Product List

August 2025

Brunata

Use Energy with Care

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

A GREENER FUTURE STARTS TODAY

EXPLORE BRUNATA'S PRODUCT CATALOG

Brunata is a European company with Danish roots. We help real estate companies, housing associations, utilities and other private and public companies optimize their energy consumption – for the benefit of both the economy and the climate.

With innovative technology and intelligent use of data, we help our customers use the energy in their properties more efficiently and sustainably. We believe that technology can make the world more energy efficient and create a greener future.

We use advanced IoT systems, artificial intelligence and data-driven solutions to measure and manage energy consumption in homes, offices, public buildings and utilities.

We are constantly working to develop new solutions and explore new technologies. In close collaboration with researchers, universities and other companies, we are constantly looking for new ways to solve the major challenges we face today.

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

Brunata
Use energy with care

Brunata

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 are a part of 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 the 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 your next project.

TABLE OF CONTENTS

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.

WHAT DOES OUR EED NOTIFICATION SERVICE INCLUDE?

AN INTELLIGENT AND EASY-TO-USE SERVICE HELPING YOU COMPLY WITH EED

1. **Monthly updates:** On the 15th of every month in the heating season, residents receive an updated consumption notification (PDF) including all relevant consumption figures for the previous month.

2. **Comparison and analysis:** The consumption overview provides a comparison with previous periods, allowing residents to track how their consumption evolves over time.

3. **Access via app or online portal:** Residents can easily access their consumption data through our user-friendly app or online portal, Brunata Online. This ensures they can check their consumption anytime, anywhere.

4. **Online archive:** All consumption overviews are securely stored in the Brunata Online archive. Residents can always access previous consumption overviews to compare data and track progress.

5. **Email distribution:** EED Notifications are sent to all residents who have registered an email address in Brunata Online. The building owner or administrator receives a list of residents who have not provided an email address and can access, print, and distribute the consumption overviews via Brunata Online.

To subscribe to the EED Notification service, you need an Brunata Online Plus or Brunata Online Premium subscription.

WANT TO LEARN MORE?

Visit us at brunata.com/eed-notification or contact us at brunata@brunata.com to learn more about the EED Notifcation Service.

THE METERING REGULATION

REMOTELY READ METERS – THE PATH TO A SMARTER AND GREENER FUTURE

Remotely read meters are not just a technological upgrade; they represent a step toward more efficient and sustainable management of energy and water consumption. With the implementation of the EU's Energy Efficiency Directive (EED), it has become a legal requirement that all new meters must be remotely read, and by 2027 at the latest, all existing meters must be replaced with this technology.

ADVANTAGES OF REMOTELY READ METERS:

- **Accurate and timely readings:** Automatic data collection ensures precise consumption information without the need for manual readings.
- **Increased awareness and savings:** When residents have access to their consumption data, awareness increases - often leading to reduced usage and lower costs.
- **Efficient administration:** Property managers gain a clear overview of consumption, making budgeting and maintenance easier.
- **Environmental benefits:** Reducing unnecessary consumption contributes to lower CO2 emissions and a more sustainable future.

Brunata offers solutions that integrate remotely read meters with advanced IoT systems, enabling real-time monitoring and rapid identification of irregularities such as leaks or inefficient installations.

By switching to remotely read meters, properties not only align with upcoming legal requirements but also benefit from more efficient, economical, and environmentally friendly operations.

For more information and advice on implementing remotely read meters, visit Brunata's website: brunata.dk

NETWORK

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

Brunata supports the planning, installation, and operation of remotely read meters.
In addition to hardware for wired M-Bus solutions, we offer two innovative alternatives for wireless reading of water and heat meters:
- Wireless M-Bus
- LoRaWAN® IoT radio technology

- Reading without access to the residence
- Simple and secure data transfer
- Avoidance of reading errors
- Optimal data quality and continuous availability
- Shorter intervals between reading and billing
- Easy access to hard-to-reach measuring points

LoRaWAN® IOT - SOLUTIONS FROM ZENNER

LoRaWAN® enables data reading from water and heat meters via a stationary radio system. ZENNER offers a complete range of LoRaWAN® - compatible measurement technology and innovative radio modules for all types of meters.

- Remote reading of main and sub-meters
- No need for reading appointments
- Visualization of consumption and energy monitoring
- Easy reading – even for hard-to-reach meters

BRUNATA ONLINE

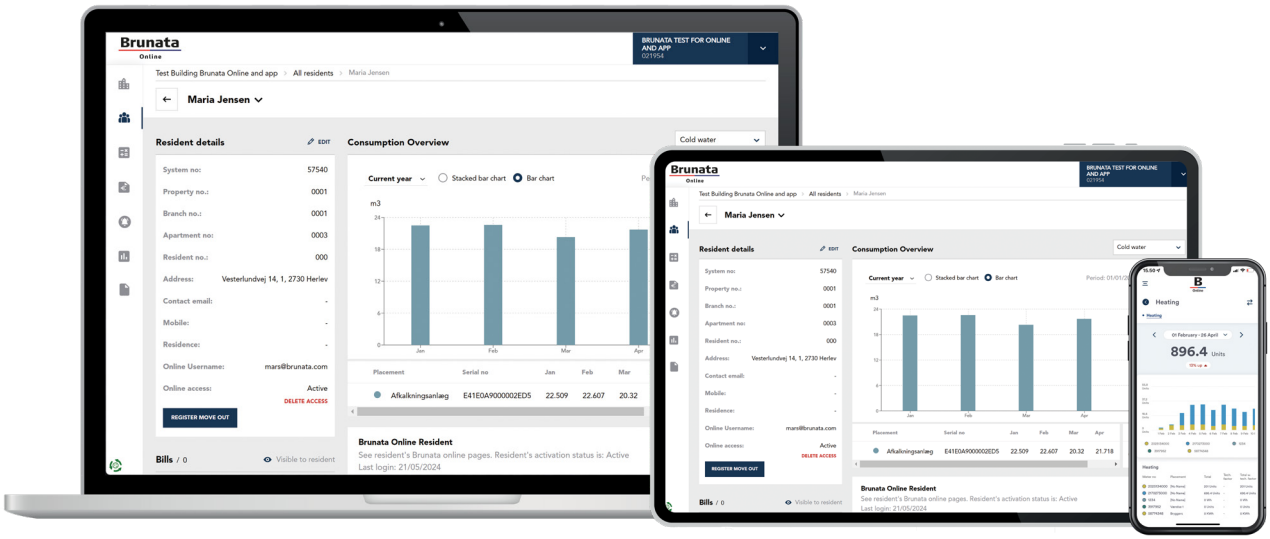
A PLATFORM FOR ADMINISTRATORS AND RESIDENTS - WITH A COMPREHENSIVE OVERVIEW OF DATA

Regardless of whether you need to prepare consumption accounts, manage your Smart Building solutions or monitor the waterworks, Brunata Online is where it takes place. It is the digital control tower that gives the administrators an overview of and insight into the consumption of water, heat and electricity.

