

# LTE Antenna Optimum 450

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+49 40 35 73 20 65



vertrieb@enqt.de

## Description:

The **LTE Antenna Optimum 450** is specifically designed for 450 MHz LTE networks such as the nationwide 450 MHz network for energy suppliers and critical infrastructures in Germany. It is ideal for use on 450 MHz terminal devices such as smart meter gateways (SMGW) in iMSys as well as for substations and transformer stations. The flat design allows universal installation.

LTE Antenna Optimum 450 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 indoor and outdoor 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:

<b>Part number</b>	60N-A015-AK-100 (1,5m FAKRA) 60N-A030-AK-100 (3m FAKRA)
<b>Frequency range</b>	450 - 480 MHz
<b>supported LTE bands</b>	32, 72
<b>Antenna gain max.</b>	2 dBi
<b>Antenna gain min.</b>	0 dBi
<b>Standing wave ratio<sup>1</sup> (VSWR)</b>	< 2.5:1
<b>Impedance</b>	50 Ω
<b>Efficiency<sup>1</sup></b>	> 40 %
<b>Polarization</b>	vertical (if mounted vertically) horizontal (if mounted horizontally)
<b>Antenna type</b>	Wallmount patch
<b>Radiation pattern</b>	omnidirectional (in free space)
<b>Power (max.)</b>	5 W
<b>Cable</b>	low-loss (AA100 type, attenuation < 0.85 dB/m at 2 GHz)
<b>Connector</b>	FAKRA D
<b>Isolation rating<sup>2</sup></b>	> 6000 V
<b>Temperature range</b>	-40 °C to +85 °C
<b>Humidity</b>	max. 95 % RH (non-condensing)

<b>Wind resistance</b>	> 150 km/h
<b>IP class</b>	IP66
<b>Flammability</b>	flame-retardant in accordance with UL 94 V-0
<b>UV resistance</b>	min. 10 years
<b>Product lifetime</b>	min. 20 years
<b>Dimensions</b>	205 x 49 x 37 mm
<b>Weight</b>	155 g / 175 g
<b>Conformity</b>	ROHS, CE
<b>Color</b>	grey
<b>HS Code</b>	85177100
<b>Country of origin</b>	People's Republic of China

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

<sup>2</sup> 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.