

Vaisala Portable Antenna Set CG31

Features and benefits

- Easy set up with captive parts
- Long telemetry range - 150 km with RS92-SGP

The Vaisala Portable Antenna Set CG31 is a portable antenna designed to be used with GPS wind-finding systems. The antenna set consists of a Helix UHF antenna with antenna amplifier and GPS antenna on a tripod. The antenna set is painted green as standard. One person can handle and assemble the antenna set. The CG31 receives radiosonde signals in 400 MHz meteorological UHF band. The tripod and the antennas fold compactly for transportation. The transport case is made of polypropylene and equipped with wheels for ease of transportation. The transport case also holds an equipment bag, which contains foot pads, pegs and a hammer.



Vaisala portable antenna CG31 is easy to set up and is well suited for portable installations.

Technical data

UHF Antenna

Type	Full-wave Quadrifilar Helix
Frequency range	400 ... 406 MHz
Gain (Elevation angle 25°)	3.5 dBic
Polarization	Right-Hand Circular
Horizontal pattern	Omnidirectional

Telemetry range

With RS92-SGP radiosonde	150 km
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Amplifier

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

GPS Antenna

Primary power	+ 5 volts DC ($\pm 10\%$)
Power consumption	22 mA, 0.11 watts (nominal)
Output impedance	50 Ohms
Frequency	L1 (1575 MHz)
Polarization	Right-Hand Circular Polarization (RHCP)
VSWR	2:1
Axial ratio	2 dB at zenith, 10 dB above 10° elevation
Gain	35 dB (nominal)
Noise	2.75 dB (nominal)
Pass-band width	50 MHz
Azimuth coverage	360° (omni-directional)
Elevation coverage	0° to 90° elevation (hemispherical)

Mechanics

Connector	
UHF Antenna	Coaxial N-type female
GPS Antenna	Coaxial TNC-type female
Diameter	Footprint 1133 mm
Total height assembled	1695 mm
Weight	
With cables	10.5 kg
With accessories and transport case	23 kg
Transportation case dimensions	1380 x 355 x 385 mm
Standard cable length	20 m

Environmental conditions

Operating temperature range	-40 ... +55 °C
Operation humidity range	0 ... 100 %RH
Operating precipitation	Unlimited
Maximum wind speed	65 m/s
Storage temperature	-50 ... +71 °C
Storage humidity	0 ... 100 %RH



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