



FLOW SENSORS & MODULES

Thermal gas and liquid flow sensors with large dynamic range, high sensitivity and excellent long-term stability





APPLIANCE



AUTOMATION



AUTOMOTIVE



OIL, GAS &
CHEMICAL

IST AG develops and produces sensors and modules for various tasks in the area of flow velocity measurement, which are used in many different applications areas.

Flow Sensors for Gases

Thermal Gas Flow Sensor FS2

The IST AG FS2 flow sensors are optimal for measuring gas flow and direction

- Excellent long-term stability
- Reproducibility
- Flow range from 0 m/s to 1.0 m/s
- Temperature range -20 °C up to +150 °C
- Detect flow direction with outstanding sensitivity



Thermal Gas Flow Sensor FS7

For measuring flow rates using a symmetrical heater design and having an excellent sensitivity and reproducibility.

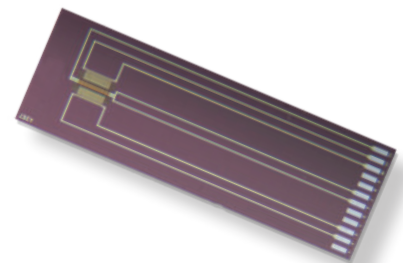
- Long-term stability
- Reproducibility
- Flow range from 0 m/s to 100 m/s
- Temperature range from -20 °C up to +150 °C
- Fast response time ~200 ms



Silicon Flow Sensor SFS01

The SFS is IST AG's first flow sensor based on silicon technology. It is operated according to the calorimetric principle.

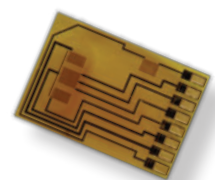
- Optimal for fast measuring of gas flow and direction
- Flow range from 0 m/s to 3.5 m/s
- Temperature range 0°C up to +80 °C
- Very fast response time <5 ms
- Very low energy consumption
- Easy system integration including temperature compensation



MicroFlowSens MFS02

Thermal gas flow sensor with ultra low thermal mass resulting in high sensitivity and fast response time.

- Optimal for fast flow measurements
- Flow range from 0 m/s to 1.5 m/s
- Temperature range from -20 °C up to +80 °C
- Very fast response time <10 ms
- High chemical resistance against aggressive gases and vapors





HANDHELD DEVICES



HVAC



MEDICAL



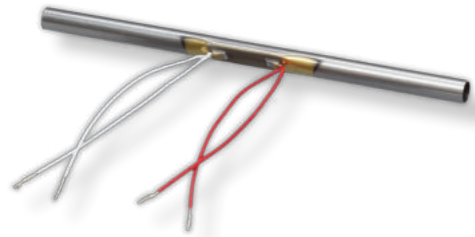
PROCESS CONTROL

Flow Sensors for Liquids

Out-of-Liquid (OOL)

Thermal flow sensor made of stainless steel as single wetted material and is suitable for various liquids incl. water, oil, coolants, lubricants, cleaning solutions.

- Suitable for aggressive liquids
- High chemical resistance
- Fast measurement results
- No contact between sensor and liquid
- Simple flow switches possible



Flow Modules

OOL Mass Flow Meter

The OOL Mass Flow Meter is a digital module continuously monitoring mass flow and temperature is made for leakage detection and can be easily integrated into new or existing industrial systems.

- Sturdy housing
- Plug-and-play sensor solution
- Accuracy of $< 3\%$ F.S.
- Response time of 500 ms
- Repeatability of $< 0.3\%$ F.S.



OOL Bubble Detector

The OOL Bubble Detector detects bubbles from ca. 1mm diameter and is suitable for various liquids, incl. water, oil or coolants.

- Suitable for various liquids, including aggressive liquids
- Independent of flow rate changes
- Suffers minimal pressure loss



CUSTOMIZED SENSOR SOLUTIONS FOR YOUR APPLICATION

Benefit from an agile co-creation of a sensor with IST AG and enable your business to focus on your core competence: From simple adaptations of our sensors to fit your application's needs to new development of a tailor-made sensor – from early prototyping to series manufacturing.

SUBSTRATES

- Alumina
- Zirconia
- Sapphire
- Steel
- Copper
- Polyimide
- Aluminium nitride
- Silicon

METAL THIN FILM

- Pt
- Rh
- Ti
- Ni
- W
- Cr
- Ag
- Au
- Al
- Mo
- Alloys

DIELECTRIC THIN FILM

- SiO_2
- Si_3N_4
- Ta_2O_5
- Polyimide

DESIGN

- Concept
- Material choice
- Technology choice
- Design of layout

CONNECTION

- Enameled Cu wire, Ø 0.2 mm
- Ag-wire, Ø 0.25 mm
- Ni/Au-wire, Ø 0.2 mm
- Pt-wire, Ø 0.2 mm
- Cu/Ag-wire, PTFE insulated
- Cu/Ag-wire, Peek insulated
- Cu/Ag stranded, PTFE-insulated
- and many more

ASSEMBLY

- Electrical final testing
- Optical final testing
- ESD testing
- Packaging
- Additional assembly

PACKAGING

- Welding*
- Bonding
- Soldering*
- Hot-melt
- Injection molding

PATTERING

- Photolithography
- Laser trimming
- Dry & wet etching

METAL THICK FILM

- Pt
- Au
- Ag
- Alloys

DIELECTRIC THICK FILM

- Glass
- Organic polymers

