

SENCITY® Rail Excel Antenna

1356.17.0010

Properties

- Railway rooftop directional antenna for Wi-Fi bands between 4900 and 5975 MHz
- Gain of 12 dBi with Vertical polarisation
- Rugged design, meets EN 50155 Railway Standard
- Fire retardant according to EN 45545-2 and NFPA-130
- Works also on non-metallic surfaces

**Electrical bands**

	Band 1	Band 2
Frequency	4900 MHz ... 5150 MHz	5150 MHz ... 5975 MHz
VSWR	1.6	1.7
Impedance	50 Ω	50 Ω
Gain	12 dBi	12 dBi
HPBW vertical	17 °	16 °
HPBW horizontal	48 °	48 °
Ambient Temperature	25 °C	25 °C
Composite Power max	300 W	300 W

Electrical remarks

Remarks	<p>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.</p> <p>High-voltage-protection: no voltage on RF port, if the catenary line touches 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)</p>
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Ports

	Port 1
Connector	N, jack (female)
Polarization	vertical

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Ports	
	Port 1
DC grounded	Yes

Connections	
	Port 1
Port number	Port 1
Band 1	✓
Band 2	✓

Mechanical data	
Weight	1.4 kg
Dimensions	90 mm x 100 mm x 260 mm (Height x Width x Depth)
Windload	Wind Speed survival: 500 km/h
Remarks	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.

Interface and 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)

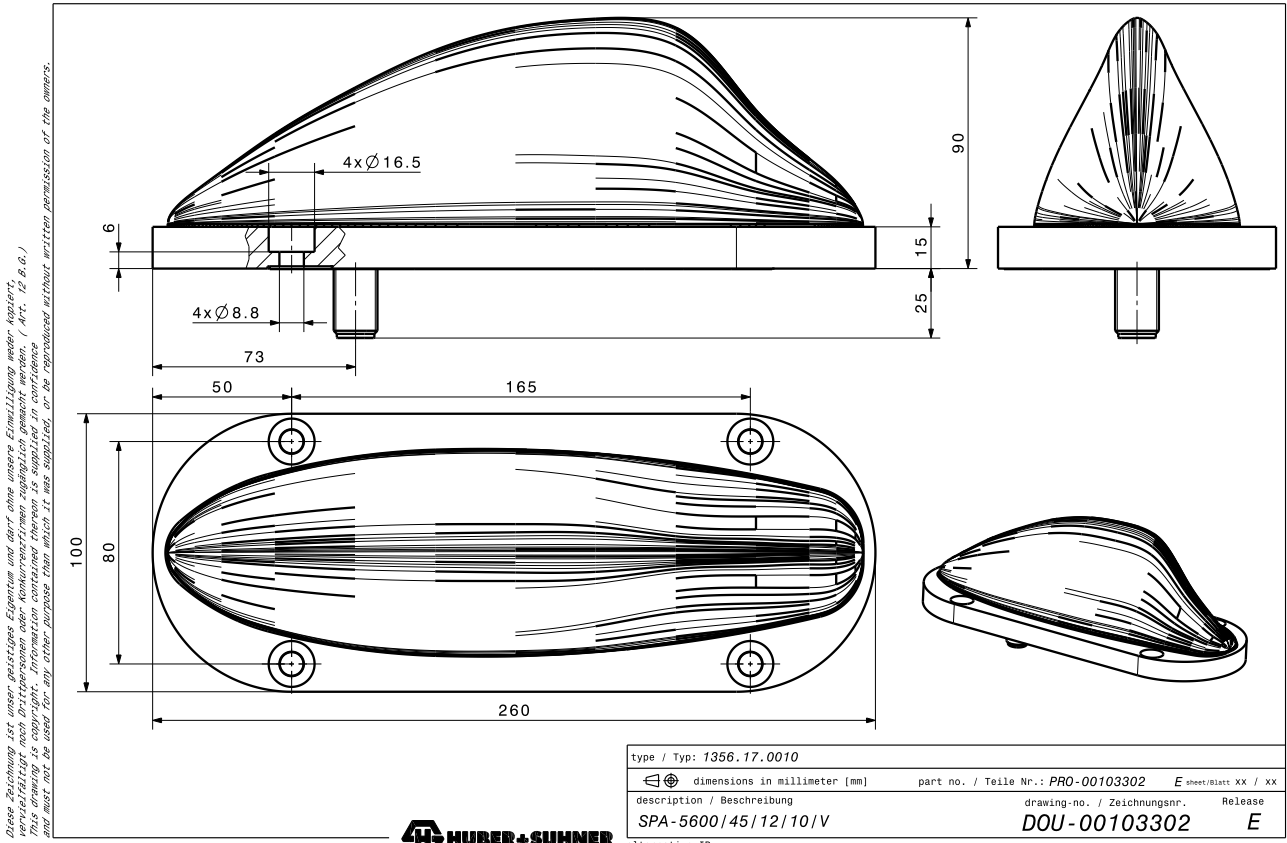
Environmental data	
Operation temperature	-55 °C ... 85 °C
Storage temperature	-55 °C ... 85 °C
Transport temperature	-55 °C ... 85 °C
Environment (application)	Outdoor
Ingress protection (IP Rating)	IP67, IP69
Flammability rating	EN 45545-2 R24 HL3
Solar radiation	UL 746C, FI

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.	

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.	

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Outline drawing



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