

# 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	105	240	65	155	45	110
	No-Load Speed	$N_{no-load}$	rpm	150	300	95	190	65	135
	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			
	ELECTRICAL	Number of Pole	$2p$	--			40		
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 <sup>(2)</sup>	$R_{th}$	$^{\circ}C/W$	0.358		0.276		0.200	
	Inertia	$J$	kg.m <sup>2</sup>	0.02473		0.04983		0.10003	
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	1.95	1.29	3.32	2.15	5.47	3.5
	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	260	500	230	435	165	315
	No-Load Speed	$N_{no-load}$	rpm	325	590	275	500	195	360
	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			
	ELECTRICAL	Number of Pole	$2p$	--			40		
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	7.72 ( $\pm 20\%$ )		4.1 ( $\pm 20\%$ )		3.16 ( $\pm 20\%$ )	
Line Inductance		$L_{LL}@60Hz$	mH	37.5 ( $\pm 30\%$ )		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 <sup>(2)</sup>	$R_{th}$	$^{\circ}C/W$	0.358		0.276		0.200	
	Inertia	$J$	kg.m <sup>2</sup>	0.02473		0.04983		0.10003	
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	1.22	0.88	1.75	1.28	2.86	2.07
	Rotor ID		mm			178			
	Stator OD		mm			260			

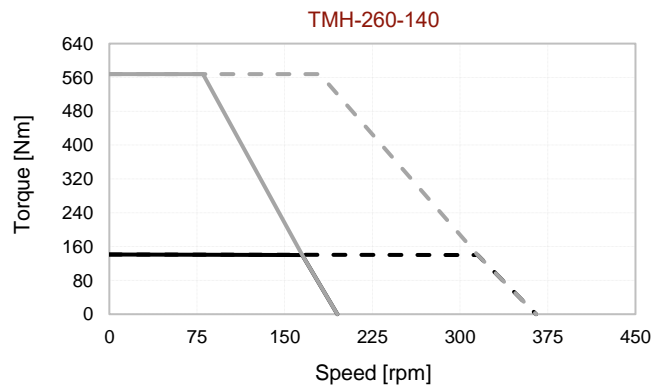
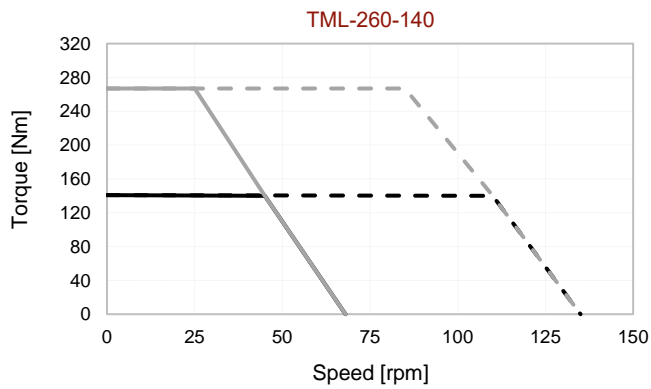
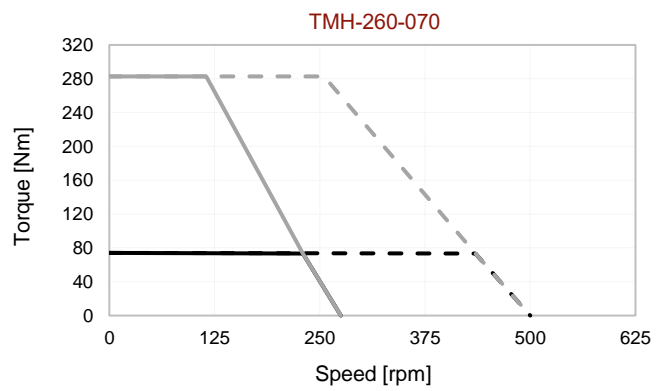
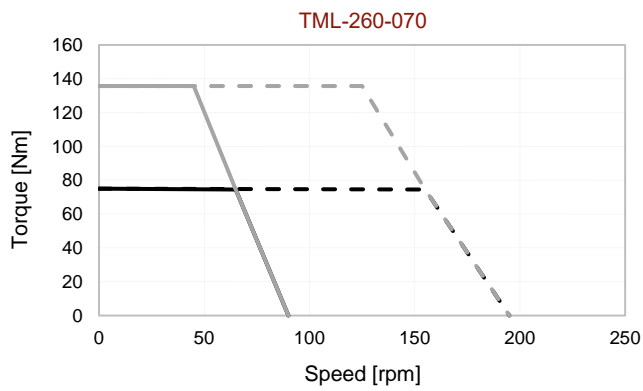
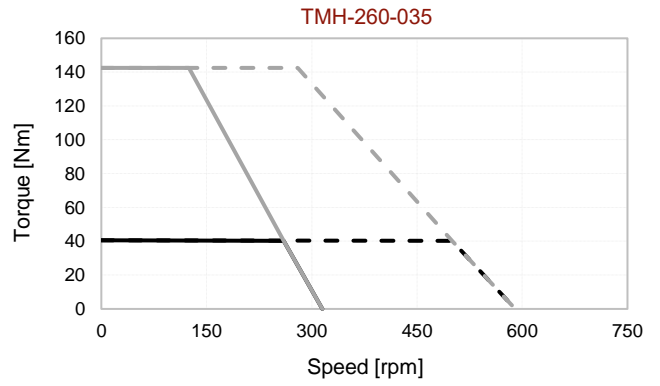
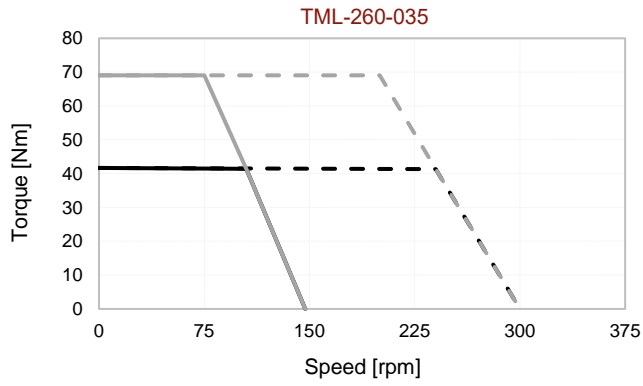
1. All performance and electrical specifications are obtained at 25°C ambient and may change  $\pm 10\%$ . 2. Housed version of motor mounted to 390 mm sq. x 15 mm aluminum heat sink (maximum winding temperature is 120°C). 3. Higher torque and speed values as well as dimensions on request.

