

Type 412-.80/.81 M S141

## METERING FLOW-SWITCH

- ◆ Precise metering flow monitor for water or oil-based solutions up to 100 bar
- ◆ High accuracy under high or low flow conditions
- ◆ Adjustable measuring range from 0.2m/sec to 3m/sec
- ◆ Adjustable set-point from 10% to 90% of the selected measuring range
- ◆ Analog display of actual flow rate
- ◆ Blinking LED for set-point adjustment
- ◆ LED display for output status



The calibrated range potentiometer allows measurement of the actual flow rate  
The calibrated set-point potentiometer allows exact adjustment of the flow alarm

*Both together provide the optimum control of any  
flowing media*

The flow-captor 4120-.81 M is the most rugged version of the famous 412.- series, also called "The yellow tennis-ball".

The unique features of this flow-captor are:

It is a flow meter and an adjustable flow switch at the same time. These features make this flow-captor an ideal device for flow-monitoring where maintaining a certain flow-rate is vital, no matter whether it is a very low or a very high flow rate. No matter what the media is, the accuracy remains the same under all operating conditions.

The rugged stainless steel housing of this flow-captor allows for installation under the harshest industrial or environmental conditions.

## Technical Data

Type	4120.80/.81 M S141	4121.80/.81 M S141
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. 10%-90 % of measuring range setting	approx. 10%-90% of measuring range setting
Medium temperature	-20 °C to +80 °C/ -4°F to 176°F	
Ambient temperature	-20 °C to +70 °C/ -4°F to 160°F	
Pressure	max. 100 bar, 1400 psi	
Response time	1 s - 10 s, according to range setting	1 s -15 s, according to range setting
Linearity deviation	< 5% <sup>1)</sup>	< 5% <sup>2)</sup>
Repeatability	< 1%	< 1%
Setpoint 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 C4 on request)
Thread	1/2" 14 NPT
Connection	Binder Connector - 6-Pin

### Electrical Data

Operating voltage	90-170 V AC
Switching current	Contact load Max. 5A, 30 VDC/240 VAC
Initial operation	approx. 10 s after connection of power
Electrical output	.80 normally closed (n.c.), .81 normally open (n.o.)

Flow < set-point	.80	.81
- LED, green	off	off
- Output relay	activated	not activated

<sup>1)</sup> data applies to water  
<sup>2)</sup> depends on oil solution type

**Connection diagram**

