![maddalena logo](www.maddalena.it)

# PRODUCT CATALOGUE



# Systems

SYSTEMS DESIGNED FOR MONITORING,
REMOTE CONTROL, REMOTE READING
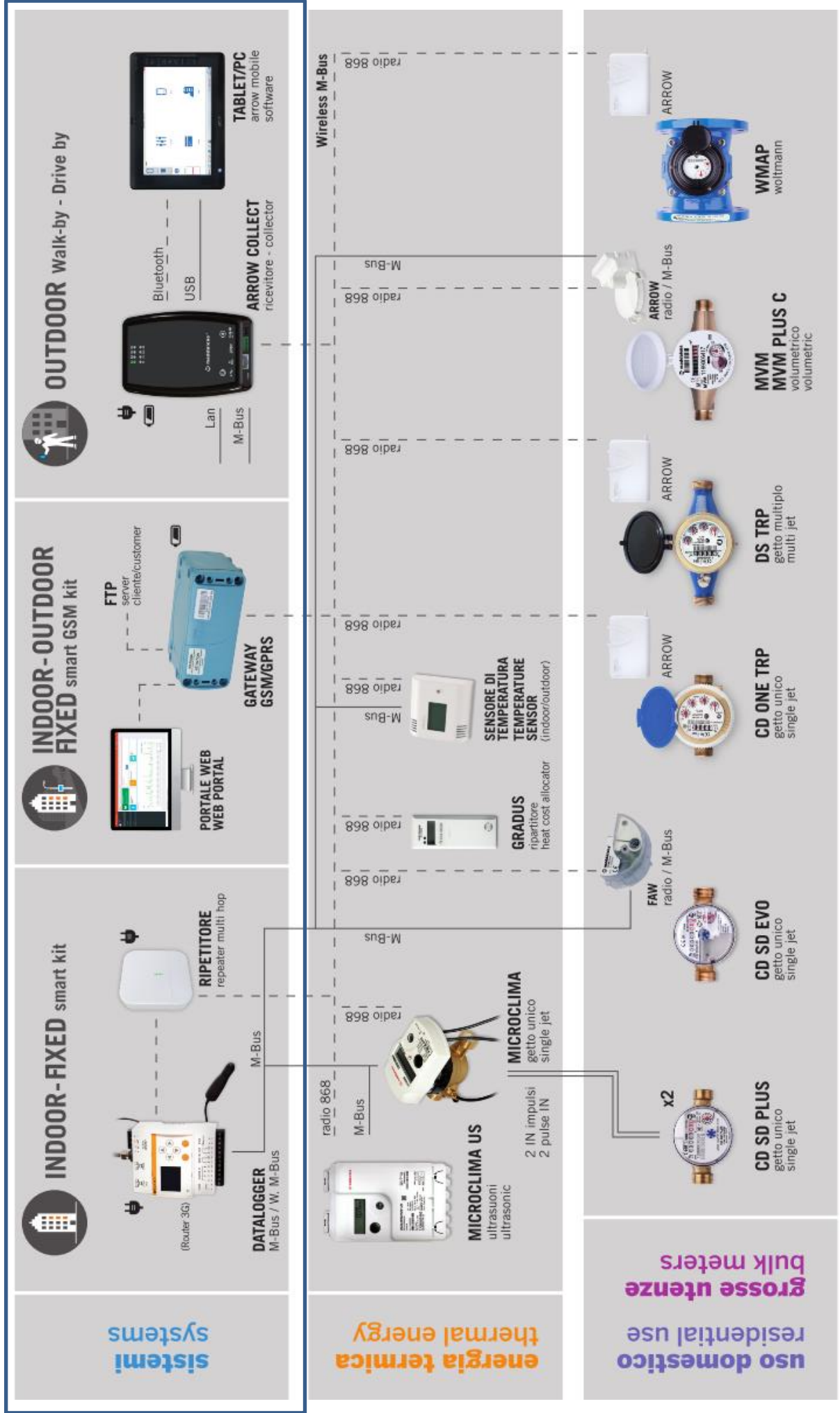AND METROLOGICAL VERIFICATION

