constant	K_{mech}	ms	0.63		0.56	0.44		0.46	0.35		0.36	
	Thermal Resistance ⁽²⁾	R_{th}	$^{\circ}C/W$	0.99			0.79			0.63			
	Inertia	J	kg.m ²	2.2E-04			4.33E-04			8.59E-04			
	Motor Constant	K_m	Nm/ \sqrt{W}	0.53		0.57	0.89		0.88	1.42		1.39	
	Rotor ID		mm	40									
	Stator OD		mm	110									

1. All performance and electrical specifications are obtained at 25°C ambient and may change $\pm 5\%$. 2. Housed version of motor mounted to 180 mm sq. x 15 mm aluminum heat sink (maximum winding temperature is 120°C). 3. All data referenced to sinusoidal commutation. 4. Higher torque and speed values as well as dimensions on request.

LFTM-110 Outline Drawing



Hall Effect Sensor Option

Model	A	B	C	D	E	F	G	H	I	J
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
LFTM-110-025	110	25	11.5	12.5	106.4	68.8	40	25.1	30.1	15.5
LFTM-110-050	110	50	11.5	12.5	106.4	68.8	40	50.2	55.2	15.5
LFTM-110-100	110	100	11.5	12.5	106.4	68.8	40	100.4	105.4	15.5

Notes:

MOTOR LEADS:

#15 AWG Teflon® insulated, 300 mm (optional) length, 1-Red, 1-White, 1-Black.

THERMISTOR LEADS:

#26 AWG Teflon® insulated, 300 mm (optional) length, 2-Brown or Blue

SENSOR LEADS:

#26 AWG Teflon® insulated, 300 mm (optional) length, 1-Blue, 1-Green, 1-Brown, 1-White, 1-Yellow

(For detailed mounting information, including tolerances, please contact MDS Motor or refer to the MDS Motor mounting document)

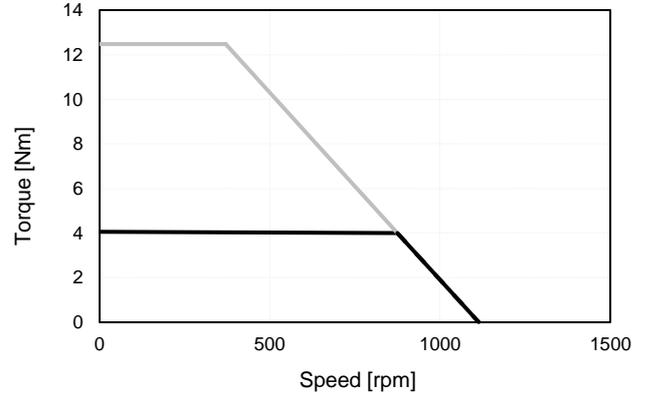
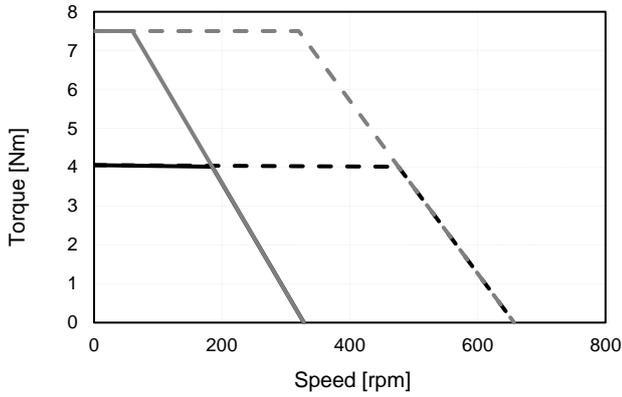
LFTM-110 Torque-Speed Curves

Tr: Rated Torque
Tp: Peak Torque

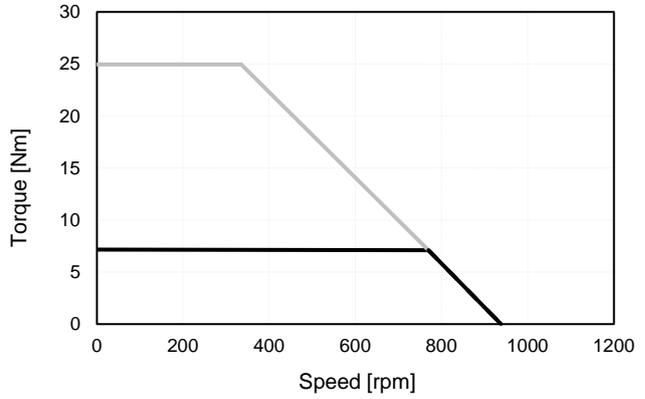
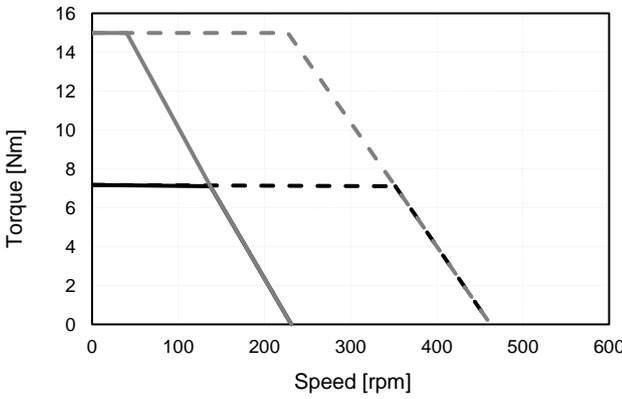
— @Tr 24V - - - @Tr 48V
— @Tp 24V - - - @Tp 48V

— @Tr 310V
— @Tp 310V

LFTM-110-025



LFTM-110-050



LFTM-110-100

