Critical Communications

Edition 05/2026

Secure, reliable and continous coverage for business and mission critical networks

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HUBER+SUHNER


Connecting – today and beyond

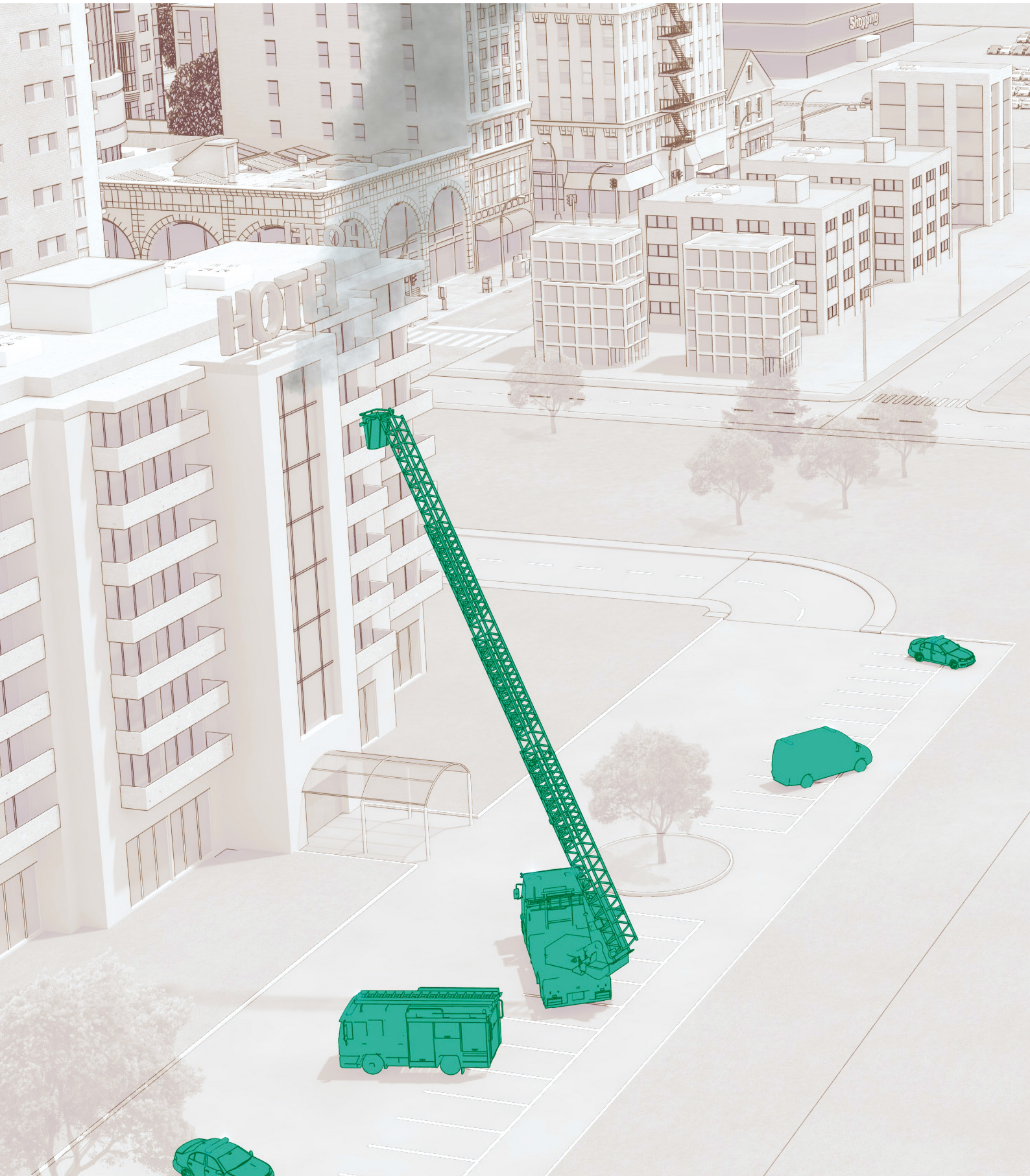
HUBER+SUHNER is a global company with headquarters in Switzerland which develops and manufactures components and system solutions for electrical and optical connectivity. With cables, connectors and systems developed from the three core technologies of radio frequency, fiber optics and low frequency – the company serves customers in the communication, transportation and industrial sectors.

The products deliver high performance, quality, reliability and long service life even under the toughest of conditions. The company's global production network, combined with group companies and agencies, ensures that HUBER+SUHNER maintains a close relationship with its customers in over 80 countries.

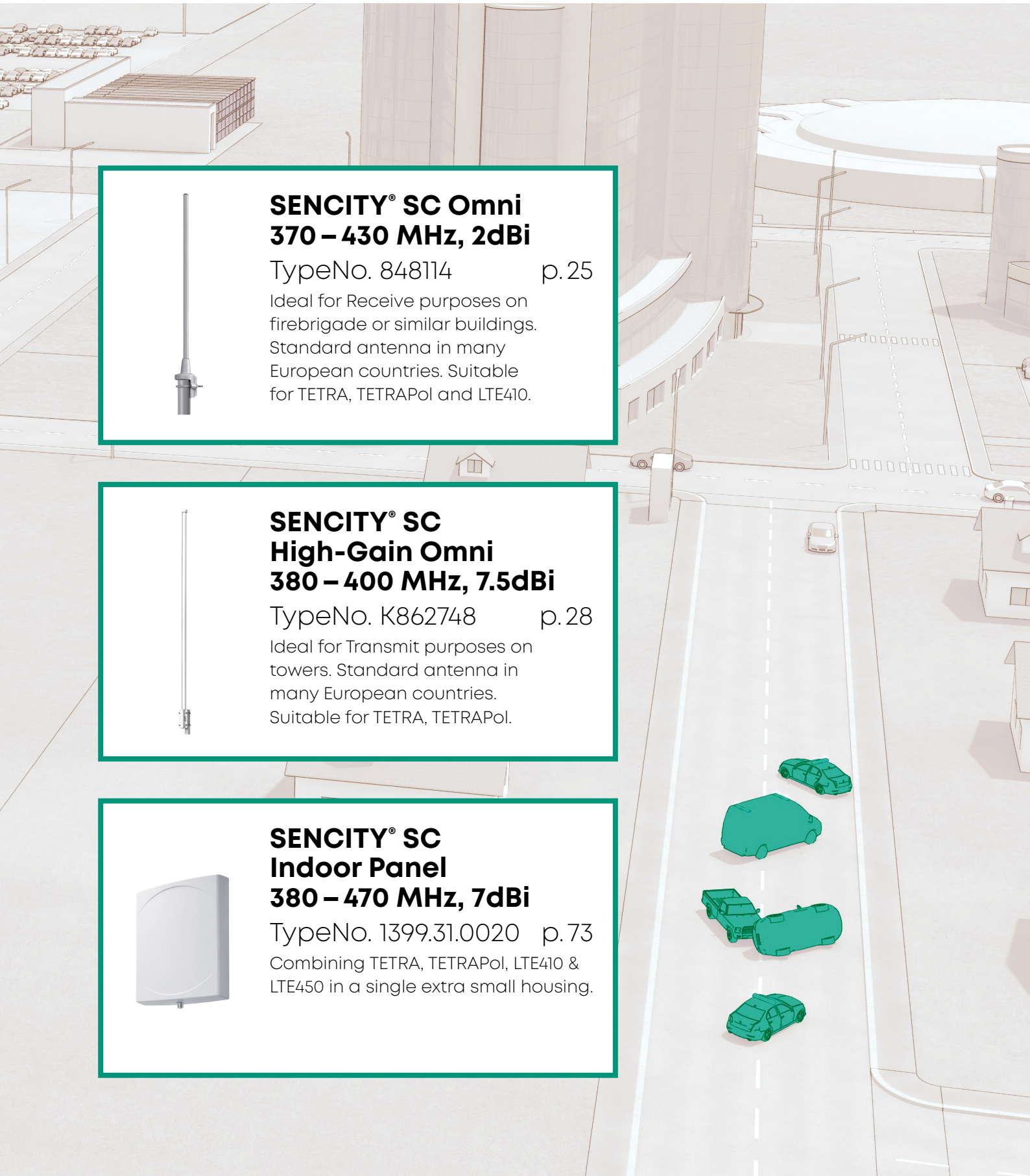
HUBER+SUHNER has been developing and manufacturing specialised antenna products for over 25 years. The SENCITY® brand of antennas reflects quality, performance and our unending pursuit of innovation. Our expertise extends to wireless applications in the railway, automotive, communication, industrial and defense industries.

Blue light

HUBER+SUHNER products also support mission-critical applications for emergency response and blue light forces by providing robust and secure solutions that support front-line operations in the air, on the ground and at sea. Covering the digital TETRA,



ultra-broadband and professional LTE bands, we offer mobile communication services enabling the combination of voice and data in emergency situations to ensure reliable coverage when it is needed most.



SENCITY® SC Omni 370 – 430 MHz, 2dBi

TypeNo. 848114 p. 25

Ideal for Receive purposes on firebrigade or similar buildings. Standard antenna in many European countries. Suitable for TETRA, TETRAPol and LTE410.

SENCITY® SC High-Gain Omni 380 – 400 MHz, 7.5dBi

TypeNo. K862748 p. 28

Ideal for Transmit purposes on towers. Standard antenna in many European countries. Suitable for TETRA, TETRAPol.

SENCITY® SC Indoor Panel 380 – 470 MHz, 7dBi

TypeNo. 1399.31.0020 p. 73

Combining TETRA, TETRAPol, LTE410 & LTE450 in a single extra small housing.

Defense

HUBER+SUHNER products also support mission-critical applications for military forces by providing robust and secure solutions that support front-line operations in the air, on the ground and at sea. Covering the digital TETRA, ultra-broadband and professional LTE bands,

SENCITY® SC
Ultra-Broadband Omni
380 – 3800 MHz, 3 – 8.5 dBi

Type no. 92210003 p. 27

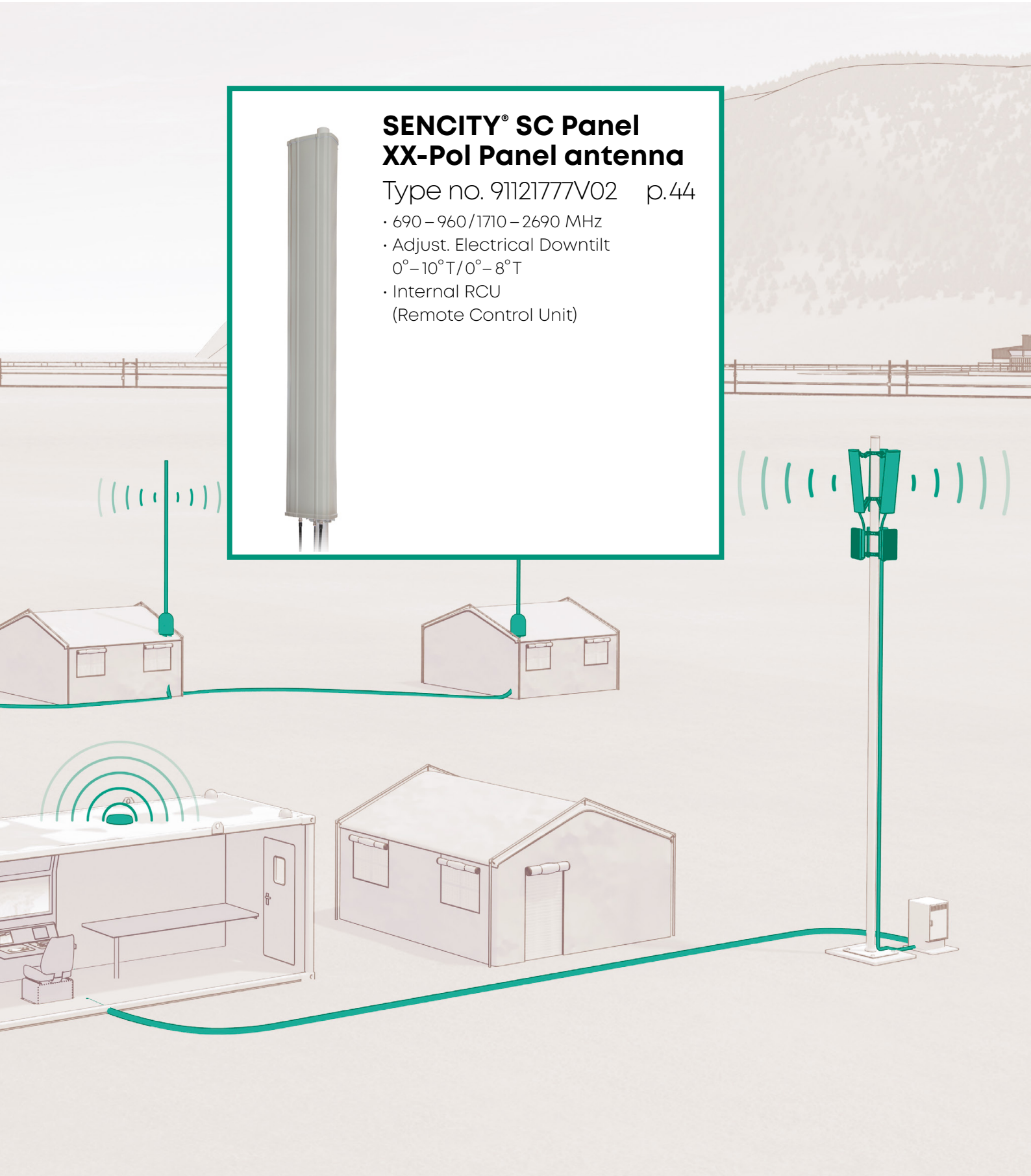
Small ground plane and
excellent coverage

SENCITY® Shield
Low Profile
790 – 6425 MHz
5 dBi

Type no. 1399.99.0284 p. 96

Rugged military vehicle antenna
for Jamming and Communication or
Drone recognition

we offer mobile communication services enabling the combination of voice and data in critical situations to ensure reliable coverage when it is needed most.



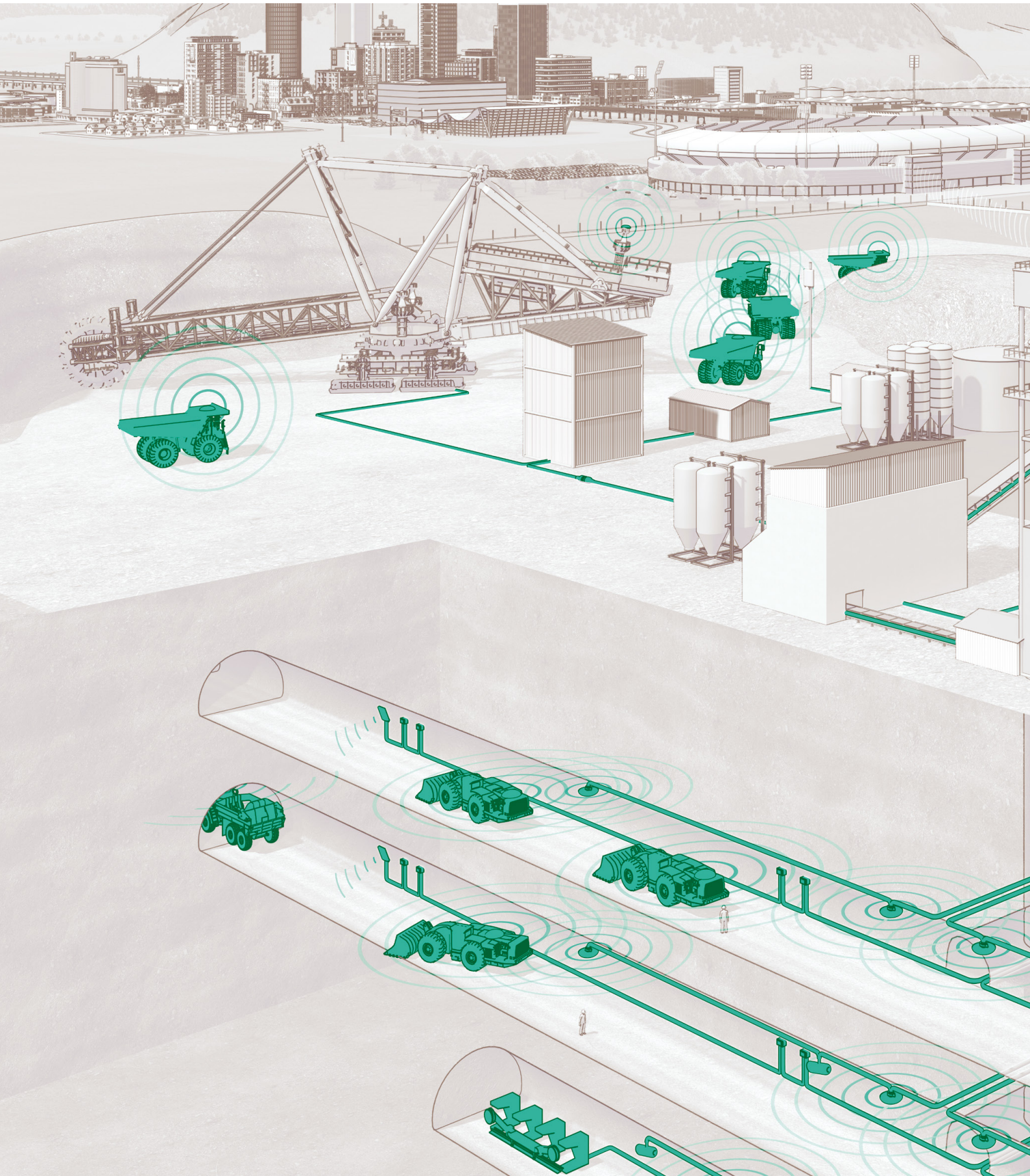
SENCITY® SC Panel XX-Pol Panel antenna

Type no. 91121777V02 p.44

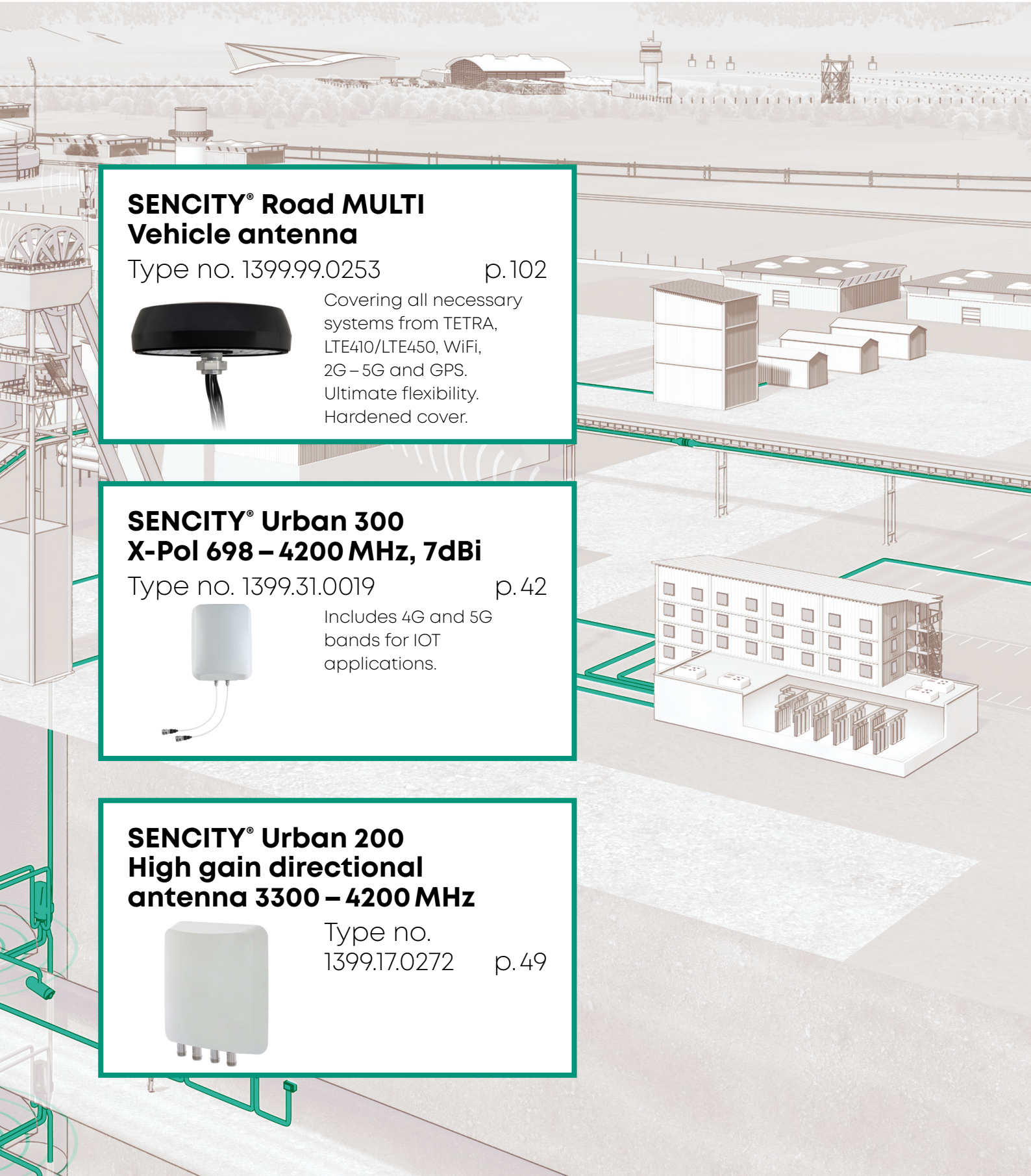
- 690 – 960 / 1710 – 2690 MHz
- Adjust. Electrical Downtilt 0° – 10° T / 0° – 8° T
- Internal RCU (Remote Control Unit)

IoT – wireless communication for industry

Although most aspects in IoT are software related, many applications place great emphasis on hardware. Although reliability and performance are critical, the total cost of ownership for a system is also just as important. Due to their sometimes complex processes, industrial



applications can pose unique challenges on radio links. HUBER+SUHNER offers a wide range of antennas that ensure business-critical connectivity even in buildings or locations with less-than-optimal reception.



SENCITY® Road MULTI Vehicle antenna

Type no. 1399.99.0253 p. 102

Covering all necessary systems from TETRA, LTE410/LTE450, WiFi, 2G – 5G and GPS. Ultimate flexibility. Hardened cover.

SENCITY® Urban 300 X-Pol 698 – 4200 MHz, 7dBi

Type no. 1399.31.0019 p. 42

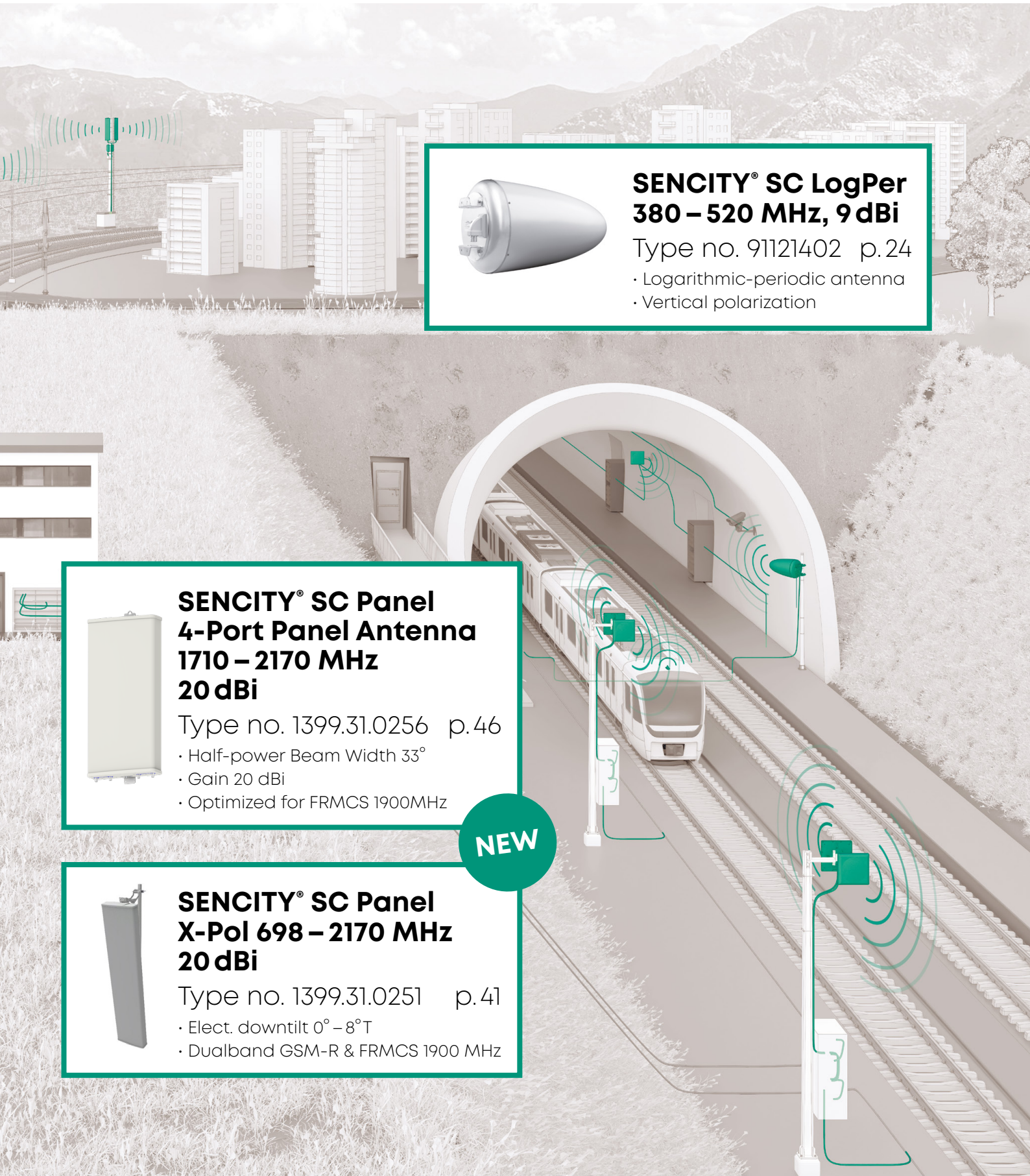
Includes 4G and 5G bands for IOT applications.

SENCITY® Urban 200 High gain directional antenna 3300 – 4200 MHz

Type no. 1399.17.0272 p. 49

Railway trackside antennas

HUBER+SUHNER offers a comprehensive portfolio of antennas for trackside installation, covering analog 450 MHz systems, GSM-R, FRMCS and CBTC systems.