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SISTEMI SYSTEMS

maddalena®
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M-Bus  M-Bus wireless  OMS®

**INDOOR-FIXED** smart kit

DATALOGGER
M-Bus / W. M-Bus

(Router 3G)

RIPETITORE
repeater multi hop

M-Bus

radio 868

M-Bus

**INDOOR-OUTDOOR**
**FIXED** smart GSM kit

PORTALE WEB
WEB PORTAL

GATEWAY
GSM/GPRS

FTP
server
cliente/customer

**OUTDOOR** Walk-by - Drive by

Bluetooth
USB

Lan
M-Bus

ARROW COLLECT
ricevitore - collector

TABLET/PC
arrow mobile
software

Wireless M-Bus

radio 868

M-Bus

radio 868

radio 868

radio 868

radio 868

radio 868

MICROCLIMA US
ultrasuoni
ultrasonic

2 IN impulsi
2 pulse IN

MICROCLIMA
getto unico
single jet

GRADUS
ripartitore
heat cost allocator

SENSORE DI
TEMPERATURA
TEMPERATURE
SENSOR
(indoor/outdoor)

FAW
radio / M-Bus

ARROW
radio / M-Bus

ARROW

ARROW

ARROW

x2

CD SD PLUS
getto unico
single jet

CD SD EVO
getto unico
single jet

CD ONE TRP
getto unico
single jet

DS TRP
getto multiplo
multi jet

MVM
MVM PLUS C
volumetrico
volumetric

WMAP
woltmann

**sistemi**
**systems**

**energia termica**
**thermal energy**

**uso domestico**
**residential use**

**grosse utenze**
**bulk meters**

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# 1. M-BUS CONCENTRATORS

## "**BASIC**" SOLUTION > DATA LOGGER 20

Recommended for small M-Bus systems requiring a local reading. Data logger for 20 M-Bus meters/devices, with display, keypad and internal memory. It provides for the searching and reading of devices automatically. Data can be shown on the display or downloaded to a PC via RS232 serial interface (FSERVICE software included).
Requires an external power supply that can be ordered separately.
Mountable on a DIN rail.
Supported standards: M-Bus EN 13757

**PRODUCT CODES**

| 1.ETRRL.0004 | DL MR006 FOR 20 DEVICES - DISPLAY (ITA) DIN INSTALLATION - SW FSERVICE |
|---|---|
| OPTIONAL | |
| 1.ETRRL.0050 | POWER SUPPLY - DIN INSTALLATION |

*Note: The software can be downloaded from www.maddalena.it*

## "**SMART KIT**" SOLUTION > DATA LOGGER 60-240

An ideal choice for medium and large M-Bus systems requiring a local or remote reading and for simplifying the management of network-connected devices. The **"SMART KIT"** includes a data logger with display (multi language), keypad and internal memory, a repeater for 60 M-Bus meters/devices and an external power supply. A maximum of 3 additional repeaters can be added to reach the logical limit of 240 devices (no need for additional power supplies).
The data logger provides for the acquisition and visualization of data from M-Bus meters and is equipped with a built-in web server for easy creation of devices' master data, consultation of past readings and generation of reports on a local or remote PC (3g router to be ordered separately, SIM card provided by the user or by Maddalena).
Repeater and power supply are all prepared for DIN rail mounting.
Supported standards: M-Bus EN 13757

**PRODUCT CODES**

| 1.ETRSEQ.0002 | DATA LOGGER WITH MULTI LANGUAGE DISPLAY + REPEATER FOR 60 DEVICES + POWER SUPPLY  - INSTALLATION ON DIN RAIL 4+4+4 modules |
|---|---|
| OPTIONAL | |
| 1.ETRSEQ.0003 | REPEATER FOR 60 DEVICES |
| 1.ETRSEQ.0021 | ROUTER 3G UMTS |

