

# TECHNICAL INFORMATION



## Inline flow-captor Type 432-.1- M

The flow-captor 432-.1- M is a unique, precise, compact, metering flow switch with adjustable set-point and analog display for industrial applications in stainless steel housing. The functionality is based on a new calorimetric principle. The inline flow-captor allows to set an exact flow set-point and to measure simultaneously the flow rate up to the lowest flow conditions.



- Accurate switching flow monitor for water or oil-based solutions
- High accuracy also under low flow conditions
- Separate adjustments for "Range" and "Set-point"
- Analog display of actual flow and display of adjusted set-point
- LED for output status
- **ISO 9002** certified manufacturing
- **CE** approval

### Technical Data

Type	4320.12/.13 M	4321.12/.13 M
Medium	water-based solutions	oil-based solutions

### Sensor Data (Inline Pipe)

Measuring range	0-20 cm/s to 0-300 cm/s, cont. adjust <sup>1)</sup>	0-30 cm/s to 0-300 cm/s, cont. adjust <sup>2)</sup>
Flow rate at 300 cm/s	6x1: <b>2,25</b> l/min. 8x1: <b>5,1</b> l/min.	12x1: <b>14,1</b> l/min. 18x1,5: <b>31,8</b> 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	up to 30 bar	
Response time	2 s to 10 s, acc. to range setting	2 s to 15 s, acc. to range setting
Linearity deviation	< 5% <sup>1)</sup>	< 5% <sup>2)</sup>
Repeatability	< 2%	
Hysteresis	approx. 10 %	

### Mechanical Data

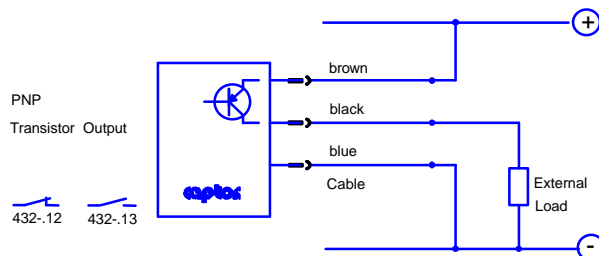
Protection class	IP 67		
Housing material	stainless steel WN 1.4404		
Sensor pipe	stainless steel WN 1.4571 (V4A) (Titanium, Hastelloy C4 <sup>®</sup> on request)		
Pipe dimensions in mm (diameter x wall thickness)	6x1,	8x1,	12x1, 18x1,5
Connection	plug M12x1, 4-pin		

### Electrical Data (Electronic Housing)

Operating voltage	18 to 30 V DC, incl. residual ripple	
Switching current	≤ 400 mA	
Initial operation	approx. 10 s after connection of power	
Electrical output	PNP n.c. <sup>3)</sup> : 4320.12 M PNP n.o. <sup>4)</sup> : 4320.13 M	PNP n.c. <sup>3)</sup> : 4321.12 M PNP n.o. <sup>4)</sup> : 4321.13 M

Notes: <sup>1)</sup> data applies to water <sup>2)</sup> depends on oil solution type <sup>3)</sup> switch open with flow <sup>4)</sup> switch closed with flow

### Connection Diagram



REV: AC/ 11.01.03  
sgd.: Wip./ Wil

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