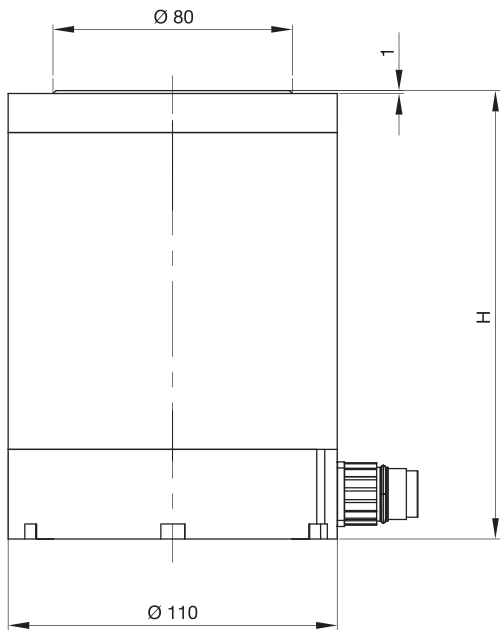


HIWIN rotary tables

4. TMSOX HIWIN rotary tables

Dimensions of the TMSOX HIWIN rotary table

(for values, see Table 4.1)



View X

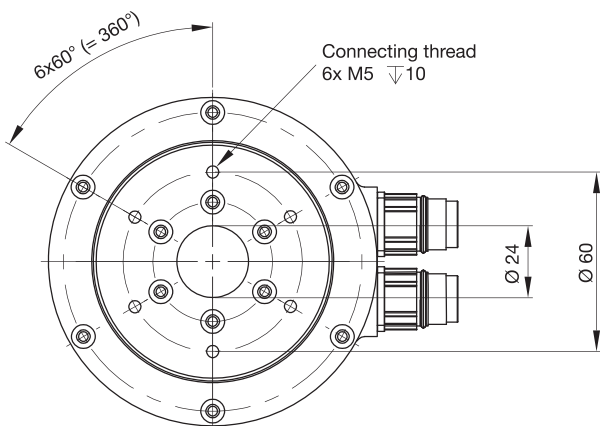
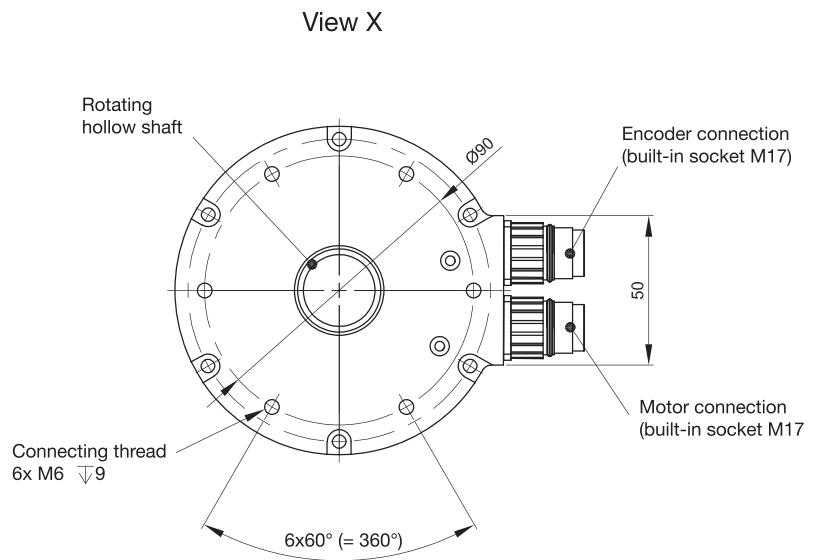


Table 4.1 Specifications for HIWIN TMS0X Rotary Tables

Specifications for HIWIN Rotary Tables

	Symbol	Unit	TMS03	TMS07
Peak torque for 1 second	T_p	Nm	7.7	15.5
Continuous torque (coil temp. 80°C)	T_c	Nm	3.1	6.2
Stall torque (coil temp. 80°C)	T_s	Nm	2.2	4.3
Moment of inertia of rotating parts	J	kgm ²	0.003	0.006
Mass	M_m	kg	4	7
Max. axial load	F_a	N	3700	3700
Max. radial load	F_r	N	820	820
Max. speed (at 400 V _{AC}) for 1 second	n_{max}	rpm	1000	1000
Nominal speed (at 400 V _{AC} and 30% DR)		rpm	500	500
Accuracy		arc sec	150	150
Repeatability		arc sec	6	6
Radial run-out		mm	0.03	0.03
Axial run-out		mm	0.03	0.03
Height	H	mm	117.5	150
Protection class			IP40	

Motor Specifications

	Symbol	Unit	TMS03	TMS07
Peak current for 1 second	I_p	A_{eff}	5	5
Continuous current (coil temp. 80°C)	I_c	A_{eff}	2	2
Motor constant (coil temp. 25°C)	K_m	Nm/ \sqrt{W}	1	0.73
Coil resistance (coil temp. 25°C) ¹⁾	R_{25}	Ω	4	6.1
Coil resistance (coil temp. 100°C) ¹⁾	R_{100}	Ω	5.5	7.6
Motor inductance ²⁾	L	mH	10	15
Electric time constant	T_e	ms	2.8	2.4
Torque constant	K_t	Nm/ A_{eff}	1.55	3.1
Voltage constant	K_v	$V_{rms}/(rad/s)$	0.61	1.24
Number of poles	2p	—	10	10
Thermal resistance	R_{th}	K/W	1.1	0.84
Thermal circuit breaker			Bimetal (break contact), switching point 100°C, 12 VDC/6 A, 24 VDC/3 A	
Max. intermediate circuit voltage		V	500	500

¹⁾ Line resistance

²⁾ Line inductance

Encoder specifications (optical, incremental)

- 2048 lines/cycle
- Index mark
- Signal output sin/cos 1 V_{SS}