DATA SHEET

SENCITY® Rail Antenna

1399.17.0044

Properties

- Railway rooftop antenna for Cellular / Wi-Fi bands
- Rugged design, meets EN 50155 Railway Standard
- Includes embedded GPS with integrated LNA
- Fire retardant acc. to DIN 5510-2, BS 6853, NF F16-101/102, EN 45545-2
- Works also on non-metallic surfaces
- A new version of this product is available with to cover the 5G Cellular bands: 1399.99.0120 / 84071811

Electrical data				
	Band 1	**Band 2**	**Band 3**	**Band 4**
Name	Cellular	Cellular	Cell/Wi-Fi	Cellular
Frequency	870 MHz ... 960 MHz	1710 MHz ... 2170 MHz	2400 MHz ... 2700 MHz	3400 MHz ... 3700 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	1.5	1.5	1.5	1.5
Gain	6 dBi	8.5 dBi	9.5 dBi	9.5 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite Power max	550 W	450 W	350 W	300 W

	Band 5	**Band 6**
Name	Cell/Wi-Fi	GPS
Frequency	5150 MHz ... 5875 MHz	1574.4 MHz ... 1576.44 MHz
Impedance	50 Ω	50 Ω
VSWR	2	1.8
Gain	8.5 dBi	
Ambient Temperature	25 °C	25 °C
Composite Power max	300 W	550 W

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Electrical remarks	
Remarks	Ground plane: Indicated VSWR values are also valid for installations on non-metallic surfaces (no specific ground plane requirements).

Ports		
	Port 1	**Port 2**
Connector	N, jack (female)	N, jack (female)
Polarization	vertical	circular right
DC grounded	Yes	

Connections		
	Port 1	Port 2
Band 1	✓	
Band 2	✓	
Band 3	✓	
Band 4	✓	
Band 5	✓	
Band 6		✓

Electrical data LNA	
LNA is connected to	Port 2
Input voltage	3 V ... 5 V
Current cunsumption	25 mA
Noise figure	2.7 dB
Remarks	Values for LNA power consumption, noise figure and gain are given for a 5V operating voltage and may differ slightly for a lower voltage GPS Gain values are valid with 1 m diameter ground plane

Mechanical data	
Weight	1.2 kg
Dimensions	90 mm x 100 mm x 260 mm (Height x Width x Depth)
Remarks	High-current-protection: Designed acc. to UIC 533, DC-grounded antenna element (protection against lightning and short circuit with catenary lines(40kA/0.1s). Corrosion: Low corrosion design acc. to MIL-F-14072(E).

Material data	
Radome material	ASA (acrylic ester-styrene-acrylonitrile)
Radome colour	RAL 7043 (dark grey)
Back plate/base plate material	Aluminum
Back plate/base plate colour	RAL 7043 (dark grey)

Environmental data	
Operation temperature	-40 °C ... 85 °C
Storage temperature	-40 °C ... 85 °C
Transport temperature	-40 °C ... 85 °C
Environment (application)	Outdoor
Ingress protection (IP Rating)	IP68

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Environmental data	
Flammability rating	DIN 5510
Solar radiation	DIN 75220

Additional Information

This product meets the Deutsche Bahn specifications for rolling stock equipment. Protected by Patents: US7327320B2, CN1765030B, AU2003218856A1, CA2521771C, SG114406, ZA200508290.

Antenna accessories

Item description	Item number	Product name
9091.99.0189	84008192	12mm adapter plate for Sencity Rail antenna

Ordering information

Item description	Item number	Product name
1399.17.0044	84002818	SENCITY® Rail Antenna

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