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smart metering
solutions.

SWM301 P/B

Ultrasonic Smart Cooling & Heat Meter



Advanced, Reliable, and Intelligent Water Heat Metering

The SWM301 Ultrasonic Heat Meter is a high-precision, intelligent metering solution designed for chilled & heating metering applications. Equipped with diverse communication interfaces—including wMBUS, RS485, Pulse, 4G, LoRaWAN, Zigbee, and NB-IoT—it enables seamless automated data management, remote monitoring, and optimized thermal energy control. Built with durable copper piping and powered by cutting-edge ultrasonic technology, this advanced meter delivers Class 2 accuracy, long-term stability, and zero mechanical wear and tear. Fully compliant with EN1434 and GB/T 32224 standards and featuring a convenient replaceable battery design, it allows utilities and building managers to maximize operational efficiency, streamline maintenance, and accurately track energy consumption.

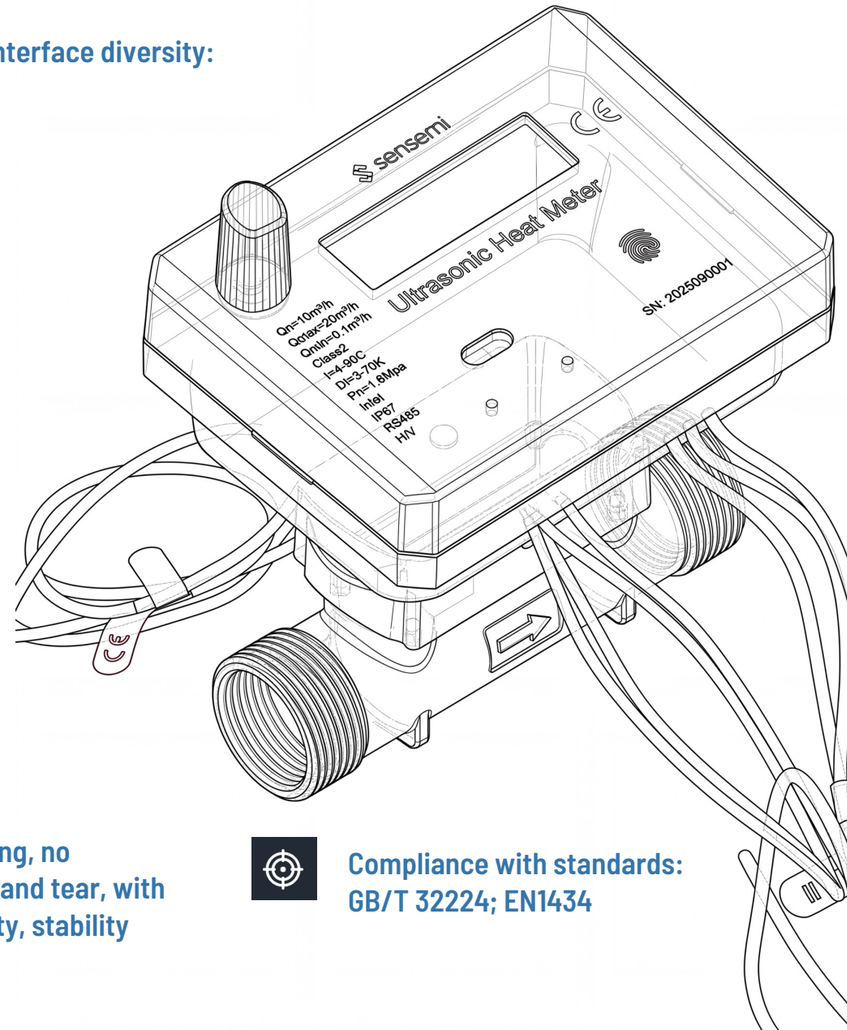
Communication Technologies:

NB-IoT · LoRaWAN · M-Bus · M-Bus wireless · LTE-M

PRODUCT FEATURES

- Pipe material: copper
- Range ratio: R50/R100
- Replaceable battery design
- Temperature range: (2~95)°C
- Accuracy level: Class 2
- Difference range: (2~90)K
- Communication interface diversity:

wMBUS
RS485
Pulse
4G
LoRawan
Zigbee
NB-IoT



- Ultrasonic metering, no mechanical wear and tear, with excellent reliability, stability
- Compliance with standards: GB/T 32224; EN1434

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APPLICATIONS

- Residential and commercial chilled & hot water metering
- Smart city water management systems
- Remote monitoring and billing applications
- Water conservation and leakage detection initiatives

FLOW RATE PARAMETERS

Diameter	Min. Flow Q_{min} (m^3/h)	Nominal Flow Q_p (m^3/h)	Max. Flow Q_{max} (m^3/h)	Length (mm)
DN15	0.012 0.015 0.03	0.6 1.5 1.5	1.2 3 3	110
DN20	0.025 0.05	2.5 2.5	5 5	130
DN25	0.035 0.07	3.5 3.5	7 7	160
DN32	0.12	6	12	180
DN40	0.2	10	20	200

EXTERNAL DIMENSIONS

Nominal Diameter	DN15	DN20	DN25	DN32	DN40
Thread	G¾B	G1B	G1 ¼B	G1 ½B	G2B
L (mm)	110	130	160	180	200
W (mm)	85	85	85	85	85
H (mm)	95	95.5	99	109	113

TECHNICAL PARAMETER

Performance	Parameter
Accuracy	Class 2
Connection type	DN15-DN40 is thread connection
Pressure loss	≤ 0.02MPa
Max. working pressure	1.6MPa
Temperature sensor	1.5m standard two-wire PT1000 paired temperature sensor (Wire length adjustable)
Data Storage	24 months history data
Transmission	Optical/M-BUS/RS485/Pulse/LoRaWan/NB- IoT/ Zigbee/4G/wMBUS
Power	Built-in Lithium Battery
Protection Class	IP65/IP67
Environmental	Class A
Temperature range	(2~95)°C
Temperature difference range	(2~90)K
Installation Method	Water inlet or return (default water inlet)
Installation	Horizontal or Vertical
Battery life	Life Period ≥ 10 years
Display	8-bit LCD display
Anti-magnetic interference	Exposure to magnetic fields with an intensity of up to 100 kA/m does not affect the metering or remote-transmission performance of the heat meter