



Features

- Long telemetry range
- No moving parts
- Six monopoles with corner reflectors
- One cross dipole
- Radome for protection against rain and wind
- Automatic control through telemetry receiver for optimizing signal reception
- Low-noise amplifier unit

Vaisala Telemetry Antenna RB31 is a directional UHF antenna well-suited for use in fixed installations. The antenna has no moving parts; the radiation pattern of the antenna can be electrically directed to track the flying radiosonde.

Controlled with Vaisala Telemetry Receiver

The Vaisala Telemetry Antenna RB31 has no moving parts and is controlled automatically by a Vaisala telemetry receiver. The RB31 is delivered as a complete unit and is easy to install.

Optimized Signal Reception

The RB31 is protected by a radome against rain and high winds, and has six monopoles with corner reflectors and a cross dipole. The dipole and monopoles are connected by means of a diode switch. The Vaisala telemetry receiver controls the switch, selecting the best available element for signal reception. A low-noise amplifier unit compensates for cable losses.

Install on Roof or Pole Mast

The standard RB31 includes a mounting pedestal and flange for roof installation. Optionally, the RB31 can be mounted on a pole mast with a special mast mounting.

Technical Data

Antenna

Frequency range	400 ... 406 MHz
Horizontal directivity	8 dBi
Vertical directivity	-3 dBi
Polarization near horizon	Vertical
Polarization at zenith	Circular
Number of corner reflectors	6

Amplifier

Gain	20 dB typical
Noise figure	<2 dB
Power input	+10 ... 12 VDC, 130 mA through RF cable
Output impedance	50 Ω , VSWR <1.5

Telemetry Range

Telemetry range with RS41-SG, RS41-SGP, or RS41-SGM radiosonde Up to 350 km under normal sounding conditions

Operating Environment

Operating temperature	-40 ... 55 °C
Operating precipitation	Unlimited
Operating humidity	0 ... 100 %RH
Maximum wind speed	65 m/s
Storage temperature	-50 ... +100 °C
Storage humidity	0 ... 100 %RH

Mechanical Specifications

Connector	Coaxial 7/16
Maximum diameter	1.1 m
Height without pedestal	0.8 m
Height with pedestal	1.55 m
Weight	32 kg
Standard cable length	33 m (greater lengths possible with low-loss cable)



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