

INSTALLATION

ID ANT.U290/290-FCC

Robust UHF Long Range Antenna 65° circular



Note

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1 Safety Instructions

- ▶ The device may only be used for the intended purpose designed by the manufacturer.
- ▶ The manual must be read thoroughly and kept safe and accessible for all users.
- ▶ Unauthorized changes and the use of spare parts and additional devices which have not been sold or recommended by the manufacturer may cause fire, electric shocks or injuries. Such unauthorized measures shall exclude any liability by the manufacturer.
- ▶ The liability-prescriptions of the manufacturer in the issue valid at the time of purchase are valid for the device. The manufacturer shall not be held legally responsible for inaccuracies, errors, or omissions in the manual or automatically set parameters for a device or for an incorrect application of a device.
- ▶ Repairs may only be executed by the manufacturer.
- ▶ Installation, operation and maintenance procedures should only be carried out by qualified personnel.
- ▶ Use of the device and its installation must be in accordance with national legal requirements and local electrical codes.
- ▶ When working on devices the valid safety regulations must be observed.
- ▶ Prevent children and unauthorized persons from accessing the device.
- ▶ Equipment is intended for use only in restricted access area.
- ▶ Special advice for carriers of cardiac pacemakers:
Although this device doesn't exceed the valid limits for electromagnetic fields you should keep a minimum distance of 25 cm between the device or the antenna and your cardiac pacemaker.

2 Performance Features of ID ANT.U290/290-FCC

The antenna ID ANT.U290/290-FCC is a circular polarized antenna and can be used at operating frequencies in the UHF range from 902 MHz – 928 MHz.

Due to the circular polarization a reading of transponders is possible in random orientations.

The antenna is optimized for the UHF frequency band dedicated to RFID applications under FCC. In this frequency band the antenna offers best possible reading performance.

Description	Frequency	Order Number
ID ANT.U290/290-FCC	902 MHz – 928 MHz	5236.000.10.00

Table 1: Ordering Information – Antenna

3 Installation

The ID ANT.U290/290-FCC is designed to be mounted outdoors. Four holes for M5 screws are provided on the backside of the housing for mounting on a VESA bracket. The screws used should have a screw-in depth of maximum 8 mm (0.3"). For secondary protection the antenna can be secured by means of an eye bolt, that should be fixed with screw locking varnish, and e.g. a wire rope. The suitable accessory ID ANT.UEB-A can be purchased from FEIG ELECTRONIC.

