



## QPT-500 MIL-461 RF ANTENNA POSITIONER



The QPT-500 antenna positioner has been rigorously tested and designed to function not only in adverse environments but in locations where RF signals wreak havoc on sensitive electronics. Not only is this antenna positioning device unperturbed by these signals, it also emits no harmful frequencies. This product surpassed numerous EMI requirements for MIL-STD-461 as well as many other environmental standards

included in MIL-STD-810 making it an ideal solution for RF communication in critical applications.

Additionally, this antenna positioner has an integrated fiber media converter that eliminates noise challenges present in systems that rely solely on copper conductors. The use of fiber for data transmission also allows for the deployment of the command and control center at a significant distance from the positioner installation. Finally, the use of heavy duty gear and bearing designs allows precision pointing to be maintained during high velocity wind loads often created by large RF payloads.

### AVAILABLE FEATURES

- Supports payloads up to 750 lbs.
- 500 lb-ft. (678 Nm) elevation torque
- Operational with 1.8m dishes up to 60 mph wind loading
- Survivability with 1.8m dishes up 90 mph wind loading
- Requires 48VDC power
- IP communication and control over fiber optic cable (using TFOCA-II® connector)
- Rigid welded aluminum housing and hardened steel worm gear drive for durability in harsh environments
- Multiple payload mounting configurations available
- Meets IP66 standards



# QPT-500 MIL-461 RF

## PERFORMANCE

Features	Model 7-51RFNP-18G
Payload capacity	750 lbs.
Payload torque (Operating)	500 lb-ft. (678 Nm)
Payload torque (Maximum static)	1000 lb-ft. (1356 Nm)
Azimuth range of motion	420° (+/-210°) Non-continuous
Azimuth speed range	0.001° - 4°/s
Elevation range of motion	180° (±90°)
Elevation speed range	0.01°-4°/s
Repeatability	0.1°
Positioning resolution	0.01°
Position feedback	Optical Encoders
Hard limits (Mechanically adj.)	Azimuth and elevation
Soft limits (Software adj.)	Azimuth and elevation
Duty cycle	This positioner is designed for periodic movement. For applications requiring constant motion, please contact our team for solutions tailored to your use case and environment.

## POWER

Features	Model 7-51RFNP-18G	
Operating voltage	48 VDC (±4 VDC)	
Power consumption (Approx)  *Simultaneous azimuth and elevation move, fully loaded, without payload power	Idle	43 watts (0.9A)
	*Continuous	307 watts (6.4A)
	*Peak	355 watts (7.4A)
	Heaters	175 watts (3.6A)
Pass through power to payload	No payload pass though power in this product	

## COMMUNICATION

Features	Model 7-51RFNP-18G
Communication method to positioner	Ethernet 10/100 Base-T via optical to fast Ethernet media converter integrated in unit
Protocol	PTCR-96
Communication to payload	No payload communication in this product
RF pass through channels	1 Channel
Bandwidth	DC - 18.0 GHz
RF channel power (Average)	500 watts (at 1 GHz)

For additional information on the RF communication, please contact our team for assistance

## PHYSICAL PROPERTIES

Features	Model 7-51RFNP-18G
Weight (w/o payload)	195 lbs. (89 KG)
Dimensions	21.3" W x 19.9" H x 13.1" D
Drive system	Stepper motors, hardened steel worm gear drive

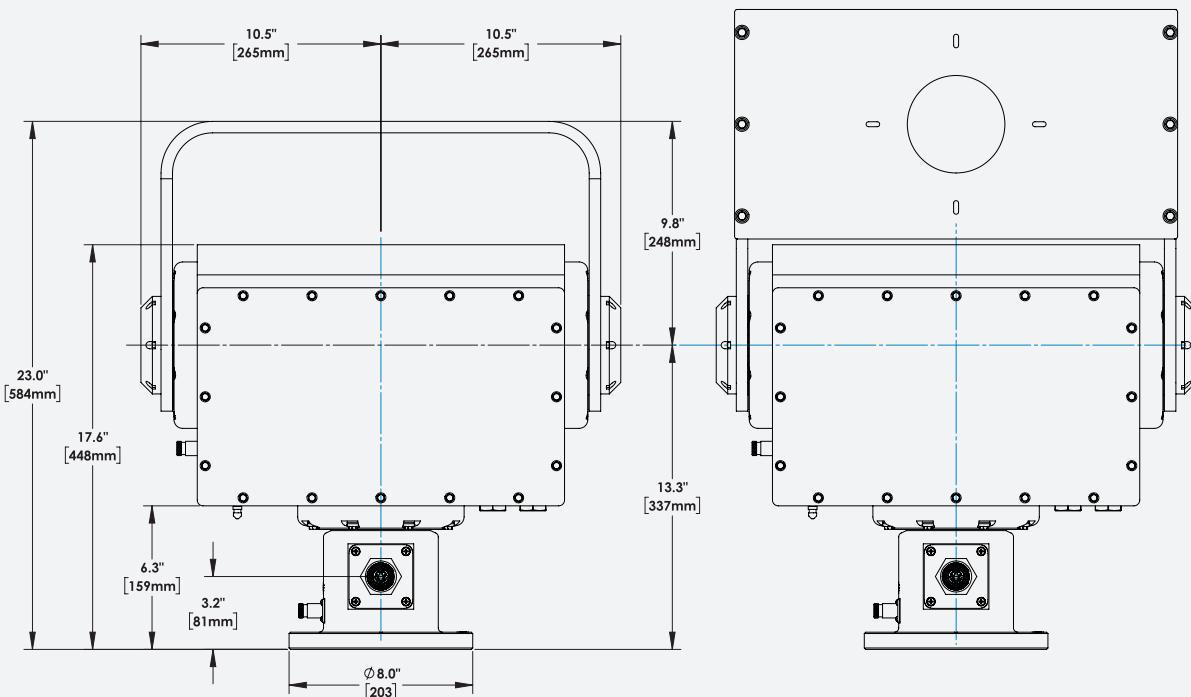
## CONSTRUCTION

Features	Model 7-51RFNP-18G
Material	Aluminum 6061-T6 plate, stainless steel hardware, permanently sealed radial ball bearings.
Exterior finish	Powder coat paint (STD.), customer specified color

## ENVIRONMENTAL

Features	Model 7-51RFNP-18G
Operational temperature	-32°C to 49°C (-25°F to 120°F)
Storage temperature	-46°C to 71°C (-50°F to 159°F)
Environmental classification	IP66
EMI Certification	MIL-STD-461 (CE102, CS101, CS114, CS115, CS116, RE102, RS103)

## ARCHITECTURAL AND DIMENSIONAL DRAWING



OPTIONAL MOUNTING CONFIGURATION



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