mod.
WDE-K50

Woltmann predisposto per moduli induttivi
Woltmann type pre-equipped for inductive modules

MID
Measuring Instrument Directive 2014/32/UE - Approved

ACS

WRAS APPROVED PRODUCT

kiwa IT-TD-Ki0413



Versioni alternative
Alternative versions

Acqua calda 30-90°C
Hot water 30-90°C



IT

Woltmann orizzontale a meccanismo estraibile. Orologeria sigillata con trascinamento magnetico a lettura diretta su rulli numeratori. Predisposizione induttiva per l'installazione di moduli di trasmissione dati M-BUS cablati, wireless M-BUS, lancia impulsi di tipo amagnetico e LoRa.

EN

Horizontal Woltmann with removable insert. Sealed counter mechanism with magnetic transmission. Inductive pre-equipment for the installation of data communicaton modules M-BUS wired and wireless M-BUS, non-magnetic pulse output and LoRa.

ES

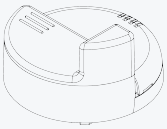
Woltmann horizontal con tambor extraíble. Relojería sellada de arrastre magnético y lectura directa en los rodillos numerados. Predisposición inductiva para módulos de telemetría M-Bus cable y wireless M-BUS, de pulsos no magnéticos y LoRa.

FR

Compteur Woltmann horizontale à tambour extractible, mécanisme de comptage étanche à transmission magnétique, lecture directe sur rouleaux numériques. Pre-équipement inductive pour modules de télérelèvage M-Bus filaire et radio M-BUS, avec émetteur d'impulsions amagnétique et LoRa.

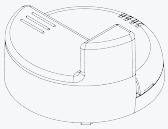
Moduli compatibili — Compatible modules

mod. IWM-TX4



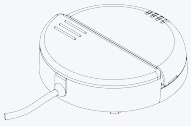
M-Bus wireless

mod. IWM-LR4



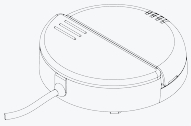
LoRaWAN

mod. IWM-MB4



M-Bus

mod. IWM-PL4



PULSE

Calibro - Size			DN (in)	50 (2")	65 (2"1/2)	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")
	Portata di sovraccarico Overload flow rate	Q_4	m³/h	50	78,75	125	200	200	312,5	500
	Portata permanente Permanent flow rate	Q_3	m³/h	40	63	100	160	160	250	400
R=100 H ←	Portata di transizione Transitional flow rate	Q_2	m³/h	0,64	1,008	1,60	2,56	2,56	4,00	6,40
R=100 H ←	Portata minima Min flow rate	Q_1	m³/h	0,40	0,63	1,00	1,60	1,60	2,50	4,00
R=160 H ↑*	Portata di transizione Transitional flow rate	Q_2	m³/h	0,40	0,63	1,00	1,60	1,60	2,50	4,00
R=160 H ↑*	Portata minima Min flow rate	Q_1	m³/h	0,25	0,394	0,625	1,00	1,00	1,563	2,50
R=250 H ↑*	Portata di transizione Transitional flow rate	Q_2	m³/h	0,256	0,403	0,64	1,024	1,024	1,60	2,56
R=250 H ↑*	Portata minima Min flow rate	Q_1	m³/h	0,16	0,252	0,40	0,64	0,64	1,00	1,60
	Lettura minima Min reading		L	0,5					5	
	Lettura massima Max reading		m³	9.999.999					99.999.999	
	Perdita di carico alla Q_3 Max pressure loss at Q_3		bar	0,25	0,40	0,25	0,40	0,40	0,16	0,40
	Pressione max ammissibile Max admissible pressure		bar	16						

*Versione su richiesta/ Version on request

Versione base — Basic version

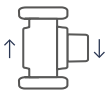
- **R100VH↑→**
- **Disponibile in versione per acqua fredda 0,1°C-50°C e per acqua calda 30°C-90°C**
- **Trasmissione magnetica**
- **Lettura diretta su 7 rulli numeratori**
- **Meccanismo estraibile**
- **Protezione antifrode magnetica**
- **Quadrante asciutto orientabile a 360°**
- **Con coperchio**

