

**Features**

- 2-channel
- Installation in Zone 1
- WirelessHART converter
- Battery operated
- Thermocouple or RTD input
- Output WirelessHART wireless interface
- Internal antenna

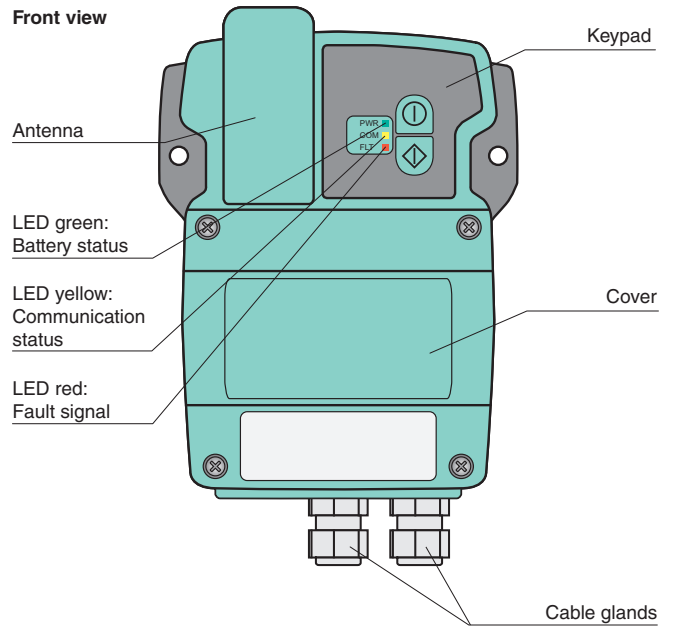
**Function**

The device is designed to connect RTDs or thermocouples from the hazardous area and provide the according temperature values into a WirelessHART network. It has an internal cold junction compensation for thermocouples. A fault is indicated by a red flashing LED per NAMUR NE44. The unit is easily configurable with a configuration tool (DTM). For additional information, refer to the manual and [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

**Application**

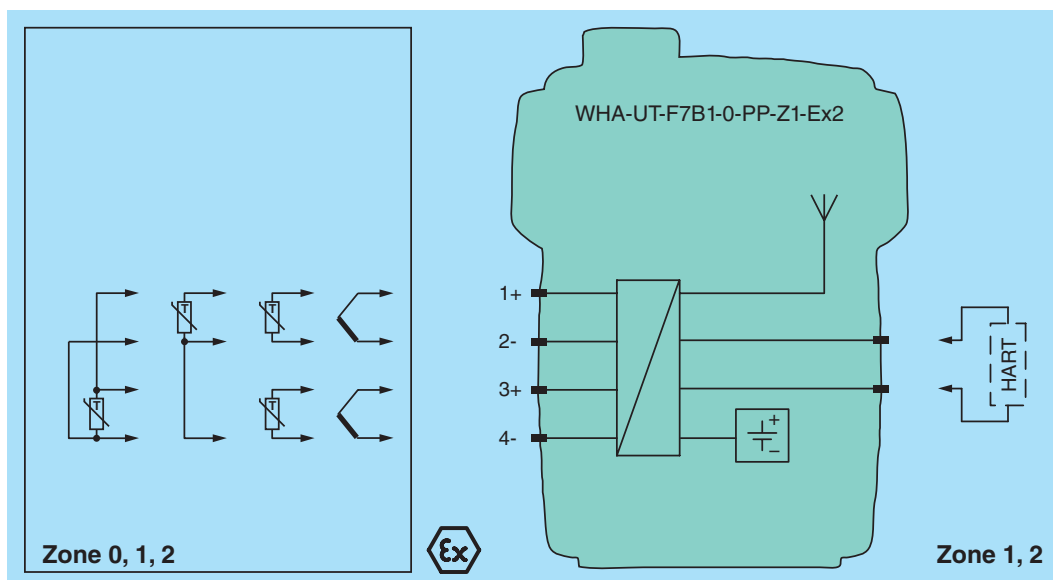
The batteries are not included with delivery. Please order separately.

