

Product List

USE ENERGY SMARTER

in buildings, utilities and smart cities

Water meters, heat allocators
and intelligent sensors

Network, IoT and
data infrastructure

Platform, applications and solutions

Services

Billing services

Data and analytics

WELCOME TO A WORLD OF OPPORTUNITIES

EXPLORE BrunataZENNER'S PRODUCT LIST

BrunataZENNER is an innovative cleantech company specialising in measuring and optimising energy usage in urban environments and buildings across Europe.

We offer intelligent energy metering, consumption accounting, and IoT solutions to residential and commercial properties, public institutions, organisations, and associations – with the strongest portfolio of Zenner products.

By harnessing the power of intelligent meter and measurement technology, data, and IoT solutions, we empower our customers to use energy in their properties more efficiently and sustainably. We firmly believe that technology can make the future more human.

Explore our products and solutions in this brochure to see how we can help you get more out of less.

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THE EUROPEAN ENERGY EFFICIENCY DIRECTIVE (EED)

EED AIMS TO REDUCE ENERGY CONSUMPTION AND IMPROVE ENERGY EFFICIENCY ACROSS EU

With the Energy Efficiency Directive, the EU has put the green transition on the agenda. We all need to become better at utilising energy and conserving the Earth's resources.

The purpose of the EED is to make residents and tenants more aware of how much energy they use to heat their homes. By doing so, we become better at saving energy.

Therefore, everyone must be informed to check their current consumption every month during the heating season. Of course, this data must be fully accessible to the residents.

The EED was adopted in 2018 and must be fully implemented by January 1, 2027.

BrunataZENNER's EED Notification Service will help you comply with EED.



NETWORK OVERVIEW

INNOVATIVE COMMUNICATION TECHNOLOGY: M-BUS, WIRELESS M-BUS, AND LORAWAN® IOT

ZENNER provides you with support during the planning, installation and operation of remote reading systems.

In addition to the hardware for wired M-Bus solutions, we provide two innovative alternatives for the wireless remote reading of your water meters, heat and cooling energy meters and gas meters with the wireless M-Bus system and the stationary LoRaWAN® IoT radio system:

- Reading without needing access to the property
- Simple and secure transmission of meter data
- Avoidance of reading errors
- Optimum data quality and continuous availability of data
- Shorter reading and billing intervals
- Simple reading of difficult to access measurement points

LORAWAN® IOT SOLUTIONS FROM ZENNER

LoRaWAN® enables you to read data from water, heat and cooling energy and gas meters via a stationary radio system.

ZENNER offers you a full range of LoRaWAN® capable measurement technology and innovative radio modules for all types of meters.

Your benefits of LoRaWAN® solutions include:

- Reading of main and sub-metering meters or sensors remotely
- Meter readout without appointments
- Visualisation of consumption and energy monitoring
- Simplifying the readout of meters in hard-to-reach measuring points

FOR A FUTURE THAT COUNTS

We focus on intelligent solutions for a sustainable future in which resources, efficiency and quality of life count more than ever. We live a strong international partnership and group of world leading companies in energy metering.

We offer a complete and unique value chain for several industries from large scale industrial solutions to domestic energy metering – from manufacturing of advanced precision meters to providing the relevant data, visualization, services and managed solutions.



FULL SCALE IS THE WAY TO GO

A complete value chain has a lot of advantages – for us and for you as a client. We can secure quality from manufacturing of every single product to installation, handling of data and services. Based on that we can offer you the best possible customer experience from first contact. From product to solutions and full service.



GLOBAL KNOW-HOW

With representation in over 40 countries and export to more than 90 markets worldwide we have a substantial knowhow, which you can draw on when planning on your next project.



WATER METERS RESIDENTIAL

SUBMETERING



IUWS

ULTRASONIC APARTMENT / DOMESTIC WATER METER FOR COLD WATER

The IUWS ultrasonic water meter guarantees reliable recording of the meter data for individual consumption bill-ing in the residential or domestic water sector.

The IUWS is equipped with a 9-digit LCD display. The integrated radio interface is preset at the factory to wireless M-Bus (OMS) or LoRaWAN[®]. If required, this can also be changed at a later date.

All variants are approved for any installation and are therefore also available in the usual lengths for riser and downpipe installation. A head-down mounting is also possible.

All materials, which are used in the drinking water section, comply with the required standards, guidelines and the current German drinking water approval (other country specific drinking water approvals on request).

PERFORMANCE CHARACTERISTICS AT A GLANCE

- Switchable radio technology
- Highest precision and reliability even in case of low flow rates
- Protection class IP68
- Insensitive to deposits and particles
- No straight inlet or outlet needed (U0/D0) according to OIML R49 and DIN EN ISO 4064
- Electronic, battery powered LCD register with NFC interface
- Smart Metering functions
- Alarm and statistic functions
- Galvanically separated NFC interface
- Battery life up to 15 years (depending on configuration and environmental conditions)
- Approved in accordance with MID (2014/32/EU)
- OMS certification for BSI-compliant smart meter gateway connection
- Plug and play detection of radio technology via NDC radio module
- Configuration-App



B.
One

- For consumption measuring of drinking water and unpolluted service water up to 50 °C

AMR options

- Integrated wM-Bus or LoRaWAN[®] radio interface
- NFC interface (=Near Field Data Capture) for connecting an external NDC module and for device configuration

APPLICATIONS

WITH INTEGRATED WIRELESS M-BUS INTERFACE, OMS CERTIFIED

for cold water up to 50 °C

approved for any installation (also overhead)

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"
4	190	20	3/4"	1"
10	260	25	1"	1 1/4"
16	300	40	1 1/2"	2"

for installation in risers or downpipes

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
4	105	20	3/4"	1"
10	150	25	1"	1 1/4"
16	150	40	1 1/2"	2"
16	200	40	1 1/2"	2"
16	300	40	1 1/2"	2"

WITH INTEGRATED LORAWAN® INTERFACE

for cold water up to 50 °C

approved for any installation (also overhead)

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"
4	190	20	3/4"	1"
10	260	25	1"	1 1/4"
16	300	40	1 1/2"	2"

for installation in risers or downpipes

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
4	105	20	3/4"	1"
10	150	25	1"	1 1/4"
16	150	40	1 1/2"	2"
16	200	40	1 1/2"	2"
16	300	40	1 1/2"	2"

ETKD / ETWD

SINGLE-JET DRY-DIAL METER FOR COLD AND HOT WATER

The ETKD / ETWD is a single-jet dry-dial water meter for cold and hot water and is available in 3 register variants. The special advantage is its compact design. Due to its very low installation height, the meter can be easily adapted to any installation situation. The meter guarantees reliable recording of meter data for individual consumption billing. All materials, which are used in the drinking water section, comply with the required standards, guidelines and the current German drinking water approval (other country-specific drinking water approvals on request).



