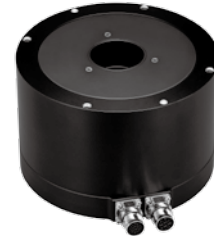


1.3 TMY Rotary Tables

The TMY series is designed with an integrated, high resolution absolute resolver which is optimized to achieve high dynamic motion, high torque and high precision. The TMY series is a perfect fit for industries that require high precision.

- Outer rotating structure
- Integrated absolute resolver with resolution 920,000 p/rev
- Time sparing for homing procedure with absolute resolver integrated
- High dynamic, torque and precision
- Maximum torque: 12~300 Nm
- Compatible with special environments



■ Model Numbers for TMY Series

Motor specification				Function
TM	Y	6	3	C

Series

TM : Torque Motor

Type

Y : Absolute resolver type

Size

4 : External diameter Φ 110mm

6 : External diameter Φ 170mm

A : External diameter Φ 270mm

Rotor height

3 : 30mm

4 : 40mm

5 : 50mm

8 : 80mm

A : 100mm

Optional Specifications

: Standard

C : Customized

1.3.1 TMY4 Series

TMY4 Dimensions

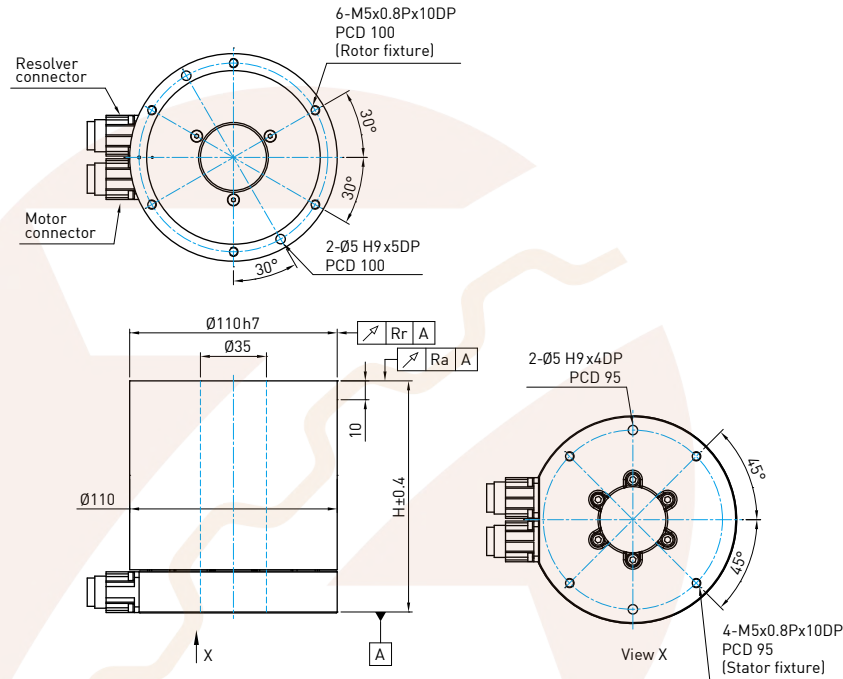


Table 1.6 TMY4 Specifications

	Symbol	Unit	TMY44	TMY48
Continuous torque	T_c	Nm	4	8
Continuous current	I_c	A _{rms}	2.6	2.6
Peak torque (Within 1s.)	T_p	Nm	12	24
Peak current (Within 1s.)	I_p	A _{rms}	7.8	7.8
Torque constant	K_t	Nm/A _{rms}	1.56	3.12
Electrical time constant	T_e	ms	5.2	5.4
Resistance (line to line at 25°C)	R_{25}	Ω	2.57	4.5
Inductance (line to line)	L	mH	13.27	24.42
Number of poles	$2p$		14	14
Back emf constant (line to line)	K_v	V _{rms} /(rad/s)	0.9	1.8
Motor constant (line to line at 25°C)	K_m	Nm/ \sqrt{W}	0.8	1.2
Thermal resistance	R_{th}	K/W	2.9	1.6
Temperature sensor				PTC SNM100
Nominal input voltage		V _{DC}		500(600 ²)
Inertia of rotating parts	J	kgm ²	0.0065	0.0085
Mass of motor	M_m	kg	4.5	7
Max. axial load	F_a	N	1000	1000
Max. moment load	M	Nm	30	30
Max. speed		rpm	300	300
Resolution		p/rev		920,000 (Absolute Resolver ¹⁾)
Repeatability		arc-sec		± 3
Accuracy		arc-sec		± 30
Axial runout	R_a	mm		0.03(0.005 ²)
Radial runout	R_r	mm		0.03(0.015 ²)
Height	H	mm	123	163

Note : ¹⁾ The motor should be matched with corresponding HIWIN driver.

