



Radio transmission for maximum flexibility

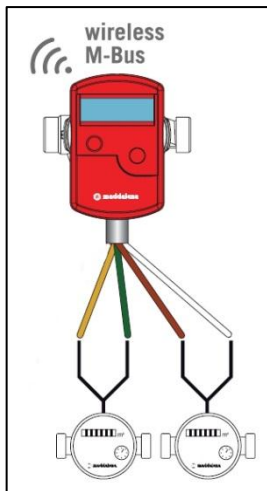
The Maddalena microCLIMA heat meter is also available with an **integral 868 MHz radio module**.

With microCLIMA Radio there is no need for gaining access to premises as meters are read out via radio. Meters installed in narrow places can also be read more easily. No cabling is needed, thus saving both money and time especially in existing buildings.

The **Wireless M-Bus microCLIMA Radio heat meter complies with Standard EN 13757-4** on systems for remote reading of meters via radio. This enables to read out instruments with any receiver available on the market (provided it complies with the standard).

The radio interface is configured and deactivated upon delivery and can be activated with the pushbutton on the device. **The factory settings enable the read-out of the device both over mobile and fixed receivers.** The factory settings can be modified over the opto-head and the Configuration Tool software (available as an option).

microCLIMA Radio with two pulse inputs



Two pulse inputs are available as an option. In this configuration the integral radio interface can send the consumption data of two secondary meters. This enables to **read out three meters with just one radio module**. microCLIMA Radio is especially suited for use in metering boxes.

The advantages of the radio technology:

- walk-by or fixed indoor read-out
- automatic read-out of consumption data
- remote diagnosis
- no cabling
- easy to install even in existing buildings

NOTE: THE GRADUS COST ALLOCATORS AND RADIO MODULES FOR CSD PLUS/EVO METERS COMPLY WITH THE WIRELESS M-BUS STANDARD EN 13757-4 AND THUS CAN BE READ-OUT OVER ONE SINGLE DATA COLLECTION SYSTEM.

TECHICAL SPECIFICATIONS

Wireless M-Bus EN 13757-4	
Radio settings (configurable)	Data transmission interval, mode, AES encryption, telegram length
Integral radio interface	Frequency: 868 MHz
4 radio modes (configurable)	S1/T1*: unidirectional S2/T2: bidirectional
OMS compliance	OMS-Spec Vol2 Primary v301 (short telegram)
Transmission strength (configurable)	-5 dBm, 0 dBm, +9 dBm
AES 128 encryption	AES: Advanced Encryption Standard Key length: 128 bit (set for each heat meter, activatable)*
Radio telegram options	Short telegram*
	Long telegram
Transmission interval (configurable)	2* to 240 minutes
Selectable transmission times	00:00 - 24:00 7:00 a.m. - 7:00 p.m.*
Weekdays	Monday - Sunday Monday - Friday*
Calendar weeks	1 - 4*
Months	1 - 12*
Radio activation	Not set* (it can be activated with the pushbutton or over the optical configuraton kit)
Minimum battery lifetime	7 years (+3 depending on the radio transmission interval)

* Factory setting

READ-OUT DEVICES AND SOFTWARE

A number of radio receivers (EN 13757-4) compatible with the range of Maddalena radio devices and other Wireless M-Bus EN 13757-4 compliant meters are available:

- ✓ **USB RADIO COLLECT** (868 MHz)
 - Mobile radio receiver
 - Ease of use
 - Power supply via USB
 - Data transfer on PC via USB
- ✓ **ARROW COLLECT** (868 MHz)
 - Mobile or indoor fixed radio receiver
 - 500 MB F RAM
 - Interfaces: Bluetooth, mini-USB, M-Bus (GSM/GPRS), LAN
 - Lithium battery; pre-equipped for external power supply
- ✓ **Mobile or fixed read-out SOFTWARE** for Windows (8, 7, Vista and XP)
 - Management of the database of the installed devices
 - Integral import and export function for easy management of the installed radio devices.
 - Also compatible with EN 13757-4 compliant Wireless M-Bus devices.




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