ETKD-M / ETWD-M



ETKD-N / ETWD-N



ETKDI-N / ETWDI-N



ETKD-M (-CC) / ETWD-M (-CC)
ETKDE-M (-CC) / ETWDE-M (-CC)

The ETKD-M / ETWD-M is a single-jet meter with a modular 8-digit register with protected magnetic coupling that can be retrofitted with EDC-Module.

The modulator disc enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus/pulse module is also possible.

ETKD-M for cold water up to 30°C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

ETWD-M for warm water up to 90 °C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

The ETKD-N/ ETWD-N is a single-jet meter with a 7- or 8-digit register with protected magnetic coupling and it is prepared for a mechanical reed switch. The ETKD-N/ ETWD-N guarantees reliable recording of meter data for individual consumption billing. Alternatively, the reed switch interface enables remote reading of the meter data via PDC via radio with LoRaWAN® or wM-Bus.

ETKD-N for cold water up to 30°C with remote count pulse output

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

ETWD-N for hot water up to 90 °C with remote count pulse output

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

The ETKDI-N / ETWDI-N is a single-jet meter with a 7- or 8-digit register with protected magnetic coupling.

A mechanical pulser is already factory-assembled.

The ETKDI-N / ETWDI-N guarantees reliable recording of meter data for individual consumption billing.

Alternatively, the reed switch interface enables remote reading of the meter data via PDC via radio with LoRaWAN® or wM-Bus.

ETKDI-N for cold water up to 30°C with remote count pulse output

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

ETWDI-N for hot water up to 90 °C with remote count pulse output

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

The ETKD-M-CC / ETWD-M-CC is a single-jet meter with a modular 8-roller copper-glass register (IP 68) with protected magnetic coupling and protective cap.

The modulator disc enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus / pulse module is also possible

ETKD-M-CC for cold water up to 30°C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

ETWD-M-CC for warm water up to 90 °C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

The ETKDE-M (-CC)/ ETWDE-M (-CC) is a single-jet meter modular 8-roller copper-glass register (IP 68) with protected magnetic coupling and protective cap.

The modulator disc enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus.

EDC-Module (-CC = IP68) is factory fitted.

ETKDE-M-CC for cold water up to 30°C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m³/h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

ETWDE-M-CC for warm water up to 90 °C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m³/h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

EDC Modules for Multi-Jet Water Meter Dry-Dial Version (Type-CC)

Description
EDC-S Communication Module with Pulse-Interface
EDC-S Communication Module with wireless M-Bus-Interface
EDC-S Communication Module with LoRaWAN®-Interface



MINOMESS®

SURFACE MOUNTED SINGLE JET WATER METER LORAWAN® OR WIRELESS M-BUS-INTERFACE

The radio water meter Minomess® is a dry-dial meter with 7-digit-rollers register and shielded magnetic coupling.

The individual advantage of the meter an exceptional compact design. With its very small height, the meter easily adapts to any installation situation. The meter is available in various lengths and dimensions. It can be used in horizontally and vertically position.

Minomess® is equipped with a LoRaWAN® or wireless M-Bus radio module ex works and can be integrated in LoRaWAN® readout-systems.

All materials, which are used in the drinking water section, comply with the required standards, guidelines and the current German drinking water approval (other country-specific drinking water approvals on request).



B.
One

for cold water up to 30°C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

for hot water up to 90 °C

for horizontal and vertical installation (also for risers and downpipes), incl. seals and seal set

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	80	15	1/2"	3/4"
2,5	110	15	1/2"	3/4"
4	130	20	3/4"	1"

MTKD-M (-CC) / MTKD-N / MTKDI-N

MULTI-JET DRY DIAL METER FOR COLD WATER

The MTKD-M (-CC) is equipped with an 8-digit dry dial meter register and a modulator disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus (according to DIN EN 13757-4). A combined M-Bus/ pulse module is also possible.

The MTKD-N and MTKDI-N are equipped with an 8-digit register and 1 l/pulse as standard or is available with a 7-digit register and 10 l/pulse.

The MTKDI-N is a multi-jet dry-dial meter for cold water with factory-assembled reed pulser.



MTKD-M (-CC)
MTKD-N



MTKDI-N

MTKD-M (-CC) for cold water up to 50 °C

for horizontal and vertical installation, also available in standpipe and downpipe design on request

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	165	15	1/2"	3/4"
2,5	170	15	1/2"	3/4"
4	190	20	3/4"	1"
6,3	260	25	1"	1 1/4"
10	260	25	1"	1 1/4"
10	260	32	1 1/4"	1 1/2"
16	300	40	1 1/2"	2"
25	300	50	2"	2 1/2"

MTKD-N and MTKDI-N for cold water up to 50 °C

for horizontal and vertical installation, also available in standpipe and downpipe design on request

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	165	15	1/2"	3/4"
2,5	170	15	1/2"	3/4"
4	190	20	3/4"	1"
6,3	260	25	1"	1 1/4"
10	260	25	1"	1 1/4"
10	260	32	1 1/4"	1 1/2"
16	300	40	1 1/2"	2"
25	300	50	2"	2 1/2"

The MTKDI-N is a multi-jet dry-dial meter for cold water with factory-assembled reed pulser.

MTKDE

DRY DIAL MULTI-JET WATER METER

The MTKDE PULSE meters are equipped with a Hybrid EDC module (Pulse & M-Bus). Standard in 1/h, but programmable to the desired pulse weight.

The MTKDE water meters guarantees the most precise measurement results, minimum bearing load and a long service life. The MTKDE is equipped with an 8-digit dry dial meter register and a modulator disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio.

Factory mounted EDC communication module enables radio communication by either 868MHz LoRaWAN[®] or WM-Bus according to DIN EN 13757-4.



