



QPT-20 Series Pan & Tilt Positioners

The QPT-20 Series of Pan & Tilt Positioners are designed for a wide variety of sensor positioning applications. The QPT-20 Series is rugged and durable enough for virtually any environment, including port surveillance and mobile vehicle vision systems. The QPT-20 can handle payloads up to 8 lbs/ft and provides tabletop and/or tilt axis load mounting for multiple sensor array applications. Digital Serial Integrated Control (IC) units communicate via network interface or through a dedicated controller (e.g. UniCom®). If preferred, the analog units are available as effective solutions where simple command and control are required without a PC.

Available Features

- Payloads up to 8 lb-ft (10.8 Nm)
- Analog driven or Digital Serial Integrated Controller (IC) models
- Mounting platforms include plain formed table top and table top with single tilt-axis connector
- 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 channel)
- Shock & Vibration Mil-spec tested

Sensor Integration

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



Serial IP Features

Microprocessor control
Software controlled with status feedback
Serial Communication: RS232 / 422 / 485 and IP
Control Protocols: QuickSet (standard) and Pelco D (optional)
2 programmable tours and 32 presets

Analog Features

Simple command and control with one controller for one positioner
Azimuth / Elevation position feedback output
Power supply integrated into controller
1 Auxiliary relay control for wiper, illuminator, laser range finder, etc.

Mil-Spec Shock & Vibration

Passed Shock: MIL-STD-810F Meth.516.5

Passed Vibration: MIL-PRF-49256A

Tilt Connector Features

Pass-through wiring
Full feature serial control of single sensor
Motor drivers for camera lens zoom and focus control
1 Auxiliary relay control for wiper, illuminator, laser range finder, etc.

Standard Performance

Load Capacity:	8 lb ft (10.8 Nm) maximum
Operating Voltage Range:	24VDC (±4VDC)
Total Power:	Pan & Tilt Axes: 0.85A at 24VDC Heater: 2.7A at 24VDC Standby: <0.1A at 24VDC (no heater current)
Pan-Axis Range:	360° continuous rotation (slip ring) 435° (±217.5°) (non-slip ring)
Pan-Axis Speed:	2° - 35°/sec
Tilt-Axis Range:	180° (±90°)
Tilt-Axis Speed:	1.0° - 12°/sec
Internal Heater:	Included standard, 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) or Potentiometers (0.25° readout)
Repeatability:	0.25°
Duty Cycle:	20%
Motor Type / Drive:	Stepper 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 (standard) and Pelco D (optional)
Connector Specifications:	Mil-Spec grade used on all configurations
Load Connector Interfaces:	1 Mil-Spec connector at tilt axis (certain models)
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:	14.3 lbs. (6.48 kg) depending on model
Dimensions:	See page 4

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.



Standard Configuration



QPT-20 with Tilt Connector

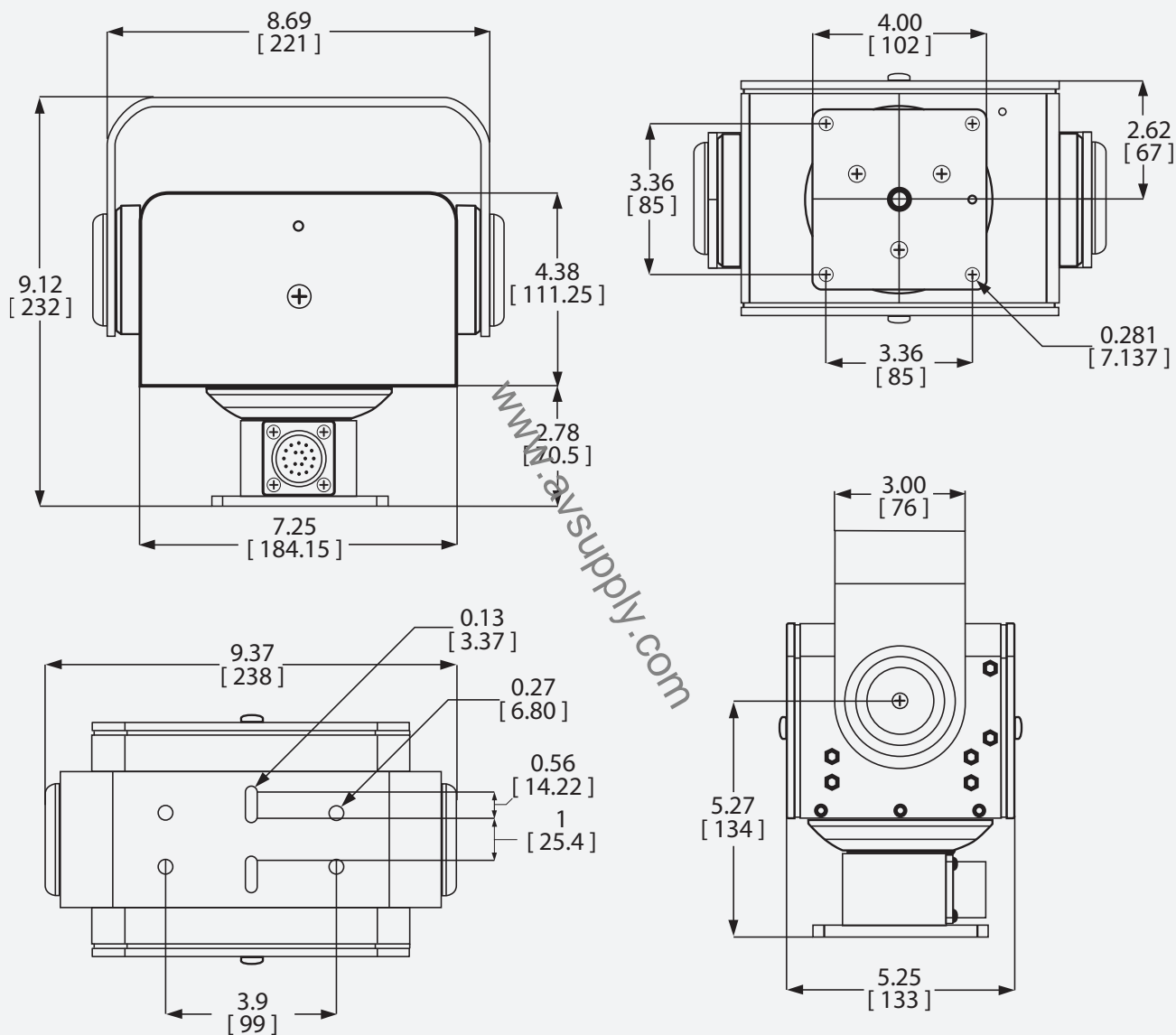
Serial / IP Configuration		
	DC Brush-Type Motor Configuration	
	12 VDC	24 VDC
Pan Speed Range (deg / sec):	2° – 23°	3° – 35° (up to 100°)
Tilt Speed Range (deg / sec):	2° – 12°	3° – 12°
Weight:	14.3 lbs (6.48 kg)	14.3 lbs (6.48 kg)

Analog Configuration			
	12 VDC	24 VDC	24 VAC
Pan Speed Range (deg / sec):	23°	35° (up to 100°)	8°
Tilt Speed Range (deg / sec):	12°	12°	3°
Weight:	14.3 lbs (6.48 kg)	14.3 lbs (6.48 kg)	14.3 lbs (6.48 kg)

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

Dimensions / Architectural Drawings

Standard Housing



Dimensions are in inches (mm)

MOOG

Sensor and Surveillance Systems

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