



A Tallysman *Accutenna*™ TW3400/TW3402 GPS/GLONASS Antenna

The TW3400/TW3402 employs Tallysman's unique *Accutenna*™ technology covering the GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS & MSAS) frequency band (1574 to 1606 MHz). They are especially designed for precision industrial, agricultural and military applications. . They provide truly circular response over the antennas' entire bandwidth thereby producing superior multipath signal rejection.

The TW3400/TW3402 feature a highly circular dual-feed wideband patch element, with a two stage Low Noise Amplifier, comprised of one input LNA per feed, a mid section SAW to filter the combined output, and a final output gain stage. This configuration provides excellent axial ratio that is constant across the full frequency band. An optional tight pre-filter is available on the TW3402 to protect against saturation by high level sub-harmonic and L-Band signals.

The TW3400/TW3402 is housed in a permanent mount industrial grade weather-proof enclosure. Two options for pole mounting are available an L-bracket (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0).

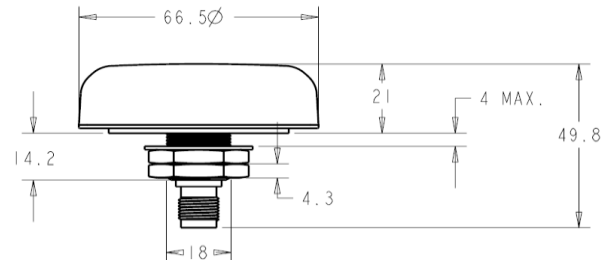
Applications

- High Accuracy & Mission Critical Global Positioning
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking



TW3400 Dimensions (mm)

Flat radome is shown, Conical Radome also available



Features

- Great axial ratio: 1 dB typ.
- Low noise LNA: 1 dB
- High rejection SAW filter
- High gain LNA: 28 dB typ.
- Low current: 10 mA typ.
- Wide voltage input range: 2.5 to 16 VDC
- IP67 weather proof housing

Benefits

- Excellent circular polarisation
- Excellent multipath rejection
- Excellent signal to noise ratio
- Great out of band signal rejection
- Increased system accuracy
- Ideal for harsh environments
- RoHS and REACH compliant



TW3400/TW3402 GPS/GLONASS Antenna

Specifications

Antenna

| | |
|--|---------------------------|
| Architecture | Dual, Quadrature Feeds |
| 1 dB Bandwidth | 30 MHz |
| Antenna Gain (with 100mm ground plane) | 4.25 dBic |
| Axial Ratio (over full bandwidth) | <1 dB @zenith., 3 dB max. |

Electrical

| | |
|---|---|
| Filtered LNA Frequency Bandwidth | 1574 to 1606 MHz |
| Polarization | RHCP |
| LNA Gain | 28 dB min., 1575.42 to 1606 MHz |
| Gain flatness | +/- 2 dB, 1575 to 1605 MHz |
| Out-of-Band Rejection | <1500 MHz >32 dB (TW3400) >50dB (TW3402) |
| | <1550 MHz >25 dB >50dB |
| | >1640 MHz >35 dB >75dB |
| VSWR (at LNA output) | <1.5:1 |
| Noise Figure | 1 dB typ. (TW3400) 3.5 dB typ (TW3402) |
| Supply Voltage Range (over coaxial cable) | 2.5 to 16 VDC nominal (12VDC recommended maximum) |
| Supply Current | 10 mA typ. |
| ESD Circuit Protection | 15 KV air discharge |

Mechanicals & Environmental

| | |
|-----------------------|--|
| Mechanical Size | 66.5 mm dia. x 21 mm H |
| Operating Temp. Range | -40 to +85 °C |
| Enclosure | Radome: EXL9330, Base: Zamak White Metal (M18x1thread) |
| Weight | 150 g |
| Attachment Method | Permanent 3/4" (19mm) through hole mount |
| Environmental | IP67 and RoHS compliant |
| Shock | Vertical axis: 50 G, other axes: 30 G |
| Vibration | 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G |
| Salt Spray | MIL-STD-810F Section 509.4 |

Ordering Information

TW3400 – GPS/GLONASS antenna 33-3400-xx-yy-zzzz TW3402 - 33-3402-xx-yy-zzzz

Where xx = connector type, yy = shape and colour of radome, and zzzz = cable length in mm (where applicable)

Please refer to the Ordering Guide (<http://www.tallysman.com/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available radomes and connectors.

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