



OMNI - F

- Flow indicator without moving parts
- Very fast reaction times for a calorimetric system
- Medium in contact with only one material
- Analogue output, frequency output, switching outputs
- Clear, easily readable, backlit LCD display
- Changeable units in the display
- Designed for industrial applications
- Small and compact
- Simple installation

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|---------------|
| Type |
| OMNI-F |

DESIGN AND FUNCTION

The calorimetric sensor measures the flow velocity in liquids and gases.

The measurement is supported in temperature compensation and in signal processing (linearisation, filtering) by the use of a microcontroller.

Please take into account though that a probe measurement system does not always give very high accuracy! Here, a point measurement is taken as representing the complete flow cross-section in a pipe!

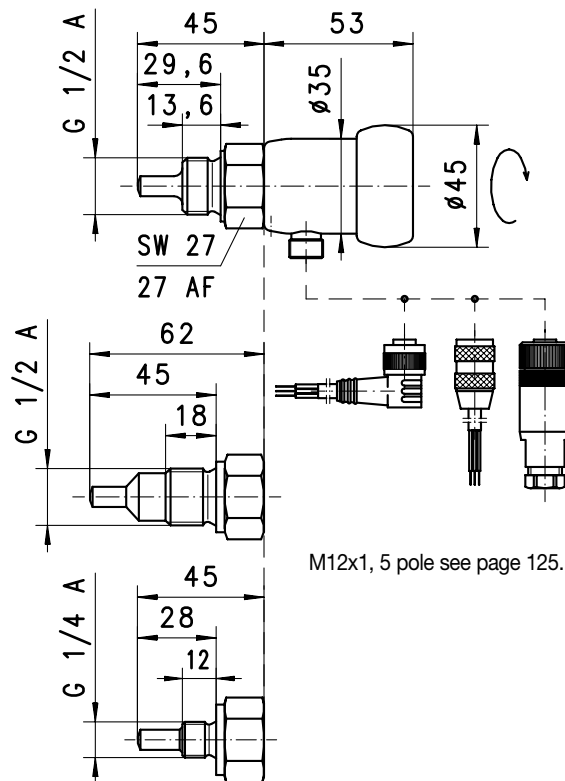
Please take all additional data from the omni-sensor-family on page 92.

MOUNTING

Seal the sensor with Teflon tape such that the stamped cross is on the upstream side. This is the setting used for the measurement at the works and which ensures the best results.

Only turn the sensor using the hexagon. Once sealed, you have the opportunity to align the sensor head to the best reading position by turning it.

DIMENSIONS



TECHNICAL SPECIFICATION

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|-------------------------------------|---|
| Measurement ranges | water 1-150 cm/s oil 3-300 cm/s |
| Accuracy | ±10% of final value, tested with 10xD for approach & exit distances with rising pipe (water medium) |
| Reproducibility | ±1% |
| Operating pressure | 200 bar (bursting pressure = operating pressure x 1.5) |
| Dynamic responses | in water (25°C) at medium flow speed about 1-2 s. |
| Operating temperature | -20 ... 70°C |
| Storage temperature | -20 ... 80°C |
| Supply voltage | 18...30 VDC |
| Power consumption | <1 W |
| Signal output | 4(0)-20mA, 2(0)-10V across 500 Ohm resistor to 0V.. |
| Switching values S1 and S2 | PNP or NPN selectable, 300mA load in sum max., programmable as min. or max. value, short-circuit proof, reverse-polarity proof |
| Hysteresis | adjustable, position of hysteresis depends on min or max. |
| Display | graphical LCD display extended temperature range -20 ... 70°C, 32x16 pixels, back-lit, shows value and units, LED signalling lamp with simultaneous message in display. |
| Connection | at locking plug M 12x1, 5-pole |
| Protection class | IP67 |
| Material medium contact | stainless steel 1.4571 |
| Materials electronic housing | housing stainless steel 1.4305 glass tempered mineral glass magnet cobalt samarium ring POM |