



Technical datasheet sensonic 3

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1 Technical data

Environmental classes

- A + C to EN 1434
- E1 / M2 to 2014/32/EU

Ambient temperature

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

Relative humidity 5 % to 95 %, non-condensing

Protection class

- Calculator: IP54 to EN 60529
- Flow sensor: IP 65 to EN 60529

Approved fluid Water

Installation site (see nameplate)



	Flow	Return
Heat meters	hot line	Cold line
Combined heat/cold meter	hot line	Cold line
Cold meters	Cold line	hot line

Inlet section

- 10 x DN in case of lack of thermal mixing or thermal stratification (e.g. after several heating circuits merge)
- otherwise not required

Outlet section not required

Nominal flow q_p 0,6 / 1,5 / 2,5 (acc. rating plate)

q_p / q_i

- asymmetric: 25
- symmetric: 50

Nominal pressure PN 16

Pressure loss at q_p (depending on the EAS) $\Delta p < 0.25$ bar

Lenght sensor cable

depending on the order variant:

sensoric 3 with temperature sensors 5.0 mm:

- symmetrical: 1.5 m/1 m or 3 m/1 m
- asymmetrical:
 - Temperature sensor in the hydraulics: 0,4 m
 - External temperature sensor: 1.5 m or 3 m

sensoric 3 with temperature sensors 5.2 mm / 6.0 mm:

- asymmetrical: 3 m

Temperature sensors

Typ Pt500 acc. EN 60751

Flow sensor temperature range limits (Θ)

	Θ_{min}	Θ_{max}
Heat meter	10 °C	90 °C
Combined heat/cold meter	5 °C	90 °C
Cold meter	5 °C	25 °C

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

	Θ_{min}	Θ_{max}	$\Delta\Theta_{min}$	$\Delta\Theta_{max}$
Heat meter (flow)	5 °C	90 °C	3 K	85 K
Heat meter (return)	10 °C	150 °C	3 K	100 K
Combined heat/cold meter (flow)	5 °C	90 °C	3 K	85 K
Combined heat/cold meter (return)	5 °C	150 °C	3 K	100 K
Cold meter	5 °C	25 °C	3 K	20 K

Measurement interval

8 s

Combined heat / cold meter changeover criteria

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

Display format

Energy	Volume	Performance
0.1 (kWh)	0.1 (m ³)	0,001 (kW)
0,001 (GJ)	0.1 (m ³)	0,001 (kW)

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	<ul style="list-style-type: none">▪ SRD band▪ Frequency range: 868 – 870 MHz▪ Transmission power: < 10 mW
Wireless M-bus radio interface	<ul style="list-style-type: none">▪ 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

2 Approval

- Heat: DE-19-MI004-PTB030
- Cold (national approval for Germany): DE-21-M-PTB-0078
- Cold (national approval for Swiss): CH-T2-21781-00

For device variants with temperature sensors 5.0 mm: The following thermowells conform to the named EC type examination certificate/PTB toleration:

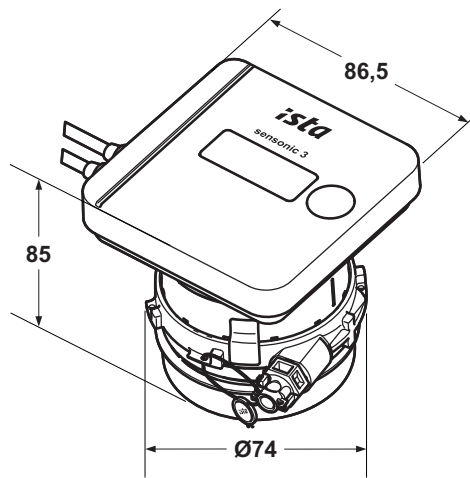
Article number	Set	Thread	Inner diameter /Length (mm)	Spanner size (width AF)	Hexagon height (mm)
18391	Yes	G 1/4"	5 / 50	17	8
18386	Yes	G 1/4"	5 / 50	17	8
18387	Yes	G 1/4"	5 / 50	17	8
18394	Yes	G 1/4"	5 / 50	17	8
18395	Yes	G 1/4"	5 / 50	17	8
18396	Yes	G 1/4"	5 / 50	17	8
18380	No	G 1/4"	5 / 50	17	8
18383	No	G 1/4"	5 / 50	17	8
18392	Yes	G 1/4"	5 / 80	17	8
18381	No	G 1/4"	5 / 80	17	8
18393	Yes	G 1/4"	5 / 150	17	8
18382	No	G 1/4"	5 / 150	17	8
18385	No	G 1/4"	5 / 150	17	8
18515	No	G 3/8"	5 / 50	22	8
18520	No	G 3/8"	5 / 80	22	8
18523	No	G 3/8"	5 / 150	22	8
18379	No	G 1/2"	5 / 60	22	18
18518	No	G 1/2"	5 / 50	22	8

