

SENCITY® Rail Excel Antenna

1324.17.0070

Properties

- Railway rooftop directional antenna for Wi-Fi bands between 2400 and 2650 MHz
- Vertically polarized radiation pattern
- Fire retardant according to EN 45545-2 and NFPA130
- Rugged design, meets EN 50155 Railway Standard
- Works also on non-metallic surfaces



Electrical data

	Band 1	Band 2	Band 3	Band 4
Frequency	2400 MHz ... 2484 MHz	2484 MHz ... 2550 MHz	2550 MHz ... 2600 MHz	2600 MHz ... 2630 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	1.5	1.5	1.5	1.5
Gain	13.5 dBi	13 dBi	12 dBi	11 dBi
HPBW vertical	24 °	25 °	23 °	24 °
HPBW horizontal	51 °	51 °	52 °	45 °
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite Power max	350 W	350 W	350 W	350 W

	Band 5
Frequency	2630 MHz ... 2650 MHz
Impedance	50 Ω
VSWR	1.5
Gain	10 dBi
HPBW vertical	24 °
HPBW horizontal	45 °
Ambient Temperature	25 °C
Composite Power max	350 W

Electrical remarks

Remarks	Indicated VSWR values are also valid for installations on non-metallic surfaces (no specific ground plane requirements). Indicated gain values will be achieved on a metallic ground plane of 1 x 1 m or larger.
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Ports		
	Port 1	Port 2
Connector	N, jack (female)	N, jack (female)
Polarization	vertical	vertical
DC grounded	Yes	Yes

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

Mechanical data	
Weight	2.2 kg
Dimensions	85 mm x 100 mm x 510 mm (Height x Width x Depth)
Windload	Wind Speed survival: 500 km/h
Remarks	High-voltage-protection: no voltage on RF port, if the catenary line touches the antenna (EN 50124-1, 27.5 kVAC/1min). High-current-protection: Designed acc. to UIC 533, DC-grounded antenna element protection against lightning and short circuit with catenary lines (EN50388, EN 50122-1, 40kA/0.1sec) Corrosion: Low corrosion design according to MIL-F-14072(E), 96 hours Salt Spray test. Mounting: Shall be installed in longitudinal position to the wind/driving direction. Suitable for installation on high-speed trains with a maximum speed of 500 km/hr.

Material data	
Radome material	PC (Polycarbonate)
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	-55 °C ... 85 °C
Storage temperature	-55 °C ... 85 °C
Transport temperature	-55 °C ... 85 °C
Environment (application)	Outdoor
Ingress protection (IP Rating)	IP67, IP69
Flammability rating	EN 45545-2 R24 HL3
Solar radiation	UL 746C, F1

Environmental remarks	
Environmental tests: EN 50155:2018-05 Flammability rating: EN45545-2:2013 + A1:2015, NFPA-130:2017 Tested according to ISO 4589-2:2017, NFX 70-100-1:2006, ISO 5659-2:2011. Antennas with production date prior to 01-Oct-2020 do not have NFPA-130 compliance.	

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Additional Information
This product meets the Deutsche Bahn specifications for rolling stock equipment.
There is no applicable EU directive nor related harmonized standard for passive antennas. Consequently, there is no CE marking on these antennas and no EU Declaration of Conformity can be issued.

Ordering information		
Item description	Item number	Product name
1324.17.0070	84027011	SENCITY® Rail Excel Antenna

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