



micronics

## ***SensoStar Q***

Multi-jet flow sensor for inline installation



- Detection of back flow
- Measuring cycle temperature, dynamic: 2 / 60 s
- Outlet flow and inlet flow can be set on site
- Lithium battery is easy to exchange
- Detachable calculator unit, pulse cable length 50 cm (optional)
- Communication interfaces:
  - wireless M-Bus;
  - wireless M-Bus + 3 pulse inputs;
  - M-Bus;
  - M-Bus + 3 pulse inputs;
  - 2 pulse outputs

## Technical data:

### Flow sensor

Measuring method	bidirectional inductive scanning system				
Sizes	Nominal flow $q_p$	$m^3/h$	0,6	1,5	2,5
	Low flow threshold	l/h	3,5	3,0	5,0
	Minimum flow $q_i$	l/h	12	30	50
	Maximum flow $q_s$	$m^3/h$	1,2	3,0	5,0
Pressure drop $\Delta p$ at $q_p$		bar	0,120	0,230	0,240
Pressure drop $\Delta p$ at $q_s$		bar	0,420	0,900	0,960
Nominal diameter		mm	DN 15	DN 15	DN 20
Thread		inch	G3/4B	G3/4B	G1B
Length		mm	110	110	130
Dynamic range $q_i/q_p$ (in brackets optional)			1:50 (1:25)	1:50 (1:25; 1:100)	1:50 (1:25; 1:100)
Accuracy class (MID)			class 3	class 3 (2)	class 3 (2)
Nominal pressure PN		bar	16		
Temperature range heat		$^{\circ}C$	15 - 90		
Temperature range cooling ( $q_p$ 1,5 and $q_p$ 2,5)		$^{\circ}C$	5 - 50		
Point of installation	outlet flow and inlet flow; can be set when the amount of energy is still $\leq 10$ kWh				
Mounting position	any position; some optional dynamic ranges $q_i/q_p$ : horizontal / vertical				
Protection class	IP65				
Medium	water; optional, without approval*: water with a propylene glycol or ethylene glycol percentage rate of 20 %, 30 %, 40 % or 50 % (* type and concentration of glycol can be set when the amount of energy is still $\leq 10$ kWh)				

### Calculator unit

Temperature range heat	$^{\circ}C$	0 – 150
Temperature range cooling ( $q_p$ 1,5 and $q_p$ 2,5)	$^{\circ}C$	0 – 50
Ambient temperature	$^{\circ}C$	5 – 55 at 95 % relative humidity
Temperature difference range $\Delta\theta$ heat	K	3 – 100
Temperature difference range $\Delta\theta$ cooling	K	-3 – -50
Minimum temperature difference $\Delta\theta$ heat	K	> 0,05
Minimum temperature difference $\Delta\theta$ cooling	K	< -0,05
Minimum temperature difference $\Delta\theta_{HC}$ heat / cooling	K	> 0,5 / < -0,5
Resolution temperature	$^{\circ}C$	0,01
Measuring cycle temperature; dynamic	s	2 / 60; using a power pack: 2 s permanent
Display	LCD - 8 digits + special characters	
Decimal places	up to 3 after comma	
Units	MWh, kW, $m^3$ , $m^3/h$ (kWh, GJ, l, l/h, MW, MMBTU, Gcal); unit of energy can be set when the amount of energy is still $\leq 10$ kWh	
Interfaces	optical interface (M-Bus protocol); optional: wireless M-Bus; wireless M-Bus + 3 pulse inputs; M-Bus; M-Bus + 3 pulse inputs; 2 pulse outputs	

Power supply		exchangeable 3 V lithium battery; all types prepared for 3 V power pack (input voltage 230 V / 24 V)
Estimated lifetime	years	10; see instruction manual
Data storage		nonvolatile memory
Reading dates		selectable yearly reading date; 15 monthly and semimonthly values via display or wireless M-Bus; 24 monthly and semimonthly values via optical interface or M-Bus can be set individually; adding up energy or time
2 tariff registers		
Storage of maximum values		flow and power
Protection class		IP65
CE		yes
EMC		EN 1434

**Temperature sensors** (2-wire technique)

Platinum precision resistor		Pt 1000
Diameter	mm	5; 5,2; 6; AGFW 27,5; 38; needle sensor 3,5 x 75
Length of cable	m	1,5; 3; 6
Installation		asymmetrical; symmetrical

**Weights**

Weight (basic version, kg)	Qp 0,6 / Qp 1,5	Qp 2,5
Calculator not detachable	0,875	0,955
Calculator detachable	0,915	0,995

**Dimensions**

Pulse cable length (only separable version)	m	0,50
Calculator housing (H x W x D)	mm	75 x 110 x 34,5
Thread	Qp 0,6 / Qp 1,5: G3/4", DN 15	Qp 2,5: G1", DN 20

(on the right the separable version with a detachable calculator)