# 1. M-BUS CONCENTRATORS

# "**SMART GSM**" SOLUTION > CMe2100 GSM GPRS

M-Bus data logger, excellent value for money, recommended for installations requiring remote reading only. It comes ready to use and is compatible with any device equipped with a standard M-Bus interface. Data transmission can be via GSM/GPRS FTP or http protocols or via e-mail (SIM card provided by the user or by Maddalena). CMe2100 uses an open standard protocol for quick and easy integration into existing systems. Configuration and control via SMS. Its flexible design makes it the most versatile and efficient M-Bus master on the market. CMe2100 can handle 8 M-Bus devices/meters and is expandable by means of CMex modules (infra-red port) up to a maximum of 256 meters.
Mountable on a DIN rail, power supply 220 V.
Supported standards: M-Bus EN 13757

**PRODUCT CODES**

| 1.ETREV.0001 | CME2100 GSM/GPRS FOR 8 DEVICES – BUILT-IN ANTENNA |
|---|---|
| OPTIONAL | |
| 1.ETREV.0010 | CMEX10 – EXPANSION MODULE  FOR 32 DEVICES |
| 1.ETREV.0015 | CMEX11 - EXPANSION MODULE FOR 64 DEVICES |
| 1.ETREV.0003 | GSM/GPRS ANTENNA - MAGNETIC BASE - 2.5 m |
| 1.ETREV.0007 | GSM/GPRS ANTENNA - WALL MOUNTING - 3 m |

# 2. WIRELESS M-BUS CONCENTRATORS
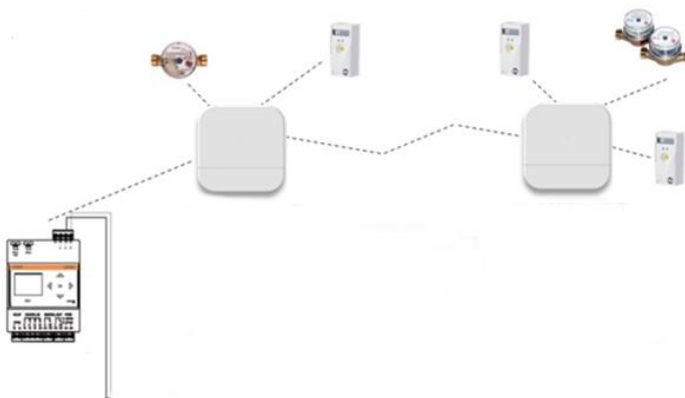
## "**SMART KIT**" SOLUTION > DATA LOGGER MESH/W.M-BUS



Ideal choice for wireless M-Bus indoor systems requiring a local or remote reading. It is designed to allow both infrequent readings (billing) and very frequent ones (monitoring). The data receiving system is compatible with any wireless M-Bus device. The "**SMART KIT**" includes a data logger for 500 devices wireless M-Bus devices and 20 M-Bus devices, a power supply and an wireless M-Bus multi hop repeater with on external power supply. In the case of multi storey buildings with many floors, it is therefore possible to extend the network without limitations, with the addition of other cascading repeaters that will be automatically connected to each other for data exchange. All this is made possible by the external power supply of the devices that frees the manager from having to worry about the limitations usually involved in battery powered devices: few daily readings, long network installation times and batteries to be replaced after several years of use. Moreover, these multi hop repeaters have a high range of radio coverage, which results in a lower number of nodes to be installed (1 every 3 floors on average).

The data logger captures and stores via radio history data of the wireless M-Bus devices connected to the repeaters. The built-in web server allows for easy consultation of the reading history and report generation on both a local and a remote PC (3g UMTS router ordered separately, SIM card provided by the user or by Maddalena).

Supported standards: wM-Bus EN 13757 and OMS on the 868 MHz frequency transmission, modes T1/C1/S1.

**PRODUCT CODES**

| 1.ETRSEQ.0011 | DATA LOGGER FOR 500 DEVICES WM-BUS + POWER SUPPLY + MULTI HOP REPEATER |
|---|---|
| OPTIONAL | |
| 1.ETRSEQ.0012 | MULTI HOP REPEATER |
| 1.ETRSEQ.0021 | ROUTER 3G UMTS |



Example of system architecture with the "SMART KIT" solution.

