

AR-300-2P

Heavy-load satellite tracking turntable

This heavy-payload satellite tracking turntable consists of a dual-axis azimuth-elevation system, capable of driving a 180 kg payload, and is used for high-precision open-loop tracking of satellites, stars and other targets.



Product Features

- Dual-axis structure for azimuth and elevation
- Load capacity: 180 kg
- Axis accuracy: $\pm 2''$
- Supports precision tracking at $1''/s$
- Open-loop tracking error: $< 5''$
- Built-in encoder zero point

Suitable scenarios

Suitable for use in the satellite communications and astronomical observation sectors, where it is used in conjunction with satellite antennas or optical systems for target acquisition and pointing.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\pm 2''$
	Angular position repeatability	$\pm 2''$
	Tracking/pointing accuracy	Open-loop tracking: $< 5''$ on a single axis for space targets; $< 0.5''$ within 10 seconds for stars
	Speed smoothness	$\omega \leq 1^\circ/\text{s}$: 2×10^{-3} $1-10^\circ/\text{s}$: 2×10^{-4} $\omega \geq 10^\circ/\text{s}$: 2×10^{-5}
Dynamic Performance	Maximum angular velocity	Azimuth $\geq 10^\circ/\text{s}$ Pitch $\geq 5^\circ/\text{s}$
	Maximum angular acceleration	Azimuth $\geq 6^\circ/\text{s}^2$ Elevation $\geq 2^\circ/\text{s}^2$
Range of Motion	Azimuth/elevation range	Azimuth: $\pm 280^\circ$ Elevation: -5° to $+95^\circ$
Mechanical Specifications	Load capacity	180 kg
	Table diameter/dimensions	300 mm
Environmental Protection	Protection rating	Ip54
	Operating temperature	-20°C to $+55^\circ\text{C}$
Power and Communications	Power supply requirements	AC 220 V / 50 Hz, ≤ 2 kVA
	Control interface	Ethernet / RS422, supports UDP/TCP protocols