SENCITY® SC LogPer 380 – 520 MHz, 9 dBi

Type no. 91121402 p. 24

- Logarithmic-periodic antenna
- Vertical polarization

SENCITY® SC Panel 4-Port Panel Antenna 1710 – 2170 MHz 20 dBi

Type no. 1399.31.0256 p. 46

- Half-power Beam Width 33°
- Gain 20 dBi
- Optimized for FRMCS 1900MHz

NEW

SENCITY® SC Panel X-Pol 698 – 2170 MHz 20 dBi

Type no. 1399.31.0251 p. 41

- Elect. downtilt 0° – 8°T
- Dualband GSM-R & FRMCS 1900 MHz

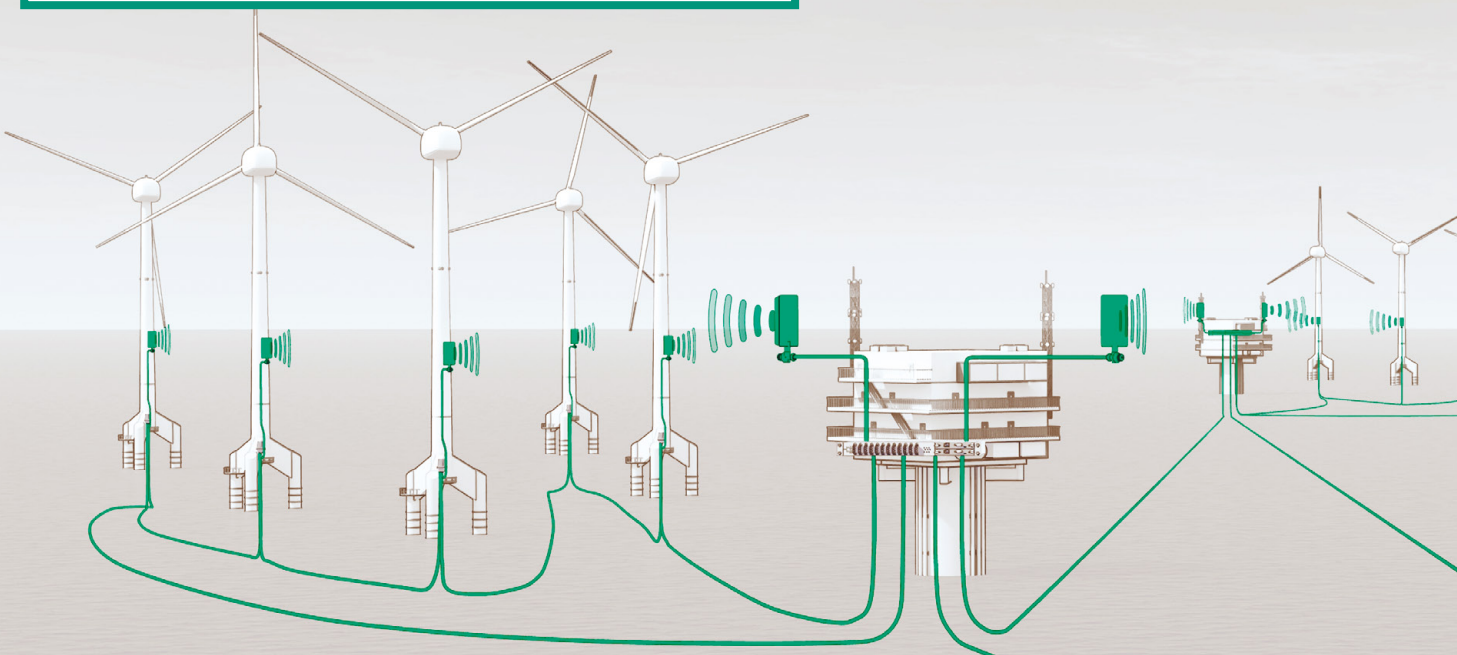
Critical industry networks

As the transition to renewable energy sources gains speed, so does the need for advanced metering and control of the entire production and distribution network. Of course, this requires the reliable transmission of voice and data communication in both urban and rural areas where signal penetration and availability is not guaranteed. This is proven to be most critical

NEW

SENCITY® SC Panel XPol 380-500 MHz 13.5 dBi, 88° HpBw

Type no. 1399.31.0263 p. 22

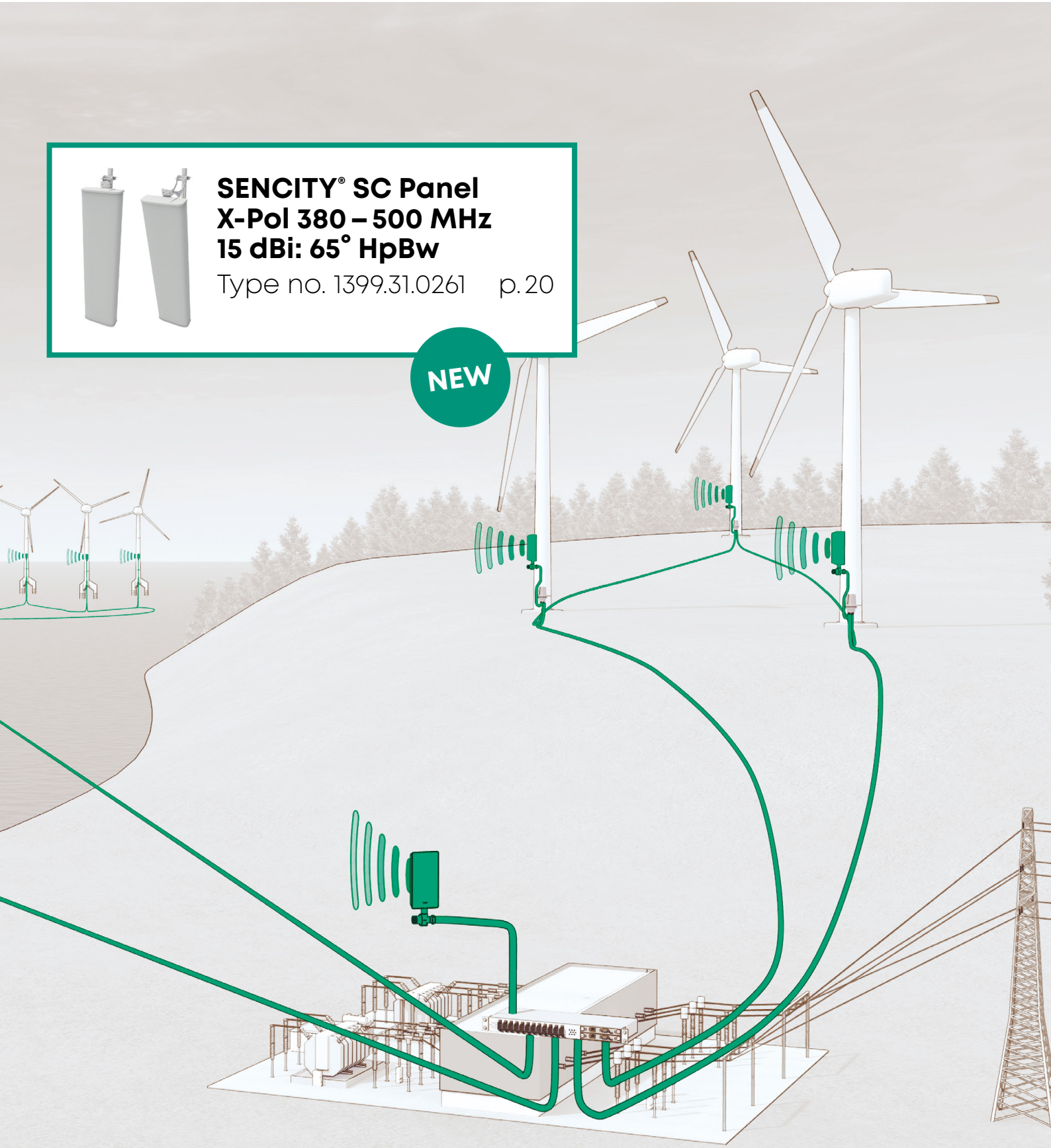


SENCITY® PUCK antenna 440 – 470 MHz

Type no. K7023231 p. 36

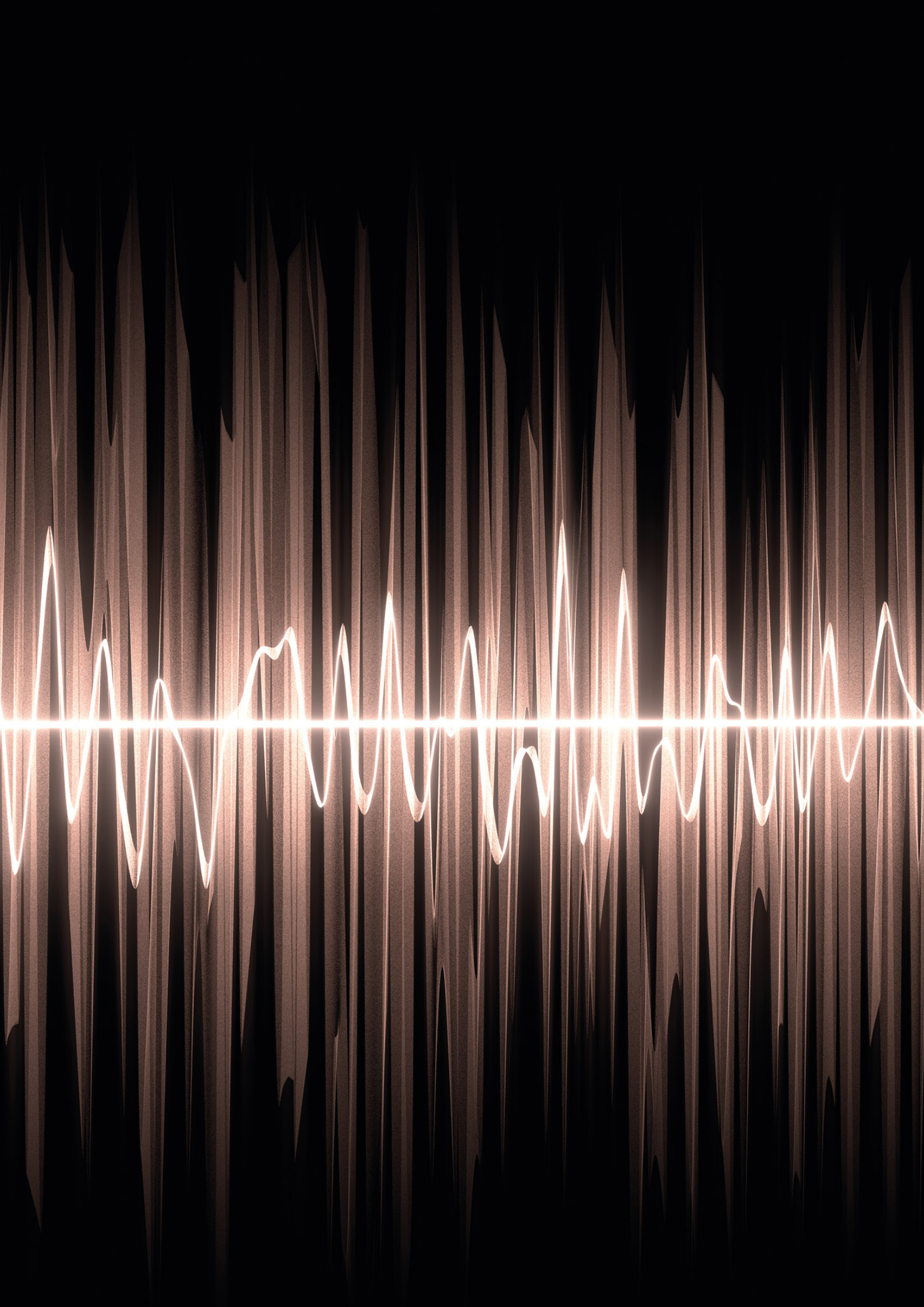
- Outdoor omni antenna
- Endpoint antenna for smart meters

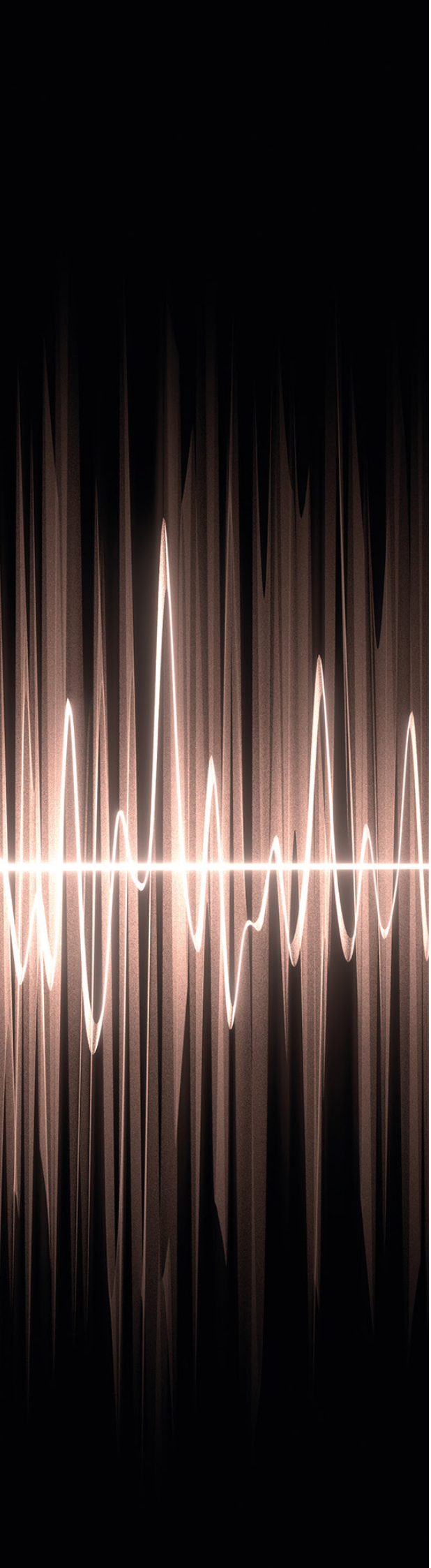
in remote locations like ocean wind parks, offshore platforms, and power plants where operational safety is highly dependent on reliable data transfer over long distances and through harsh environments.



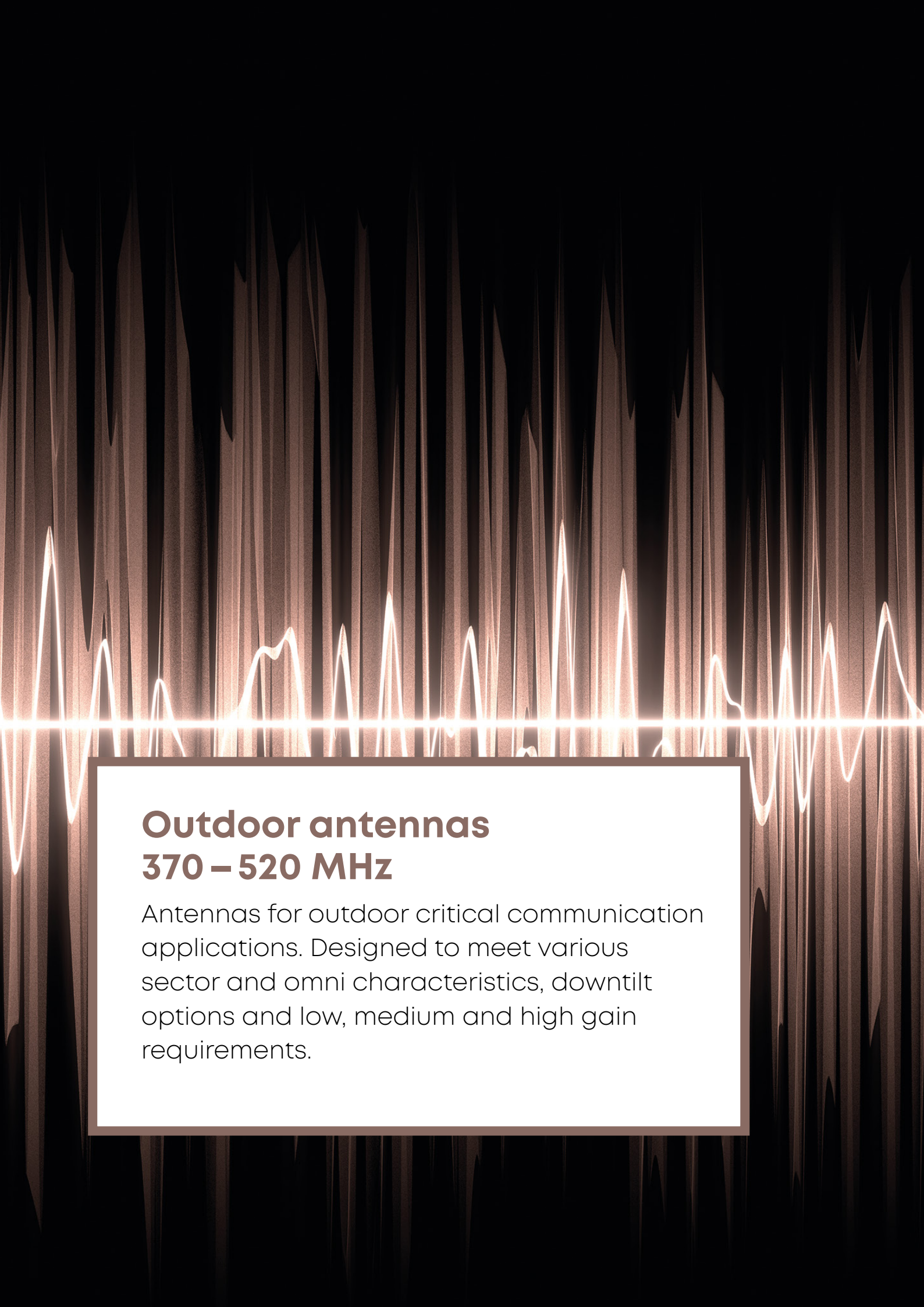
SENCITY® SC Panel
X-Pol 380 – 500 MHz
15 dBi: 65° HpBw
Type no. 1399.31.0261 p. 20

NEW





Content



Outdoor antennas 370 – 520 MHz

Antennas for outdoor critical communication applications. Designed to meet various sector and omni characteristics, downtilt options and low, medium and high gain requirements.

Outdoor antennas 370 – 520 MHz

Overview

Directional antennas

Description					Type no.	Height	Input	Page
X-Pol panel	380 – 500 MHz	65°	12 dBi		852626	992 mm	2 × 7/16 female	18
X-Pol panel	380 – 470 MHz	65°	14 dBi	0° – 14° T	91121514	1999 mm	2 × 7/16 female	19
NEW X-Pol panel	380 – 500 MHz	65°	15 dBi		1399.31.0261	1995 mm	2 × 4.3-10 fem.	20
X-Pol panel	380 – 500 MHz	88°	10.5 dBi		852628	1007 mm	2 × 7/16 female	21
NEW X-Pol panel	380 – 500 MHz	88°	13.5 dBi		1399.31.0263	1995 mm	2 × 4.3-10 fem.	22
V-Pol Panel	380 – 500 MHz	65°	12 dBi		91121363	992 mm	1 × 7/16 female	23
Log.-Per.	380 – 520 MHz	87°	9 dBi		91121402	785 mm	1 × 7/16 female	24

Omnidirectional antennas

Description					Type no.	Height	Input	Page
V-Pol Omni	370 – 430 MHz		2 dBi		848114	555 mm	1 × N female	25
V-Pol Omni	406 – 470 MHz		2 dBi		K862232	515 mm	1 × N female	26
V-Pol Omni	380 – 3800 MHz		3 – 8.5 dBi		92210003	540 mm	1 × 4.3-10 fem.	27
V-Pol Omni	380 – 400 MHz		7.5 dBi		K862748	2840 mm	1 × 7/16 female	28
V-Pol Omni	410 – 430 MHz		8 dBi		848657	3114 mm	1 × 7/16 female	29
V-Pol Omni	450 – 470 MHz		8.5 dBi		853266	3113 mm	1 × 7/16 female	30
MIMO SC Omni-M	380 – 7125 MHz		3 – 6.5 dBi		1399.17.0338	60 mm	2 × N male	31
MIMO SC Omni-M	380 – 7125 MHz		2 – 6 dBi		1399.17.0340	60 mm	4 × N male	32
SENCITY® SC X-Pol Omni-M portfolio overview								33

Special purpose antennas (e.g. endpoint antennas for smart meters)

Description					Type no.	Height	Input	Page
V-Pol Omni	380 – 430 MHz				98121119	150 mm	1 × N female	34
V-Pol Omni	410 – 470 MHz				K813132	142 mm	1 × N female	35
V-Pol Omni	440 – 470 MHz				K7023231	70 mm	1 × N female	36

Outdoor 370 – 520 MHz

Directional antennas

Ordering information	**SENCITY® SC Panel**
	X-Pol panel antenna
Type no.	**852626**
Frequency range	**380 – 500 MHz**
Half-power beam width	**65°**
Gain	**12 dBi**
Version	**7/16 (female)**
Height	**992 mm**
Item no.	84467194

Electrical data per band	**Band 1**	**Band 2**
Frequency	380 – 430 MHz	430 – 500 MHz
Gain	11.5 dBi	12 dBi
3 dB beamwidth (h)	68°	65°
3 dB beamwidth (v)	37°	32°

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Composite power max.	500 W
Ambient temperature	50 °C
Front to back ratio	25 dB
Port isolation	30 dB
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	992 × 492 × 190 mm
Weight	12.0 kg
Connector	2 × 7/16 (female)
Windload	frontal: 500 N at 150 km/h, lateral: 220 N at 150 km/h wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Outdoor 370 – 520 MHz

Directional antennas

Ordering information	**SENCITY® SC Panel**
	X-Pol panel antenna
Type no.	**91121514**
Frequency range	**380 – 470 MHz**
Half-power beam width	**65°**
Gain	**14 dBi**
Electrical downtilt	**Elect. downtilt 0° – 14° T**
Version	**7/16 (female)**
Height	**1999 mm**
Description	Adjust. electrical downtilt 0° – 14° T set by hand or by optional RCU (Remote Control Unit)
Item no.	84467229

Electrical data per band	**Band 1**	**Band 2**
Frequency	380 – 430 MHz	430 – 470 MHz
Gain	13.5 dBi	14 dBi
3 dB beamwidth (h)	66°	62°
3 dB beamwidth (v)	22°	19°

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Electrical downtilt	0° – 14° T
Composite power max.	400 W
Ambient temperature	50 °C
Front to back ratio	25 dB
Port isolation	30 dB
IMD level	–150 dBc at 2 × 43 dBm

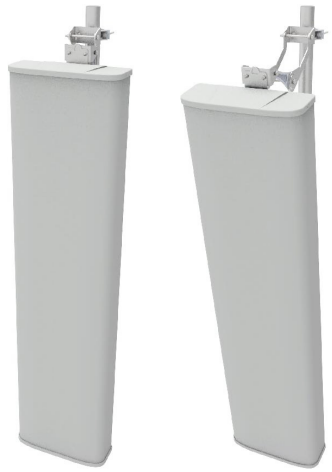
Mechanical data	
Dimensions (height × width × depth)	1999 × 575 × 199 mm
Weight	22.0 kg
Connector	2 × 7/16 (female)
Windload	frontal: 1160 N at 150 km/h, lateral: 480 N at 150 km/h wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate material	aluminium

Outdoor 370 – 520 MHz

Directional antenna



NEW

Ordering information	**SENCITY® SC Panel**
	X-Pol Panel antenna
Type no.	**1399.31.0261**
Frequency range	**380 – 500 MHz**
Half-power beam width	**65°**
Gain	**15 dBi**
Version	**4.3-10 (female)**
Height	**1995 mm**
Description	• Meets ETSI 300 019-1-4 class 4.1E
Item no.	85240962

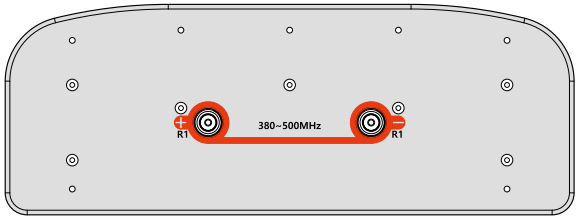
Electrical data per band	**Band 1**	**Band 2**
Frequency	380 – 430 MHz	430 – 500 MHz
Gain	14.0 dBi ±0.6	14.6 dBi ±0.6
3 dB beamwidth (h)	67° ±4	64° ±4
3 dB beamwidth (v)	18.8° ±1.5	16.5° ±1.7

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Composite power max.	500 W
Ambient temperature	25 °C
Front to back ratio	25 dB
Port isolation	30 dB

Mechanical data	
Dimensions (height × width × depth)	1995 × 480 × 170 mm
Weight	25.0 kg
Connector	2 × 4.3-10 (female)
Windload	frontal: 779 N at 150 km/h, lateral: 337 N at 150 km/h wind speed survival: 216 km/h

Environmental data	
Environmental conditions	outdoor
Remarks	Environmental tests: ETS 300 019-2-4

Material data	
Radome colour	grey
Radome material	Fiber-reinforced plastic (FRP)



Outdoor 370 – 520 MHz

Directional antenna

Ordering information	**SENCITY® SC Panel**
	X-Pol panel antenna
Type no.	**852628**
Frequency range	**380 – 500 MHz**
Half-power beam width	**88°**
Gain	**10.5 dBi**
Version	**7/16 (female)**
Height	**1007 mm**
Item no.	84467198

Electrical data per band	**Band 1**	**Band 2**
Frequency	380 – 430 MHz	430 – 500 MHz
Gain	10 dBi	10.5 dBi
3 dB beamwidth (h)	88°	86°
3 dB beamwidth (v)	37°	32°
Port isolation	40 dB	35 dB

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Composite power max.	500 W
Ambient temperature	50 °C
Front to back ratio	20 dB
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	1007 × 317 × 193 mm
Weight	10.5 kg
Connector	2 × 7/16 (female)
Windload	frontal: 420 N at 150 km/h, lateral: 220 N at 150 km/h wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate material	aluminium

Outdoor 370 – 520 MHz

Directional antennas

NEW

Ordering information	**SENCITY® SC Panel**
	X-Pol Panel antenna
Type no.	**1399.31.0263**
Frequency range	**380 – 500 MHz**
Half-power beam width	**88°**
Gain	**13.5 dBi**
Version	**4.3-10 (female)**
Height	**1995 mm**
Item no.	85276812