²⁾ Optional

*All the specifications in the table are in $\pm 10\%$ of tolerance except dimensions.

1.3.2 TMY6 Series

TMY6 Dimensions

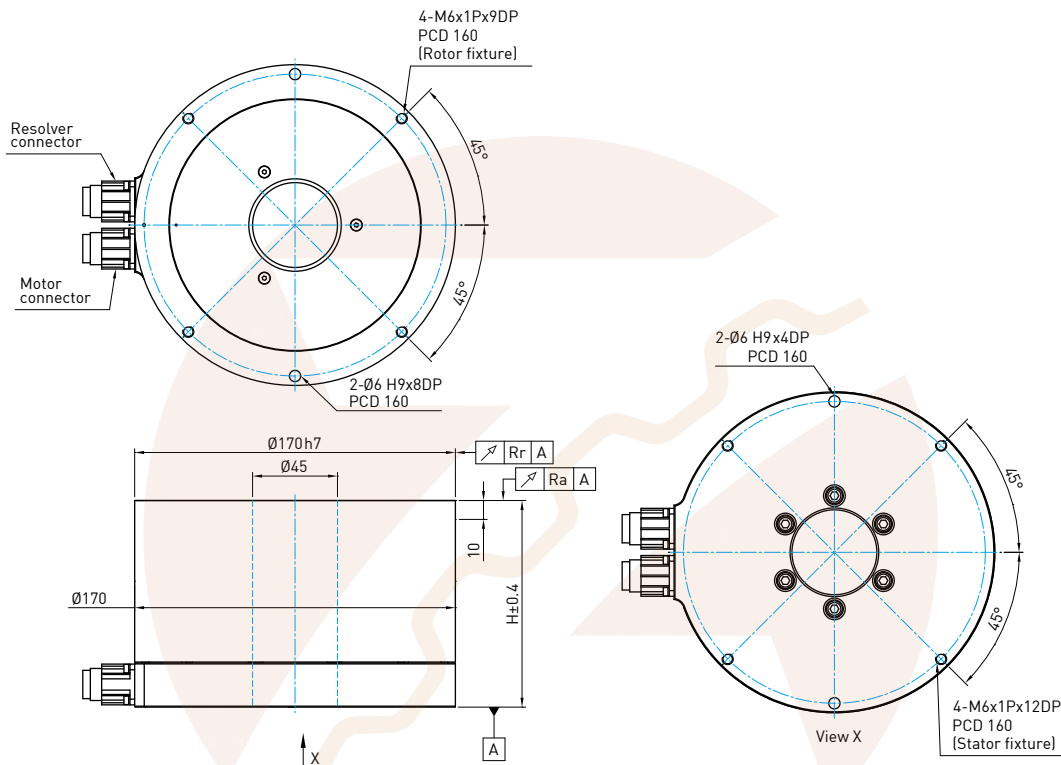


Table 1.7 TMY6 Specifications

	Symbol	Unit	TMY63	TMY65	TMY68
Continuous torque	T_c	Nm	8	16	24
Continuous current	I_c	A _{rms}	3.8	3.8	3.8
Peak torque (Within 1s.)	T_p	Nm	24	48	72
Peak current (Within 1s.)	I_p	A _{rms}	12	12	12
Torque constant	K_t	Nm/A _{rms}	2.13	4.26	6.39
Electrical time constant	T_e	ms	5.7	6.3	6.5
Resistance (line to line at 25°C)	R_{25}	Ω	2	3.1	4.38
Inductance (line to line)	L	mH	11.4	19.4	28.26
Number of poles	2_p		16	16	16
Back emf constant (line to line)	K_v	$V_{rms}/(rad/s)$	1.2	2.5	3.7
Motor constant (line to line at 25°C)	K_m	Nm/\sqrt{W}	1.2	2	2.5
Thermal resistance	R_{th}	K/W	1.7	1.1	0.8
Temperature sensor				PTC SNM100	
Nominal input voltage		V_{DC}		500(600 ²)	
Inertia of rotating parts	J	kgm ²	0.019	0.026	0.033
Mass of motor	M_m	kg	8	11	15
Max. axial load	F_a	N	3700	3700	3700
Max. moment load	M	Nm	60	60	60
Max. speed		rpm	300	300	300
Resolution		p/rev	920,000 (Absolute Resolver ¹⁾)		
Repeatability		arc-sec	±3		
Accuracy		arc-sec	±30		
Axial runout	R_a	mm	0.03(0.005 ²)		
Radial runout	R_r	mm	0.03(0.015 ²)		
Height	H	mm	109.5	134.5	159.5

Note : ¹⁾ The motor should be matched with corresponding HIWIN driver.