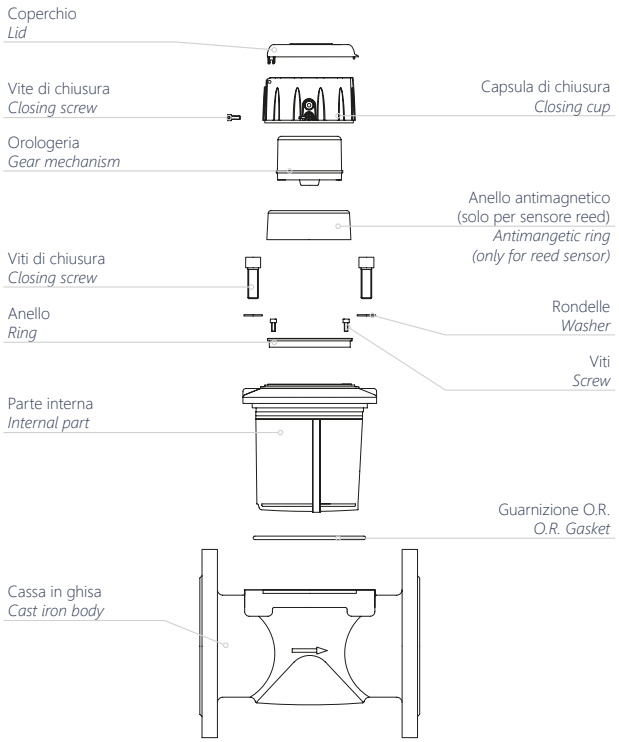
- R100 VH↑→
- Available for cold water 0,1°C-50°C and for hot water 30°C-90°C
- Magnetic transmission
- Direct reading on 7 numeric rolls
- With removable insert
- Anti-magnetic fraud protection
- 360° rotating drydial
- With lid

Su richiesta — Upon request

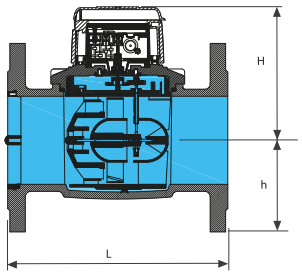
- **R160 H↑ R100 VH→**
- **R250 H↑ R160 VH→ (Disponibile nella sola versione per acqua fredda 0,1°C-50°C)**

- R160H ↑ R100VH →
- R250H ↑ R160VH → (Available for cold water 0,1°C-50°C only)

Posizione d'installazione - Installation position		
		
R 100H↑ R 160H↑ R 250H↑	R 100H→ R160H→	R 100V R160V



Dimensioni e pesi - Dimensions and Weights



Calibro - Size	DN (in)	50 (2")	65 (2"1/2)	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")
L	mm	200	200	225	250	250	300	350
H	mm	130	130	152	152	152	181	181
h	mm	78	86	95	104	117	133	162
Pesi Weight	Kg	8,5	9,5	13,5	15	18	30,5	43

Flange ISO 7005-2 / EN 1092-2 PN16

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.*
Allarms	*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*

mod.

IWM-MB4

V3.2

Wired M-BUS module
for Woltmann meters with inductive interface

NFC

android

Google play

M-Bus



Compatible water meters

mod. **WDE-K50**



ENG

Description

The IWM-MB4 is suitable for remote reading applications in a commercial and industrial context. This M-BUS module allows the meter consumption data collecting by using the standard Wired M-BUS protocol, developed for remote meters reading.
The use of an inductive target into the meter dial excludes the possibility of magnetic fraud and makes the application insensitive to the pipes vibrations.

The IWM-MB4 is compatible with all the pre-equipped Woltmann meters and provides:
- *Consumption analysis with reverse flow compensation.*
- *Fraud detection (removal of the module, external magnetic field tampering, reverse flow, water leakage). All the alarms are recorded and reported into the M-BUS telegram sent by the module.*
- *IP68 protection* allows the installation of the module even in harsh environments.*
- *NFC interface allows configuration and commissioning of the device with the use of a simple smartphone app.*

Technical features	
Protocol	*MBUS EN13757-2\3*
Cable length	*1,5 meters*
Compatible water meters	*WDE-K50*
Sensitivity measure	*10 liters (up to DN125) or 100 liters (from DN150)*
Reverse flow	*Activate for the backward flow amount after user-settable threshold*
Energy supply	*Non-replaceable lithium battery, rechargeable (automatic recharge from the BUS network). Backup for measuring function in absence of BUS voltage.*
Protection class	*IP68**
Weight	*151 g*
Size (l x p x h, cable excluded)	*100 x 100 x 25 mm*
Working Temperature	*from +1°C to +55°C*
Transmitted data	*Volume (consumption), alarms*
Maximum reading error	*0,5%*
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 freely downloadable from GOOGLE PLAY.* *• Any M-BUS level converter and Windows PC with BMBus software installed (or other M-BUS softwares).*

** IP68: maximum 24 hours of continuous submersion at 1 m depth*

SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

mod.

