



# THREE BAND GSM - DCS - GPS ANTENNA

870 ÷ 960, 1710 ÷ 1880 and 1575.42 MHz

TDBLD-3V/S

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

Frequency range (MHz)	870 ÷ 960 1710 ÷ 1880
Input Impedance ( $\Omega$ )	50
VSWR	<1.7:1
Maximum rated RF power (W)	30
Polarization	vertical
Gain (dB) over $\lambda/4$ monopole	0
Operating Temp. Range ( $^{\circ}\text{C}$ )	-40 $^{\circ}$ to +70 $^{\circ}$

## SATELLITE NAVIGATION AND GEOLOCALIZATION BAND

Frequency band (MHz)	1574.42 ÷ 1576.42
Impedance ( $\Omega$ )	50
Polarization	Right Hand Circular Polarization (RHCP)
Gain (dBic)	$\geq 25$ (typical 27), @ $T_0=25^{\circ}\text{C}$ , $V_{\text{DC}}=5\text{V}$
Noise Figure (dB)	$\leq 2.5$ , @ $T_0=25^{\circ}\text{C}$ , $V_{\text{DC}}=5\text{V}$
Operating supply voltage ( $V_{\text{DC}}$ )	3 ÷ 7
Current consumption (mA)	$\leq 35$ , @ $T_0=25^{\circ}\text{C}$ , $V_{\text{DC}}=5\text{V}$
Satellite navigation and geolocalization supported systems	GPS

## Mechanical Specifications

Connectors	Silver plated brass
Type of connection	N female for GSM and DCS MCX male 90 $^{\circ}$ with cable for GPS
Dimensions (mm)	140x80x145
Weight (kg)	abt. 0.5
Base material	Aluminium with SURTEC 650 treatment
Radome	High impact polycarbonate
Mounting	on metallic surface (600x600 mm minimum)

## Environmental Characteristics

### CLIMATIC CONDITIONS according to EN 50155:2017 and EN 60068

Operating Temperature ( $^{\circ}$ )	-40 ÷ +70
Storage Temperature ( $^{\circ}$ )	-40 ÷ +80

### MECHANICAL CONDITIONS according to EN 50155:2017 and EN 61373

### EMC according to EN 50121-3-2

### HIGH VOLTAGE PROTECTION according to EN 50124-1

### HIGH CURRENT PROTECTION according to EN 50153, UIC 758, UIC 533, EN 50388 and EN 50123

Short-circuit currents flow/time before breaking	40 kA / 100 ms (DC) 15 kA / 100 ms (AC)
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### FLAMMABILITY RATING according to EN 45545-2

IP 67

RoHS 2011/65/EU compliant



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 600x600 mm; it's advisable to keep the mounting surface clean for a better electrical contact.

TDBLD-3V 3 screws flange: flange with 3 screws included; according to FEDERTRASPORTI 0010/45; see mounting instructions on the following page.

**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 amplified.

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

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

C2-PUBLIC

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## MOUNTING INSTRUCTIONS

### 3V MOUNTING FLANGE

