

ARROW^{EVO} module

Compact radio module with built-in bidirectional inductive sensor, designed for Maddalena MVM, MVM PLUS C and WMAP EVO water meters.

Add-on version also available. It mounts on compatible pulsed meters.

Designed for reading remotely 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 locally via radio with the configuration kit (optional).

- Inductive, bidirectional sensor (compact version)
- Direct mount, wireless (compact version)
- **868 MHz, with open data protocol wM-Bus (EN 13757), OMS**
- Data transmitted: current volume, historical volume, serial number of the meter, alarms
- **Mobile (walk-by) or fixed (AMR) reading**
- **Battery service life up to 15 years**
- Protection rating: IP68
- Compact size



Compact version



Add-on version

DESCRIPTION

Based on the inductive principle, which ensures insensitivity to magnetic interference fields, the internal sensor of Arrow^{EVO} detects the revolutions of the meter's pointer, calculates the volume (in both directions) and manages the alerts.

The module manages the following alarms: overflow (the threshold must be activated and can be configured), backflow (threshold set, can be configured), leak, meter blocked or non-used (days threshold set, configurable), magnetic and mechanical tampering (removal).

Arrow^{EVO} complies with the wM-Bus data communication protocol regulated at European level by the standard EN 13757. This ensures interoperability with different reading systems, as well as by third parties.



MVM PLUS C



WMAV EVO

TECHNICAL SPECIFICATIONS

| | | |
|--------------------------|-----------------------|---|
| SENSOR | | Inductive (bidirectional) or pulse input (add-on module) |
| COMPATIBLE METERS | | MVM, MVM PLUS C, WMAP EVO or pulsed meters |
| SENSOR RESOLUTION | | Configurable |
| ALARMS | | Tampering, magnetic fraud, backflow, suspected leak, meter blocked, maximum flow rate, meter inverted, removal |
| CONFIGURATION | | Via radio (local interface) |
| POWER SUPPLY | | Battery, service life up to 15 years (depending on the configuration selected) |
| APPROVALS | | CE in accordance with the European standards. EMC: EN 61000-4-2, EN 61000-4-3, 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 |
| RADIO | STANDARD | Wireless M-Bus, OMS 4.0* |
| | MODES | C1*, T1 |
| | FREQUENCY | 868 MHz |
| | TRANSMISSION DISTANCE | 500 m in line of sight |
| | REFERENCE STANDARDS | EN 13757; the short frame and very short frame are OMS approved |
| | DATA TRANSMITTED | - Short frame: current volume, volume on the billing dates, serial number of the meter, alarms - Very short frame*: current volume, volume on the billing dates, serial number of the meter, alarms - Long frame: same as the short frame plus the values of the latest 12 months - Arrow frame (compatible with previous generation): current volume, historical volume, billing date, alarms |
| ENVIRONMENTAL CONDITIONS | | Storage temperature: -20 °C ÷ +60 °C Operating temperature: -10 °C ÷ +55 °C |
| PROTECTION RATING | | IP68 |

*Factory settings

DATA COLLECTION DEVICES AND SOFTWARE

Maddalena offers a full range of radio transceivers for mobile (walk-by) and fixed (AMR) reading. They are compatible both with Maddalena water meters featuring a wM-Bus interface and with water meters from other brands complying with the standard EN 13757.

The main software and devices for mobile reading are described below.

✓ USB RADIO TRANSCEIVER (868 MHz)

Specifically designed for reading wM-Bus devices and changing the factory settings. Available with an antenna that can be connected remotely (kit for car use on request).

Low in price and easy to use.



✓ ARROW COLLECT (868 MHz)

Powerful and fast wM-Bus radio receiver with built-in rechargeable battery, storage for data collection and Bluetooth® communication interface.



✓ SOFTWARE ARROW MOBILE

Mobile reading software for O.S. Windows and Android for Maddalena mobile radio receivers.

The version for Android devices is specifically designed for drive-by reading and enables georeferencing of the meters location.