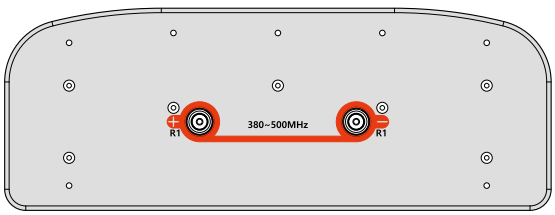
Electrical data per band	**Band 1**	**Band 2**
Frequency	380 MHz ... 430 MHz	430 MHz ... 500 MHz
Gain	12.5 ± 0.6 dBi	13.1 ± 0.6 dBi
3 dB beamwidth (h)	89 ± 5°	86 ± 6°
3 dB beamwidth (v)	19.7 ± 1.7°	17.2 ± 2°
Port isolation	25 dB	28 dB

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Composite power max.	500 W
Ambient temperature	25 °C
Front to back ratio	17 dB
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	1995 × 375 × 170 mm
Weight	19 kg
Connector	4.3-10 (female)
Windload	front: 629.7 N at 150 km/h, lateral: 333.6 N at 150 km/h, Wind Speed survival: 216 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	FRP (Fiber-reinforced plastic)



Outdoor 370 – 520 MHz

Directional antennas

Ordering information	**SENCITY® SC Panel**
	V-Pol panel antenna
Type no.	**91121363**
Frequency range	**380 – 500 MHz**
Half-power beam width	**65°**
Gain	**12 dBi**
Version	**7/16 (female)**
Height	**992 mm**
Item no.	84467208

Electrical data per band	**Band 1**	**Band 2**
Frequency	380 – 430 MHz	430 – 500 MHz
Gain	11.5 dBi	12 dBi
3 dB beamwidth (h)	68°	63°
3 dB beamwidth (v)	37°	32°
Front to back ratio	18 dB	20 dB

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Composite power max.	500 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	992 × 492 × 190 mm
Weight	12.0 kg
Connector	1 × 7/16 (female)
Windload	frontal: 500 N at 150 km/h, lateral: 220 N at 150 km/h wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Outdoor 370 – 520 MHz

Directional antennas

Ordering information	**SENCITY® SC LogPer** **Logarithmic-periodic antenna** **Vertical polarization**
Type no.	**91121402**
Frequency range	**380 – 520 MHz**
Half-power beam width	**87°**
Gain	**9 dBi**
Version	**7/16 (female)**
Height	**785 mm**
Item no.	84467223

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	380 – 410 MHz	410 – 470 MHz	470 – 520 MHz
Gain	9.2 dBi	9 dBi	8.7 dBi
3 dB beamwidth (h)	80°	85°	88°
3 dB beamwidth (v)	61°	60°	59°

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Composite power max.	500 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × width × depth)	785 × 400 × 400 mm
Weight	6.0 kg
Connector	1 × 7/16 (female)
Windload	frontal: 54 N at 150 km/h, lateral: 150 N at 150 km/h wind speed survival: 180 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	white
Radome material	Glass Reinforced Plastic (GRP)

Outdoor 370 – 520 MHz

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**848114**
Frequency range	**370 – 430 MHz**
Gain	**2 dBi**
Version	**N (female)**
Height	**555 mm**
Item no.	84467190

Electrical data per band	**Band 1**	**Band 2**
Frequency	370 – 380 MHz	380 – 430 MHz
VSWR	1.6	1.5

Electrical data	
Impedance	50 Ohm
Gain	2 dBi
Composite power max.	100 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 37 dBm

Mechanical data	
Dimensions (height × diameter)	555 × 21 mm
Weight	1.0 kg
Connector	1 × N (female)
Windload	frontal: 20 N at 150 km/h, wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**K862232**
Frequency range	**406 – 470 MHz**
Gain	**2 dBi**
Version	**N (female)**
Height	**515 mm**
Item no.	84467243

Electrical data	
Frequency	406 – 470 MHz
VSWR	1.5
Impedance	50 Ohm
Gain	2 dBi
Composite power max.	100 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 37 dBm

Mechanical data	
Dimensions (height × diameter)	515 × 21 mm
Weight	0.8 kg
Connector	1 × N (female)
Windload	frontal: 20 N at 150 km/h, wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**92210003**
Frequency range	**380 – 3800 MHz**
Gain	**3 – 8.5 dBi**
Version	**4.3-10 (female)**
Height	**540 mm**
Description	Small ground plane and excellent coverage
Item no.	84467565

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 400 MHz	400 – 450 MHz	450 – 470 MHz	694 – 746 MHz
Gain	3 dBi	4 dBi	5 dBi	6 dBi
	Band 5	**Band 6**	**Band 7**	
Frequency	746 – 960 MHz	1200 – 2700 MHz	3300 – 3800 MHz	
Gain	7 dBi	8 dBi	8.5 dBi	

Electrical data	
VSWR	1.7
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	540 × 60 mm
Weight	0.5 kg
Connector	1 × 4.3-10 (female)

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Base material	weather-proof aluminum
Radome material	UV protected plastic

Outdoor 370 – 520 MHz

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**K862748**
Frequency range	**380 – 400 MHz**
Gain	**7.5 dBi**
Version	**7/16 (female)**
Height	**2840 mm**
Item no.	84467245

Electrical data	**Band 1**
Frequency	380 – 400 MHz
VSWR	1.5
Impedance	50 Ohm
Gain	7.5 dBi
Composite power max.	500 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	2840 × 112 × 148 mm
Weight	8.0 kg
Connector	1 × 7/16 (female)
Windload	frontal: 200 N at 150 km/h, wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**848657**
Frequency range	**410 – 430 MHz**
Gain	**8 dBi**
Electrical downtilt	**Fixed elect. downtilt 8.5°**
Version	**7/16 (female)**
Height	**3114 mm**
Item no.	84467192

Electrical data	**Band 1**
Frequency	410 – 430 MHz
VSWR	1.5
Impedance	50 Ohm
Gain	8 dBi
Composite power max.	500 W
Ambient temperature	50 °C
Electrical downtilt	8.5°
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	3114 × 51 mm
Weight	8.0 kg
Connector	1 × 7/16 (female)
Windload	frontal: 220 N at 150 km/h, wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**853266**
Frequency range	**450 – 470 MHz**
Gain	**8.5 dBi**
Version	**7/16 (female)**
Height	**3113 mm**
Item no.	84467205

Electrical data	
Frequency	450 – 470 MHz
VSWR	1.5
Impedance	50 Ohm
Gain	8.5 dBi
Composite power max.	500 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	3113 × 51 mm
Weight	8.0 kg
Connector	1 × 7/16 (female)
Windload	frontal: 220 N at 150 km/h, wind speed survival: 200 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	grey
Back plate / base plate material	aluminium

Outdoor 370 – 520 MHz

Omnidirectional MIMO antenna

Ordering information	**SENCITY® SC Omni-M**
	Rugged Omni antenna
Type no.	**1399.17.0338**
Frequency range	**380 – 7125 MHz**
Gain	**3 – 6.5 dBi**
Version	**N (female)**
Height	**60 mm**

Description
- For installation on outdoor cabinets
- Supports TETRA with up to 2 radiators plus 2G/3G/4G/5G cellular bands
- Low profile housing. Single hole mounting

Item no.	85185570

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	380 – 470 MHz	694 – 960 MHz	1710 – 2170 MHz
VSWR	2.5	2.1	2.1
Gain	3 dBi	4.5 dBi	5 dBi
Composite power max.	40 W	40 W	40 W
Port Isolation	3 dB	8 dB	15 dB
	Band 4	**Band 5**	**Band 6**
Frequency	2400 – 2690 MHz	3400 – 4200 MHz	4200 – 7125 MHz
VSWR	2.1	2.1	2.1
Gain	5 dBi	6 dBi	6.5 dBi
Composite power max.	40 W	30 W	25 W
Port Isolation	15 dB	20 dB	20 dB

Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × diameter)	60 × 210 mm
Mounting breakthrough	Ø 30 mm
Weight	0.75 kg
Connector	2 × N (female)

Environmental data	
Environmental conditions	indoor/outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	PC (Polycarbonate)

Outdoor 370 – 520 MHz

Omnidirectional MIMO antenna

Ordering information	**SENCITY® SC OMNI-M antenna**
Type no.	**1399.17.0340**
Frequency range	**380 – 7125 MHz**
Gain	**2 – 6 dBi**
Version	**N (female)**
Height	**60 mm**

Description

- Rugged omni-directional antenna for installation on outdoor cabinets
- Supports TETRA, LTE450, 2G/3G/4G/5G cellular, Wifi 2.4/5 GHz, Wifi 6E
- 4 separate ports for 2x2 TETRA/cellular MIMO and 2x2 Wifi MIMO
- Meets ETSI 300 019-1-4 class 4.1E
- Low profile housing, single hole mounting, easy cabling feedthrough

Item no.	85185573

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Name	TETRA/LTE450	Cellular	Cellular	Cellular
Frequency	380 – 470 MHz	694 – 960 MHz	1350 – 2700 MHz	3300 – 4200 MHz
VSWR	2.5	2	2	2
Gain	3 dBi	2 dBi	4 dBi	4 dBi
Port isolation (dB)	3 dBi	8 dBi	15 dBi	20 dBi
Composite power max.	40 W	40 W	40 W	40 W
	Band 5	**Band 6**	**Band 7**	
Name	Cellular	Wi-Fi	Wi-Fi	
Frequency	4900 – 7125 MHz	2400 – 2500 MHz	4900 – 7125 MHz	
VSWR	2	2	2	
Gain	5 dBi	6 dBi	6 dBi	
Port isolation (dB)	20 dBi	20 dBi	20 dBi	
Composite power max.	40 W	30 W	30 W	

Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × diameter)	60 × 210 mm
Weight	1.1 kg
Connector	4 × N (female)

Environmental data	
Environmental conditions	outdoor
IP rating	IP68, IP69k
RoHS 2011/65/EU	compliant

Material data	
Radome colour	RAL 7044 (light grey)
Base material	Aluminum
Radome material	PC (Polycarbonate)

Full portfolio of types see page 31

Outdoor 370 – 520 MHz

SENCITY® SC Omni-M portfolio

The SENCITY® SC Omni-M portfolio is designed for 2×2, 3×3 or 4×4 MIMO operation in cellular and Wi-Fi applications and in addition comes with SISO or 2×2 TETRA/LTE450 options. It offers a variety of combinations of up to 9 radiators within one housing and comes with an GNSS option for L1, L2, L5 operation.

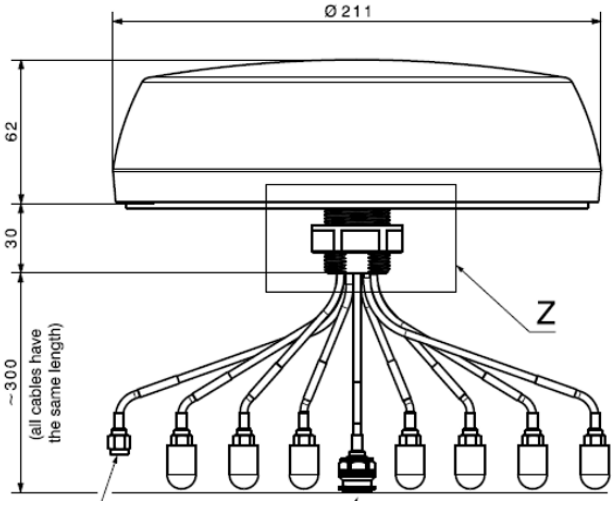
For all versions is applicable:

- Frequency Range 380 – 7125 MHz
- Cable length 500 mm
- Connector Type TNC (GNSS)
- Connector Type N (all others)
- Radome colour RAL 7044 (light grey)

The standard versions are listed below:

No of ports					
Tetra, CDMA/ LTE410/450	**Cellular & Wi-Fi**	**GNSS (L1)**	**GNSS (L1+L2+L5)**		
380 – 470MHz	**694 – 7125 MHz**	**1559 – 1610 MHz**	**1164 – 1279 MHz & 1559 – 1610 MHz**	**Product ID**	**Item No**
1		0	0	1399.17.0330	85185546
1		0	1	1399.99.0331	85185549
1		1	0	1399.99.0330	85185551
1	2	0	0	1399.17.0332	85185553
1	2	0	1	1399.99.0333	85185555
1	2	1	0	1399.99.0332	85185556
1	3	0	0	1399.17.0334	85185558
1	3	0	1	1399.99.0335	85185561
1	3	1	0	1399.99.0334	85185563
1	4	0	0	1399.17.0336	85185565
1	4	0	1	1399.99.0337	85185568
1	4	1	0	1399.99.0336	85185569
2		0	0	1399.17.0338	85185570
2		0	1	1399.99.0339	85185571
2		1	0	1399.99.0338	85185572
2	2	0	0	1399.17.0340	85185573
2	2	0	1	1399.99.0341	85185574
2	2	1	0	1399.99.0340	85185575
2	3	0	0	1399.17.0342	85192514
2	3	0	1	1399.99.0343	85192515
2	3	1	0	1399.99.0342	85192516
2	4	0	0	1399.17.0344	85192517
2	4	0	1	1399.99.0345	85192518
2	4	1	0	1399.99.0344	85192520

Outline drawing and mounting instruction are the same for every antenna.



Special purpose antennas

Ordering information	**SENCITY® SC Special Purpose**
	V-Pol Omni-directional vehicle antenna
Type no.	**98121119**
Frequency range	**380 – 430 MHz**
Version	**N (female)**
Height	**150 mm**
Description • For special purpose installations • Option as vehicle antenna • Meets EN 50155 and fire retardant acc. EN 45545-2	
Item no.	84468948

Electrical data	**Band 1**
Band name	Tetra
Frequency	380 – 430 MHz
VSWR	1.7
Impedance	50 Ohm
Gain	dB 0 (ref. to the quarter-wave antenna)
Composite power max.	100 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × width × depth)	150 × 145 × 85 mm
Weight	0.5 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	outdoor
Operation temperature	–40 to 85 °C
Storage temperature	–55 to 85 °C
IP rating	IP66
Flammability rating	UL 94-HB
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	black
Back plate / base plate material	aluminium

Special purpose antennas

Ordering information	**SENCITY® SC Special Purpose**
	V-Pol Omni-directional vehicle antenna
Type no.	**K813132**
Frequency range	**410 – 470 MHz**
Version	**N (female)**
Height	**142 mm**
Description • For special purpose installations • Option as vehicle antenna • Meets EN 50155 and fire retardant acc. EN 45545-2	
Item no.	84468534

Electrical data	**Band 1**
Band name	Tetra
Frequency	410 – 470 MHz
VSWR	1.5
Impedance	50 Ohm
Gain	dB 0 (ref. to the quarter-wave antenna)
Composite power max.	170 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × width × depth)	142 × 145 × 80 mm
Weight	0.5 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	outdoor
Operation temperature	–40 to 85 °C
Storage temperature	–55 to 85 °C
IP rating	IP66
Flammability rating	UL 94-HB
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Back plate / base plate colour	black
Back plate / base plate material	aluminium

Special purpose antennas

Ordering information	**SENCITY® PUCK antenna**
Type no.	**K7023231**
Frequency range	**440 – 470 MHz**
Version	**N (female)**
Height	**70 mm**
Description	• Outdoor omni antenna • Endpoint antenna for smart meters
Item no.	84459192

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	440 – 450 MHz	450 – 465 MHz	465 – 470 MHz
VSWR	1.7	1.5	1.7

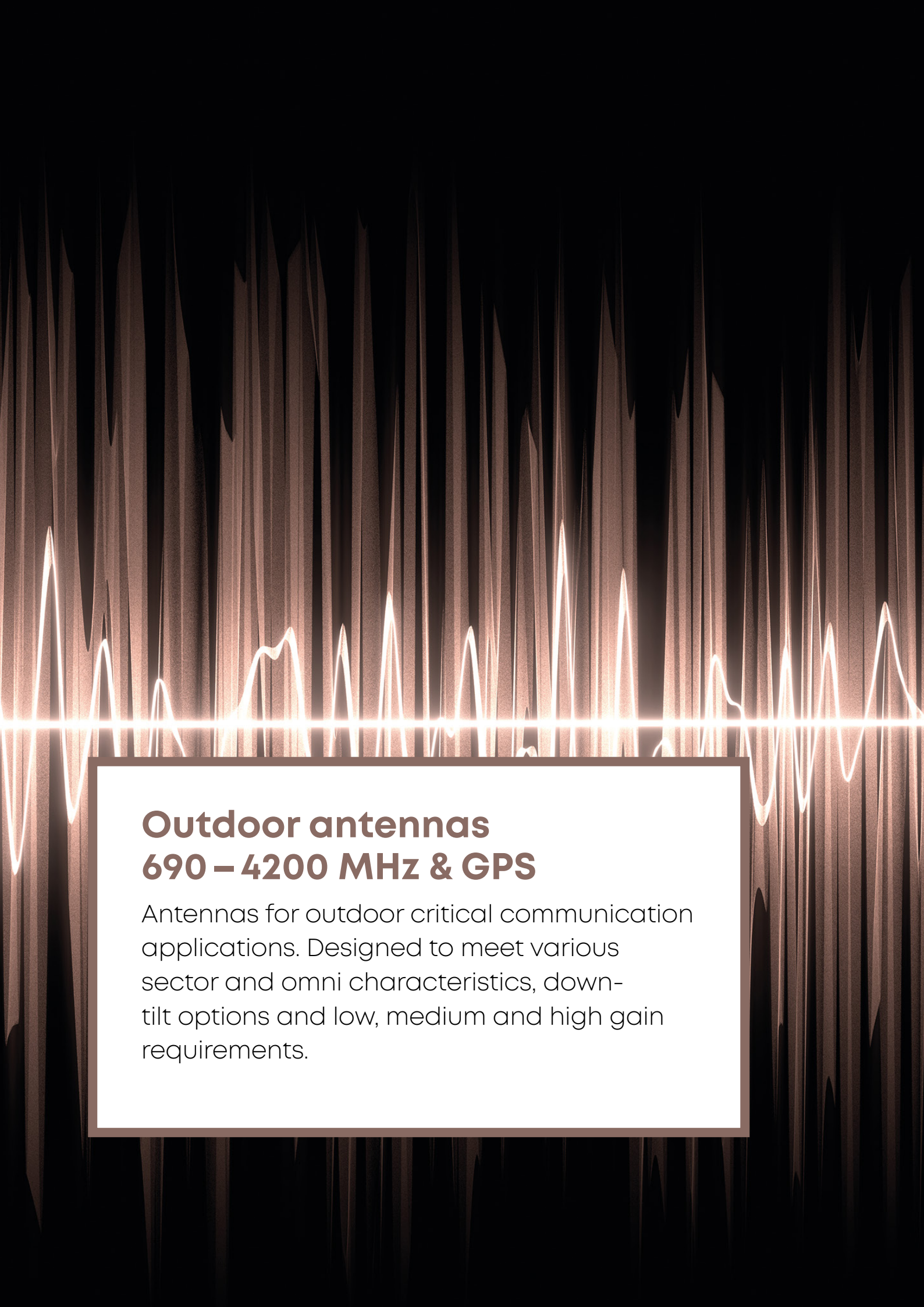
Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × diameter)	70 × 110 mm
Mounting breakthrough	Ø 17 mm
Weight	0.4 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	outdoor
IP rating	IP56
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Base plate colour	black
Base plate material	Aluminum

Antenna K7023231 used as End-Point Antenna in LTE450MHz Smart Meter Network.



Outdoor antennas 690 – 4200 MHz & GPS

Antennas for outdoor critical communication applications. Designed to meet various sector and omni characteristics, down-tilt options and low, medium and high gain requirements.

Outdoor antennas 690 – 4200 MHz

Overview

Directional antennas

Description					Type no.	Height	Input	Page
X-Pol panel	698 – 960 MHz	33°	20 dBi		1399.31.0250	2695 mm	2 × 4.3-10 fem.	40
XX-Pol panel	698 – 960 MHz 1710 – 2170 MHz	33°	20 dBi		1399.31.0251	2695 mm	2 × 4.3-10 fem.	41
X-Pol panel	698 – 4200 MHz	85°/65°	12 dBi		1399.31.0019	200 mm	2 × 4.3-10 fem.	42
X-Pol panel	698 – 960 MHz	65°	16 dBi	0° – 14° T	1399.31.0200	1850 mm	2 × 4.3-10 fem.	43
XX-Pol panel	690 – 960 MHz 1710 – 2690 MHz	65°	16.5 dBi	0° – 10° T	91121777V02	2625 mm	4 × 4.3-10 fem.	44
NEW X-Pol panel	1710 – 2170 MHz	33°	20 dBi	0° – 10° T	1399.31.0255	1245 mm	2 × 4.3-10 fem.	45
NEW XX-Pol panel	1710 – 2170 MHz	33°	20 dBi	0° – 10° T	1399.31.0256	1245 mm	2 × 4.3-10 fem.	46
X-Pol panel	1695 – 2690 MHz 3410 – 4200 MHz	70°/65°	7 – 8.5 dBi		1399.17.0248	184.8 mm	2 × N female	47
X-Pol panel	1695 – 2690 MHz 3300 – 4200 MHz	110°	4.8 – 5.9 dBi		1399.17.0250	184.8 mm	2 × N female	48
XX-Pol panel	3300 – 4200 MHz		11 dBi		1399.17.0272	184.8 mm	4 × N female	49

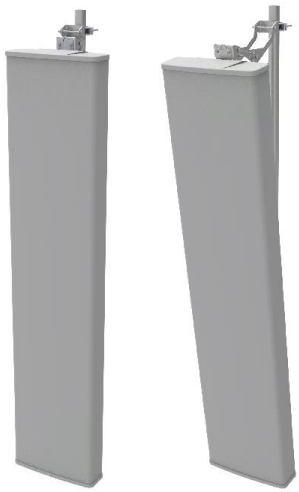
Omnidirectional antennas

Description					Type no.	Height	Input	Page
V-Pol Omni	380 – 3800 MHz		3 – 8.5 dBi		92210003	540 mm	1 × 4.3-10 fem.	50
MIMO SC Omni-M	380 – 7125 MHz		3 – 6.5 dBi		1399.17.0338	60 mm	2 × N male	51
V-Pol Omni	698 – 2690 MHz		2 – 5 dBi		1399.19.0225	33.2 mm	1 × SMA male	52
V-Pol Omni	790 – 960 MHz 1710 – 2690 MHz		2 – 3 dBi		1399.17.0231	263 mm	1 × N female	53
GNSS ANT L1+L2 3.3V	1227.6/1588 MHz		32 dBi		85160014	66.2 mm	TNC female	54

Special purpose antennas

Description					Type no.	Height	Input	Page
V-Pol Omni	698 – 960 MHz 1710 – 2690 MHz 4900 – 5935 MHz		5 – 7 dBi		1399.99.0039	82 mm	SMA, TNC	56
FM Radio	88 – 108 MHz				9091.99.0246	425 mm		57
TETRA	380 – 430 MHz				9091.99.0247	145 mm		58
TETRA	450 – 470 MHz				9091.99.0248	120 mm		59
V-Pol Omni	698 – 960 MHz 1710 – 2690 MHz		4 – 6 dBi		1399.99.0119	88 mm	2 × SMA male	60
V-Pol Omni	698 – 960 MHz 1710 – 2690 MHz		5 – 7 dBi		1399.99.0129	88 mm	SMA, TNC	61

Directional antennas



Ordering information	**SENCITY® SC Panel**
	X-Pol panel antenna
Type no.	**1399.31.0250**
Frequency range	**698 – 960 MHz**
Half-power beam width	**33°**
Gain	**20 dBi**
Electrical downtilt	**Elect. downtilt 0° – 8°T**
Version	**4.3-10 (female)**
Height	**2695 mm**
Item no.	85226004

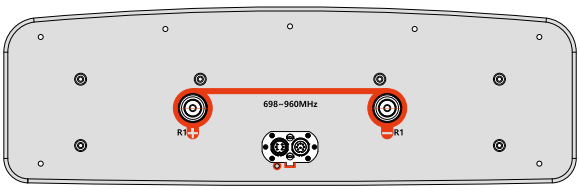
Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	698 – 806 MHz	790 – 894 MHz	880 – 960 MHz
Gain	19.2 dBi	19.9 dBi	20.5 dBi
3 dB beamwidth (h)	36°	33°	30°
3 dB beamwidth (v)	8.4°	7.6°	7.0°

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Max. effective comb. power per port	300 W
Ambient temperature	25 °C
Front to back ratio	25 dB
IMD level	–150 dBc at 2 × 43 dBm

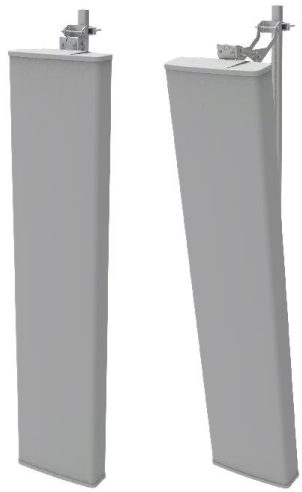
Mechanical data	
Dimensions (height × width × depth)	2695 × 565 × 170 mm
Weight	31.0 kg
Connector	2 × 4.3-10 (female)
Windload	frontal: 1266.6 N at 150 km/h, lateral: 495.3 N at 150 km/h wind speed survival: 216 km/h

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Fiber-reinforced plastic (FRP)



Directional antennas



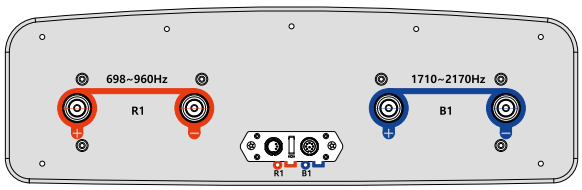
Ordering information	**SENCITY® SC Panel**
	XX-Pol panel antenna
Type no.	**1399.31.0251**
Frequency range	**698 – 2170 MHz**
Half-power beam width	**33°**
Gain	**20 dBi**
Electrical downtilt	**Elect. downtilt 0° – 8°T**
Version	**4.3-10 (female)**
Height	**2695 mm**

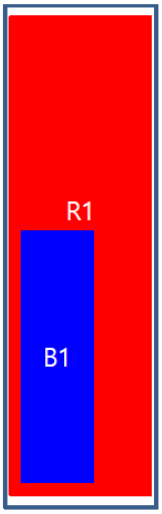
Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	698 – 806 MHz	790 – 894 MHz	880 – 960 MHz
Gain	18.8 dBi	19.5 dBi	20.0 dBi
3 dB beamwidth (h)	36°	33°	30°
3 dB beamwidth (v)	8.4°	7.6°	7.0°
	Band 4	**Band 5**	**Band 6**
Frequency	1710 – 1880 MHz	1850 – 1990 MHz	1920 – 2170 MHz
Gain	20.0 dBi	20.4 dBi	20.8 dBi
3 dB beamwidth (h)	34°	32°	30°
3 dB beamwidth (v)	6.8°	6.4°	6.1°

