

## Features

- 1-channel
- Installation in Zone 1
- WirelessHART Adapter
- Battery operated
- Also supplies field device
- Input 2-wire HART transmitters and 2-wire HART current sources
- Output WirelessHART wireless interface
- Direct mounting on HART- or 4 mA ... 20 mA field device
- Rotatable antenna

## Function

The device upgrades a conventional HART or 4 mA ... 20 mA field device with a WirelessHART interface. It is mounted either directly to the cable gland entry or separated from the field device.

The device contains a battery pack which also powers the field device. Depending on the parameterization, battery lifetimes up to 5 years are possible. This allows autonomous measurements. The rotatable antenna can be brought in the optimal position, regardless of the mounting orientation of the field device.

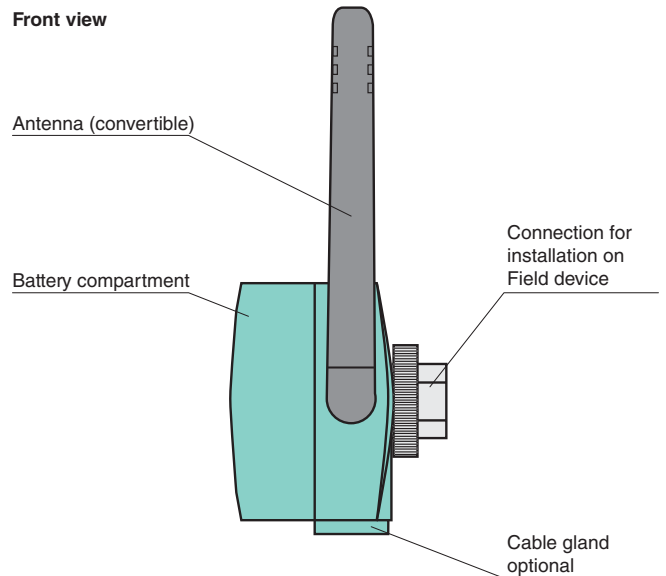
The unit is easily programmed with a configuration tool (DTM or DD).

For additional information, refer to the manual and [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

## Application

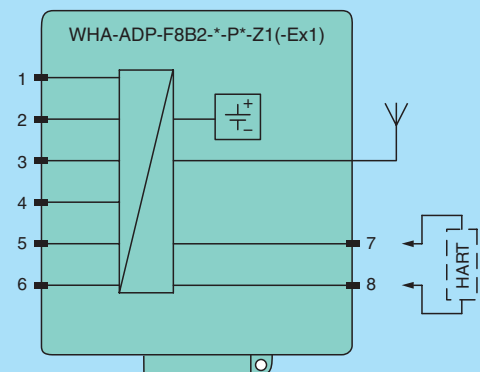
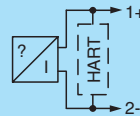
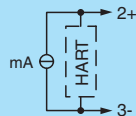
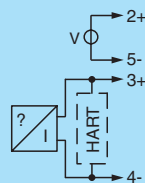
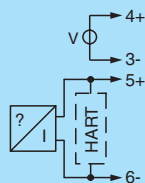
The batteries are not included with delivery. Please order separately.

