



# MicroFlowSens Amplifier Module

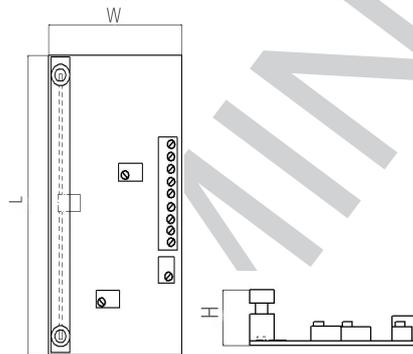
## Thermal Mass Flow Sensor

### Optimal for demonstration and evaluation of the MFS02

#### Benefits & Characteristics

- Single supply 12 V<sub>DC</sub>
- Separate temperature sensor on chip
- Interfacing with screw termination block
- Flow channel and pneumatic connectors mounted
- Monitoring for internal supply, offset and heater voltages at termination block
- Adjustment with three trimming potentiometers (gain, offset, heater voltage)

#### Illustration<sup>1)</sup>



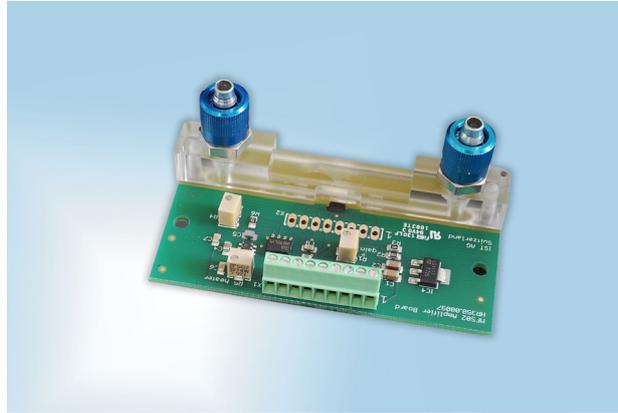
1) For actual size, see dimensions

#### Technical Data

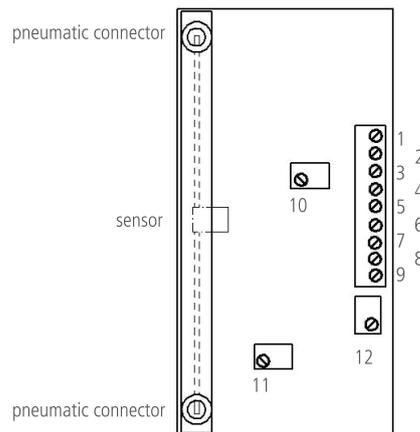
Dimensions (L x W x H in mm):	70 x 35 x 30
Operating measuring range:	≥ 0 m/s to 2 m/s (0 ml/min to 240 ml/min)
Integrated sensor:	MFS02
Temperature sensor:	Pt RTD similar to Pt1000 (passive - directly wired to output)
Voltage range (heater):	2 V <sub>DC</sub> to 5 V <sub>DC</sub>
Current consumption:	< 50 mA
Supply voltage:	12 V <sub>DC</sub> external supply (no reverse polarity protection)
Output signal range (flow):	-1.8 V <sub>DC</sub> to 12 V <sub>DC</sub> (not linearized), adjustable with trimming potentiometer
Gain:	23 to 10000, adjustable with trimming potentiometer
Analog output load:	R <sub>L</sub> ≥ 25 kΩ (output short circuit protected)
Heater power:	approx. 6.6 mW at 2 V heater voltage, 14.9 mW at 3 V heater voltage approx. 26.4 mW at 4 V heater voltage, 41.3 mW at 5 V heater voltage
Channel cross section:	2 mm <sup>2</sup>
Mounting:	2 x M3 screw
Operating mode:	full bridge mode



## Product Photo



## Pin Assignment



1	2	3	4	5	6
$V_{CC} = 12 V_{DC}$	GND	$V_{out, diff}$ [-1.8 $V_{DC}$ to 12 $V_{DC}$ ]	temperature sensor PT1000	temperature sensor PT1000	5.5 $V_{DC}$ out
7	8	9	10	11	12
-5 $V_{DC}$ out	Heater voltage output [0 $V_{DC}$ to 5.7 $V_{DC}$ ]	Offset voltage output [-1.8 $V_{DC}$ to 5.7 $V_{DC}$ ]	$R_1$ (gain)	$R_4$ (offset)	$R_5$ (heater)

## Order Information

Description:	Item number:	Former main reference:
IST_A05_Flowmodul mit MFS02	104955	350.00097



## Additional Electronics

Description:	Item number:	Former main reference:
MFS02	103743	050.00263
MFS02.PSTD.0	103745	050.00266
MFS02.PEXP.0	103746	050.00267



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