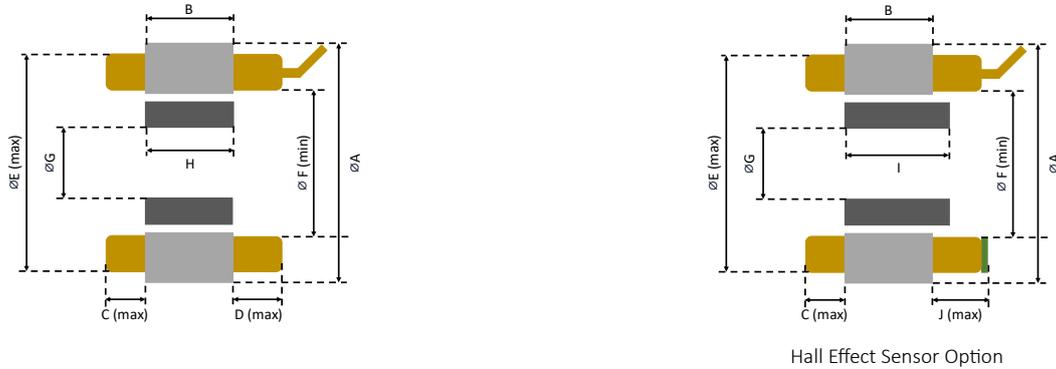


| | Motor Parameters | Symbols | Units | LFTM-95-025 | | | LFTM-95-050 | | | LFTM-95-100 | | | | | |
|----------------------|-----------------------------------|----------------------|-------------------|---------------------|------|---------------------|-------------|---------------------|------|----------------------|-------|---------------------|------|---------------------|--|
| PERFORMANCE | DC Bus Voltage | V_{DC} | V | 24 | 48 | 310 | 24 | 48 | 310 | 24 | 48 | 310 | | | |
| | Rated Torque | T_r | Nm | 2.60 | | | 5.06 | | | 8.8 | 8.85 | | | | |
| | Peak Torque | T_p | Nm | 3.36 | | | 6.73 | | | 16.1 | 13.48 | | | | |
| | Rated Speed | N_r | rpm | 230 | 600 | 1260 | 175 | 445 | 780 | 75 | 230 | 690 | | | |
| | No-Load Speed | $N_{no-load}$ | rpm | 385 | 770 | 1450 | 280 | 560 | 905 | 155 | 310 | 780 | | | |
| | Torque Constant | K_t | Nm/A | 0.6 | | | 2.16 | | | 0.86 | 3.46 | | | | |
| | Voltage Constant | K_v | V/rpm | 0.054 | | | 0.185 | | | 0.074 | 0.296 | | | | |
| | Max. Cogging Torque | T_{cog} | % | <1 | | | | | | | | | | | |
| ELECTRICAL | Torque Ripple | T_{ripple} | % | <1 | | | | | | | | | | | |
| | Number of Pole | 2p | -- | 16 | | | | | | | | | | | |
| | Rated Current | I_r | A_{rms} | 4.30 | | | 1.25 | | | 5.85 | 1.46 | 5.59 | 2.21 | | |
| | Peak Current | I_p | A_{rms} | 5.37 | | | 3.91 | | | 7.8 | 4.88 | 8.6 | 8.49 | | |
| MECHANICAL & THERMAL | Line Resistance | $R_{LL}@25^{\circ}C$ | Ohm | 1.53 ($\pm 20\%$) | | 17.4 ($\pm 20\%$) | | 1.06 ($\pm 20\%$) | | 16.84 ($\pm 20\%$) | | 1.46 ($\pm 20\%$) | | 9.3 ($\pm 20\%$) | |
| | Line Inductance | L_{LL} | mH | 3.55 ($\pm 30\%$) | | 40.3 ($\pm 30\%$) | | 3.1 ($\pm 30\%$) | | 49.71 ($\pm 30\%$) | | 5 ($\pm 30\%$) | | 32.6 ($\pm 30\%$) | |
| | Stator Weight | W_s | kg | 0.85 | | | 1.46 | | | 2.7 | | | | | |
| | Rotor Weight | W_r | kg | 0.32 | | | 0.64 | | | 1.28 | | | | | |
| | Total Weight | W_{total} | kg | 1.17 | | | 2.1 | | | 3.97 | | | | | |
| | Mech. Time Constant | K_{mech} | ms | 1.07 | | 1.00 | | 0.75 | | 0.62 | | 0.61 | | | |
| | Thermal Resistance ⁽²⁾ | R_{th} | $^{\circ}C/W$ | 1.23 | | | 0.92 | | | 0.75 | | | | | |
| | Inertia | J | kg.m ² | 2.19E-04 | | | 4.34E-04 | | | 8.65E-04 | | | | | |
| Motor Constant | K_m | Nm/ \sqrt{W} | 0.40 | | 0.42 | | 0.69 | | 0.69 | | 1.06 | | 1.07 | | |
| Rotor ID | | mm | 40 | | | | | | | | | | | | |
| Stator OD | | mm | 95 | | | | | | | | | | | | |