Electrical data		**Mechanical data**	
VSWR	1.5	Dimensions (height × width × depth)	2695 × 565 × 170 mm
Impedance	50 Ohm	Weight	33.5 kg
Max. effective comb. power per port	300 W	Connector	2 × 4.3-10 (female)
Ambient temperature	25 °C	Windload	frontal: 1266.6 N at 150 km/h, lateral: 495.3 N at 150 km/h wind speed survival: 216 km/h
Front to back ratio	27 dB		
IMD level	–150 dBc at 2 × 43 dBm		

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Fiber-reinforced plastic (FRP)





Directional antennas

Ordering information	**SENCITY® Urban 300**
	X-Pol panel antenna
Type no.	**1399.31.0019**
Frequency range	**698 – 4200 MHz**
Half-power beam width	**85°/65°**
Gain	**6 – 7 dBi**
Version	**4.3-10 (female)**
Height	**200 mm**
Description	• Includes 4G and 5G bands for IOT applications • Supports MIMO 2×2

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	698 – 960 MHz	1695 – 2700 MHz	3100 – 4200 MHz
Gain	6.5 dBi	7 dBi	6 dBi
3 dB beamwidth (h)	85°	65°	65°
3 dB beamwidth (v)	80°	65°	65°
Port isolation	18 dB	20 dB	22 dB

Electrical data	
VSWR	2
Impedance	50 Ohm
Combined power per port max.	50 W
Ambient temperature	25 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	200 × 260 × 90 mm
Weight	1.1 kg
Connector	2 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–40 to 70 °C
IP rating	IP67
Flammability rating	UL 94-V0
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	PC (Polycarbonate)

Directional antennas

Ordering information	**SENCITY® SC Panel**
	X-Pol panel antenna
Type no.	**1399.31.0200**
Frequency range	**698 – 960 MHz**
Half-power beam width	**65°**
Gain	**16 dBi**
Version	**4.3-10 (female)**
Height	**1850 mm**
Description	Adjust. electrical downtilt 0° – 10° T
Item no.	85184054

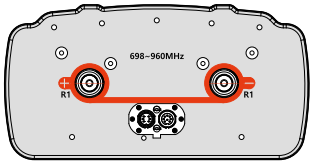
Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	698 – 803 MHz	791 – 862 MHz	824 – 894 MHz	880 – 960 MHz
Gain	15.6 dBi	15.9 dBi	16 dBi	16.3 dBi
3 dB beamwidth (h)	68°	64°	62°	59°
3 dB beamwidth (v)	12.4°	11.3°	10.5°	10.0°

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Electrical downtilt	0° – 10° T
Port isolation	30 dB
Combined power per port max. eff.	300 W
Ambient temperature	25 °C
Passive intermodulation	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	1850 × 260295× 145 mm
Weight	12.0 kg
Connector	2 × 4.3-10 (female)
Windload	frontal: 712 N at 150 km/h, lateral: 350 N at 150 km/h wind speed survival: 240 km/h

Environmental data	
Environmental conditions	outdoor
Operation temperature	–55 to 60 °C
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	ASA (UV resistant)
Top/bottom cover material	PC (F1)



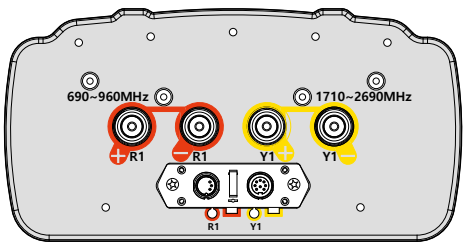
Directional antennas

Ordering information	**SENCITY® SC Panel**
	XX-Pol Panel antenna
Type no.	**91121777V02**
Frequency range	**690 – 960 / 1710 – 2690 MHz**
Half-power beam width	**65°**
Gain	**16.5 dBi**
Electrical downtilt	**Elect. downtilt 0° – 10°T**
Version	**4.3-10 (female)**
Height	**2625 mm**
Description	• Adjust. Electrical Downtilt 0° – 10°T/ 0° – 8°T • Internal RCU (Remote Control Unit)
Item no.	85254056

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	690 – 806 MHz	790 – 894 MHz	880 – 960 MHz	1710 – 1880 MHz
Gain	16.1 dBi	16.5 dBi	16.7 dBi	17.3 dBi
3 dB beamwidth (h)	66°	65°	63°	66°
3 dB beamwidth (v)	8.6°	7.7°	7.0°	7.2°
Composite power max.	300 W	300 W	300 W	300 W
	Band 5	**Band 6**	**Band 7**	**Band 8**
Frequency	1850 – 1990 MHz	1920 – 2170 MHz	2300 – 2400 MHz	2500 – 2690 MHz
Gain	17.7 dBi	18.2 dBi	18.7 dBi	18.6 dBi
3 dB beamwidth (h)	64°	62°	57°	59°
3 dB beamwidth (v)	6.6°	6.3°	5.7°	5.1°
Composite power max.	300 W	300 W	300 W	300 W

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Ambient temperature	25 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	2625 × 295 × 145 mm
Weight	23.5 kg
Connector	4 × 4.3-10 (female)
Windload	frontal: 722.5 N, lateral: 429.1 N, at 150 km/h; wind speed survival: 216 km/h



Outdoor 1710 – 2170 MHz

SENCITY® SC Panel

NEW

Ordering information	**SENCITY® SC Panel** **X-Pol Panel Antenna**
Type no.	**1399.31.0255**
Frequency range	**1710 – 1880 MHz** **1900 – 2170 MHz**
Half-power beam width	**33°**
Gain	**20 dBi**
Version	**4.3-10 (female)**
Height	**1245 mm**
Description	• Adjust. Electrical Downtilt 0°-10°T • Integrated RCU (Remote Control Unit)
Item no.	85257458

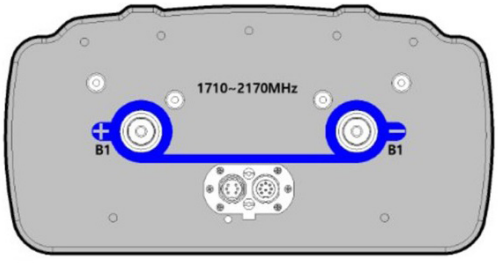
Electrical data per band	**Band 1**	**Band 3**
Frequency	1710 – 1880 MHz	1900 – 2170 MHz
Gain	19.2 dBi	19.9 dBi
3 dB beamwidth (h)	36 ± 4°	34 ± 4°
3 dB beamwidth (v)	7.8 ± 0.8°	7 ± 0.7°
Composite power max.	300 W	300 W

Electrical data	
VSWR	1.5
Impedance	50 Ohm
Ambient temperature	-40 °C ... 70 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	1245 × 295 × 145 mm
Weight	9.2 kg
Connector	4.3-10, jack (female)

Environmental data	
Environmental conditions	outdoor
IP rating	IP54
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	ASA



Outdoor 1710 – 2170 MHz

SENCITY® SC Panel

NEW

Ordering information	**SENCITY® SC Panel** **XX-Pol Panel Antenna**
Type no.	**1399.31.0256**
Frequency range	**1710 – 1880 MHz** **1900 – 2170 MHz**
Half-power beam width	**33°**
Gain	**20 dBi**
Version	**4.3-10 (female)**
Height	**1245 mm**
Description	• Adjust. Electrical Downtilt 0°-10°T • Integrated RCU (Remote Control Unit)
Item no.	85257459

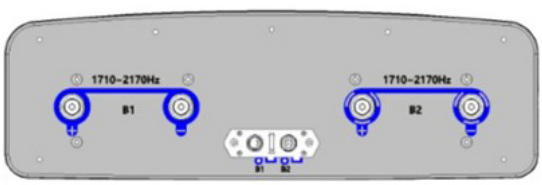
Electrical data per band	**Band 1**	**Band 3**
Frequency	1710 – 1880 MHz	1900 – 2170 MHz
Gain	19.2 dBi	19.9 dBi
3 dB beamwidth (h)	36 ± 4°	33 ± 4°
3 dB beamwidth (v)	7.8 ± 0.8°	7 ± 0.7°
Composite power max.	300 W	300 W

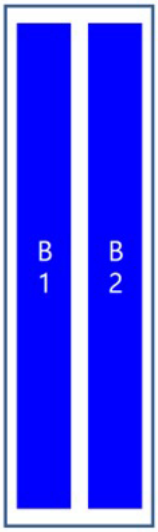
Electrical data	
VSWR	1.5
Impedance	50 Ohm
Ambient temperature	-40 °C ... 70 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	1245 × 565 × 170 mm
Weight	17.7 kg
Connector	4.3-10, jack (female)

Environmental data	
Environmental conditions	outdoor
IP rating	IP54
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	FRP (Fiber-reinforced plastic)





Directional antennas

Ordering information	**SENCITY® Urban 200**
	X-Pol panel antenna
Type no.	**1399.17.0248**
Frequency range	**1695 – 2690 MHz** **3410 – 4200 MHz**
Half-power beam width	**70°/65°**
Gain	**7 – 8.5 dBi**
Version	**N (female)**
Height	**184.8 mm**
Description	• Supports 2×2 MIMO configurations • Low PIM
Item no.	85110146

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	1695 – 1920 MHz	1920 – 2180 MHz	2300 – 2690 MHz
Gain	7 dBi	7 dBi	7.5 dBi
3 dB beamwidth (h)	75°	75°	70°
3 dB beamwidth (v)	80°	90°	70°
Composite power max.	125 W	125 W	110 W
	Band 4	**Band 5**	
Frequency	3410 – 3800 MHz	3800 – 4200 MHz	
Gain	7.5 dBi	8.5 dBi	
3 dB beamwidth (h)	60°	65°	
3 dB beamwidth (v)	60°	50°	
Composite power max.	95 W	90 W	

Electrical data	
VSWR	2
Impedance	50 Ohm
Ambient temperature	25 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	184.8 × 164.6 × 84.2 mm
Weight	0.5 kg
Connector	2 × N (female)

Environmental data	
Environmental conditions	indoor/outdoor
IP rating	IP66
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	PC (Polycarbonate)

Directional antennas

Ordering information	**SENCITY® Urban 200**
	X-Pol panel antenna
Type no.	**1399.17.0250**
Frequency range	**1695 – 2690 MHz** **3300 – 4200 MHz**
Half-power beam width	**110°**
Gain	**4.8 – 5.9 dBi**
Version	**N (female)**
Height	**184.8 mm**
Description	• Supports 2×2 MIMO configurations • Low PIM
Item no.	85110147

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	1695 – 1920 MHz	1920 – 2180 MHz	2300 – 2690 MHz
Gain	5.7 dBi	4.8 dBi	5 dBi
3 dB beamwidth (h)	100°	120°	100°
3 dB beamwidth (v)	105°	120°	95°
Composite power max.	125 W	125 W	110 W
	Band 4	**Band 5**	
Frequency	3300 – 3800 MHz	3800 – 4200 MHz	
Gain	5.9 dBi	4.9 dBi	
3 dB beamwidth (h)	110°	120°	
3 dB beamwidth (v)	65°	85°	
Composite power max.	95 W	90 W	

Electrical data	
VSWR	2
Impedance	50 Ohm
Ambient temperature	25 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	184.8 × 164.6 × 84.2 mm
Weight	0.5 kg
Connector	2 × N (female)

Environmental data	
Environmental conditions	indoor/outdoor
IP rating	IP66
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	PC (Polycarbonate)

Directional antennas

Ordering information	**SENCITY® Urban 200**
	XX-Pol panel antenna
Type no.: Version	**1399.17.0272**
Frequency range	**3300 – 4200 MHz multi-band**
Gain	**11 dBi**
Height	**184.8 mm**
Item no.	85178889

Electrical data per band	**Band 1**	**Band 2**
Frequency	3300 – 3800 MHz	3800 – 4200 MHz
Isolation between Ports	23	22
Composite power max.	95 W	90 W

Electrical data	
Impedance	50 Ohm
VSWR	1.8
Gain	11 dBi
Ambient temperature	25 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	184.8 × 164.6 mm × 84.2 mm (heigth x width x depth)
Weight	0.59 kg
Connector	4 × N (female)

Environmental data	
Environmental conditions	indoor/outdoor
RoHS 2011/65/EU	compliant
Flammability	UL94-V0
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Radome material	polycarbonate
Colour	RAL 7035 (light gray)

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni**
	V-Pol Omni antenna
Type no.	**92210003**
Frequency range	**380 – 3800 MHz**
Gain	**3 – 8.5 dBi**
Version	**4.3-10 (female)**
Height	**540 mm**
Description	Small ground plane and excellent coverage
Item no.	84467565

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 400 MHz	400 – 450 MHz	450 – 470 MHz	694 – 746 MHz
Gain	3 dBi	4 dBi	5 dBi	6 dBi
	Band 5	**Band 6**	**Band 7**	
Frequency	746 – 960 MHz	1200 – 2700 MHz	3300 – 3800 MHz	
Gain	7 dBi	8 dBi	8.5 dBi	

Electrical data	
VSWR	1.7
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	50 °C
IMD level	–150 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	540 × 60 mm
Weight	0.5 kg
Connector	1 × 4.3-10 (female)

Environmental data	
Environmental conditions	outdoor
RoHS 2011/65/EU	compliant

Material data	
Base material	weather-proof aluminum
Radome material	UV protected plastic

Omnidirectional antennas

Ordering information	**SENCITY® SC Omni-M**
	Rugged Omni antenna
Type no.	**1399.17.0338**
Frequency range	**380 – 7125 MHz**
Gain	**3 – 6.5 dBi**
Version	**N (female)**
Height	**60 mm**

Description
- For installation on outdoor cabinets
- Supports TETRA with up to 2 radiators plus 2G/3G/4G/5G cellular bands
- Low profile housing. Single hole mounting

Item no.	85185570

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	380 – 470 MHz	694 – 960 MHz	1710 – 2170 MHz
VSWR	2.5	2.1	2.1
Gain	3 dBi	4.5 dBi	5 dBi
Composite power max.	40 W	40 W	40 W
Port Isolation	3 dB	8 dB	15 dB
	Band 4	**Band 5**	**Band 6**
Frequency	2400 – 2690 MHz	3400 – 4200 MHz	4200 – 7125 MHz
VSWR	2.1	2.1	2.1
Gain	5 dBi	6 dBi	6.5 dBi
Composite power max.	40 W	30 W	25 W
Port Isolation	15 dB	20 dB	20 dB

Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × diameter)	60 × 210 mm
Mounting breakthrough	Ø 30 mm
Weight	0.75 kg
Connector	2 × N (female)

Environmental data	
Environmental conditions	indoor/outdoor
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	PC (Polycarbonate)

Omnidirectional antennas

Ordering information	**SENCITY® Omni-S**
	V-Pol Omni SISO Cellular/LTE 700 antenna
Type no.	**1399.19.0225**
Frequency range	**698 – 2690 MHz**
Gain	**2 – 5 dBi**
Version	**SMA, plug (male)**
Height	**33.2 mm**
Description	Single hole cabinet or wall/pole mounting
Item no.	85065467

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	698 – 862 MHz	1710 – 2170 MHz	2300 – 2690 MHz
Gain	2 dBi	5 dBi	3 dBi
Composite power max.	60 W	50 W	40 W

Electrical data	
VSWR	1.8
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × diameter)	33.2 × 145 mm
Weight	0.3 kg
Connector	1 × SMA, plug (male)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 85 °C
Flammability rating	UL 94-V0
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	PC (Polycarbonate)

Omnidirectional antennas

Ordering information	**SENCITY® Omni-M**
	V-Pol Omni LTE antenna
Type no.	**1399.17.0231**
Frequency range	**790 – 960 MHz** **1710 – 2690 MHz**
Gain	**2 – 3 dBi**
Version	**N (female)**
Height	**263 mm**
Description	L-bracket for pole or wall mounting scenario included
Item no.	85027954

Electrical data per band	**Band 1**	**Band 2**
Frequency	790 – 960 MHz	1710 – 2690 MHz
Gain	2 dBi	3 dBi
VSWR	2	1.9

Electrical data	
Impedance	50 Ohm
Composite power max.	25 W
Ambient temperature	25 °C
IMD level	–143 dBc at 2 × 30 dBm

Mechanical data	
Dimensions (height × diameter)	263 × 32 mm
Weight	0.4 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–40 to 85 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Material data	
Radome colour	white
Radome material	Glass Reinforced Plastic (GRP)

GNSS antenna L1+L2

Ordering information	**GNSS ANT L1+L2 3.3V**
Frequency range	**1227.6 / 1588 MHz**
Gain	**32 dBi**
Height	**66.2 mm**
Item no.	85160014

Description

- Excellent performance as part of a GPS-over-Fiber solution
- Dual Frequency – GPS L1 and L2 bands
- Weatherproof housing, proven extra rugged, reliable
- Extended temperature range (-40°C / +85°C)

Electrical data	**3.3 V** 85160014
Centre frequency: L1	1588 MHz
Centre frequency: L2	1227.6 MHz
VSWR	maximum 2.0
Impedance	50 Ohm
Gain	32 dBi

Mechanical data	
Dimensions (height × diameter)	66.2 × 77.5 mm
Weight	0.2 kg
Connector	1 × TNC (female)

Environmental data	
Environmental conditions	outdoor
Operation temperature	–40 to 90 °C

Material data	
Enclosure	Off-white plastic

Direct GPS-over-Fiber

Description

- Direct GPSoF enables a fiber optic connection directly into an antenna – delivering the world's first "truly copperless" link.
- The use of Power-over-Fiber perfectly addresses power delivery constraints in Remote Antenna applications by eliminating the need for external power to the antenna (outdoor) unit. This is ideal for applications that have limited power resources such as rooftop installations. Using Power-over-Fiber also saves time and money in environments that may hindered by the installation of conductive cable – which is typical when extending the supply of power to the installation areas.

Features

- Reduces the amount of hardware required in a link as core functionality is integrated into the antenna radome). Also significantly reduces the cable footprint of the link.
- Uses HUBER+SUHNER's Q-ODC fiber optic interface – which is perfect for outdoor/harsh environment use.
- Employs laser safety features that are compliant with all IEC standards.
- Is easy to install. Plug-and-Play.
- Supports link distances of up to 10 km.
- Unlimited flexibility in signal distribution.

Special purpose antennas

Ordering information	**SENCITY® Road** **V-Pol 3-Port Omni vehicle antenna**
Type no.	**1399.99.0039**
Frequency range	**698 – 960 MHz** **1710 – 2690 MHz** **4900 – 5935 MHz**
Gain	**5 – 7 dBi**
Version	**SMA, TNC**
Height	**82 mm**
Description	• Stick antenna option for TETRA • GPS/Glonass with integrated LNA • Offers a stick antenna socket and separate connectors • Single hole mounting, easy cabling • Works also on non-metallic surfaces
Item no.	84089087

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**	**Band 5**
Frequency	698 – 790 MHz	790 – 960 MHz	1710 – 2690 MHz	1710 – 2690 MHz	4900 – 5935 MHz
VSWR	2.1	1.8	2	1.8	1.8
Gain	5 dBi	5 dBi	5 dBi	5 dBi	7 dBi
Composite power max.	80 W	40 W	40 W	40 W	30 W
Port Isolation			20 dB	20 dB	30 dB
	Band 6	**Band 7**			
Band name	GPS/Glonass	Socket			
Frequency	1574 – 1610 MHz				
VSWR	2				

Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × width × depth)	82 × 83 × 208 mm
Weight	0.41 kg
Connector	SMA (male), SMA (female), TNC (male), TNC (female)

Environmental data	
Environmental conditions	indoor/outdoor
RoHS 2011/65/EU	compliant

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

Related Products		
FM radio stick antenna 88 – 108 MHz	84112255	9091.99.0246
Stick antenna 380 – 430 MHz	84112256	9091.99.0247
Stick antenna 450 – 470 MHz	84112257	9091.99.0248

Special purpose antennas

Ordering information	**FM Radio Stick antenna**
Type no.	**9091.99.0246**
Frequency range	**88 – 108 MHz**
Height	**425 mm**
Description	• Stick antenna for Sencity Road • Supports FM radio in the 88 – 108 MHz frequency range • Can be equipped on optional antenna socket
Item no.	84112255

Electrical data	
Frequency range	88 – 108 MHz
Impedance	50 Ohm

Mechanical data	
Dimensions (height × diameter)	425 × 16 mm
Weight	0.1 kg
Thread	M5

Environmental data	
Operation temperature	–40 to 85 °C
Flammability rating	UL 94-HB
RoHS 2011/65/EU	compliant

Material data	
Colour	black

Special purpose antennas

Ordering information	**TETRA Stick antenna**
Type no.	**9091.99.0247**
Frequency range	**380 – 430 MHz**
Height	**145 mm**
Description	• Stick antenna for Sencity Road • Supports TETRA applications in the 380 – 430 MHz frequency range.
Item no.	84112256

Electrical data	
Frequency range	380 – 430 MHz
Impedance	50 Ohm

Mechanical data	
Dimensions (height × diameter)	145 × 15 mm
Weight	0.05 kg
Thread	M5

Environmental data	
Operation temperature	–40 to 85 °C
Flammability rating	UL 94-HB
RoHS 2011/65/EU	compliant

Material data	
Colour	black

Special purpose antennas

Ordering information	**TETRA Stick antenna**
Type no.	**9091.99.0248**
Frequency range	**450 – 470 MHz**
Height	**120 mm**
Description	• Stick antenna for Sencity Road • Supports TETRA applications in the 450 – 470 MHz frequency range.
Item no.	84112257

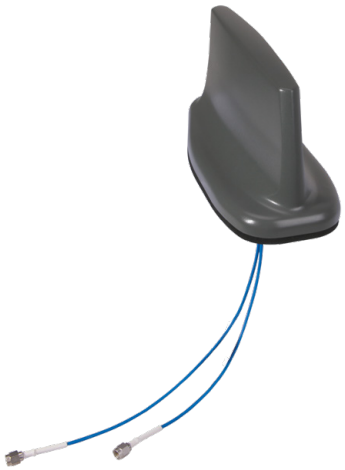
Electrical data	
Frequency range	450 – 470 MHz
Impedance	50 Ohm
VSWR	2
Gain	3 dBi (on metal ground plane)
Composite power max.	10 W

Mechanical data	
Dimensions (height × diameter)	120 × 15 mm
Weight	0.05 kg
Thread	M5

Environmental data	
Operation temperature	–40 to 85 °C
Flammability rating	UL 94-HB
RoHS 2011/65/EU	compliant

Material data	
Colour	black

Special purpose antennas



Ordering information	**SENCITY® Road MIMO**
	V-Pol 2-Port Omni vehicle antenna
Type no.	**1399.99.0119**
Frequency range	**698 – 960 MHz** **1710 – 2690 MHz**
Gain	**4 – 6 dBi**
Version	**SMA (male)**
Height	**88 mm**

Description

- Rugged vehicle rooftop multi-band antenna for heavy duty vehicles
- Supports 2×2 MIMO configurations
- Single hole mounting, easy cabling feed-through

Item no.	85021510

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	698 – 790 MHz	790 – 960 MHz	1710 – 2170 MHz	2400 – 2690 MHz
VSWR	2.2	2	2	2
Gain	4 dBi	4 dBi	6 dBi	6 dBi
Composite power max.	80 W	50 W	40 W	40 W
Port Isolation	12 dB	12 dB	15 dB	15 dB

Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × width × depth)	88 × 83 × 208 mm
Weight	0.4 kg
Connector	2 × SMA (male)

Environmental data	
Environmental conditions	indoor/outdoor
IP rating	IP68, IP69
RoHS 2011/65/EU	compliant

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

Related Products	
Metal ground plane foil 0.6×0.6 m	9091.99.0250

Special purpose antennas

Ordering information	**SENCITY® Road MIMO**
	V-Pol 2-Port Omni vehicle antenna
Type no.	**1399.99.0129**
Frequency range	**698 – 960 MHz** **1710 – 2690 MHz**
Gain	**5 – 7 dBi**
Version	**SMA, TNC**
Height	**88 mm**

Description

- Rugged vehicle rooftop multi-band antenna for heavy duty vehicles
- Supports 2×2 MIMO configurations
- Single hole mounting, easy cabling feed-through
- Works also on non-metallic surfaces

Item no.	85004616

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	698 – 790 MHz	790 – 960 MHz	1710 – 2170 MHz	2400 – 2690 MHz
VSWR	2.2	2	2	2
Gain	4 dBi	4 dBi	6 dBi	6 dBi
Composite power max.	80 W	50 W	40 W	40 W
Port Isolation	12 dB	12 dB	15 dB	15 dB
	Band 5			
Band name	GPS/Glonass			
Frequency	1574 – 1610 MHz			
VSWR	2			

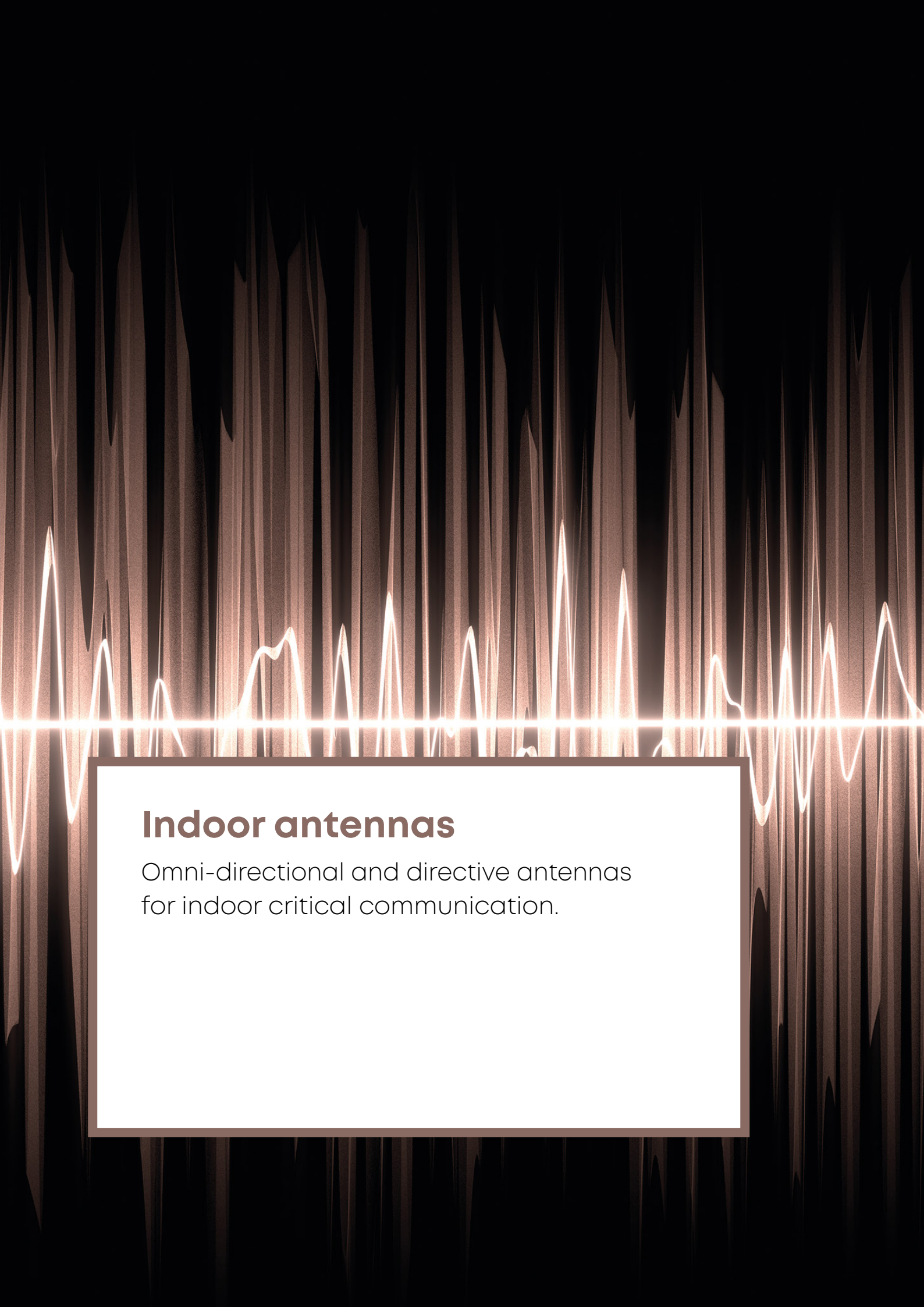
Electrical data	
Impedance	50 Ohm
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × width × depth)	88 × 83 × 208 mm
Weight	0.5 kg
Connector	SMA (male), SMA (female), TNC (male)

Environmental data	
Environmental conditions	indoor/outdoor
RoHS 2011/65/EU	compliant

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

Related Products	
Metal ground plane foil 0.6×0.6 m	9091.99.0250



Indoor antennas

Omni-directional and directive antennas for indoor critical communication.

