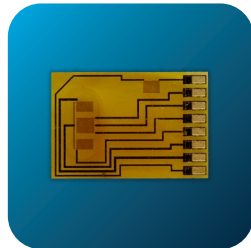




innovative  
Sensor  
Technology

## FLOW SENSORS & MODULES

Thermal measuring principle for gas and liquid applications. Easy integration, signal processing and customization



physical · chemical · biological





APPLIANCE



AUTOMATION



AUTOMOTIVE



OIL, GAS & CHEMICAL



HVAC



HANDHELD DEVICES



MEDICAL



IST offers a wide range of sensors based on different technologies suitable for any application.

Standard or customized

## Flow sensors

### Thermal gas flow sensor FS7

- Anemometric gas mass flow
- Temperature range -20 °C up to +150 °C
- Ceramic sensor with response time <200 ms
- Excellent sensitivity and reproducibility from low flow rates
- With optional hotmelt housing for positioning (easy customization to fit flow channel geometry)



### Thermal gas flow sensor FS2

- Calorimetric gas flow sensor for mass flow and direction detection
- 4 structures on one chip for temperature compensation / extended flow range with CTA
- Ceramic sensor with response time <200 ms
- Temperature range -20 °C up to +150 °C



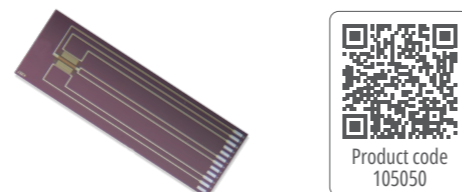
### MicroFlowSens MFS02

- For highly sensitive calorimetric mass flow measurements at low flow rates and extended measuring range up to 150m/s in CTA mode
- Glas membrane sensor with fast response time  $t_{63} < 10\text{ms}$
- Temperature range from -20 °C up to +80 °C
- High chemical resistance against aggressive gases and vapours



### Silicon flow sensor SFS01

- Calorimetric gas mass flow sensor with very low energy consumption
- For flow range up to 3.5 m/s and temperature range up to +80 °C
- Easy to linearize raw signal
- Silicon membrane sensor with response time <5 ms



### Out-Of-Liquid (OOL)

- For sensitive low flow range in liquids
- For usage in aggressive liquids with stainless steel as single wetted material
- For sensitive, anemometric mass flow measurement in ml/h to ml/min range
- Suitable as leakage detector or flow switch



## Flow modules

### SFS flow module

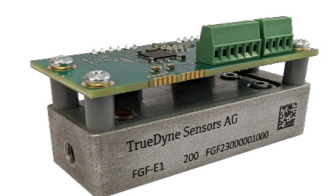
- Ready-to-use and factory calibrated with <2% f.s. accuracy
- Available in 3 flow ranges:  $\pm 50$ ,  $\pm 200$ ,  $\pm 1000$  sccm
- Integration ready with digital I<sup>2</sup>C and 0-1V outputs
- Add-on fluidic adapter available
- Suitable for process control in manufacturing equipment and gas analyzers for gas supply or dosing systems and manifolds



### FGF – Thermal gas flow and density module

- Multiparametric module for density and pressure compensated gas mass flow
- CleanGas identification
- Binary gas ratio evaluation and flow compensation
- Suitable for medical devices and industrial process monitoring

truedyne



### Mass flow meter – OOL Module

- Factory calibrated liquid mass flow meter
- Calibration range 0.1...20 kg/h and accuracy of  $\pm 3\%$  f.s.
- For sensitive low flow / leakage analysis
- Mass flow and temperature outputs as digital I<sup>2</sup>C signal via M8 connector
- Compatible with water, oil or alcohol based media



### OOL Bubble Detector

- Detection of gas bubbles in liquid with thermal principle
- Fast response time <6 ms.
- Resolution of ~1 mm sized individual bubbles
- Compatible with aggressive liquids with stainless steel as single wetted material, including coolant, ink and oils



# Customized sensor solutions for your application

Benefit from an agile co-creation of your next sensor solution. Use our competence at component level and focus on your added value for fast and successful product development - from simple design adaptations to new measuring principles: from concept prototyping to high-volume manufacturing.

