

TRM-260 Technical Information

Motor Parameters		Symbols	Units	TML-260-035		TML-260-070		TML-260-140	
PERFORMANCE	DC Bus Voltage	V_{DC}	V	24	48	24	48	24	48
	Rated Torque	T_r	Nm	41.6		75		140.8	
	Peak Torque	T_p	Nm	69		135.7		266.9	
	Rated Speed	N_r	rpm	90	215	55	140	40	95
	No-Load Speed	$N_{no-load}$	rpm	125	260	90	170	60	120
	Torque Constant	K_t	Nm/A	1.83		2.84		4.07	
	Voltage Constant	K_v	V/rpm	0.156		0.243		0.348	
	Max. Cogging Torque	T_{cog}	%			<1			
	Torque Ripple	T_{ripple}	%			<1			
	Number of Pole	$2p$	--			40			
ELECTRICAL	Rated Current	I_r	A_{rms}	22.8		26.4		34.6	
	Peak Current	I_p	A_{rms}	38		48		66	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	0.21 ($\pm 20\%$)		0.19 ($\pm 20\%$)		0.17 ($\pm 20\%$)	
	Line Inductance	$L_{LL}@60Hz$	mH	1.04 ($\pm 30\%$)		1.18 ($\pm 30\%$)		1.15 ($\pm 30\%$)	
MECHANICAL & THERMAL	Stator Weight	W_s	kg	4.75		8.41		15.76	
	Rotor Weight	W_r	kg	2.60		5.23		10.47	
	Total Weight	W_{total}	kg	7.35		13.64		26.23	
	Mech. Time Constant	K_{mech}	ms	1.86		1.46		1.23	
	Thermal Resistance ⁽²⁾	R_{th}	$^{\circ}C/W$	0.358		0.276		0.200	
	Inertia	J	$kg.m^2$	0.02473		0.04983		0.10003	
	Motor Constant	K_m	Nm/\sqrt{W}	3.29		5.27		8.15	
	Rotor ID		mm			178			
Stator OD		mm			260				

Motor Parameters		Symbols	Units	TMH-260-035		TMH-260-070		TMH-260-140	
PERFORMANCE	DC Bus Voltage	V_{DC}	V	310	560	310	560	310	560
	Rated Torque	T_r	Nm	40.5		74.1		141.1	
	Peak Torque	T_p	Nm	142.5		282.8		567.8	
	Rated Speed	N_r	rpm	235	450	205	390	150	285
	No-Load Speed	$N_{no-load}$	rpm	285	515	240	435	175	315
	Torque Constant	K_t	Nm/A	10.97		13		17.87	
	Voltage Constant	K_v	V/rpm	0.938		1.112		1.529	
	Max. Cogging Torque	T_{cog}	%			<1			
	Torque Ripple	T_{ripple}	%			<1			
	Number of Pole	$2p$	--			40			
ELECTRICAL	Rated Current	I_r	A_{rms}	3.7		5.7		7.9	
	Peak Current	I_p	A_{rms}	14		23.4		34.2	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	7.56 ($\pm 20\%$)		4.1 ($\pm 20\%$)		3.16 ($\pm 20\%$)	
	Line Inductance	$L_{LL}@60Hz$	mH	35.2 ($\pm 30\%$)		24.5 ($\pm 30\%$)		22.3 ($\pm 30\%$)	
MECHANICAL & THERMAL	Stator Weight	W_s	kg	4.66		8.41		15.79	
	Rotor Weight	W_r	kg	2.60		5.23		10.47	
	Total Weight	W_{total}	kg	7.26		13.64		26.26	
	Mech. Time Constant	K_{mech}	ms	1.94		1.48		1.21	
	Thermal Resistance ⁽²⁾	R_{th}	$^{\circ}C/W$	0.358		0.276		0.200	
	Inertia	J	$kg.m^2$	0.02473		0.04983		0.10003	
	Motor Constant	K_m	Nm/\sqrt{W}	3.26		5.24		8.21	
	Rotor ID		mm			178			
Stator OD		mm			260				

