Nordic Propeye

home solutions
a Nordic Propeye company

# Minomess LoRaWAN vattenmätare

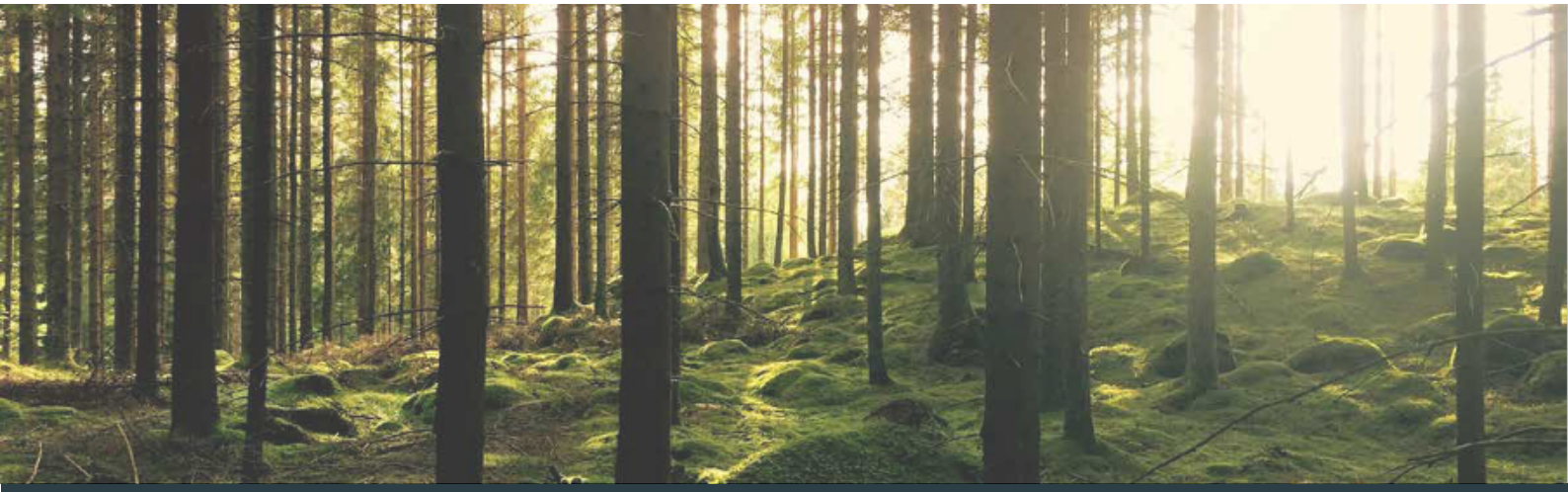
**Single-jet dry-dial meter for cold and hot water**
The radio water meter Minomess® is a dry-dial meter with 7-digit-rollers register and a shielded magnetic coupling. The individual advantage of the meter an exceptional compact design. With its very small height, the meter easily adapts to any installation 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® radio module ex works and can be integrated in LoRaWAN® readoutsystems.

**Product characteristics**

- Single jet dry-dial 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)



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- 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 with EDC-LPWAN-radio module (868 MHz) for LoRaWAN® as standard
- Battery life 10 years after radio activation
- Transmission interval daily
- Brass body (chrome-plated)
- Register rotatable 360°
- Operating pressure MAP 10
- Approved in accordance with M

**Applications**

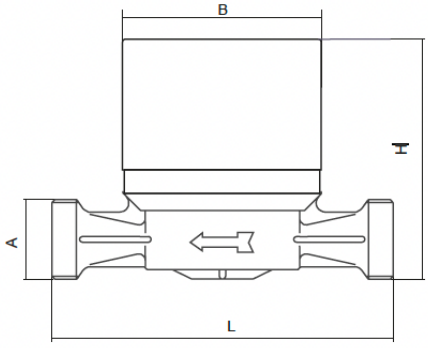
- For the consumption measurement of cold and unpolluted drinking water or service water up to 30 °C
- For the consumption measurement of hot and unpolluted drinking water or service water up to 90 °C