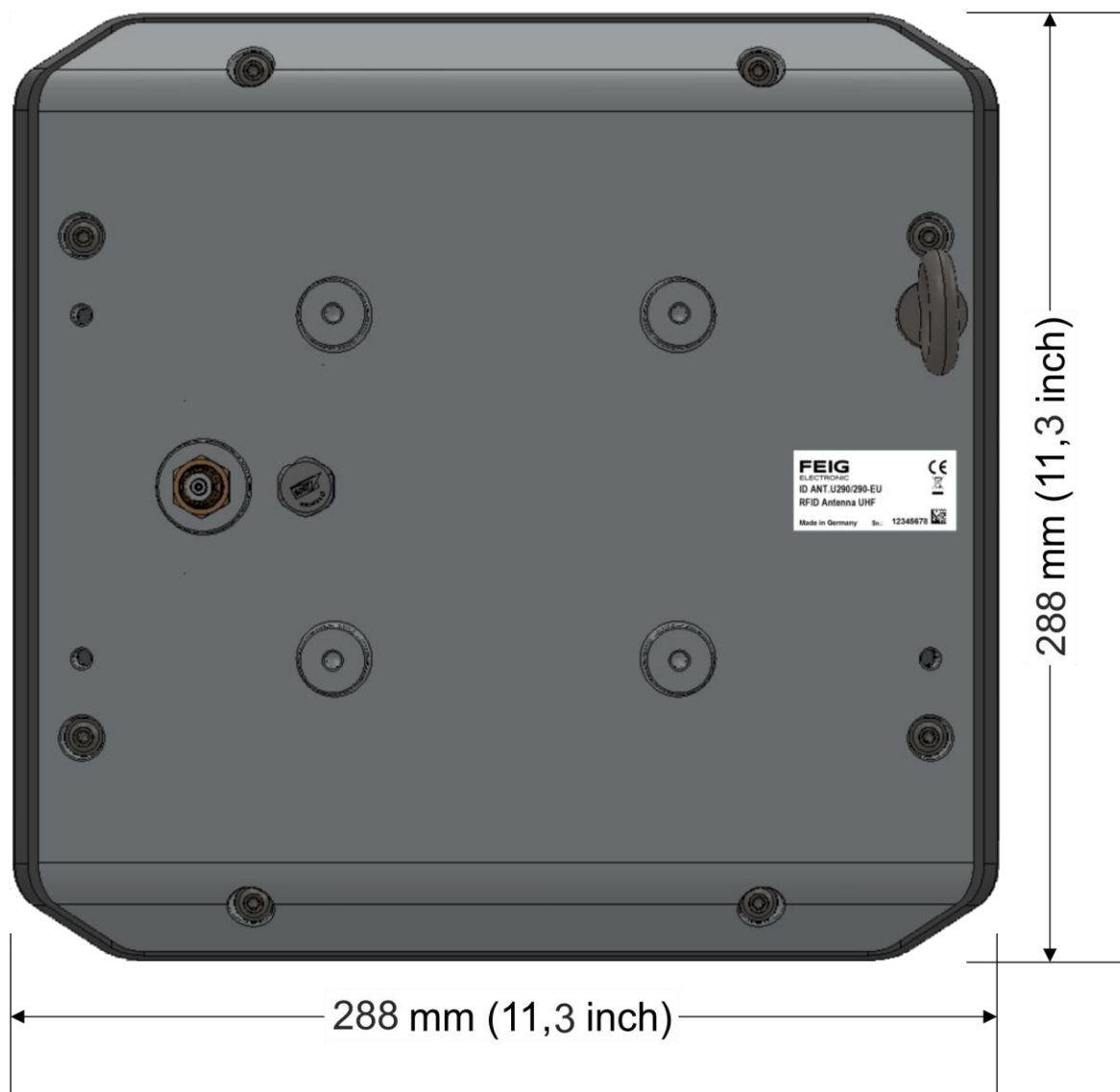


Fig. 1: Dimensional drawing – back view

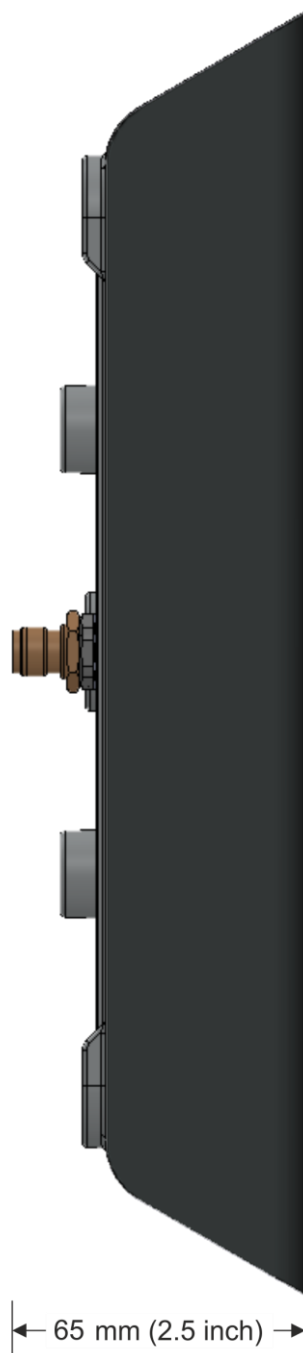


Fig. 2: Dimensional drawing - side view

⚠ CAUTION:

- *Do not exceed the bending radius of the connection cable (15 mm static, 30 mm dynamic) to prevent damage and a decrease of the antenna performance.*
- *To keep the full protection class and to prevent performance losses of the antenna it needs to be ensured that the screw plug is not damaged.*

4 Accessories

For the ID ANT.U290/290-FCC following optional accessories are available:

Order Number	Article	Description
5241.001.00	ID ANT.C2-B	UHF Antenna Cable SMA/TNC 2 m
5241.002.00	ID ANT.C6-B	UHF Antenna Cable SMA/TNC 6 m
5243.001.00	ID ANT.C2-C	UHF Antenna Cable R-TNC/TNC 2 m
5243.002.00	ID ANT.C6-C	UHF Antenna Cable R-TNC/TNC 6 m
5335.000.00	ID ANT.C6-x	UHF Antenna Extension Cable TNC/TNC 6 m
5254.000.00	ID ANT.UEB-A Eye Bolt	M6 eye bolt for secondary protection, PU: 10 pieces

NOTE:

The maximum tightening torque of the TNC jack is 0,45 Nm (4.0 lbf in).

