MS 2820

Installation manual

Sensus PulseRF-Mei
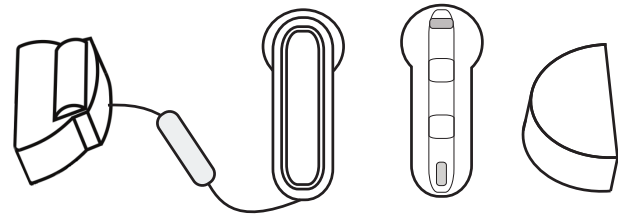
Description

Sensus PulseRF-Mei is a radio transponder connected to a HRI-Mei pulse unit for Sensus C&I water meters MeiStream, MeiStream Plus, MeiTwin and WPV-MS.

Equipment

1. Radio transponder connected to a HRI-Mei
2. Wall holder
3. Semicircular cover

❶ Mounting of the HRI-Mei

Release the round cover from the hinge and replace it with the supplied semicircular cover.

1. Open the cover for the OD with light pressure against the left side
2. Turn blue ring counterclockwise (approx. 10°), pulser sockets are open
3. Remove aluminum foil from the bottom of the HRI-Mei module
4. Insert the two hooks of the HRI-Mei diagonally from above into the holes of the backfitting ring
5. Push HRI-Mei down until it lies on the backfitting ring
6. Turn blue ring clockwise against stop (approx. 10°), pulser sockets are locked
7. Close cover for OD. If required the HRI-Mei can be protected with a seal wire against removal.

Communication

The SensusRF radio protocol is supported by SensusREAD or DIAVASO and SIRT and allows the configuration and reading of the Sensus PulseRF-Mei.

Sensus PulseRF-Mei is also supported by the Fixed Radio Network Software IRIS and IRISlite.

❷ Configuration

The radio module can be configured using SensusRF radio with SIRT and configuration software.

- Activation by radio or automatic by first 10 pulses
- Sensus PulseRF protocol is encrypted with a default encryption key

For the SensusRF radio module choose a position which affects the radio signal as little as possible. Metal, soil and water (e.g. power supply line or a water pipe) have a negative impact on the radio range. The effect of plastic is lower than concrete or wood. Try to avoid a position close to these materials. In pits the transponder must be mounted above the water line and at a minimum distance of 200 mm to metal lid covers. Transponders should not be closer to each other than 80 cm. Test the best position before final installation.

Radio range

The typical distance between transponder and read-out device is 500m@868MHz (350m@433MHz) in line of sight. Inappropriate installation places, obstacles in the radio line-of-sight and other influences like electrical interference or metal devices can reduce the radio range or even make radio reads impossible. From buildings to outside a typical range is 100 to 200 metres, while in an extreme case the reading range in a pit might be less than 20 metres.

Installation of the wall holder

The wall plate is surface mounted using two screws. Leave sufficient slack cable and space so that the transponder can be replaced in the future. Do not install the transponder upside down!

Fitting / Removing the transponder

To fit the transponder push the rectangular protrusions on the back into the mating holes in the wall plate and push down. To remove the transponder, do it vice versa.

Disposal instructions

This product contains lithium batteries. To protect the environment it should not be disposed of in household waste when its serviceable life is over. Do not destroy, drill or demolish the module housing!
Disposal can take place through a Sensus Service Centre. If however you want to take care of the disposal yourself please comply with the local and national regulations for environmental protection.

Technical data (Radio module only)

Technical norms & applied standards	see Declaration of Conformity RoHS, WEEE
Frequency	868 MHz (433 MHz)
Transmitter power	25 mW (10 mW)
Power supply	Lithium batteries sealed
Battery life time	Typically 12+ years depending on usage profile
Cable length	5.5 m overall
Protection class	IP 68
Operation temperature	min -10 °C / max +60 °C
Storage temperature	-10 °C bis +60 °C
Dimensions	123 x 116 x 87 mm
Weight	571 g
Radio protocol	SensusRF radio protocol bi-directional FlexNet protocol (TFX) bi-directional wMBus OMS unidirectional

Technical data of HRI-Mei B3 please see the HRI-Mei datasheet

EU Declaration of Conformity

Date: 01.06.2017

No. CE/PulseRF/0617

Herewith we,

Sensus GmbH Ludwigshafen
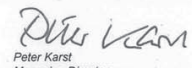**Industriestr.16**
67063 Ludwigshafen
Germany,

declare under our sole responsibility, that the Sensus **PulseRF/PulseRF-A3/PulseRF-Mei** is in conformity with the legal regulation of the Directive **2014/53/EU** (RED) of the European Parliament and the Council of 16 April 2014.

