

flow-captor 4511.30/x

The flow-captor type 4511.30/x is a non-reactive flow meter, ideal for all measuring and control tasks in automation processes or other industrial applications. This “micro” flow-captor has been specially designed to detect extremely small flow rates, up to < 0.1 ml/min.

The sensor operates according to the calorimetric measuring principle. Detection takes place in the inline tube, whereby the sensor measures the heat flow dependent on the flow velocity of the medium and converts it into a linear, flow-proportional, electrical signal.



- for smallest pipe diameters: 4 x 1 mm and 6 x 1 mm
- no flow obstruction due to elements projecting into the pipe.
- analogue current output 4 - 20 mA
- electronic function - without mechanically moved parts
- robust industrial design (special potting)
- **ISO 9001:2015**

Technical data

Type	4511.30/4	4511.30/6
Pipe diameter	4 x 1mm (ID 2)	6 x 1mm (ID 4)
Measuring range	min. linear range 0.1 - 1 ml/min ($\approx 0.05 - 0.5$ cm/s)	min. linear range 0.4 - 4 ml/min ($\approx 0.05 - 0.5$ cm/s)
With increased linearity deviation	max. linear range 1 - 20ml/min ($\approx 0.5 - 10$ cm/s)	max. linear range 4 - 75 ml/min ($\approx 0.5 - 10$ cm/s)
	extended range 1 - 47 ml/min ($\approx 0.5 - 25$ cm/s) ¹	extended range 4 - 190 ml/min ($\approx 0.5 - 25$ cm/s) ¹

Sensor data¹

Range adjustment	by means of 2 potentiometers for zero point and range
Medium	water (other media on request)
Medium temperature	-10 °C to +80 °C
Ambient temperature	-10 °C to +60 °C
Linearity deviation	< 5 % (best fitting slope)
Repeatability tolerance	< 3 %
Temperature drift	< 0.3 % / K

Mechanical data

Protection class	IP65
Operating pressure	max. 10 bar
Material housing	Makrolon®
Material sensor pipe	stainless steel AISI 316Ti (other material on request)
Torsion	no twisting pipe against housing permissible
Electrical connection	4-pin M12-coupling and 2 m cable 3 x 0,34 mm ² (type 4950) with 4-pin M12 plug

Electrical data

Voltage supply	24 VDC $\pm 10\%$
Current consumption	max. 100mA
Output current	4 - 20 mA
Resistive load	0 - 600 Ω