This is also where you can report consumption expenses, register resident information, get an overview of issued EED consumption notifications, keep track of the indoor climate, monitor smoke alarms, download consumption reports and much more – depending on which of our solutions you have purchased.

GET QUICK ACCESS VIA COMPUTER, SMART PHONE OR TABLET

The platform is of course accessible via computer, tablet and smart phone. We also offer Brunata Online as a resident app for iPhone and Android.



WATER METERS RESIDENTIAL

SUBMETERING

MINOMESS®

SURFACE-MOUNTED SINGLE-JET WATER METER WITH 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 advantage of the meter is 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).

Minomess® APZ V2 – 7 digits for cold water (30 °C) for horizontal and vertical installation, radio module V2, LoRa daily value.

Q3 m³/h	Qn m³/h	Length mm	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	80	15	1/2"	3/4"	R80H R40V	72-3000-H
2,5	1,5	110	15	1/2"	3/4"	R80H R40V	72-3010-H
2,5	1,5	130	20	3/4"	1"	R80H R40V	72-3015-H
4	2,5	130	20	3/4"	1"	R80H R40V	72-3020-H

Minomess® APZ V2 – 7 digits for hot water (90 °C) for horizontal and vertical installation, radio module V2, LoRa daily value.

Q3 m³/h	Qn m³/h	Length mm	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	80	15	1/2"	3/4"	R80H R40V	72-3100-H
2,5	1,5	110	15	1/2"	3/4"	R80H R40V	72-3110-H
2,5	1,5	130	20	3/4"	1"	R80H R40V	72-3115-H
4	2,5	130	20	3/4"	1"	R80H R40V	72-3120-H

Bath water meter, radio module V2, LoRa daily value.

Q3 m³/h	DN	Type	Omløber Rx	Thread GxB	Q3/Q1 Ratio	Radio	Item Number
2,5	15	T50	1/2"	3/4"	40	LoRaWAN	72-3500-H
2,5	15	T90	1/2"	3/4"	40	LoRaWAN	72-3510-H

APZ V2 - 7 digits for cold water for horizontal and vertical installation, radio module V2, wM-Bus, OMS.

Q3 m^3/h	Qn m^3/h	Lenght mm	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	80	15	1/2"	3/4"	R80H R40V	72-0000-H
2,5	1,5	110	15	1/2"	3/4"	R80H R40V	72-0010-H
2,5	1,5	130	20	3/4"	1"	R80H R40V	72-0020-H
4	2,5	130	20	3/4"	1"	R80H R40V	72-0020-H

APZ V2 - 7 digits for hot water (90 °C) for horizontal and vertical installation, radio module V2, wM-Bus, OMS.

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	80	15	1/2"	3/4"	R80H R40V	72-0100-H
2,5	1,5	110	15	1/2"	3/4"	R80H R40V	72-0110-H
2,5	1,5	130	20	3/4"	1"	R80H R40V	72-0120-H
4	2,5	130	20	3/4"	1"	R80H R40V	72-0120-H

Bath water meter, radio module V2, wM-Bus, OMS.

Q3 m^3/h	DN	Type	Ø pipe Rx	Thread GxB	Q3/Q1 Ratio	Radio	Item Number
2,5	15	T50	1/2"	3/4"	40	LoRa	72-0500-H
2,5	15	T90	1/2"	3/4"	40	LoRa	72-0510-H

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) accord-ing 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 configura-tion 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

APPLICATIONS

- 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

WITH INTEGRATED LORAWAN® INTERFACE

IUWS, cold water (50 °C), D-cell battery (15 years), LoRa hourly data.
Approved for all installations

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe Rx	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	110	15	1/2"	3/4"	R250	72-8300-H
2,5	1,5	190	20	3/4"	1"	R250	72-8305-H
4	2,5	130	20	3/4"	1"	R250	72-8307-H
4	2,5	190	20	3/4"	1"	R250	72-8310-H
6,3	3,5	260	25	1"	5/4"	R250	72-8315-H
10	6	260	25	1"	5/4"	R250	72-8317-H
10	6	260	32	1 1/4"	6/4"	R250	72-8320-H
16	10	300	40	1 1/2"	2"	R250	72-8325-H
25	15	300	50	2"	2 1/2"	R250	72-8335-H
25	15	270	50 flanged	2"	FL50	R250	72-8330-H

WITH INTEGRATED WIRELESS M-BUS INTERFACE, OMS CERTIFIED

IUWS, cold water (50 °C), D-cell battery (15 years), wM-Bus.
Approved for all installations (including overhead).

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe Rx	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	110	15	1/2"	3/4"	R250	72-6301-H
2,5	1,5	190	20	3/4"	1"	R250	72-6302-H
4	2,5	105	20	3/4"	1"	R250	72-6300-H
4	2,5	130	20	3/4"	1"	R250	72-6305-H
4	2,5	190	20	3/4"	1"	R250	72-6310-H
6,3	3,5	260	25	1"	5/4"	R250	72-6315-H
10	6	260	25	1"	5/4"	R250	72-6320-H
10	6	260	32	1 1/4"	6/4"	R250	72-6325-H
16	10	300	40	1 1/2"	2"	R250	72-6330-H
25	15	300	50	2"	2 1/2"	R250	72-6335-H
25	15	270	50 Flanged	2"	FL50	R250	72-6340-H

NDC-communication module, LORA-wMBUS 868, OD, IP68

Description	Item Number
The NDC communication module makes it possible to place radio communication advantageously in, for example, a well, 3 meters of wire.	72-1161-H
The NDC communication module makes it possible to place radio communication advantageously in, for example, a well, 10 meters of wire.	72-1162-H

* The module integrates easily into existing systems and ensures reliable, automated data transfer for remote reading and analysis.

HYDRUS 173

ULTRASONIC WATER METER, T90

HYDRUS 2.0 is a static ultrasonic water meter designed for use in cold and hot water supply, enabling accurate measurement with long-term stability even under difficult conditions (no air measurement and insensitive to contamination).
Developed within the framework of the MID, it complies with European regulations and has sanitary certificates (including KTW / W270, ACS, WRAS).

The integrated communication function supports the transmission of measurement data via mobile reading (walk-by / drive-by / passive drive-by) or fixed network (upgrade without on-site configuration). In combination with Diehl Metering's IZAR fixed network system, which stands out with extra high coverage and strong performance for reading difficult-to-reach meters, high data quality and timeliness are maintained. This is what enables you to react immediately.

