



## QPT-20 Series

### Pan & Tilt Positioners

The QPT-20 Series of Pan & Tilt positioners is designed for a wide variety of sensor positioning applications. Rugged and durable enough for virtually any environment. The QPT-20 can handle payloads up to 8 ft - lbs. and provides tabletop and/or tilt axis load mounting for multiple sensor array applications. The QPT-20 and its derivatives has proven itself a worthy platform for harsh environment port surveillance and mobile vehicle vision systems such as DVE. Integrated Control (IC) units can communicate via network interface or dedicated controller (e.g. UniCom™). Analog units provide effective solutions where simple command and control are required without a PC.

#### AVAILABLE FEATURES

- Payloads up to 8 ft-lbs (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

# QPT-20 SERIES

## Serial/IP Features

- 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

## Tilt Connector Features

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

## Analog Features

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

## Mil-Spec Shock & Vibration

- Passed Shock: MIL-STD-810F Meth.516.5
- Passed Vibration: MIL-PRF-49256A

## Standard Performance

<b>Load Capacity</b>	8 lb ft (10.8 Nm) maximum
<b>Operating Voltage Range</b>	24VDC (±4VDC)
<b>Total Power</b>	Pan & Tilt Axes: 0.85A at 24VDC Heater: 2.7A at 24VDC Standby: <0.1A at 24VDC (no heater current)
<b>Pan-Axis Range</b>	360° continuous rotation (slip ring) 435° (±217.5°) (non-slip ring)
<b>Pan-Axis Speed</b>	2° - 35°/sec
<b>Tilt-Axis Range</b>	180° (±90°)
<b>Tilt-Axis Speed</b>	1.0° - 12°/sec
<b>Internal Heater</b>	Included standard, Thermostatically controlled (32° on/35° off)
<b>Operating Temperature</b>	-15°C to 55°C (without heater)    -30°C to 55°C (with heater) 5°F to 131°F (without heater)    -22°F to 131°F (with heater)
<b>Rotational Limits</b>	Fixed tilt hard limit, adjustable soft limits on both axes
<b>Feedback</b>	Optical Encoders (0.01° readout) or Potentiometers (0.25° readout)
<b>Repeatability</b>	0.25°
<b>Duty Cycle</b>	20%
<b>Motor Type/Drive</b>	Stepper and DC Brush
<b>Communication to Pan &amp; Tilt</b>	RS232/422/485, IP Ethernet: 10/100 Base-T
<b>Communication to Sensors</b>	RS232/422, Ethernet Pass-Through
<b>Control Protocol</b>	QuickSet or Pelco D
<b>Connector Specifications</b>	Mil-Spec grade used on all configurations
<b>Load Connector Interfaces</b>	1 Mil-Spec connector at tilt axis (certain models)
<b>Materials</b>	Housing 6061-T6 Aluminum, stainless steel hardware, permanently sealed radial ball bearings.
<b>Finish/Color</b>	White powder coat paint over alodined chromate for corrosion resistance standard. Other colors and CARC available upon request
<b>Weight</b>	14.3 lb.s (6.48 kg) depending on model
<b>Dimensions</b>	See page 4
<b>Test Cable and Software</b>	6 ft test cable and software included with all IC 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.



**Standard Configuration**



**QPT-20 with Tilt Connector**

## SERIAL/IP CONFIGURATION

DC Brush-Type Motor Configurations		
	12 VDC	24 VDC
<b>Pan Speed Range</b> (deg/sec)	2° - 23°	3° - 35° (up to 100°)
<b>Tilt Speed Range</b> (deg/sec)	2° - 12°	3° - 12°
<b>Weight</b>	14.3 lb.s (6.48 kg)	

