SYCOUS®

# Hello, I am the Zenner WR3 heat meter

The new generation of ultrasonic heat and cooling meters for precise energy consumption measurement.

# Zenner WR3
## Ultrasonic Energy Meter


### About

The ZENNER WR3 Ultrasonic Energy Meter offers a robust and future-proofed solution for energy consumption measurement in both heating and cooling applications.

The MID Approved Class 2 standard, compact design, reliability at low flow rates and range of data collection outputs, including MBus, and Pulse makes the ZENNER WR3 Ultrasonic Energy Meter the ideal solution for all energy consumption measurement applications.

Whatever your application, the ZENNER WR3 Ultrasonic Energy Meter is the solution for you.

### An Overview of Features and Benefits

- Available as heat, cooling or combined heat and cooling
- MBus output as standard
- Calculator Powered by MBus
- Optional wireless MBus
- 2 pulse inputs or outputs
- Any installation position
- Stores monthly readings during whole running time
- Long battery life and calculator powered by MBus
- Precise, long term stable and wear free
- Range of available nominal flow rates
- Tamper evident features
- MID Class 2 for domestic and commercial billing. Suitable for the RHI
- Special flanged or threaded connections can be requested
- No straight lengths of pipe required
- Split energy meaning parts can be changed without replacing the entire meter
- Battery can be retrofitted on-site

For further technical advice please contact us on:

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# Applications

## District and Communal Heating Applications

On any heat or cooling network, whether communal or district, the ZENNER WR3 Ultrasonic Energy Meter offers the most reliable and future-proofed solution available.

The compact and smart design ensures the ease of installation in any position. The removable calculator and mounting bracket make the display easy to locate and viewable for consumers, alongside tamper-evident features to both deter and detect fraud.

All ZENNER WR3 Ultrasonic Energy meters offer an MBus 'open-protocol' data collection output as standard, with the meter calculator powered by MBus and not reliant on any battery. Additional meters, such as water or electricity meters, can be connected to one of the two available pulse inputs to provide a cost effective solution to capture all metering data through one data collection method.

The reliable and robust MBus data transfer method complies with the Open Metering System (OMS) standard, ensures that data is not locked to any supplier or manufacturer.

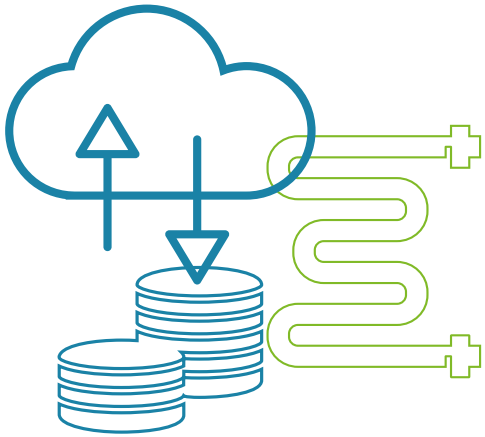
Alongside this a wireless MBus version is available making the ZENNER WR3 Ultrasonic Energy Meter suitable for both new-builds as well as retrofits.

## Stand Alone Installations

On any stand-alone installation the ease of installation and operation are key. The ZENNER WR3 Ultrasonic Energy Meter offers proven and reliable ultrasonic measurement technology that is wear free and tolerant of debris, stable over long term measurement, reliable for very low volume flow rates and can be installed in any installation position.

Alongside this a wireless MBus external adapter is available making the ZENNER WR3 Ultrasonic Energy Meter suitable for both new-builds as well as retrofits.