PERFORMANCE CHARACTERISTICS AT A GLANCE

- DN 15 to 50
- Approved dynamic range R 800
- Can be mounted outdoors (IP68)
- Integrated radio communication based on Open Metering telegram (OMS Generation 3 or 4, Profile B)
- Wired M-Bus/Pulse/Pulse, wireless M-Bus, wireless M-Bus in combination with wired L-Bus/ Pulse interface
- Easy-to-read display with symbols, error and alarm codes including leak detection and monitoring function
- Battery life up to 16 years
- No requirement for straight pipe runs

Diehl Hydrus 2.0 (173) L-Bus (wM-Bus radio + 1 x pulse output)

Q3 m^3/h	Length mm	DN	Ø pipe Rx	Thread G x B	L/Imp	Q3/Q1 Ratio	Item Number
2,5	110	15	1/2"	3/4"	10	R400	75-7000-H
2,5	190	20	3/4"	1"	10	R400	75-7010-H
4	190	20	3/4"	1"	10	R400	75-7120-H
6,3	260	25	1"	5/4"	10	R400	75-7130-H
10	260	32	5/4"	6/4"	10	R400	75-7140-H
16	300	40	6/4"	2"	10	R400	75-7150-H
25	300	50	2"	2 1/2"	10	R400	75-7060-H

Diehl Hydrus 2.0 (173) M-Bus (M-Bus + 2 x pulse output)

Q3 m^3/h	Length mm	DN	Ø pipe Rx	Thread G x B	L/Imp	Q3/Q1 Ratio	Item Number
2,5	110	15	1/2"	3/4"	1 + 10	R400	75-7005-H
2,5	190	20	3/4"	1"	1 + 10	R400	75-7110-H
4	190	20	3/4"	1"	1 + 10	R400	75-7020-H
6,3	260	25	1"	5/4"	1 + 10	R400	75-7030-H
10	260	32	5/4"	6/4"	1 + 10	R400	75-7040-H
16	300	40	6/4"	2"	1 + 10	R400	75-7050-H
25	300	50	2"	2 1/2"	1 + 10	R400	75-7160-H

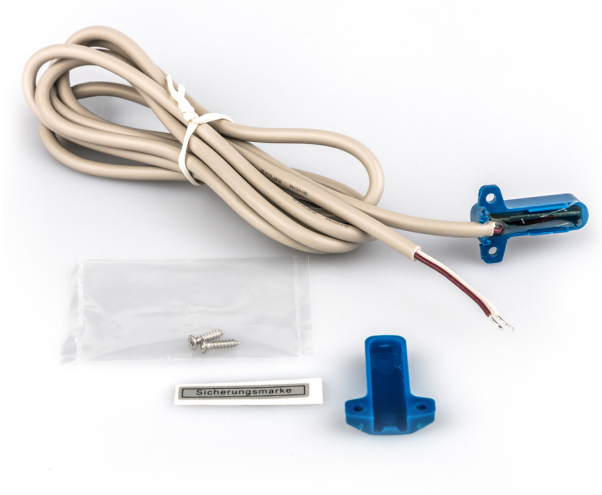
MNK

WET DIAL MULTI-JET METER

The MNK multi-jet meter is an ideal domestic water meter for tamper-proof, high-precision consumption measurement. The meter is MID-approved for connection to branch pipes and can be retrofitted with a pulse sensor (Reed) for remote reading.

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

MNK-N



REED for MNK

MNK-N is a multi-jet wet-type meter for cold water. It is a MID-approved water meter for connecting branch pipes, equipped with a Reed switch as standard. The interface enables remote reading of meter data via PDC radio module with LoRaWAN® or wM-Bus.

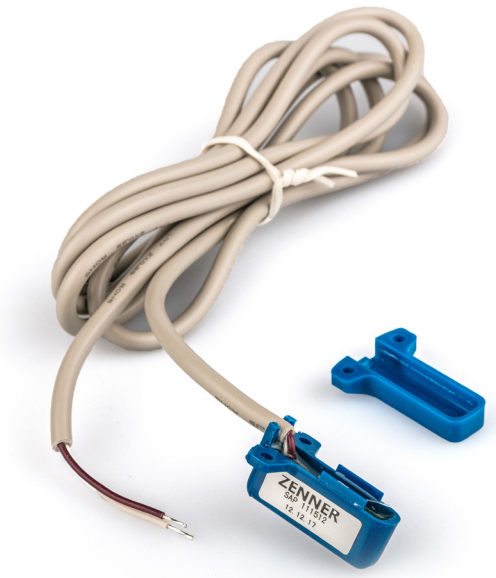
Current technology ensures the most precise measurement results, minimal bearing stress and a long service life.

MNK for cold water

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe R x	Thread G x B	L/Imp	Q3/Q1 Ratio	Item Number
2,5	1,5	165	15	1/2"	3/4"	10	R80H R40V	19-5141-H
2,5	1,5	190	20	3/4"	1"	10	R80H R40V	19-5151-H
4	2,5	190	20	3/4"	1"	10	R80H R40V	19-5125-H
10	6	260	25	1"	5/4"	10	R80H R40V	19-5142-H
10	6	260	32	1 1/4"	6/4"	10	R80H R40V	19-5143-H
16	10	300	40	1 1/2"	2"	10	R80H R40V	19-5157-H
25	15*	300	50	2"	2 1/2"	10	R80H	19-5160-H
25	15	270	50	2"	2 1/2"	10	R80H	19-5601-H
25	15*	270	50	Flanged		10	R80H	19-5138-H

Reed for MNK

The MNK meter can be equipped with a Reed pulse transmitter for remote reading of consumption. The pulse transmitter enables integration into various remote reading systems and provides a reliable electrical pulse for each defined volume of water (e.g. 1 liter/pulse or 10 liters/pulse, depending on configuration).



The pulse generator is ideal for:

- Integration into building automation systems
- Reading via wireless modules (wM-Bus, LoRaWAN®)
- Manual or automatic data collection

Advantages of the pulse generator:

- Easy retrofit without replacing the meter
- Reliable and maintenance-free
- Sealed and tamper-proof
- Supports measurement of both cold and hot water

Description	Item Number
Reed for MNK	19-5126-H

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, LoRa, can be installed in all positions except overhead, 8 digits, untreated meter housing.

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
2,5	1,5	165	15	1/2"	3/4"	R80H	19-5449-H
4	2,5	190	20	3/4"	1"	R40 R80H	19-5475-H
6,3	3,5	260	24	1"	1/4"	R40 R80H	19-5479-H
10	6	260	25	1"	5/4"	R40 R80H	19-5476-H
10	6	260	30	1 1/4"	6/4"	R40 R80H	19-5477-H
16	10	300	40	1 1/2"	2"	R40 R80H	19-5478-H
25	15	300	50	2"	2 1/2"	R80H40V	19-5450-H
25	15	270	50	DN 50 FL		R80H40V	19-5480-H

MTKDE til koldt vand, LoRa, kan installeres i alle positioner undtagen overhead, 8 cifre, ubehandlet målerhus.