²⁾ Optional

*All the specifications in the table are in ±10% of tolerance except dimensions.

1.3.3 TMYA Series

TMYA Dimensions

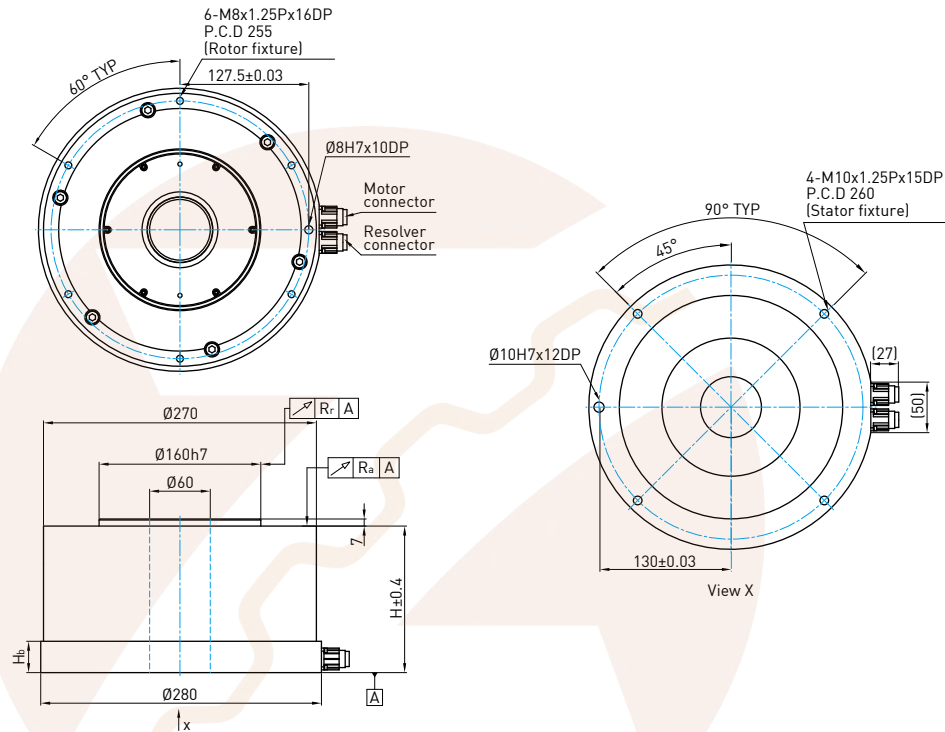


Table 1.8 TMYA Specifications

	Symbol	Unit	TMYA5	TMYAA
Continuous torque	T _c	Nm	50	100
Continuous current	I _c	A _{rms}	2.2	4.4
Peak torque (Within 1s.)	T _p	Nm	150	300
Peak current (Within 1s.)	I _p	A _{rms}	6.6	13.2
Torque constant	K _t	Nm/A _{rms}	22.5	22.5
Electrical time constant	T _e	ms	13.2	13.3
Resistance (line to line at 25°C)	R ₂₅	Ω	13.3	5.8
Inductance (line to line)	L	mH	170	77
Number of poles	2 _p		22	22
Back emf constant (line to line)	K _v	V _{rms} /(rad/s)	13	13
Motor constant (line to line at 25°C)	K _m	Nm/√W	5	7.6
Thermal resistance	R _{th}	K/W	0.8	0.4
Temperature sensor				PTC SNM100
Nominal input voltage		V _{dc}		500(600 ²⁾)
Inertia of rotating parts	J	kgm ²	0.32	0.44
Mass of motor	M _m	kg	54	74
Max. axial load	F _a	N	6500	6500
Max. moment load	M	Nm	240	240
Max. speed		rpm	100	100
Resolution		p/rev		920,000 (Absolute Resolver ¹⁾)
Repeatability		arc-sec		±3
Accuracy		arc-sec		±30
Axial runout	R _a	mm		0.03(0.005 ²⁾)
Radial runout	R _r	mm		0.03(0.015 ²⁾)
Height	H	mm	145	200
Height of base	H _b	mm		31

Note : ¹⁾ The motor should be matched with corresponding HIWIN driver.

²⁾ Optional

*All the specifications in the table are in ±10% of tolerance except dimensions.

1.3.4 TMY Series T-N curves

(DC bus voltage=325V_{DC})