MTKDE for cold water up to 50 °C, with factory-assembled EDC communication module
for horizontal and vertical installation (also for risers and downpipes)

Q3 m ³ /h	Length mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	165	15	1/2"	3/4"
4	190	20	3/4"	1"
10	260	25	1"	1 1/4"
10	260	32	1 1/4"	1 1/2"
16	300	40	1 1/2"	2"
25	300	50	2"	2 1/2"
25	270	50	Flange	

MTWD / MTWD-N / MTWDI

MULTI-JET DRY DIAL METER FOR HOT WATER

The MTWD is ideally suited to measuring tasks at temperatures up to 90°C. By using special materials, outstanding measurement readings can be combined with a high maximum temperature.

The MTWD-N multi-jet meter with flood-proof (IP68) hermetically sealed glass/copper register guarantees a reliable collection of meter data for individual consumption billing and can optionally be retrofitted with a pulser.

The MTWD-N is equipped with an 8-digit register and 1 l/pulse as standard or is available with a 7-digit register and 10 l/pulse and it is optionally available with brass register box.



MTWD-N for hot water up to 90 °C

for horizontal and vertical installation, also available in standpipe and downpipe design on request

Q3 m ³ /h	Length mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	165	15	1/2	3/4
2,5	170	15	1/2	3/4
4	190	20	3/4	1
4	105	20	3/4	1
6,3	260	25	1	1 1/4
6,3	150	25	1	1 1/4
10	260	25	1	1 1/4
10	260	32	1 1/4	1 1/2
10	10	25	1	1 1/4
16	300	40	1 1/2	2
16	150	40	1 1/2	2
16	200	40	1 1/2	2
25	300	50	2	2 1/2

MTWDI for hot water up to 90 °C

for horizontal and vertical installation, also available in standpipe and downpipe design on request

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	165	15	1/2	3/4
2,5	170	15	1/2	3/4
4	190	20	3/4	1
4	105	20	3/4	1
6,3	260	25	1	1 1/4
6,3	150	25	1	1 1/4
10	260	25	1	1 1/4
10	260	32	1 1/4	1 1/2
10	10	25	1	1 1/4
16	300	40	1 1/2	2
16	150	40	1 1/2	2
16	200	40	1 1/2	2
25	300	50	2	2 1/2

MTWD-M-CC

MULTI-JET DRY DIAL METER FOR HOT WATER

The current level of development of the MTWD-M-CC guarantees the most precise measurement results, minimum bearing load and a long service life.

It is ideally suited to measuring tasks at temperatures up to 90°C. By using special materials, outstanding measurement readings can be combined with a high maximum temperature.

The meter is equipped with an 8-digit glass/copper register (IP68) and a modulator disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus.

A combined M-Bus/pulse module is also possible.



MTWD-M-CC for hot water up to 90 °C, can be retrofitted for remote reading

for horizontal and vertical installation (also for risers and downpipes), counter protection class IP68

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
2,5	165	15	1/2"	3/4"
4	190	20	3/4"	1"
10	260	25	1"	1 1/4"
10	260	32	1 1/4"	1 1/2"
16	300	40	1 1/2"	2"

EDC Modules for Multi-Jet Water Meter Dry-Dial Version (Type-CC)

Description

EDC-S Communication Module with Pulse-Interface

EDC-S Communication Module with wireless M-Bus-Interface

EDC-S Communication Module with LoRaWAN®-Interface



RTKD-M-CC

ROTARY PISTON DRY-DIAL METER FOR COLD WATER

Available with flood-proof (IP 68) hermetically seal glass/copper register

The RTKD positive displacement meter records the flow rate according to the volumetric measuring principle. It offers a very high measuring range, excellent measuring stability and therefore guarantees extremely precise consumption recording.

The RTKD-M features a very low starting flow and is permitted for all installation positions.

The meter is equipped with an 8-digit dry-dial meter register and a modular disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus/pulse module is also possible.



RTKD-M for cold water up to 50 °C

rotary piston dry-dial meter for any installation position (except overhead)

Q3 m ³ /h	Length mm	DN	Ø pipe R x	Counter attachment Ø G x B
1,6	110	15	1/2	3/4
1,6	115	15	1/2	3/4
1,6	165	15	1/2	3/4
1,6	170	15	1/2	3/4
2,5	110	15	1/2	3/4
2,5	115	15	1/2	3/4
2,5	165	15	1/2	3/4
2,5	170	15	1/2	3/4
2,5	165	20	3/4	1
2,5	190	20	3/4	1
4	105	20	3/4	1
4	165	20	3/4	1
4	190	20	3/4	1

RTKD-M-CC for cold water up to 50 °C

rotary piston dry-dial meter for any installation position (except overhead)

Q3 m ³ /h	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
1,6	110	15	1/2	3/4
1,6	115	15	1/2	3/4
1,6	165	15	1/2	3/4
1,6	170	15	1/2	3/4
2,5	110	15	1/2	3/4
2,5	115	15	1/2	3/4
2,5	165	15	1/2	3/4
2,5	170	15	1/2	3/4
2,5	165	20	3/4	1
2,5	190	20	3/4	1
4	105	20	3/4	1
4	165	20	3/4	1
4	190	20	3/4	1
6,3	165	25	1	1 1/4
10	260	25	1	1 1/4
10	260	32	1 1/4	1 1/2
16	300	40	1 1/2	2

ACCESSORIES FOR MULTI-JET METERS

Article		DN	Ø pipe R x	Counter attachment Ø G x B
Fittings brass with gasket (2 pieces per meter are required)		15	1/2"	3/4"
		20	3/4"	1"
		25	1"	1 1/4"
		32	1 1/4"	1 1/2"
		40	1 1/2"	2"
		50	2"	2 1/2"
Backflow Preventer incl. gasket		15	1/2"	
		20	3/4"	
		25	1"	
		40	1 1/2"	
Sealing Clamp	one-piece	15	1/2"	3/4"
		20	3/4"	1"
Sealing Clamp (Half shell)	two-piece	15	1/2"	3/4"
		20	3/4"	1"
		25	1"	1 1/4"
		40	1 1/2"	2"
Sealing wire Brass / Plastic 1 Role (100m)				
Sealing wire Copper/Copper 1 Role (100m)				
Plastic seal 10 mm				
Sealing clamp Incl. Sealing Clamp Insert without engraving				
Sealing Clamp Insert with 2 Numerals				
Transition piece		25 / 32	for Q ₃ =4 / Q ₃ =10	
		32 / 50	for Q ₃ =10 / Q ₃ =16	