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
4	2,5	190	20	3/4"	1"	R160	19-5490-H
10	6	260	25	1"	5/4"	R160	19-5491-H
10	6	260	30	1 1/4"	6/4"	R160	19-5492-H
16	10	300	40	1 1/2"	2"	R160	19-5493-H
25	15	300	50	2"	2 1/2"	R100	19-5494-H

ETKD-N / ETWD-N

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

The ETKD-N / ETWD-N is a single jet water meter with an 8-digit register and protected magnetic coupling. Prepared for mechanical Reed contact.

The special advantage of the ETKD-N / ETWD-N is its extremely compact design. With its very low height, the meter is easy to install.

The ETKD-N / ETWD-N ensures reliable recording of meter data for individual consumption billing. Alternatively, the Reed user interface allows remote reading of meter data via PDC via radio with LoRaWAN® or wM-Bus.

All materials used meet the necessary standards, guidelines and the current German drinking water approval (and other country-specific approvals on request).

ETKD-N 8-digit counter with magnetic pointer, for horizontal and vertical installation, can be retrofitted with 1 l/pulse, cold water (30 °C).

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe R x	Thread G x B	L/Imp	Q3/Q1 Ratio	Item Number
2,5	1,5	80	15	1/2"	3/4"	1l/ 8R	R80H R40V	19-5122-H
2,5	1,5	110	15	1/2"	3/4"	1l/ 8R	R80H R40V	19-5193-H
2,5	1,5	130	20	3/4"	1"	1l/ 8R	R80H R40V	19-5194-H
4	2,5	130	20	3/4"	1"	1l/ 8R	R80H R40V	19-5191-H

ETWD-N 8-digit counter with magnetic pointer, for horizontal and vertical installation, can be retrofitted with 1 l/pulse, hot water (90 °C).

Q3 m^3/h	Qn m^3/h	Length mm	DN	Ø pipe R x	Thread G x B	L/Imp	Q3/Q1 Ratio	Item Number
2,5	1,5	80	15	1/2"	3/4"	1l/ 8R	R80H R40V	19-5169-H
2,5	1,5	110	15	1/2"	3/4"	1l/ 8R	R80H R40V	19-5189-H
2,5	1,5	130	20	3/4"	1"	1l/ 8R	R80H R40V	19-5197-H
4	2,5	130	20	3/4"	1"	1l/ 8R	R80H R40V	19-5182-H

*Option to add a pulse module to D-type meter for cold and hot water

Communication module

Description	Item Number
Communication module pulsmodul 1 l/puls	19-5147-H

JS SMART+

DN15 SINGLE JET VANE WHEEL DRY WATER METER - COMPOSITE BODY

The family of single jet vane wheel meters from the Smart series, made of composite material, is designed to measure water consumption. Thanks to modern design solutions, the water meters provide precise measurements and are compatible with data communication modules for remote reading. Among all dry water meters, these devices offer the best protection against strong magnetic fields.

The units are manufactured in accordance with MID for a measuring range of R=100 for JS Smart+. The use of the composite housing significantly reduces the carbon footprint. Sustainability is a key focus in the design, operation, and recycling of the Smart series water meters in order to eliminate environmental impact.

MAIN FEATURES

- EC type examination certificate in accordance with MID requirements
- Double-sided rotor bearings together with other solutions and materials to ensure stable metrology throughout the entire service life
- Drinking water approved and certified materials
- Electronic diagnosis of metrological parameters
- Protection against mechanical interference in the counter mechanism using a pin to deform the counter disc as permanent evidence of unauthorized tampering

Apator JS Smart+ composite (wM-Bus)

Q3	Temperature	Length	DN	Thread	Radio	Item Number
2,5	T50	110	15	3/4	wM-Bus	75-4301-H
2,5	T70	110	15	3/4	wM-Bus	75-4302-H

Apator JS Smart+ composite (LoRaWAN)

Q3	Temperature	Length	DN	Thread	Radio	Item Number
2,5	T50	110	15	3/4	wM-Bus	75-4303-H
2,5	T70	110	15	3/4	wM-Bus	75-4304-H

BULK WATER METERS

INDUSTRY

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®-RADIOMODULE

Ultrasonic water meter for drinking water and industrial use,
can be installed in any position up to 50 °C, scenario 202 (daily LoRa value)

Q3 m^3/h	Length mm	DN	Inches	Item Number
25	200	50	2"	72-7000-H
25	270	50	2"	72-7005-H
40	200	65	2 1/2"	72-7006-H
40	300	65	2 1/2"	72-7010-H
63	225	80	3"	72-7015-H
63	300	80	3"	72-7030-H
100	250	100	4"	72-7025-H
160	250	100	4"	72-7022-H
160	250	125	5"	72-7023-H
250	300	150	6"	72-7028-H
250	500	150	6"	72-7029-H
400	350	200	8"	72-7031-H

WITH INTEGRATED NFC INTERFACE FOR RETROFITTING A W-MBUS-RADIOMODULE

Ultrasonic water meter for drinking water and industrial use,
can be installed in any position up to 50 °C, wM-Bus

Q3 m^3/h	Length mm	DN	Inches	Item Number
25	200	50	2"	72-7100-H
25	270	50	2"	72-7105-H
40	200	65	2 1/2"	72-7110-H
40	300	65	2 1/2"	72-7115-H
63	225	80	3"	72-7120-H
63	300	80	3"	72-7125-H
100	250	100	4"	72-7130-H
160	250	125	4"	72-7135-H
250	300	150	6"	72-7140-H
400	350	200	8"	72-7145-H

NDC-communication module

Description	Item Number
The NDC communication module makes it possible to read meter data wirelessly via LoRaWAN® or wireless M-Bus, 3 meter cable.	72-1161-H
The NDC communication module makes it possible to read meter data wirelessly via LoRaWAN® or wireless M-Bus, 10 meter cable.	72-1162-H

* The module integrates easily into existing systems and ensures reliable, automated data transfer for remote reading and analysis.

WPD (E) / WPHD (E)

WOLTMAN METER WITH IMPELLER MOUNTED 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 pulser can also be connected in parallel.