Indoor antennas

Overview

Indoor omnidirectional antennas

Description				Type no.	Height	Input	Page
V-Pol Omni	380 – 405 MHz		2 dBi	91121388	77 mm	1 × N female	64
V-Pol Omni	405 – 430 MHz		2 dBi	91121440	77 mm	1 × N female	65
V-Pol Omni	450 – 470 MHz		2 dBi	91121743	77 mm	1 × N female	66
V-Pol Omni	380 – 6000 MHz		1 – 6 dBi	92210001	189.8 mm	1 × N female	67
V-Pol Omni	380 – 6000 MHz		1 – 6 dBi	92210002	189.8 mm	1 × 4.3-10 female	67
NEW OMNI-M	380 – 4200 MHz		2 – 4 dBi	1399.17.0330	60 mm	1 × N-female	68
V-Pol Omni	617 – 4200 MHz		2.5 – 5.5 dBi	1399.31.0008	3 – 87mm	1 × 4.3-10 female	69
X-Pol Omni	617 – 4200 MHz		2.5 – 6.5 dBi	1399.31.0007	3 – 87mm	2 × 4.3-10 female	70
XX-Pol Omni	617 – 6000 MHz		6 dBi	1399.32.0020	40 mm	4 × NEX10 female	71

Indoor directional antennas

Description				Type no.	Height	Input	Page
V-Pol	380 – 470 MHz	90°	7 dBi	1399.17.0010	302 mm	1 × N female	72
V-Pol	380 – 470 MHz	90°	7 dBi	1399.31.0020	302 mm	1 × 4.3-10 female	73
X-Pol	698 – 960 MHz 1695 – 2700 MHz 3100 – 4200 MHz	85°/65°	6 – 7 dBi	1399.31.0022	200 mm	2 × 4.3-10 female	74

Indoor omnidirectional antennas

Ordering information	**SENCITY® SC Indoor** **V-Pol Indoor Omni antenna**
Type no.	**91121388**
Frequency range	**380 – 405 MHz**
Gain	**2 dBi**
Version	**N (female)**
Height	**77 mm**
Description	The antenna needs no additional groundplane
Item no.	84467216

Electrical data	
Frequency	380 – 405 MHz
VSWR	2
Gain	2 dBi
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × diameter)	77 × 258 mm
Weight	0.429 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	indoor
IP rating	IP30
RoHS 2011/65/EU	compliant
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Reflector	aluminium
Radome	high impact polystyrol
Colour	white

Indoor omnidirectional antennas

Ordering information	**SENCITY® SC Indoor** **V-Pol Indoor Omni antenna**
Type no.	**91121440**
Frequency range	**405 – 430 MHz**
Gain	**2 dBi**
Version	**N (female)**
Height	**77 mm**
Description	The antenna needs no additional groundplane
Item no.	84467225

Electrical data	
Frequency	405 – 430 MHz
VSWR	2
Gain	2 dBi
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × diameter)	77 × 258 mm
Weight	0.429 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	indoor
IP rating	IP30
RoHS 2011/65/EU	compliant
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Reflector	aluminium
Radome	high impact polystyrol
Colour	white

Indoor omnidirectional antennas

Ordering information	**SENCITY® SC Indoor** **V-Pol Indoor Omni antenna**
Type no.	**91121743**
Frequency range	**450 – 470 MHz**
Gain	**2 dBi**
Version	**N (female)**
Height	**77 mm**
Description	The antenna needs no additional groundplane
Item no.	84467231

Electrical data	
Frequency	450 – 470 MHz
VSWR	2
Gain	2 dBi
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × diameter)	77 × 258 mm
Weight	0.429 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	indoor
IP rating	IP30
RoHS 2011/65/EU	compliant
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Reflector	aluminium
Radome	high impact polystyrol
Colour	white

Indoor omnidirectional antennas

Ordering information	**SENCITY® SC Indoor**
	V-Pol Indoor Omni antenna
Type no.: Version	**92210001: N (female)**
Item no.	84467570
	92210002: 4.3-10 (female)
Item no.	84467568
Frequency range	**380 – 6000 MHz multi-band**
Gain	**1 – 6 dBi**
Height	**189.8 mm**

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 806 MHz	806 – 960 MHz	1395 – 1432 MHz	1710 – 2170 MHz
VSWR	2.5	2	2	2
Gain	2 dBi	4 dBi	5 dBi	5 dBi
	Band 5	**Band 6**	**Band 7**	
Frequency	2300 – 2500 MHz	3300 – 3700 MHz	4900 – 6000 MHz	
VSWR	2	1.9	1.9	
Gain	5 dBi	5 dBi	6 dBi	

Electrical data	
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	50 °C
IMD level	–155 dBc at 2 × 20 dBm

Mechanical data	
Dimensions (height × diameter)	189.8 × 274.1 mm
Weight	0.55 kg
Connector	92210001: 1 × N (female) 92210002: 1 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor
RoHS 2011/65/EU	compliant
Flammability	UL94
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Radome material	UV protected polycarbonate
Colour	white
Back plane	aluminum protected through chemical passivation

SENCITY® SC OMNI-M

Ordering information	**SENCITY® SC OMNI-M**
	V-Pol Indoor Omni antenna
Type no.: Version	**1399.17.0330**
Item no.	85185546
Frequency range	**380 – 4200 MHz**
Gain	**2 – 4 dBi**
Height	**60 mm**

NEW

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 470 MHz	694 – 960 MHz	1350 – 2700 MHz	3300 – 4200 MHz
VSWR	2.5	2	2	2
Gain	3 dBi	2 dBi	4 dBi	4 dBi
	Band 5	**Band 6**	**Band 7**	
Frequency	4900 – 7125 MHz	2400 – 2500 MHz	4900 – 7125 MHz	
VSWR	2			
Gain	5 dBi			

Electrical data	
Impedance	50 Ohm
Composite power max.	40 W
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × diameter)	60 × 210 mm
Weight	1.1 kg
Connector	N, jack (female

Environmental data	
Environmental conditions	Indoor / Outdoor
Flammability	UL94

Material data	
Radome material	PC (Polycarbonate)
Colour	RAL 7044 (light grey)
Back plane	Aluminium

Indoor omnidirectional antennas

Ordering information	**SENCITY® Rondo SISO**
	V-Pol Indoor Omni antenna
Type no.	**1399.31.0008**
Frequency range	**617 – 4200 MHz**
Gain	**2.5 – 5.5 dBi**
Version	**4.3–10 (female)**
Height	**87 mm**
Description	• Antenna ETL listed for Plenum space (UL 2043) • Design patent DM/088510
Item no.	85086041

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	617 – 698 MHz	698 – 790 MHz	790 – 960 MHz
VSWR	1.8	2	2
Gain	2.5 dBi	2.5 dBi	4.5 dBi
	Band 4	**Band 5**	**Band 6**
Frequency	1695 – 2400 MHz	2400 – 2690 MHz	3300 – 4200 MHz
VSWR	1.7	1.5	2
Gain	5 dBi	5.5 dBi	5 dBi

Electrical data	
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	25 °C
IMD level	–155 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	87 × 238 mm
Weight	0.512 kg
Connector	4.3 – 10, 4.3 – 10, jack (female)

Environmental data	
Environmental conditions	indoor
Flammability	UL94-V0

Material data	
Radome colour	white
Back plate / base plate material	PCB_1

Antenna accessories		
Item description	Item number	Product name
9091.99.0258	85067690	Multi function bracket for SENSITY® Rondo

Antenna accessories remarks
Thickness of false ceiling to be < 30 mm.

Installation example

Indoor omnidirectional antennas

Ordering information	**SENCITY® Rondo MIMO**
	X-Pol Indoor Omni antenna
Type no.	**1399.31.0007**
Frequency range	**617 – 4200 MHz**
Gain	**2.5 – 6.5 dBi**
Version	**4.3–10 (female)**
Height	**87 mm**
Description	• Antenna ETL listed for Plenum space (UL 2043) • Design patent DM/088510
Item no.	85086028

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	617 – 698 MHz	698 – 790 MHz	790 – 960 MHz	1695 – 2180 MHz
VSWR	1.8	1.9	2	1.6
Gain	2.5 dBi	3.5 dBi	4.5 dBi	5 dBi
Composite power max.	300 W	180 W	180 W	130 W
	Band 5	**Band 6**	**Band 7**	**Band 8**
Frequency	2180 – 2400 MHz	2400 – 2500 MHz	2500 – 2690 MHz	3300 – 4200 MHz
VSWR	1.6	1.5	1.5	2
Gain	6 dBi	6.5 dBi	6.5 dBi	5.5 dBi
Composite power max.	90 W	50 W	50 W	50 W

Electrical data	
Impedance	50 Ohm
Ambient temperature	55 °C
IMD level	–155 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	87 × 238 mm
Weight	0.82 kg
Connector	2 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor
Flammability	UL94-V0

Material data	
Radome colour	white
Back plate / base plate material	PCB_1

Antenna accessories		
Item description	Item number	Product name
9091.99.0258	85067690	Multi function bracket for SENSITY® Rondo

Antenna accessories remarks
Thickness of false ceiling to be < 30 mm.

Installation example

Indoor omnidirectional antennas

Ordering information	**SENCITY® OCCHIO 4x4 MIMO Antenna**
	XX-Pol Indoor Omni antenna
Type no.	**1399.32.0020**
Frequency range	**617 – 6000 MHz**
Gain	**6 dBi**
Version	**NEX10 (female)**
Height	**40 mm**

Description
SENCITY Occhio MIMO 4x4 offers 5G coverage, a simple, time-saving installation process and an attractive industry preferred design with a small form factor. Thanks to its multiband capability between 617 MHz till 6 GHz it supports todays and future wireless applications.

Item no.	85189602

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	617 – 960 MHz	1427 – 1660 MHz	1695 – 2690 MHz
Gain	3 dBi	4.5 dBi	4.5 dBi
Port Isolation	15 dB	15 dB	20 dB
	Band 4	**Band 5**	
Frequency	3300 – 4200 MHz	4500 – 6000 MHz	
Gain	5 dBi	6 dBi	
Port Isolation	30 dB	30 dB	

Electrical data	
VSWR	2
Impedance	50 Ohm
Ambient temperature	55 °C
IMD level	–153 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × diameter)	40 × 275 mm
Weight	0.93 kg
Connector	4 × NEX10 (female)

Environmental data	
Environmental conditions	indoor
Operation temperature	0 – 55 °C
RoHS 2011/65/EU	compliant
Flammability	UL94-V0
REACH 2006/1907/EC	compliant

Material data	
Radome colour	white
Back plate / base plate colour	black

Indoor directional antennas

Ordering information	**SENCITY® SC Indoor V-Pol Indoor directional antenna**
Type no.	**1399.17.0010**
Frequency range	**380-470 MHz**
Half-power beam width	**90°**
Gain	**7 dBi**
Version	**N (female)**
Height	**302 mm**
Item no.	85194601

Electrical data	
Frequency	380 – 470 MHz
VSWR	2
Gain	7 dBi
3dB beamwidth (v)	90°
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	25 °C

Mechanical data	
Dimensions	302 × 243 × 50 mm
Weight	1.39 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	indoor
IP rating	IP30
RoHS 2011/65/EU	compliant
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Reflector	copper
Radome	high impact polystyrol
Colour	white
Mounting plates	stainless steel

Indoor directional antennas

Ordering information	**SENCITY® SC Indoor V-Pol Indoor directional antenna**
Type no.	**1399.31.0020**
Frequency range	**380 – 470 MHz**
Half-power beam width	**90°**
Gain	**7 dBi**
Version	**4.3-10 (female)**
Height	**302 mm**
Item no.	85201925

Electrical data	
Frequency	380 – 470 MHz
VSWR	2
Gain	7 dBi
3dB beamwidth (v)	90°
Impedance	50 Ohm
Composite power max.	50 W
Ambient temperature	25 °C

Mechanical data	
Dimensions	302 × 243 × 50 mm
Weight	1.39 kg
Connector	1 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor
IP rating	IP30
RoHS 2011/65/EU	compliant
WEEE 2012/19/EU	no special marking needed
REACH 2006/1907/EC	compliant

Material data	
Reflector	copper
Radome	high impact polystyrol
Colour	white
Mounting plates	stainless steel

Indoor directional antennas

Ordering information	**SENCITY® Urban 300**
	X-Pol Indoor directional antenna
Type no.	**1399.31.0022**
Frequency range	**698 – 960 MHz** **1695 – 2700 MHz** **3100 – 4200 MHz**
Gain	**6 – 7 dBi**
Version	**4.3-10 (female)**
Height	**200 mm**
Description	Supports MIMO 2x2
Item no.	85198125

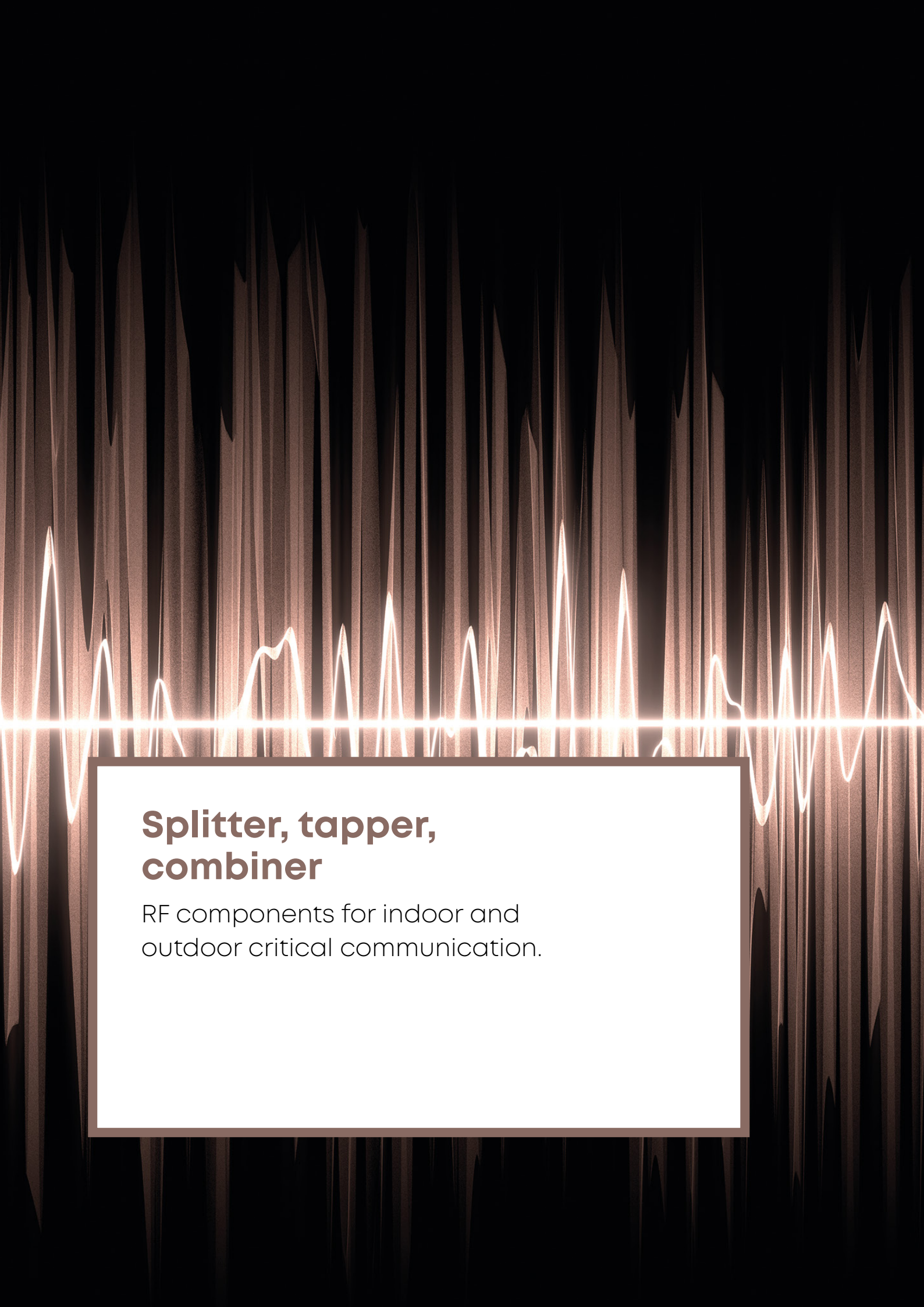
Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	698 – 960 MHz	1695 – 2700 MHz	3100 – 4200 MHz
Gain	6.5 dBi	7 dBi	6 dBi
3dB beamwidth (h)	85°	65°	65°
3dB beamwidth (v)	80°	65°	65°

Electrical data	
VSWR	2
Impedance	50 Ohm
Max. effective comb. power per port	50 W
Ambient temperature	25 °C

Mechanical data	
Dimensions (height × width × depth)	200 × 260 × 90 mm
Weight	1.1 kg
Connector	2 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor/outdoor
IP rating	IP67
Flammability Rating	UL 94-V0
RoHS 2011/65/EU	compliant
REACH 2006/1907/EC	compliant

Material data	
Radome	PC (Polycarbonate)
Colour	white



Splitter, tapper, combiner

RF components for indoor and outdoor critical communication.

Splitter, tapper, combiner
Overview

Splitter

Description			Type no.	Length	Output	Page
2-way splitter	380 – 4000 MHz		5501.31.0102	318 mm	2 × 4.3-10 fem.	78
3-way splitter	380 – 4000 MHz		5501.31.0103	365 mm	3 × 4.3-10 fem.	79
4-way splitter	380 – 4000 MHz		5501.31.0104	399 mm	4 × 4.3-10 fem.	80
2-way splitter	380 – 2700 MHz		5501.17.0030	267 mm	2 × N female	81
3-way splitter	380 – 2700 MHz		5501.17.0031	262 mm	3 × N female	82
2-way splitter	340 – 3800 MHz		5501.41.0102	318 mm	2 × 7/16 female	83
3-way splitter	340 – 3800 MHz		5501.41.0103	365 mm	3 × 7/16 female	84
4-way splitter	340 – 3800 MHz		5501.41.0104	399 mm	4 × 7/16 female	85
2-way splitter	694 – 6000 MHz		5504.17.0011	239 mm	2 × N female	86

Tapper

Description			Type no.	Power	Ports	Page
2-way tapper 3 dB	350 – 2700 MHz	2:1 unequal power divider	5501.31.0002	300 W	3 × 4.3-10 fem.	87
2-way tapper 4.8 dB	350 – 2700 MHz	3:1 unequal power divider	5501.31.0003	300 W	3 × 4.3-10 fem.	87
2-way tapper 6 dB	350 – 2700 MHz	4:1 unequal power divider	5501.31.0004	300 W	3 × 4.3-10 fem.	87
2-way tapper 10 dB	350 – 2700 MHz	10:1 unequal power divider	5501.31.0010	300 W	3 × 4.3-10 fem.	87
2-way tapper 15 dB	350 – 2700 MHz	30:1 unequal power divider	5501.31.0015	300 W	3 × 4.3-10 fem.	87
2-way tapper 20 dB	350 – 2700 MHz	100:1 unequal power divider	5501.31.0100	300 W	3 × 4.3-10 fem.	87

Diplexer

Description			Type no.	Power	Ports	Page
TETRA + cellular + Wi-Fi diplexer	80 – 520 MHz 694 – 2700 MHz	Return Loss 16 dB	2501.17.0091	120 W	N female	88
450MHz + GSM-R diplexer	440 – 470 MHz 870 – 960 MHz	Return Los ≤ 20 dB	2501.17.0100	50 W	N female	89

Quadraplexer

Description			Type no.	Power	Ports	Page
4-port quadraplexer	380 – 960 MHz 1710 – 1880 MHz 1920 – 2170 MHz 2500 – 2690 MHz	Return Loss 18 dB	2501.41.0100	700 W 300 W 200 W 200 W	7/16 female	90

Filter

Description	Pass Band	Rejection Band	Type no.	Rejection	Ports	Page
Double GSM-R Rejection Filter	703 ... 3800 MHz	873 – 880 MHz 918 – 925 MHz	2601.17.0001	Min. 50 dB	N female	91

Reactive Power Splitter

Ordering information	**2-Way Reactive Power Splitter**
Type no.	**5501.31.0102**
Frequency range	**380 – 4000 MHz**
Version	**4.3-10**
Length	**318 mm**
Description	• Installation equipment for critical communication antennas • 2-Way Low-loss Power Splitter • Multi-band • Low PIM –160 dBc
Item no.	85195613

Electrical data	**Band 1**
Frequency	380 – 4000 MHz
Split Loss	3.5 dB
Impedance	50 Ohm
Composite power max.	500 W
Peak envelope power	1500 W
Ambient temperature	25 °C
PIM3	–160 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (length × height × width)	318 × 25 × 25 mm (without connector dimension)
Weight	0.5 kg
Connector	Input 1 × 4.3-10 (female), Output 2 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 60 °C
IP rating	IP65
RoHS 2011/65/EU	compliant

Reactive Power Splitter

Ordering information	**3-Way Reactive Power Splitter**
Type no.	**5501.31.0103**
Frequency range	**380 – 4000 MHz**
Version	**4.3-10**
Length	**365 mm**
Description	• Installation equipment for critical communication antennas • 3-Way Low-loss Power Splitter • Multi-band • Low PIM –160 dBc
Item no.	85195614

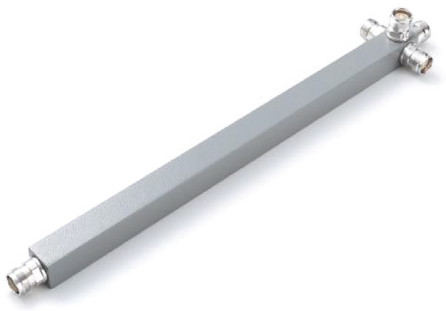
Electrical data	**Band 1**
Frequency	380 – 4000 MHz
Split Loss	5.6 dB
Impedance	50 Ohm
Composite power max.	500 W
Peak envelope power	1500 W
Ambient temperature	25 °C
PIM3	–160 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (length × height × width)	365 × 25 × 25 mm (without connector dimension)
Weight	0.64 kg
Connector	Input 1 × 4.3-10 (female), Output 3 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 60 °C
IP rating	IP65
RoHS 2011/65/EU	compliant

Splitter

Reactive Power Splitter



Ordering information	**4-Way Reactive Power Splitter**
Type no.	**5501.31.0104**
Frequency range	**380 – 4000 MHz**
Version	**4.3-10**
Length	**399 mm**
Description	• Installation equipment for critical communication antennas • 4-Way Low-loss Power Splitter • Multi-band • Low PIM –160 dBc
Item no.	85195615

Electrical data	**Band 1**
Frequency	380 – 4000 MHz
Split Loss	6.8 dB
Impedance	50 Ohm
Composite power max.	500 W
Peak envelope power	1500 W
Ambient temperature	25 °C
PIM3	–160 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (length × height × width)	399 × 25 × 25 mm (without connector dimension)
Weight	0.75 kg
Connector	Input 1 × 4.3-10 (female), Output 4 × 4.3-10 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 60 °C
IP rating	IP65
RoHS 2011/65/EU	compliant

Reactive Power Splitter

Ordering information	**2-Way Reactive Power Splitter**
Type no.	**5501.17.0030**
Frequency range	**380 – 2700 MHz**
Version	**N (female)**
Length	**267 mm**
Description	• Evenly split high power signals with minimal reflections or loss • Wide frequency range allows use with multiband antennas and leaky cable systems
Item no.	85029258

Electrical data	**Band 1**
Frequency	380 – 2700 MHz
Split Loss	3 dB
Insertion Loss	0.1 dB
Char. Impedance	50 Ohm
Composite power max.	300 W
Intermodulation distortion	–155 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × length)	28.5 × 28.5 × 267 mm
Weight	0.33 kg
Connector	Input 1 × N jack (female), Output 2 × N jack (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–35 to 85 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Splitter

Reactive Power Splitter

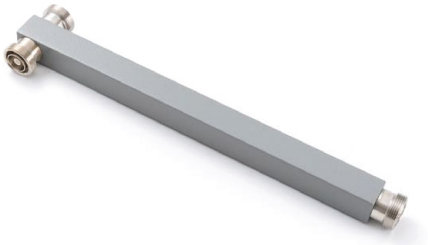
Ordering information	**3-Way Reactive Power Splitter**
Type no.	**5501.17.0031**
Frequency range	**380 – 2700 MHz**
Version	**N (female)**
Length	**262 mm**
Description	• Evenly split high power signals with minimal reflections or loss • Wide frequency range allows use with mult-iband antennas and leaky cable systems
Item no.	85029259

