



MONO BAND GSM-R ANTENNA

870 ÷ 960 MHz

MGD1

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

Electrical Specifications

GSM-R BAND	
Frequency range (MHz)	870 ÷ 960
Impedance (Ω)	50
VSWR	$\leq 1.7:1$
Continuous Max. Power (W)	30
Polarization	vertical
Gain (dB) over $\lambda/4$ monopole	0
Operation Temp. Range ($^{\circ}\text{C}$)	$-40^{\circ} \div +70^{\circ}$

Mechanical Specifications

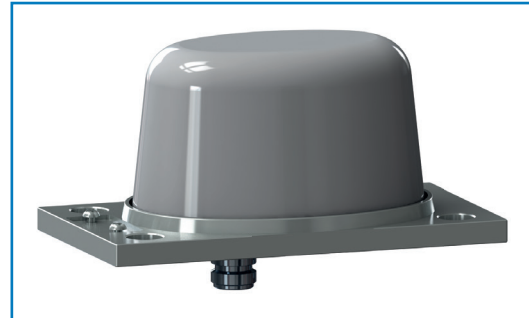
Connector	Silver plated brass
Type of connection	N female
Dimensions (Height x Width x Depth, mm)	70x80x145
Weight (kg)	0.5
Base material	Aluminium with SURTEC 650 treatment
Radome	High impact polycarbonate
Mounting	at the center of a metallic conductive surface with minimum size of 600x600mm



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.



Environmental Specifications

ATMOSPHERIC and CLIMATIC CONDITIONS according to NF EN 60068

Temperature conditions:	-40°C , $+70^{\circ}\text{C}$
Atmospheric pressure:	-40°C , $+70^{\circ}\text{C}$, 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

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)
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MOUNTING FLANGE

Mounting: at the center of a metallic conductive surface with a minimum size of 600x600mm; it's advisable to keep the mounting surface clean and free from paint for an optimal electrical contact.

MGD1 mounting flange holes are indicated in the relevant mounting instructions 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.

Approved by: SNCF, SNCB, TRENITALIA

BY



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

MGD1-DS REV. 00 - 15/12/2016



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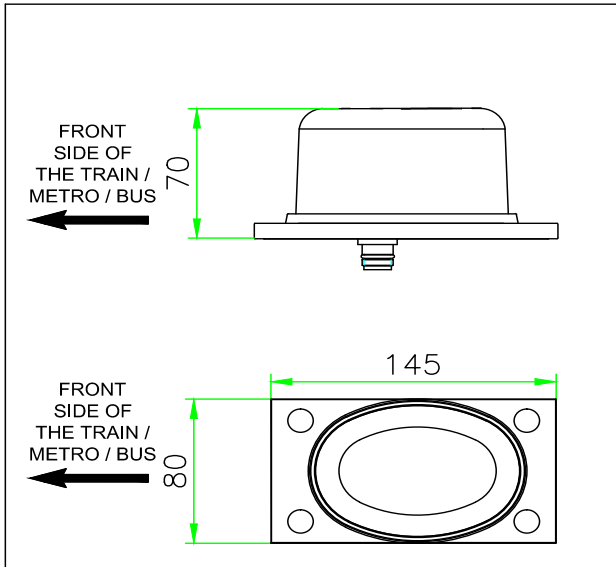


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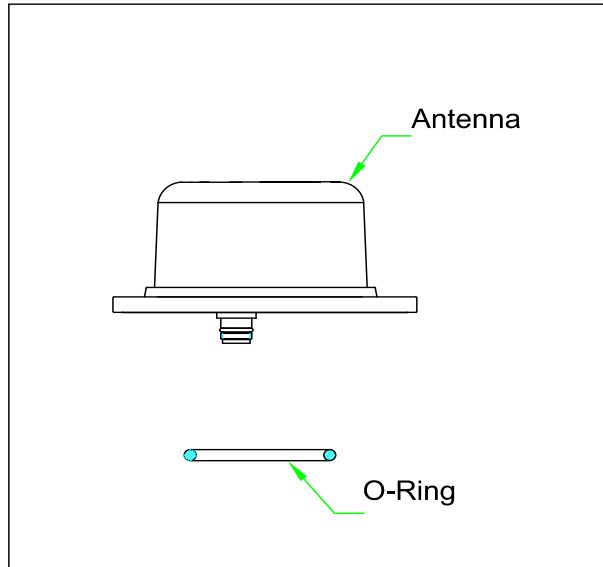
RAILWAYS AND TRANSPORT

