

Ultrasonic flowmeter for water

Portable, very robust and easy-to-use ultrasonic flowmeter for the water and wastewater industry

Features

- Several months of battery operation possible
- Very high bidirectional measuring accuracy and highly dynamic flow measurement
- IP68 transducers, reinforced transducer cables and very robust housing
- Easy and intuitive use
- Very fast and easy installation
- Permanent coupling foil
- High measuring accuracy, even at low flow velocities
- Suitable for highly diverse nominal pipe sizes and pipe materials
- Minimum nightflow mode

Applications

- Temporary measurements in the water and wastewater industry
- Leakage detection
- Water loss balancing
- Accuracy verification of permanently installed flowmeters
- Monitoring of pumping tests



Technical data

Measurement	
Measurement principle	transit time difference correlation principle
Flow velocity	0.01...25 m/s
Repeatability	0.25 % v. MW \pm 0.01 m/s
Measurement uncertainty (volumetric flow rate) ¹	\pm 2 % v. MW \pm 0.01 m/s
Transmitter	
Power consumption	< 3 W, Charge: 18 W
Integrated battery	Li-Ion
Operating time	Without outputs and backlight, inner pipe diameter max.1400 mm ² : Continuous measurement: > 48 h Energy safe mode: - > 7 d (measuring interval: 1 min) - > 30 d (measuring interval: 10 min) - > 180 d (measuring interval: 30 min) - > 270 d (measuring interval: 60 min) Minimum nightflow mode: -> 14 d (4 h cont. measurement per 24 h) -> 30 d (2 h cont. measurement per 24 h) -> 60 d (1 h cont. measurement per 24 h)
Number of measuring channels	1
Damping	0 ... 100 s (adjustable, continuous measurement)
Measuring cycle	10 Hz
Measuring cycle	- 1 s (continuous measurement) - 1, 5, 10, 15, 30, 60 min (energy safe mode) - max. 12 h continuous measurement per 24 h (minimum nightflow mode)
Housing material	PP
Degree of protection	IP67 (housing cover closed) IP65 (housing cover open)
Measurements	273 x 247 x 127 mm
Weight	3.1 kg
Ambient temperature	-10 ... +50 °C
Display	2 x 16 characters, dot matrix, backlight
Menu language	English, German, French, Dutch, Spanish
Measuring functions	
Physical quantities	volumetric flow rate, mass flow rate, flow velocity
Totalizer	volume, mass
Data logger	
Loggable values	all physical quantities and totalized values
Capacity	> 100.000 measured values



Scope in delivery

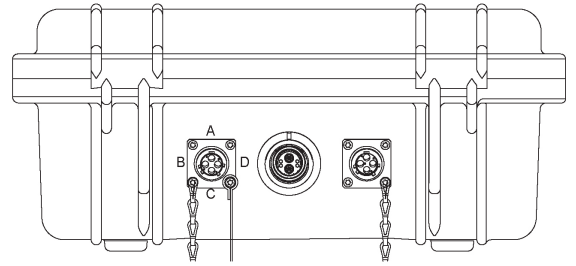
- one Transducer of choice included in set, two more transducers can be booked as an option to expand the operational range (see Transducer recommendation, page 4)
- Transmitter
- Transducer mounting
- Transmission cable for reading
- Charger
- Steel brush
- Coupling paste
- Ruler
- Software
- Transport case

¹ for reference conditions and $v > 0.25$ m/s

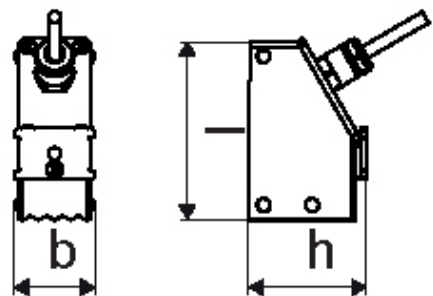
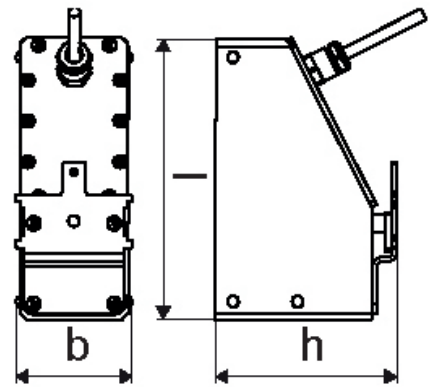
² Operating time extension using the power pack 1008637 (optional)

Technical data

Outputs The outputs are galvanically isolated from the transmitter.	
Current output	
Number	1 (continuous measurement)
Range	4 ... 20 (0 ... 22) mA (passive)
Accuracy	0.1 % v. MW $\pm 15 \mu\text{A}$
Passive output	$U_{\text{ext}} = 4 \dots 24 \text{ V}$, depending on R_{ext} ($R_{\text{ext}} < 1 \text{ k}\Omega$ at 24 V)
Binary output	
Number	1 (continuous measurement)
Optorelay	32 V / 200 mA
- Binary output as alarm output	
Functions	Limit or error
- Binary output as pulse output	
Functions	mainly for totalizing
Puls value	0.01 ... 1000 ms
Puls width	80 ... 1000 ms



