

Type 4.1.2 radio ultrasonic meter vario 4

Measure heat or cold consumption more precisely with radio readout.

The 4.1.2 ultrasonic meters comprise a calculator, volume measuring unit and temperature sensor in one and are always equipped with the latest radio 4 technology. Volume is measured by ultrasonic flow measurement with maximum precision.

In a nutshell

- Available in sizes qp 0.6 – 2.5 m³/h
- No mechanical wear: flow measurement without moving parts
- Detachable calculator
- Smoothing sections in the inlet and outlet are not required
- Fitting position arbitrary, even overhead
- OMS certificated datagram configurable
- Heat meter: Type examination certificate (TEC) according to MID (Measuring Instruments Directive)
- Cold meter: TEC according to Annex 4 Module B of the German measurement and calibration regulation (MessEV)
- Return temperature sensor already installed in the connector
- The basis for measurement stability is water quality compliant with the German District Heating Working Group (AGFW) information sheet FW 510 and VDI 2035



Figure heat meter

For a wide variety of applications

Heat meters are mainly used in the residential sector, but also for local and district heating transfer stations or for measuring energy for hot water preparation. The cold meter is intended for cooling circuits.

Future as standard

The 4.2.1 meets the requirements of the Energy Efficiency Directive (EED) with regard to the provision of intermediate consumption information. It is already activated for radio operation. Read-out data is transmitted from the unit, so the user does not have to be present. Intermediate readings on site are no longer necessary.

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Technical data Main meter

Guidelines:		MID 2014/32/EU
Heat meters:		TEC according to Annex 4
Cold meters:		Module B of the German measurement and calibration regulation (MessEV)
Approval:		
Heat meter		DE-20-MI004-PTB002
Cold meter		DE-20-M-PTB-0022
EN 1434 designation		Accuracy class 2 Environmental class A
Mechanical environment		Class M1
Electromagnetic environment		Class E1
Storage temperature	(°C)	-25 ... 55 (empty meter)
Ambient temperature	(°C)	5 ... 55
Battery		3.6 VDC, 1x A-cell lithium

Technical data Volume meter

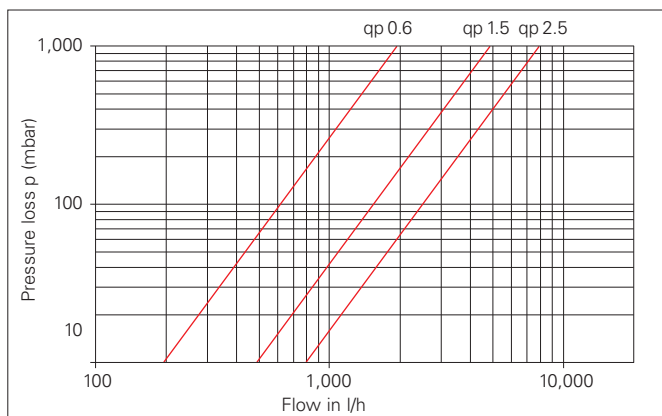
Nominal flow rate qp	(m³/h)	0.6	1.5	2.5
Maximum flow qs	(m³/h)	1.2	3.0	5.0
Minimum flow qi	(l/h)	6	15	25
qi/qp		1:100		
Pressure loss at qp	(mbar)	95	120	100
Kv-values Δp = 1 bar	(m³/h)	1.95	4.33	7.91
Threaded connection on the meter		G¾B	G¾B	G1B
Length	(mm)	110	110	130
Nominal width DN		15	15	20
Protection class heat meter		IP54		
cooling meter		IP65		
Pressure level		PN 16		
Flow rate sensor cable	(m)	0.5 (not removable)		
Medium		water		
Heat meter	(°C)	1 ... 105		
Cold meter	(°C)	3 ... 50		

Technical data Calculator

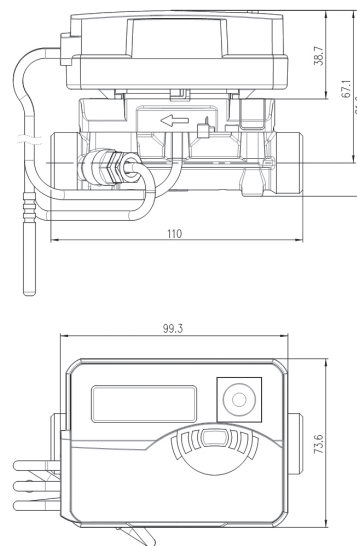
Protection classes		
Heat meter	(°C)	0 ... 105
	(K)	3 ... 102
Cold meter	(°C)	0 ... 90
	(K)	3 ... 87

Technical data Temperature sensor

Free temperature sensor	(m)	1.5 (not removable)
Integrated temperature sensor	(m)	0,5
Diameter Ø	(mm)	5.2
Type		PT 1000



Pressure loss graph



Technical data Radio

Radio mode		unidirectional Standard: Mode C1 according to OMS V4
Radio data transmission		Standard: - Year-end value (as OMS data point) - Consumption data of 12 mid-month and end-of-month values - Status information
Transmitting frequency	(MHz)	868.95
Transmitting power	(W)	0.003 ... 0.015
Transmission period	(sec.)	0.008 ... 0.014
CE conformity		according to Directive 2014/53/EU (RED)
Data security		Encryption according to OMS standard; recognised by BSI TR-03109
Future-proof design		prepared for EED (Directive 2012/27/EU)