**The full range of installation accessories are available including, couplings, ball valves and pockets as required.**



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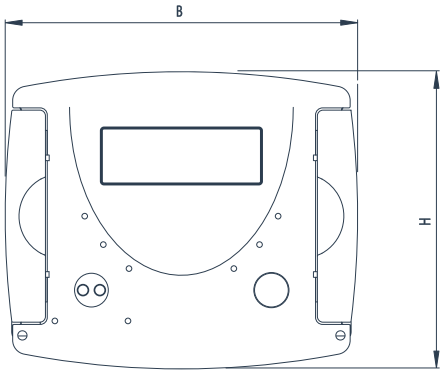
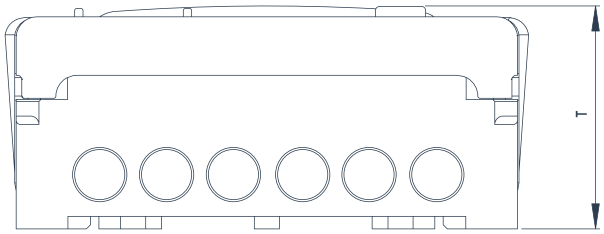
| Technical data | | |
|---|---|---|
| Temperature range | °C | 0 — 150 |
| Temperature difference | K | 3 — 120 |
| Temperature sensor | | PT 100 / 500 / 1000 |
| Power supply | Years | 6 / 11 |
| Protection class | IP | 54, 65 |
| Communication | | optical, MBus<br>2 Pulse Input or Output |
| Length (T) | mm | 54 |
| Height (H) | mm | 106 |
| Width (B) | mm | 120 |
| Environmental class | | A |

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| Nominal flowrate $q_p$ | Overall length | Connection | Maximum flowrate $q_s$ | Minimum flowrate $q_i$ | Response threshold (variable) | Pressure loss at $q_p$ |
|---|---|---|---|---|---|---|
| m³/h | mm | G/DN | m³/h | l/h | l/h | mbar |
| 0.6 | 110 | G ¾ | 1.2 | 6 | 2.4 | 150 |
| 0.6 | 190 | G1 | 1.2 | 6 | 2.4 | 150 |
| 0.6 | 190 | DN20 | 1.2 | 6 | 2.4 | 150 |
| 1.5 | 110 | G ¾ | 3 | 15 | 6 | 150 |
| 1.5 | 130 | G1 | 3 | 15 | 6 | 160 |
| 1.5 | 190 | G1 | 3 | 15 | 6 | 160 |
| 1.5 | 190 | DN20 | 3 | 15 | 6 | 160 |
| 2.5 | 130 | G1 | 5 | 25 | 10 | 200 |
| 2.5 | 190 | G1 | 5 | 25 | 10 | 210 |
| 2.5 | 190 | DN20 | 5 | 25 | 10 | 210 |
| 3.5 | 260 | G 1 ¼ | 7 | 35 | 14 | 60 |
| 3.5 | 260 | DN25 | 7 | 35 | 14 | 60 |
| 6 | 150 | G 1 ¼ | 12 | 60 | 24 | 240 |
| 6 | 260 | G 1 ¼ | 12 | 60 | 24 | 180 |
| 6 | 260 | DN25 | 12 | 60 | 24 | 180 |
| 10 | 200 | G2 | 20 | 100 | 40 | 130 |
| 10 | 300 | G2 | 20 | 100 | 40 | 110 |
| 10 | 300 | DN40 | 20 | 100 | 40 | 130 |
| 15 | 200 | DN50 | 30 | 150 | 60 | 95 |
| 15 | 270 | DN50 | 30 | 150 | 60 | 110 |
| 25 | 300 | DN65 | 50 | 250 | 100 | 105 |
| 40 | 300 | DN80 | 80 | 400 | 160 | 160 |
| 60 | 360 | DN100 | 120 | 600 | 240 | 115 |
| 150 | 500 | DN150 | 300 | 1500 | 600 | 120 |

Measurement insert 4 kg

Tolerance of pressure loss: +/- 5%

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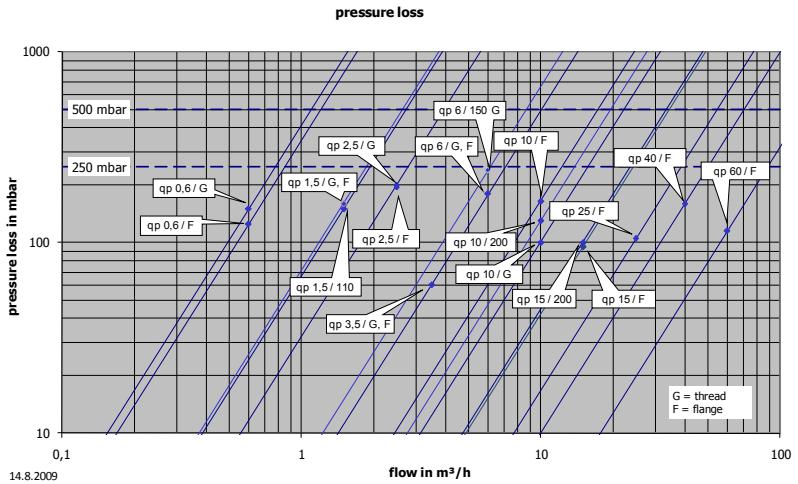
| Technical data temperature sensors | | |
|---|---|---|
| Platinum precision resistor | | Pt 500 |
| Sensor diameter/type | mm | 45 x 5.2 / 105 x 6.0 / 140 x 6.0 / 230 x 6.0 |
| Temperature range | °C | 0 ... 105 / 0 .... 150* |
| Cable length | m | 1.5 or 3 depending on size of meter. (opt. 5) |
| Installation | VL | By direct immersion or by immersion sleeves (in case of existing measuring points) |
| | RL | By direct immersion or by immersion sleeves (in case of existing measuring points); integrated in flow sensor (only on meters up to DN40). |

