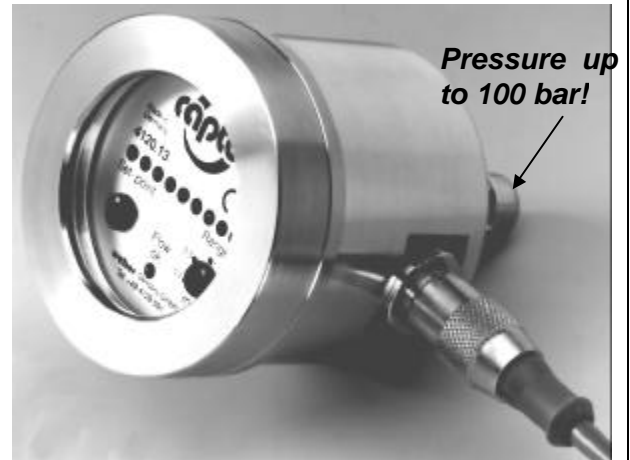


# TECHNICAL INFORMATION



## flow - captor Type 412-.1- M

The flow-captor type 412-.1- M is a family of compact, precise metering flow switches with analog display in a rugged stainless steel housing. They operate based on the calorimetric principle. The flow-captor allows to set an exact flow set-point and will measure simultaneously the flow rate up to the lowest flow conditions.



- Precise switching flow monitor for water or oil-based solutions up to **100 bar**
- 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 display for output status
- **ISO 9002** certified manufacturing
- **CE** approval

Housing Dimensions in mm: OD 66 X H 99/59

### Technical Data

Type	4120.12/.13 M	4121.12/.13 M
Medium	water based solutions	oil-based solutions

### Sensor Data

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>
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 100 bar	
Response time	2 s - 10 s, according to range setting	2 s -15 s, according 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	stainless steel WN 1.4305 (V2A)	
Sensor head	stainless steel WN 1.4305 (V2A), - (WN 1.4571 (V4A), Titanium, Hastelloy <sup>®</sup> C4 or C22 on request)	
Thread	G½ A (½" BSP), alt. ½" - 14 NPT	
Connection	plug M 12 x 1, 4-pin	

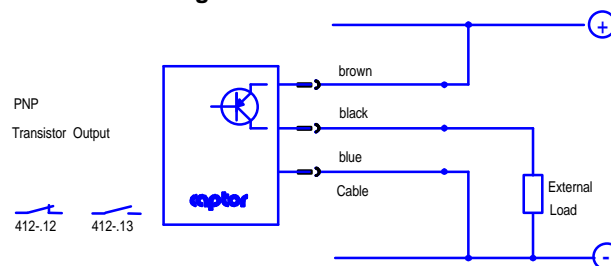
### Electrical Data

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> : 4120.12 M	PNP n. o. <sup>3)</sup> : 4121.12 M
- Transistor	PNP n. o. <sup>4)</sup> : 4120.13 M	PNP n. c. <sup>4)</sup> : 4121.13 M
- Relay	on request	

Notes:

- 1) data applies to water
- 2) depends on oil solution type
- 3) switch open with flow
- 4) switch closed with flow

### Connection diagram



**weber**

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