Article		DN	Ø pipe R x	Temperature
Fiber Seal (Aramid ST-2058)	17x24x2	15	1/2"	50 °C/90 °C
	24x30x2	20	3/4"	50 °C/90 °C
	29,2x38x3	25	1"	50 °C/90 °C
	35x44x2	32	1 1/4"	50 °C/90 °C
	43,2x56x2	40	1 1/2"	50 °C/90 °C
	59x70x4	50	2"	50 °C/90 °C
Aqualit gasket (EPDM) for cold water	17x24x2	15	1/2"	50 °C
	23,2x30x2	20	3/4"	50 °C
	29,2x38x3	25	1"	50 °C
	35x44x3	32	1 1/4"	50 °C
	43,2x55x3	40	1 1/2"	50 °C
Plastic gasket LDPE white for cold water	18x24x3	15	1/2"	50 °C
	23,2x30x2	20	3/4"	50 °C
	29,2x38x2	25	1"	50 °C
	36,2x44x2	32	1 1/4"	50 °C
	43,2x54x2,5	40	1 1/2"	50 °C

BULK WATER METERS

PRODUCTION



IUW

ULTRASONIC BULK WATER METER FOR USE IN DRINKING WATER DISTRIBUTION AND INDUSTRIAL APPLICATIONS

The IUW ultrasonic bulk water meter is used to record high and fluctuating flows in drinking water distribution and in industry, with a very low pressure loss at the same time. Two pairs of ultrasonic sensors ensure optimum measurement accuracy.

The IUW is factory-fitted with a 9-digit LCD display and an NFC interface. This enables a subsequent connection of a wM-Bus (OMS) or LoRaWAN[®]-NDC module.

Via the plug and play function of the NDC module, the radio technology set on the meter is automatically adopted by the NDC module. All variants are approved for any installation and are therefore also suitable for riser and downpipe installation. A head-down mounting is also possible.

All materials, which are used in the drinking water section, comply with the required standards, guidelines and the current German drinking water approval (other country-specific drinking water approvals on request).

PERFORMANCE CHARACTERISTICS AT A GLANCE

- Switchable radio technology
- Highest precision and reliability even in case of low flow rates
- Protection class IP68
- No moving parts in the flow sensor
- Insensitive to deposits and particles
- No straight inlet or outlet needed (U0/D0) according to OIML R49 and DIN EN ISO 4064
- Battery powered LCD register with NFC interface
- Smart functions
- Alarm and statistic functions
- Galvanically separated NFC interface
- Battery life > 15 Years
- Operating pressure MAP 16
- Approved in accordance with MID
- Plug and play detection of radio technology via NDC radio module
- Configuration-App
- Mechanical/electromagnetic environment class M2/E2

APPLICATIONS

- For measuring the consumption of cold and clean



- drinking water or service water up to 50° C
- For measuring high flow rates

AMR options

- NFC interface (= Near Field Data Capture) for connecting an external NDC module and for device configuration

READOUT OPTIONS OF THE MEASURING DEVICE VIA THE NFC INTERFACE (NEAR FIELD COMMUNICATION)

- Device ID (serial number)
- Current (balanced) consumption display or Total volume in case of an overflow
- Date / Time
- Firmware version
- Up to 15 previous month's value
- Temperature
- Key date / key date volume
- Flow volume / return volume
- Alarm or error message
- Battery end

WITH INTEGRATED NFC INTERFACE FOR RETROFITTING A LORAWAN® RADIO MODULE

for cold water up to 50 °C

approved for any installation (including overhead), remote reading via NFC interface

Q3 m ³ /h	Lenght mm	DN	PN
25	200	50	16
25	270	50	16
40	200	65	16
40	300	65	16
63	225	80	16
63	300	80	16
100	250	100	16
100	360	100	16
160	250	125	16
250	300	150	16
250	500	150	16
400	350	200	16

WITH INTEGRATED NFC INTERFACE FOR RETROFITTING A wM-BUS RADIO MODULE

for cold water up to 50 °C

approved for any installation (including overhead), remote reading via NFC interface

Q3 m ³ /h	Lenght mm	DN	PN
25	200	50	16
25	270	50	16
40	200	65	16
40	300	65	16
63	225	80	16
63	300	80	16
100	250	100	16
100	360	100	16
160	250	125	16
250	300	150	16
250	500	150	16
400	350	200	16

NDC communication module

Description

NDC communication module with LoRa/wireless M-Bus interface



WPD (E) / WPHD (E)

WOLTMAN METER WITH IMPELLER AXIS ARRANGED IN PARALLEL TO THE FLOW DIRECTION

The bulk water meter WPD / WPHD is used to record high flows in drinking water distribution and in industry, with low pressure loss and a predominantly constant flow profile at the same time.

The meter is equipped with a 6-roller dry dial register (IP68) and a modulator disc. This enables electronic, reaction-free scanning and is the basis for remote reading of the meter data via radio with LoRaWAN[®] or wM-Bus.

A combined M-Bus / pulse module is also possible. A mechanical pulsers can also be connected in parallel.



WPD/WPHD Woltman for cold water up to 50 °C

for installation in horizontal and vertical pipelines, can be retrofitted for remote reading

Q3 m ³ /h	Lenght mm	DN	PN
25	200	50	16
40	200	65	16
63	225	80	16
100	250	100	16
100	250	125	16
250	300	150	16
400	350	200	16

EDC retrofit modules for large water meters type WPD / WSD

Description	Interface	Assembly	Impulse value (L/impulse)
EDC-C for WPD/WSD DN50-125	M-Bus + Pulse output Mode U	Clip	10
EDC-C for WPD/WSD DN150-300	M-Bus + Pulse output Mode U	Clip	100
EDC-C for WPD/WSD DN50-125	wireless M-Bus	Clip	10
EDC-C for WPD/WSD DN150-300	wireless M-Bus	Clip	100
EDC-C for WPD/WSD DN50-125	LoRa	Clip	10
EDC-C for WPD/WSD DN150-300	LoRa	Clip	100

WI-N

IRRIGATION WATER METER

The WI-N water meter is designed for use with heavily contaminated water, e.g. in agriculture, in sewage treatment plants or wastewater systems.

