

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 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

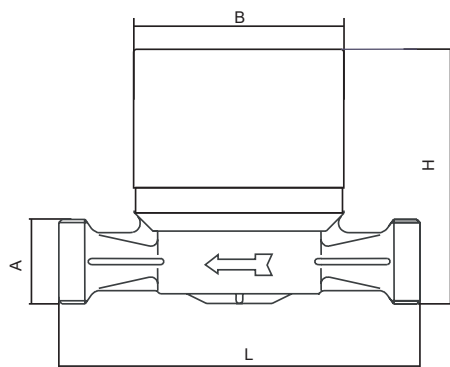
Minomess® with wireless M-Bus-interface

Nominal technical data

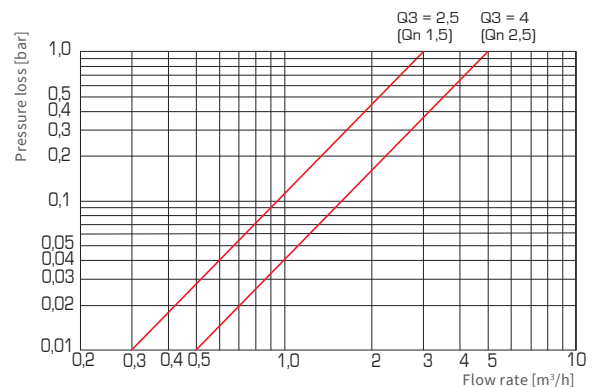
Permanent Flowrate	Q_3	m^3/h	2.5	2.5	4
Comparable to nominal flow (EWG)	Q_n	m^3/h	1.5	1.5	2.5
Overload Flowrate	Q_4	m^3/h	3.125	3.125	5
Transitional Flowrate	Q_2	l/h	50 H / 100 V	50 H / 100 V	80 H / 160 V
Minimum flow	Q_1	l/h	31.25 H / 62.5 V	31.25 H / 62.5 V	50 H / 100 V
Standard measuring range	Q_3 / 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

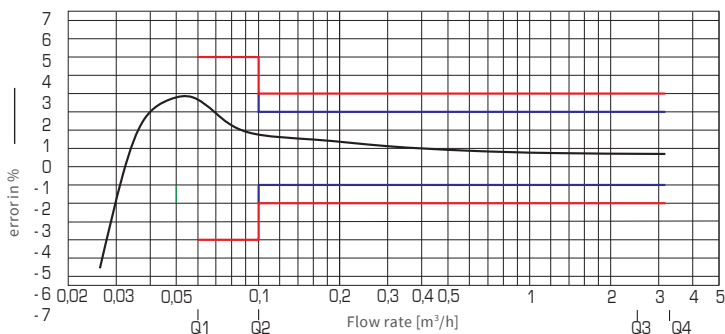
Technical data Wireless M-Bus-radio module

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

- The activation of the radio and the coil scanning of the module can be carried out:
- using the ZENNER configuration software MSS and the universal interface Mino-Connect (USB or Bluetooth) and the special ZENNER infrared opto head IrCombi-Head;
 - Illumination of the infrared interface with a light source (> 8s)
 - After a flow of at least 100 liters, the radio module is activated automatically

*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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