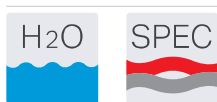


Data sheet

FLOWSONIQ®

FSQ/S1



OVERVIEW

Operation

- Ultrasonic flow meter and totalizer (transit-time difference method)

Applications

- Cooling systems and cooling circuits
- Semiconductor production
- Mechanical engineering and plant construction
 - Laser systems
 - Welding machinery
- Special vehicle construction
- Water treatment
- Process water applications

Features

- Precise measurement of flow rate and total volume even for non-electrically conductive media
- Local display (LCD) for flow rate and total volume
- Large measuring range
- High chemical resistance
- Parameters programmable via buttons
- Signal output adjustable: current, voltage or frequency output
- Installation in any orientation (individually pre-assembled housing)
- Minimum pressure drop
- Two limit value relays (changeover contact)
- Threaded connection
- No moving parts

Installation information

- Please refer to the operating instructions for FSQ/S1-15 for installation and operating instructions.
- **Download from: www.meister-flow.com**

OPERATING DATA

Max. operating pressure	25 bar
Pressure drop	see diagram below
Media temperature	-20 °C - 100 °C
Ambient temperature	-10 °C - 60 °C
Accuracy	± 2,0 % of full scale
Measured value acquisition	
Response time	0,8...8 s factory setting approx. 1,6 s
Flow direction	adjustable in device
Standard direction horizontal	from left to right
Standard direction vertical	from bottom to top

MEASURING RANGES

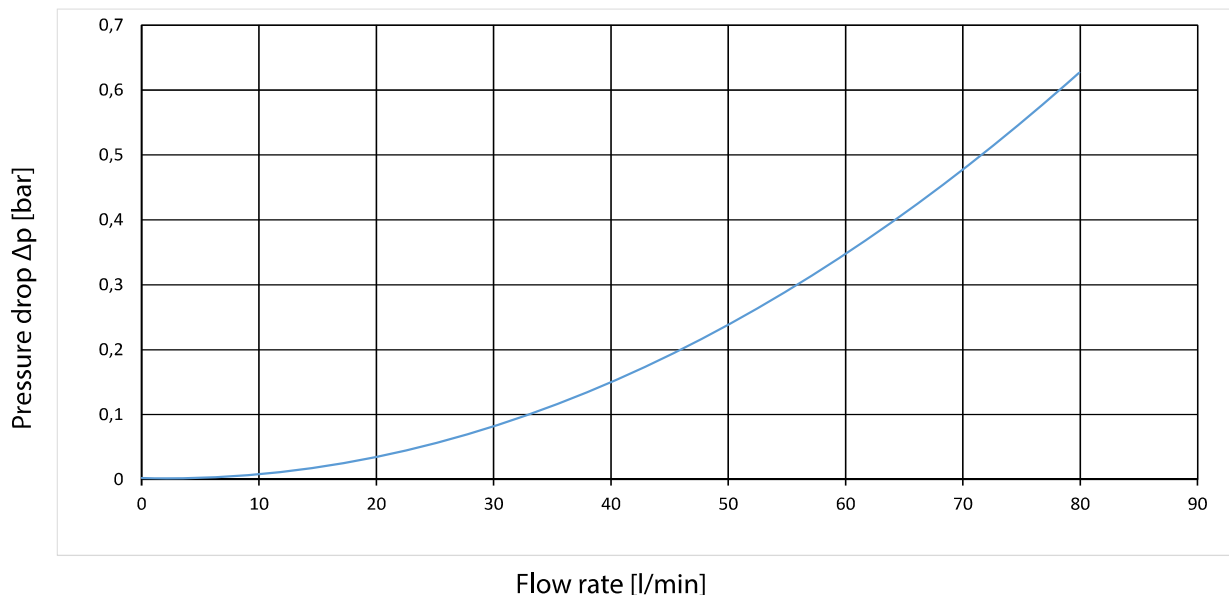
Type	Measuring range for H ₂ O
FSQ/S1-15	0,5 – 80 l/min

MEDIA

Acoustically conductive liquids,
solids content < 10 vol. %

DIAGRAMS

Pressure drop diagram



MATERIALS

Brass-version

Parts in contact with media

Measuring tube:	Brass CW614N (CuZn39Pb3)
Sensors:	Stainless-steel 1.4571 (AISI 316 Ti)
Seals:	FKM (optional EPDM)

