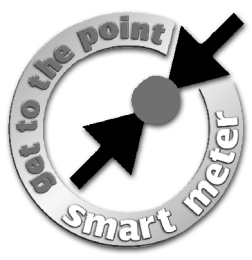


# flow-captor smart meter

## The adjustable flow meter

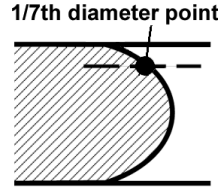
- Suitable for pipes up to 24"
- Measuring range from 0.2 m/s up to 3.5 m/s
- A flow meter for everything that flows
- Made for the 1/7th law



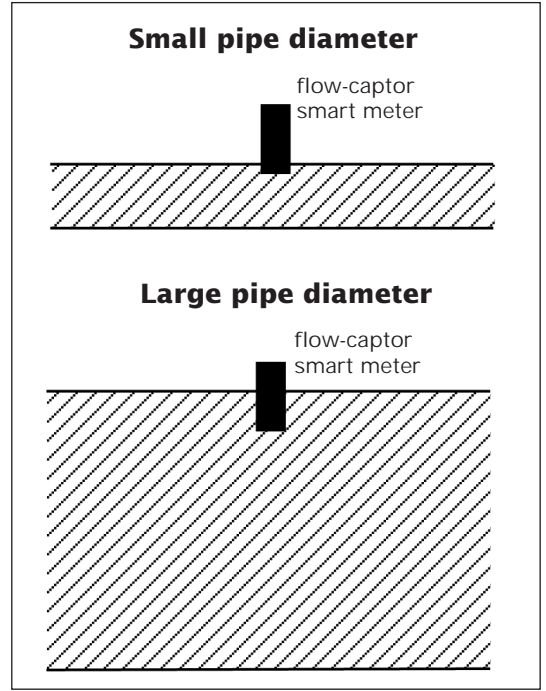
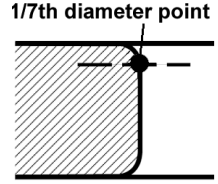
## flow-captor smart meter Type 4115.30 sm

The flow-captor smart meter solves the problems inherent with insertion type flow meters and achieves high accuracy over a wide range of pipe sizes by applying the 1/7th law. The flow-captor smart meter measures even very low flow rates due to the applied calorimetric principle.

**Laminar flow** is the ideal flow condition, with no obstruction or bends. Under this condition, the flow rate at an insertion depth of 1/7th of the pipe diameter represents the average flow rate.

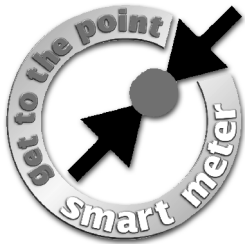


**Turbulent flow** is a very common flow condition characterized by a flat flow profile across the pipe diameter starting almost immediately after the pipe wall. Applying the 1/7th law creates the same accurate metering as under laminar flow conditions.



# flow-captor smart meter

Type 4115.30 sm



## Application

Metering of all fluid media, like water, oil, aggressive media, paste, glue, sludge, grease etc.

## Principle of operation

The flow-captor smart meter's operation is based on an advanced calorimetric technology.

The sensor head of the flow-captor contains two PT-resistors. One of them is measuring the temperature of the media, while the other is heated by an attached heating resistor, resulting in a temperature difference between the two PT-resistors.

The temperature difference between the two PT-resistors is predetermined and a control circuit keeps this temperature difference constant.

The flow of the media cools the heated PT-resistor proportional to the speed of the flow. The heating power fed into the system by the control circuit, in order to keep the temperature difference between the two PT-resistors constant, is the equivalent to the heat dissipation by the flow of the media. This results in a linear output signal proportional to the flow speed.

## Technical Data

Type	4115.30 sm2	4115.30 sm3	4115.30 sm4	4115.30 sm5
Measuring range <sup>1) 2)</sup>	0 to 0,5 m/s	0 to 1 m/s	0 to 2 m/s	0 to 3 m/s

<sup>2)</sup> other ranges on request

## Sensor Data

Medium temperature	0 °C to +80 °C (+32 °F to +176 °F)
Ambient temperature	-20 °C to +70 °C (-4 °F to +160 °F)
Pressure	18 bar, max.
Accuracy	< 3% <sup>1)</sup>
Repeatability	< 1% / Response time to flow rate change 10 sec. typ.

## Mechanical Data

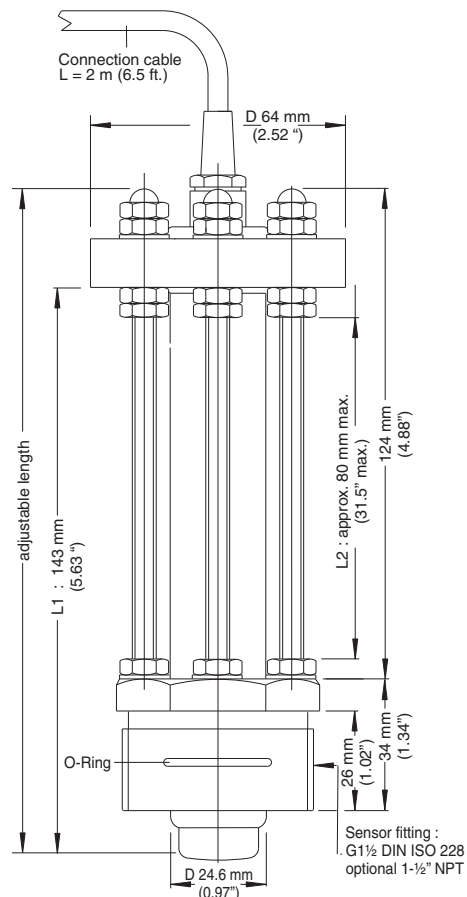
Protection class	IP65
Housing material	Stainless steel WN 1.4571 (V4A), 316 Ti
Sensor head material	Stainless steel WN 1.4571 (V4A), 316 Ti
Sensor fitting	G1½ DIN ISO 228, stainless steel (optional 1-½" NPT)
Electrical connection	2 m (6.5 ft.) moulded oilflex cable, 3 x 0.5 mm <sup>2</sup>

## Electrical Data

Supply voltage	24 VDC +10% -15%
Current consumption	100 - 200 mA
Output current	4 to 20 mA
Resistive load	600 Ohm, max.

<sup>1)</sup> data applies to water

## Dimensions



## Connection Diagram

