

mod.

IWM-LR4

V1.1

LoRaWAN Radio module
for pre-equipped Woltmann water meters



Compatible water meters

mod. **WDE-K50**



ENG

Description

IWM-LR4 has been designed to allow wireless remote reading in different types of applications in 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 any constraints of access to the site thanks to the Long Range LoRa radio technology and the compliance to the LoRaWAN standard can be intergated into multi-service networks.

- Consumption analysis with reverse flow compensation that provides an always perfect alignment between the counter and the counter clock.
- Fraud control (removal of the radio module, application of external magnetic field, reverse flow, identification of system loss). Magnetic tampering at the counter 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 loss function can be monitored at the time of reading or by the AMR system if a timely update is desired.
- IP68 protection allows the use of the module also for meters installed in difficult environments.
- NFC interface allows configuration and commissioning of the device with the use of a simple smartphone app.

Technical features

Radio interface	LoRaWAN @868 MHz ≤ 25 mW
Network joining methods	OTAA / ABP
Frequency of transmission	max. 4 per day
Coverage	Up to 5 Km*
Compatible water meters	WDE-K50
Pulse output minimum value (K)	10 liters (up to DN125) or 100 liters (from DN150)
Maximum reading error	0,5%
Configuration	NFC (with Android app)
Energy supply	Non-replaceable lithium battery, maximum lifetime 10 years**
Protection class	IP68***
Weight	167 g
Size (l x p x h)	100 x 100 x 57 mm
Working Temperature	+1° ÷ +55°C
Transmitted data	Volume (consumption), total of backward flow, alarms.
Alarms	Discharged battery, module removal, magnetic fraud attempt, backward flow, leakage detection.
Module programming requirements	Android device (smartphone, tablet, etc.) with an NFC interface and the Bmetering NFC Config android app APP freely downloadable from GOOGLE PLAY

* 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 m depth