# 2 WIRELESS M-BUS CONCENTRATORS

## "SMART GSM" SOLUTION > GATEWAY



Wireless M-Bus gateway GSM/GPRS, battery-powered, excellent value for money. It comes pre-configured and ready for use. It is the ideal solution for indoor or outdoor installations only requiring fixed remote readings at not too frequent intervals. The gateway supports up to 1000 wireless M-Bus devices/meters, allows for the logging of received data and the subsequent transmission of data to an FTP server. The factory default and recommended configuration of the device is one reading and sending of data per day. The SIM card may be supplied by you or Maddalena.

Battery life depends on the configuration of the data logging interval and data transmission. With the factory settings, the battery life is 9 years. Alternative configurations can still be requested to suit different needs.

Supported standards: wM-Bus EN13757 and OMS on the 868 MHz frequency, modes T1/C1/ S1.

The gateway has a robust housing suitable for outdoor installation and is designed to be installed both on vertical and horizontal surfaces (M6 screws not included).

**PRODUCT CODES**

| 1.ETRKWG.0001 | GATEWAY WM-BUS GRPS |
|---|---|
| OPTIONAL | |
| Access to Maddalena's Portal. | |

## "AMR" SOLUTION > BASE STATION DUAL BAND 868/169



Bidirectional wireless M-Bus base station, ideal for outdoor installations requiring a "long range" radio coverage. Supports both 868 MHz and 169 Mhz frequencies and must be powered externally. It can manage up to 1000 devices/meters and WAN connectivity may occur via GPRS/EDGE/3G or Ethernet.

The M2M platform is provided by Maddalena.

Supported standards: wM-Bus EN 13757 and OMS, modes T/C/S/N.

Various types of antennas and installation accessories available.

**PRODUCT CODES**

| 1.ETRKWG.0010 | BASE STATION 868/169 MHz |
|---|---|

*NOTE*

*This device requires a careful examination of the installation and the specific requirements of the customer.*

# 3. WIRELESS M-BUS RECEIVERS

## RADIO RECEIVER > USB VERSION

Wireless M-Bus radio receiver 868 MHz for *walk-by*, *drive-by* mobile reading systems, to be connected via USB to a laptop computer. This receiver allows data collection and transfer via serial port to the PC with the reader software Arrow Mobile installed.

Supported standards: wM-Bus EN 13757 and OMS on the 868 MHz frequency, modes T1/S1. No limitation on the number of meters manageable.

USB powered.

**PRODUCT CODES**

| 1.KEGCUSB.0001 | RADIO USB RECEIVER |
|---|---|
| OPTIONAL | |
| 1.ETRMD.0020 | ARROW MOBILE SOFTWARE LICENSE |

*Note*
*The software and drivers can be downloaded from www.maddalena.it*

## RADIO RECEIVER > ARROW COLLECT

Arrow Collect is an advanced and powerful wireless M-Bus radio receiver 868 MHz powered with a rechargeable battery that can be used both as mobile reading system (alone or in combination with a PC) and as a fixed receiver with indoor reading. It can work with a tablet/PC, through the special reading software Arrow Mobile, via Bluetooth or USB interface. In the case of mobile reading there are no limitations on the maximum number of readable devices/meters (max. 500 in fixed mode).

The built-in interfaces available on Arrow Collect are the following: Bluetooth (100 m), USB, LAN. The device is also equipped with an M-Bus interface, usable in fixed mode, which can be connected to the master CMe2100 GSM/GPRS (remote data transmission).

Supported standards: wM-Bus EN 13757 and OMS on the 868 MHz frequency, modes T1/C1.

Power supply: rechargeable lithium battery or 220 V (fixed mode).