Our irrigation meters guarantee functional reliability under the most difficult conditions by positioning the measuring insert in the upper section of the pipe, where there is generally only a small number of suspended particles in the running water. The meter easily takes a level of impurity of up to 30% in its stride. Where there is very heavy contamination, external filters can be inserted upstream of the water meter.

The factory-tested measuring insert is the same for all meter sizes and can be delivered with the following measurement accuracy:

$Q_{max}-Q_t: \pm 3\%$ (value class A+B)

$Q_t-Q_{min}: \pm 5\%$ (value class A)

The mechanical counter is completely encapsulated and hence protected against impurities. As standard, the meters are supplied with a lockable protective metal cap which acts as a dependable protection for the counter, even in harsh conditions. Reed pulser can be retrofitted at any time without damaging the calibration seal.

Pulser values for Woltman Meters*

DN 40 – DN 125 Standard 100 L/Imp.

DN 150 – DN 300 Standard 1.000 L/Imp.

DN 400 – DN 500 Standard 10.000 L/Imp.

(* other values on request)



WI-N Woltman for cold water up to 50 °C

Q3 m ³ /h	Lenght mm	DN	Counter attachement
30	200	50	Flange
50	200	65	Flange
90	250	100	Flange
125	250	125	Flange
250	300	200	Flange

ENERGY METERS

HEATING AND COOLING METERS



zelsius® C5-IUF

COMPACT HEAT METER WITH ULTRASONIC FLOW SENSOR (IUF)

The thermal energy meter (also called heat or cold meter) zelsius® C5-IUF operates with an innovative ultrasonic technology, specially developed for a broad scope of application from submetering to domestic and district heating and cooling.

Specially for district heating transfer and compact apartment stations with fast temperature changes, zelsius® C5-IUF is also available as a "fast response meter" in accordance with DIN EN 1434-1.

This wear-free ultrasonic technology is stable in the long run, insensitive to dirt and measures reliably, even with very small flow volumes.

The ultrasonic flow sensors can be operated permanently up to a heat medium temperature of 130 °C and are optimally suited for application in district heat supply.

Because of the high overload capacity and the wear-free measurement technology they can also be used to measure energy in hot water supply systems in accordance with § 9 (2) of the German heating costs ordinance.

A single button is used to call up all the important device

- Ultrasonic flow sensor in a robust metal design
- Consumption display in MWh with 3 decimal places
- Calculator rotatable and removable as standard
- Connection cable length approx. 1.2 m, including wall bracket
- Versions with thread in pressure rating PN 16
- Versions with flange in pressure rating PN 25
- Conformity assessment in metrological class 2
- MID type examination certificate DE-12-MI004-PTB010 in the metrological class 2
- Domestic type examination certificate DE-20-M-PTB-0046 for cooling energy metering in metrological class 2
- OMS certification for BSI-compliant smart meter gate-way connection



and consumption data, such as reference date values, maximum values or the stored monthly values over the entire lifetime of the meter.

Its diverse, optionally selectable communication interfaces mean that the zelsius® C5 guarantees efficiency and precision in the recording of consumption data, whether by M-Bus or radio.

PERFORMANCE CHARACTERISTICS AT A GLANCE

- Flow sensor with protection class IP 68
- No straight inlet or outlet sections required
- Permanent temperature load depending on the model up to 105 °C or 130 °C
- Any installation position - even "head down"

HEAT METER WITH ULTRASONIC FLOW SENSOR (IUF)

for heating and/or cooling systems

Version with temperature sensors L = 45 mm, D = 5.2 mm

Operating temperature of the flow sensor either up to 105°C or 130°C

Sensor cable length approx. 1.5 m

Flow temperature optionally up to 105°C or 150°C

Nominal size qp (m³/h)	Length mm	DN	Ø pipe R x	Counter attachment Ø G x B
1,5	110	15	R1/2	G3/4B
2,5	130	20	R3/4	G1B
3,5	150	25	R1	G1 1/4B
6	260	25	R1	G1 1/4B
6	260	32	R1 1/4	G1 1/2B
10	300	40	G1 1/2 B	G2B

M-Bus interface according to DIN EN 13757

Wireless M-Bus interface

LoRaWAN® interface

Temperature sensor type DS 27.5 ("AGFW sensor")

Temperature measuring interval 4 seconds

"Fast responding" according to DIN EN 1434-1

Temperature sensor L=45 mm, D=5.0 mm

Designed as a combined heat/cold meter with automatic switching

Temperature sensor cable length approx. 5 m (instead of approx. 1.5 m)

zelsius® C5-ISF

COMPACT HEAT METER WITH SINGLE-JET FLOW SENSOR (ISF)

The thermal energy meter (also called heat or cold meter) zelsius® C5-ISF with single-jet flow sensor combines efficiency with compact design, highest precision and most advanced communication interfaces for M-Bus, wireless M-Bus or LoRa®.

Specially designed for sub-metering applications, it is very well prepared to be used in all real estate with central heat supply:

- Industrial and business buildings
- Apartment buildings and residential complexes
- Multi-family buildings

The combi version with removable calculator allows installation even in the smallest distribution boxes.

Zelsius® C5-ISF is a threaded meter, equipped with a rugged single-jet flow sensor (ISF) with reaction-free electronic impeller detection, available for new installations as well as for simple calibration replacement in all common sizes.

for heating and/or cooling systems

Version with temperature sensor L = 45 mm, D = 5.2 mm

Sensor cable length approx. 1.5 m

Nominal size qp (m ³ /h)	Lenght mm	DN	Ø pipe R x	Counter attachment Ø G x B
0,6	110	15	R1/2	G3/4B
1,5	110	15	R1/2	G3/4B
2,5	130	20	R3/4	G1B

Version with rotating and removable calculator,
Connection cable length approx. 1.2 m, including wall bracket

M-Bus interface according to DIN EN 13757

Wireless M-Bus interface

LoRaWAN® interface

Temperature sensor L=45 mm, D=5.0 mm

Temperature sensor type DS 27.5 ("AGFW sensor")

Designed as a combined heat/cold meter with automatic
Switching (only for versions with removable calculator)

Temperature sensor cable length approx. 5 m (instead of approx. 1.5 m)

Version as a "glycol meter" for water-antifreeze mixtures, type of glycol (ethylene or propylene glycol) and 15 mixing ratios can be programmed on site directly on the meter, not capable of being calibrated or subject to calibration



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zelsius® C5-CMF

COMPACT HEAT METER WITH MEASURING CAPSULE FLOW SENSOR (CMF)

The thermal energy meter (also called heat or cold meter) zelsius® C5-CMF with measuring capsule flow meter combines compactness with rugged construction.