## Assembly



**WirelessHART**

## Connection



|  |       |  |
|--|-------|--|
| <b>Supply</b>                                  |       |  |
| Rated voltage                                  | $U_n$ | 7.2 V DC , battery operated  |
| <b>Electrical specifications</b>               |       |  |
| Output rated operating current                 |       | 4 ... 20 mA  |
| Supply   |       | loop power for field devices<br>voltage 8 ... 23 V DC, adjustable in steps of 0.1 V  |
| <b>Input</b>                                   |       |  |
| Connectable field devices                      |       | usable for:<br>- one point-to-point connection with a HART field device, or<br>- one point-to-point connection with a 4 ... 20 mA field device, or<br>- up to four externally powered HART field devices operating in multidrop mode   |
| Connection                                     |       | terminals 1, 2, 3, 4, 5, 6<br>multiple wirings available , depending on operating mode   |
| Current  |       | 4 ... 20 mA  |
| <b>HART communication</b>                      |       |  |
| Protocol                                       |       | HART 7.1, backward compatible  |
| Number of devices                              |       | - one passive 4 ... 20 mA/HART field device<br>- up to 4 HART field devices in multidrop mode  |
| Transfer rate                                  |       | 1200 Bit/s   |
| Parameters                                     |       | primary/secondary master, preambles, retries and short address scan ranges   |
| <b>Output</b>                                  |       |  |
| Interface                                      |       | omnidirectional dipole antenna, adjustable in vertical plane   |
| Output variables                               |       | PV: loop current<br>SV, TV, QV:configurable according to user requirement<br>- adapter: temperature, battery voltage, energy consumed and estimated battery life-time<br>- 4 ... 20 mA device: scaled or linearized process value<br>- HART device: up to four process variables   |
| 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>Transfer characteristics</b>                |       |  |
| Accuracy                                       |       | current input: 0.125 % of measuring range  |
| Influence of ambient temperature               |       | current input: 5 $\mu$ A/K   |
| <b>Indicators/settings</b>                     |       |  |
| Parameter assignment                           |       | - wireless transmit power: configurable to 0 dBm or 10 dBm (EIRP)<br>- device variables mapping<br>- publishing of up to ten burst messages in a wireless network, period and trigger mode selectable<br>- notification of up to five events from adapter and/or connected device(s) in a wireless network<br>- scaling and linearization of 4 ... 20 mA signal of connected analog device<br>- tuning of supply parameters for the connected device<br>- locking/unlocking of device parameterization |
| <b>Directive conformity</b>                    |       |  |
| <b>Electromagnetic compatibility</b>           |       |  |
| 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>                              |       |  |
| Degree of protection                           |       | IEC 60529  |
| Shock resistance                               |       | EN 60068-2-27  |
| Vibration resistance                           |       | EN 60068-2-64  |
| <b>Ambient conditions</b>                      |       |  |
| Ambient temperature                            |       | -40 ... 60 °C (-40 ... 140 °F)   |
| Storage temperature                            |       | -40 ... 85 °C (-40 ... 185 °F)   |
| Relative humidity                              |       | max. 90 % , noncondensing  |
| Vibration resistance                           |       | 20 ... 2000 Hz, 0,01 g <sup>2</sup> /Hz  |
| Impact resistance                              |       | 15 g, 11 ms  |
| 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>               |       |  |
| Degree of protection                           |       | IP66   |
| Cable entry                                    |       | M20 x 1.5 ; enclosed cable gland   |
| Material                                       |       | plastic  |
| Mass   |       | approx. 750 g  |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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|   |  |
|---|--|
| Dimensions  | 91 x 88.5 x 100.6 mm (3.6 x 3.5 x 4 in) (without cable glands and antenna)   |
| Mounting  | mounting on field device , panel or pole mounting<br>versions see type code  |
| <b>Data for application in connection with Ex-areas</b> |  |
| EC-Type Examination Certificate                         | BVS 11 ATEX E 081 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>   |
| Group, category, type of protection, temperature class  | ⊕ II 2 G Ex ia IIC T4 Gb   |
| Directive conformity                                    |  |
| Directive 94/9/EC                                       | EN 60079-0:2009 , EN 60079-11:2007 , EN 60079-31:2009  |
| <b>International approvals</b>                          |  |
| IECEx approval  | BVS 11.0061  |
| <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> . |
| <b>Accessories</b>                                      |  |
| Designation   | battery W-BAT-B2-Li mandatory for use in connection with hazardous areas (order separately)<br>mounting set W-ACC-MKF8   |

**Product versions**

| Designation              | Description  |
|--------------------------|--|
| WHA-ADP-F8B2-N-PP-Z1-Ex1 | Mounts in 1/2" thread on Field Device                  |
| WHA-ADP-F8B2-T-PP-Z1-Ex1 | Mounts in 3/4" thread on Field Device                  |
| WHA-ADP-F8B2-P-PP-Z1-Ex1 | Mounts in PG thread on Field Device                    |
| WHA-ADP-F8B2-S-PP-Z1-Ex1 | Mounts in M20 thread on Field Device                   |
| WHA-ADP-F8B2-0-PP-Z1-Ex1 | Mounting seperated from Field Device with Mounting Kit |
| WHA-ADP-F8B2-0-P0-Z1     | Repeater with Mounting Kit                             |

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