**PRODUCT CODES**

| 1.ETRMD.0042 | ARROW COLLECT - MOBILE RECEIVER (PREPARED FOR FW / FIXED MODE) |
|---|---|
| 1.ETRMD.0065 | ARROW COLLECT - FIXED RECEIVER |
| OPTIONAL | |
| 1.ETRMD.0020 | ARROW MOBILE SOFTWARE LICENSE |
| 1.ETRMD.0060 | COMPLETE BOX FOR WALL MOUNTING |
| 1.ETRMD.0043 | BRACKET FOR INSTALLATION ON A DIN RAIL |

*Note:*
*The software and drivers can be downloaded from www.maddalena.it*

# 4. M-BUS/WIRELESS M-BUS DEVICES AND ACCESSORIES

## HUMIDITY/TEMPERATURE SENSOR > CMa10/11



CMa10 is a humidity and temperature sensor for *indoor* installation, equipped with an M-Bus communication interface. Ideal for controlling different zones, thanks to the user-friendly display. Also available without display (CMa11) on request. The CMa10w version is equipped with wireless M-Bus 868 MHz radio interface (T1 mode). Also available without display (CMa11w) on request. Easy to install and long life.

**PRODUCT CODES**

| 1.ETREV.0040 | CMa10, DISPLAY, M-BUS |
|---|---|
| 1.ETREV.0041 | CMa10, DISPLAY, WIRELESS M-BUS |
| 1.ETREV.0042 | CMa11, M-BUS |
| 1.ETREV.0043 | CMa11, WIRELESS M-BUS |



## HUMIDITY/TEMPERATURE SENSOR > CMa20



CMa20 is a humidity and temperature sensor for *outdoor* installation. Equipped with M-Bus communication interface. Equipped with a high-sensitivity sensor, the instrument is ideal for outdoor weather data logging. Easy to install and long life.
Also available with radio interface 868 MHz wireless M-Bus (mode T1)

**PRODUCT CODES**

| 1.ETREV.0044 | CMa20, M-BUS |
|---|---|
| 1.ETREV.0045 | CMa20, WIRELESS M-BUS |

# 4. M-BUS/WIRELESS M-BUS DEVICES AND ACCESSORIES

## PULSE ADAPTER  - M-BUS > TWIN PULSE

Twin-Pulse is a pulse counter designed for *metering* applications in a *slave* configuration on the M-Bus line that can manage up to 2 pulse inputs. Twin-Pulse has only a single primary and a single secondary address, greatly simplifying the installation process and the management of the readings. Twin-Pulse is powered by the M-Bus network and has an internal backup battery. For a possible set-up of the device it is recommended to use the guided procedure of the TwinCom software. The factory default for both inputs is: water, 1 pulse/10 litres and reading in m$^3$.
Rugged IP68 housing.

**PRODUCT CODES**

| 1.ETRTM.0001 | TWIN PULSE - 2 PULSES IN – M-BUS OUTPUT - WALL INSTALLATION |
|---|---|
| 1.ETRTM.0002 | TWIN PULSE - 2 PULSES IN – M-BUS OUTPUT – DIR RAIL INSTALLATION |

*Note*
*Configuration accessory: please see Micromaster.*
*The software can be downloaded from www.maddalena.it*

## PULSE ADAPTER  -  RADIO 868 MHz > ARROW

ARROW is a radio transceiver that records the reading of the device/meter coupled to it and then transmits it via wireless M-Bus 868 MHz (T1 mode) while managing incoming pulses, direction signals and alarms (manipulation and possible loss).
ARROW can be connected to any type of meter with pulse output (different mediums configurable) or can be provided in combination with the static pulser QuadraPlus for water meters Maddalena CD ONE TRP and DS TRP.
At installation, the ARROW module must be programmed with the characteristic data (configuration via radio - Arrow Collect needed). Thanks to the complete internal resin coating, ARROW is watertight (IP68). Power is supplied by an internal lithium battery (12 years).
Frequent and continuous transmission every 11 seconds.

