

PL-S1



Dual Frequency, Dual Constellation Antenna



- Featuring Topcon's High-performance Fence Antenna™ Technology
- Dual Frequency, Dual Constellation GNSS Antenna
- L-Band Compatible
- Rugged Enclosure with High Shock and Vibration Tolerance

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The PL-S1 is a newly designed dual-frequency and dual-constellation GNSS antenna offered at an affordable price. When accuracy requirements are flexible, this antenna is the best choice to provide maximum return on your investment. Like the geodetic-grade PG-S1 antenna, the new PL-S1 uses an integrated ground plane and Fence Antenna™ Technology for advanced multipath rejection and improved tracking sensitivity. For applications where Topcon's high-performance micro-centered antennas are not necessary, the PL-S1 delivers excellent signal tracking and mid-grade performance at an attractive price.

The PL-S1 antenna supports L1/L2 frequencies from GPS and GLONASS satellite constellations, as well as L-Band frequencies. The PL-S1 is designed to accompany all Topcon modular and handheld GNSS receivers when using Topcon's Spectrum RTK™ Technology.

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SPECIFICATIONS

Operating Frequency Range

L1 GPS/GLONASS	1586.5 ± 25MHz
L2 GPS/GLONASS	1236 ± 20 MHz
L-Band	1535 ± 10 MHz

Out of Band Rejection

L1	± 100 MHz -30 dBc (typical)
L2	± 200 MHz -60 dBc (typical)

Gain, Noise Figure and VSWR

LNA Gain	33 dB (typical)
Gain at Zenith (90°)	GPS L1 4.5 dBic (min) GPS L2 3.5 dBic (min) GLONASS L1 3.5 dBic (min) GLONASS L2 2.5 dBic (min) L-Band 1 dBic (min)
Noise Figure	1.5 dB (typical)
VSWR	≤ 2.0:1
Nominal Impedance	50 Ohms

Connector and Mounting

Antenna Connector	TNC
Mount	5/8-11 UNC-2B thread

Physical Characteristics

Dimension (W x H x L)	141.6 x 141.6 mm x 54.2 mm
Diameter with Ground Plane	200 mm
Weight without ground plane	430 g
Weight with ground plane	615 g
Centering	< 1 cm

Power

Input Voltage Range	3-18 VDC. Reverse Polarity Protected
Power Consumption	55 mA (typical)

Environmental

Enclosure	Aluminum with Plastic Radome
Operating Temperature	-50°C to 85°C
Storage Temperature	-55°C to 85°C
Waterproof & Dust Rating	IP67
Random Vibration	IEC 60068-2-34, Test Fd
Sinusoidal Vibration	IEC 60068-2-6, Test Fc
Shock	IEC 60068-2-29 Test Ea
Bump	IEC 60068-2-29 Test Eb
Mechanical Drop	2m pole drop to concrete

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