

(for values, see Table 8.1)

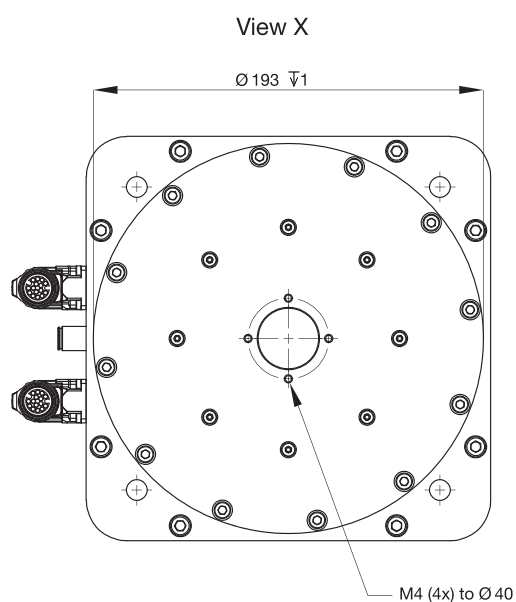
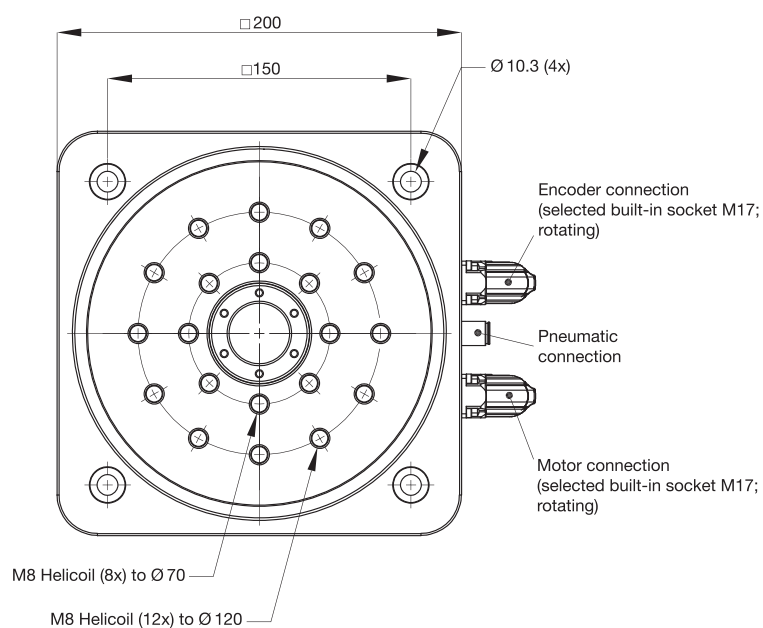


Table 8.1 Specifications for HIWIN TMA3X Rotary Table

Specifications for HIWIN rotary table

	Symbol	Unit	TMA32
Peak torque for 1 second	T_p	Nm	27
Continuous torque (coil temp. 80°C)	T_c	Nm	11
Stall torque (coil temp. 80°C)	T_s	Nm	8
Moment of inertia of rotating parts	J	kgm ²	0.019
Mass	M_m	kg	16
Max. axial load	F_a	N	2500
Max. radial load	F_r	N	2500
Rigidity of axial bearing		N/μm	350
Rigidity of radial bearing		N/μm	125
Tipping rigidity		Nm/μrad	0.58
Max. tipping moment		Nm	70
Max. speed (at 400 V _{AC}) for 1 second	n_{max}	rpm	
Nominal speed (at 400 V _{AC} and 30% DR)		rpm	
Accuracy		arc sec	20
Repeatability		arc sec	2
Radial run-out		mm	0.002
Axial run-out		mm	0.002
Operating pressure	H	bar	5
Air consumption	v_n	NU/min	18
Protection class			IP40

Motor Specifications

	Symbol	Unit	TMA32
Peak current for 1 second	I_p	A_{eff}	8
Continuous current (coil temp. 80°C)	I_c	A_{eff}	3.0
Motor constant (coil temp. 25°C)	K_m	Nm/√ W	1.0
Coil resistance (coil temp. 25°C) ¹⁾	R_{25}	Ω	2.9
Coil resistance (coil temp. 100°C) ¹⁾	R_{100}	Ω	3.7
Motor inductance ²⁾	L	mH	10.0
Electric time constant	T_e	ms	3.9
Torque constant	K_t	Nm/ A_{eff}	3.5
Voltage constant	K_v	V _{rms} /(rad/s)	1.6
Number of poles	$2p$	—	22
Thermal resistance	R_{th}	K/W	0.7
Thermal circuit breaker			100°C, bimetal (break contact), DC12V/6A,
Max. intermediate circuit voltage		V	750

¹⁾ Line resistance²⁾ Line inductance

Encoder specifications (optical, incremental)

- 5400 lines/cycle
- Index mark
- Signal output sin/cos 1 V_{ss}