**Assembly**



**WirelessHART**

**Connection**



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

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<b>Supply</b>		
Rated voltage	$U_n$	3.6 V DC , battery operated
Power loss/power consumption		< 0.09 W
<b>Input</b>		
Connection		terminals 1, 2, 3, 4
RTD		type Pt100, Pt1000 (IEC 751: 1995; GOST: alpha = 0.391)
Connection		2-wire: 2 sensors, 3- or 4-wire: 1 sensor
Lead resistance		≤ 10 Ω
Measuring circuit monitoring		sensor breakage
Thermocouples		type E, J, K, T (IEC 584-1)
Cold junction compensation		internal , external
Measuring circuit monitoring		sensor breakage
Measurement range		type K: -270 ... 1370 °C type T: -270 ... 400 °C type E: -270 ... 1000 °C type J: -210 ... 1200 °C
Resistor		
Measurement range		0 ... 500 Ω , 0 ... 4000 Ω
Voltage		mV Input
Measurement range		-100 ... 100 mV , 0 ... 300 mV
Input resistance		≥ 1 MΩ
<b>Output</b>		
Interface		internal antenna
Output variables		PV: input 1 (°C, Ω, mV) SV: input 2 (°C, Ω, mV) TV: CJC temperature (°C) estimated battery life (days) battery voltage (volts) residual battery capacity (%)
Communication		WirelessHART specifications - physical layer: IEEE 802.15.4.2006 - frequency band: 2.4 GHz (ISM band, licence free) - transmission rate: 250 kBit/s - max. transmit power: +10 dBm (EIRP) - transmission range: outdoor 250 m, indoor 50 m (under reference conditions) - communication standard: WirelessHART
<b>Transfer characteristics</b>		
Temperature measuring range		sensor type: - TC type E: -200 ... 1000 °C, accuracy ± 0,5 °C - TC type J: -200 ... 750 °C, accuracy ± 1 °C - TC type T: -200 ... 400 °C, accuracy ± 1 °C - TC type K: -140 ... 1300 °C, accuracy ± 1 °C - RTD type Pt100: -200 ... 850 °C, accuracy ± 0,5 °C - 100 mV, accuracy ± 20 μV - 300 mV, accuracy ± 40 μV
Accuracy		- internal cold junction compensation error ± 1,5 °C (typ. acc. to IEC 61298-3) - external cold junction compensation error ± 1 °C (typ.) - resolution error < 0.1 °C - accuracy TC ± 20 μV - accuracy RTD: ± 100 mΩ
<b>Indicators/settings</b>		
Parameter assignment		- sampling period: 1, 2, 5, 10, 30 seconds or 1, 2, 5, 10, 30, 60 minutes - transmit power: configurable 0 dBm or 10 dBm (EIRP) - sensor type - mapping of input measuring values 1 and 2 into primary variable (PV) and secondary variable (SV) - publishing of up to three messages from the device, transmission rate selectable from 4 seconds to 60 minutes
<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>		
Degree of protection		IEC 60529
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Accuracy		IEC 61298-3
<b>Ambient conditions</b>		

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Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	5 ... 95 %, noncondensing
Corrosion resistance	acc. to ISA-S71.04-1985, severity level G3 test setup and execution acc. to EN 60068-2-60
<b>Mechanical specifications</b>	
Degree of protection	IP65
Mass	approx. 1000 g
Dimensions	77 x 129 x 177 mm (3 x 5.08 x 6.97 in)
Mounting	panel or pole mounting
<b>Data for application in connection with Ex-areas</b>	
EC-Type Examination Certificate	IMQ 09 ATEX 008X
Group, category, type of protection	Ⓔ II 2(1)G Ex ia [ia] IIC T4
Directive conformity	
Directive 94/9/EC	EN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2007
<b>International approvals</b>	
FM approval	CoC 3042534
IECEX approval	IECEX INE 09.0025X
Approved for	Ex ia IIC T4
<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-B1-Li mandatory for use in connection with hazardous areas (order separately) Mounting set W-ACC-F7MK External cold junction compensation W-ACC-CJC

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