TRM-150 Technical Information

	Motor Parameters	Symbols	Units	TML-150-025		TML-150-050		TML-150-100	
PERFORMANCE	DC Bus Voltage	V_{DC}	V	24	48	24	48	24	48
	Rated Torque	T_r	Nm	8.9		17.4		31.7	
	Peak Torque	T_p	Nm	14.75		29.75		59.25	
	Rated Speed	N_r	rpm	130	350	85	225	60	165
	No-Load Speed	$N_{no\text{-}load}$	rpm	245	495	155	320	115	225
	Torque Constant	K_t	Nm/A	1.12		1.73		2.42	
	Voltage Constant	K_v	V/rpm	0.096		0.148		0.208	
	Max. Cogging Torque	T_{cog}	%	<1					
	Torque Ripple	T_{ripple}	%	<1					
ELECTRICAL	Number of Pole	2p	--	24					
	Rated Current	I_r	A_{rms}	8		10.1		13.1	
	Peak Current	I_p	A_{rms}	13.4		17.6		25	
	Line Resistance	R_{LL}@25°C	Ohm	0.85 (±20%)		0.8 (±20%)		0.62 (±20%)	
	Line Inductance	L_{LL}@60Hz	mH	3.81 (±30%)		4.35 (±30%)		4.19 (±30%)	
MECHANICAL & THERMAL	Stator Weight	W_s	kg	2.32		3.92		7.02	
	Rotor Weight	W_r	kg	0.66		1.32		2.65	
	Total Weight	W_{total}	kg	2.98		5.24		9.67	
	Mech. Time Constant	K_{mech}	ms	1.10		0.77		0.61	
	Thermal Resistance (2)	R_{th}	°C/W	0.656		0.490		0.373	
	Inertia	J	$kg.m^2$	0.00119		0.00228		0.00477	
	Motor Constant	K_m	Nm/√W	0.81	0.50	1.40	0.81	0.50	1.40
	Rotor ID		mm	70					
	Stator OD		mm	150					

	Motor Parameters	Symbols	Units	TMH-150-025		TMH-150-050		TMH-150-100	
PERFORMANCE	DC Bus Voltage	V_{DC}	V	310	560	310	560	310	560
	Rated Torque	T_r	Nm	9		17.3		31.4	
	Peak Torque	T_p	Nm	25.85		51.75		102.9	
	Rated Speed	N_r	rpm	330	665	310	610	290	560
	No-Load Speed	$N_{no\text{-}load}$	rpm	475	865	415	750	370	670
	Torque Constant	K_t	Nm/A	7.57		8.65		9.69	
	Voltage Constant	K_v	V/rpm	0.647		0.741		0.829	
	Max. Cogging Torque	T_{cog}	%	<1					
	Torque Ripple	T_{ripple}	%	<1					
ELECTRICAL	Number of Pole	2p	--	24					
	Rated Current	I_r	A_{rms}	1.2		2		3.25	
	Peak Current	I_p	A_{rms}	4		7		12.4	
	Line Resistance	R_{LL}@25°C	Ohm	44 (±20%)		19.8 (±20%)		9.8 (±20%)	
	Line Inductance	L_{LL}@60Hz	mH	172.3 (±30%)		108.7 (±30%)		67.1 (±30%)	
MECHANICAL & THERMAL	Stator Weight	W_s	kg	2.32		3.9		7.05	
	Rotor Weight	W_r	kg	0.66		1.32		2.65	
	Total Weight	W_{total}	kg	2.98		5.22		9.70	
	Mech. Time Constant	K_{mech}	ms	1.12		0.77		0.61	
	Thermal Resistance (2)	R_{th}	°C/W	0.656		0.490		0.373	
	Inertia	J	$kg.m^2$	0.00119		0.00228		0.00477	
	Motor Constant	K_m	Nm/√W	0.51	0.36	0.73	0.51	0.36	0.73
	Rotor ID		mm	70					
	Stator OD		mm	150					

