

Inline flow switch



flow-captor 442x.1xM/xx + PT100 temperature detecting element

The **flow-captor** type **442x.1xM/xx** is a compact, precise flow switch with analog display and PT100 temperature output in a rugged stainless steel housing. It operates based on the calorimetric principle. The flow-captor allows to set an exact flow set-point and will display simultaneously the flow speed up to the lowest flow conditions. The 442x.1xM/xx has an additional PT100 temperature detecting element for determining the required temperature set point.

- precise switching flow monitor for water or oil based solutions
- 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
- PT100 temperature detecting element
- **ISO 9001:2015**



Technical Data		
Type	4420.1xM/xx + PT100	4421.1xM/xx + PT100
Medium	water based solutions	oil based solutions
Sensor Data		
Measuring range	0 - 20 cm/s to 0 - 300 cm/s, cont. adjust ¹⁾ 0 - 30 cm/s to 0 - 300 cm/s, cont. adjust ²⁾	
Flow rate at 300 cm/s	8x1: 5.1 l/min.; 12x1: 14.1 l/min.; 18x1.5: 31.8 l/min.; 22x1.5: 51.0 l/m.	
Flow rate max.	28 x 1.5 mm	28 x 1.5 mm
	88.36 l/min at 300 cm/s	58.9 l/min at 200 cm/s
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	
Response time	2 sec. - 10 sec., according to range setting	2 sec. - 15 sec., according to range setting
Linearity deviation	< 5 % ¹⁾	< 5 % ²⁾
Repeatability	< 2 %	
Hysteresis	approx. 10 %	
Temperature drift	< 0.3 % per Kelvin	
Temperature detecting element	PT100 (characteristic curve according to DIN 60751, class 3)	
Mechanical Data		
Protection class	IP 67	
Housing	stainless steel WN 1.4404 (AISI 316L)	
Sensor head	stainless steel WN 1.4571 (AISI 316 Ti)	
Pipe dimensions in mm (DxWxL)	8x1x200, 12x1x200, 18x1.5x200, 22x1.5x200, 28x1.5x200	
Connection	M12x1 plug/5-pin (order cable type 4942 separately)	
Electrical Data		
Operating voltage	18 - 30 VDC, inclusive residual ripple	
Switching current / Contact load	≤ 400 mA	
Initial operation	approx. 10 s after connection of power	
Electrical output	PNP n. c. ³⁾ : 4420.12 M	PNP n. c. ³⁾ : 4421.12 M
	PNP n. o. ⁴⁾ : 4420.13 M	PNP n. o. ⁴⁾ : 4421.13 M

¹⁾ data applies to water ²⁾ calibrated with insulation oil type "Shell Diala S2 ZU-I Dried" ³⁾ switch open with flow ⁴⁾ switch closed with flow

weber

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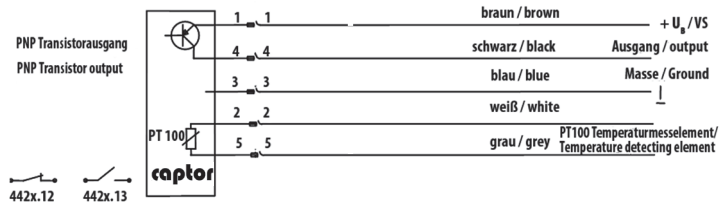
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Technical data subject to alteration! Rev. AL 19.08.20

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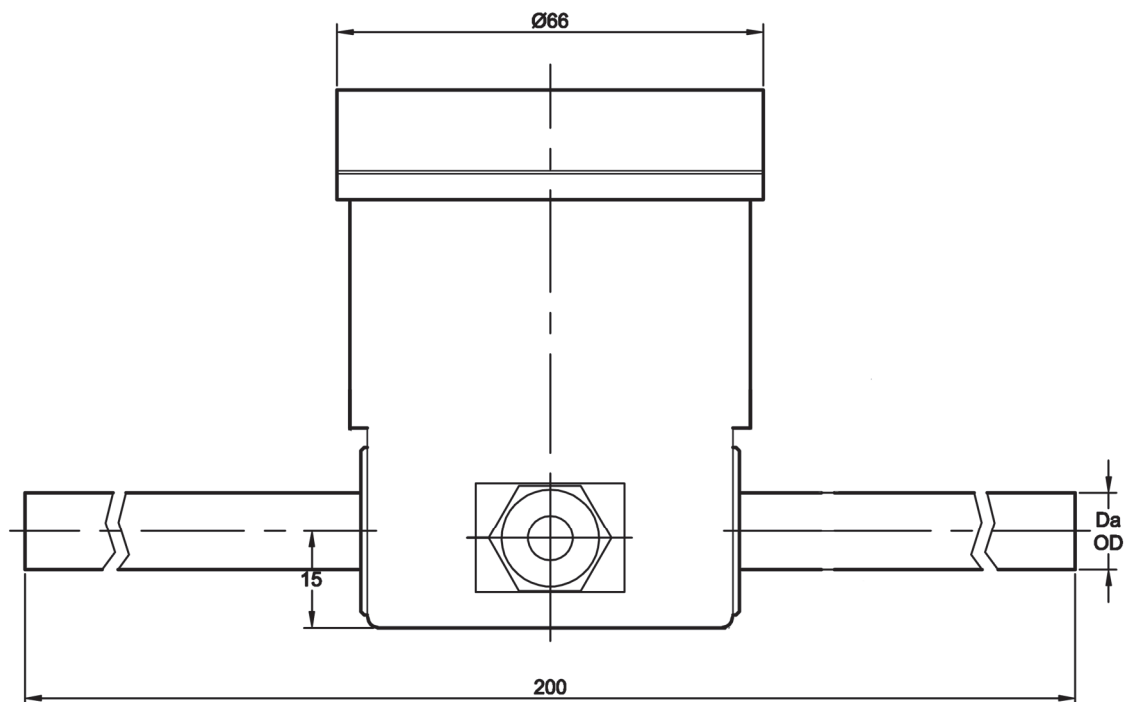


M 12x1
Stecker
Plug

M 12x1
Kupplung
Coupling



Blick von vorn auf die Stifte bzw. Buchsen
Front view onto the pins and sockets



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