Electrical data	**Band 1**
Frequency	380 – 2700 MHz
Split Loss	4.8 dB
Insertion Loss	0.1 dB
Char. Impedance	50 Ohm
Composite power max.	300 W
Intermodulation distortion	–155 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × length)	28.5 × 28.5 × 262 mm
Weight	0.37 kg
Connector	Input 1 × N jack (female), Output 3 × N jack (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–35 to 85 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Reactive Power Splitter



Ordering information	**2-Way Reactive Power Splitter**
Type no.	**5501.41.0102**
Frequency range	**340 – 3800 MHz**
Version	**7/16 (female)**
Length	**318 mm**
Description	• Installation equipment for critical communication antennas • 2-Way Low-loss Power Splitter • Multi-band • Low PIM –160 dBc
Item no.	85195616

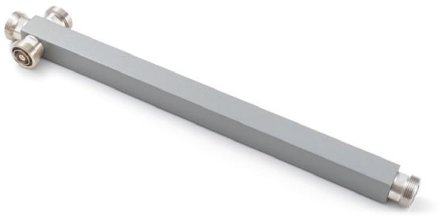
Electrical data	**Band 1**
Frequency	340 – 3800 MHz
Split Loss	3.0 dB
Impedance	50 Ohm
Composite power max.	500 W
Peak envelope power	1500 W
Ambient temperature	25 °C
PIM3	–160 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (length × height × width)	318 × 25 × 25 mm (without connector dimension)
Weight	0.6 kg
Connector	Input 1 × 7/16 (female), Output 2 × 7/16 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 60 °C
IP rating	IP65
RoHS 2011/65/EU	compliant

Splitter

Reactive Power Splitter



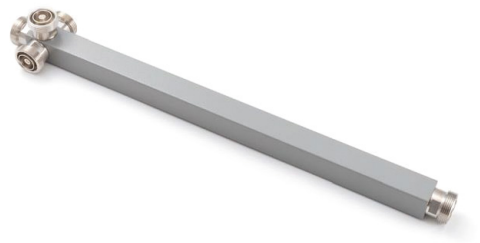
Ordering information	**3-Way Reactive Power Splitter**
Type no.	**5501.41.0103**
Frequency range	**340 – 3800 MHz**
Version	**7/16 (female)**
Length	**365 mm**
Description	• Installation equipment for critical communication antennas • 3-Way Low-loss Power Splitter • Multi-band • Low PIM –160 dBc
Item no.	85195617

Electrical data	**Band 1**
Frequency	340 – 3800 MHz
Split Loss	4.8 dB
Impedance	50 Ohm
Composite power max.	500 W
Peak envelope power	1500 W
Ambient temperature	25 °C
PIM3	–160 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (length × height × width)	365 × 25 × 25 mm (without connector dimension)
Weight	0.7 kg
Connector	Input 1 × 7/16 (female), Output 3 × 7/16 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 60 °C
IP rating	IP65
RoHS 2011/65/EU	compliant

Reactive Power Splitter



Ordering information	**4-Way Reactive Power Splitter**
Type no.	**5501.41.0104**
Frequency range	**340 – 3800 MHz**
Version	**7/16 (female)**
Length	**399 mm**
Description	• Installation equipment for critical communication antennas • 2-Way Low-loss Power Splitter • Multi-band • Low PIM –160 dBc
Item no.	85195618

Electrical data	**Band 1**
Frequency	340 – 3800 MHz
Split Loss	6.0 dB
Impedance	50 Ohm
Composite power max.	500 W
Peak envelope power	1500 W
Ambient temperature	25 °C
PIM3	–160 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (length × height × width)	399 × 25 × 25 mm (without connector dimension)
Weight	0.8 kg
Connector	Input 1 × 7/16 (female), Output 4 × 7/16 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–55 to 60 °C
IP rating	IP65
RoHS 2011/65/EU	compliant

Reactive Power Splitter

Ordering information	**2-Way Reactive Power Splitter**
Type no.	**5504.17.0011**
Frequency range	**694 – 6000 MHz**
Version	**N (female)**
Length	**239 mm**
Description	• 2-way broadband reactive power splitter • It covers 5G and Wi-Fi 6 Band • Waterproof (IP67) in un-mated condition as well • Tested according to EN 50155 • Conformity to EN 45545
Item no.	85191624

Electrical data	**Band 1**
Frequency	694 – 6000 MHz
Return loss input port	> 20 dB
Insertion Loss	< 3.2 dB
Char. Impedance	50 Ohm
Composite power max.	300 W

Mechanical data	
Dimensions (height × width × length)	20 × 67 × 239 mm
Weight	0.345 kg
Connector	Input 1 × N jack (female), Output 2 × N jack (female)

Environmental data	
Environmental conditions	Outdoor
Operation temperature	–40 to 85 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Power tapper

Unequal Power Divider

Frequency range	**350 – 2700 MHz**
Version	**4.3-10 (female)**
Width	**89 mm**

Description

These tappers unevenly split high power cellular signals with minimal reflections or loss over the wireless bands in the range 350-2700 MHz (no coupling from 960 to 1710 MHz). The innovative asymmetric design ensures an excellent input VSWR and coupling flatness across the band. The lightweight design allows easy attachment to a wall using the supplied bracket. Designed with only a few solder joints and an air dielectric, loss is minimized and reliability enhanced. It supports public safety and cellular bands, as well as Wi-Fi 2.4 GHz.

Ordering information

2:1 unequal power divider
Type no. **5501.31.0002**, Item no. 85075310

	MHz Band 1 350 – 960	MHz Band 2 1710 – 2700	
Return Loss	15 dB	17 dB	
Tapp Loss	3 dB	3 dB	
Insertion Loss	1.8 dB	1.8 dB	

3:1 unequal power divider
Type no. **5501.31.0003**, Item no. 85075311

	MHz Band 1 350 – 960	MHz Band 2 1710 – 2700	
Return Loss	17.6 dB	17.6 dB	
Tapp Loss	4.8 dB	4.8 dB	
Insertion Loss	1.3 dB	1.3 dB	

4:1 unequal power divider
Type no. **5501.31.0004**, Item no. 85075312

	MHz Band 1 350 – 960	MHz Band 2 1710 – 1800	MHz Band 3 1800 – 2700
Return Loss	20.8 dB	17.6 dB	20.8 dB
Tapp Loss	6 dB	6 dB	6 dB
Insertion Loss	1 dB	1 dB	1 dB

10:1 unequal power divider
Type no. **5501.31.0010**, Item no. 85075315

	MHz Band 1 350 – 960	MHz Band 2 1710 – 1800	MHz Band 3 1800 – 2700
Return Loss	20.8 dB	17.6 dB	20.8 dB
Tapp Loss	10 dB	10 dB	10 dB
Insertion Loss	0.4 dB	0.4 dB	0.4 dB

30:1 unequal power divider
Type no. **5501.31.0015**, Item no. 85075316

	MHz Band 1 350 – 960	MHz Band 2 1710 – 2700	
Return Loss	20.8 dB	20.8 dB	
Tapp Loss	15 dB	15 dB	
Insertion Loss	0.1 dB	0.1 dB	

100:1 unequal power divider
Type no. **5501.31.0100**, Item no. 85075317

	MHz Band 1 350 – 960	MHz Band 2 1710 – 2700	
Return Loss	20.8 dB	20.8 dB	
Tapp Loss	20 dB	20 dB	
Insertion Loss	0.1 dB	0.1 dB	

Specifications

Electrical data	
Char. Impedance	50 Ohm
Composite power max.	300 W
Peak envelope power	2000 W
Intermodulation distortion	–161 dBc at 2 × 43 dBm

Mechanical data			
Dimensions (height × width × length)	32 × 89 × 32 mm		
Weight	0.42 kg		
Connector	Main Line In	Main Line Out	Tap Port
	4.3-10 jack (female)	4.3-10 jack (female)	4.3-10 jack (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–40 to 75 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Diplexer

Ordering information	**TETRA + cellular + Wi-Fi diplexer**
Type no.	**2501.17.0091**
Frequency range	**80 – 520 MHz** **694 – 2700 MHz**
Version	**N (female)**
Height	**30.99 mm**

Description

Diplexer for combination and separation of the signals in 80 – 520 MHz and the 694 – 2700 MHz wireless bands. To minimize band inter-reaction, the inputs are well isolated and have minimal insertion loss over their respective frequency bands. The diplexer is designed using passive, proprietary techniques for low loss, low PIM and high reliability. Meets EN 50155 (Class T1).

Item no.	84103625

Electrical data per band	**Band 1**	**Band 2**
Frequency	80 – 520 MHz	694 – 2700 MHz
Insertion Loss	0.3 dB	0.5 dB
Composite power max.	50 W	120 W

Electrical data	
Return Loss	16 dB
Peak envelope power	3000 W
Intermodulation distortion	–161 dBc at 2 × 43 dBm
Remarks	Return loss band 2, sub-band 960 – 1500 MHz: 12 dB Isolation between port J1 (80 – 520 MHz) and port J2 (694 – 2700 MHz): 80 – 520 MHz: 50 dB 694 – 800 MHz: 40 dB 800 – 2500 MHz: 50 dB 2500 – 2700 MHz: 30 dB

Mechanical data	
Dimensions (height × width × depth)	30.99 × 130.36 × 177.02 mm
Weight	0.8 kg
Connector	N (female)

Environmental data	
Environmental conditions	indoor
Operation temperature	–35 to 65 °C
IP rating	IP64
RoHS 2011/65/EU	compliant

Material data	
Housing material	aluminium
Surface treatment	passivated

Diplexer

Ordering information	**450MHz + GSM-R diplexer**
Type no.	**2501.17.0100**
Frequency range	**440 – 470 MHz** **870 – 960 MHz**
Version	**N (female)**
Height	**247 mm**
Description • Diplexer combines and separate signals in frequency 440 – 475 MHz and the 870 – 960 MHz wireless bands • Fire retardant acc. to EN 45545-2	
Item no.	85193147

Electrical data per band	**Band 1**	**Band 2**
Frequency	440 – 470 MHz	870 – 960 MHz
Insertion Loss	0.3 dB	0.3 dB
Composite power max.	50 W	120 W

Electrical data	
Return Loss	16 dB
Peak envelope power	3000 W
Intermodulation distortion	–150 dBc at 2 × 43 dBm
Remarks	VSWR < 1.22

Mechanical data	
Dimensions (height × width × depth)	247 × 123 × 49 mm
Weight	2.1 kg
Connector	N (female)

Environmental data	
Environmental conditions	indoor / Outdoor
Operation temperature	–40 to 70 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Material data	
Housing material	aluminium
Surface treatment	passivated

Quadraplexer

Ordering information	**4-port quadraplexer**
Type no.	**2501.41.0100**
Frequency range	**380 – 2690 MHz**
Version	**7/16 (female)**
Height	**232 mm**

Description
A 4-port quadraplexer which allows combination and separation of the signals in 380 – 960/1710 – 1880/1920 – 2170/2500 – 2690 MHz wireless bands. To minimize band inter-reaction, the inputs have an isolation >50 dB and have minimal insertion loss <0.3 dB over their respective frequency bands.

Item no.	85070953

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 960 MHz	1710 – 1880 MHz	1920 – 2170 MHz	2500 – 2690 MHz
Composite power max.	700 W	300 W	200 W	200 W

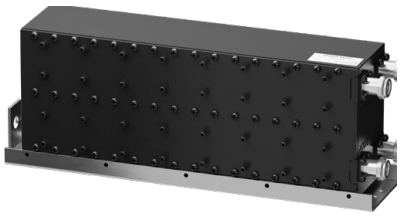
Electrical data	
Insertion Loss	0.3 dB
Return Loss	18 dB
Peak envelope power	1500 W
Impedance	50 Ohm
Intermodulation distortion	–155 dBc at 2 × 43 dBm

Mechanical data	
Dimensions (height × width × depth)	232 × 223 × 50 mm
Weight	4.6 kg
Connector	7/16 (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–40 to 65 °C
IP rating	IP67
RoHS 2011/65/EU	compliant

Material data	
Housing material	aluminium
Surface treatment	black paint

Filter



Ordering information	**Double GSM-R Rejecting Filter**
Type no.	**2601.17.0001**
Frequency range	**703 – 3800 MHz**
Version	**N (female)**
Height	**72 mm**

Description

- The Double GSM-R Band Rejecting filter is designed to achieve low insertion loss and high rejection level close to the pass band.
- It prevents the inte!erence between the public mobile network (LTE700 / LTE800 / GSM900 /LTE1800 / UMTS / LTE 2600 / 5G) and GSM-R signal.
- Rugged design, meets EN 50155 Railway Standard
- Fire retardant acc. to EN 45545-2
- IP54 Rated

Item no.	85172747

Electrical bands	**Pass Band**	**Pass Band**	**Pass Band**	**Pass Band**
Frequency	703 MHz – 803 MHz	790 MHz – 862 MHz	890 MHz – 910 MHz	935 MHz – 960 MHz
Insertion loss	≤ 0.3 dB	≤ 0.7 dB	≤ 0.9 dB	≤ 1 dB
Return loss	≥ 16 dB	≥ 12 dB	≥ 12 dB	≥ 16 dB
	Pass Band	**Pass Band**	**Pass Band**	**Pass Band**
Frequency	1710 MHz – 1880 MHz	1900 MHz – 2200 MHz	2500 MHz – 2690 MHz	3400 MHz – 3800 MHz
Insertion loss	≤ 0.5 dB	≤ 0.5 dB	≤ 0.55 dB	≤ 0.8 dB
Return loss	≥ 16 dB	≥ 16 dB	≥ 14 dB	≥ 12 dB

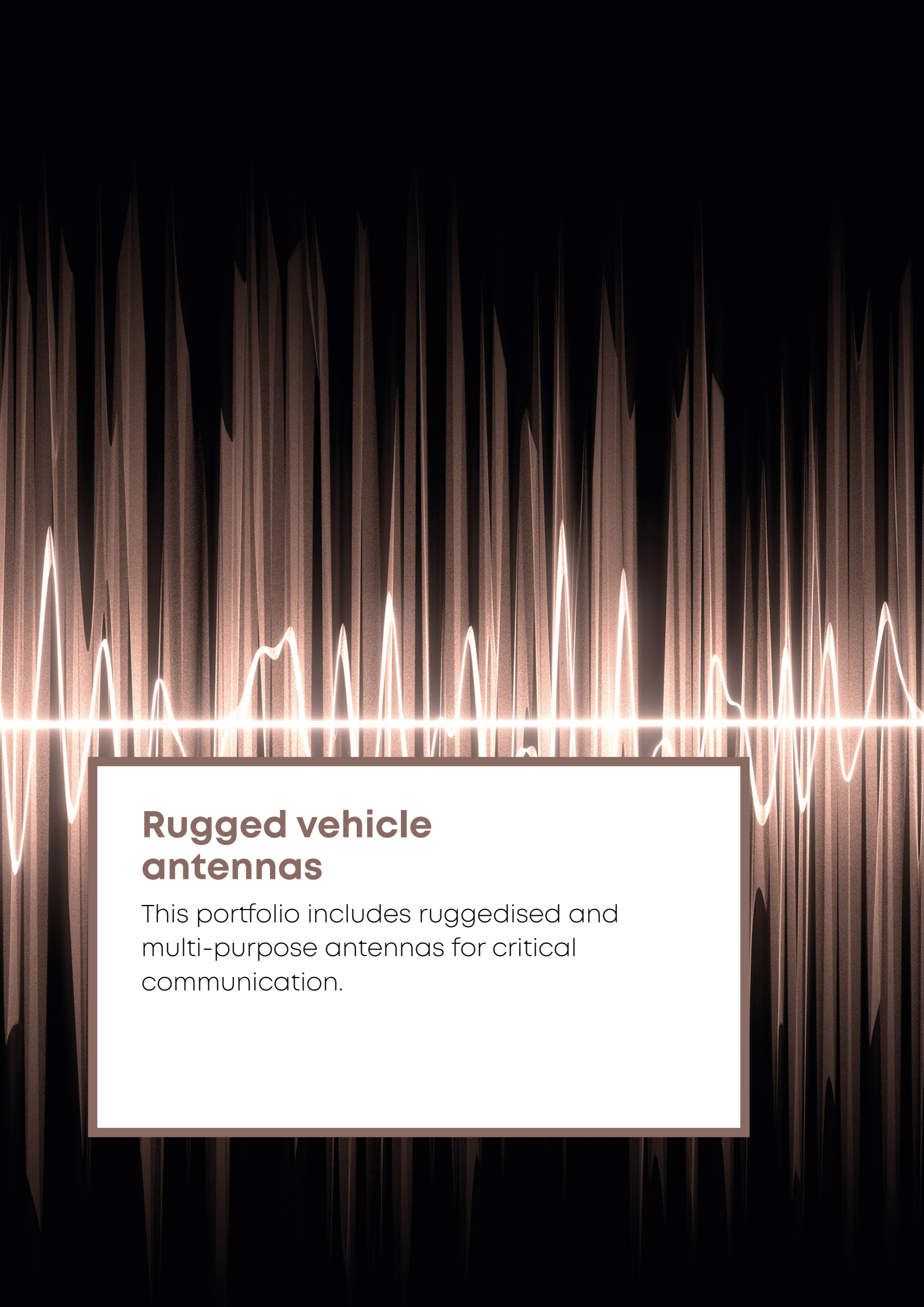
Electrical bands	
Composit power max	50 W

Electrical data (rejection)	
Band	Rejection
Stop Band	Min. 50 dB @ 873 MHz ... 880 MHz
Stop Band	Min. 50 dB @ 918 MHz ... 925 MHz

Mechanical data	
Dimensions (height × width × depth)	72 × 251 × 96 mm
Weight	4 kg
Connector	N (female)

Environmental data	
Environmental conditions	indoor/outdoor
Operation temperature	–25 to 70 °C
IP rating	IP54
RoHS 2011/65/EU	compliant

Material data	
Housing material	aluminium
Surface treatment	black paint



Rugged vehicle antennas

This portfolio includes ruggedised and multi-purpose antennas for critical communication.

Rugged vehicle antennas
Overview

Omnidirectional antennas

Description				Type no.	Height	Input	Page
V-Pol Omni	410 – 470 MHz			K813132	142 mm	1 × N female	94
V-Pol Omni	380 – 430 MHz			98121119	150 mm	1 × N female	95

Communication incl. GPS

Description				Type no.	Height	Input	Page
NEW SENCITY® Shield Low Profile	790 – 6425 MHz	5 dBi	· «Normal» Omni patterns · Low Power (80 W) · Broad bandwidth · GPS L1 + L2 · One type inkl. MIMO · One type inkl. Mag. Mount	1399.99.0284	40 mm	1 × N female	96
NEW SENCITY® Shield MIMO	617 – 7125 MHz	5 – 7.5 dBi		1399.99.0286	81.6 mm	2 × N female	97
NEW SENCITY® Shield	694 – 6425 MHz	5 – 8.5 dBi		1399.99.0287	90 mm	1 × N female	98
NEW SENCITY® Shield Ultra	380 – 6425 MHz	3 – 8 dBi		1399.99.0288	154 mm	1 × N female	99
SENCITY® special communication antenna	380 – 7125 MHz	4 – 6 dBi		1399.19.0060	130 mm	6 × SMA fem.	100

Other vehicle antennas

Description				Type no.	Height	Input	Page
SENCITY® Tram MULTI	380 – 7125 MHz	2 – 6 dB		1399.99.0253	60 mm	SMA, TNC	102
SENCITY® Tram MULTI portfolio							102

GPS amplifier

Description				Type no.	Height	Input	Page
External GPS & Galileo amplifier	1559 – 1609 MHz	25 dB		86010142	70 mm	N female	105

Omnidirectional antennas

Ordering information	**SENCITY® SC antenna**
	V-Pol vehicle Antenna
Type no.	**K813132**
Frequency range	**410 – 470 MHz**
Gain	**dB 0**
Version	**N (female)**
Height	**142 mm**
Description	Low profile antenna in GRP radome
Item no.	84468534

Electrical data	**Band 1**
Band name	Tetra
Frequency	410 – 470 MHz
VSWR	1.5
Gain	Gain dB 0 (ref. to the quarter-wave antenna)
Impedance	50 Ohm
Composite power max.	170 W
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × width × depth)	142 × 145 × 80 mm
Weight	0.5 kg
Connector	1 × N, jack (female)

Environmental data	
Environmental conditions	outdoor
Operation temperature	–40 to 85 °C
IP rating	IP66
Flammability rating	UL 94-HB
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Radome material	Glass Reinforced Plastic (GRP)
Radiator and flange	aluminium

Omnidirectional antennas

Ordering information	**SENCITY® SC Special Purpose**
	V-Pol Omni-directional vehicle antenna
Type no.	**98121119**
Frequency range	**380 – 430 MHz**
Version	**N (female)**
Height	**150 mm**
Description	• Meets EN 50155 • Fire retardant acc. EN 45545-2
Item no.	84468948

Electrical data	**Band 1**
Frequency	380 – 430 MHz
VSWR	1.7
Gain	0 dB (ref. to the quarter-wave antenna)
Composite power max.	100 W
Impedance	50 Ohm
Ambient temperature	50 °C

Mechanical data	
Dimensions (height × width × depth)	150 × 145 × 85 mm
Weight	0.5 kg
Connector	1 × N (female)

Environmental data	
Environmental conditions	outdoor
IP rating	IP66
Flammability rating	DIN 5510-2, UL94 HB, EN 45545-2
RoHS 2011/65/EU	compliant

Material data	
Radome colour	grey
Back plate / base plate colour	black
Back plate / base plate material	aluminium

Communication incl. GPS

NEW

Ordering information	**SENCITY® Shield**
	Low Profile
Type no.	**1399.99.0284**
Frequency range	**790 – 6425 MHz**
Gain	**5 dBi**
Height	**40 mm**

Description

Rugged military vehicle antenna for Jamming and Communication applications. Broadband peormance starting at 790 Mhz up to 6.425 GHz. Supports 2G/3G/4G cellular, Wifi 2.4/5 GHz, Wifi 6E. Embedded GNSS antenna with integrated LNA supports GPS L1, Galileo E1, BeiDou B1 and GLONASS G1. Meets MIL-STD 810H. Extremely low profile (40mm).

Item no.	85244558

Electrical data per band	**Band 1**	**Band 2**	**Band 3**
Frequency	790 – 806 MHz	806 – 870 MHz	870 – 960 MHz
VSWR	2.2	1.9	1.6
Gain	5 dBi	5 dBi	5 dBi
Ambient Temperature	25 °C	25 °C	25 °C
Composite Power max	80 W	80 W	80 W
	Band 4	**Band 5**	**Band 6**
Frequency	1359 – 2700 MHz	4600 – 6425 MHz	1559 – 1610 MHz
VSWR	2	2.1	1.8
Gain	5 dBi	5 dBi	
Ambient Temperature	25 °C	25 °C	
Composite Power max	80 W	80 W	

Electrical data	
Impedance	50 Ohm
Remarks	Indicated VSWR values are valid for a metallic ground plane of 0.2 × 0.2 m or larger for the 806 – 6425 MHz frequency band. Indicated gain values will be achieved on a metallic ground plane of 1 × 1 m or larger.

Ports	**Port 1**	**Port 2**
Connector	N, jack (female)	TNC, plug (male)
Cable length		0.21 m
Polarization	vertical	circular right
DC Grounded	Yes	No

Connections	**Band 1**	**Band 2**	**Band 3**	**Band 4**	**Band 5**	**Band 6**
Port 1	x	x	x	x	x	
Port 2						x

Electrical data LNA		**Mechanical data**	
LNA is connected to	Port 2	Weight	0.6 kg
Input voltage	3 V – 5 V	Dimensions (height × width × depth)	40 mm × 100 mm × 145 mm
Current cunsumption	20 mA	Remarks	Low corrosion design according to MIL-F-14072(E).
Noise figure	1.6 dB	**Interface and material data**	
Total gain @90° elevation	30 dBic	Radome material	PC (Polycarbonate)
		Radome colour	black

Communication incl. GPS

NEW

Ordering information	**SENCITY® Shield MIMO**
Type no.	**1399.99.0286**
Frequency range	**617 – 7125 MHz**
Gain	**5 – 7.5 dBi**
Height	**81.6 mm**

Description

- Rugged military vehicle antenna for Jamming and Communication applications.
- Supports 2x2 Cellular MIMO for 3G, 4G and 5G.
- Supports 2x2 Wi-Fi MIMOin all Wi-Fi 6E bands.
- Embedded GNSS antenna with integrated LNA supports GPS L1, Galileo E1, BeiDou B1 and GLONASS G1
- Meets MIL-STD 810H

Item no.	85244560

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	617 – 694 MHz	694 – 790 MHz	790 – 960 MHz	1350 – 2700 MHz
VSWR	1.7	1.7	1.7	1.8
Gain	6 dBi	5 dBi	6 dBi	7.5 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite power max.	80 W	80 W	80 W	80 W
	Band 5	**Band 6**	**Band 7**	**Band 8**
Frequency	2700 – 3300 MHz	3300 – 4900 MHz	4900 – 7125 MHz	1559 – 1610 MHz
VSWR	2	2.1	1.9	1.8
Gain	6.5 dBi	6.5 dBi	7.5 dBi	
Ambient Temperature	25 °C	25 °C	25 °C	
Composite power max.	80 W	80 W	80 W	

Electrical data	
Impedance	50 Ohm
Remarks	Indicated VSWR values are valid for a metallic ground plane of 0.5 × 0.5 m or larger. In the 790 – 7125 MHz band, 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 1×1 m or larger.

Ports	**Port 1**	**Port 2**	**Port 3**
Connector	N, jack (female)	N, jack (female)	TNC, plug (male)
Cable type	RADOX_RF_142	RADOX_RF_142	
Cable length	0.24 m	0.12 m	0.17 m
Polarization	vertical	vertical	circular right
DC Grounded	Yes	Yes	

Connections	**Band 1**	**Band 2**	**Band 3**	**Band 4**	**Band 5**	**Band 6**	**Band 7**	**Band 8**
Port 1	x	x	x	x	x	x	x	
Port 2	x	x	x	x	x	x	x	
Port 3								x

Electrical data LNA		**Mechanical data**	
LNA is connected to	Port 3	Dimensions (height × width × depth)	81.6 mm × 102.5 mm × 352.5 mm
Input voltage	3 V – 5 V	Remarks	Low corrosion design according to MIL-DTL-14072(E).
Current cunsumption	20 mA	**Interface and material data**	
Noise figure	1.6 dB	Radome material	PC (Polycarbonate)
Total gain @90° elevation	30 dBic	Radome colour	black

Communication incl. GPS

NEW

Ordering information	**SENCITY® Shield**
Type no.	**1399.99.0287**
Frequency range	**694 – 960 / 1350 – 6425 MHz**
Gain	**5 – 8.5 dBi**
Height	**99 mm**

Description

- Rugged military vehicle antenna for Jamming and Communication applications.
- Broadband peormance starting at 694 Mhz up to 6.425 GHz
- Supports 2G/3G/4G/5G cellular and Wi-Fi 4/Wi-Fi 6 bands.
- Embedded GNSS antenna with integrated LNA supports GPS L1, Galileo E1, BeiDou B1 and GLONASS G1
- Meets MIL-STD 810H
- Low profile design.