WPD/WPHD Woltman for cold water up to 50 °C, PN 16 MID, R160
for installation in horizontal and vertical pipelines, can be retrofitted for remote reading

Q3 m^3/h	Length mm	DN	Inches	EDC L/pulse	Reed L/pulse	Item Number
25	200	50	2"	10	100	19-5446-H
40	200	50	2"	10	100	19-5457-H
40	200	65	2 1/2"	10	100	19-5458-H
63	225	80	3"	10	100	19-5602-H
63	225	80	3"	10	100	19-5459-H
100	250	100	4"	10	100	19-5460-H
160	250	100	4"	10	100	19-5603-H
100	250	125	5"	10	100	19-5604-H
250	300	150	6"	100	1000	19-5471-H

WPD/WPHD Woltman for cold water up to 50 °C, PN 16 MID, R160R160
for installation in horizontal and vertical pipelines, can be retrofitted for remote reading

Q3 m^3/h	Length mm	DN	Inches	EDC L/pulse	Reed L/pulse	Item Number
400	350	200	8"	100	1000	19-5605-H
400	350	200	8"	100	1000	19-5606-H

WPD/WPHD Woltman for cold water up to 50 °C, PN 16 MID, R160
for installation in horizontal and vertical pipelines, can be retrofitted for remote reading

Q3 m^3/h	Length mm	DN	Inches	EDC L/pulse	Reed L/pulse	Item Number
630	450	250	10"	100	1000	19-5607-H
630	450	250	10"	100	1000	19-5608-H
1000	500	300	12"	100	1000	19-5609-H
1000	500	300	12"	100	1000	19-5610-H

Description

EDC communication module
The EDC communication module enables meter data to be read wirelessly via LoRaWAN® or wireless M-Bus. The communication module is also available in a wired version.
The module integrates easily into existing systems and ensures reliable, automated data transfer for remote reading and analysis.
Can be retrofitted with EDC module (Electronic Data Capture):

- LPWAN EDC radio module (868 MHz) for LoRaWAN®.
- Wireless M-Bus EDC radio module (868 MHz)
- Combined M-Bus and pulse EDC module

EDC-communication module

EDC-communication module 1l/pulse

EDC-communication module

Description	Item Number
EDC-communication module LPWAN-EDC radio module (868 MHz) til LoRaWAN® (DN50-125)	72-1172-H
EDC-communication module Wireless M-Bus-EDC-radio module (868 MHz) (DN50 -125)	173936
EDC-communication module 10l/pulse (DN50-125)	72-1180-H

FITTINGS – WATER METERS

Red Brass Compression Fitting	Item Number
Red brass compression fitting 3/4" x 1/2" 25 mm, GDV-approved	77-8800-A
Red brass compression fitting 3/4" x 1/2", 40 mm, GDV-approved	77-8810-A
Red brass compression fitting 1" x 3/4" 50 mm, GDV-approved	77-8811-A
Red brass compression fitting 1¼" x 1", GDV-approved	77-8812-A
Red brass compression fitting1 1/2" x 5/4" 60 mm, GDV-approved	77-8813-A
Red brass compression fitting 2" x 1 1/2" x 70 mm, GDV-approved	77-8814-A

Red Brass Compression Fitting - Special	Item Number
Red brass compression fitting, G3/4BxR1/2, REC, Controllable check valve, RG, GDV	77-8824-H
Red brass compression fitting 3/4" x 1/2" x 40 mm, GDV-approved m/check valve	77-8825-A
Red brass compression fitting, G1BxR3/4, REC, Controllable check valve, RG, GDV	77-8827-H
Red brass compression fitting, G3/4BxR1/2, 40mm, m/ ball valve	22-0206-A
Red brass compression fitting 3/4" x 1/2", m. ball valve - high neck	77-8400-H
Compression fitting, G3/4BxR1/2, 40mm m/, red brass, KVENT, GDV-approved	77-8740-C
Ball valve 3/4", muff/muff, butterfly	77-8486-H

Red Brass Extender	Item Number
Extender 3/4" x 3/4", 20 mm, red brass	77-8727-H
Extender 3/4" x 3/4", 30 mm, red brass	77-8726-H
Extender 3/4" x 3/4", 55 mm, red brass	77-8728-H
Extender, 1" - 1", 30 mm, red brass	77-8722-H
Extender, 1¼" x 1" 30 MM, red brass	77-8723-H
Extender, 1 1/2" x 1", 30 MM, red brass	77-8724-H
Extender, 2" x 5/4", 19mm, red brass	77-8725-H
Extender, 3/4"-1" 12,5 mm, red brass	77-8729-H
Extender, 3/4"-1" 8 mm, red brass	77-8721-H
Extender, 3/4"-1", 38 mm, red brass	77-8720-H

Mounting Kit	Item Number
Red brass mounting kit no. 1 changes 3/4"X110mm to 3/4" X130 mm GDV approved	77-8851-A
Red brass mounting kit no.2 changes 3/4"X110mm to 1" X130 mm GDV approved	77-8852-A
Red brass mounting kit no. 3 changes 3/4"X110mm to 3/4" X165 mm GDV approved	77-8853-A
Red brass mounting kit no. 4 changes 3/4"X110mm to 1" X190 mm GDV approved	77-8854-A
Red brass mounting kit no. 5 changes 3/4"X80mm to 1" X105 mm GDV approved	77-8855-A
Red brass mounting kit no. 6 changes 3/4"X110mm to 1" X165 mm GDV approved	77-8856-A
Red brass mounting kit no. 7 changes 1"X190mm to 5/4" X260 mm GDV approved	77-8857-A
Red brass mounting kit no. 8 changes 1"X190mm to 1 1/2" X260 mm GDV approved	77-8858-A
Red brass mounting kit no. 9 changes 5/4"X260mm to 2" X300 mm GDV approved	77-8859-A
Red brass mounting kit no. 10 changes 1"X130mm to 1" X190 mm GDV approved	77-8860-A

Fitting Pipe	Item Number
Fitting, R3/4, 110mm, plastic (Composite)	05-9047-C

ENERGY METERS

HEATING

zelsius® C5-IUF

COMPACT HEAT METER WITH ULTRASONIC FLOW SENSOR (IUF)

The thermal energy meter (also called heat 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.

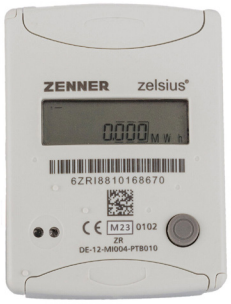
This wear-free ultrasonic technology is stable in the long run, insensitive to dirt and measures reliably, even with very small flow volumes.