The calculator on the zelsius® C5-CMF is removable as standard with a cable length of approx. 1.2 m and provides a real practical advantage in tight spaces and transfer stations with covers. A matching wall adapter with mounting hardware is included in the delivery.

The flow sensor on the zelsius® C5-CMF has electronic, non-reactive impeller scanning and has metrological approval for horizontal and vertical installation (downpipe and riser) according to the current European Measuring Instruments Directive 2014/32 /EU (MID).

The zelsius® C5-CMF is ideally suited for regular meter replacement as well as for installation in pre-equipped single-pipe connectors thanks to the large selection of compatible and commercially available interfaces.



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Version with connection interface type IST according to DIN EN 14154-2

Connection thread 2", compatible with ISTA, among others

Temperature sensor L = 45 mm, D = 5.0 mm

Sensor cable length approx. 1.5 m

Return flow temperature sensor integrated in the flow sensor

Nominal size qp (m ³ /h)	Connection thread
0,6	2"
1,5	2"
2,5	2"



Version with connection interface type TE1 according to DIN EN 14154-2

Connection thread M 62x2, compatible with TECHEM

Temperature sensor L = 45 mm, D = 5.2 mm

Sensor cable length approx. 1.5 m

Return flow temperature sensor integrated in the flow sensor

Nominal size qp (m ³ /h)	Connection thread
0,6	M 62x2
1,5	M 62x2
2,5	M 62x2

**Version with connection interface type A1 according to DIN EN 14154-2**

Connection thread M 77x1.5, compatible with ALLMESS / ITRON

Temperature sensor L = 60 mm, D = 6.0 mm (DS6)

Sensor cable length approx. 1.5 m

Both temperature sensors are external

Nominal size qp (m ³ /h)	Connection thread
0,6	M 77x1,5
1,5	M 77x1,5
2,5	M 77x1,5

**Version with connection interface type PCC according to DIN EN 14154-2**

Connection thread M 60x2, compatible with SENSUS (Xylem) PolluCom C

Temperature sensor L = 45 mm, D = 5.2 mm

Sensor cable length approx. 1.5 m

Return flow temperature sensor integrated in the flow sensor

Nominal size qp (m ³ /h)	Connection thread
0,6	M 60x2
1,5	M 60x2
2,5	M 60x2



Version with connection interface type M60 according to DIN EN 14154-2

Connection thread M 60x1.5, compatible with MINOL

Temperature sensor L = 45 mm, D = 5.0 mm

Sensor cable length approx. 1.5 m

Return flow temperature sensor integrated in the flow sensor

Nominal size q _p (m ³ /h)	Connection thread
0,6	M 60x1,5
1,5	M 60x1,5
2,5	M 60x1,5

**Optional****Description**

M-Bus interface according to DIN EN 13757

Wireless M-Bus interface

LoRaWAN[®] interfaceDesigned as a combined heat/cold meter
with automatic switching

Temperature sensor cable length approx. 5 m (instead of approx. 1.5 m)

Assembly wrench / hook wrench for screwing the measuring capsule into the respective single-pipe connection
piece (EAS), robust design

Assembly key for zelsius type C5-A1(N)

MULTIDATA WR3

CALCULATOR FOR HEAT AND COOLING METERS

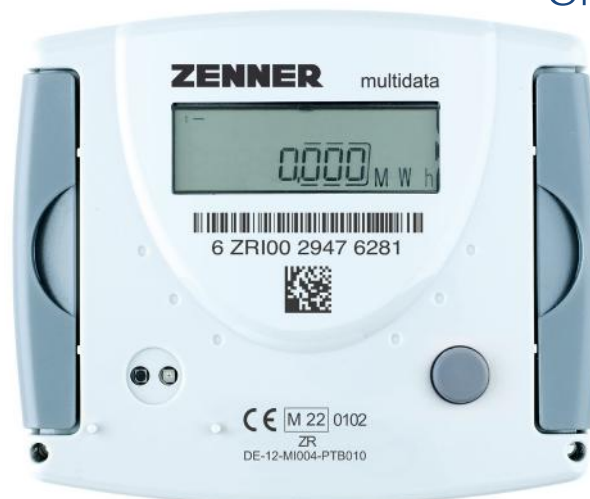
Multidata WR3 is used to measure heating and cooling energy in closed circulation systems. This is a so called split heat meter, for which a calculator, flow sensor and temperature sensor pair are required.



HIGH LEVEL OF COMPATIBILITY

The multidata WR3 is a real all-rounder that can be combined with nearly all standard temperature sensors and flow sensors. A special version is available for flow sensors with a high frequency pulse output.

All appliances allow the connection of both the flow sensor and two additional appliances via the pulse generator as standard, e.g. a cold and hot water meter. The meter readings can be called up via the menu on the appliance or via reading systems.



SUITABLE FOR HEATING AND COOLING

The multidata WR3 is optimally suited for the measurement of heating and cooling energy. The measured consumption values for cold and heat are saved in separated registers. Areas of application are air-conditioning systems in which both heating and cooling energy is emitted through the same pipeline network.

for connecting temperature sensor pairs type Pt 500

Version for connecting flow sensors with reed switches or Open Collector output, input frequency up to 1 Hz

Data interface	Temperature sensor type	Pulse inputs or outputs (can be configured on site via optical interface)		Pulse value of the flow meter (liters)
		Impulse inputs ex factory	Pulse outputs from the factory	
Version for heat counting with MID type test certificate				
with M-Bus	Pt 500	-	2	1
with M-Bus	Pt 500	-	2	10
with M-Bus	Pt 500	-	2	25
with M-Bus	Pt 500	-	2	100
with M-Bus	Pt 500	-	2	250

IZM Multipulse

PULSE MODULE

The new multipulse pulse counter stands out for its innovative housing concept and modern measuring technology: the module can be opened without using any tools.

The multifunctional and self-explanatory display always shows the current meter status. Additional symbols can be used to quickly and easily recognize other less common operating states.

