

# Model PTU-D46

PTU-D46-70 | PTU-D46-17 | PTU-D46-17P70T

## Precision Pan/Tilt Unit

Miniature Pan/Tilt Units

### 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 60 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 over 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
- Trackball and analog joystick interfaces
- Geo-Pointing Module



### Applications

- Robotic and computer vision
- Security and surveillance
- Industrial automation
- Tracking
- Webcams
- Laser ranging
- Teleconferencing/distance learning
- Antenna pedestal
- Photography, video, and special effects



Surveillance



Military



Remote Sensing



Robotics



Maritime



Antennas



Motion Control Systems

# Model PTU-D46

## Technical 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<br>Tilt: 60°/second |
| Resolution                     | 0.013°         | 0.003°         | Pan: 0.013°<br>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)<br>6 W continuous peak (low power mode)<br>1 W continuous peak (holding power off mode) |

### Connections & Communications

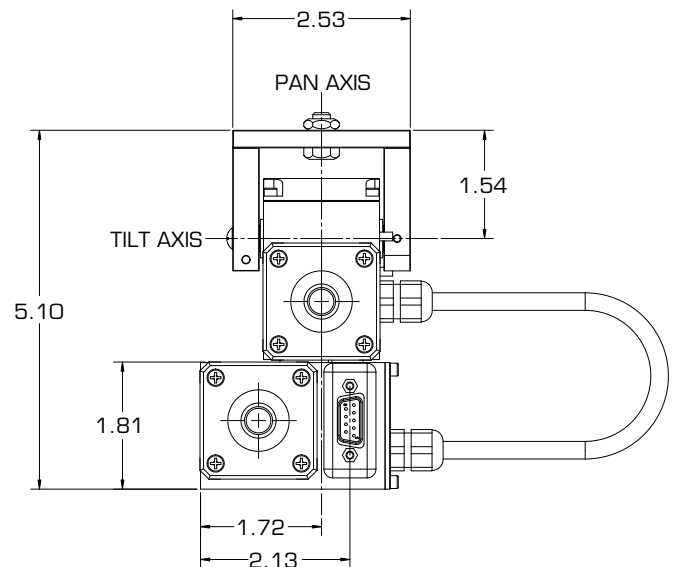
|                   |  |
|-------------------|--|
| Host Interface    | RS-232 (DB-9 female connector) RS-422/-485 (RJ-12 connector)   |
| Networking        | Control of multiple pan/tilt units from one or more host computers. Multi-drop RS-485 network using RJ-12. |
| Control Protocols | DP (ASCII, 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    |
| Certifications        | RoHS Compliant                                 |



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