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 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

- 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
- 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 ULTRASOUND FLOW SENSOR (IUF)

For heating

Version with temperature sensors L = 45 mm, D = 5.2 mm Operating temperature for flow sensor either up to 105 °C or 130 °C Sensor cable approx. 1.5 m

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

Nominal size qp (m^3/h)	Nominal diameter	Length	Ø pipe R x	Thread G x B	Radio protocol	Item Number
0,6	DN15	110	1/2"	3/4	wM-Bus	73-0001-H
1,5	DN15	110	1/2"	3/4	wM-Bus	73-0002-H
2,5	DN20	130	3/4	1"	wM-Bus	73-0003-H
3,5	DN25	260	1"	5/4"	wM-Bus	73-0004-H
6	DN25	260	1"	5/4"	wM-Bus	73-0005-H
10	DN32	260	1 1/2"	2"	wM-Bus	73-0006-H

Nominal size qp (m^3/h)	Nominal diameter	Length	Ø pipe R x	Thread G x B	Radio protocol	Item Number
0,6	DN15	110	1/2"	3/4	LoRaWAN®	73-3000-H
1,5	DN15	110	1/2"	3/4	LoRaWAN®	73-3015-H
2,5	DN20	130	3/4	1"	LoRaWAN®	73-3030-H
3,5	DN25	260	1"	5/4"	LoRaWAN®	73-3046-H
6	DN25	260	1"	5/4"	LoRaWAN®	73-3056-H
10	DN32	260	1 1/2"	2"	LoRaWAN®	73-3071-H

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

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

SHARKY 775 OPTUNA H

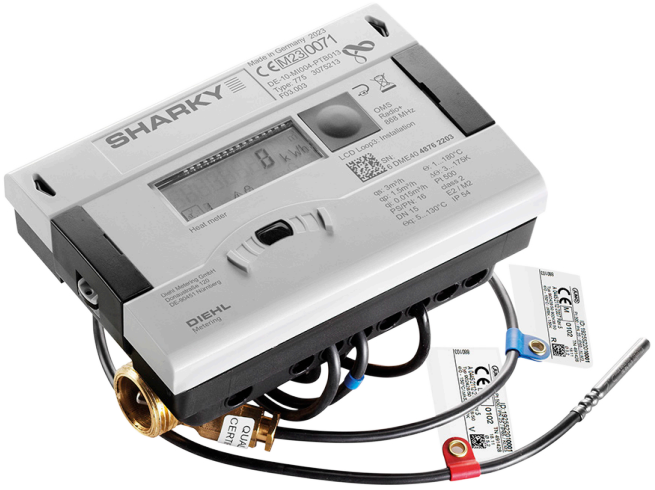
SAFE, FLEXIBLE AND EFFECTIVE ULTRASOUND ENERGY METER

Optuna H (SHARKY 775) regularly transmits your preset consumption values and status data via radio for mobile reading. In district heating supply, it is an advantage that high-resolution data can also be received via stationary data concentrators.

Sharky 775 continuously transmits flow and return temperature, flow rate, current power consumption, energy consumption and alarm messages via radio, thus creating a solid basis for increased efficiency.

It regularly transmits your preset consumption values and status data via radio for mobile reading. Ideal for safe and easy installation in confined spaces with flexible configuration on site.

Whether for flow or return, horizontal, vertical or wall-mounted, SHARKY is suitable for every installation situation and thus reduces the need for different variants.



PERFORMANCE CHARACTERISTICS AT A GLANCE

- Standard setup return (cold) can be changed to flow (hot) on site.
- International display – expansion by one decimal place, as well as extensive language selection
- Integrated radio: Meter reading via Walk-by/Drive-by and can be upgraded to fixed network
- Precise for both small and large volumes – selected nominal sizes in the dynamic range 1:250
- Battery life up to 20 years – intelligent electronic design for extremely low consumption
- Intelligent self-monitoring – automatic notification in case of air in the pipes, incorrect installation or sensor replacement
- Easy maintenance – the measuring unit is easy to replace without the need for re-alignment.
- Excellent interoperability based on the compatible Open Metering System (OMS)
- Heating, cooling or air conditioning meters –5 °C to 150 °C
- International standards – supports frequencies 868 MHz or 434 MHz
- Excellent data security, even with even larger data volumes

ENERGY METER, OPTUNA H, ULTRASOUND, FLEXIBLE (RETURN / FORWARD)

Diehl Optuna H/Sharky 775 wM-Bus

Nominal size qp (m^3/h)	Direction	Length	DN	Ø pipe R x	Thread G x B	Q3/Q1 Ratio	Item Number
0,6	Inlet/Outlet	110	15	1/2"	3/4"	R100	79-6000-H
1,5	Inlet/Outlet	110	15	1/2"	3/4"	R100	79-6010-H
2,5	Inlet/Outlet	130	20	3/4"	1"	R100	79-6020-H
2,5	Inlet/Outlet	190	20	3/4"	1"	R100	79-6030-H
3,5	Inlet/Outlet	260	32	1"	5/4"	R100	79-6040-H
6	Inlet/Outlet	260	32	1"	5/4"	R100	79-6050-H
10	Inlet/Outlet	300	40	6/4"	2"	R100	79-6060-H
10	Inlet/Outlet	300	40		Flange	R100	79-6070-H
15	Inlet/Outlet	270	50		Flange	R100	79-6080-H
25	Inlet/Outlet	300	65		Flange	R100	79-6090-H
40	Inlet/Outlet	300	80		Flange	R100	79-6100-H
60	Inlet/Outlet	360	100		Flange	R100	79-6110-H

Accessories

Accessories	Item Number
Optuna H, M-Bus module Mounted in Slot 2	79-9004-H
Optuna H, Pulse module, 2 inputs	79-9020-H
Optuna H, Puls module, 2 outputs for volume and energy or error status	79-9021-H
Pulse input and output module (leakage), Optuna H	79-9022-H
Communication module Modbus RTU for Optuna H	79-9023-H
12…24 Vac power supply with backup, Optuna H	79-9030-H
230 Vac power supply with backup, additional price on meter, Optuna H	79-9031-H
Wall mounting bracket for Optuna H/SHARKY 774	79-9091-H

BRUNATA MINOMETER M8

HEAT COST ALLOCATOR

The Brunata Minometer M8 is an electronic heat meter for recording heat consumption from a radiator. The heat meter has a built-in radio module and can register each resident's individual heat consumption in a property. Experience shows that individual metering of heat consumption results in energy savings - benefiting both the environment and residents' finances.

One of the most accurate heat meters on the market
With dual-sensor measurement, the meter can ensure accurate readings even at low radiator temperatures, while not detecting the heat impact from external sources such as solar heat or heat from a stove.

READING THE HEAT METER

The meter has an easy-to-read display where residents can read their actual consumption for this year and compare it to last year. With a built-in radio module, the meter is read remotely and readings can be viewed/accessed via Brunata Online. Brunata Online is a platform that can give the administrator a comprehensive overview of energy consumption. Our intelligent network collects large amounts of data from meters and sensors in a building and sends it to the platform where it is included in various data analyses.