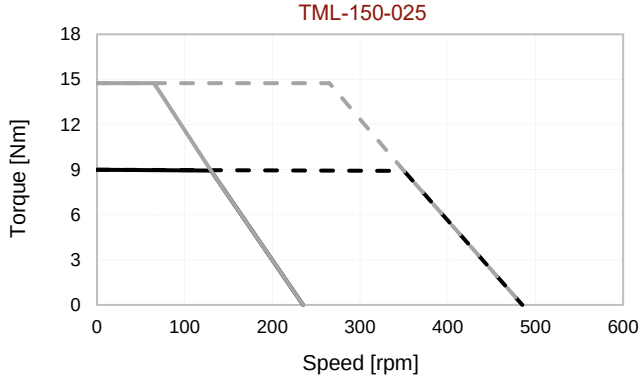
1. All performance and electrical specifications are obtained at 25°C ambient and may change ±10%. 2. Housed version of motor mounted to 290 mm sq. x 10 mm aluminum heat sink (maximum winding temperature is 120°C). 3. Higher torque and speed values as well as dimensions on request.

TM(L/H)-150 Torque-Speed Curves

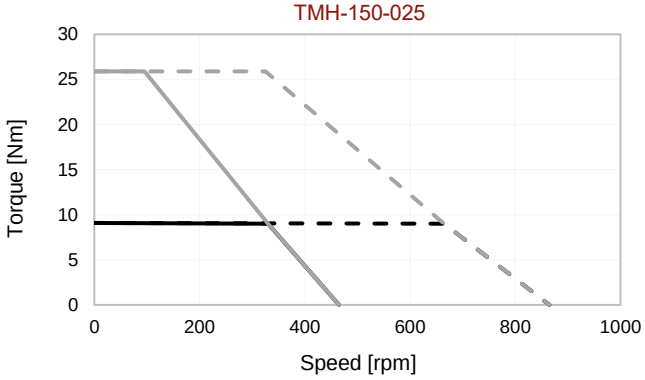
Tr: Rated Torque
Tp: Peak Torque

@Tr 24V @Tr 48V @Tr 310V @Tr 560V
@Tp 24V @Tp 48V @Tp 310V @Tp 560V

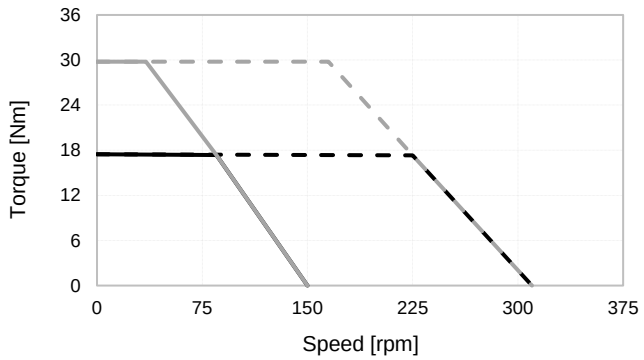
TML-150-025



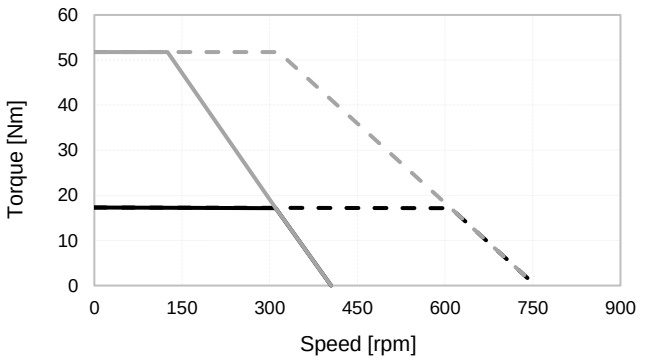
TMH-150-025



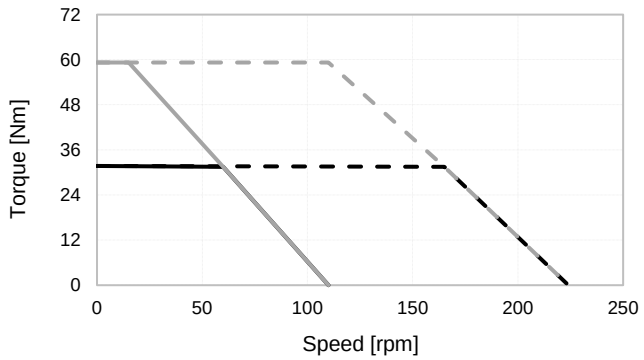
TML-150-050



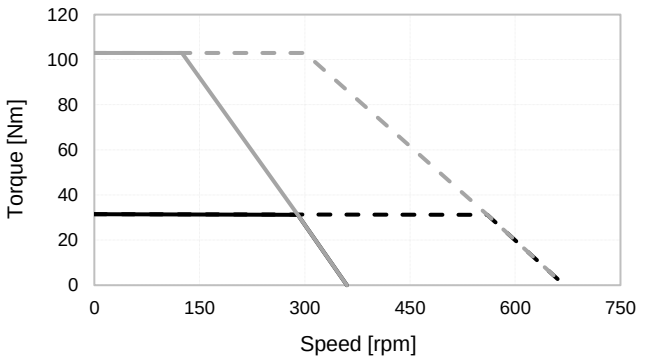
TMH-150-050



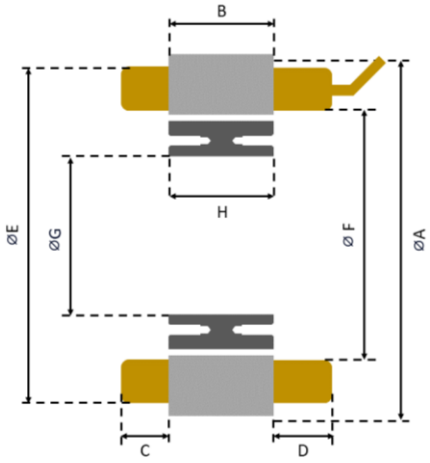
TML-150-100

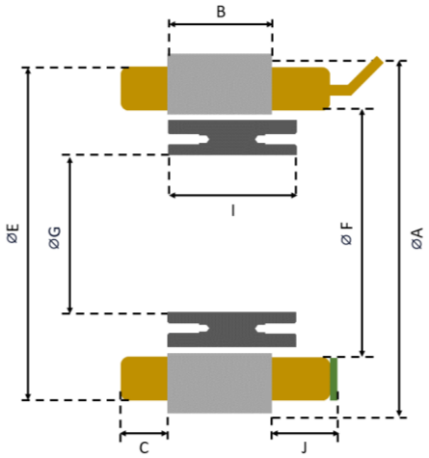


TMH-150-100



TM(L/H)-150 Outline Drawing





Hall Effect Sensor Option

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)
TM(L/H)-150-025	150	25	14	16	142	100.5	70	25.1	30.1	19
TM(L/H)-150-050	150	50	14	16	142	100.5	70	50.2	55.2	19
TM(L/H)-150-100	150	100	14	16	142	100.5	70	100.4	105.4	19

Notes:

MOTOR LEADS:
150-TML: #13 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.
150-TMH: #17 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.

THERMISTOR LEADS:
#26 AWG Teflon® insulated, 500 mm (optional) length, 2-Brown or Blue.

SENSOR LEADS:
#23 AWG Teflon® insulated, 500 mm (optional) length, 1-Blue, 1-Green, 1-Brown, 1-White, 1-Yellow.

MOUNTING OPTION:
#Stator: 3x3 Keyway
#Rotor: (8X on each side) M4 Bolt Hole (For details refer to MDS Motor mounting documents)