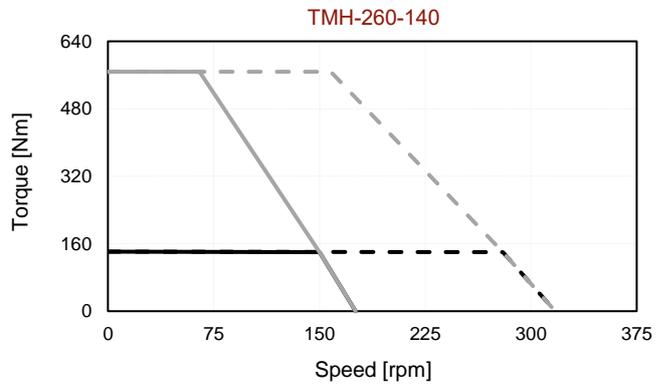
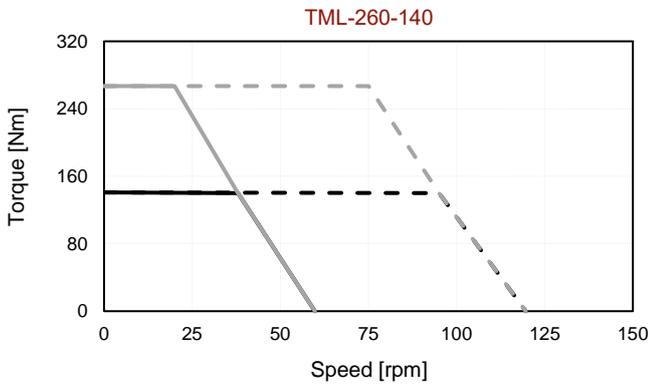
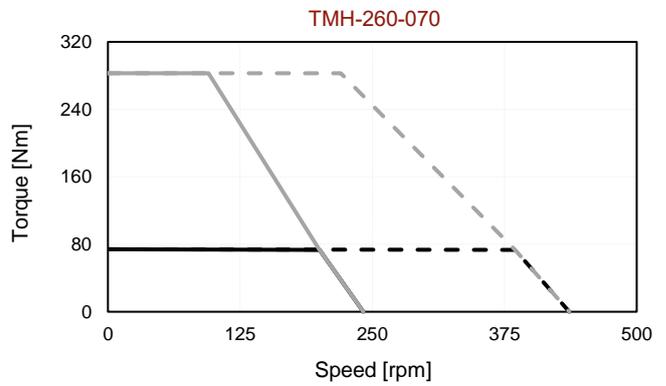
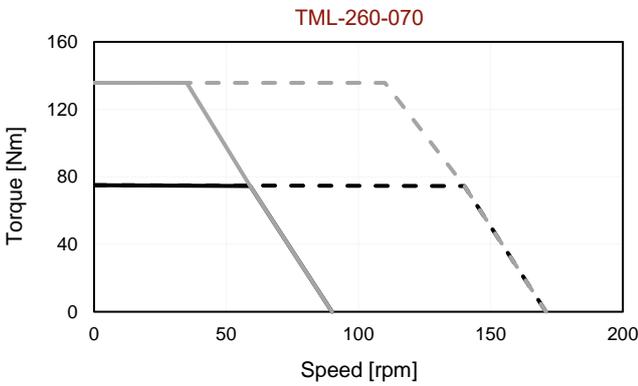
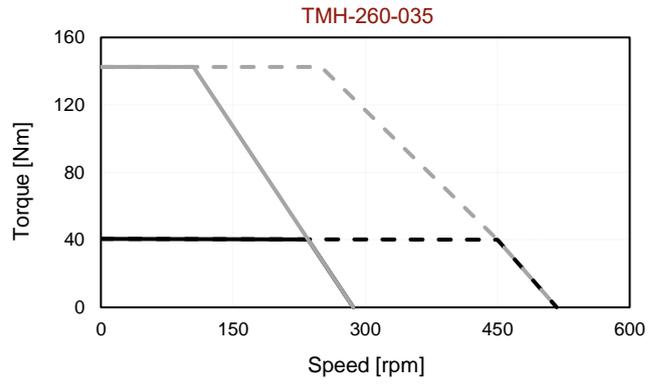
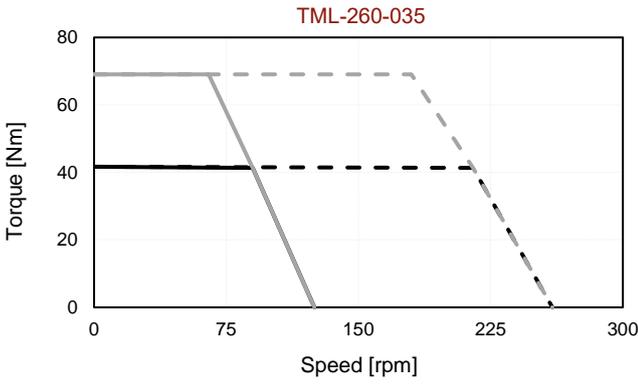
1. All performance and electrical specifications are obtained at 25°C ambient and may change $\pm 10\%$. 2. Housed version of motor mounted to 390 mm sq. x 15 mm aluminum heat sink (maximum winding temperature is 120°C). 3. All data referenced to sinusoidal commutation. 4. Higher torque and speed values as well as dimensions on request.

