

Sensus PulseRF Radio Transponder



Application

The Sensus PulseRF provides a solution to integrate meters with pulse output into the SensusRF Radio Network. The solution is mainly used with C&I water meters, but also other meters with pulse output as thermal energy, gas or electricity meters can be implemented.

It is designed to transmit meter data in intervals or readout further information with mobile readout devices or a fixed radio network transceiver.

The Sensus PulseRF creates data from incoming pulses and transmits them to an external data management system (for example meter index, alarms or additional information as Fixed Date Reading or Data Logger)

In addition to transmitting the meter index, the Sensus PulseRF transponder allows numerous other smart functions which provide added customer value.

Special Features

Transmission of consumption values

Data Logging (by steps of 1 min to 24h)

Active alarm status (cable cut or removal, leakage, broken pipe, reverse flow, low battery)

Pulse Input

Flow Direction Input

Units for Energy and Volume

Technical Specifications

General

Dimensions max.: 45 x 115 x 40 mm
 Weight: 230 g
 Casing: ABS
 Colour: Grey
 Electronics & battery sealed
 Cable length: 2.5 m
 Max. cable length: 15 m

Power supply

Lithium battery
 Battery life: typically 15+ years depending on usage profile

Radio specification

433 MHz at 10mW
 868 MHz at 25mW

Radio protocol

SensusRF radio protocol bi-directional
 FlexNet protocol (TFX) bi-directional
 wMBus OMS unidirectional

Environmental

Operation: min -20 °C / max +60 °C
 Storage: min -20 °C / max +70 °C
 Protection rating: IP68

Mounting bracket

The transponder can be fixed on a wall with a mounting bracket which is part of the consignment

Recycling

Has to be recycled according to national rules for electronic devices with lithium batteries.

Applied Standards

EN 62479; EN 60950-1;
 Radio frequency: EN 300 220-1/-2
 EMC: EN 301 489-1/-3
 RoHS, WEEE

Accessories

To connect Sensus PulseRF to a meter with pulse unit we recommend:

Jointing sleeve IP 68, order no. 18 17 84
 Connector IP68 for two cables up to 5 wires



Pulse Interface

Meters with a pulse output, as open collector or reed switch, can be connected. The Sensus PulseRF has one 4 wire input enabling the following functions

- Pulse input (+) (white)
- Cable cut (green)*
- Direction (yellow)*
- Ground (-) (brown)

| | |
|-----------------------------|----------------|
| Min. pulse length | 32 ms |
| Min. pulse pause | 60 ms |
| Max. pulse frequency | 10 Hz |
| Detection for closed | (0....0.7) V |
| Detection for open | (2.0....2.5) V |
| Max. cable capacity | 10 nF |
| Max. bouncing time (Reed) | 2,5 ms |
| Internal pull up resistance | 10 kOhm |
| Internal pull up voltage | 2.5 V |

Configuration interface

The transponder can be configured using SensusRF radio with SIRT and configuration software.
 Activation via radio or automatically through first 10 pulses.

Data

- Meter ID
- Meter Reading
- Alarms (leak, cable cut*, reverse flow*, broken pipe, internal errors, low battery)
- Fixed Date Reading
- Data Logger

* Depending on the connected pulse device

Assembly versions

For Sensus mechanical water meters prepared for HRI or HRI-Mei pick-up an assembly with connected pulser exists.



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UK & Ireland Enquiries

Sensus UK Systems Ltd, 3 Lindenwood Crockford Lane, Chineham Business Park
 Basingstoke RG24 8QY UK
 T: +44 (0) 1256 372800 F: +44 (0) 1256 707203 Email: info.gb@xyleminc.com www.sensus.com

International Enquiries

Sensus GmbH Hannover, Meineckestraße 10, D-30880 Laatzen Germany
 T: +49 (0) 5102 74-0 F: +49 (0) 5102 74-3341 Email: info.int@xyleminc.com www.sensus.com