



# DUAL BAND VHF - L1 GPS - G1 GLONASS

151 ÷ 156 MHz, 1609 MHz

BFLG1D2

POLOMARCONI.IT



POLOMARCONI offers a very wide range of wireless products. Our products can be tailored according to the customer's need.

RAILWAYS AND TRANSPORT

## Electric Characteristics

Frequency range	151 ÷ 156
Input impedance ( $\Omega$ )	50
VSWR	< 2.:1
Continuous Max. Power (W)	30
Polarization	vertical
Gain (dB) over $\lambda/4$ monopole	0
Operation Temp. Range ( $^{\circ}\text{C}$ )	-40° to +70

## GPS/GLONASS DIELECTRIC ANTENNA

Frequency range G1 GLONASS	1609 MHz
Input impedance ( $\Omega$ )	50
VSWR (GPS antenna without amplifier mounted on a conductive surface of dimensions 5x5 cm)	< 1.5:1
Polarization	right hand circular
Medium gain (GPS antenna without amplifier) at zenith ( $90^{\circ}$ of elevation)	from -2 to +1 dBic

## LNA/FILTER

Gain (without cable):	> 28 dB Typical
Noise figure:	< 1.5 dB
Power supply:	2.7 to 5 V
Consumption:	30 mA maximum

## Mechanical Specifications

Connectors	Silver plated brass
Type of connection	N female for VHF band TNC female for L1 GPS / G1 GLONASS
Dimensions (mm)	360x80x145
Weight (kg)	0.8
Base material	Aluminium with SURTEC 650 treatment
Radome	High impact polycarbonate
Mounting	on metallic surface (1500x1500 mm minimum)
Reliability	above to 200,000 hours

## Environmental Characteristics

### ATMOSPHERIC and CLIMATIC CONDITIONS according to NF EN 60068

Temperature conditions	-40°C, +70°C
Atmospheric pressure	-40°C, +70°C, 95% HR at 2000 mt
Rain, hail, snow, frost	1000 mm/h, 1 J impact, 0.5 m, 3 cm
Combined wind and train speed	530 km/h

### MECHANICAL CONDITIONS according to NF EN 60068, 61373 and 15-818

Free falls	1 m
Hits (vertical, cross-sectional, longitudinal)	30m/s <sup>2</sup> , 30m/s <sup>2</sup> , 50m/s <sup>2</sup> , 30ms
Impacts	50 J

### GROUNDING and HIGH VOLTAGE PROTECTION according to NF EN 50388 and NF EN 50123

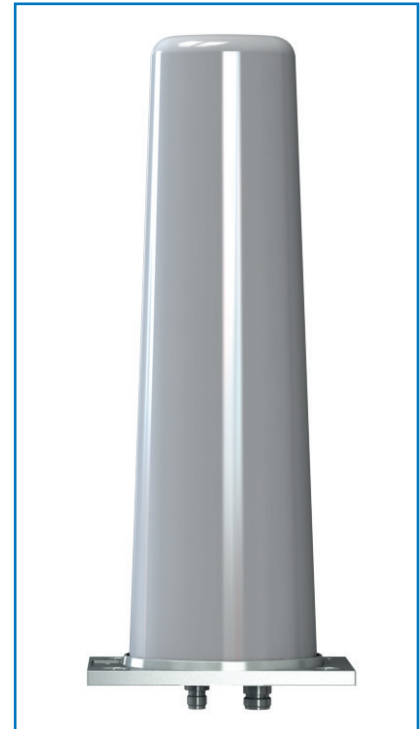
Short-circuit currents flow / time before breaking	70 kA / 5 ms – 40 kA / 100 ms (DC) 31,5 kA / 10 ms – 15 kA / 100 ms (AC)
--	---



Patent n° 1548873

Antenna for train with protective means against high voltages.

Patent has been used by SNCF and by the most important producers of trains.



## MOUNTING FLANGE

Mounting: on a conductive surface with a minimum size of 1500x1500 mm; it's advisable to keep the mounting surface clean for a better electrical contact.

**Grounding and high voltage protection:** Our antennas have passed the strict SNCF's tests that approved our products as protected against lightning and high-tension voltage thanks to our patented DC and AC grounded system.

**Advantage:** amplifier included; there is no need of an external low noise amplifier GPS/GLONASS as the internal GPS/GLO-NASS is already amplified.

**Approved by:** SNCF, SNCB, TRENITALIA

BY



Made in Italy. We reserve the right to modify these data without any notice.