**PRODUCT CODES**

| 1.ETRMD.0002 | ARROW MODULE - PULSE INPUT (4 WIRES) |
|---|---|
| OPTIONS | |
| 1.ETRMD.0017 | ARROW MODULE WITH QUADRAPLUS FOR CD ONE |
| 1.ETRMD.0027 | ARROW MODULE WITH QUADRAPLUS FOR DS TRP |
| 1.ETRMD.0301 | ARROW MODULE MVM COMPACT |

*Note*
*ARROW Collect software needed for the configuration, available on www.maddalena.it*

# 4. M-BUS /WIRELESS M-BUS DEVICES AND ACCESSORIES

## PULSE ADAPTER  - RADIO > ARROW 169 MHz

ARROW 169 is a radio transceiver that records the reading of the device/meter coupled with it and then transmits it via wireless M-Bus radio 169 MHz (N1 mode). It can be connected to any type of meter with pulse output (different mediums configurable).
Battery powered (replaceable). Battery service life: up to 10 years (AMR set-up).
Transmission periodicity and basic parameters can be configured via radio at the time of initial installation.
Rugged IP68 housing, wall mounting ready.

**PRODUCT CODES**

| 1.ETRMD.0055 | ARROW 169 MHz - WATER APPLICATION |
|---|---|
| 1.ETRMD.0045 | ARROW 169 MHz - CONFIGURABLE APPLICATION TYPE |
| OPTIONAL | |
| 1.ETRMD.0056 | USB TRANSCEIVER FOR PROGRAMMING AND READING |

*Note*
*The software can be downloaded from www.maddalena.it*

## FAW RADIO MODULE (for meter CD SD EVO)

Compact wireless M-Bus radio module 868 MHz (mode T1, S1, C1) with built-in inductive sensor, retrofittable on specially prepared water meters Maddalena CD SD EVO and VTZ. It can also be installed on meters from other brands that are compatible with the Modularis® system.
Can be installed on the meter at any time with the possibility of a protection seal. The radio interface, already configured, is factory deactivated and is activated automatically when the module is installed on the meter. Factory configuration: transmission every 2 minutes, from 7:00 a.m. to 7:00 p.m., Monday to Friday (modifiable via USB optical head). Battery powered. Battery service life: 12 years.

**PRODUCT CODES**

| 2.51.0032 | FAW – wireless M-Bus RADIO MODULE |
|---|---|

*Note*
*Configuration accessory, please see: Optical head.*

# 4. M-BUS/WIRELESS M-BUS DEVICES AND ACCESSORIES

## M-BUS MODULE (for meter CD SD EVO)

Compact M-Bus cabled module with built-in optical sensor, retrofittable on specially prepared water meters Maddalena CD SD EVO and VTZ. It can also be coupled to meters from other brands that are compatible with the Modularis® system. It can be installed on the meter at any time with the possibility of a protection seal.

Power is supplied via M-Bus network and the internal backup battery ensures data/counting retention in the event of temporary drop in the network.

**PRODUCT CODES**

| 1.ETRMD.0340 | M-BUS COMPACT MODULE |
|---|---|

*Note*
*Configuration accessory: please see Micromaster.*

## MICROMASTER

Portable M-Bus level converter with USB interface. USB powered. It simplifies programming of M-Bus meters and instruments such as pulse converters > M-Bus (Twin Pulse).

**PRODUCT CODES**

| 1.ETRRL.0031 | MICROMASTER FOR 3 METERS - USB |
|---|---|

# 4. M-BUS/WIRELESS M-BUS DEVICES AND ACCESSORIES

## USB OPTICAL HEAD

Kit for the configuration and reading via optical head for the following M-Bus or wireless M-Bus: microCLIMA calorimeters, Gradus distributors and FAW compact radio modules. It allows the downloading of the electronic unit's data to a PC (.csv) and the configuration of parameters such as automatic reading date, M-Bus address, pulse inputs, etc.

**PRODUCT CODES**

| 2.KEG.0002 | USB OPTICAL HEAD - SW CONFIGURATION TOOL |
|---|---|

# 5. PROTOCOL CONVERTERS

## M-BUS > MODBUS RS232

Gateway (converter) from M-Bus to Modbus. Modbus RS232 output. Equipped with galvanic isolation between M-Bus and RS232. M-Bus master input and Modbus slave output. Also available as gateway from Modbus to M-Bus.

