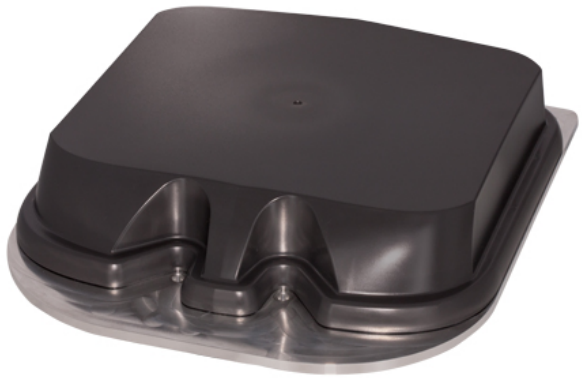
Data Sheet

HUBER+SUHNER

SENCITY® Rail MULTI 4-Port
1399.17.0268

Description

4-Port Railway rooftop antenna for Cellular and Wi-Fi bands.
Supports 4x4 Cellular MIMO for 3G, 4G and 5G or all Wi-Fi 6E bands.
Rugged design, meets EN 50155 Railway Standard.
Fire retardant according to EN 45545-2 and NFPA-130.



Product Configuration

Technical Data

Electrical Data

	Band 1	Band 2	Band 3	Band 4
Band Name	Cellular 1-4	Cellular 1-4	Cellular 1-4	Cellular 1-4
Frequency (MHz)	617 - 694	694 - 960	1350 - 2700	2700 - 3300
VSWR	1.7	1.6	1.8	1.8
Impedance (Ohm)	50	50	50	50
Gain (dBi)	3.5	5	6	6
Composite power max (W)	80	80	80	80
Ambient temperature (°C)	25	25	25	25
Port Isolation (dB)	13	13	20	25

	Band 5	Band 6
Band Name	Cellular 1-4	Cellular 1-4
Frequency (MHz)	3300 - 4900	4900 - 7125
VSWR	1.9	1.7
Impedance (Ohm)	50	50
Gain (dBi)	6	6
Composite power max (W)	80	80
Ambient temperature (°C)	25	25
Port Isolation (dB)	25	25

Ports

	Port 1	Port 2	Port 3	Port 4
Port name	Cellular 1	Cellular 2	Cellular 3	Cellular 4
Connector	N, jack (female)	N, jack (female)	N, jack (female)	N, jack (female)
Cable Type	RADOX_RF_316_D	RADOX_RF_316_D	RADOX_RF_316_D	RADOX_RF_316_D
Cable Length (m)	0.493	0.358	0.357	0.494
Polarization	vertical	vertical	vertical	vertical
DC grounded	Yes	Yes	Yes	Yes

Connections

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

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Port 4	X	X	X	X	X	X

General Data

Ground plane: VSWR and gain values are also valid for installations on non-metallic surfaces (no specific ground plane requirements).

Mechanical Data

Dimensions (mm)	84 x 368 x 425 (Heigth x Width x Depth)
Weight (kg)	8

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)
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.

Environmental Data

Environmental conditions	outdoor
Operation temperature (°C)	-55 to 85
Storage temperature (°C)	-55 to 85
Transport temperature (°C)	-55 to 85
IP rating	IP69
Flammability rating	EN 45545-2 R24 HL3
Solar radiation	UL 746C, F1
2011/65/EU (RoHS - including 2015/863 and 2017/2102)	compliant acc. Annex III
Lead-free soldered	not soldered
WEEE 2012/19/EU	no special marking needed
ELV 2000/53/EC	not evaluated
REACH 1907/2006/EC	compliant

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.

Environmental tests: EN 50155:2018-05
§13.4.6 EN 60068-2-1:2008-01 Cold temperature test Ab, -55°C, 16h
§13.4.5 EN 60068-2-2:2008-01 Dry heat test Be +85°C, 16h
§13.4.7 EN 60068-2-30:2006-06 Damp heat cyclic test Db, +25/55°C, 2 cycles
§13.4.10 EN 60068-2-11:2000-02 Salt mist test, 96h
§13.4.11 EN 61373:2011-04 § 8, Cat. 1B Broadband Random Vibration
§13.4.11 EN 61373:2011-04 § 9, Cat. 1B Increased Random Vibration
§13.4.11 EN 61373:2011-04 § 10, Cat. 1B Mechanical shock
§13.4.12 Ingress Protection EN 60529:2014-09 IP6X, IPX5, IPX6, IPX8, IPX9

Material Data

Radome colour	RAL 7043 (dark grey)
Radome material	PC (Polycarbonate)
Back plate/base plate material	Aluminium

Related Products

9091.99.0269 Aluminium Mounting Plate for Sencity Rail MULTI 7-Port
9091.99.0270 Steel Mounting Plate for Sencity Rail MULTI 7-Port

Related Documents

Mounting instruction	DOC-0000813531
Painting instruction	DOC-0000256180
Security instruction	DOC-0000278984
Outline drawing	DOU-00483124
3D-model	DOC-0000912924

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Additional Information

The antenna needs a customer specific bracket when mounted on a curved roof (not part of the delivery content of the antenna). A standard bracket is available for the antenna mounting above an existing cable breakthrough on a flat roof (Article Number 9091.99.0270). Protected by Patents: DE202015009331(U1), US10116056(B2), CN106663861B, US7327320B2, CN1765030B, AU2003218856A1, CA2521771C, SG114406, ZA200508290.

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