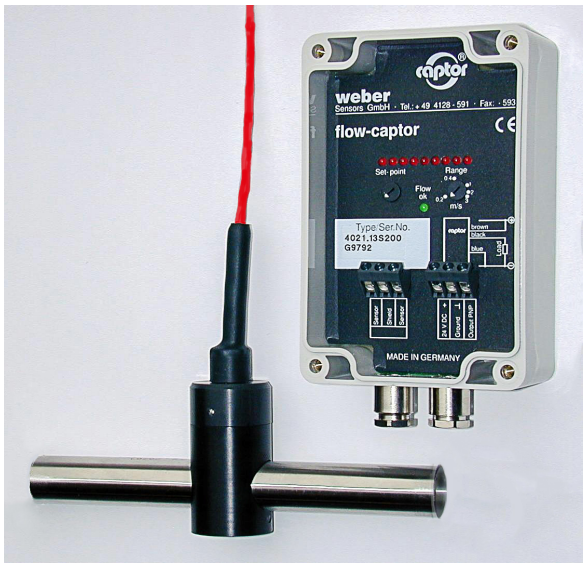
Flow switch for oil-based media
flow-captor 4320/xx + 4021.1x S200

The flow-captor system 4320/xx + 4021.1x S200 consists of a sensor tube and separate electronics. Separate systems are used where special protection of the electronics is required. Separate systems are used in automation processes or other industrial applications where liquid media must be monitored. The flow-captor works according to the calorimetric measuring principle, fully electronically and without mechanically moving parts. The sensor detects the flow velocity of the medium and converts it into an electrical signal.



similar picture

- precise switching flow monitor
- high switching accuracy even at lower flows
- separate adjustment of Set-point and Range
- analog display of the current flow and the adjusted set-point via LED chain
- LED for output status
- robust industrial design (special potting of sensor and electronics)
- **ISO 9001:2015**

Technical data						
Type	**4320/xx + 4021.1x S200**					
Medium	oil-based					
Sensor data						
Measuring range	0 - 30 cm/s to 0 - 300 cm/s, continuously adjustable					
Flow volume at 300 cm/s	8 x 1 mm 5,1 l/min	12 x 1 mm 14,1 l/min	18 x 1,5 mm 31,8 l/min	22 x 1,5 mm 51 l/min	28 x 1.5 mm 88.4 l/min	
Measuring range	0 - 30 cm/s to 0 - 200 cm/s, continuously adjustable *					
Flow volume at 200 cm/s	6 x 1 mm 1,5 l/min					
Set-point range	approx. 15 % - 90 % of measuring range setting					
Medium temperature	-20 °C bis +80 °C					
Ambient temperature	-20 °C bis +70 °C					
Pressure	max. 30 bar (3000 kPa)					
Response time	2 sec. to 10 sec. (according to range setting)					
Linearity deviation	< 5 %					
Repeatability	< 2 %					
Hysteresis	approx. 10 %					
Temperature drift	< 0.3 % K					
Mechanical data						
Protection rate	IP65					
Housing material of eletronics	ABS plastic					
Sensor material	stainless steel AISI 316 (other material on request)					
Pipe sizes OD x wall thickness	6 x 1 mm	8 x 1 mm	12 x 1 mm	18 x 1.5 mm	22 x 1.5 mm	28 x 1.5 mm
Electrical connection	screw terminal block					
Electrical data						
Operating voltage	18 - 30 VDC, inclusive residual ripple					
Current consumption	max. 150 mA (pulsed)					
Power consumption	approx. 1 W					
Switching current	≤ 400 mA					
Circuit protection	reverse polarity / short circuit / overload					
Voltage drop	< 2 V at max. load					
State of readiness	approx. 10 sec. after connection of power					

* calibrated with insulation oil type "Shell Diala S4 ZX-I"

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Sensors GmbH Strohdeich 32 DE-25377 Kollmar Tel.: +49 (0)4128 - 591· Fax: - 593 **www.captor.de**
Sensors Ltd. 66 Eastbourne Road, Southport Merseyside PR8 4DU, UK Tel.: +44 (1704) - 551684 · Fax: - 551297 info@captor.de
Sensors LLC. 4462 Bretton Court, Building 1, Suite 7 Acworth, Georgia 30101, USA Tel.: +1 (770) 592 - 6630 · Fax: - 592 6640 sales@captor.co.uk
sales@captor.com

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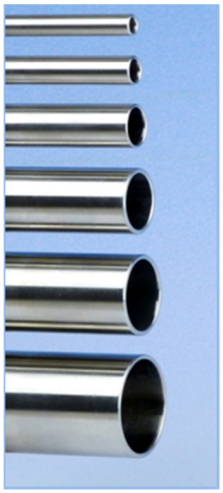
Elektrischer Ausgang	4021.12 S200	4021.13 S200
Switching condition with flow < switching point	energized, switched	currentless, not switched
LED	off	off
Switching condition with flow > switching point	currentless, not switched	energized, switched
LED	green	green

High temperature version		
Type	4320/xx + 4021.1x S202	
Medium temperature in relation to ambient temperature	Medium temperature max.	Ambient temperature max.
	135 °C	20 °C
	130 °C	30 °C
	120 °C	40 °C
	110 °C	50 °C
	100 °C	60 °C
	90 °C	70 °C
	Medium temperature min	Ambient temperature min.
	-20 °C	-20 °C
	-30 °C	-10 °C

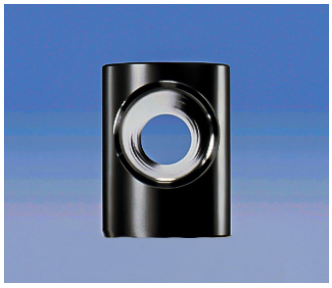


The sensor tube

The sensor tube is made of stainless steel AISI 316. The sensor tubes are available with the following diameters:

6 x 1, 8 x 1, 12 x 1, 18 x 1.5, 22 x 1.5 and 28 x 1.5 mm.