**PRODUCT CODES**

| 1.ETRAW.0001 | M-BUS> MODBUS - 20 METER - RS232 |
|---|---|
| 1.ETRAW.0002 | M-BUS> MODBUS - 40 METER - RS232 |
| 1.ETRAW.0003 | M-BUS> MODBUS - 80 METER - RS232 |
| 1.ETRAW.0004 | M-BUS> MODBUS - 160 METER - RS232 |
| 1.ETRAW.0005 | M-BUS> MODBUS - 250 METER - RS232 |

## M-BUS > MODBUS RS485

Gateway (converter) from M-Bus to Modbus. Modbus RS485 output. Equipped with galvanic isolation between M-Bus and RS485. M-Bus master input and Modbus slave output. Also available as gateway from Modbus to M-Bus.
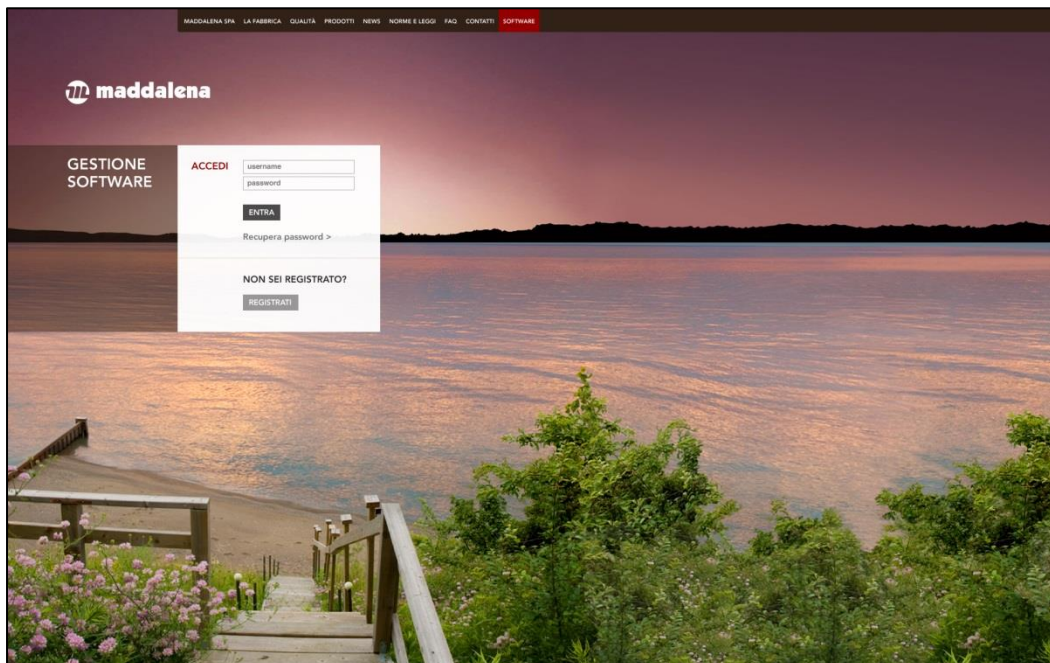
**PRODUCT CODES**

| 1.ETRAW.0020 | M-BUS> MODBUS - 20 METER - RS485 |
|---|---|
| 1.ETRAW.0021 | M-BUS> MODBUS - 40 METER - RS485 |
| 1.ETRAW.0022 | M-BUS> MODBUS - 80 METER - RS485 |
| 1.ETRAW.0023 | M-BUS> MODBUS - 160 METER - RS485 |
| 1.ETRAW.0024 | M-BUS> MODBUS - 250 METER - RS485 |

# 6. SOFTWARE, FIRMWARE, DRIVERS

## SOFTWARE AREA



The SOFTWARE section is available on our site www.maddalena.it. Once registered, the user can access the latest versions of software, firmware and drivers for Maddalena products. Also, when a new software release is published, registered users will be notified immediately. This is a service that Maddalena provides for more technologically advanced installations, which use systems featuring smart data centralisation for M-Bus and wireless M-Bus (EN 13757).

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