

2met![®] TRACKING ANTENNA 1.8/2.0/2.4 EI/Az Tracking Satellite Antennae

Release 4.3



2.4m NOAA/METOP HRPT EI/Az Tracking Pedestal

FUNCTIONS	ADVANTAGES
<ul style="list-style-type: none">▪ Automatic satellite acquisition and tracking▪ Support of S- and L-band missions like NOAA, METOP, Feng-Yun and OrbView▪ Program Track with various data formats (TLE, TBUS)▪ Remote control and diagnosis (SLA agreements)	<ul style="list-style-type: none">▪ Full integration into 2met![®] System▪ Standardised interfaces▪ Low maintenance effort▪ Single 230V power supply▪ Highest reliability at excellent price- performance ratio

General Description

The Tracking Antenna consists of the following components:

- parabolic reflector
- elevation over azimuth type pedestal
- DC servo motor drives
- limit switches
- electromechanical brake
- shaft encoders
- motor control unit (MCU)
- antenna interface unit (AIU)
- power and control cabling

The El/Az Tracking Antenna is a parabolic antenna, designed to receive signals from NOAA, Feng-Yun, OrbView and METOP polar orbiting satellites.

The El/Az tracking pedestal includes all relevant facilities to control and position a tracking antenna and operates about two axes - the azimuth and elevation assembly. DC motors driven by a 4-quadrant pulse width modulation system in conjunction with digital shaft encoders allow full servo position control. The motors drive the axes through a primary gearbox and a cycloid zero backlash transmission unit. Primary and secondary limit switches at all extreme positions offer protection against any mechanical damage.

The pedestal is designed to be mounted on a stable foundation, such as a concrete pad, fastened in place by suitable threaded rods and is connected to the control equipment by the appropriate power and control cables. The maximum distance between the pedestal and the motor control unit is 75m, but may be extended up to 150m by using special cabling.

The antenna can be used with unshielded parabolic reflectors ranging from 1.8m – 2.4m.

Technical Characteristics

Mechanical

Reflector Diameter	1.8 / 2.0 / 2.4m
Antenna Optics	Prime Focus
Mount Size	0.5m x 0.5m
El/Az Area	0° to 180° / 0° to 360°
Max. Velocity El/Az	5°/s / 15°/s
Max. Acc. El/Az	5°/s ² / 15°/s ²
Pointing Accuracy	< +/- 0.50° RMS
Tracking Error	< +/- 0.50° RMS
Weight Antenna	30kg (1.8m), 50kg (2.4m)
Weight Pedestal	120kg (1.8m), 380kg (2.4m)

Electrical

Frequency Range	1.7 ... 2.1 GHz
Gain	27.5dB (1.8m), 30.0dB (2.4m)
Beam Width	6.0° (1.8m), 4.5° (2.4m)

Environmental

Temperature	-30° ...+50° C
Operational Wind	120km/h (1.8m), 100km/h (2.4m)
Survival Wind	200km/h (1.8m), 160km/h (2.4m)

Ordering Information

2met![®] Tracking Antenna El/Az

This version provides all functions to receive data from all relevant S- and L-band missions.

Contacts

If you have any questions, please contact our Marketing and Sales Department at 2met@scisys.de



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