Dimensioning limits may apply for non-symmetrical temperature sensors installation.

*optional





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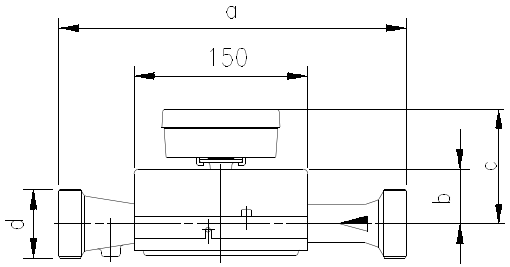
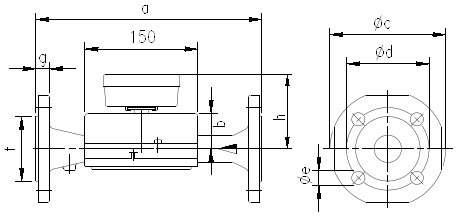
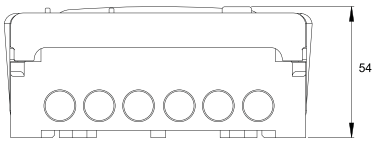
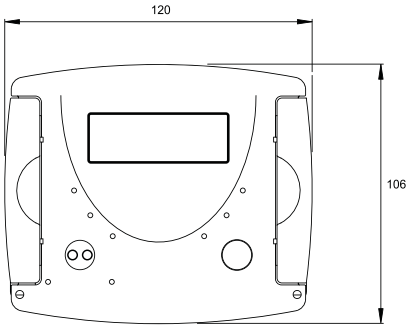



| Order No. | qp m³/h | PN bar | a | b | c | d |
|---|---|---|---|---|---|---|
| 2WR7 45 | 3.5 | 16 | 260 | 51 | 96 | G 1¼ B |
| 2WR7 50 | 6 | 16 | 260 | 51 | 96 | G 1¼ B |
| 2WR7 55 | 6 | 16 | 150 | 22 | 63 | G 1¼ B |
| 2WR7 63 | 10 | 16 | 200 | 48 | 93 | G 2 B |
| 2WR7 60 | 10 | 16 | 300 | 48 | 93 | G 2 B |




| Order No. | qp m³/h | PN bar | DN | a | b | Øc | Ød | Øe | No. of holes | f | g | h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2WR7 46 | 3.5 | 25 | 25 | 260 | 51 | 115 | 85 | 14 | 4 | 68 | 18 | 96 |
| 2WR7 52 | 6 | 25 | 25 | 260 | 51 | 115 | 85 | 14 | 4 | 68 | 18 | 96 |
| 2WR7 61 | 10 | 25 | 40 | 300 | 48 | 150 | 110 | 18 | 4 | 88 | 18 | 93 |
| 2WR7 65 | 15 | 25 | 50 | 270 | 46 | 165 | 125 | 18 | 4 | 102 | 20 | 91 |
| 2WR7 69 | | | | 200 | | | | | | | | 107 |
| 2WR7 70 | 25 | 25 | 65 | 300 | 52 | 185 | 145 | 18 | 8 | 122 | 22 | 97 |
| 2WR7 74 | 40 | 25 | 80 | 300 | 56 | 200 | 160 | 18 | 8 | 138 | 24 | 101 |
| 2WR7 82 | 60 | 16 | 100 | 360 | 68 | 235 | 180 | 18 | 8 | 158 | 24 | 113 |
| 2WR7 83 | 60 | 25 | 100 | 360 | 68 | 235 | 190 | 22 | 8 | 158 | 24 | 113 |

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# Notes

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