Using the button on the front, all consumption and instrument data can be called up on three different levels, including the values for the set day! The multipulse pulse counter module is used wherever it is necessary to integrate existing meters that only have pulse outputs into an M-Bus system.

With this instrument, M-Bus networks can be created without having to use expensive electronic meters and M-Bus.

With the multilog, the variant with a large memory, it is possible to program numerous data loggers.



Data interface	Temperature sensor type	Pulse inputs or outputs (can be configured on site via optical interface)		Pulse value of the flow meter (liters)
		Impulse inputs ex factory	Pulse outputs from the factory	
Version for heat counting with MID type test certificate				
with M-Bus	Pt 500	-	2	1
with M-Bus	Pt 500	-	2	10
with M-Bus	Pt 500	-	2	25
with M-Bus	Pt 500	-	2	100
with M-Bus	Pt 500	-	2	250

Flow sensor IUF

WITH 2 ULTRASONIC MEASURING PATHS, FOR MEASUREMENT OF THERMAL ENERGY (HEATING OR COOLING)

The flow sensors IUF serve to record the heat carrier volume (water) in closed circulation systems of heating or cooling plants. The scope of application reaches from measuring points in buildings to district heating or cooling networks.

The recorded volume can be output either in the form of conventional volume pulses or via an optional data interface (type VMCP / Volume Meter Cycle Protocol).

Particularly noteworthy is the compatibility with the short case lengths of Woltman WP flow sensors, so that these mechanical devices can now be easily replaced by ultrasonic technology without the need for expensive reconstruction of the respective measuring point.

To complete a measuring point for thermal energy, a calculator and a pair of temperature sensors are required.



PERFORMANCE CHARACTERISTICS AT A GLANCE

- High-quality and durable housing, up to nominal size DN 100 made of stainless steel
- 2 ultrasonic measuring paths for precise flow measurement
- MID type examination certificat DE-19-MI004-PTB031 in the metrological class 2
- Supplementary German type examination certificat DE-20-M-PTB-0012 for cooling applications
- No straight inlet or outlet sections required
- Permanent temperature load up to 105 °C or 130 °C, depending on the version
- Any installation position (even "head down")
- Optional data interface for transmission of volume, flow rate, flow direction and device status

qp (m ³ /h)	Lenght mm	DN	Ø pipe R x	Impulse value (L)	Nominal pressure PN
Versions for combined heating/cooling metering					
15	200	50	Flange	25	25
15	270	50	Flange	25	25
25	200	65	Flange	25	25
25	300	65	Flange	25	25
40	225	80	Flange	25	25
40	300	80	Flange	25	25
60	250	100	Flange	25	16
60	360	100	Flange	25	16
60	360	100	Flange	25	25
100	250	125	Flange	250	16
100	350	125	Flange	250	16
150	300	150	Flange	250	16
150	500	150	Flange	250	16
150	500	150	Flange	250	25
250	350	200	Flange	250	16
250	500	200	Flange	250	16
400	600	250	Flange	250	16
600	500	300	Flange	250	16

Note: A complete heat meter requires a flow sensor, an electronic calculator including an M-Bus interface and a pair of sensors. Please specify the required variant when ordering.

FITTINGS

IMPULSE CABLE EXTENSION SET

Description

Impulse cable extension set, consisting of:
 Cable connector with protection class IP 65 / 68
 Two-core cable, length approx. 7 meters, assembled with ferrules
 2 adhesive seals

TEMPERATURE PROBES – PAIRS AND ACCESSORIES

TEMPERATURE SENSOR PAIRS TYPE PT 500

	Diameter (mm)	Installation length (mm)	Cable length (approx., m)	Matching immersion sleeve (mm)
PSC (Pocket Short Cable)	5,0	45	3,0	
	5,0	45	10,0	
	5,2	45	3,0	
	6,0	50	3,0	
DS (Direct Short) 27.5 for heat and cold measurement		27,5	1,5	
		27,5	5,0	
DS (Direct Short) 38 for heat and cold measurement		38	1,5	
		38	5,0	
"Universal 6 x 60 - 230" for heat and cold measurement, suitable for: Immersion wells 85, 120 and 210 mm with clamping screw Immersion wells 100 and 150 mm with 1/4" internal thread Installation locations for temperature sensor type "DS6"	6,0	60 to 230	3,0	85 to 210
	6,0	60 to 230	10,0	85 to 210



Pocket Short Cable



Temperature sensor for heat and cooling meter



Stainless steel thermowell with 1/2" connection thread

IMMERSION SLEEVES FOR "UNIVERSAL TEMPERATURE SENSORS 6 X 60 - 230" FOR HEAT AND COLD MEASUREMENT INCLUDING COPPER SEAL (2 PIECES ARE REQUIRED PER PAIR OF SENSORS)

Description	Immersion sleeve (mm)	For temperature sensors Installation length (mm)
Stainless steel with 1/2" connection thread	85	105
	120	140
	150	175
	210	230

SMART BUILDING

SMART SYSTEM



INDOOR T+H SENSOR

TEMPERATURE AND HUMIDITY SENSOR

The Indoor T+H Sensor determines the temperature and relative humidity of indoor spaces.

The sensor supports the user in optimizing the heating and ventilation behavior. The current temperature and humidity values can be read at any time on the display of the device.

The temperature and humidity are measured inside the device every three minutes. The average value of the last quarter of an hour is determined from the measured values, saved and summed up in the register of the respective temperature or humidity range.

The radio transmission takes place every 20 seconds for wireless M-Bus and every hour for LoRaWAN®.

PRODUCT FEATURES

- Measurement, display and data transmission of temperature and humidity
- Data transmission via wireless M-Bus or LoRaWAN®
- Battery life up to 10 years + storage reserve
- Internal antenna
- Plug & Play – start-up mode
- Optical interface for configuration and readout of stored data
- Wall mounting with sealing option

SENSORS

- Temperature measurement range: -20°C to 50°C
- Measuring accuracy: $\pm 0.3^\circ\text{C}$ in the range from 5°C to 50°C
- Humidity measurement range: 0% to 100% RH
- Measuring accuracy: $\pm 2\%$ RH in the range from 20% to 80%
- Resolution of the measured values: 0.1°C and 0.1% RH

Temperature and humidity sensor with wireless M-Bus and LoRaWAN® interface and LCD display measuring the indoor temperature and relative humidity



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COMMUNICATION TECHNOLOGIES

- Radio via LoRaWAN®
- Radio via wireless M-Bus

Description

Indoor T+H Sensor LoRa Sz204 868 ID IP40

Indoor T+H Sensor wMB Sz331 868 ID IP40

ZENNER CO₂ INDICATOR

INDOOR LORAWAN® CO₂ SENSOR

The ZENNER CO₂ INDICATOR is a compact indoor LoRaWAN® radio sensor (868 MHz) for measuring the CO₂ content of indoor air. This product uses the photoacoustic principle to detect the CO₂ concentration (ppm) in real time, enabling more efficient ventilation behaviour and faster response time.