QUICK FACTS

- wM-Bus or LoRaWAN radio module
- Internal or external sensor
- Annual reset on accounting date
- Battery life minimum 10 years
- Meter fulfils EED requirements for remote reading

FITTINGS – ENERGY METERS

Sensor Nipple/Sensor Pocket	Item Number
1/2" Sensor nipple	77-8190-H
3/8" Sensor nipple	77-8191-H
3/4" Sensor nipple	77-8192-H
Sensor pocket 52mm x 1/2" (1 set of 2 pcs.) For qp 3,5 and 6,0 m3/h	79-9041-H
Sensor pocket 85mm x 1/2" (1 set of 2 pcs.) For qp 10,0 and 15 m3/h	79-9042-H
Sensor pocket 120 mm x 1/2" (1 set of 2 pcs.) For EM > 15 m3/h	79-9043-H
Union Fitting	**Item Number**
Screw connection brass 3/4" x 1/2" x 25mm GDV (CW625)	77-5500-A
Screw connection brass 3/4" x 1/2" x 40mm GDV (CW625)	77-5510-A
Screw connection brass 1" x 3/4" x 50mm GDV (CW625)	77-5511-A
Screw connection brass 5/4 x 1" GDV (CW625)	77-5512-A
Screw connection brass 1 1/2" x 5/4" x 60mm GDV (CW625)	77-5513-A
Screw connection brass 2" x 1 1/2" x 70 mm GDV (CW625)	77-5514-A
Union Fitting - Special	**Item Number**
Screw connection, G3/4BxR1/2, 40mm, m/ ball valve, GDV	22-0205-A
Screw connection, G3/4BxR1/2, 50mm, m/ ball valve	22-0211-A
Ball valve 1/2" with sensor connection M10x1, muff/muff, butterfly-grip	77-8484-H
Ball valve 3/4" with sensor connection M10x1, muff/muff, butterfly-grip	77-8485-H
Tube with thread measuring socket, 1/2", high neck	77-8488-H
Screw connection w. ball valve, 1/2" x 3/4, high neck	77-8489-H
Fitting Pipe	**Item Number**
Installation kit, DN15, 110mm	77-8480-H
Installation kit, DN20, 130mm	77-8481-H
Fitting pipe, G3/4×110 mm	05-9048-C
Fitting piece, R3/4, 110mm	05-9047-C
Fitting piece, R3/4, 80mm	05-9044-B
Mounting Kit	**Item Number**
Mounting kit no. 10 changes 3/4"X110mm to 3/4" X165 mm	75-0710-A
Mounting kit no. 11 changes 3/4"X110mm to 1" X165 mm	75-0711-A
Mounting kit no. 12 changes 3/4"X110mm to 1" X190 mm	75-0712-A
Mounting kit no. 13 changes 3/4"X110mm to 1" X220 mm	75-0713-A
Mounting kit no. 14 changes 3/4"X110mm to 3/4" X130 mm	75-0714-A
Mounting kit no. 15 changes 3/4"X110mm to 1" X130 mm	75-0715-A
Mounting kit no. 16 changes1"X190mm to 5/4" X260 mm	75-0716-A
Mounting kit no. 17 changes 1"X190mm to 1 1/2" X260 mm	75-0717-A
Mounting kit no. 18 changes 1 1/2"X260mm to 2" X300 mm	75-0718-A
Mounting kit no. 19 changes 1"X130mm to 1" X190 mm	75-0719-A
Mounting kit for temperature sensor (plastic), for direct mounting	79-9039-H
Mounting kit for brass temperature sensors, for direct mounting	79-9040-H
O-ring for temperature sensors	77-3091-H

ELECTRICITY METERS

ELECTRICITY

EM24

ELECTRICITY METERS FOR THREE-PHASE SYSTEMS

Three-phase electronic electricity meter for DIN rail mounting with configuration joystick, front selector and LCD display.

Direct connection up to 65A or via current and potential transformers. Can be equipped with 2 digital outputs (pulse transfer or alarm function).

Alternatively, Modbus RTU or
Dupline communication port and 3 digital inputs,
M-Bus communication or Modbus TCP/IP Ethernet ports are available.

The EM24 is the perfect solution for any application, especially in building and industrial automation, where monitoring of energy and main electrical parameters is required, and is particularly suitable for:

- energy efficiency monitoring
- cost allocation
- tax/legal re-invoicing, where the wireless M-Bus version is the best choice for quick and easy installation without cables. Encryption ensures data security and confidentiality.

The wireless M-Bus version is the perfect solution when wiring is not possible.

PERFORMANCE CHARACTERISTICS AT A GLANCE

- Measurement of energy consumption and electrical variables for single-phase, two-phase or three-phase systems.
- Display of single-phase measurements and total measurements.
- Data transfer via serial communication (Modbus RTU, M-Bus or Dupline) or Ethernet (Modbus TCP/IP).
- Energy consumption transfer via pulser output (optional).
- Easy connection function.
- Data transfer via wireless M-Bus (868 MHz for the European market)
- Two wireless M-Bus versions: a compact model with internal antenna and a model with SMA connector for external antenna (for use in metal distribution boards).
- Energy measurements: total and partial kWh and kVArh or based on 4 different tariffs; single-phase measurements
- Gas, cold water, hot water and district heating kWh measurements via digital inputs
- TRMS measurements of distorted sine waves (voltages/currents)
- Data encryption (a unique key is provided for each unit in a sealed envelope included in the instrument box)
- Complies with IEC/EN61557-12 performance requirements (active power and active energy)

COMMUNICATION TECHNOLOGY

- Radio via wireless M-Bus

Connection	Current Strength	Item Number
Direct	65 A	19-3085-H

SMART BUILDING

SMART SYSTEM

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.

Smoke detector with optical detection method and additional temperature sensor
Complies with DIN EN 14604
KRIWAN and Q-Label certified with environmental detection

Description	Item Number
EASY PROTECT with wireless M-Bus interface	72-9000-H
EASY PROTECT with LoRaWAN® interface	72-9010-H

INDOOR T+H SENSOR

TEMPERATURE AND HUMIDITY SENSOR WITH WIRELESS M-BUS AND LORAWAN® INTERFACE

The indoor temperature and humidity sensor reads the temperature and relative humidity indoors.

The sensor helps the user to optimize heating and ventilation. The current values for temperature and humidity can always be read on the device's display. The data recorded and stored on the device can be transferred to downstream recording systems using wM-Bus or LoRaWAN® radio technology. This ensures transparency regarding heating and ventilation, so that possible efficiency and optimization measures are made aware. For example, this data can be used to prevent mold.

