Data Sheet

Sencity Rail Antenna
1399.99.0026

SWA-0459/360/4/25/DFRX30

Description

Railway rooftop antenna for Tetra, DVB-T, GSM 900, GSM 1800,
GSM 1900, UMTS, LTE, WiFi and WiMAX 2.4, 3.5, 5.3 and 5.8 GHz Bands.
Rugged design, meets EN 50155 railway standard.
Embedded GPS antenna with integrated LNA.
Split installation support.
Optional grounding kit available.
Optional conduit support kit available to protect the cabling.
Fire retardant acc. to DIN 5510-2, BS 6853, NF F16-101/102, EN 45545-2.

Product Configuration

Technical Data

Electrical Data

	Band 1	Band 2	Band 3	Band 4
Frequency (MHz)	380 - 470	470 - 960	1710 - 2170	2400 - 2700
VSWR	1.8	1.8	1.8	1.6
Impedance (Ohm)	50	50	50	50
Gain (dBi)	4	4	8	7.5

	Band 5	Band 6	Band 7
Band Name			GPS
Frequency (MHz)	3400 - 3700	4900 - 5935	1574.397 - 1576.443
VSWR	1.6	1.9	1.8
Impedance (Ohm)	50	50	50
Gain (dBi)	7.5	8.5	

Ports

	Port 1	Port 2
Connector	N, jack (female)	TNC, plug (male)
Polarization	vertical	circular right

Connections

	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7
Port 1	X	X	X	X	X	X	
Port 2							X

General Data

DC Grounding	Yes
Composite Power max (W)	100

Indicated VSWR values are valid for a metallic ground plane of 0.5 x 0.5m or larger. Indicated gain values will be achieved on a metallic ground plane of 1 x 1 m or larger.

Electrical Data LNA

LNA noise figure dB	1.8
LNA current consumption (mA)	30
LNA is connected to	Port 2

EMC: EN 50121-3-2:2001
LNA input voltage range: 3..5V

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Total gain @90° elevation: 30 dBiC
Values for LNA power consumption, noise figure and gain are given for a 5V operating voltage and may differ slightly for a lower voltage

Mechanical Data

Dimensions (mm)	153 x 100 x 256 (Heigth x Width x Depth)
Weight (kg)	1.6

High-voltage-protection: no voltage on RF port, if the catenary line touches the antenna (EN 50124-1, 27.5 kVAC).
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).
Mounting: Shall be installed in longitudinal position to the wind/driving direction.

Environmental Data

Environmental conditions	outdoor
Operation temperature (°C)	-40 to 85
Storage temperature (°C)	-40 to 85
Transport temperature (°C)	-40 to 85
IP rating	IP69K
Solar radiation	DIN 75220
RoHS 2011/65/EU	compliant
REACH 2006/1907/EC	compliant

Environmental tests EN 50155:2007
Flammability rating DIN 5510-2, BS 6853, NF F16-101/102, EN 45545-2.

Material Data

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

Related Products

9091.99.0235 Sencity Rail Antenna grounding kit
9091.99.0236 Sencity Rail conduit Support Kit
9091.99.0251 MIMO adapter plate for Sencity Rail antennas
9091.99.0252 Adapter plate for Sencity Rail antenna

Related Documents

Mounting instruction	DOC-0000295392
Painting instruction	DOC-0000256180
Security instruction	DOC-0000278984
Outline drawing	DOU-00135091
Outline drawing 2	DOU-00154160
3D-model	DOC-0000339670

Additional Information

This product meets the Deutsche Bahn specifications for rolling stock equipment.

Mouser Electronics

Authorized Distributor

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