



Sonic

■ Thermal Energy ■ Flow Metering ■

Superstatic

Static flow sensor



Superstatic **The measuring steady heat meter** **with economical advantages**

Superstatic 440 **Static heat meter**



The measurement is direct without any additional electronics for meter signal generation. The piezo pulses are processed directly by Supercal 531 electronics.

Superstatic 442 **Static independent flow sensor**



The independent flow sensor, which is combinable with any integrator. The flow is converted into pulses, which are transmitted to an integrator where they are counted and used to calculate flow and energy consumption.

For detailed information about Sontex Supercal 531 integrator please refer to the following leaflet:

- Supercal 531

Multi function Integrator that lives up to

Your highest expectations

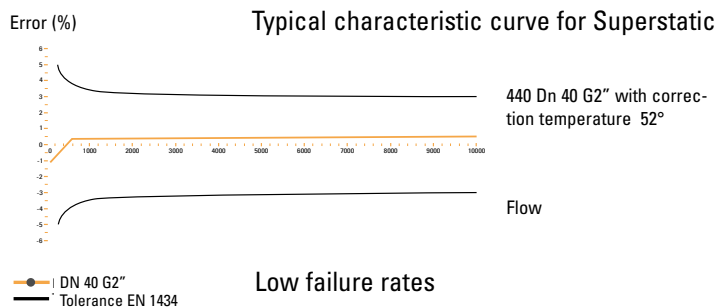


Superstatic The static heat meter with low failure rates

Superstatic – static flow sensors

The Superstatic flow sensors convince by their clear technical and conceptual structure and the steady measuring characteristics.

The proven oscillating jet principle of the flow sensors in combination with the Supercal integrator units guarantees a reliable and extremely precise heat metering even with bad water quality.



Low failure rates

Thanks to the renouncement of moving parts as well as the experience of many years of the company Sontex, the failure rate of the Superstatic reached in the field can be reduced to a minimum. In comparison with conventional heat meters this is the far below the known average.

Modular and well designed structure

Superstatic flow sensors without any moving parts have common components from 1 to 400 m³/h.

Main features

Superstatic static sensors are optimized for measuring and calculating energy consumption in district heating systems:

- a complete range 1 – 400 m³/h
- the approval is based on the measuring capsule principle - for the recalibration only the measuring head needs to be changed
- economically in the acquisition and maintenance when compared with other static flow sensors and heat meters
- corrosion-resistant materials
- all flow sensors reach class 3 EN1434
- no flow strengtheners required up to DN40
- no moving parts, therefore no wear and tear
- unaffected by dirt
- durable
- horizontal or vertical installation
- independent installation position
- for heating and cooling measurement applications



Superstatic Static flow sensor qp 1 - 400m³/h



Flow measurement

Nominal flow	qp	1.0	1.5	2.5	3.5	6.0	10	15	25	40	60	100	150	250	400	m ³ /h
Maximum flow	qs	2.0	3.0	5.0	7.0	12	20	30	50	80	120	200	300	500	800	m ³ /h
Minimum flow	qi	10	15	25	35	60	100	150	250	800	1200	2000	3000	5000	8000	l/h
Starting point (50°C)		4	10	10	15	30	50	75	125	400	600	1000	1500	2500	4000	l/h
Plus value at qp		49.0	27.0	27.0	15.5	8.8	5.8 / 5.15	3.8	2.3	0.84	0.56	0.34	0.23	0.14	0.09	Imp/l
Pressure lost at qp		0.20	0.09	0.21	0.16	0.16	0.19	0.19	0.19	0.08	0.08	0.09	0.10	0.10	0.10	bar
Metrological class	EN 1434 Class 3															
Nominal pressure PN	16 / 25												10 / 16 / 25		bar	

Mounting

Temperature continuously	130°C																					
Temp. sensor mounting place	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes													
Mounting length	110	190	110	190	190	260	260	260	260	300	300	270	300	225*	300	250*	360	250	300	350	450	mm
Screwed connection	3/4"	1"	3/4"	1"	1"	1 1/4"	1 1/4"	2"														
Flanged connection					25		25		40		50	65	80	80	100	100	125	150	200	250	DN	
Weight	1.8	2.3	1.8	2.3	2.3	1.96	2.9	1.96	2.9	6.1	7.0	12.2	12.8	11.5	12.2	14.0	14.6	16.0	23.0	30.0	57.0	kg

