
High precision, multi-band L1/L2 RHCP helical Active GNSS Antenna for demanding environments.

Datasheet - In Production



Features

- 3V to 12V - 50mA power supply
- Sealing rubber ring (IP67)
- Low noise, High gain (39dB)
- Small and lightweight
- Gold plated SMA-J connector

Applications

- Drones
- RTK Base or Rover
- Ground vehicles
- Precise navigation
- Portable devices

Description

The Siderion **SA233** is a high-performance helical multi-band active GNSS antenna designed for precision navigation and positioning applications.

The device allows concurrent reception of GPS /GLONASS / BeiDou & Galileo signals to improve signal availability. The minimum 2dBi peak gain is amplified using a 39dB LNA gain to ensure the best signal quality in any situation.

The SMA male connector together with the rubber joint sealing make them reliable, robust and waterproof.

Its IP67-rated enclosure ensures dustproof and waterproof protection, and with an operational temperature range of -40°C to +85°C, the SA275 is built to deliver reliable performance in the most demanding environments.

Table 1. Device summary

Order ref code	Temperature [°C]	Product size [mm]	Weight [g]
SID-GNSS-ANT-SA233	-40 to +85	60.0 x 27.5	16

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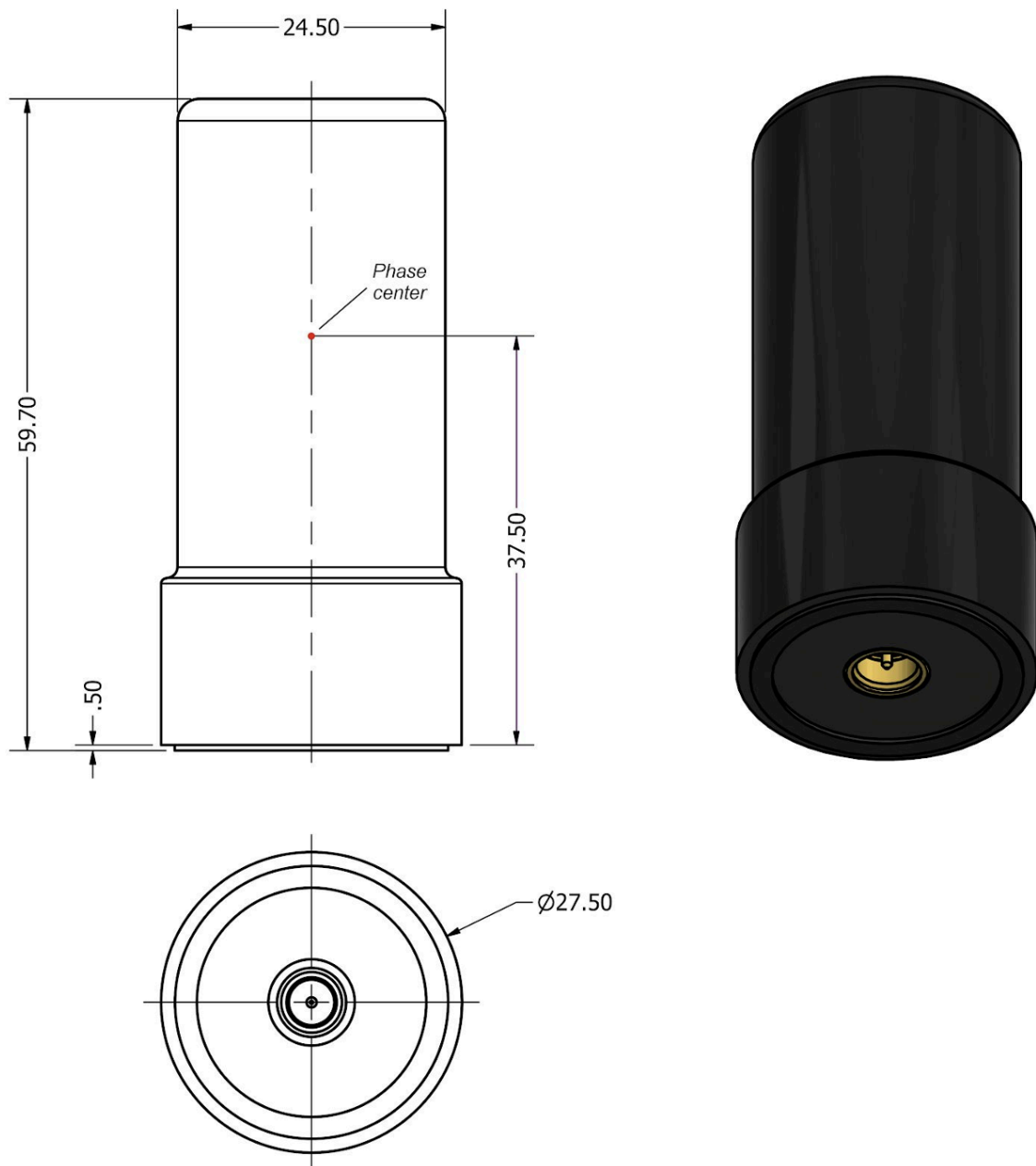
1. Specifications

Table 1. SA233 mechanical and electrical specifications

Symbol	Parameter	Value
ANTENNA		
Arch	Antenna architecture	Quadrifilar helix
Gband	GNSS signal bands	GPS: L1/L2 GLONASS: G1/G2 BDS: B1/B2/B3 Galileo: E1/E5/E6
Gpp	Peak gain	≥2.0 dBi
Pol	Polarization	RHCP
Arat	Axial ratio @ zenith	≤3.0dB
Acov	Azimuth coverage	360°
Z	Impedance	50Ω
LNA		
Vdd	Operating voltage	3.3V ~ 12.0V
Idd	Operating current	≤50mA
Fran	Frequency Range	1164MHz ~ 1278MHz 1525MHz ~ 1615MHz
Glna	LNA gain	39±2.0dB (Typ. @25°C)
MECHANICAL & ENVIRONMENTAL		
IP	IP rating	IP67
Con	Connector	SMA-J
Wei	Weight	16g
Mat	Plastic material	ABS + PC
Top	Operating temperature	-40°C to +70°C
Size	Antenna dimensions	60.0 x 27.5mm

2. Mechanical drawings

Figure 1. SA233 v1.0 mechanical drawings



3. Revision history

Table 2. Document revision history

Date	Revision	Changes
13-Sep-2025	1.0	SiderionDoc_SA233 / Initial release

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