



Technical datasheet sensonic 3 calculator

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1 Technical data

Ambient conditions to EN 1434 Classes M1 / E1

Ambient temperature

- Storage: -25 °C to +55 °C
- Operation: +5 °C to +55 °C

Relative humidity 5 % to 95 %, non-condensing

Protection class IP 65 as per EN 60529

Temperature sensors Pt500 in accordance with EN 60751

Temperature measurement range limits (Θ) / Temperature difference limits ($\Delta\Theta$)

	Θ_{\min}	Θ_{\max}	$\Delta\Theta_{\min}$	$\Delta\Theta_{\max}$
Heat meter	5 °C	150 °C	3 K	100 K
Combined heat/cold meter	1 °C	150 °C	3 K	100 K
Cold meter	1 °C	25 °C	3 K	20 K

Combined heat / cold meter changeover criteria

- $\Delta\Theta_{\text{grenz}} = 0.19 \text{ K}$
- $\Theta_{\text{in_umsch}} = 20 \text{ °C}$

Pulse value

- 1 / 25 / 250 l/pulse set by the factory in accordance with type plate (T1, T25, T250 versions)
- 1 / 2.5 / 10 / 25 / 100 / 250 / 500 / 1000 / 2500 / 10000 / 25000 l/impulse can be adjusted oncer (TX version)

Impulse input Class IB as per EN 1434

Main dimensions

- Width: 93 mm
- Height (without cable sockets): 134,5 mm
- Height (with cable sockets): 149 mm
- Depth: 35 mm

Power supply

- Battery type: 1 x AA lithium metal battery in equipment
- Nominal voltage: 3.6 V
- Battery weight*: 0.0160 kg or 0.0170 kg
- Lithium content*: 0.62 g or 0.7 g
- UN number: UN 3091

*(depending on the order variant)

Service life 10 years of operation + 1 year operating reserve + 1 year storage

ista radio interface

- SRD band
- Frequency range: 868 – 870 MHz
- Transmission power: < 10 mW

Wireless M-bus radio interface

- Mode: C1 as per EN 13757-4:2013-11
- Protection mechanism: AES-CBC-128 (safety mode 7) as per EN 13757-7:2018-06, individual key per device
- Transmission method: Unidirectional
- Send interval: 4 minutes
- Transmission power: <10 mW
- Frequency band: 868 MHz
- Telegram content: Current measured value, reference date value, end-of-month value of last month

Overview of versions

Article number	Pulse input	Energy unit	Energy format	Volume format (m ³ /h)	Power format (kWh)	Medium	Flow sensor installation position	Sensor	Approvals to
51001	T1	kWh	0.1	0.001	0.001	Heat	Return	Pt500	MID
51002	T25	MWh	0.001	0.1	0.1	Heat	Return	Pt500	MID
51003	T250	MWh	0.1	0.1	0.1	Heat	Return	Pt500	MID
51000	TX	kWh/ MWh	Variable	Variable	Variable	Heat	Return	Pt500	MID
51010	T1	GJ	0.001	0.1	0.1	Heat	Return	Pt500	MID
51011	T25	GJ	0.001	0.1	0.1	Heat	Return	Pt500	MID
51012	T250	GJ	0.1	0.1	0.1	Heat	Return	Pt500	MID
51050	TX	kWh/ MWh	Variable	Variable	Variable	Heat	Flow	Pt500	MID
51061	T1	GJ	0.001	0.1	0.1	Heat	Flow	Pt500	MID
51062	T25	GJ	0.001	0.1	0.1	Heat	Flow	Pt500	MID
51021	T1	kWh	0.1	0.001	0.001	Cold	Return	Pt500	D/CH
51022	T25	MWh	0.001	0.1	0.1	Cold	Return	Pt500	D/CH
51023	T250	MWh	0.1	0.1	0.1	Cold	Return	Pt500	D/CH
51071	T1	kWh	0.1	0.001	0.001	Cold	Flow	Pt500	D/CH
51072	T25	MWh	0.001	0.1	0.1	Cold	Flow	Pt500	D/CH
51031	T1	kWh	0.1	0.001	0.001	Hybrid	Return	Pt500	MID, D/CH
51032	T25	MWh	0.001	0.1	0.1	Hybrid	Return	Pt500	MID, D/CH
51033	T250	MWh	0.1	0.1	0.1	Hybrid	Return	Pt500	MID, D/CH
51030	TX	kWh/ MWh	Variable	Variable	Variable	Hybrid	Return	Pt500	MID, D/CH

Article number	Pulse input	Energy unit	Energy format	Volume format (m ³ /h)	Power format (kWh)	Medium	Flow sensor installation position	Sensor	Approvals to
51041	T1	GJ	0.001	0.1	0.1	Hybrid	Return	Pt500	MID, D/CH
51042	T25	GJ	0.001	0.1	0.1	Hybrid	Return	Pt500	MID, D/CH
51034	TX	kWh/MWh	Variable	Variable	Variable	Hybrid	Flow	Pt500	MID, D/CH
51080	TX	kWh/MWh	Variable	Variable	Variable	Heat / Glycol	Return	Pt500	with-out
51081	TX	kWh/MWh	Variable	Variable	Variable	Heat / Glycol	Flow	Pt500	with-out

2 Approval

- Heat (MID): DE-19-MI004-PTB029
 - Cold (national approval for Germany): DE-21-M-PTB-0025
 - Cold (national approval for Switzerland): CH-T2-21779-00
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3 Main and connection dimensions

Main dimensions