Item no.	85244779

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	694 – 790 MHz	790 – 960 MHz	1350 – 1710 MHz	1710 – 2700 MHz
VSWR	2	1.5	2.2	1.5
Gain	5 dBi	5 dBi	6 dBi	6 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite power max.	80 W	80 W	80 W	80 W
	Band 5	**Band 6**	**Band 7**	**Band 8**
Frequency	2700 – 3300 MHz	3300 – 4900 MHz	4900 – 6425 MHz	1559 – 1610 MHz
VSWR	1.5	1.7	1.5	1.8
Gain	8.5 dBi	7 dBi	7.5 dBi	
Ambient Temperature	25 °C	25 °C	25 °C	
Composite power max.	80 W	80 W	80 W	

Electrical data	
Impedance	50 Ohm
Remarks	Indicated VSWR values are valid for a metallic ground plane of 0.5 × 0.5 m or larger. In the 790 – 7125 MHz band, 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 1×1 m or larger.

Ports	**Port 1**	**Port 2**
Connector	N, jack (female)	TNC, plug (male)
Cable length		0.21 m
Polarization	vertical	circular right
DC Grounded	Yes	No

Connections	**Band 1**	**Band 2**	**Band 3**	**Band 4**	**Band 5**	**Band 6**	**Band 7**	**Band 8**
Port 1	x	x	x	x	x	x	x	
Port 2								x

Electrical data LNA		**Mechanical data**	
LNA is connected to	Port 2	Weight	1.1 kg
Input voltage	3 V – 5 V	Dimensions (height × width × depth)	90 mm × 100 mm × 256 mm
Current cunsumption	20 mA	Remarks	Low corrosion design according to MIL-F-14072(E).
Noise figure	1.6 dB	**Interface and material data**	
Total gain @90° elevation	30 dBic	Radome material	PC (Polycarbonate)
		Radome colour	black

Communication incl. GPS

NEW

Ordering information	**SENCITY® Shield Ultra**
Type no.	**1399.99.0288**
Frequency range	**380 – 960 / 1350 – 6425 MHz**
Gain	**3 – 8 dBi**
Height	**154 mm**

Description

- Rugged military vehicle antenna for Jamming and Communication applications.
- Ultra broadband peormance starting at 380 MHz up to 7.125 GHz.
- Supports TETRA, LTE450, 2G/3G/4G/5G cellular, Wifi 2.4/5 GHz, Wifi 6E and GNSS (Beidou, Galileo, GPS, Glonass)
- Meets MIL-STD 810H

Item no.	85245226

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 694 MHz	694 – 960 MHz	1350 – 2700 MHz	2700 – 3300 MHz
VSWR	1.8	1.8	1.5	1.5
Gain	3 dBi	4 dBi	7.5 dBi	6.5 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite power max.	80 W	80 W	80 W	80 W
	Band 5	**Band 6**	**Band 7**	
Frequency	3300 – 4900 MHz	4900 – 6425 MHz	1559 – 1610 MHz	
VSWR	1.7	1.5	1.8	
Gain	7 dBi	8 dBi		
Ambient Temperature	25 °C	25 °C		
Composite power max.	80 W	80 W		

Electrical data	
Impedance	50 Ohm
Remarks	Indicated VSWR values are valid for a metallic ground plane of 0.5 × 0.5 m or larger. Indicated gain values will be achieved on a metallic ground plane of 1 × 1 m or larger.

Ports	**Port 1**	**Port 2**
Connector	N, jack (female)	TNC, plug (male)
Cable length		0.21 m
Polarization	vertical	circular right
DC Grounded	Yes	No

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

Electrical data LNA		**Mechanical data**	
LNA is connected to	Port 2	Weight	1.5 kg
Input voltage	3 V – 5 V	Dimensions (height × width × depth)	154 mm × 100 mm × 256 mm
Current cunsumption	20 mA	Remarks	Low corrosion design according to MIL-F-14072(E).
Noise figure	1.6 dB	**Interface and material data**	
Total gain @90° elevation	30 dBic	Radome material	PC (Polycarbonate)
		Radome colour	black

Communication incl. GPS

Ordering information	**SENCITY® Mag.-Mount antenna**
Type no.	**1399.19.0060**
Frequency range	**380 – 7125 MHz**
Gain	**4 – 6 dBi**
Height	**130 mm**

Description

- Rugged military vehicle rooftop multi-band antenna with magnet mount for heavy duty vehicles.
- Supports 2G/3G/4G/5G cellular, Wifi 2.4/5 GHz, Wifi 6, TETRA and GNSS (Beidou, Galileo, GPS, Glonass).
- 6 separate ports for 2×2 cellular MIMO and 2×2 Wifi MIMO, TETRA plus GNSS.

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Frequency	380 – 430 MHz	698 – 960 MHz	1710 – 2690 MHz	2400 – 2500 MHz
VSWR	2	2	2	2
Impedance	50 Ohm	50 Ohm	50 Ohm	50 Ohm
Gain	4 dBi	4 dBi	6 dBi	6 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
	Band 5	**Band 6**	**Band 7**	
Frequency	4900 – 6425 MHz	4900 – 7125 MHz	1559 – 1610 MHz	
VSWR	2	1.6	2	
Impedance	50 Ohm	50 Ohm		
Gain	6 dBi	6 dBi		
Ambient Temperature	25 °C	25 °C		

Ports	**Port 1**	**Port 2**	**Port 3**	**Port 4**	**Port 5**	**Port 6**
Port name	TETRA	LTE	LTE	Wi-Fi	Wi-Fi	GNSS
Connector	SMA, jack (female)	SMA, jack (female)	SMA, jack (female)	SMA, jack (female)	SMA, jack (female)	SMA, jack (female)
Polarization	vertical	vertical	vertical	vertical	vertical	circular right
DC grounded	No	No	No	Yes	Yes	No

Connections	**Band 1**	**Band 2**	**Band 3**	**Band 4**	**Band 5**	**Band 6**
Port 1	x					
Port 2		x	x			
Port 3		x	x			
Port 4				x	x	
Port 5				x	x	
Port 6						x

General data	
	Ground plane: Indicated VSWR values are valid for a metallic ground plane of 0.5 × 0.5 m or larger. Indicated VSWR values are mostly valid for installations on non-metallic surfaces also (no specific ground plane requirements), apart from VSWR 2.5 below 840 MHz and VSWR 3 below 750 MHz.

→

→ SENCITY® Mag.-Mount antenna – 1399.19.0060

Electrical data LNA	
LNA noise figure	2 dB
LNA current consumption	30 mA
LNA is connected to	Port 6
EMC	EN 50121-3-2
LNA input voltage range	3 – 5V
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 (height × width × depth)	130 × 83 × 250 mm
Weight	2.5 kg
Height of whip antenna	440 mm

Environmental data			
Environmental conditions	outdoor	2011/65/EU (RoHS – including 2015/863 and 2017/2102)	compliant
Operation temperature	–40 to 85 °C	REACH 1907/2006/EC	compliant
Storage temperature	–55 to 85 °C	Flammability: ECE-R118, EN 45545-2	
Transport temperature	–40 to 85 °C	Environmental tests: ISO 16750:2010	
IP rating	IP68, IP69	Environmental tests: ISO 50155	
Solar radiation	DIN 75220	Low corrosion designed acc. to MIL-F-14072D	

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

Additional views

MIMO antenna

Ordering information	**SENCITY® Tram MULTI**
Type no.	**1399.99.0253**
Frequency range	**380 – 7125 MHz**
Gain	**2 – 6 dBi**
Height	**60 mm**

Description

- Supports TETRA, LTE450, 2G/3G/4G/5G cellular, Wifi 2.4/5 GHz, Wifi 6E and Dual Band GNSS (Beidou, Galileo, GPS, Glonass)
- 7 separate ports for 2×2 TETRA/cellular MIMO and 4×4 Wifi MIMO plus GNSS
- Fire retardant acc. to EN45545-2 and NFPA-130
- Meets EN50155 railway standard
- Single hole mounting, easy cabling feedthrough

Item no.	85185041

Electrical data per band	**Band 1**	**Band 2**	**Band 3**	**Band 4**
Name	TETRA/LTE450	Cellular	Cellular	Cellular
Frequency	380 – 470 MHz	617 – 960 MHz	1350 – 2700 MHz	3300 – 4200 MHz
VSWR	2.5	2.1	2.1	2.1
Gain	3 dBi	2 dBi	4 dBi	4 dBi
Isolation between Ports	3 dBi	8 dBi	15 dBi	20 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite Power max	40 W	40 W	40 W	40 W
	Band 5	**Band 6**	**Band 7**	**Band 8**
Name	Cellular	Wi-Fi	Wi-Fi	GNSS
Frequency	4900 – 7125 MHz	2400 – 2500 MHz	4900 – 7125 MHz	1164 – 1279 MHz
VSWR	2.1	2.1	2.1	1.5
Gain	5 dBi	6 dBi	6 dBi	
Isolation between Ports	20 dBi	20 dBi	20 dBi	
Ambient Temperature	25 °C	25 °C	25 °C	
Composite Power max	40 W	30 W	30 W	
	Band 9			
Name	GNSS			
Frequency	1559 – 1610 MHz			
VSWR	1.8			

Electrical data	
Impedance	50 Ohm

Ports	**Port 1 to 2**	**Port 3 to 6**	**Port 7**
Port name	Tetra 1-2 (White)	Wi-Fi 1-4 (blue)	GNSS (black)
Connector	SMA, plug (male)	SMA, plug (male)	TNC, plug (male)
Cable media type	RADOX_RF_316_D	RADOX_RF_316_D	RADOX_RF_316_D
Cable length	0.3 m	0.3 m	0.3 m
Polarization	vertical	vertical	circular right
DC grounded	Yes	Yes	No

→

Connections			
	Port 1 to 2	**Port 3 to 6**	**Port 7**
Band 1	x		
Band 2	x		
Band 3	x		
Band 4	x		
Band 5	x		
Band 6		x	
Band 7		x	
Band 8			x
Band 9			x

Electrical data LNA	
LNA is connected to	Port 7
Input voltage	3 – 5 V
Current cunsumption	45 mA
Noise figure	2 dB
Gain	38 dB
Total gain @90° elevation	42 dBiC

Mechanical data	
Weight	1.1 kg
Dimensions (height × diameter)	60 × 210 mm

Interface and material data	
Radome material	PC (Polycarbonate)
Radome colour	RAL 9017 (black)
Back plate/base plate material	Aluminium

Environmental data		
Operation temperature	–40 to 85 °C	
Storage temperature	–40 to 85 °C	
Transport temperature	–40 to 85 °C	
Environment (application)	Outdoor	
Ingress protection (IP Rating)	Mated / IP68, IP69k	
Flammability rating	EN 45545-2	NFPA-130
Solar radiation	DIN 75220	
	CE	

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

Environmental remarks	
Environmental tests	EN50155:2018-05
High-voltage protection	EN50124-1:2017-03 (tested without stick antenna)
Low corrosion designed acc. to MIL-F-14072D	
This Antenna is compliant with the Radio Equipment Directive 2014/53/EU	

Other vehicle antennas

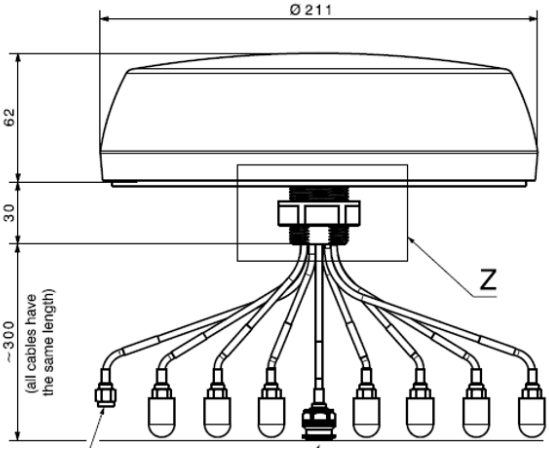
The SENCITY® Tram MULTI portfolio is designed for 4×4 MIMO operation in cellular, 8×8 MIMO in Wi-Fi networks and in addition comes with 2×2 TETRA options. It offers a variety of combinations of up to 9 radiators within one housing and comes with an GNSS option for L1, L2, L5 operation. The standard versions are listed below:

Product ID	Article No.	Cellular	Wi-Fi	TETRA	GNSS
1399.19.0208	85185402	2			
1399.99.0209	85185403	2			L1+L2+L5
1399.99.0208	85185404	2			L1
1399.19.0210	85185371	2	2		
1399.99.0211	85185373	2	2		L1+L2+L5
1399.99.0210	85185374	2	2		L1
1399.19.0212	85185375	2	3		
1399.99.0213	85185379	2	3		L1+L2+L5
1399.99.0212	85185381	2	3		L1
1399.19.0214	85185382	2	4		
1399.99.0215	85185383	2	4		L1+L2+L5
1399.99.0214	85185384	2	4		L1
1399.19.0216	85185385	4			
1399.99.0217	85185386	4			L1+L2+L5
1399.99.0216	85185387	4			L1
1399.19.0218	85185388	4	2		
1399.99.0219	85185389	4	2		L1+L2+L5
1399.99.0218	85185390	4	2		L1
1399.19.0220	85185391	4	3		
1399.99.0221	85185395	4	3		L1+L2+L5
1399.99.0220	85185397	4	3		L1
1399.19.0232	85185406	4	4		
1399.99.0233	85185407	4	4		L1+L2+L5
1399.99.0232	85185408	4	4		L1
1399.19.0234	85185409		6		
1399.99.0235	85185416		6		L1+L2+L5
1399.99.0234	85185417		6		L1

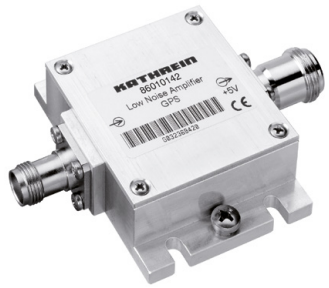
Product ID	Article No.	Cellular	Wi-Fi	TETRA	GNSS
1399.19.0236	85185418		8		
1399.99.0237	85185419		8		L1+L2+L5
1399.99.0236	85185420		8		L1
1399.19.0238	85185512			1	
1399.99.0239	85185513			1	L1+L2+L5
1399.99.0238	85185514			1	L1
1399.19.0240	85185515		2	1	
1399.99.0241	85185516		2	1	L1+L2+L5
1399.99.0240	85185517		2	1	L1
1399.19.0242	85185518		3	1	
1399.99.0243	85185523		3	1	L1+L2+L5
1399.99.0242	85185524		3	1	L1
1399.19.0244	85185525		4	1	
1399.99.0245	85185526		4	1	L1+L2+L5
1399.99.0244	85185527		4	1	L1
1399.19.0246	85185528			2	
1399.99.0247	85185529			2	L1+L2+L5
1399.99.0246	85185533			2	L1
1399.19.0248	85185534		2	2	
1399.99.0249	85185535		2	2	L1+L2+L5
1399.99.0248	85185536		2	2	L1
1399.19.0250	85185038		3	2	
1399.99.0251	85185037		3	2	L1
1399.99.0250	85185036		3	2	L1
1399.19.0252	85185039		4	2	
1399.99.0253	85185041		4	2	L1+L2+L5
1399.99.0252	85185042		4	2	L1

Description				Type no.	Height	Page
SENCITY® Tram MULTI	380 – 7125 MHz	2 – 6 dBi	7 separate ports for 2×2 TETRA/cellular MIMO and 4×4 Wifi MIMO plus GNSS	1399.99.0253	60 mm	102

Outline drawing and mounting instruction are the same for every antenna.



Low noise amplifier GNSS



Ordering information	**Low noise amplifier GNSS**
Type no.	**86010142**
Frequency range	**1559 – 1609 MHz**
Gain	**25 dB**
Version	**TNC, N (female)**
Height	**70 mm**

Description

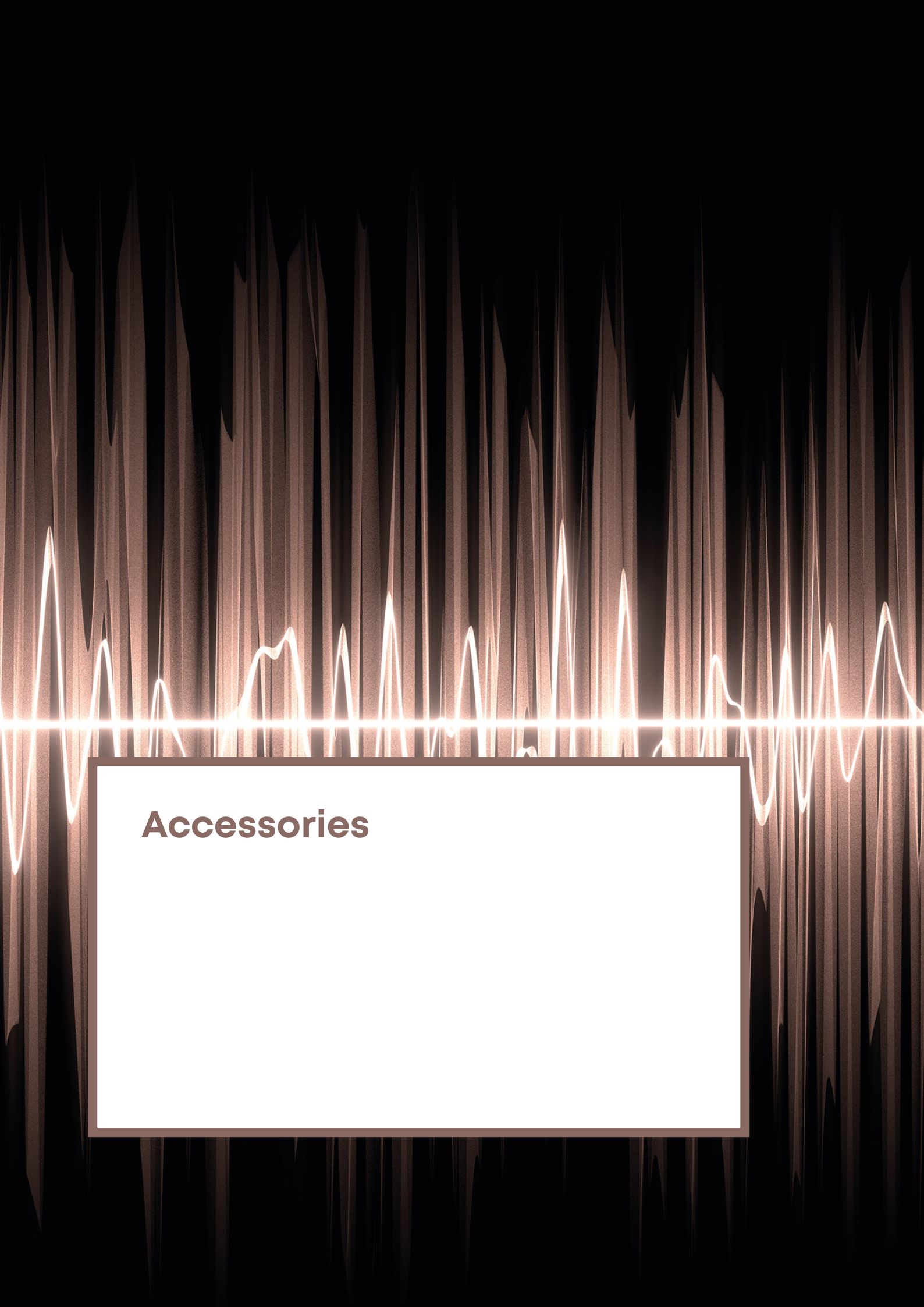
- The low noise amplifier 86010142 is designed for the use inside vehicles with train antennas with GNSS.
- It includes a preselection filter to prevent the interference in case of simultaneous operation at the frequency range 380 – 960/1710 – 3800 MHz and GNSS.
- The product fulfils the requirements according to EN 50155 and EN45545.

Item no.	84460305

Electrical data	**Band 1**
Frequency	1559 – 1609 MHz
Gain	25 dBi
Composite power max.	50 W

Mechanical data	
Dimensions (height × width × depth)	70 × 22 × 50 mm
Mounting	4 holes, 4.5 mm diameter
Connector	1 × N (female)

Environmental data	
Operation temperature	–25 to 55 °C
Flammability rating	EN 45545-2
RoHS 2011/65/EU	compliant



Accessories

Accessories

Overview

Clamps

Description	Mast diameter	Type no.	Item no.	Page
Tension band	45 – 125 mm	734365	84468505	108
Tension band	120 – 140 mm	734364	84468692	108
Clamp for panel antennas	28 – 60 mm	731651	84468695	108
Clamp for panel antennas	42 – 115 mm	738546	84468512	108
Clamp for panel antennas	110 – 220 mm	85010002	84468516	108
Clamp for panel antennas	210 – 380 mm	85010003	84476982	108

Downtilt

Description		Type no.	Item no.	Page
Downtilt for panel antennas	light	737978	84468509	108
Downtilt for panel antennas	medium/heavy	85010009	84492856	108

Lightning protector

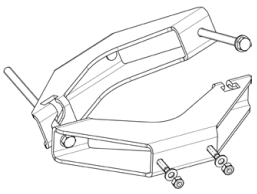
Description			Type no.	Item no.	Page
EMP Protector	380 – 512 MHz	7/16 connector	3400.41.0203	23030133	109
EMP Protector	806 – 2500 MHz	7/16 connector	3400.41.0204	23030180	109
EMP Protector	380 – 700 MHz	4.3-10 connector	3400.31.0023	85215657	109
EMP Protector	690 – 2700 MHz	4.3-10 connector	3400.31.0001	85020284	109

Remote control unit

Description		Type no.	Item no.	Page
Remote control unit for adjustable electrical tilt		86010148V01	84468526	109
RET cable for power supply and control	0.5 m	86010054	84480770	109
RET cable for power supply and control	1 m	86010007	84480772	109
RET cable for power supply and control	2 m	86010008	84480774	109
RET cable for power supply and control	3 m	86010029	84480776	109
RET cable for power supply and control	5 m	86010009	84468524	109
RET cable for power supply and control	10 m	86010010	84480778	109
RET cable for power supply and control	20 m	86010032	84480780	109
RET cable for power supply and control	50 m	86010033	84480782	109

Clamps

Ordering information

Type no.	Item no.	Description	
734365	84468505	Tension band 45 – 125 mm	
734364	84468692	Tension band 120 – 140 mm	
731651	84468695	Clamp 28 – 60mm L/M	
738546	84468512	Clamp 42 – 115 mm	
85010002	84468516	Clamp 110 – 220 mm	
85010003	84476982	Clamp 210 – 380 mm	

Downtilt

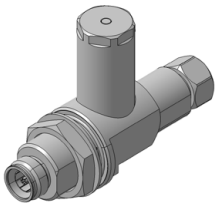
Ordering information

Type no.	Item no.	Description	
737978	84468509	Downtilt kit light	
85010009	84492856	Downtilt kit medium/heavy	 

Lightning protector

More types see separate catalogue

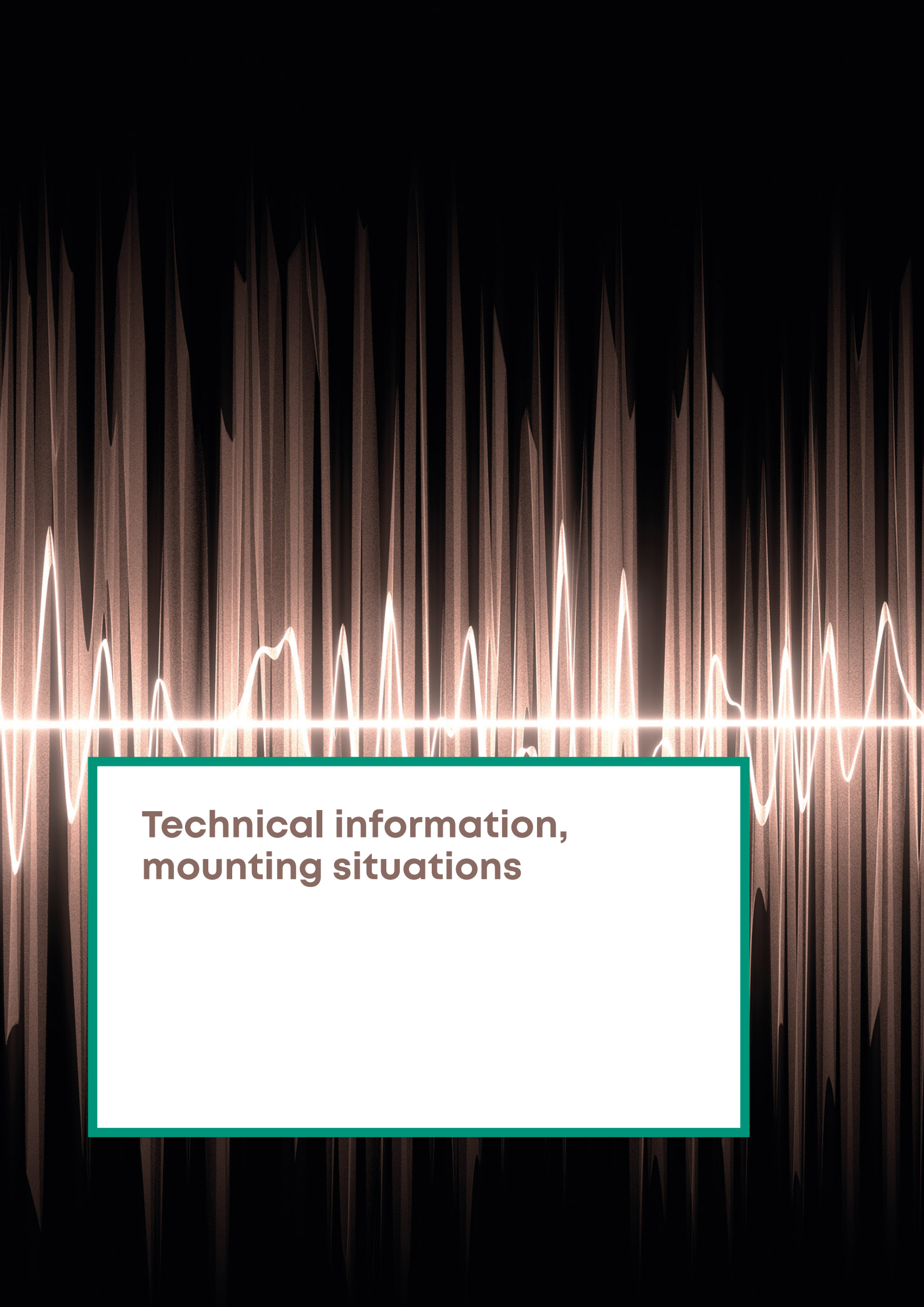
Ordering information

Type no.	Item no.	Description	
3400.41.0203	23030133	EMP Protector 380 – 512 MHz Quarter-wave stub technology 7/16 connector	
3400.41.0204	23030180	EMP Protector 806 – 2500 MHz Quarter-wave stub technology Broad-band design 7/16 connector	
3400.31.0023	85215657	EMP Protector 380 – 700 MHz Quarter-wave stub technology Broad-band design Ready for TETRA and LTE410, 450 and 700 MHz NEMP tested 4.3-10 connector	
3400.31.0001	85020284	EMP Protector 690 – 2700 MHz Quarter-wave stub technology Broad-band design 4.3-10 connector	

