



QPT-50 Series Pan & Tilt Positioners

The QPT-50 Series of Pan & Tilt positioners is designed for a wide variety of applications. They are rugged and durable enough for virtually any environment. The QPT-50 can handle payloads up to 50 foot pounds of torque making it suitable for a wide range of sensors.

Multiple models are available to fit your needs. Integrated Control (IC) units can communicate via networked PC or separate controller. IC units feature integrated dual sensor serial control, lens drive and power supply interface making sensor integration quick and easy. Analog units provide effective solutions where simple command and control are required without a PC. The Sentry line takes our products to the next level by utilizing Stepper Motor technology into the design for more precise accuracy and broader speed control.

AVAILABLE FEATURES

- Payloads up to 50 ft-lbs (67.8 Nm)
- Analog driven or Digital Serial Integrated Controller (IC) models
- Mounting platforms include plain formed table top, table top with single tilt-axis connector and 4 connector Universal models
- Internal wire table top for pass-through or IC sensor wiring on certain models
- Fixed, Inverted or Mobile Installations
- Mil-Spec Connectors
- Tough metal housing and gearing for durability in harsh environments
- Marine configuration that meets IP-67 standards
- RF pass-through connectivity (RF rotary joint, 1-2 channels)
- Pressurized housing available with formed table top models

SENSOR INTEGRATION

- Multi-Spectrum Cameras (Visible/NIR/SWIR)
- Thermal Imagers (LWIR)
- IR and Visible Illuminators
- Laser Range Finders
- Communication Antennas
- Acoustic Devices

QPT-50 SERIES

Serial/IP Features

- Available with DC brush or stepper motors
- Microprocessor control
- Software controlled with status feedback
- Serial Communication: RS232/422/485 and IP
- Control Protocols: QuickSet and Pelco D
- 2 programmable tours and 32 presets

Universal Features

- Pass-through wiring
- Full feature serial control of sensors
- Motor drivers for camera lens zoom and focus control
- 2 Auxilliary relay controls for wipers, illuminators, laser range finders, etc.

Analog Features

- Simple command and control with one controller for one positioner
- Azimuth/Elevation position feedback output
- Power supply integrated into controller

Standard Performance

Load Capacity	50 lb ft (67.8 Nm) maximum	
Operating Voltage Range	24VDC (±4VDC)	
Total Power	Pan & Tilt Axes: 6.5A pk, 2.5A continuous at 24VDC Heater: 2.7A at 24VDC Standby: <0.7A at 24VDC (no heater current)	
Pan-Axis Range	360° continuous rotation (slip ring) 435° (±217.5°) (non-slip ring)	
Pan-Axis Speed	0.005° - 50°/sec	
Tilt-Axis Range	180° (±90°)	
Tilt-Axis Speed	0.005° - 10°/sec at 50 lb ft	
Internal Heater	Thermostatically controlled (32° on/35° off)	
Operating Temperature	-15°C to 55°C (without heater) 5°F to 131°F (without heater)	-30°C to 55°C (with heater) -22°F to 131°F (with heater)
Rotational Limits	Fixed tilt hard limit, adjustable soft limits on both axes	
Feedback	Optical Encoders (0.01° readout)	
Repeatability	0.25° (Pan - 0.05°, Tilt - 0.1° on Sentry models)	
Duty Cycle	20%	
Motor Type/Drive	Stepper (Sentry) and DC Brush	
Communication to Pan & Tilt	RS232/422/485, IP Ethernet: 10/100 Base-T	
Communication to Sensors	RS232/422, Ethernet Pass-Through	
Control Protocol	QuickSet or Pelco D	
Connector Specifications	Mil-Spec grade used on all configurations	
Load Connector Interfaces	1 Mil-Spec connector at tilt axis (certain models) 4 Mil-Spec connectors on Universal tilt table top	
Materials	Housing 6061-T6 Aluminum, stainless steel hardware, permanently sealed radial ball bearings.	
Finish/Color	White powder coat paint over alodined chromate for corrosion resistance standard. Other colors and CARC available upon request	
Weight	22 lbs (10 kg) to 36 lbs (16.3 kg) depending on model	
Dimensions	See page 4	
Test Cable and Software	6 ft test cable and software included with all IC and Sentry configurations	

Note: Test software compatible with Windows-95 SP2, 98, ME, 2000 and XP version. Not compatible with NT. QuickSet control protocol documentation supplied. Different models may vary.



QPT-50 Sentry Universal



QPT-50 with Tilt Connector



Standard Configuration

SERIAL/IP CONFIGURATION

	DC Brush-Type Motor Configurations		Stepper Motor Configurations (Sentry)
	24 VDC	24 VAC	24 VDC
Pan Speed Range (deg/sec)	1.7° - 25°	1.7° - 25°	0.005° - 50°
Tilt Speed Range (deg/sec)	0.3° - 7°	0.3° - 7°	0.005° - 10°
Weight	26 lbs (11.8 kg) to 36 lbs (16.3 kg)		

Note: Speed ranges dependent on model, weight and payload configuration - contact factory for details

ANALOG CONFIGURATION

	12 VDC	24 VDC
Pan Speed Range (deg/sec)	0.5 - 8°	0.5 - 9°
Tilt Speed Range (deg/sec)	0.1 - 3°	0.1 - 3°
Weight	26 lbs (11.8 kg)	

Note: Speed ranges dependent on model, weight and payload configuration - contact factory for details

