

PT-150-2P

Satellite Tracking Turntable

This satellite tracking gimbal is a two-axis gimbal comprising azimuth and elevation axes. When used in conjunction with a satellite antenna or optical system, it serves to eliminate the effects of the Earth's rotation, enabling the acquisition, pointing and high-precision open-loop tracking of space targets such as stars and satellites.



Product Features

- Two-axis (azimuth/elevation) movement
- Load capacity: 150 kg
- Angular position accuracy: $\pm 3''$
- High tracking stability
- Stellar error: $< 1''/h$
- Encoder resolution: $1''$

Suitable scenarios

Suitable for use in the fields of astronomical observation and satellite communications; when used in conjunction with satellite antennas or optical systems, it is employed for the acquisition, pointing and tracking of 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	For stars: error < 1" within 60 minutes (open-loop); for space targets: < 5" per axis (open-loop)
	Rate stability	$\omega \leq 1^\circ/\text{s}: 2 \times 10^{-3}$ $1-10^\circ/\text{s}: 2 \times 10^{-4}$ $\geq 10^\circ/\text{s}: 2 \times 10^{-5}$ (all calculated using the 1° or 360° averaging method)
Dynamic Performance	Maximum angular velocity	$30^\circ/\text{s}$
	Maximum angular acceleration	Azimuth $\geq 6^\circ/\text{s}^2$ Elevation $\geq 2^\circ/\text{s}^2$
Range of Motion	Azimuth/elevation range of motion	Azimuth: $\pm 280^\circ$ Elevation: -5° to $+95^\circ$
Mechanical Specifications	Load capacity	150 kg
Environmental Protection	Protection rating	Ip54
	Operating temperature	-10°C to $+50^\circ\text{C}$
Power and Communication	Power supply requirements	AC 220 V, 50 Hz
	Control interface	Ethernet/RS422/Fibre optic