1. All performance and electrical specifications are obtained at 25°C ambient and may change $\pm 5\%$. 2. Housed version of motor mounted to 160 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-95 Outline Drawing



| Model | A | B | C | D | E | F | G | H | I | J |
|-------------|------|------|------|------|------|------|------|-------|-------|------|
| | (mm) | (mm) | (mm) |
| LFTM-95-025 | 95 | 25 | 9.5 | 10.5 | 90.8 | 68.8 | 40 | 25.1 | 30.1 | 13.5 |
| LFTM-95-050 | 95 | 50 | 9.5 | 10.5 | 90.8 | 68.8 | 40 | 50.2 | 55.2 | 13.5 |
| LFTM-95-100 | 95 | 100 | 9.5 | 10.5 | 90.8 | 68.8 | 40 | 100.4 | 105.4 | 13.5 |

Notes:

MOTOR LEADS:

#18 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)

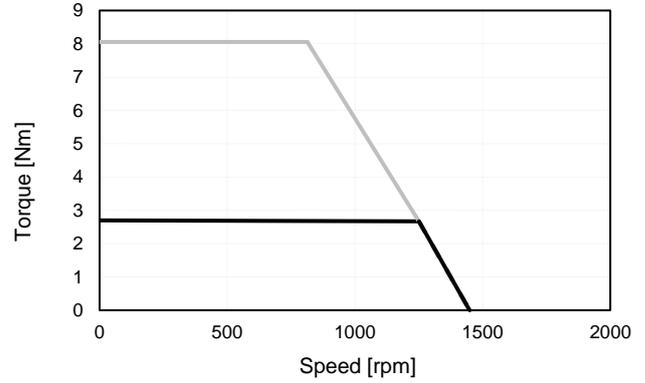
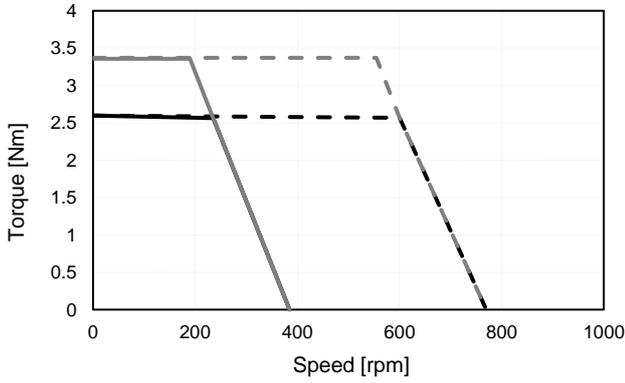
LFTM-95 Torque-Speed Curves

Tr: Rated Torque
Tp: Peak Torque

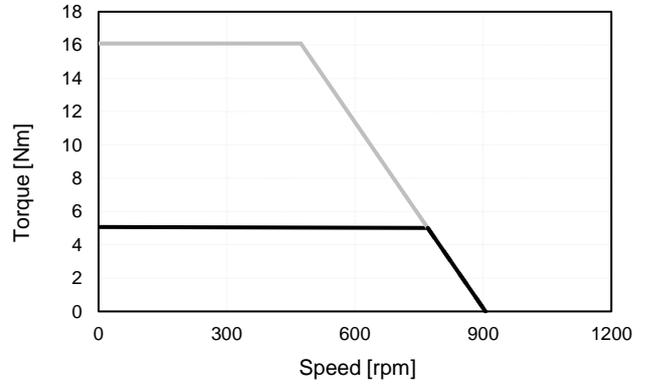
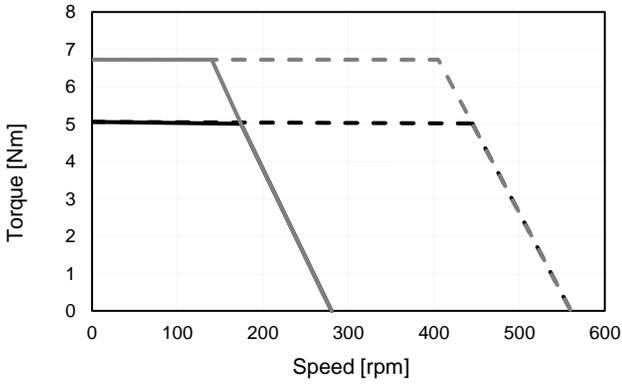
— @Tr 24V - - - @Tr 48V
— @Tp 24V - - - @Tp 48V

— @Tr 310V
— @Tp 310V

LFTM-95-025



LFTM-95-050



LFTM-95-100

