

mod.

IWM-LR5

Wireless M-BUS and LoRaWAN module for GSD8-I water meters

V1.3



NFC



Compatible meters

mod. GSD8-I



ENG

Description

IWM-LR5 has been designed to allow wireless remote reading in different types of applications from the residential sector to the commercial and industrial sectors. The radio module thanks to the presence of the inductive target into the meter dial allows the reading of the volume consumption without on-site intervention, in walk-by mode or AMR (automatic meter reading), in respect of the WMBUS standard and can be also intergated into multi-service networks thanks to the Long Range LoRa radio technology and the compliance to the LoRaWAN standard.

- Consumption analysis with reverse flow compensation that provides an always perfect alignment between the totalizer and the water meter.
- Fraud control (removal of the radio module, application of external magnetic field and NFC field, reverse flow, leakage detection). Magnetic/NFC tampering to the meter and removal are recorded and reported to the receiving system via radio transmission. The presence of reverse flow is recorded in an additional register that allows to calculate the amount of water passed in reverse. The leakage detection can be monitored at the time of reading or by the AMR system if a timely update is desired.
- IP68 protection class allows the use of the module also for water meters installed in difficult environments.
- NFC interface allows configuration and commissioning of the device with the use of a simple Android app for smartphone, tablet or other NFC device.

Technical features

Radio interface	W-Mbus OMS 4.5.1 EN13757-4 868.95 MHz ≤ 25 mW T1, C1 mode LoRaWAN 1.0.4 class A LoRa DR7-DR0 EU863-870 MHz ≤ 25 mW
Coverage	300 m* (wM-BUS), up to 5 Km* (LoRaWAN)
Network joining methods	OTAA / ABP (on request)
Frequency of transmission	wM-Bus: 200 seconds LoRaWAN: max. 24 times per day (based on Data Rate) Combo: max. 4 times per day (LoRa) + 200 seconds (wM-Bus)
Compatible water meters	GSD8-I
Pulse output minimum value (K)	1 liter
Energy supply	Non-replaceable lithium battery, maximum lifetime 10 years**
Protection class	IP68***
Weight	62 g
Size (l x p x h)	73,4 x 95 x 35 mm
Working Temperature	from +1° to +55°C
Transmitted data	Volume (consumption), total of reverse flow, 12 monthly historical values, alarms, datalogger
Alarms	Discharged battery, module removal, magnetic fraud attempt, NFC fraud attempt, reverse flow, leakage detection, QMax overflow, burst, reverse installation, no consumption
Maximum reading error	0,5%
Module programming requirements (optional)	Bmetering software on Microsoft Windows. NFC Android device and Bmetering NFC Config app freely downloadable GOOGLE PLAY. Downlink via LoRa network.

* In optimal signal transmission conditions

** The battery life strongly depends on the working time window, set during the configuration process, and on the environmental conditions

*** IP68: maximum 24 hours of continuous submersion at 1,5 m depth