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# ROTARY ANTENNA ATS-M

**Dimensions**
113 x 119 mm

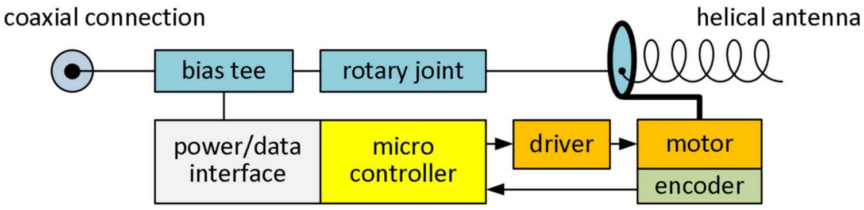
## KEY FEATURES

- frequency range 4.8-5.5 GHz (other frequencies on request)
- circular polarization
- 9 dBic gain
- 60° beam width
- lightweight miniature construction
- 12 Vdc power & antenna control signal through the antenna cable
- GPS target tracking capability
- rugged design for long-term usage on aircraft fuselage
- WINS protocol compatible

## DESCRIPTION

The rotary antenna ATS-M is a very small and light directional antenna for use on aircraft and ground vehicles. The waterproof design and the very robust construction of this antenna make it suitable for use even under very hostile environmental conditions.
Circular polarization, the high gain and the automatic tracking of the other station enable a range several times as great as with linear polarization and an omnidirectional antenna.
The coax connection supplies the HF signal, the operating voltage and the control signals for the tracking antenna. The control protocol is compatible with WINS, the modular IP transmission system.
By using an optionally available interface box, the antenna can be used in stand-alone operation. In this case the target coordinates are supplied through a serial interface or Ethernet.
The antenna is available in two connection types: axial SMA connection for a direct link to the interior of the vehicle (version designation '-1') and radial TNC connection for an external cable connection (version designation '-2').

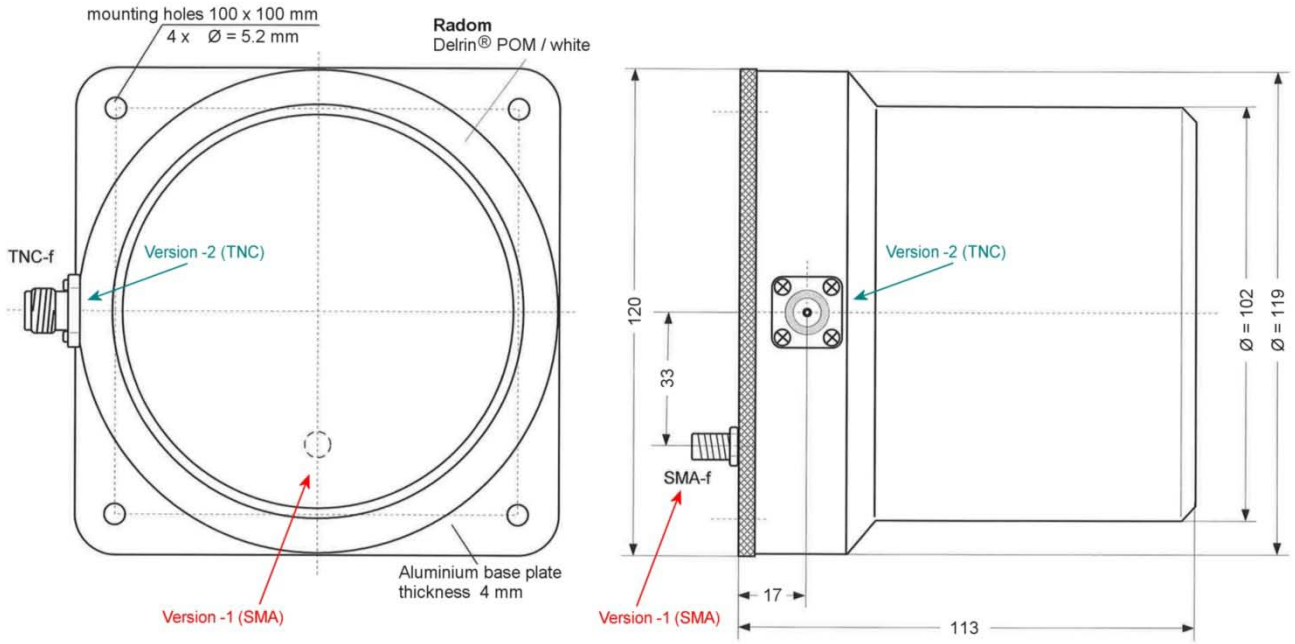
## FUNCTIONAL BLOCK DIAGRAM



## SPECIFICATIONS

| | |
|---|---|
| Model | ATS-M-1 (SMA)<br>ATS-M-2 (TNC) |
| Frequency Range | 4400 - 5500 MHz<br>other frequencies on request |
| Gain | 9 dBic |
| Polarization | circular RHC |
| Beam Width (-3 dB az./elev.) | 60 degrees |
| Pointing Accuracy | ±1.5º (depends on compass accuracy) |
| Maximum Angular Velocity | 24º/sec |
| Front to Back Ratio | >20 dB |
| Impedance | 50 Ohm |
| VSWR | < 1.5 : 1 |
| Maximum Input Power | 20 Watt |
| Maximum Speed | 450 km/h |
| Altitude | ≤ 5000 m |
| Radome Material | Delrin® POM |
| Command/Control Protocol | WINS (through the antenna cable) |
| Supply Voltage | 10 - 16 Vdc (through the antenna cable) |
| Current Draw (rotating) | 500 mA max. |
| Current Draw (idle, LEDs off) | 30 mA |
| Operating Temperature | -40°C to +85°C |
| Humidity | ≤ 95% RH |
| Vibration | 10g (sine 20Hz-2kHz) |
| Shock (½ sine) | 100g peak (11ms) |
| Dimensions | 113 mm (height) x 120 mm x 120 mm |
| Weight | 750 g |
| RF Input Connector | SMA (ATS-M-1: axial through baseplate)<br>TNC (ATS-M-2: radial through radom base) |

## OUTLINE DRAWING

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dimensions in mm