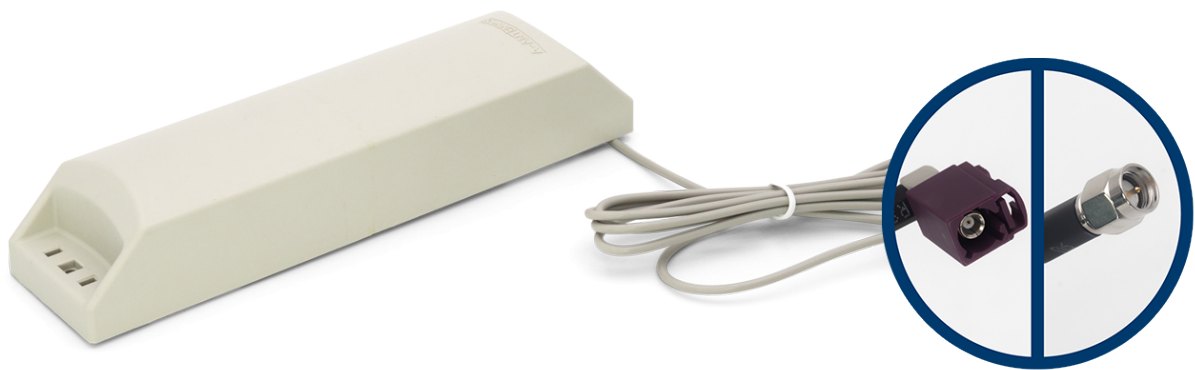


LTE Antenna Optimum

TECHNICAL DATA SHEET

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Description:

The **LTE Antenna Optimum** is ideal for use with Smart Meter Gateways (SMGW) in iMSys and with LTE routers. The flat design allows universal installation. The antenna supports all major LTE frequency ranges as well as 2G and 3G networks.

The LTE Antenna Optimum is **extremely durable and robust**. It is flame-retardant in accordance with UL 94 V-0, protected against water jets and dust in accordance with IP66 and UV-stable for at least 10 years. This makes the antenna ideal for both indoors and outdoors installations. The antenna is designed for a service life of up to 20 years.

The antenna can be mounted using screws (2-hole mounting), adhesive pads or optional magnets. It can be mounted on metal, wood and plastic surfaces.

Technical details:

Part number	23N-A015-AK-01 (1.5m, FAKRA) 23N-A030-AB-01 (3m, SMA) 23N-A030-AK-01 (3m, FAKRA) 23N-A015-AB-01 (1.5m, SMA) 23N-A015-AK-30 (1.5m, RG178, FAKRA) 23N-A030-AK-30 (3m, RG178, FAKRA)
Frequency range	690 - 960 MHz, 1710 - 2690 MHz
supported LTE bands	1-10, 12-14, 17-20, 23, 25-30, 33-41, 44, 53, 65-69, 85, 103, 106
Antenna gain max.	690 - 960 MHz: 4 dBi 1710 - 2690 MHz: 5 dBi
Antenna gain min.	690 - 960 MHz: 2 dBi 1710 - 2690 MHz: 2 dBi
Standing wave ratio¹ (VSWR)	< 3.5:1 (690 - 960 MHz) < 2.5:1 (1710 - 2690 MHz)
Impedance	50 Ω
Efficiency¹	50 % (690 - 960 MHz) 32 % (1710 - 2690 MHz)
Polarization	vertical (if mounted vertically) horizontal (if mounted horizontally)
Antenna type	Wallmount patch
Radiation pattern	omnidirectional (in free space)
Power (max.)	5 W
Cable	low-loss (AA100 type, attenuation < 0.85 dB/m at 2 GHz) RG178 (1.6 dB/m at 1'000 MHz)
Cable length	1.5 m / 3 m

Connector	FAKRA D / SMA
Isolation rating²	> 6000 V
Temperature range	-40 °C to +85 °C
Humidity	max. 95 % RH (non-condensing)
Wind resistance	> 150 km/h
IP class	IP66
IK class	IK09
Flammability	flame-retardant in accordance with UL 94 V-0
UV resistance	min. 10 years
Product lifetime	min. 20 years
Dimensions	205 x 49 x 37 mm
Color	grey
Weight	159 g / 178 g / 180 g / 158 g / 145 g / 160 g
Conformity	RoHS, CE
HS Code	8529.10
Country of origin	People's Republic of China

¹ The standing wave ratio (VSWR) and the efficiency of the antenna depend on the materials used in the vicinity.

² Applies to the cable only. Test of the complete cable between inner conductor and outer sheath in accordance with EN 50395:2005 Sect. 6

Notes:

- Mounting instructions can be found on our website <https://enqt.de/en> under Support/Downloads.
- In addition to the variants listed above, the antenna can be manufactured with numerous different connector types, customized cable types and cable lengths. Please contact us for a quote.