

Minomess®

Water meter with wireless M-Bus-interface

Single-jet dry-dial meter for cold and hot water

The radio water meter Minomess® is a dry-dial meter with 7-digit-rollers register and a shielded magnetic coupling. The individual 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 wireless M-Bus radio module ex works and can be integrated in wireless M-Bus readout-systems.



Product characteristics

- Dry dial register with shielded magnetic coupling
- With 7-digit-rollers register and modulator disc (1 l/pulse) for non-reactive scanning for radio
- For horizontal and vertical installation (also for risers and downpipes)
- 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)
- Register cap made of high-quality UV-resistant polymer plastic
- Equipped as standard with an (IP67) wireless M-Bus radio module according to EN13757-4 with C1 mode
- Battery life 10 years after radio activation
- Transmission interval 180s
- Brass body (outside chrome-plated)
- Register rotatable 360°
- Operating pressure MAP 10
- Approved in accordance with MID

Applications

- For consumption measuring of drinking water and unpolluted service water up to 30 °C
- For consumption measuring of drinking water and unpolluted service water up to 90 °C

Smart Metering functions

- Self-monitoring
- Tampering detection
- Reverse water flow detection
- Leakage detection
- Meter Stop detection
- Meter oversized detection
- Meter undersized respectively pipe burst detection

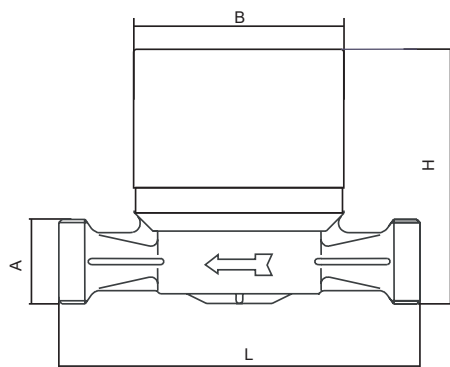
Minomess® with wireless M-Bus-interface

Nominal technical data

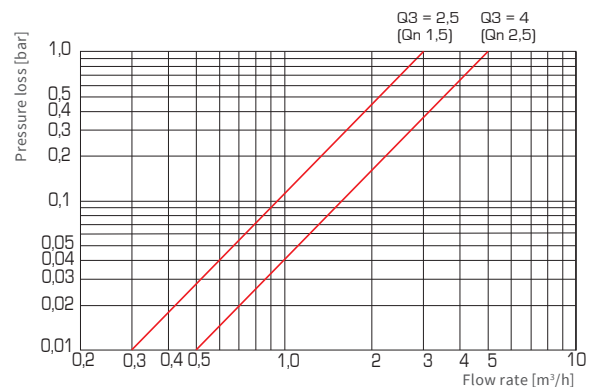
| | | | | | |
|----------------------------------|-------------|---------|------------------|------------------|--------------|
| Permanent Flowrate | Q_3 | m^3/h | 2.5 | 2.5 | 4 |
| Comparable to nominal flow (EWG) | Q_n | m^3/h | 1.5 | 1.5 | 2.5 |
| Overload Flowrate | Q_4 | m^3/h | 3.125 | 3.125 | 5 |
| Transitional Flowrate | Q_2 | l/h | 50 H / 100 V | 50 H / 100 V | 80 H / 160 V |
| Minimum flow | Q_1 | l/h | 31.25 H / 62.5 V | 31.25 H / 62.5 V | 50 H / 100 V |
| Standard measuring range | Q_3 / Q_1 | R | 80 H / 40 V | 80 H / 40 V | 80 H / 40 V |
| Starting flow approx. | | l/h | 10 | 10 | 14 |
| Display value min. | | l | 0.05 | 0.05 | 0.05 |
| Display value max. | | m^3 | 10.000 | 10.000 | 10.000 |

Technical Dimensions

| | | | | | |
|--|--------------------|------|---------------------------------|-------|-------|
| Connecting sizes | DN | mm | 15 | 15 | 20 |
| | | inch | ½ | ½ | ¾ |
| Overall length meter | L | mm | 80 | 110 | 130 |
| Overall length with connectors approx. | | mm | 160 | 190 | 226 |
| Meter thread | A | inch | G ¾ B | G ¾ B | G 1 B |
| Thread connector | | inch | R ½ | R ½ | R ¾ |
| Height | H | mm | 77 | 75 | 78 |
| Width | B | mm | 64 | 64 | 64 |
| Net weight | | kg | 0.44 | 0.48 | 0.59 |
| Measurement accuracy class | cold and hot water | | ± 5 % ($Q_1 \leq Q < Q_2$) | | |
| | | | ± 2 % ($Q_2 \leq Q \leq Q_3$) | | |
| | | | ± 3 % ($Q_3 \leq Q \leq Q_4$) | | |



Dimensions



Pressure loss curve

Minomess® with wireless M-Bus-interface

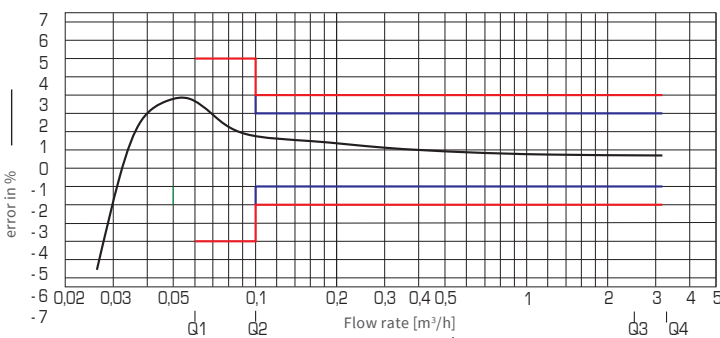
Nominal operating conditions

| | | | |
|---------------------------------------|--------------------|-----|-------------------------------------|
| Temperature range | cold and hot water | °C | 0.1 - 30 30 - 90 |
| Pressure stage | MAP | bar | 10 |
| Test pressure | P | bar | 16 |
| Pressure loss class at Q ₃ | Δp | bar | 0.63 |
| Pressure loss class at Q ₄ | Δp | bar | 1.0 |
| Mechanical environmental condition | | | M1 |
| Climatic condition | | | 5°C to 70°C – Condensation possible |
| Magnet protection | | | PTB tested acc. VDDW and EN 14154-3 |

Technical data Wireless M-Bus-radio module

| | |
|-----------------------------------|--|
| Operating frequency | 868 MHz |
| Transmission power | ~ 14 dBm |
| Duration of transmission telegram | ~ 10-15 ms |
| Sending interval | all 180 s* |
| Data transmission procedure | Wireless M-Bus (C1-Mode) |
| Encoding of radio protocols | yes (Standard: Encryption Mode 5; Encryption Mode 7 on request) |
| Error detection | CRC |
| Telegram content | Serial number, date, meter reading, mid-month value, previous month (max. 15), status information radio module |
| Optional IR interface | yes |
| Battery capacity | for 10 years from the beginning of radio activation |
| Display | no |
| Energy supply | Lithium battery |
| Reverse flow detection | yes |
| Protection class | IP67 |
| ambient conditions | +5 °C to +55 °C |
| CE conformity | according to directive 2014/53/EU (RED) |
| Radio activation | Illuminating > 8s; Autostart after flow of 30 l; using Zenner opto head and MSS software |

*After activation, the device sends for a period of one hour with a quicker transmission interval of 20 s (commissioning scenario).



Typical pressure loss curve

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