

ISM Omni Directional Antenna

ISM-430

Type of protection Temperature class Degree of protection EC type certificate Temperature

II 2G/D EEx-e II T6 T6 IP66 ISSeP11ATEX015x -40°C / +60°C



2.4 or 5.7 GHz wifi antenna



Wifi antenna and Kermaz pc panel in zone2.

technical informations

Antenna cable: 1.5 meters low losses (*). See table

Central frequency: +/- 5 MHz (**)
Bandwidth: 50 ohms

Impedance: Frequency function Less than 1.2

Gain: Directional Omni 50 continuous watts

Stationary: See table

Radiation: ¼ wave or ¼ ground plane wave

Maximum power: Between 5 and 12dBi (**)
Connector:

Radiant element:

Gain: (*) other on request
(**) Frequency function

Industrial, Scientific and Medical Band - ISM Band

ISM (industrial, scientific, and medical) bands are frequency bands that can be used for industrial, scientific, medical, household or similar applications, with the exception of radiocommunication applications, without requiring authorization from authorities). For the European Union, the frequency bands, and any limit levels, are defined in standard EN 55011.

Description

This antenna can be used in Zones 1 or 2 in the presence of flammable vapors or gases, with Group IIA, IIB & IIC devices for all temperature classes. It can also be used in zone 21/22 in the presence of flammable powders with a maximum surface temperature of 60 °C. The security rules apply. The connection to the electronic equipment is done in an Ex-d cabinet. It can only be used within the indicated temperature range.

Antenna

Designed for mounting outdoors or indoors, on a bracket provided and for connection in an explosion-proof enclosure.

They are available in the ISM band (specify when ordering)

6,765 - 6,795 MHz (6,78 MHz ± 15,0 kHz)
13,553 - 13,567 MHz (13,56 MHz ± 7,0 kHz)
26,957 - 27,283 MHz (27,12 MHz ± 163,0 kHz)
40,660 - 40,700 MHz (40,68 MHz ± 20,0 kHz)
433,05 - 434,79 MHz (433,920 MHz ± 0.2%)
2,4 - 2,5 GHz (2,450 GHz ± 50,0 MHz)
5,725 - 5,875 GHz (5,800 GHz ± 75,0 MHz)

ATEX marking: II 2G / D EEx-e II T6 IP66 (also available in NON Atex)

Instructions for mounting in the ATEX zone are in the Atex Directive 94/9 / EC, Annex II, 1.0.6.

Installation recommendations

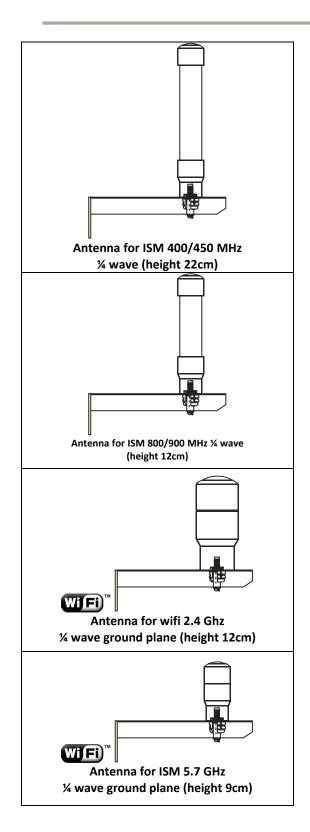
It is recommended that the antenna be mounted at +/- 200 mm overall, metal objects, metal clad walls or beams. Antennas must be mounted at least 600 mm apart. The height of the antenna and therefore its radome is a function of the frequency.

NOTE:

The painted stainless steel antenna support provided (*) with the antenna allows to mount it on a wall respecting the difference of +/-200mm. This is done to avoid the absorption of waves by the wall itself.

The installation of this equipment must be carried out by trained personnel in accordance with the codes of good practice (EN 60079-14). The antenna must be connected to an access point / port located in a security zone or within an approved Ex enclosure.

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Other types of antennas available





Assembly of an Ex-d box, a coupler and a 2.4GHz wireless antenna for wall mounting. This system allows you to connect the router directly into the box.

The use of the coupler makes it possible to mount or dismantle a standard antenna in the zone and therefore easy maintenance.

The antennas can be of all types (yagi, ¼ wave, whip ...) and possibly be deported on mast, support or other.

Comparison of coaxial cables

We mainly use two types of coaxial cables

Types		RG-58/U	WLL-400	unités
Impedance		50	50	Ω
Diam. outside		5	10.3	mm
Radius of curvature		25	25	mm
mitigation	400/450 MHz	2,4	2,10	dB/10m
	800 MHz	3,9	1,28	dB/10m
	wifi 2,4GHz	5,4	2,18	dB/10m
	wifi 5,7GHz	7,9	3,76	dB/10m

Explosion-proof box for mounting radio or wifi modules

Below is a typical box used to install the routers. We do not limit ourselves to this box, there are many others. Contact us for more information.

Cast aluminum with IP66 gasket, gray paint, stainless steel screws.







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