Material			
Housing	PEEK with stainless steel cap 316Ti (1.4571)		
Contact surface	PEEK		
Degree of protection	IP68 ¹		
Dimensions			
500KHz Sensor			
Length	130 mm		
Width	54 mm		
Height	83.5 mm		
Weight	0.43 kg		
1MHz/2MHz Sensor			
Length	72 mm		
Width	32 mm		
Height	46 mm		
Weight	0.085 kg		
Transducer cable			
Type	7819		
Length	6 m		
Ambient temperature			
min.	-40 °C		
max.	+100 °C		
Transducer parameters			
Transducer frequency	500 kHz	1 MHz	2 MHz
Rohrinnendurchmesser	see transducer recommendation		
Inner pipe diameter	min. 5 mm	min. 2.5 mm	min. 1.2 mm



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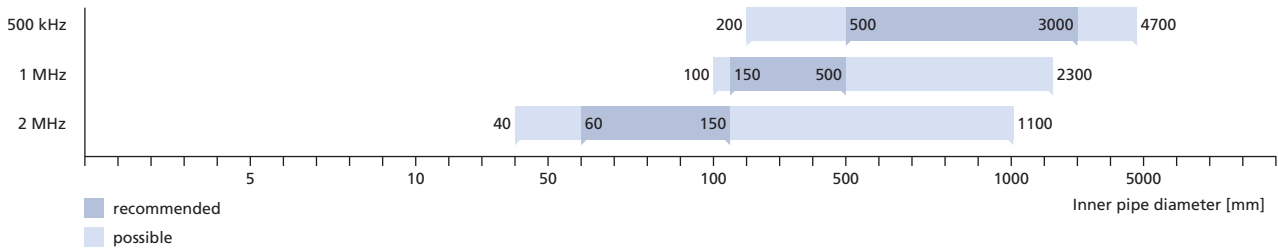
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Transducer recommendation for typical water pipe materials

Plastic pipes (e.g.: PE, HDPE, PVC)
steel pipes, stainless steel pipes, copper pipes without coating

Flow velocity: max. 3m/s

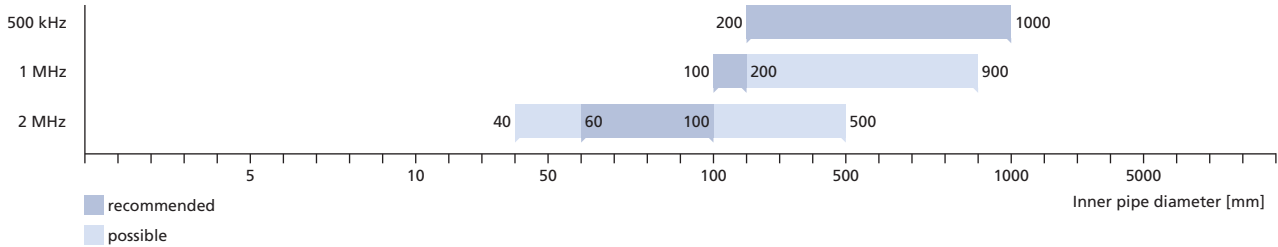
Transducer



Cast iron pipes with cement mortar liner and coating

Flow velocity: max. 3m/s

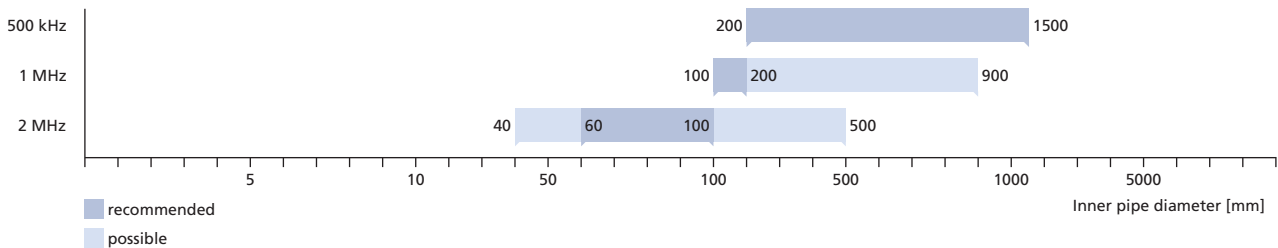
Transducer



Steel pipes with cement mortar liner and PE coating

Flow velocity: max. 3m/s

Transducer



For other pipe materials and higher flow velocities please contact **SebaKMT** Support:
Phone number +49 9544 - 68 74 12 or +49 35208 - 84 29 20.