

HIRSCHMANN MOBILITY



CELLULAR-MIMO (2G/3G/4G/5G ready) GNSS (GPS/GLONASS/ GALILEO)/ WLAN (2.4GHz/5.8GHz) Screw Antenna

4G S MIMO/series
Pt no.
951-018-...

- Telematic & M2M application - telemetering, remote, maintenance
- Public transport, Building indoor & outdoor, ...
- High performance, coverage & data rate

Subject to alterations

Technical data

Cellular

Frequency range	LTE-LB 700	698 – 862 MHz	
	AMPS/GSM 850	824 – 894 MHz	VSWR 2,8
	GSM 900	880 – 960 MHz	
	GSM 1800	1710 – 1880 MHz	
	GSM 1900	1850 – 1990 MHz	VSWR 2,0
	UMTS 2100	1920 – 2170 MHz	
	LTE-HB 2600	2305 – 2690 MHz	VSWR 1,9
	5G 3500	3300 – 3800 MHz	VSWR 1,7
	5G 4000	3800 – 4200 MHz	VSWR 1,7
	5G 5000	4400 – 5000 MHz	VSWR 2,8
Gain	Avg. 2,0 dBi *	Max. 5,5 dBi *	
Polarization	linear, vertical		
Decoupling Cell 1 vs 2	LB: 8 dB	HB: > 18 dB	
Impedance	50 Ohm		
Load capacity	Max. 10 W pulsed		

Satellite GNSS

Frequency range	GPS L1	1563 - 1587 MHz
	Galileo E1	1559 - 1591 MHz
	GLONASS G1	1593 - 1610 MHz
VSWR	≤ 1,5	
Gain	2 dBic *	
Polarization	Right hand circular	
Impedance	50 Ohm	
Voltage supply	2,9 – 5,5 VDC	
Current consumption	typ. 13 + - 2 mA	
Rejection (LNA)	>30 dB	
Amplification (LNA)	27 ± 2 dB	
Noise figure (LNA)	≤ 3,0 dB	

CELLULAR-MIMO (2G/3G/4G/5G ready)/ GNSS (GPS/GLONASS/GALILEO)/ WLAN (2.4GHz/5.8GHz) SCREW ANTENNA

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WLAN or Bluetooth

Frequency range	Bluetooth	2400- 2484 MHz	
	IEEE 802.11 b, g, n, ax	2412– 2484 MHz	≤ 200 mW
	IEEE 802.11 a, h, n, ac, ax	5150– 5875 MHz	≤ 1000 mW
	IEEE 802.11 p	5755– 5925 MHz	≤ 8 W EIRP <5,81 GHz ≤ 2 W EIRP >5,85 GHz

VSWR	≤ 2
Gain (linear gain, vertical polarization)	Typ. 2 dBi *
Polarization	linear, vertical
Decoupling WLAN vs Cell 1 & 2	Cell1 > 20 dB CELL2 > 15 dB
Impedance	50 Ohm

Mechanical

Dimensions	ca. 124 x 80 x 84 mm
Housing Materials	ASA+PC
Cable type	RG174 Low Loss compliant (long dimensions not adapted to WLAN >5 GHz)
Weight	320 g var. acc. to versions
Operations temperature range	- 40 + 85° C
Storage temperature range	- 40 + 85 °C
Housing protection class	IP66 (acc. IEC 60529)
Cable type	RG174 low loss

Versions

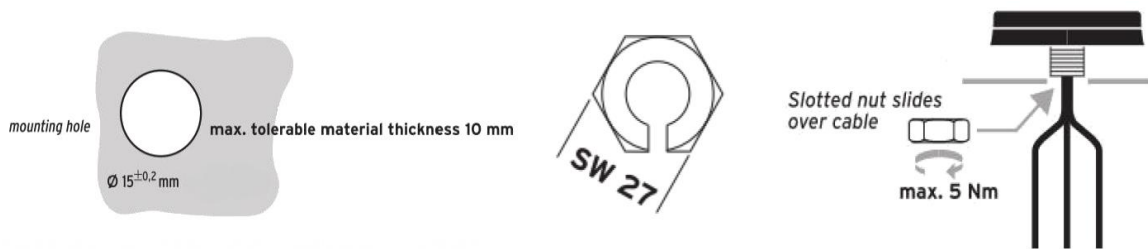
		Cable length	CEL1	CEL2	GNSS	W1	W2
951-018-001	CEL 7038 S MIMO SMAM 0,2	~200 mm	SMAM	SMAM			
951-018-101	CGN 7038 S MIMO SMAM 0,2	~200 mm	SMAM	SMAM	SMAM		
951-018-102	CGN 7038 S MIMO SMAM 3,0	~3000 mm	SMAM	SMAM	SMAM		
951-018-201	CW 7059 S MIMO SMAM 0,2	~200 mm	SMAM	SMAM		SMAM	
951-018-301	CGNW 7059 S MIMO SMAM 0,2	~200 mm	SMAM	SMAM	SMAM	SMAM	

Technical drawings



Installation

- Take the necessary electrostatic precautions for a connection of electronic components (Potential ESD < 1 kV)
- Surface must be quite flat (maximum radius 1cm per meter) & max thickness 10 mm & conductive (metal recommended 40x40cm)
- No metallic (conductive) surface above the antenna
- Connectors are not waterproof, so area below the antenna must be dry
- Drill a hole (diameter 15 mm +4/-0,5mm)
- Clean with isopropyl alcohol or similar
- No adjunction of any material (silicones, glue, ...)
- Screw the nut on the grounding plate (Torque 5 Nm +0 -10%)
- Check that the coaxial cable is not electrically charged (Potential ESD < 1 kV)
- Connect the coaxial cable connector by hand without forcing (Torque 1 +/- 0,15 Nm = handmade)
- Check that the cables respect the appropriate way, not pulled / stressed / bended < 25mm radius / touching aggressive parts
- For extension cables in WLAN > 5 GHz, we highly recommend a RG58 low loss or better
- GNSS connector must only be connected to a GPS/GNSS receiver with a controlled and limited power source



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