

# PTU-D46

## Miniature Computer-Controlled Pan/Tilt Unit

The PTU-D46 family of miniature pan/tilt units provide fast, precise positioning in an extremely small and lightweight package. They are fully computer-controlled and offer programmability of speed, acceleration, power, and other parameters. The included controller, with built-in RS-232 and RS-485 interfaces, handles precise kinematic motion control according to user-set parameters. The PTU-D46 units accept ASCII and binary command formats and is networkable. Commands can be sent at up to 30 Hz (commands/second) for demanding applications such as laser scanning and video tracking.

### KEY FEATURES INCLUDE:

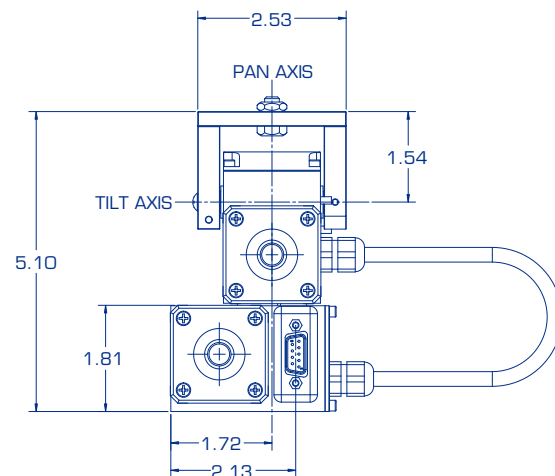
- Fast - speeds to 300°/second
- Resolutions to 0.003°
- Load capacity up to 9 pounds
- Precise control of position, speed, and acceleration
- On-the-fly position and speed changes
- Small form factor (< 5.2" tall)
- Light weight (head < 3 lb)
- Single DC power input suited for battery operation
- Simple to use from any RS-232 terminal or computer
- Rigid worm gear design; no belts/pulleys
- Fast and accurate camera positioning at low cost
- ASCII command mode for simplicity; binary commands available for high-performance

### OPTIONS

- International AC/DC Power Supply
- Weatherization for outdoor use
- Nodal (gimbal) - payload aligned to motion axes
- C Programmer's Interface
- PTU network cabling kits
- Geo-Pointing Module

## Specifications

Pan/Tilt Performance	PTU-D46-17	PTU-D46-70	PTU-D46-17P70T
Rated Payload	6 lb (2.72 kg)	9 lb (4.08 kg)	9 lb (4.08 kg)
Max. Unloaded Speed (@ 30 VDC)	300°/second	60°/second	Pan: 300°/second Tilt: 60°/second
Resolution	0.013°	0.003°	Pan: 0.013° Tilt: 0.003°
Pan/Tilt Features			
Tilt Range	-47° to +31° from level (78° range) with extended range enabled for 80° down (111° range)		
Pan Range	+/- 159° (+/- 180° with extended range mode enabled)		
Min. Pan Speed	<min. resolution>/second		
Min. Tilt Speed	<min. resolution>/second		
Duty Cycle	Up to 100% duty cycle, or 3-5 million cycles		
Acceleration/Deceleration	On-the-fly speed and position changes		
Power Requirements			
Input Voltage	12-30 VDC unregulated (fastest performance and torque @ 30 VDC)		
Power Consumption (Measured at 30 VDC)	13 W continuous peak (full power mode), 6 W continuous peak (low power mode) 1 W continuous peak (holding power off mode)		
Connections & Communications			
Host Interface	RS-232 (DB-9 female connector) RS-422/485 (RJ-12connector)		
Networking	Control of multiple pan/tilt units from one or more host computers. Multi-drop RS-485 network using RJ-12.		
Control Protocols	DP (ASCII, Binary)		
Mechanical			
PTU Weight	3 lb		
PTU Dimensions	3" (h) x 5.13" (w) x 4.25" (d)		
Payload Mounting	Hole for 1/4-20 screw standard. Camera mounting plate removes for easy customizing.		
PTU Mounting	Bottom or front 1/4-20 mounting		
Controller Weight	8 oz		
Controller Dimensions	1.25" (h) x 3.25" (w) x 4.5" (d)		
Packaging & Environmental			
Standards	Designed to IP65 (head only, with weatherized)		
Operating Temperature*	-20°C to 60°C		
Humidity	100% relative humidity, non-condensing		
Dust/Sand (Operating)	Sustained exposure to blowing dust/sand		
Wind/Rain/Fog	IP65		
Color/Finish	Black anodized		
EMI	CE Mark and FCC Part 15, Subpart B, Class A		



\*Reduced speeds may be required for low temperature operation.

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