PAN & TIL
POSITIONERS_

AUDIO VIDEO SUPPLY

MOOG

QPT-50 Series

Pan & Tilt Positioners

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

Multiple models are available to fit your needs. Integrated Control (IC) units communicate via networked PC or through a 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 utilizes Stepper Motor technology for more precise accuracy and broader speed control.

Available Features

- Payloads up to 50 lb-ft (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 and 2 channels)
- Pressurized housing available

Sensor Integration

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

QUICKSET

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: Moog 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 Auxiliary 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° – 12°/sec at 50 lb-ft
Internal Heater:	Thermostatically controlled 0°C (32°F) ON • 1.7°C (35°F) OFF
Operating Temperature:	Without Heater: -15°C to 55°C (5°F to 131°F) • With Heater: -30°C to 55°C -22°F to 131°F
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 - 0.05° 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:	Moog 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:	26 lbs (11.8 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. Moog control protocol documentation supplied. Different models may vary.

Sentry Universal
4-Port Payload Connectivity*

Formed Table (FT)
Tilt A/B Payload Connectivity**

Formed Table (FT)

Serial/IP Configuration			
	DC Brush-Type Motor Configuration		Stepper Motor Configurations (Sentry)
	24 VDC	24 VAC	24 VDC
Pan Speed Range (deg / sec):	1° – 25°	1° – 25°	0.005° – 50°
Tilt Speed Range (deg / sec):	0.3° – 7°	0.3° – 7°	0.005° – 12°
Weight:	26 lbs (11.8 kg) to 36 lbs (16.3 kg)	26 lbs (11.8 kg) to 36 lbs (16.3 kg)	26 lbs (11.8 kg) to 36 lbs (16.3 kg)

Analog Configuration		
	12 VDC	24 VDC
Pan Speed Range (deg / sec):	1° – 8°	0.5 – 9°
Tilt Speed Range (deg / sec):	1° – 3°	0.1 – 3°
Weight:	26 lbs (11.8 kg)	26 lbs (11.8 kg)

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

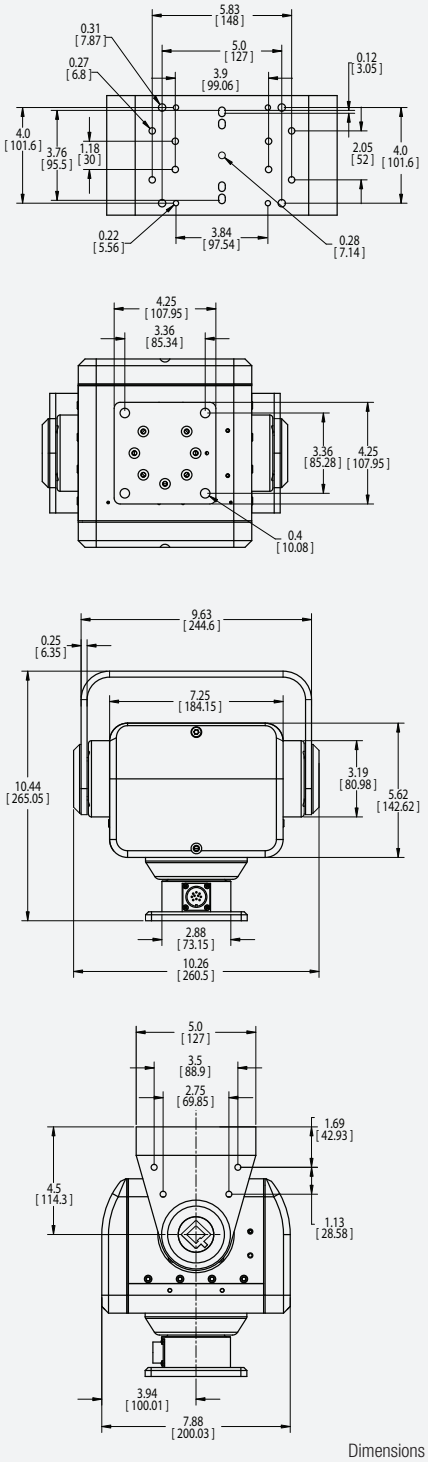
* 4-Port Payload Connectivity
* 2-Channel: Internal processor payload serial control, camera lens drivers / feedback input, Ethernet, payload power supply, video coax to base connector wiring.
* 2-Channel: Payload pass-through wiring for customer supplied payload interfacing including Ethernet, power, serial control, video coax to base connector wiring, and more. (See details in Moog Universal Pan / Tilt data sheet)

