

PT-10 PAN & TILT UNIT



13.56 N-m (10 lb-ft) of output torque on each axis handles moderately heavy loads

Available in either AC or DC power configurations

Corrosion-resistant housing is ideal for use in hazardous environments



Dual axis pan & tilt to remotely position camera systems, acoustic equipment, and other instrumentation.

The unparalleled reliability of the PT-10 is due in part to its rugged construction. Housings and machined components are made of corrosion resistant, hard-anodized aluminum. All external hardware is made of stainless steel, with oceanographic and nuclear applications in mind.

The PT-10 provides 13.56 N-m (10 lb-ft) of output torque on each axis and accommodates payloads up to 15 pounds. The drive train for each axis of the pan & tilt uses either a reversible synchronous motor or a brushless stepper motor coupled to low backlash harmonic gearing. The rugged design of the gear train allows stalling of either output shaft without damage to the gears or the motor.

With the choice of different AC or DC power configurations the PT-10 can be used in a wide array of varying environments and applications.

The PT-10 pan & tilt complements all ROS underwater lights and camera systems and was designed to be an integral part of turnkey, remotely operated, video inspection systems.

All ROS positioning units are available in either dual or single axis configurations.

ROS has been manufacturing an array of harsh environment cameras, lights, positioners, and specialized systems designed for oceanographic, nuclear, industrial, and military applications for over 30 years.

PT-10 - Pan & Tilt Unit

PERFORMANCE

Power:	120 VAC, 0.135 amps per axis; 24 VAC option available 24 VDC, 1.25 amps per axis	
Torque:	10 lb-ft (13.56 N-m) per axis	
Rotation Speed (88:1 gears):		
60 Hz:	4.9 degrees/second (0.82 RPM)	
24 VDC:	5.5 degrees/second (0.92 RPM)	
Harmonic gear backlash (88:1 gears):	0.6 degrees (36 arc minutes); robotic anti-backlash gears available	
Scan Range (both axes):	360 degrees	
Scan Range with optional yoke bracket:	360 degrees pan axis, +/- 90 degrees tilt axis	
Static braking option (24 VDC model only):	Requires an additional connector pin	

MECHANICAL

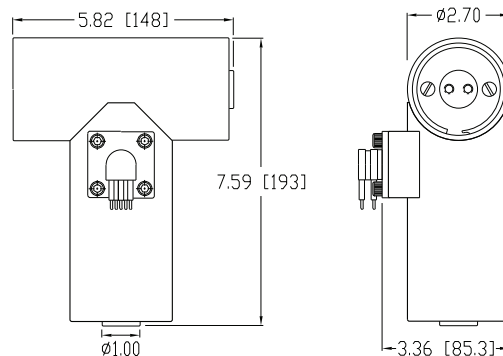
Housing Material:	Anodized 6061-T6 aluminum	Electropolished 316 Stainless Steel
Height:	193 mm (7.59 in)	193 mm (7.59 in)
Width:	148 mm (5.82 in)	148 mm (5.82 in)
Length without connector:	85.3 mm (3.36 in)	85.3 mm (3.36 in)
Main Body Diameter:	68.6 mm (2.70 in)	68.6 mm (2.70 in)
Output Shaft Diameter:	25.4 mm (1.00 in)	25.4 mm (1.00 in)
Weight in Air:		
Air-filled:	2.9 kg (6.5 lbs)	4.9 kg (10.8 lbs)
Oil-filled:	3.2 kg (7.0 lbs)	5.1 kg (11.3 lbs)
Weight in Water:		
Air-filled:	1.9 kg (4.2 lbs)	3.9 kg (8.5 lbs)
Oil-filled:	2.2 kg (4.7 lbs)	4.1 kg (9.0 lbs)
Standard Connectors:	LPMBH-5-MP, FAWL-5P-BCRA, MSAJ-9-BCR, 5506-2006, 5507-1508	
Housing Mounting:	Two 1/4-20 threaded holes in output pan shaft	
Equipment Mounting:	Two 1/4-20 threaded holes in output tilt shaft	
Mounts:	ROS mounting plate and yoke bracket optional	
External Mechanical Limits:	ROS stop collar optional	
Compensator (oil-filled units only):	Bellofram	

ENVIRONMENTAL

Operating Depth:		
Air-filled:	30 m (100 ft)	
Oil-filled:	3,000 m (10,000 ft) standard 6,000 m (20,000 ft) available	
Operating Temperature:	0°C to +50°C (32°F to 122°F)	
Storage Temperature:	-20°C to +60°C (-4°F to 140°F) in air	
Radiation Tolerance:	1 x 10 ⁸ rad (max accumulated dose)	

ROS STANDARD PIN-OUT

- 1 - COMMON
- 2 - TILT CCW
- 3 - TILT CW
- 4 - PAN CW
- 5 - PAN CCW
- 6 - BRAKING (OPTION)



5618 Copley Drive
San Diego, CA 92111 USA
Tel (858) 565-8500
Fax (858) 565-8808
East Coast Office (804) 754-3936

www.rosys.com
sales@rosys.com

98-52003 REV A

Specifications subject to change without notice