

PT-100-2PW

Heavy-load tracking turntable

This product is a 'T'-shaped two-dimensional tracking turntable, comprising azimuth and elevation axes, an encoder and a control box, and is used for high-precision tracking of space targets such as satellites.



Product Features

- Load capacity exceeding 100 kg
- Pointing accuracy of 10 arcseconds
- Angular measurement accuracy ≤ 2 arcseconds
- Equipped with both mechanical and electronic limit switches
- Tracking speed whilst maintaining accuracy $\geq 6^\circ/\text{s}$
- Resistant to salt spray, moisture and corrosion

Suitable scenarios

Designed for the quantum communications industry, this serves as the core equipment for ground receiving stations, working in conjunction with software control to facilitate satellite-to-ground quantum communications.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular Position Accuracy	$\leq 2''$ (measurement accuracy at angular positions)
	Angular Position Repeatability	3''
	Tracking/Pointing Accuracy	Static pointing accuracy: 10" Open-loop guiding error: Stars $< 0.2''/10s$, $< 1.0''/10min$ Satellites in full orbit $< 3''$ Sine-wave guiding (single axis) < 3
Dynamic Performance	Maximum angular velocity	Azimuth $\geq 10^\circ/s$, pitch $\geq 5^\circ/s$
	Maximum angular acceleration	Azimuth $\geq 1^\circ/s^2$, pitch $\geq 1^\circ/s^2$
Range of Motion	Azimuth/elevation range	Azimuth: Mechanical $\geq \pm 280^\circ$, electrical limit switch $\geq \pm 275^\circ$ Elevation: Mechanical -5° to 95° , electrical limit switch -3° to 92°
Mechanical Specifications	Load capacity	≥ 100 kg
	Table diameter/dimensions	Load diameter > 800 mm, load length > 1514 mm
Environmental Protection	Protection rating	Corrosion-resistant, salt-spray-resistant, moisture-resistant
	Operating temperature	-20°C to $+40^\circ\text{C}$