Two Axis Rate Turntable

Features

1. This kind of two-axis test turntable is part of a series of universal turntable top speed turntable with a range of standard modules available to customer's requirements. It can be selected according to customer's needs. It has position and speed functions to provide accurate single axis and double axis positioning and rate reference for the load to be measured. It is mainly used for static test and calibration of small and medium inertial measurement unit (IMU) and inertial navigation system**.**

2. This type of turntable shafts are directly driven by permanent magnet DC torque motor, the turntable shafts are directly driven by permanent magnet DC torque motor, PWM drive unit for the motor to provide the required power supply, so that the turntable has excellent rate stability and rate accuracy, accurate control precision in place.

3. The pitching shaft of the turntable is equipped with a mechanical locking device to facilitate the assembly and disassembly of the measured load. At the same time, when the mechanical locking device is in the locking state, the turntable's electric control system can not be put into operation, so as to avoid the motor damage caused by wrong operation.

4. The inner and outer frames of the turntable are equipped with conductive slip rings to facilitate the transmission of the measured load signal or power supply. This series turntable is equipped with two kinds of standard conductive slip rings for customers to choose, also can be customized according to customer needs.

5. The turntable adopts DSP control system developed by our company, equipped with RS232, RS485 communication interface, and can also be

customized according to customer needs, the system has a very friendly man-machine interface.

Specifications

Maximum height (mm):				792
The height of the axis of the outer frame (mm):				642
Maximum width of rame shafting (mm):				888
Dimensions of base (mm):				712 X 460 (LXW)
Table flatness (mm):				0.05
The distance between the mesa and the axis of the outer frame (mm):				98
Mesa of magnetic flux leakage (mT):				0.5
Payload weight (kg):				20kg
The weight of the turntable (kg):				280kg
Turntable Model No.:		ER-ZX2V300T	ER-ZX2V360T	
Shafting category		Inside casing shaft	The casing outside the shaft	
Mechanical Technical Specifications				
Shafting perpendicularity		±4”		
Shafting rotation accuracy		≤±2″	≤±3”	
The moment of inertia of shafting	Without load	0.06kgm2 (Duralumin table)		
	On load	Decided by the load moment of inertia (acceleration is equal to the motor moment divided by the moment of inertia), the motor can run continuously for 10 minutes under the action of peak torque.		
Electrical Technical Specifications				
Angular rotation range		Continuous infinite	Continuous infinite	
Control position accuracy		±5”	±5”	
Rate range		0.001°/s~±800° /s	0.001°/s~±500° /s	
Rate accuracy & stability		w<1°/s, 5X10-3 (1° average)	w<1°/s, 5X10-3 (1° average)	
		1°/s≤w<10°/s, 5X10-4 (10° average)	1°/s≤w<10°/s, 5X10-4 (10° average)	
		10°/s≤w, 5X10-5 (360° average)	10°/s≤w, 5X10-5 (360° average)	
Optional template				
Table-board	Diameter	φ360mm	φ300mm	
	Material	Hard aluminum alloy (surface hard treatment, surface hardness up to HRC30)		
Motor	–	Inside casing shaft	The casing outside the shaft	
	Continuous torque	4Nm	7.5Nm	7.5/15Nm	32.5/65Nm
	Peak torque	10Nm	22.5Nm	22.5/45Nm	65/130Nm
Customization				
1. The accuracy of the control can be selected according to customer requirements, up to 2″.				
2. Speed accuracy, stability and flatness of the table can be selected according to customer requirements, up to 5				

times. 3. Northward guiding mirror is available. 4. According to user requirements, British Renishaw circular grating or German Heidenhain encoder can be configured as position feedback components (standard for Heidenhain encoder). 5. The shaft rotation accuracy and verticality can be customized according to user requirements. 6. Table diameter can be customized within 360mm according to user requirements.
Conductive slip ring
1. Ring number: (can be customized according to user requirements) 56Ring 36Ring 1~36 channel, 2A, twin twist shield; 1~24 channel, 2A, twin twist shield 37~56 channel, 5A, power cord. 25~36 lines, 5A, power Line 2. Contact resistance change value: static ≤0.005Ω dynamic ≤0.01 Ω 3. Insulation resistance between conductive slip rings: ≥300MΩ, 500V; Contact resistance of conductive slip ring: ≤0.1Ω 4. Working humidity: ≤85%. 5. Power supply: 220V ±10%, 50Hz/16A