Parts not in contact with media

Display housing:	Aluminium die-cast
------------------	--------------------

Stainless steel-version

Parts in contact with media

Measuring tube:	Stainless-steel 1.4571 (AISI 316 Ti)
Sensors:	Stainless-steel 1.4571 (AISI 316 Ti)
Seals:	FKM (optional EPDM)

Parts not in contact with media

Display housing:	Aluminium die-cast
------------------	--------------------

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ELECTRICAL DATA

Outputs

Current output	4 - 20 mA
Voltage output	0 - 10 V
Frequency output	programmable, max. 32 kHz
Ri:	2 kΩ

Limit value relays

Number:	2
Type:	Changeover
	30 VDC / 1 A

Power supply +24 VDC ± 15 %

Power consumption 200 mA max.

Display LCD 2 x 16 digits, illuminated

ELECTRICAL CONNECTION

Electrical connection

plug (DIN EN 61076-2-106)

4 - pin:
for supply, current, voltage or frequency output
(included in the scope of delivery)

6 - pin:
for relay outputs
(included in the scope of delivery)

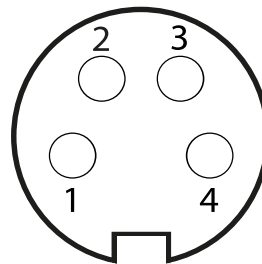
Ingress protection:

IP 65
(only if connections are closed with the protective caps supplied)

Pin assignment

4-pin device socket:

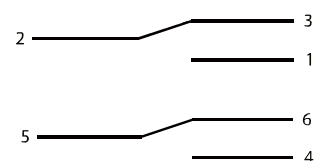
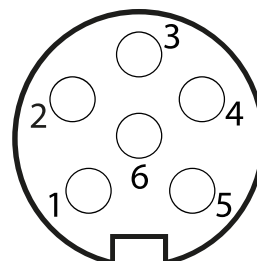
Pin 1:	4 - 20 mA, 0 - 10 V or frequency output (adjustable on site)
Pin 2:	GND
Pin 3:	GND
Pin 4:	+24 VDC ± 15 %



Pin assignment

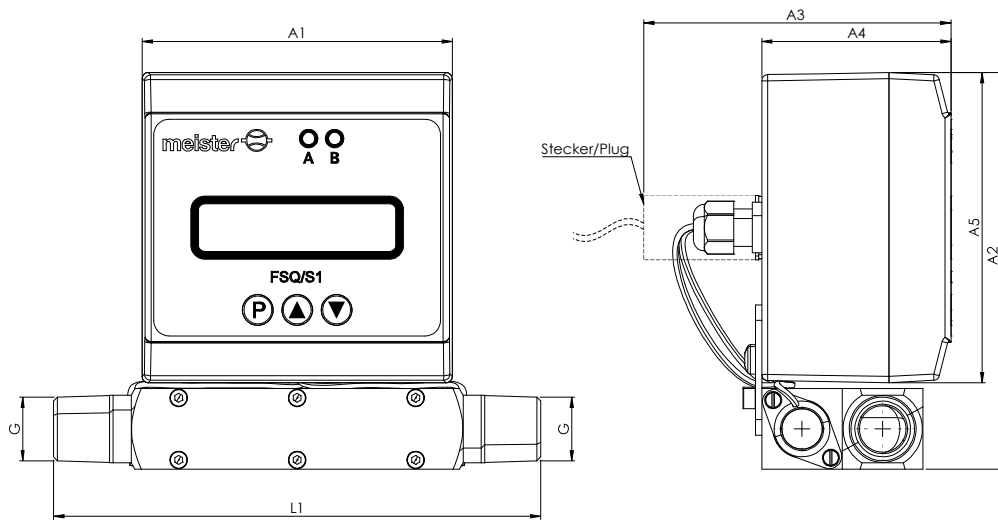
6-pin device socket:

Pin 1:	Relay 2, normally open contact
Pin 2:	Relay 2, center contact
Pin 3:	Relay 2, normally closed contact
Pin 4:	Relay 1, normally open contact
Pin 5:	Relay 1, center contact
Pin 6:	Relay 1, normally closed contact



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TECHNICAL DRAWING



DIMENSION TABLE

Type	Dimensions [mm]								Weight approx. [g]
	G	DN	L1	A1	A2	A3	A4	A5	
FSQ/S1-15	R 1/2"	15	157	100	128	99	61	100	1634

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