The temperature and humidity are measured every three minutes inside the device. The average value over the last fifteen minutes is determined from the measured values, saved and summarized in the record of the respective temperature or humidity range. The radio transmission takes place every 20 seconds for wM-Bus and every hour for LoRaWAN®.

PERFORMANCE CHARACTERISTICS AT A GLANCE

- 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: ±0.3°C in the range from 5°C to 50°C
- Humidity measurement range: 0% to 100% RH
- Measuring accuracy: ±2% RH in the range from 20% to 80%
- Resolution of the measured values: 0.1°C and 0.1% RH

COMMUNICATION TECHNOLOGIES

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

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

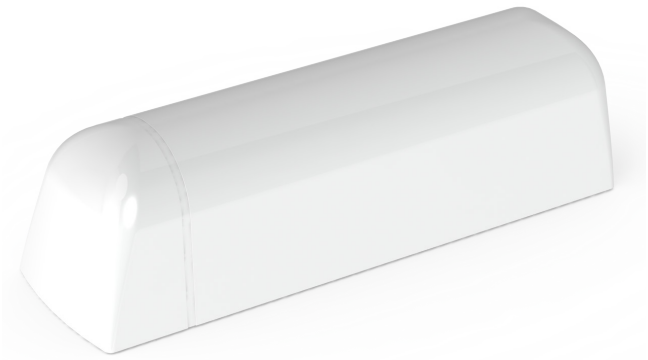
Description	Item Number
Indoor T+H Sensor LoRa Sz204 868 ID IP40	50-6950-H
Indoor T+H Sensor wMB Sz331 868 ID IP40	50-6825-H

ELSYS MOISTURE & LEAKAGE SENSOR

RELIABLE WATER SENSOR FOR PREVENTING MOISTURE AND WATER DAMAGE

Elsys Leak Sensor is a compact LoRaWAN® sensor that specializes in detecting leaks and moisture early – before they develop into major and expensive damage. It detects the presence of water via an external sensor wire that can be strategically placed in technical cabinets, under installations or other risk zones.

The sensor is battery-powered and requires no cables, making it easy to install and ideal for both new and existing buildings. With a long lifespan and wireless data transmission, it provides peace of mind for property management, facility management and residents.



TYPICAL APPLICATIONS:

- Detection of water leaks in technical rooms and installations
- Prevention of moisture damage in homes and basements
- Monitoring of vulnerable areas without access to electricity

Description	Item Number
Elsys leak sensor	50-6927-LEAK

ELSYS EMS SENSOR

MULTISENSOR FOR MEASURING INDOOR CLIMATE AND RUNNING TOILETS

Elsys EMS is a discreet and battery-powered LoRaWAN® sensor that measures a wide range of indoor climate values and physical conditions in buildings. It registers, among other things, temperature, humidity, movement (PIR), light level, sound level as well as movements via accelerometer and door status with magnetic contact.

The compact size makes it ideal for concealed installation in, for example, offices, meeting rooms, institutions and apartments.

The sensor allows for close monitoring of comfort levels, energy consumption and usage patterns – and thus optimizes both indoor climate and operation. It is suitable for installations where more insight into the use and condition of the room is desired without compromising design or flexibility.

TYPICAL APPLICATIONS:

- Temperature and humidity monitoring
- Presence and noise level detection
- Insight into usage patterns and comfort in homes and businesses

Description	Item Number
Elsys EMS sensor - Running toilet	50-6927-H-VIBR
Elsys EMS sensor - Indoor climate	50-6927-H-ROOM

DON'T HESITATE TO REACH OUT TO OUR LOCAL OFFICES

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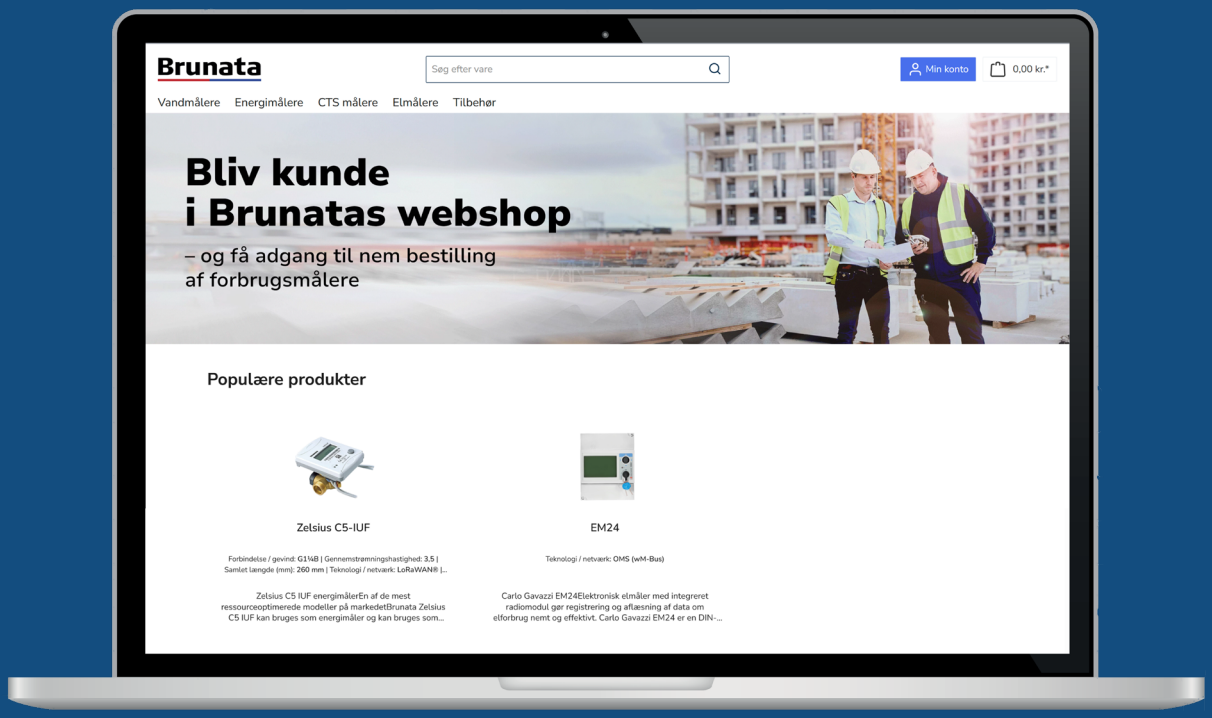
Brunata is one of Europe's leading specialists in energy metering, meter reading and sub-metering, as well as property-based IoT solutions and energy management.

For more than 100 years, we have been collecting consumption data from residential properties – first from radiators, but today via a range of innovative meters, detectors and sensors.

We work to deliver energy optimization solutions to homes across Europe, reducing resource consumption and creating a better quality of life.



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