Sensor tubes made of hastelloy and titanium can be offered for aggressive media.



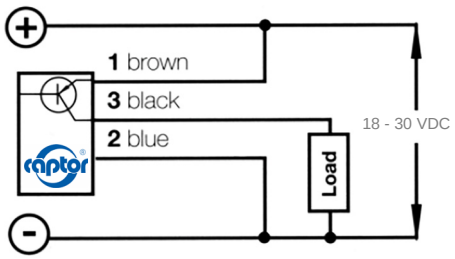
Free flow

The sensor element is located on the outside of the tube so that the flow is not affected by any elements protruding into the cross-section. The sensor housing consists of either POM (polyacetal) or PSU (polysulfone) for higher temperatures.

Mechanical connection

Cutting ring fittings must be ordered separately. These screw connections have proven their worth during installation in pipelines. By tightening the union nut, the wedge-shaped inner ring side cuts into the pipe wall, creating an absolutely tight and reliable form fit.

Connection diagram:



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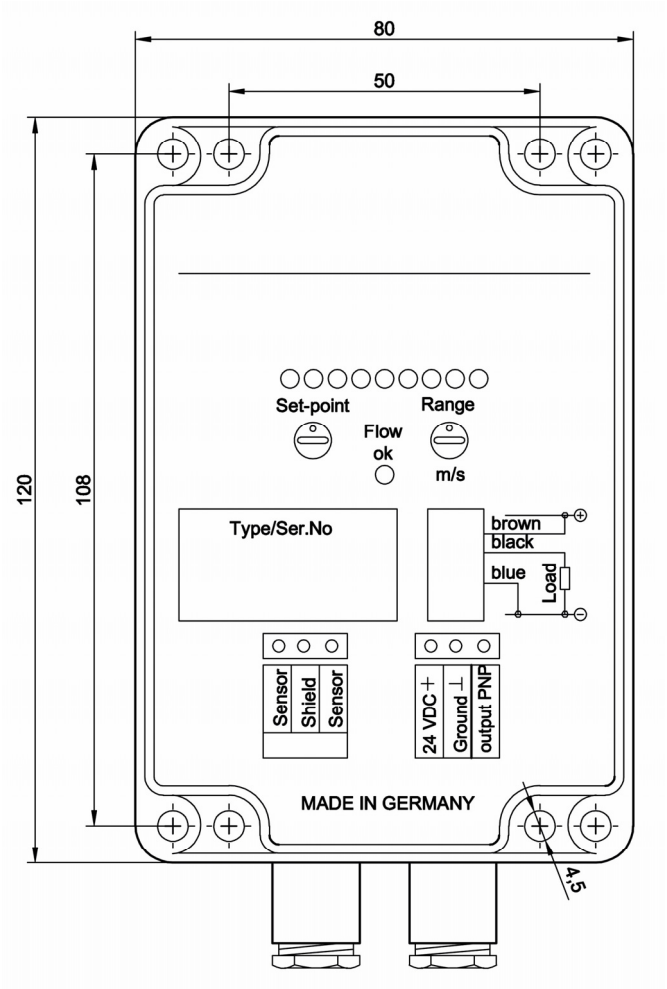
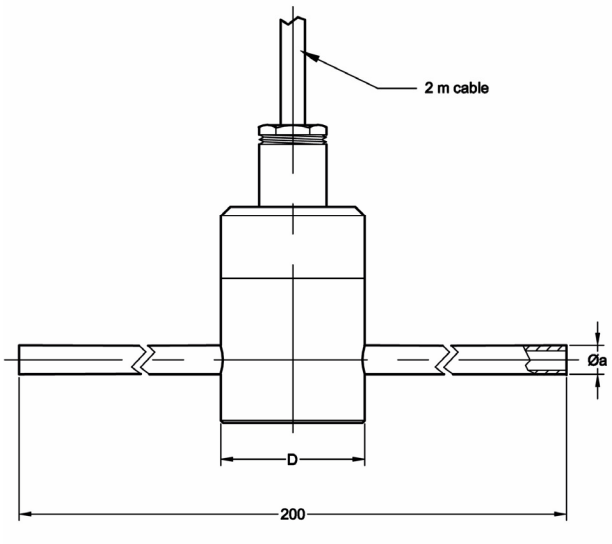
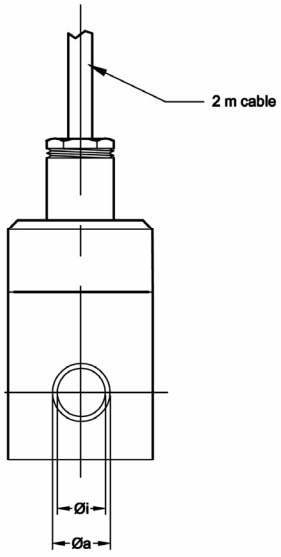


4020.1x / 4021.1x	Specification
S100	Mediumtemp. max. 140 °C
S102	Mediumtemp. von - 60 °C bis +60 °C
S103	Mediumtemp. max. 135 °C
S200	for Inline Sensor 4320/xx
S202	for Inline Sensor 4320/xx Mediumtemp. max. 135 °C





dimensions in mm

Øa	Øi	D
6	4	30
8	6	30
12	10	30
18	15	30
22	19	30
28	25	38

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