THREE BAND UHF – GSM – L1 GPS ANTENNA

456 ÷ 462 , 870 ÷ 960 and 1575.42 MHz

TRGLD1

TRANSPORT

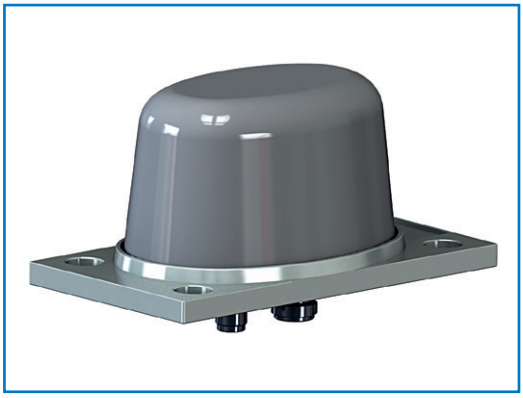
POLOMARCONI.IT

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

Electrical Specifications

Frequency band (MHz)	456 ÷ 462 870 ÷ 960
Impedance (Ω)	50
VSWR	<2:1
Continuous Max. Power (W)	30
Polarization	vertical
Gain (dB) over λ/4 monopole	0
Operating Temp. Range (°C)	-40° ÷ +70°
GPS BAND	
Frequency Band (MHz)	1575.42 ±1
Impedance (Ω)	50
VSWR (GPS antenna without amplifier mounted on a conductive surface of dimensions 5x5 cm)	<1.5:1
Medium gain (dBic) (GPS antenna without amplifier) at zenith (90° of elevation)	-2 ÷ +1
Polarization	right hand circular
GPS AMPLIFIER	
Gain (dB)	> 27 (29 medium)
Noise factor (dB)	< 1.5 (1.2 medium)
Power supply (V)	5 ±40%
Consumption (mA)	23 ±3.5 (21 medium)

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.



Mechanical Specifications

Connectors		N female for UHF and GSM TNC female for GPS
Dimensions (mm)		70x80x145
Weight (kg)		0.5
Materials		
	base	Aluminium with SURTEC 650 treatment
	radome	High impact polycarbonate
	connectors	connectors
Mounting		on metallic surface (800x800mm minimum)

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 m
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/s², 30m/s², 50m/s², 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)

MOUNTING FLANGE

Mounting: on a conductive surface with a minimum size of 800x800 mm; it's advisable to keep the mounting surface clean for a better electrical contact. TRGLD1 4 holes flange: flange with 4 M10 studs included.

Grounding and high voltage protection: Our antennas have passed the strict SNCF's tests that approved our products as protected against lighting 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 GPS amplifier as the internal GPS signal is already ampliefied.
***Advantage:** UHF frequency could be modified on customer's request
Approved by: SNCF, SNCB, TRENITALIA