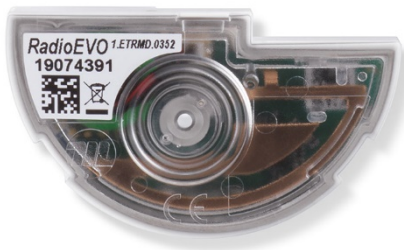# RadioEVO module
868 MHz, wireless M-Bus

Compact radio module with built-in bidirectional inductive sensor, designed for Maddalena SJ EVO, VTZ EVO e UPZ EVO.

RadioEVO is also compatible with other models or meters from other brands that are suitable for use with the Modularis system.

It is designed for reading remotely via radio the consumption data and alarms, ensuring ease and efficiency. It is ready for use and the factory settings enable both mobile (walk-by) and fixed (AMR) reading. The factory settings can be changed later via radio with the configuration kit (optional).

- Bidirectional inductive sensor
- Direct mount, no cables needed, automatic activation of data transmission via radio
- **868 MHz, with open data protocol wM-Bus (EN 13757)**, OMS Certificate (DVGW cert OMS Group)
- Data transmitted: current volume, volume on the billing dates, meter's serial number, alarms.
- **Mobile (walk-by) or fixed (AMR) reading**
- **Battery lifetime 11 years + 1, replaceable**
- Protection rating: IP67
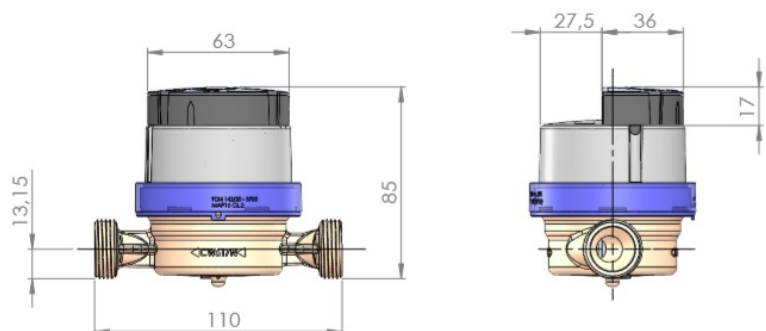- Compact size

DESCRIPTION

Based on the inductive principle, which ensures insensitivity to magnetic interference fields, the module's internal sensor detects the revolutions of the meter's pointer, calculates the volume (both directions) and manages the alarms.

The alarms managed are: overflow (threshold configurable, must be activated), backflow (threshold set, configurable), leak, meter blocked or non-used (days threshold set, configurable), magnetic and mechanical tampering (removal).

RadioEVO complies with the wM-Bus data communication protocol regulated at European level by the Standard EN 13757. This ensures large interoperability between different reading systems from other brands available on the market.

CD SD EVO PLUS with RadioEVO

DIMENSIONS

TECHNICAL SPECIFICATIONS

SENSOR	Inductive, dual spool (bidirectional)
COMPATIBLE METERS	Maddalena S.p.A.: SJ EVO, VTZ EVO e UPZ EVO Any meters compatible with Modularis design DN 15 and 20 (specific version for DN > 25mm)
SENSOR RESOLUTION	1 litre
ALARMS	Tampering, magnetic fraud, backflow, suspected leak, meter blocked, maximum flow rate, meter inverted
CONFIGURATION	Via radio
POWER SUPPLY	Lithium-ion battery (replaceable), 11 years + 1 year storage*
APPROVALS	CE in accordance with the European standards EMC: EN 610000-4-2, EN 610000-4-3, ETSI EN 301 489-1 v1.9.2, ETSI EN 301 489-3 v1.6.1, ETSI 300 220 ISO 4064 Ancillary device 6.3 (with CD SD PLUS EVO) Ancillary device: UNI EN ISO 4064 – 1 2017 3.1.8

RADIO	STANDARD	Wireless M-Bus, OMS*
	MODES	T1*, C1
	FREQUENCY	868 Mhz
	TRANSMISSION DISTANCE	500 m in line of sight
	REFERENCE STANDARDS	EN 13757
	DATA TRANSMITTED	Short frame*: current volume, volume on the billing dates, meter's serial number, alarms Long frame: same as the short frame with the values of the previous 12 months

ENVIRONMENTAL CONDITIONS	Storage temperature: -20 °C ÷ +60 °C Operating temperature: -10 °C ÷ +55 °C
PROTECTION RATING	IP67

*Factory settings, configurable

DATA COLLECTION DEVICES AND SOFTWARE

Maddalena offers a full range of mobile (walk-by) and fixed (AMR) radio transceivers. They are both compatible with Maddalena water meters with wM-Bus interface and with water meters from other brands compliant with the Standard EN 13757. The main devices for mobile reading are described below.

✓ **USB (868 MHz) RADIO TRANSCEIVER**
It allows reading via radio of wM-Bus devices and modification of the factory settings of RadioEVO.
Also Available in external Antenna version Low in price and easy to use.

✓ **UniCo >> Universal Connecting Tool (868 MHz)**
Powerful and fast wM-Bus radio receiver with built-in rechargeable battery, Bluetooth communication interface. Windows and Android APP

✓ **ARROW MOBILE**
Windows for use with Maddalena mobile radio receivers.
Available for download at www.maddalena.it.

✓ **EVO CONFIGURATOR**
Windows Configuration software for use in combination with Maddalena mobile radio receivers. Available for download at www.maddalena.it. Android APP available on request

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