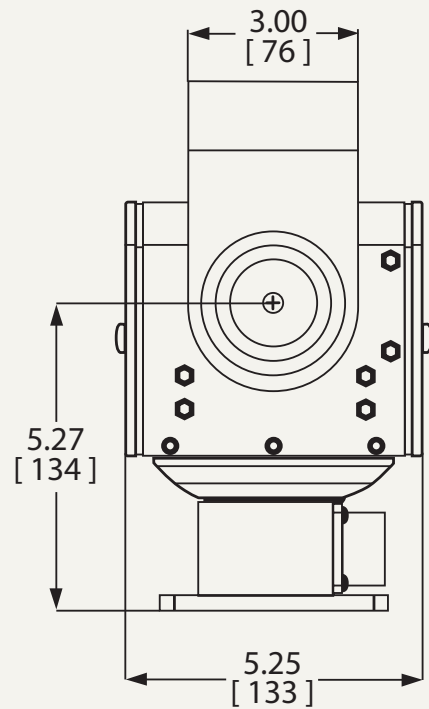
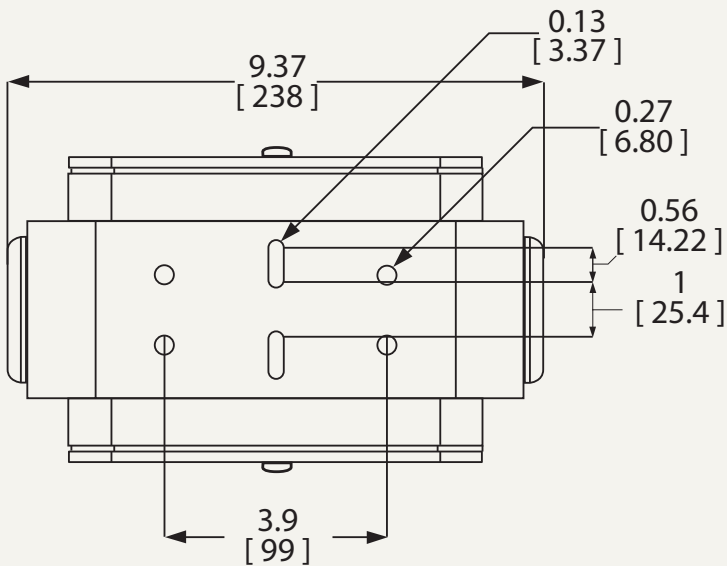
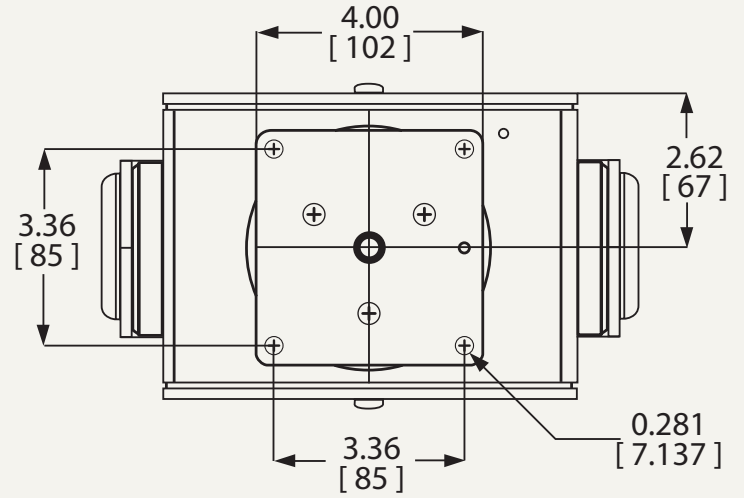
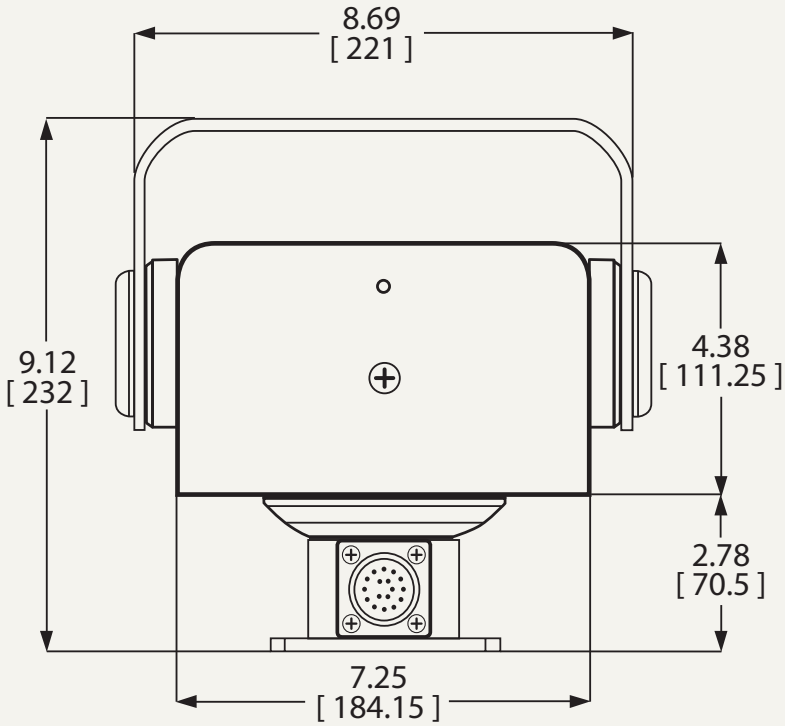
Note: Speed ranges dependent on model, weight and payload configuration - contact factory for details

## ANALOG CONFIGURATION

	12 VDC	24 VDC	24 VAC
<b>Pan Speed Range</b> (deg/sec)	23°	35° (up to 100°)	8°
<b>Tilt Speed Range</b> (deg/sec)	12°	12°	3°
<b>Weight</b>	14.3 lb.s (6.48 kg)		

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

## STANDARD HOUSING



Dimensions are in Inches [mm]



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