For device variants with temperature sensors 5.2 mm / 6.0 mm: Use the following features table to identify the thermowells to be used.

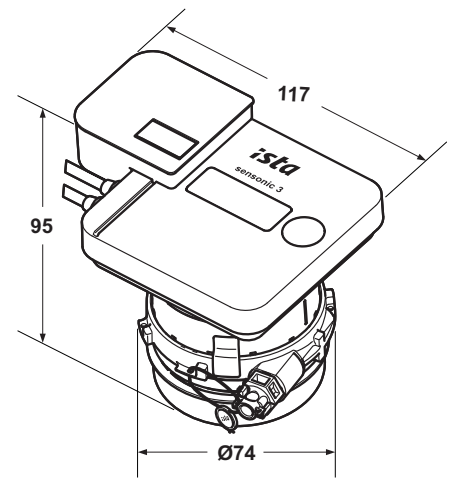
Tolerance ID	Article number	Version	Hexagon height (mm)	Width across flats (mm)	Insertion length (mm)	Inside diameter (mm)	Material	Thread size (inch or mm)
TH001	47400	C	6	24	42	5.2	MS/Ni	1/2
TH002	47401	C	6	24	42	5.2	MS/Ni	3/8
TH003	47402	B	9	24	56	5.2	MS/Ni	1/2
TH004	47403	C	9	24	53	5.2	MS/Ni	1/2
TH005	47447	C	7	30	52	5.2	MS	1/2
TH009	47404	A	9	14	50	6.0	MS	M10
TH010	47405	A	5	22	50	6.0	MS	3/8
TH011	47406	A	8	19	50	6.0	MS	1/4
TH012	47407	A	6	22	50	6.0	MS	1/2
TH014	47438	C	18	17	60	6.0	MS	3/8
TH016	18500	C	5	22	56	6.0	MS	3/8
TH019	18504	C	18	22	60	6.0	MS	1/2
TH027	47408	A	10	14	50	6.0	MS	M10
TH028	47409	A	10	14	60	6.0	MS	M10
TH040	47421	C	8	24	46	5.2	MS	1/2
TH043	47449	C	8	24	57	5.2	MS	3/8
TH044	47450	C	8	24	57	5.2	MS	1/2
TH046	47423	C	8	17	46	5.2	MS	M10
TH054	47455	B	13	17	49	5.2	MS	M10
TH067	47463	B	10	17	59	5.2	MS	1/4
TH068	47472	B	10	17	69	5.2	MS	1/4
TH077	47431	B	14	13	39	5.2	MS	M10
TH078	47432	A	13	13	50	6.0	MS	M10
TH079	47433	B	7	24	39	5.2	MS	1/2
TH081	47435	B	10	17	39	5.2	MS	3/8
TH089	47469	C	9	22	53	5.2	MS/Ni	3/8
TH091	47474	C	9	14	46	5.2	MS	M10

3 Main and connection dimensions

Main and connecting dimensions



All dimensions in millimetres (mm)



Hydraulics connection interface G 2"