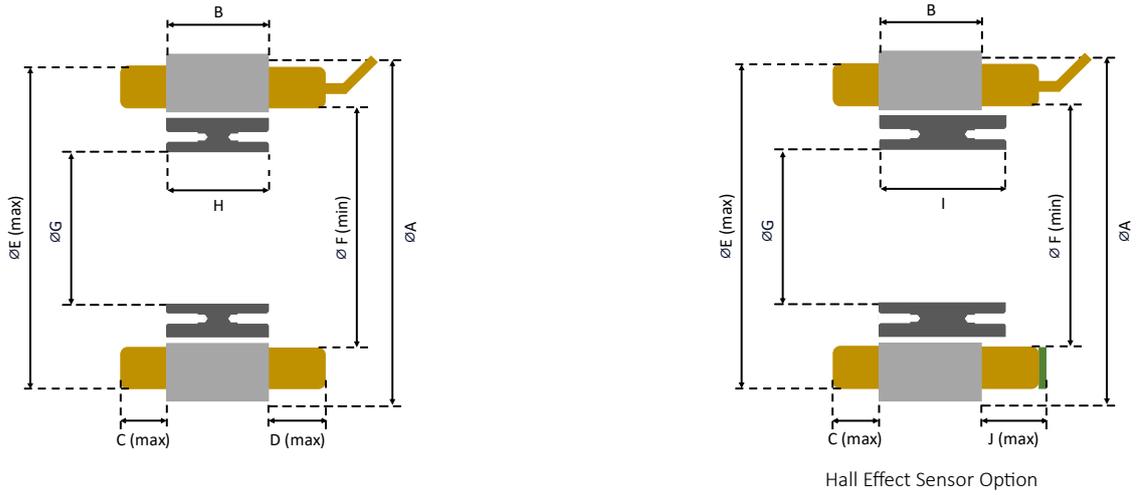
TM(L/H)-260 Torque-Speed Curves

Tr: Rated Torque
Tp: Peak Torque

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

— @Tr 310V - - - @Tr 560V
— @Tp 310V - - - @Tp 560V





Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)
TM(L/H)-260-035	260	35	16	18	253	215.5	178	35.1	40.1	21
TM(L/H)-260-070	260	70	16	18	253	215.5	178	70.2	75.2	21
TM(L/H)-260-140	260	140	16	18	253	215.5	178	140.4	145.4	21

Notes:

MOTOR LEADS:

260-TML: #9 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.
 260-TMH: #13 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: (20X on each side) M5 Bolt Hole
 (For detailed mounting information, including tolerances, please contact MDS Motor or refer to the MDS Motor mounting document)