IWM-PL4

Electronic pulse emitter module
for Woltmann meters with inductive interface

NFC

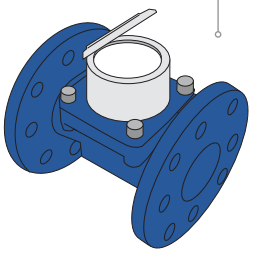
android

Google play

PULSE



Compatible water meters



mod. **WDE-K50**

ENG

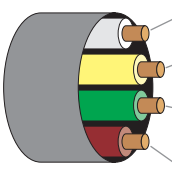
Description

The IWM-PL4 is suitable for remote reading applications in commercial and industrial sectors, acting as an electronic pulse-emitter. It allows the acquisition of the consumption of the counter by third-party systems with a universal interface and integrating advanced counting functions and fraud detections. The use of an inductive target at the counter excludes the possibility of magnetic fraud and makes the application insensitive to the pipes vibrations.
The IWM-PL4 is compatible with all the pre-equipped Woltmann meters and allows:

- *Consumption analysis (with incremental and decremental counting), Reverse flow compensation can be activated for an always perfect alignment between the counter and counter clock.*
- *Checking frauds (cable cut and removal, application of external magnetic field, reverse flow). The presence of reverse flow can be monitored with a dedicated impulse contact.*
- *Dedicated dosing function available for industrial applications.*
- *IP68 protection* allows the use of the module also for meters installed in harsh environments.*
- *NFC interface allows high flexibility of configuration, allowing setting of the output pulse ratio in total autonomy through smartphone app (available ratio values: multiples of the index value), and being able to configure the duration of the output pulse according to the sensitivity of the acquisition system.*

Technical features	
Output signal	*Supply: maximum 30VDC (100mA) Type: polarized open-collector*
Cable length	*1.5 meters (4 conductors)*
Compatible water meters	*WDE-K50*
Pulse output minimum value (K)	*10 liters (up to DN125) or 100 liters (from DN150)*
Energy supply	*Non-replaceable lithium battery, max lifetime 10 years**
Protection class	*IP68***
Weight	*160 g*
Size (l x p x h, cable excluded)	*100 x 100 x 25 mm*
Working Temperature	*+1° / +55°C*
Module programming requirements	*Android device (smartphone, tablet, etc.) with a NFC interface and the NFC IWM Config APP freely downloadable from GOOGLE PLAY*

** 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.*



WHITE+ — *Simple counting wire, NO contact*
Closes every index revolution, independently from the flow direction

YELLOW+ — *Fraud wire, NC contact, Opens at the following alarm conditions:*
- Module removal
- Inductive target tampering
- Cable cut
- Magnetic tampering

GREEN+ — *Third wire, NO contact, it can be assigned to one of the following features:*
- Absolute counting (closes every index revolution during forward flow, with backward flow revolution compensation)
- Backward counting (closes every revolution during back flowing)
- Dosing (closes every XX liter, with XX freely settable)

BROWN- — *Ground (common wire)*

mod.

IWM-TX4

V21.2

Wireless M-BUS module
for Woltmann meters with inductive interface



Compatible water meters

mod. **WDE-K50**



ENG

Description

IWM-TX4 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 in Walk-by mode or AMR, in respect of the wM-Bus standard.

• 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	W-Mbus EN13757-4 @868 MHz ≤ 25 mW, modo T1
Coverage	500m*
Compatible water meters	WDE-K50
Pulse output minimum value (K)	10 liters (up to DN125) or 100 liters (from DN150)
Configuration	Via radio (with RFM-RX2 and software B Metering), 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	from +1°C to +55°C
Transmitted data	Volume (consumption), backward flow volume, 12 monthly historical values, battery status, alarms
Maximum reading error	0,5 %
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 android Bmetering NFC Config app freely downloadable from GOOGLE PLAY • RFM-RX2 receiver, magnet and Windows PC with B Metering software installed

** 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*