



THREE BAND UHF- GSM-R - GPS ANTENNA

440 ÷ 470 MHz , 870 ÷ 960 MHz, 1575.42 MHz

TRGLI

POLOMARCONI.IT

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

TRANSPORT

Electrical Specifications

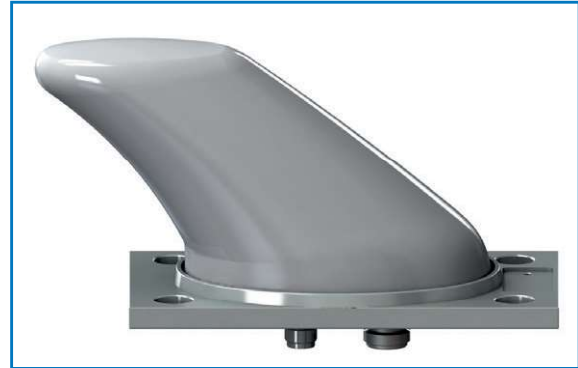
UHF BAND	
Frequency band (MHz)	440 ÷ 470
VSWR	≤ 1.6:1 with GND 600x600mm
Gain (dB) over λ/4 monopole antenna	0
GSM-R BAND	
Frequency band (MHz)	870 ÷ 960
VSWR (referred to GND 500x500mm)	< 1.5:1
Gain (dB) over λ/4 monopole antenna	0
UHF AND GSM-R BANDS COMMON DATA	
Impedance (Ω)	50
Continuous Max. Composite Power (W)	30
Polarization	vertical
Operation Temp. Range (°C)	-40° ÷ + 70°
SATELLITE NAVIGATION AND GEOLOCALIZATION BAND	
Frequency band (MHz)	1574.42 ÷ 1576.42
Impedance (Ω)	50
Polarization	Right Hand Circular Polarization (RHCP)
Gain (dBic)	≥ 25 (typical 27), @T ₀ =25°C, V _{DC} =5V
Noise Figure (dB)	≤ 2.5, @T ₀ =25°C, V _{DC} =5V
Operating supply voltage (V _{DC})	3.0 ÷ 7.0
Current consumption (mA)	≤ 35, @T ₀ =25°C, V _{DC} =5V
Satellite navigation and geolocalization supported systems	GPS
Operation Temp. Range (°C)	-40° ÷ +70°



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	UHF and GSM-R bands GPS band	N f TNC f
Dimensions (Height from installation surface x Width x Depth, mm)		98x80x145
Weight (kg)		0.5
Materials	Base Radome Connectors	Aluminium with ALODINE1200 galvanic treatment High impact polycarbonate Silver plated brass
Mounting		at the center of a metallic conductive surface with a minimum size of 500x500 mm
Reliability (hours)		> 200,000

Environmental Specifications

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/s ² , 30m/s ² , 50m/s ² , 30ms
Impacts	50 J

PREAMPLIFIER EMC according to ETSI EN 50121-3-2 (2016)

Radiated electromagnetic fields	20 V/m (30 MHz – 6 GHz)
Electrostatic discharges	±15 kV on air, ±8 kV on contact
Pulsed magnetic fields	1000 A/m

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

It's advisable to keep the mounting surface clean and free from paint for an optimal electrical contact.

Mounting flange holes are indicated in the relevant mounting instruction document.

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: GPS LNA included; there is no need of an external low noise GPS amplifier as the internal GPS antenna is already amplified.

Approved by: SNCF, SNCB, TRENITALIA



THREE BAND UHF- GSM-R - GPS ANTENNA

440 ÷ 470 MHz , 870 ÷ 960 MHz, 1575.42 MHz

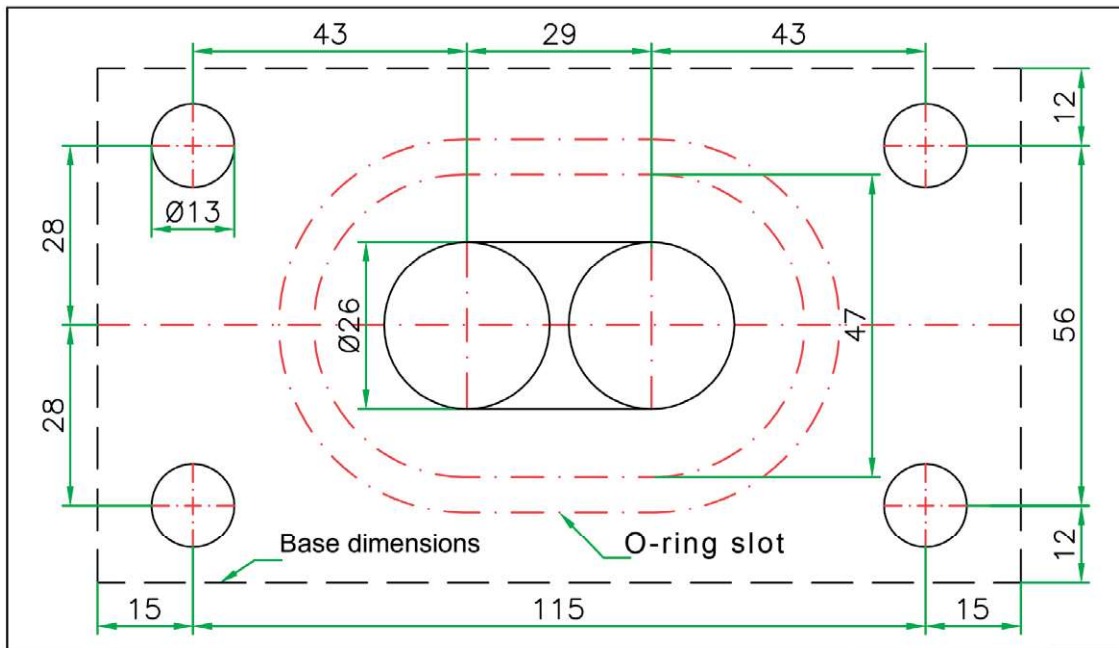
TRGLI

POLOMARCONI.IT

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

TRANSPORT

DRILLING MASK



All dimensions are in mm

VSWR CURVES