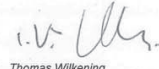Applied normative, harmonised standards:
- EN 300 220-1 V3.1.1
- EN 300 220-2 V3.1.1
- EN 301 489-1 V2.1.1
- EN 301 489-3 V2.1.1
- IEC 60950-1:2005 (2nd Ed.) + Am1:2009 + Am2:2013
- EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013
- EN 62479:2010
- EN 60529:1989 + A1:1999 + A2:2013

This declaration is made on behalf of the manufacturer by the Director R&D.

Sensus GmbH Ludwigshafen

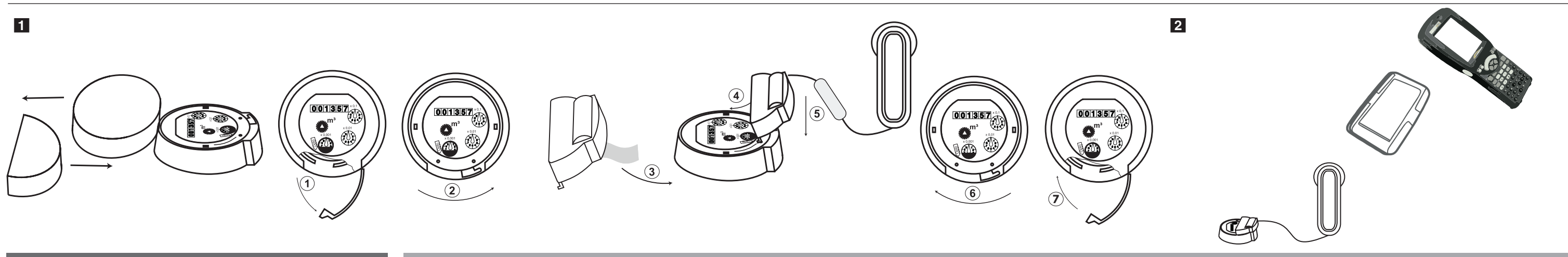*Peter Karst*
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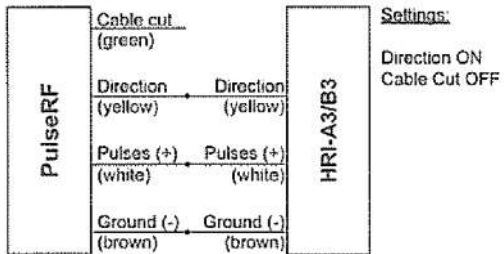
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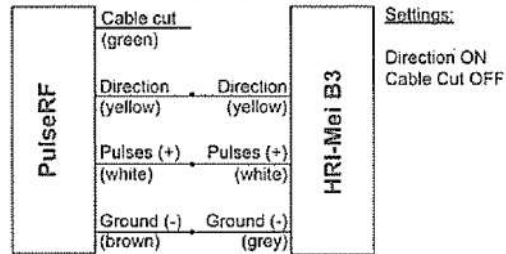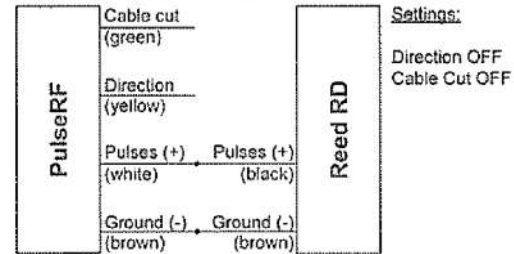Peter Karst I Roland Rott
Christopher Dühnen

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a **xylem** brand

Connection diagram & configuration

Sensus PulseRF - HRI-A3/HRI-B3

PulseRF		HRI-A3/B3
Cable cut (green)		
Direction (yellow)	Direction (yellow)	
Pulses (+) (white)	Pulses (+) (white)	
Ground (-) (brown)	Ground (-) (brown)	

Settings:

Direction ON
Cable Cut OFF

Sensus PulseRF - HRI-Mei B3

PulseRF		HRI-Mei B3
Cable cut (green)		
Direction (yellow)	Direction (yellow)	
Pulses (+) (white)	Pulses (+) (white)	
Ground (-) (brown)	Ground (-) (grey)	

Settings:

Direction ON
Cable Cut OFF

Sensus PulseRF - Reed RD

PulseRF		Reed RD
Cable cut (green)		
Direction (yellow)		
Pulses (+) (white)	Pulses (+) (black)	
Ground (-) (brown)	Ground (-) (brown)	

Settings:

Direction OFF
Cable Cut OFF

Sensus PulseRF - open collector

PulseRF	
Cable cut (green)	
Direction (yellow)	
Pulses (+) (white)	
Ground (-) (brown)	

Settings:

Cable cut (optional)

Direction (optional)
Open = forward
Close = backwards