

Vaisala Telemetry Antenna RB31



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 with the Vaisala DigiCORA® Sounding System MW31 and is easy to install.

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.

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 INFORMATION

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 ohms, VSWR <1.5

TELEMETRY RANGE

Telemetry range with RS92-SGP radiosonde	Up to 350 km under normal sounding conditions
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MECHANICS

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)

ENVIRONMENTAL CONDITIONS

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