

8230 & 8230AJ

Outdoor GNSS Antenna

INSTALLATION GUIDE



Models 8230 and 8230AJ are active antennas for Safran products with embedded GPS/GNSS receivers, covering the GPS L1, GLONASS L1, BeiDou B1, Galileo E1, and QZSS L1 bands. Model 8230AJ also includes horizon-blocking anti-jam technology.

Each antenna is shipped with an L-bracket and clamps for affixing the antenna to an appropriate structure.

Note: A rugged antenna mount, post mounting kit, weather-proofing kit, cables, and free-standing base are sold separately. Contact Safran for details and to order accessories for your antenna.

The active antenna circuitry provides 40dB of gain and requires 2.5 to 16 V_{DC} at 21 milliamps to operate.

Specifications Summary

	8230 Antenna	8230AJ Antenna
Frequency	1559 to 1606 MHz	1559 to 1606 MHz
Temp Range	-40 to 85°C	-40 to 85°C
Gain	40 dB	40 dB
Connector	N-type, female	N-type, female
Diameter	66.5 mm x 47.5 mm H	100 mm x 101.5 mm H
Weight	150 g	370 g
Anti-Jam	No	Yes

Antenna Cable & Accessories

Safran recommends a low-loss coaxial cable such as Times Microwave LMR-400 (or equivalent). Safran offers cable assemblies terminated with Type N Male connectors at standard lengths of 5, 25, 50, 100, and 200 feet.

Cable Considerations

The antenna cable must be a coax suitable for outdoor use. A surge protection device in the antenna line is recommended to protect the GNSS receiver and connected devices from lightning damage. Safran offers an optional surge suppressor can shunt potentially damaging voltages on the antenna coax to ground.

Cable length

With a low loss coaxial cable such as LMR 400, the maximum recommended cable length is 400 ft. (121 m). Installations requiring longer distance may require an inline amplifier.

Installation

Location

The antenna must be installed outdoors with an unobstructed view of the sky (to 20° elevation from the horizon). An unobstructed line of sight to the sky allows the antenna to locate and track the maximum number of satellites. Avoid locations where the antenna could be buried by loose or drifting snow, or obstructed by growing foliage. Whenever possible, avoid placing the antenna in close proximity to broadcast antennas. See the technical note for more installation help: <https://safran-navigation-timing.com/document/outdoor-gnss-antenna-installation-considerations/>

L-bracket Installation

1. Remove the double panel nuts
2. Insert the connector end into the 18.2 mm (0.71") through-hole and replace and tighten the nuts.
3. Connect the L-bracket to a pole, post, vent pipe, or other suitable location via hose clamps.
4. Connect the antenna to the antenna cable via N-type connectors.
5. In wet conditions, it is recommended to wrap the connection in weather-proofing tape.



L-Bracket



Model 8230

Technical Support

To request more information or enter a support ticket, visit our website at safran-navigation-timing.com

Product and L-bracket Dimensions