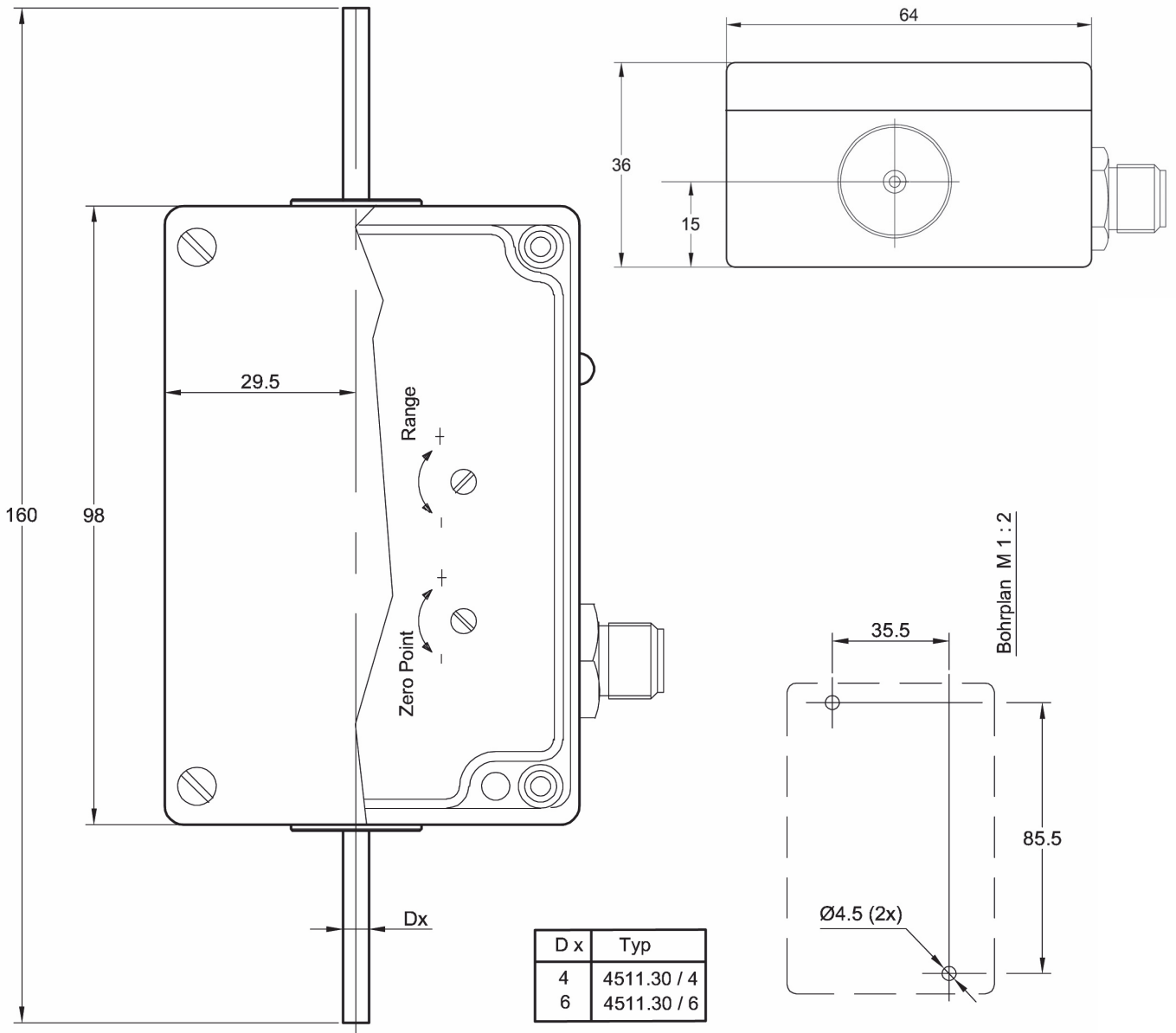
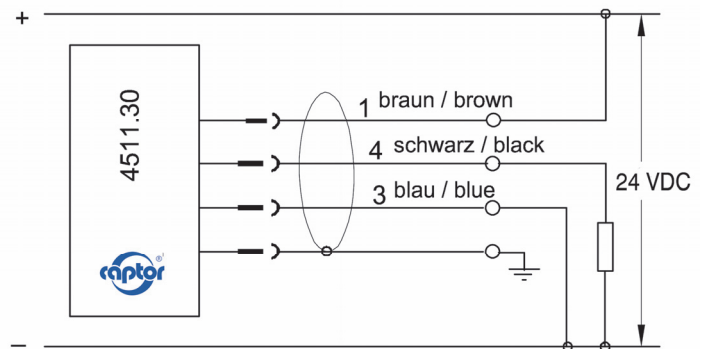
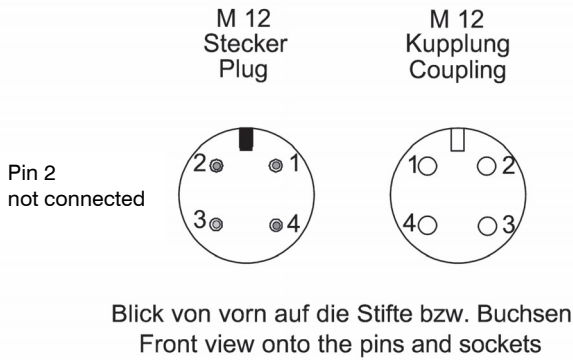
¹⁾ S354

Flow meter for liquid media



flow-captor 4511.30/x

Connection diagram



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