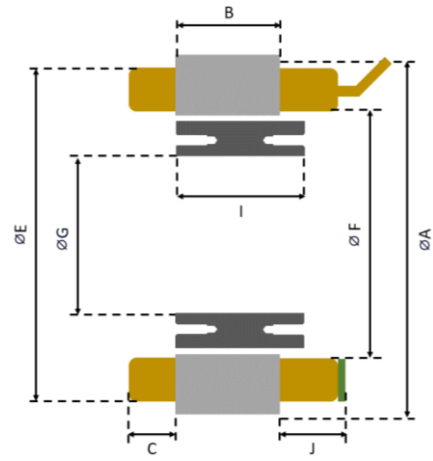
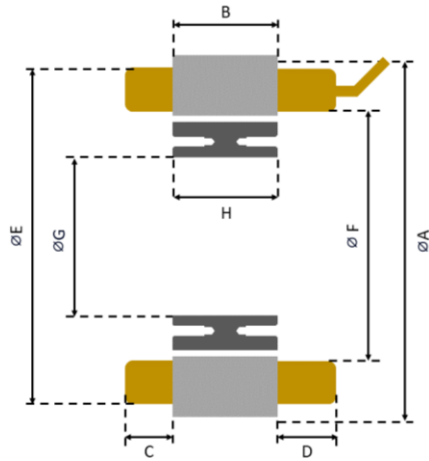
# TM(L/H)-260 Torque-Speed Curves

Tr: Rated Torque  
Tp: Peak Torque

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

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





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)-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 details refer to MDS Motor mounting documents)