

## Features

- MODBUS WirelessHART Gateway
- Graphical network analysis
- Simple and automatic configuration options
- Ethernet and RS 485 interface
- HART and MODBUS protocol via both interfaces
- Input WirelessHART wireless interface
- 24 V DC supply
- Redundant power supply connections

## Function

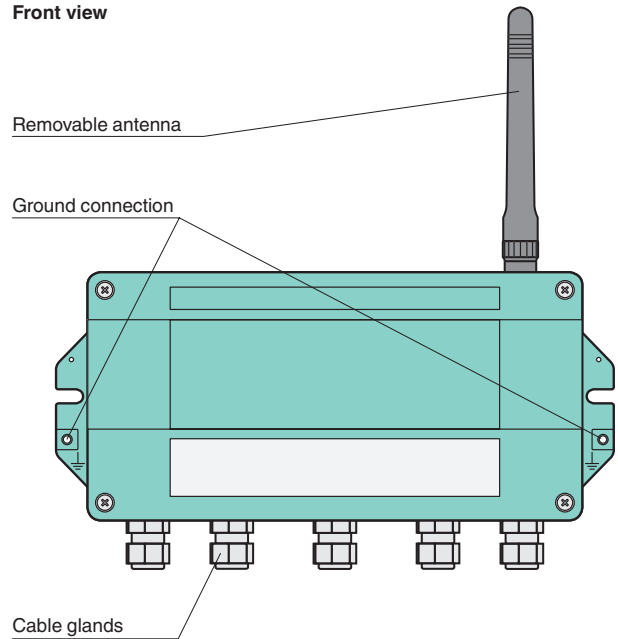
The WirelessHART Gateway is the interface between the WirelessHART network and the control system or asset management system.

The device supports WirelessHART networks with up to 250 network participants and provides a RS485 interface as well as an Ethernet interface. Both interfaces transmit the HART or MODBUS protocol. OPC connectivity can be realized via the HART OPC server.

The device can be configured via the DTM or DD in connection with a configuration software. Furthermore, it provides a web interface for direct access via a web browser.

