

Operation`s Manual

flow-captor

4115.30 sm x



flow - captor

Type 4115.30 sm



Installation and Adjustment Instructions

Please read carefully: No liability can be accepted for damage caused by improper use of the captor.

Before any handlings „Safety Instructions“ must be fully read!

1.0 Items delivered

1.1 flow-captor smart meter type 4115.30 sm consisting of:

1.1.1 Sensor unit

1.1.2 Sensor fitting DIN ISO 228 **G 1-1/2** “ complete with all sensor unit mounting parts, see at 4.0 parts list

alt.

1.1.3 Sensor fitting **1-1/2 in. NPT** complete with all sensor unit mounting parts, see at 4.0 parts list

1.2 Screwdriver for adjustment

2.0 Installation Instructions

2.1 Installation depth: 1/7x ID pipe sizes from 1,5“ to 24“

2.2 Orientation to flow: see drawing “Installation“

2.3 **Fitting position:** preferably in ascending pipes or in horizontal pipes with flow-captor in horizontal position. For optimal flow, straight pipe should be min. 7 x ID before, and 5 x ID behind the flow-captor.

2.4 **Mounting:**

Screw in flow-captor smart meter into the fitting on the pipe side and fix it at the correct insertion depth of 1/7 x ID (see drawing no. 704315-1)

2.5 **Initial operation:**

Connect flow-captor to 24 VDC according to connection diagram and wait approx. 2 min. before starting any measurement.

The flow-captor smart meter has been calibrated to the specified type related flow rate (standard: medium water)

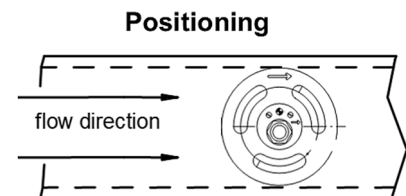
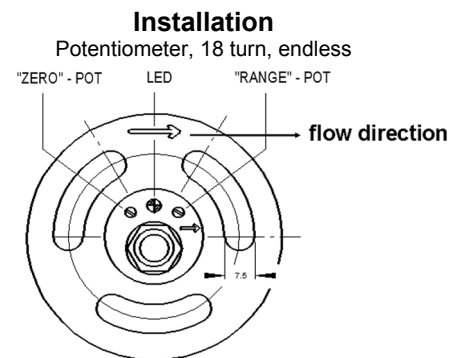
4115.30 sm 3: 0 to 1.0 m/s

4115.30 sm 4: 0 to 2.0 m/s

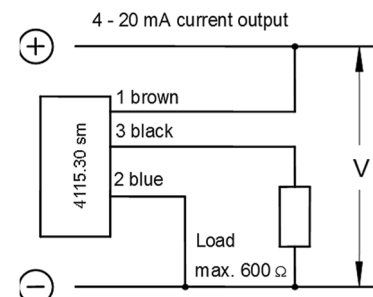
4115.30 sm 5: 0 to 3.0 m/s

At customers plant signal may vary dependent on individual mounting and medium conditions. If re-adjustment is required, please refer to point 3.

Dimensions:
see drawing-no. 704315-1



Connection Diagram



weber

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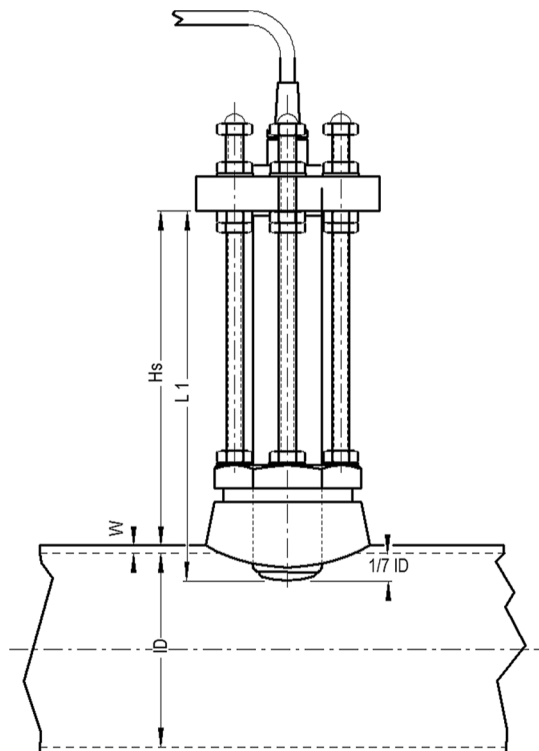
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3.0 Adjustment Procedure

- 3.1 Zero point adjustment in stationary medium (roughly):
Adjust zero point potentiometer after 2 min. so,
that $I_a \gg 4 \text{ mA}$, i.e. at $I_a > 4 \text{ mA}$ turn pot. to the left,
at $I_a < 4 \text{ mA}$ turn pot. to the right.
- 3.2 Measuring range adjustment at max. flow: Measuring range:
adjustable from 0-20 cm/s to 0-200 cm/s (medium water).
Accelerate flow of the medium to a point, where the flow-captor
should give an output signal of 20 mA and wait min. 2 minutes.
Turn range pot. until $I_a = 20 \text{ mA}$ (to the left I_a will be bigger, to
the right I_a will be smaller). The color of the LED will change from
green ($I_a \leq 20 \text{ mA}$) to red (exceeding measuring range).
- 3.3 Fine adjustment of zero point: After at least 3 minutes standstill
of flow turn zero point slightly so, that I_a is just 4 mA (turning
direction as in 3.1) .
- 3.4 Repeat adjustment according to 3.2 and 3.3 until the zero point
(4 mA) and max. range setting (20 mA) remain constant.



Calculation of the standard height for 1/7 ID (insertion depth)

$$H_s = L_1 - W - (1/7 \times ID)$$

Hs: standard height

L₁: unit length (see drawing)

W: wall thickness of pipe

ID: inner pipe diameter

For example:

$$L_1 = 143 \text{ mm}$$

$$W = 5 \text{ mm}$$

$$ID = 50.4 \text{ (2")}$$

$$H_s = 143 - 5 - (1/7 \times 50.4)$$

$$= 143 - 5 - 7.0$$

$$\gg 131 \text{ mm}$$

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Technical data subject to alteration! · Rev. A1 / 01.11.16

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4.0 Parts List

Pos.	Description	Quantity/pcs.	Article No.
1	threaded rod, M6, L: 5" (127 mm), stainless steel 1.4305 (303)	3	00028381
2	hex nut, M6 (DIN 934), stainless steel 1.4305 (303)	12	00281601
3	lock washer for M6 (DIN 6797-I 6,4-VA), stainless steel 1.4305 (303)	6	00028057
4	cap nut, M6 (DIN 1587), stainless steel 1.4305 (303)	3	00028201
5	O-ring, Viton Vi500, 24,5x2	2	00241191
6a	fitting G 1- 1/2" (BSP) (DIN ISO 228), stainless steel 1.4571, 316 Ti	1	004318931
	alternativ:		
6b	fitting 1- 1/2" NPT , stainless steel 1.4571, 316 Ti	1	00431893

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