



GPS Antenna GA31

Vaisala GPS Antenna GA31 is used with the Vaisala Sounding Systems for the local reception of GPS signals when performing GPS soundings. GA31 is suitable for stations equipped with the GPS wind finding system.

Data Directly from GPS Satellites

Vaisala GPS Antenna GA31 allows Vaisala Sounding Systems to gather orbital and other navigational data directly from the GPS satellites. The local reception is also used to get differential corrections for positioning.

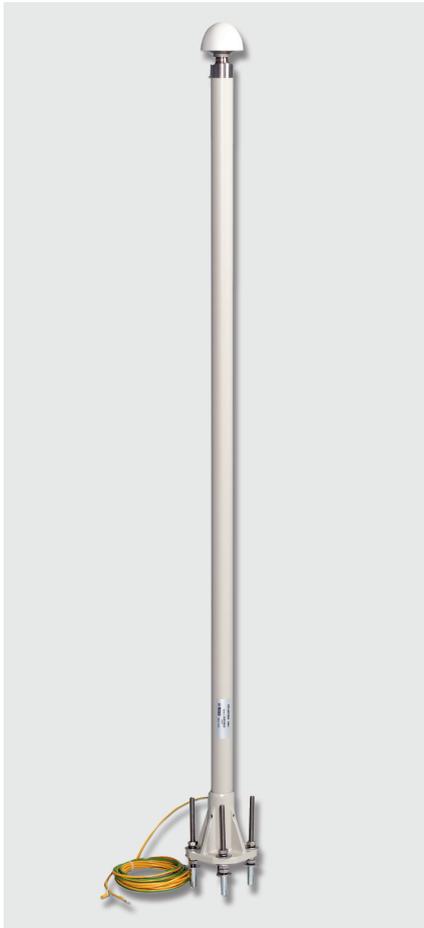
Achieving Optimal Reception

GPS signal reception requires an unobscured line-of-sight to the GPS satellites. Seen from the zenith, an open sky angle of at least 75 degrees is necessary. The best reception is achieved with a location that has a clear view of

the sky down to the horizon in every direction. The Vaisala GPS Antenna GA31 is equipped with a 35 dB pre-amplifier. A band pass filter renders the GA31 immune e.g., to Inmarsat and radar interference.

Protected against Weather Conditions

The Vaisala GPS Antenna GA31 is sealed with epoxy for protection against ambient conditions. It is shipped with a 1.5-meter aluminum pole with a cast-aluminum flange and pole mounting clips and 33 meters of cable.



Features

- Receives data from GPS satellites
- 35 dB pre-amplifier
- Epoxy seal for protection against ambient conditions
- 33 meter long N-to-TNC cable for connecting to sounding instruments.

Technical Data

Operating Environment

Operating temperature	-40 ... +85 °C
Storage temperature	-55 ... +100 °C
Operating humidity	0 ... 100 %RH
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Operating precipitation	Unlimited
Maximum wind speed	65 m/s

Inputs and Outputs

Primary power	+5 VDC (±10 %)
Power consumption	22 mA, 0.11 W (nominal)
Output impedance	50 Ω
Operating frequency	L1 (1575 MHz)
Polarization	Right-hand circular polarization (RHCP)

Mechanical Specifications

Weight (without cables)	2.6 kg
Height	1.6 m
Mounting	Pedestal flange or pole clamps

General

VSWR	2:1
Axial ratio	2 dB at zenith, 10 dB above 10° elevation
Gain	35 dB (nominal)
Noise figure	2.75 dB (nominal)
Pass-band width	50 MHz
Cable attenuation	17 dB > A > 7 dB at 1.5 GHz
Azimuth coverage	360° (omni-directional)
Elevation coverage	0 ... 90° (hemispherical)



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Published by Vaisala | B210466EN-D © Vaisala 2017

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