

PT-080-2P

Dual-axis tracking turntable

This turntable comprises an azimuth axis (X) and a pitch axis (Y), forming a dual-axis turntable structure. As a two-dimensional precision testing device, when used in conjunction with optical or antenna payloads, it enables the acquisition, pointing and high-precision open-loop tracking of spatial targets.



Product Features

- Dual-axis tabletop precision structure
- Load capacity: 80 kg
- Rotational accuracy: $\pm 3''$
- Angular positioning accuracy: $\pm 3''$
- High speed stability across a wide range
- Open-loop tracking accuracy to the arc-second level

Suitable scenarios

Suitable for use in the fields of optoelectronic tracking and astronomical observation, in conjunction with telescopes, optical systems or satellite antennas, for tracking stars and space targets.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\pm 3''$
	Angular position repeatability	$\pm 2''$
	Tracking/pointing accuracy	Open-loop tracking of spatial targets: single-axis $< 3''$ (RMS) Open-loop tracking of stellar targets: error $< 1''$ within 60 minutes
	Rate stability	$\omega \leq 1^\circ/\text{s}$: 2×10^{-3} (1° averaging method) $1 < \omega < 10^\circ/\text{s}$: 2×10^{-4} (10° averaging method) $\omega \geq 10^\circ/\text{s}$: 2×10^{-5} (360° averaging method)
Dynamic Performance	Maximum angular velocity	Azimuth: $\geq 10^\circ/\text{s}$ Pitch: $\geq 4^\circ/\text{s}$
	Maximum angular acceleration	Inner ring (pitch): $\geq 1^\circ/\text{s}^2$ Outer ring (azimuth): $\geq 1^\circ/\text{s}^2$
Range of Motion	Azimuth/elevation range of motion	Azimuth (outer ring): $\pm 355^\circ$ Elevation (inner ring): -20° to $+95^\circ$
Mechanical Specifications	Load capacity	80 kg
Environmental Protection	Protection rating	Ip20
	Operating temperature	0°C to $+40^\circ\text{C}$
Power and Communication	Power supply requirements	220 V AC $\pm 10\%$ / 50 Hz
	Control interface	RS232/RS422/485 serial port or network interface (EtherCAT)