**Smart Metering functions**

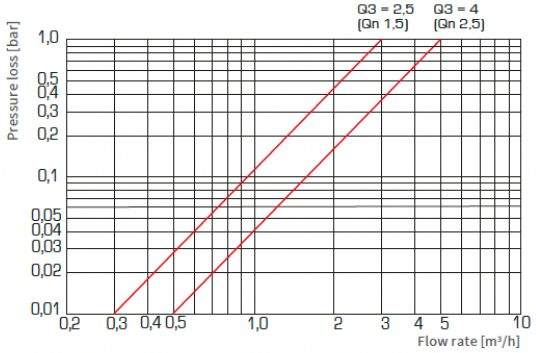
- Self-monitoring
- Tampering detection
- Reverse water flow detection
- Leakage detection
- Meter Stop detection
- Meter oversized detection
- Meter undersized respectively pipe burst detection

# Minomess LoRaWAN vattenmätare

| **Nominal technical data** | | | | | |
|---|---|---|---|---|---|
| Permanent flow rate | $Q_3$ | $m^3/h$ | 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 | 50H/100V | 50H/100V | 80H/160V |
| Minimum flow | $Q_1$ | l/h | 31,25H/6 2,5V | 31,25H/6 2,5V | 50H/100V |
| Standard measuring range | $Q_3$/ $Q_1$ | R | 80H/40V | 80H/40V | 80H/40V |
| Starting flow approx.. | | l/h | 10 | 10 | 14 |
| Display value min. | | $m^3$ | 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 |
| Algorithms | | 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% (Q1 ≤ Q < Q2)<br>± 2 % (Q2 ≤ Q ≤ Q4)<br>± 3 % (Q2 ≤ Q ≤ Q4) | | |




Dimensions




Pressure loss curve

# Minomess LoRaWAN vattenmätare

| **Nominal operating conditions** | | | |
|---|---|---|---|
| Temperature range | Cold and hot water | °C | 0.1 - 30<br>30 – 90 |
| Pressure stage | MAP | Bar | 10 |
| Test pressure | P | Bar | 16 |
| Pressure loss class at Q3 | Δp | Bar | 0,63 |
| Pressure loss class at Q4 | 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 LoRaWAN® radio module** | |
|---|---|
| Operating frequency | 868 MHz |
| Transmission power | ~ 14 dBm |
| Duration of transmission telegram | up to 1 s (depending on spreading factor) |
| Sending interval | daily (monthly rep. hourly: on request) |
| Data transmission procedure | LoRaWAN class A (bi-directional communication) |
| Encoding of radio protocols | yes |
| Error detection | CRC |
| Telegram content | Telegram contents depend on the communication scenario: Contents can be, for example: daily-, monthly, half-monthly value, due date, date, time, status information, firmware version, ident number |
| 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 100 l; using Zenner opto head and MSS software |

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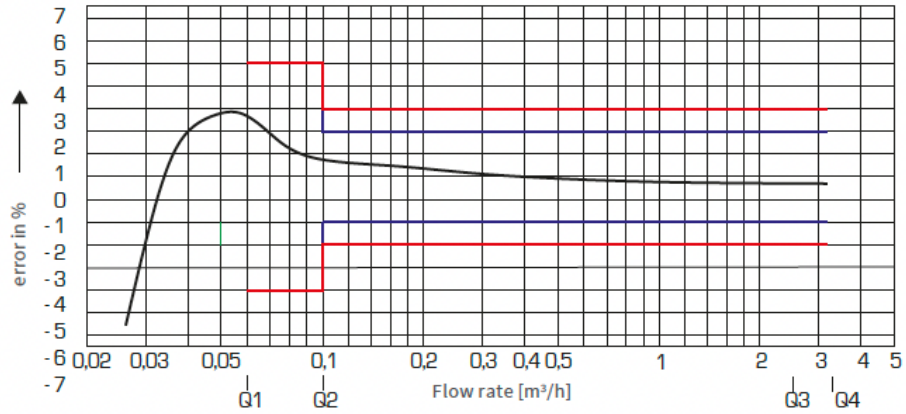


Typical pressure loss curve