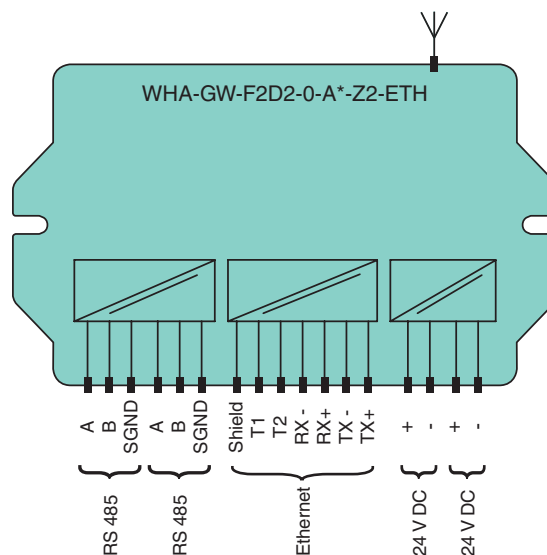
## Assembly

Front view



**WirelessHART**

## Connection

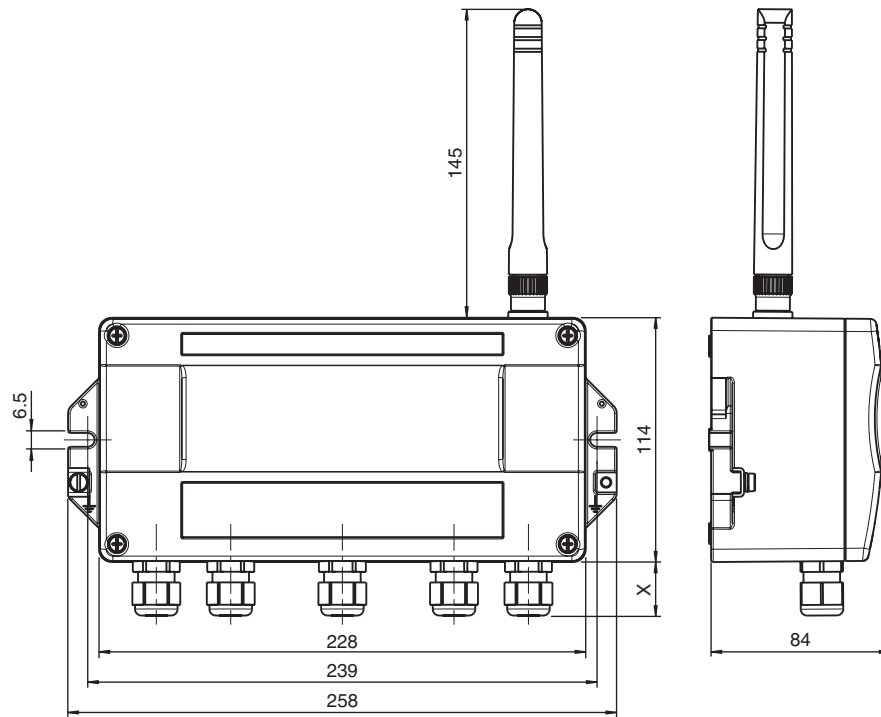


Zone 2

|   |  |
|---|--|
| <b>Supply</b>   |  |
| Rated voltage   | 20 ... 30 V DC   |
| Power consumption                                       | < 5 W  |
| <b>External bus</b>                                     |  |
| Connection  | screw terminals for<br>- 0.2 ... 4 mm <sup>2</sup> (rigid wire)<br>- 0.2 ... 2.5 mm <sup>2</sup> (flexible wire)   |
| Interface 1   | Ethernet<br>10 BASE-T/100 BASE-TX , full galvanic isolation  |
| Protocol  | HART UDP, MODBUS TCP   |
| Cable length  | max. 100 m , depending on cables and transfer rate   |
| Connection  | UTP, STP or FTP  |
| Interface 2   | RS 485   |
| Protocol  | HART, MODBUS RTU   |
| Daisy-chain capability                                  | supported by duplicated connection terminals   |
| Transfer rate   | max. 115 kBit/s  |
| Cable length  | max. 1200 m , depending on cables and transfer rate  |
| Bus termination   | integrated termination resistor , adjustable via DIP switch and software   |
| <b>Input</b>  |  |
| Interface   | omnidirectional dipole antenna, removable  |
| Communication   | WirelessHART specifications<br>- physical layer: IEEE 802.15.4.2006<br>- frequency band: 2.4 GHz (ISM band, licence free)<br>- transmission rate: 250 kBit/s<br>- max. transmit power: +10 dBm (EIRP)<br>- transmission range: outdoor 250 m, indoor 50 m (under reference conditions)<br>- communication standard: WirelessHART |
| <b>Electrical isolation</b>                             |  |
| Interface/power supply                                  | basic insulation according to IEC 61140, rated insulation voltage 50 V <sub>eff</sub>  |
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| <b>Directive conformity</b>                             |  |
| Electromagnetic compatibility                           |  |
| Directive 2004/108/EC                                   | EN 61326-1:2006  |
| Radio and telecommunication terminal equipment          | The usage of 2.4 GHz equipment is bound to local restrictions. Ensure that restrictions allow usage of this product before commissioning.  |
| Directive 99/5/EC                                       | ETSI EN 300328: V1.7.1 (2006-10), ETSI EN 301489-17: V1.2.1 (2002-08), EN 60950:2001   |
| FCC CFR47 Part 15 B and C                               | ANSI C63.4-2003  |
| <b>Conformity</b>                                       |  |
| Protection degree                                       | IEC 60529  |
| Shock resistance  | EN 60068-2-27  |
| Vibration resistance                                    | EN 60068-2-6   |
| <b>Ambient conditions</b>                               |  |
| Ambient temperature                                     | -20 ... 60 °C (-4 ... 140 °F)  |
| Storage temperature                                     | -40 ... 85 °C (-40 ... 185 °F)   |
| Relative humidity                                       | 5 ... 95 %, noncondensing  |
| Corrosion resistance                                    | acc. to ISA-S71.04-1985, severity level G3<br>test setup and execution acc. to EN 60068-2-60   |
| <b>Mechanical specifications</b>                        |  |
| Protection degree                                       | IP65   |
| Mass  | approx. 1 kg   |
| Dimensions  | 258 mm x 114 mm x 84 mm<br>without antenna and cable glands  |
| Mounting  | panel mounting   |
| <b>Data for application in connection with Ex-areas</b> |  |
| Statement of conformity                                 |  |
| Group, category, type of protection, temperature class  | ⊕ II 3G Ex nA II T4  |
| Directive conformity                                    |  |
| Directive 94/9/EC                                       | EN 60079-0:2006, EN 60079-15:2005  |
| <b>General information</b>                              |  |
| Supplementary information                               | EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .   |

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Dimensions



All dimensions in millimeters and without tolerance indication.

Product versions

| Type code               | Description                      | Height "X" (mm) of cable gland | Cable diameter (mm) depending on cable gland |
|-------------------------|----------------------------------|--------------------------------|--|
| WHA-GW-F2D2-0-AP-Z2-ETH | Plastic cable gland              | 27,5                           | 5 ... 10                                     |
| WHA-GW-F2D2-0-AS-Z2-ETH | Steel cable gland                | 22                             | 5 ... 10                                     |
| WHA-GW-F2D2-0-AB-Z2-ETH | Brass cable gland, nickel-plated | 22                             | 5 ... 10                                     |