# weber

# flow-captor





Available with inline tubes of 6mm, 8 mm, 12 mm or 18 mm O.D.

## flow-captor Type 4320.1- & 4321.1-

The inline flow-captor 4120.1- and 4121.1- is a family of compact industrial metering flow switches with adjustable set-point and analog display.

Their functionality is based on the calorimetric principle. The flow-captor allows the operator to set an exact flow set-point and to measure simultaneously the flow speed.

- Accurate switching flow monitor for water- or oil based solutions in 6 mm / 8 mm / 12mm and 18 mm O.D. pipes.
- High accuracy also under low flow conditions.
- Separate adjustments for RANGE and SET-POINT.
- Analog display of actual flow and display of set-point.
- LED for flow status.
- ISO 9000 certified manufacturing.
- CE approval.

water- and oil-based medium with outstanding accuracy even at low flow conditions.

Metering inline flow switch for

#### Adjustments / Display

| RANGE potentiometer      |
|--------------------------|
| 9 LED display            |
| SET-POINT potentiometer  |
| blinking LED             |
| GREEN LED (on with flow) |
|                          |

#### Models

| flow-captor 4320.1- | for water based solutions |
|---------------------|---------------------------|
| flow-captor 4321.1- | for oil based solution    |



### flow-captor

Type 4120.1-, 4121.1-metering flow switch

# Typical Application Examples:

The flow-captor 412-./1- can be applied in all areas of industries, where exact flow set-points are required, e.g. in systems where a signal is required at a slight deviation of the flow rate above or below the nominal value.

The flow-captor can optimize existing processes in a wide variety of industrial applications.

#### **Technical Data**

| Туре   | 4320.12/.13           | 4321.12/.13         |
|--------|-----------------------|---------------------|
| Medium | water-based solutions | oil-based solutions |

#### **Sensor Data**

| ochisor bata          |  |                                    |
|-----------------------|--|------------------------------------|
| Measuring Range       | 0 - 20 cm/s to 0 - 300 cm/s                  | 0 - 30 cm/s to 0 - 300 cm/s        |
|                       | cont. adjust 1)                              | cont. adjust 2)                    |
| Flow rate at 300 cm/s | 6x1 tube: 5 gal/min.                         | 12x1 tube: 3.1 gal/min.            |
|                       | 8x1 tube: 1.1 gal/min.                       | 18x1.5 tube: 7.0 gal/min.          |
| Set-point range       | approx. 15% - 90% of measuring range setting |                                    |
| Medium temperature    | - 20 °C to +80 °C (- 4 °F to +176 °F)        |                                    |
| Pressure              | up to max. 30 bar (450 psi)                  |                                    |
| Response time         | 2 s to 10 s, acc. to range setting           | 2 s to 15 s, acc. to range setting |
| Accuracy              | < 3 %1)                                      | < 3 % 2)                           |
| Repeatability         | < 1 %  |                                    |
| Hysteresis            | approx. 10 %                                 |                                    |

#### **Mechanical Data**

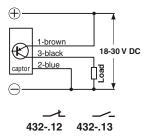
| Protection class | IP 65 (equivalent to NEMA 4)  |  |
|------------------|---|--|
| Housing material | Electronics housing: PBTP, glassfibre reinforced (Ultradur®)  |  |
| Sensor tube      | stainless steel WN1.4571(V4A, 316 Ti)   |  |
| Pipe dimensions  | 6x1, 8x1, 12x1, 18x1,5 (O.D x wall thickness)   |  |
| Connection       | integrated plug assembly with PG9 fitting, 2 m oilflex cable 3 x 0.5 mm <sup>2</sup> also available with M12, 4-pin industrial connector (option) |  |

#### **Electrical Data (Electronic housing)**

| Operating voltage               | 18 to 30 V DC, incl. residual ripple (adapter for 110 V available) |  |  |  |
|---------------------------------|--|--|--|--|
| Current consumption             | max. 150 mA  |  |  |  |
| Power consumption               | approx. 1 W  |  |  |  |
| Switching current               | 400 mA   |  |  |  |
| Circuit protection              | Reverse polarity, short circuit and overload protected             |  |  |  |
| Voltage drop                    | < 2,5 V at max. load   |  |  |  |
| Ambient temperature             | - 20 °C to +70 °C (-4 °F to +158 °F)                               |  |  |  |
| Initial operation               | approx. 10 s after connection of power                             |  |  |  |
| Electrical output               | PNP n.c. <sup>3)</sup> : 4320.12                                   | PNP n.c. 3: 4321.12                    |  |  |
|                                 | PNP n.o. 4): 4320.13   | PNP n.o. 4): 4321.13                   |  |  |
| Notes: 1) data applies to water | 2) depends on oil solution type 3) switch oper                     | n with flow 4) switch closed with flow |  |  |

#### **Connection Diagram:**

#### **PNP-transistor output**





Strohdeich 32 • D-25377 Kollmar • Tel.: +49 4128-591 • Fax: +49 4128-593