5 VSWR

The typical VSWR of the antenna ID ANT.U290/290-FCC is $< 1,2:1$.

6 Beamwidth

The 3 dB beamwidth of the antenna is $65^{\circ} \times 65^{\circ}$.

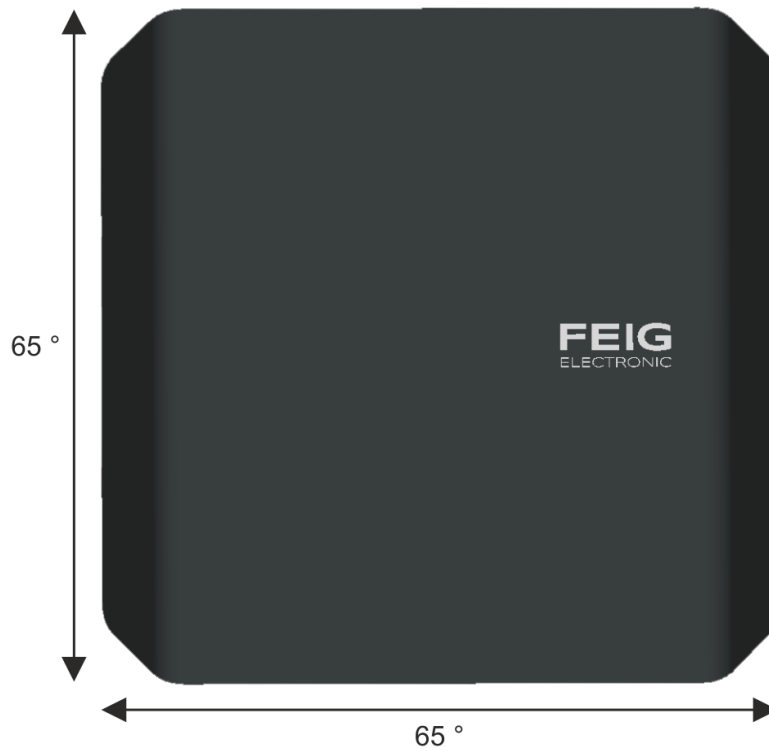


Fig. 3: 3 dB beamwidth

7 Technical Data

Mechanical Data

Housing	Plastic (ASA-PC) Aluminum
Dimension (W x H x D)	288 mm x 288 mm x 65 mm (11.3" x 11.3" x 2.6")
Weight	1550 g
Mounting	VESA FDMI MIS-D 100 mm x 100 mm
Protection Class	IP 67
Colour	Anthracite Aluminum

Electrical Data

Operating Frequency	902 MHz – 928 MHz
Antenna Gain	9,0 dBiC (± 0,5)
3 dB Beamwidth	
• E-Plane	65°
• H-Plane	65°
Polarization	Circular
VSWR	< 1,2:1
Antenna Connector	TNC socket (50 Ω)

Environmental Conditions

Temperature Range	
• Operation	-25 °C to 55 °C
• Storage	-25 °C to 80 °C
Humidity	0 % to 95 % (non-condensing)
Vibration	EN 60068-2-6 10 Hz to 150 Hz: 0,075 mm / 1 g
Shock	EN 60068-2-27 Acceleration: 30 g

Applicable Standards

Radio Regulation	
• Europe	EN 302 208
• UK	EN 302 208
• USA	FCC 47 CFR Part 15
• Canada	IC RSS-GEN, RSS-210
• India	BIS IS 13252 Part 1
EMC	EN 301 489
Safety	
• Low Voltage	EN 62368
• Human Exposure	EN 50364
• Fire	EN 45545
Others	RoHS, WEEE