With the integrated display and the colour-changing LED display, the sensor always provides real-time information about the current CO₂ value, the battery level and the status of the LoRaWAN® connection.

It can be placed on any flat surface. In addition, the device can also be used "stand alone", i.e. without a LoRaWAN® connection - however, no remote monitoring or alarming can take place. The CO₂ limits can be set individually by radio command (downlink).

The device can be operated with the integrated rechargeable battery or permanently powered by a standard USB-A power supply unit. Please note that only the USB-A to USB-C charging cable is included, a power supply unit is required.

ZENNER CO₂ INDICATOR L868 ID A for LoRaWAN® with LCD display and integrated battery measuring CO₂, configuration Over the Air (OTA)



Description

ZENNER CO₂ INDICATOR L868 ID A for LoRaWAN®

EASY PROTECT Radio

SMOKE ALARM WITH WIRELESS M-BUS OR LORAWAN® RADIO INTERFACE

The EASY PROTECT Radio smoke alarm was specially developed for use in radio remote reading systems and offers optimum protection. The annual remote inspection via radio saves the annual on-site appointment.

The detector's innovative environment monitoring detects objects located within a radius of up to at least 50 cm.



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Smoke alarm with optical detection method and additional temperature sensor

DIN EN 14604 compliant

KRIWAN and Q-Label certified

with environment detection

Description

EASY PROTECT with wireless M-Bus interface

EASY PROTECT with LoRaWAN® interface

Adhesive pad for smoke detectors

Smoke alarm without individual packaging in an outer box
Minimum purchase is one packaging unit (16 pieces)

HEAT COST ALLOCATOR

ELECTRONIC HEAT COST ALLOCATORS



caltos E

ELECTRONIC HEAT COST ALLOCATOR WITH RADIO MODULE

The electronic heat cost allocator caltos E with integrated radio interface serves to record the share of heat produced by radiators.

The electronic heat cost allocator caltos E with its many possible uses and its convenient recording and data transfer technology (LoRaWAN[®] or wireless M-Bus) fully satisfies the high level of requirements for the housing industry and the increasing demand for comfort by home owners and tenants.

The caltos E can be used within a particularly wide range of temperatures from 35 °C to 130 °C (average design temperatures for the heating medium) and is optimally suited for heating systems with all design temperatures (particularly low temperature systems).

The caltos E can be used in single-pipe heating systems as well as the two-pipe systems that are standard today.

The caltos E works in accordance with the dual sensor measuring principle in which high-precision sensors constantly record the actual temperature difference between the radiator and room temperature. The recorded measurement data is reliably recorded and assessed for consumption measuring purposes.

Also an automatic switch takes place from dual sensor measuring principle to single sensor measuring principle if there is a thermal effect (e.g. manipulation or heat accumulation).

Differentiation already occurs between heating operation and external heating in the heating-up phase by means of plausibility tests on the measured room air and radiator temperature in the equipment.

PRODUCT FEATURES



- Use range from 35 °C to 130 °C (average design temperatures for the heating medium)
- Display of the current consumption data for the specified due date value and the last 18 month-end values in the equipment memory (each in a unit scale)
- Stored in the equipment memory: current consumption, 2 due date values and 18 mid-month and month-end values and 31 daily values
- The specified reading date can be chosen freely with corresponding parameterisation software
- Battery lifetime up to 12 years
- Infrared interface for data reading, display retrieval and equipment programming
- Consumption data reading using LoRaWAN[®] radio (standard: scenario for monthly values) or wireless M-Bus radio module
- Unit scale and alternative product scale programmable with corresponding parameterisation software
- Permanent internal self-monitoring
- Electronic registration of manipulation attempts
- High level of protection against thermal, electrical and magnetic failures

Electronic heat cost allocator with wireless M-Bus or LoRaWAN[®] radio radio module

Description

caltos E heat cost allocator with wireless M-Bus interface

caltos E heat cost allocator with LoRaWAN[®] interface

caltos E heat cost allocator with wireless M-Bus interface
Split version with remote sensor

caltos E heat cost allocator with LoRaWAN[®] interface
Split version with remote sensor

Heat cost allocator without individual packaging, without back part, in an outer box
Minimum purchase is one packaging unit (20 pieces)

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Phone: +45 77 77 70 00
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AUSTRIA Brunata GmbH and CoKG

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Website brunata.com/at/austria



CROATIA Brunata d.o.o.

Phone (+385) 01 48 39 053
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Website brunata.com/pl/poland



SWITZERLAND Brunata AG

Phone (+41) 41 669 10 10
Website brunata.ch/en



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Website brunata.com/si/slovenia



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Phone (+46) 40 411 999
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TURKEY Brunata ZENNER ENERJİ SİSTEMLERİ SAN. ve TİC. A.Ş.

Phone (+90) 312 443 02 43
Website brunata.com/tr/turkey/

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Website spmtechnologies.be



Phone (+372) 6 480 125
Website sanobaltic.com/et/



Phone (+30) 210 2690 292
Website delatolasenergy.gr



Phone (+371) 26 156 189
Website sanobaltic.com/lv/



Phone (+370) 698 47 799
Website sanobaltic.com/lt/



Phone (+31) 515 575 222
Website wms.nl

BrunataZENNER is part of the Brunata-Minol-ZENNER Group. Our portfolio consists of both public and private customers.

Brunata is one of Europe's leading specialists in energy measuring, metering and submetering as well as property based IoT solutions and Energy Management.

For more than 100 years we have collected consumption data from residential properties – initially from radiators but today from a variety of innovative meters, detectors, and sensors.

Our goal is to bring energy optimisation solutions to doorsteps all over Europe, save resources and improve quality of life.



a **B**.One Solution is your guarantee of a robust and reliable digital solution



4/2026