

Flow monitor for oil-based media



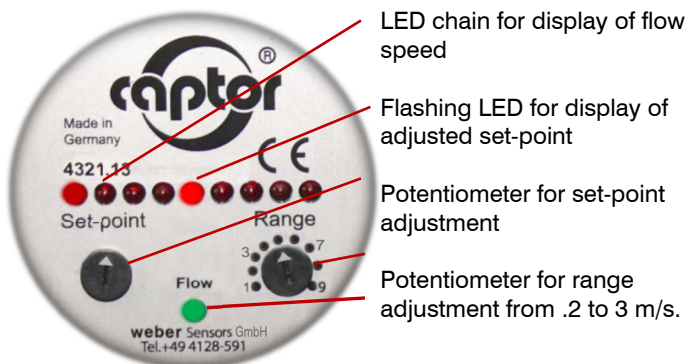
flow-captor 4321.1xM

The Inline **flow-captor** type 4321.1xM is a unique, compact, metering flow switch with adjustable set-point and analog display for industrial applications in stainless steel housing. The functionality is based on the calorimetric principle. The inline flow-captor allows to set an exact flow set-point while simultaneously displaying the flow velocity down to the smallest values.

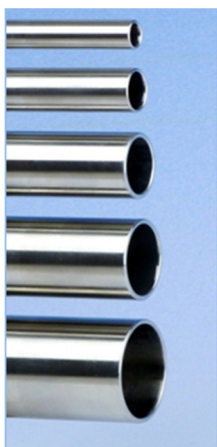
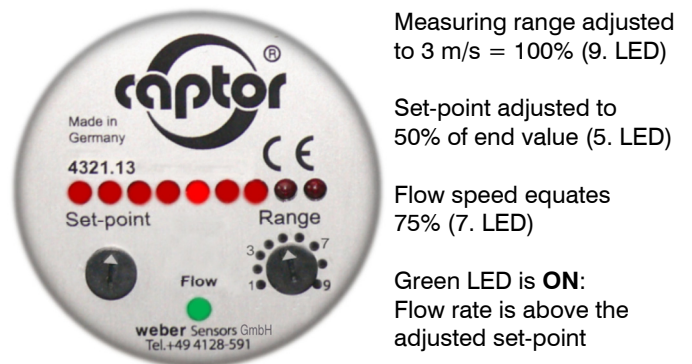
- accurate switching flow monitor for water or oil-based solutions
- rugged industrial version
- high accuracy also under low flow conditions
- separate adjustment for "range" and "set-point"
- analog display of actual flow rate and display of adjusted set-point value
- LED for output status
- ISO 9001 : 2015



Control and display panel



example of operation

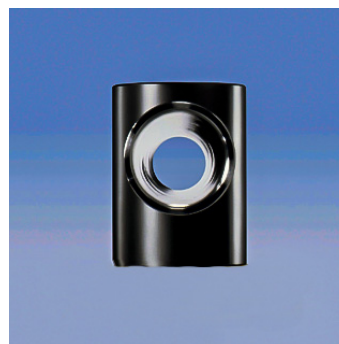


The sensor tube

The sensor tube (length 200 mm) is made of stainless steel 316Ti and is an integral part of the inline flow-captor.

This series is available with sensor tubes in different sizes as 8 x 1, 12 x 1, 18 x 1,5, 22 x 1,5 as well as 28 x 1,5 mm.

For aggressive media special sensor tube materials as Titanium and Hastelloy can be offered.



Free flow

The sensor element of the inline flow-captor is fitted to the out-side of the sensor tube. Since there is no element inside the tube, the sensor is non-intrusive to the flow. The robust housing is constructed of stainless steel 316 Ti (V4A). The electronics housing includes a full resin encapsulation.

Mechanical connection

Cutting ring couplings, to be ordered separately, have proven their value when mounting the sensor into pipe systems. By slightly tightening the swivel nut the v-shaped ring inside of the coupling cuts into the sensor tube wall and thus ensures a dense and reliable form closure.



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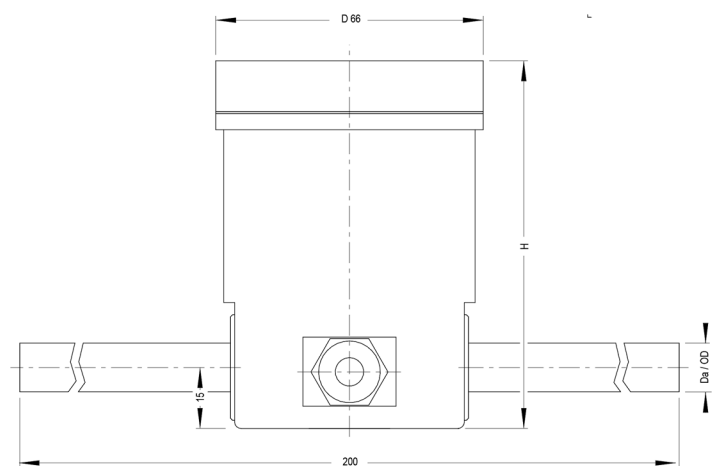
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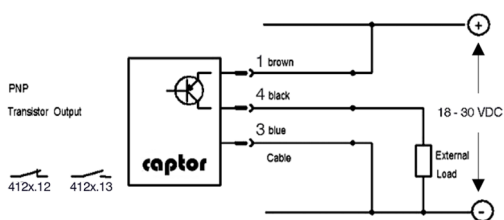
Technical Data					
Type	flow-captor 4321.1xM				
Medium	oil-based media				
Sensor Data					
Measuring range	0 - 30 cm/s to 0 - 300 cm/s, cont. adjustable *1				
Flow volume at 300 cm/s	8 x 1 mm 5,1 l/min	12 x 1 mm 14,1 l/min	18 x 1,5 mm 31,8 l/min	22 x 1,5 mm 51 l/min	28 x 1,5 mm 88,4 l/min
Set-point range	approx. 15% - 90% of measuring range setting				
Medium temperature	-20 °C to +80 °C				
Ambient temperature	-20 °C to +70 °C				
Pressure	max. 30 bar (3000 kPa)				
Response time	2 s to 10 s (according to range setting)				
Linearity deviation	< 5% *1				
Repeatability	< 2%				
Hysteresis	ca. 10%				
Temperature drift	< 0,3% K				
Mechanical Data					
Protection rate	IP67				
Housing material	stainless steel 316 Ti (V4A)				
Sensor material	stainless steel 316Ti (B : Titanium; C : Hastelloy ® C4)				
Pipe sizes	8 x 1 mm	12 x 1 mm	18 x 1,5 mm	22 x 1,5 mm	28 x 1,5 mm
OD x wall thickness					
Connection	Plug M12x1, 4-pin				
Dimensions of housing in mm	D 60 x L 200				
Electrical Data					
Operating voltage	18 to 30 VDC, incl. 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 s after connection of power				
Electrical output	4321.12 PNP current-carrying (opener / n. c.)				
Without flow:	4321.13 PNP currentless (closer / n. o.)				

*1 calibrated with insulation oil type "Shell Diala S2 ZU-I Dried"

Dimensions:



Connection diagram



weber