Remote control unit

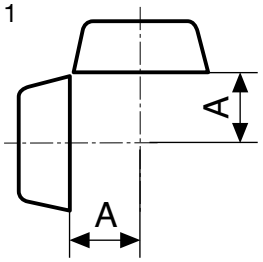
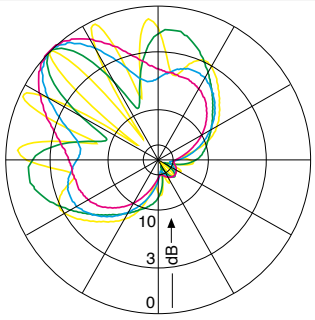
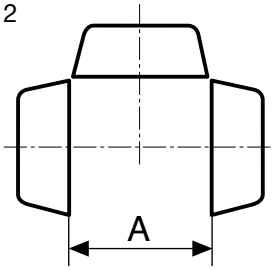
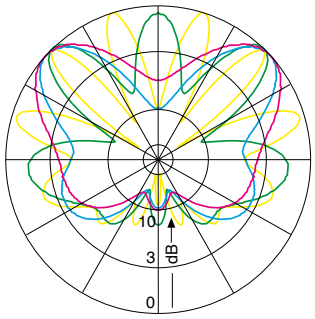
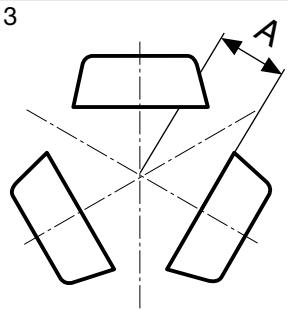
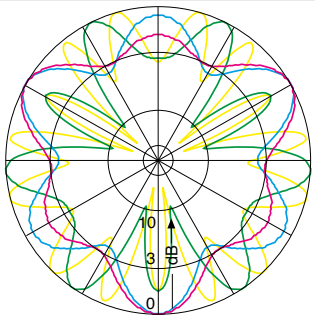
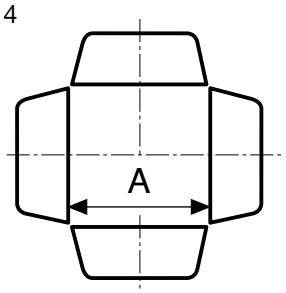
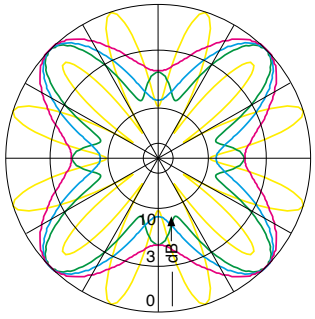
Ordering information

Type no.	Item no.	Description	
86010148V01	84468526	remote control unit	
86010054	84480770	control cable AISG 0.5 m	
86010007	84480772	control cable AISG 1 m	
86010008	84480774	control cable AISG 2 m	
86010029	84480776	control cable AISG 3 m	
86010009	84468524	control cable AISG 5 m	
86010010	84480778	control cable AISG 10 m	
86010032	84480780	control cable AISG 20 m	
86010033	84480782	control cable AISG 50 m	

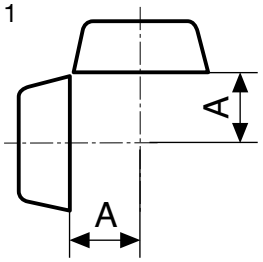
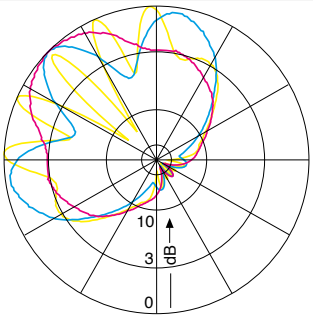
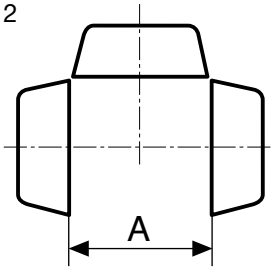
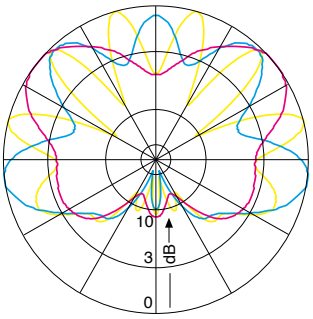
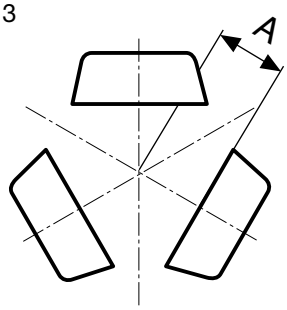
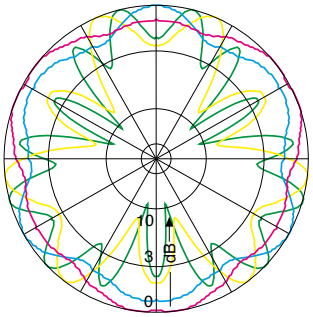
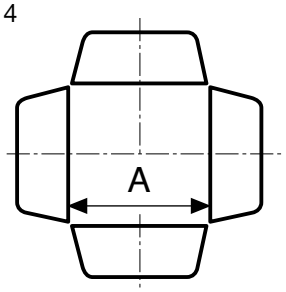
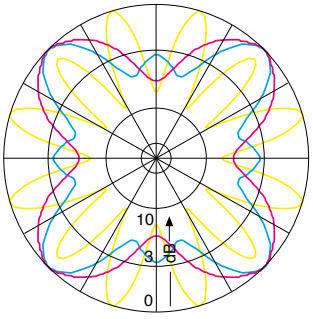


Technical information, mounting situations

Examples of Radiation Patterns at 390 MHz with Combinations of Panels 852628 (XPol)

Arrangement	Horizontal Radiation Pattern	Technical Data	
1 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.16 m	9.85 dBi
		0.25 m	9.95 dBi
		0.5 m	9.45 dBi
		1.5 m	9.55 dBi
2 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.32 m	7.75 dBi
		0.5 m	8.15 dBi
		1.0 m	7.85 dBi
		2.0 m	7.95 dBi
3 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.16 m	5.85 dBi
		0.22 m	5.75 dBi
		0.65 m	6.55 dBi
		1.1 m	6.35 dBi
4 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.32 m	6.15 dBi
		0.5 m	7.15 dBi
		0.8 m	7.65 dBi
		2.1 m	7.35 dBi

Examples of Radiation Patterns at 390 MHz with Combinations of Panels 91121363 (VPol)

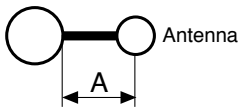
Arrangement	Horizontal Radiation Pattern	Technical Data	
1 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.25 m	9.55 dBi
		0.5 m	9.35 dBi
		1.5 m	9.85 dBi
2 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.5 m	8.05 dBi
		1.0 m	7.75 dBi
		2.0 m	8.35 dBi
3 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.16 m	5.45 dBi
		0.22 m	5.75 dBi
		0.65 m	6.95 dBi
		1.1 m	6.95 dBi
4 		**Distance A**	100 % rel. field strength corresponds to a gain of
		0.5 m	6.85 dBi
		0.8 m	7.35 dBi
		2.1 m	7.45 dBi

Radiation Patterns for Side-mounted Omnidirectional Antennas

Examples of horizontal radiation patterns for different mast diameters where A = 0.25 λ; 0.5 λ; 0.75 λ. Examples also apply for antenna K75292.

Distance A:

Tubular mast

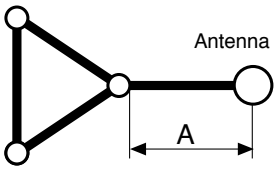


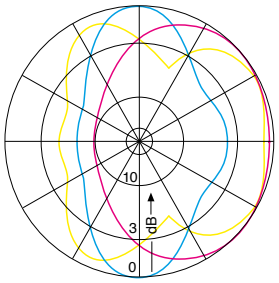
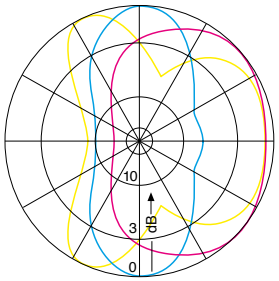
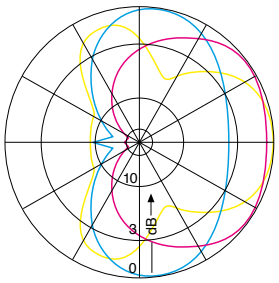
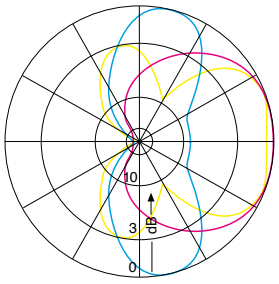
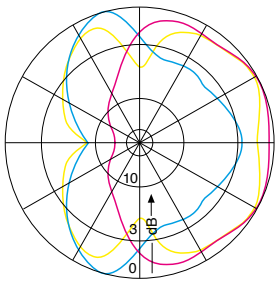
A = 0.25 λ

A = 0.5 λ

A = 0.75 λ

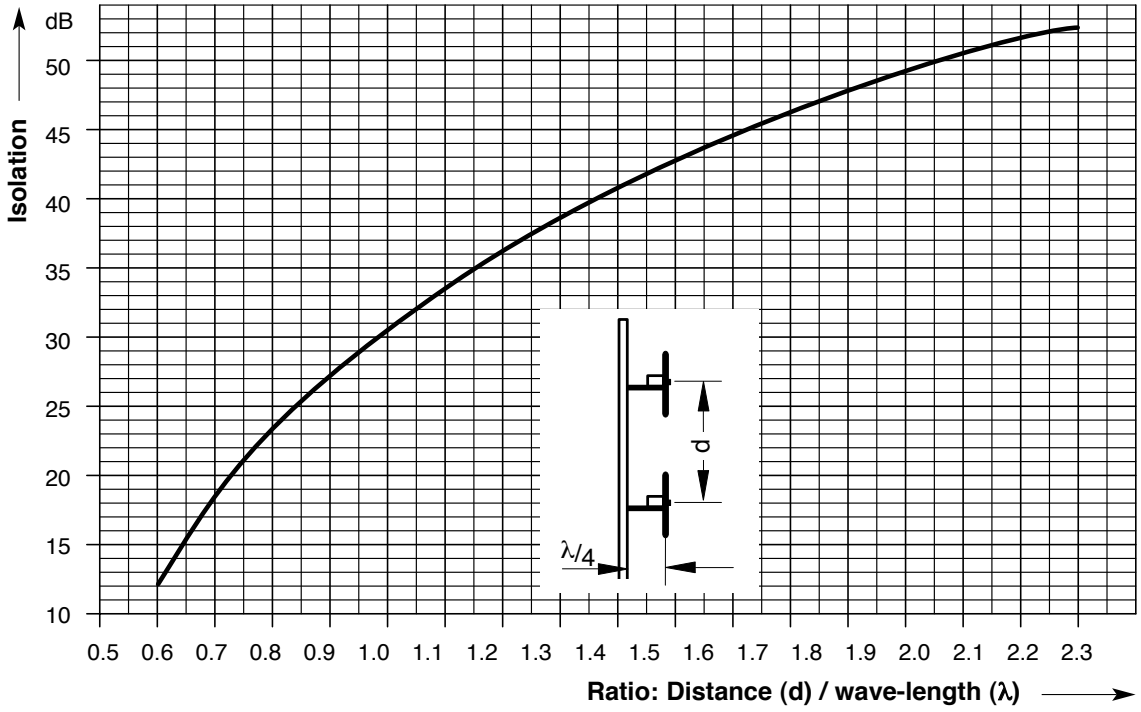
Triangular lattice mast



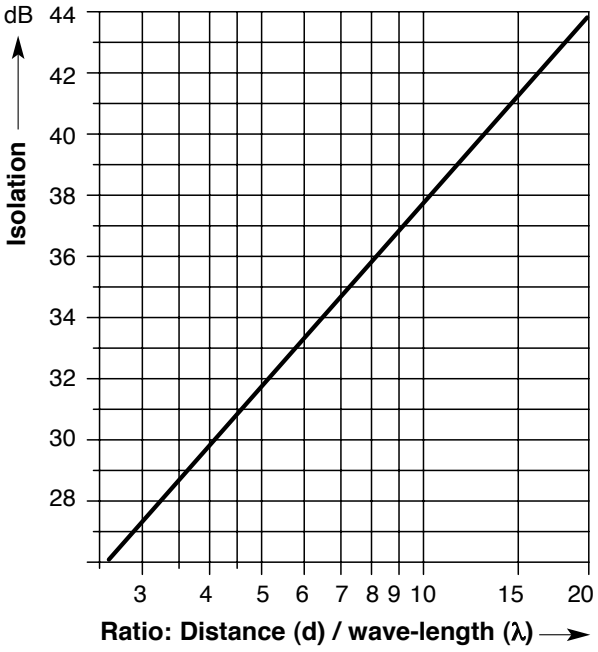
Mast diameter	Horizontal Radiation Pattern
60 mm	
160 mm	
250 mm	
600 mm	
Triangular lattice mast with side length of 500 mm	

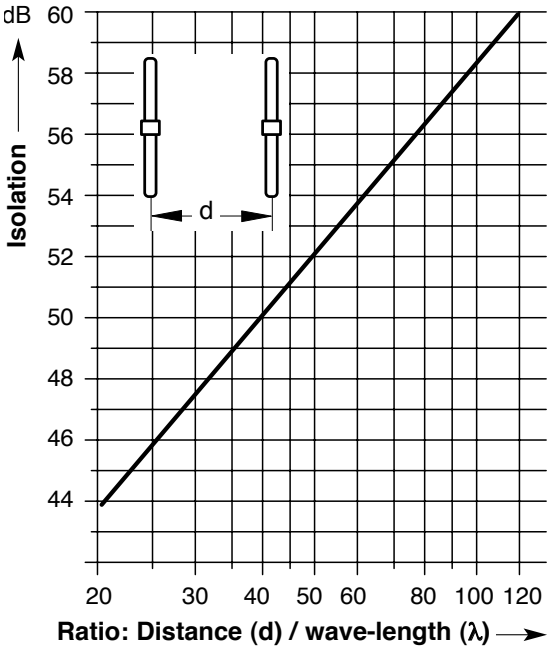
Isolation Between Two Half-wave Dipoles

Isolation between two half-wave dipoles, vertically polarized and positioned vertically in line above each other on one common mast.

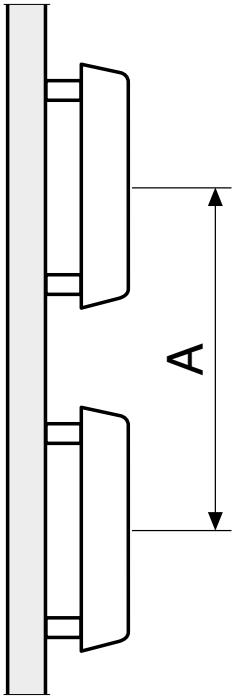


Isolation between two vertically polarized half-wave dipoles mounted laterally.

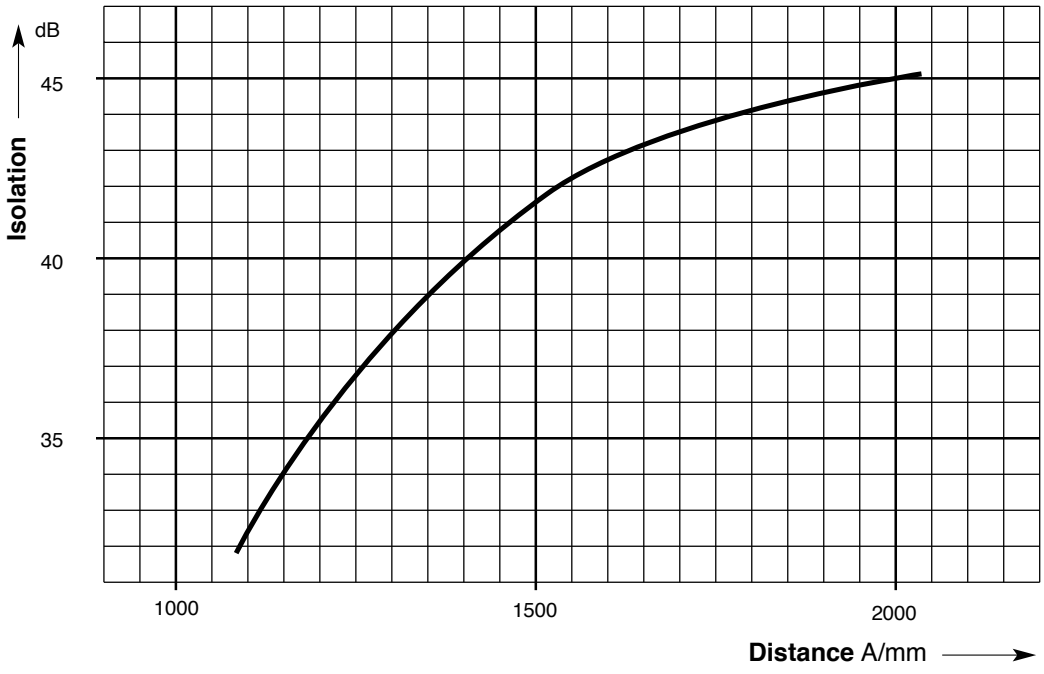




Isolation of Two Vertically Stacked Panels 91121363



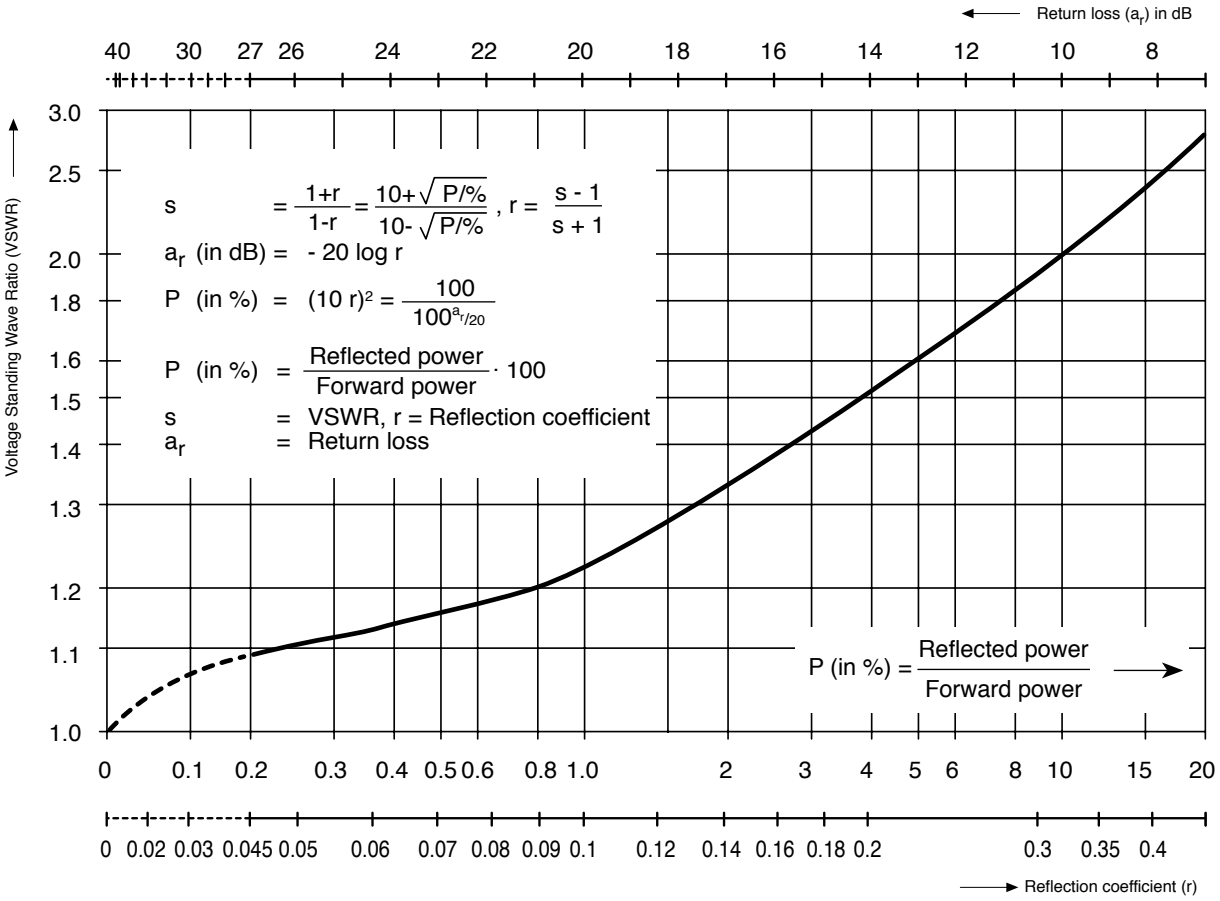
Isolation depends on vertical spacing A (at 450 MHz)



Antenna Gain, VSWR / Reflected power

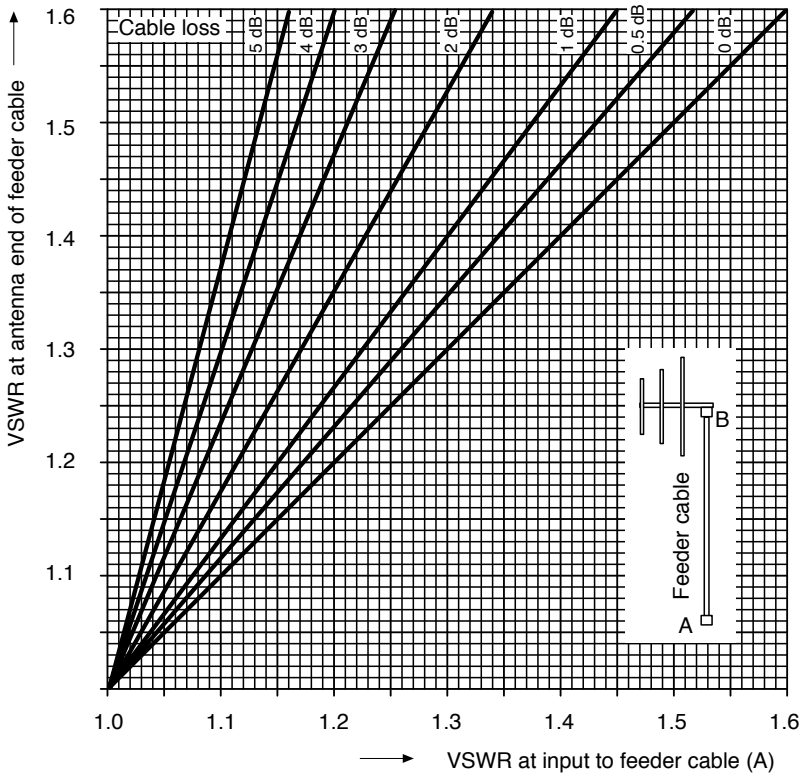
Isolation depends on vertical spacing A (at 450 MHz)

Voltage Standing Wave Ratio (VSWR) vs Reflected power

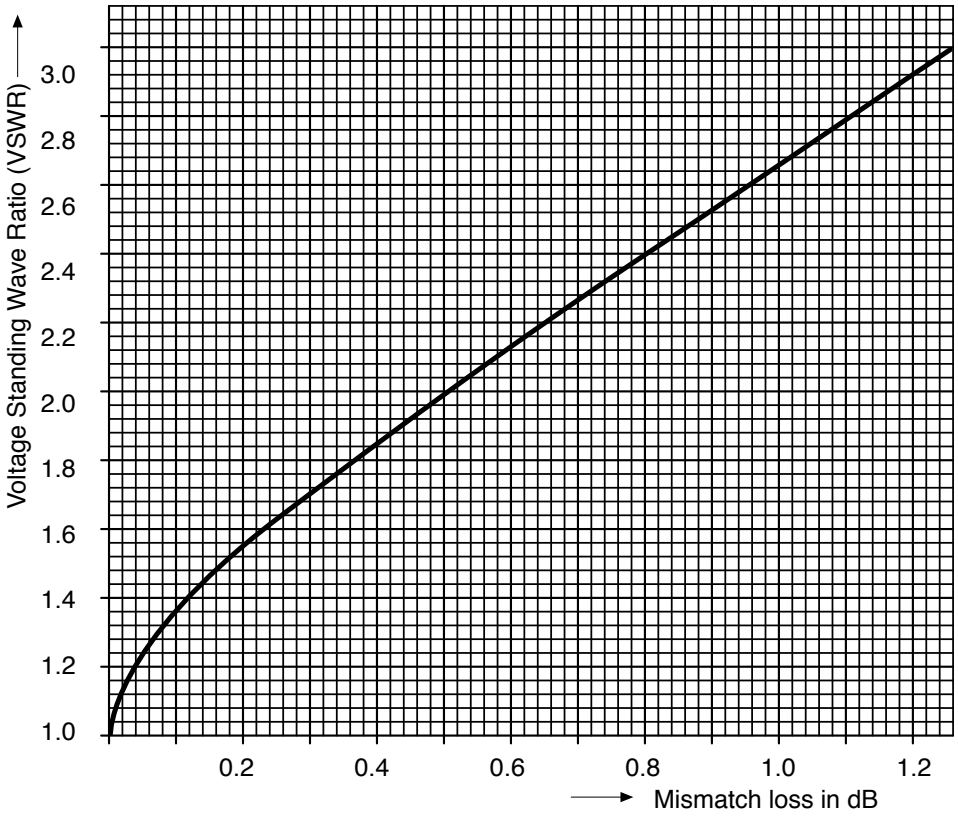


VSWR-reduction / Mismatch loss

Reduction of VSWR as a result of feeder cable attenuation



Mismatch loss vs VSWR



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INDAD/4115/10.2025

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