MOUNTING INSTRUCTION

GENERAL DIMENSIONS



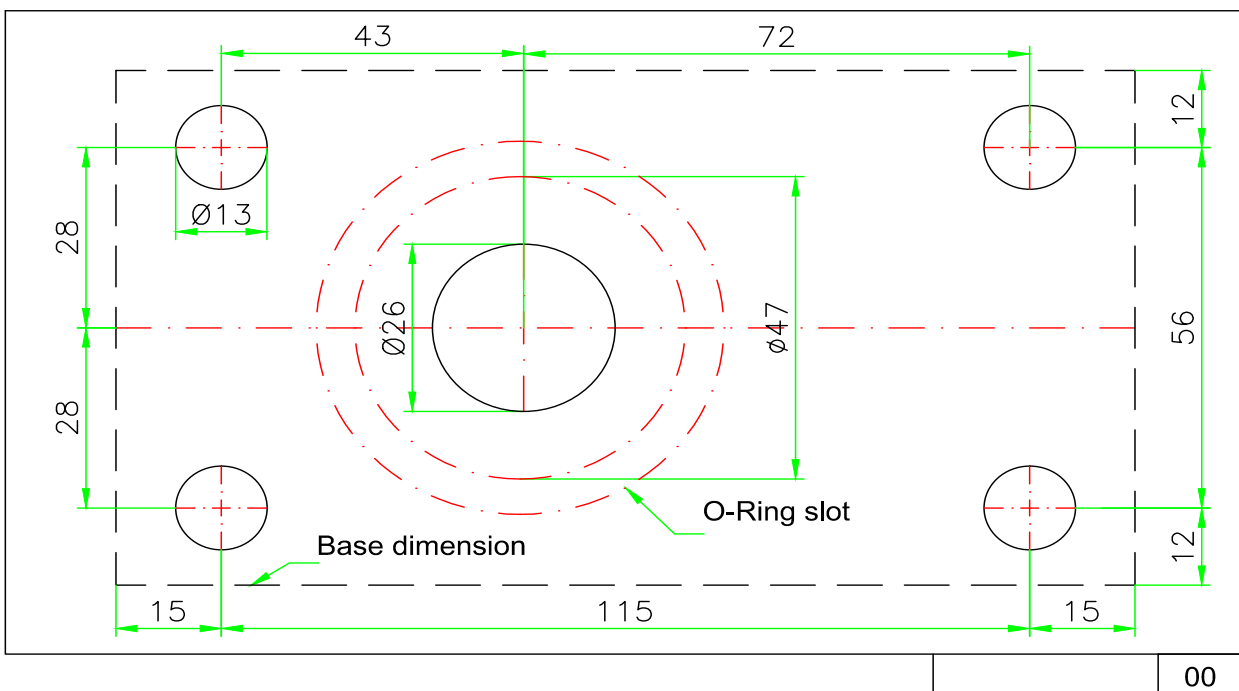
EXPLODED VIEW



MANUAL OF USE

- 1) In order to guarantee the SECURITY OF THE STAFF, in case of fall of the catenary and consequent contact of the same one with the antenna it's necessary that the antenna is mounted on conductive surface (metallic) connected to earth.
- 2) For the use of the antenna on glass-reinforced plastic surfaces or however on non metallic surfaces making sure that the antenna is mounted on a conductive surface (metallic) of minimal dimensions 600x600mm; IN THIS CASE IS NOT GUARANTEED HOW MUCH BROUGHT BACK TO POINT 1 also maintaining the radioelectric characteristics unchanged.
- 3) For an optimal connection of the antenna with the conductive surface (metallic) , before the assembly, strip the zones of contact between surface of antenna's installation and nuts and bolts of implantation.
- 4) Reccomended M10 screw torque 15Nm - 20Nm.

PERFORATION MASK



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