** **Tilt A**, Single Channel Payload Connectivity:
Internal processor payload serial control, camera lens drivers / feedback input, Ethernet, payload power supply.

** **Tilt B**, Single Channel Payload Connectivity:
Payload pass-through wiring for customer supplied payload interfacing. Includes base to tilt connector wiring for Ethernet, power, serial control, video coax to base connector wiring, and more.

Dimensions / Architectural Drawings

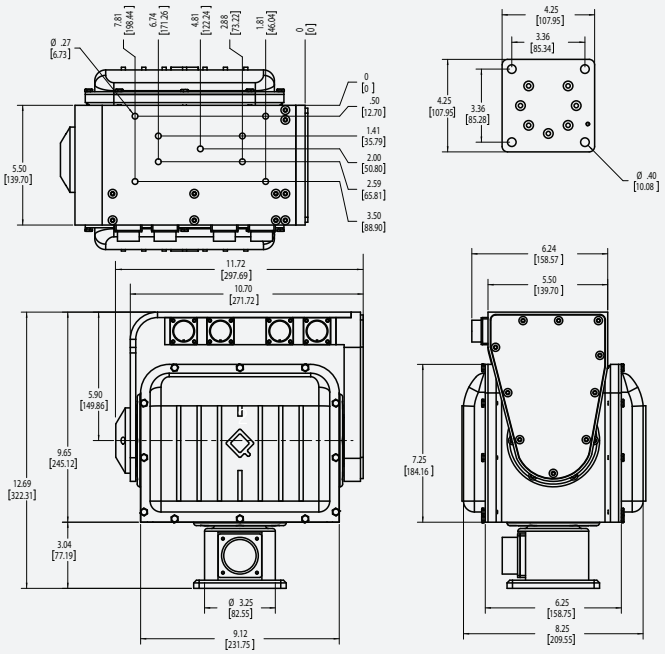
Standard Housing



Dimensions are in Inches [mm]

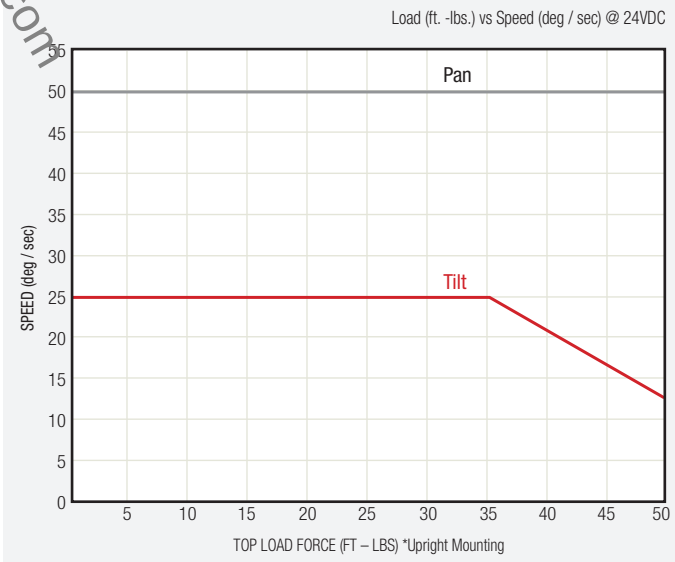
Dimensions / Architectural Drawings

Sentry Universal



Dimensions are in Inches [mm]

Sentry 50 Torque Curve



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