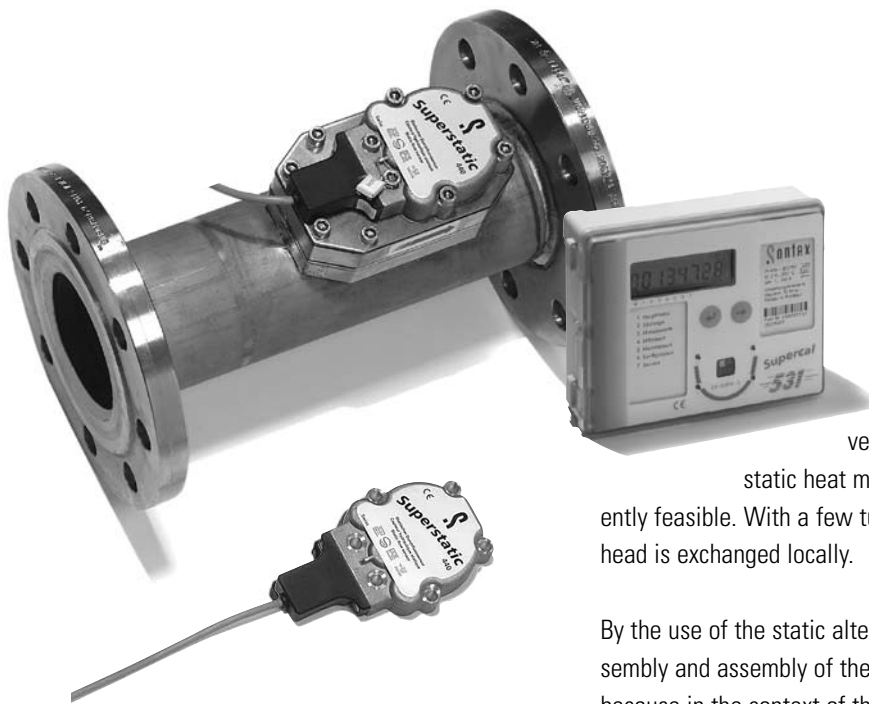
*upon request

Supercal Integrator 531

Temperature measurement	Pt500 / Pt100	two or four wire technique
Temperature range	0...200°C	
Temperature difference	(0.2) 2...150K	
Starting point	0.2K	



Static Heat Meter Superstatic provides cost reduction – exchangeable measuring head



Start-up and regular maintenance in the context of the legally prescribed verification obligation are now also with static heat meters problem-free, economically and efficiently feasible. With a few turns of a screwdriver only the measuring head is exchanged locally.

By the use of the static alternative Superstatic, the costs of the disassembly and assembly of the recalibration are drastically reduced, because in the context of the legally prescribed verification obligation only the measuring head must be exchanged. The exchange is simply and fast, since the laborious interferences into the tubing system are no longer necessary. The use of high-quality - corrosion resistant materials ensures the measuring stability and working reliability during several calibration periods.

In the German district heating association – AGFW - heat meter test program IV the Superstatic heat meter was distinguished with the highest note (five stars) for the measuring accuracy and measuring stability.

The complete assortment of the static alternative Superstatic of q_p 1 to 400 m^3/h is available as a independent flow sensor or as compact heat meter in combination with the new multifunctional integrator Supercal 531.

The mounting dimensions correspond to EN1434-2 therefore Ultrasonic, Single-jet, Multi-jet, and Woltman WP and WS flow sensors can easily be exchanged.

Also the modular design of the new integrator Supercal 531 enables a simple meter replacement.



Only the verified integrator upper part will be replaced, while the cover part with all connections and non-volatile memory for the communication settings remains in the installation.

This optimises the exchange time and reduces the costs of the prescribed meter change.



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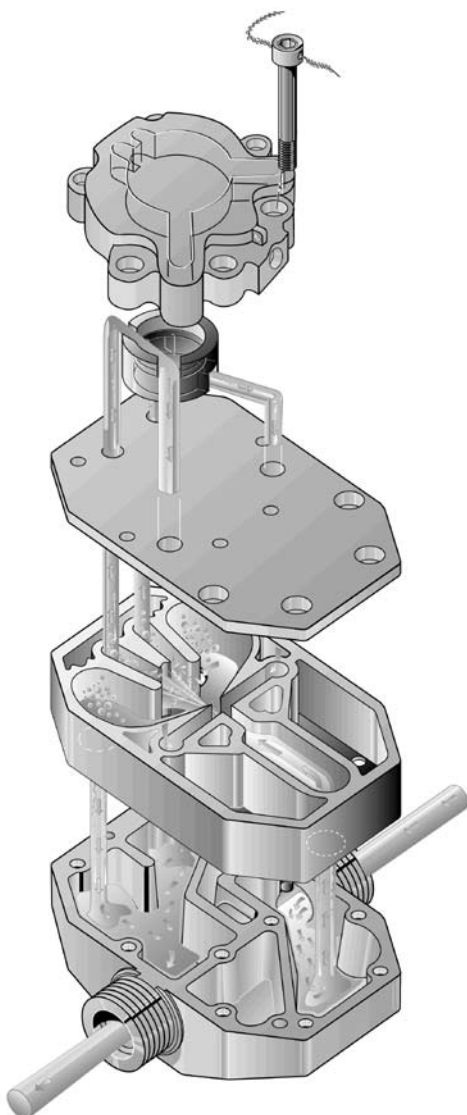
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Functional description

Sensor level with feedback loops.
The sensor pulses are directly proportional to the flow volume.

Oscillating jet level with nozzle and interactive chamber.
The oscillator frequency of the moving jet and the electrical signals produced do not need any external energy supply.
The complex geometric forms are decisive for Superstatic's excellent measuring range.

Water inlet and outlet with optimum flow fluid guide and with integrated steadying zone function, which make external flow straighteners up to DN40 superfluous.