



# BIOSENSORS

Multiparametric measurement with excellent long-term stability for continuous monitoring or analyzer operation mode





BIOTECHNOLOGY



CONSUMER HEALTHCARE



ENVIRONMENTAL

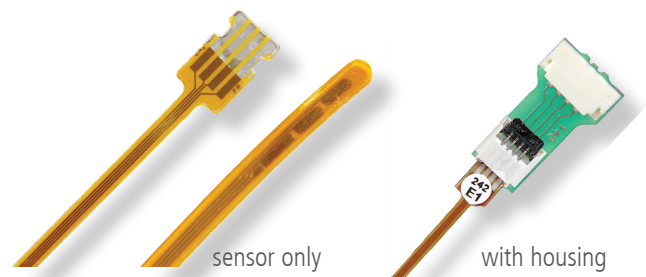
**In collaboration with daughter company Jobst Technologies GmbH, IST AG produces and develops biosensors designed to measure concentration of glucose, lactate, glutamine, pyruvate and glutamate. The biosensors use the enzymatic-amperometric measurement principle.**

## Biosensors

### IV4 – Optimal for stable continuous single parameter dip-in applications

IST AG's IV4 biosensor is a flexible stripe with large form factor ideal for direct dipping in the measurement media. It is designed for the detection of a single analyte, glucose as standard. This sensor is ideal for applications that require in-line continuous measurement with high reliability.

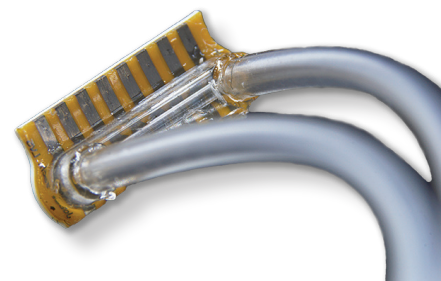
- Excellent long-term stability
- Long shelf life
- Gamma and beta sterilization compatible
- Fast response time
- Outstanding reliability
- Reference, counter and blank electrodes on-chip
- Suitable for bioreactors or aseptic media



### LV5 – Multi-parametric measurements

Our LV5 sensor is a flow-through biosensor and offers multi-parametric measurements. Up to 4 analytes can be measured simultaneously (glucose, lactate, glutamine, glutamate). The sensor features a very small flow cell (1  $\mu$ L) and therefore requires minimal sample volumes when used as an analyzer.

- Excellent long-term stability over a month in continuous measurement mode
- Long shelf life (under appropriate environmental conditions)
- Gamma and beta sterilization compatible
- Suitable for continuous and analyzer measurement modes
- Fast response time
- Reference, counter and blank electrodes on-chip
- Integrated flow cell
- Suitable for sampling systems in laboratories or food and pharmaceutical industries





MEDICAL

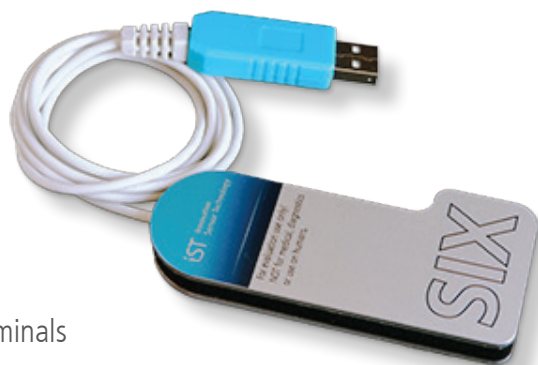


SAFETY ENGINEERING

## SIX Biosensor Transmitter – Evaluation Kit for Amperometric Biosensors

The SIX Biosensor Transmitter enables a direct evaluation of LV5 and IV4 biosensors. It can be directly connected to a computer via USB or to any microprocessor via a standard TTL-serial interface. The evaluation software bioMON is also available for the acquisition of measurement data and its analysis in real time.

- USB connectivity for easy evaluation
- Very high current precision (approx. 20 pA)
- Very light weight
- Evaluation software bioMON available
- Current range can be factory-adjusted to meet specific requirements
- OEM version with serial interface for easy integration in custom developments
- 6 current channels with common reference and counter terminals



## Microfluidic Accessories

Our daughter company, Jobst Technologies GmbH, offers a range of microfluidic accessories. For more information on peristaltic, microfluidic actuators contact Jobst Technologies directly.

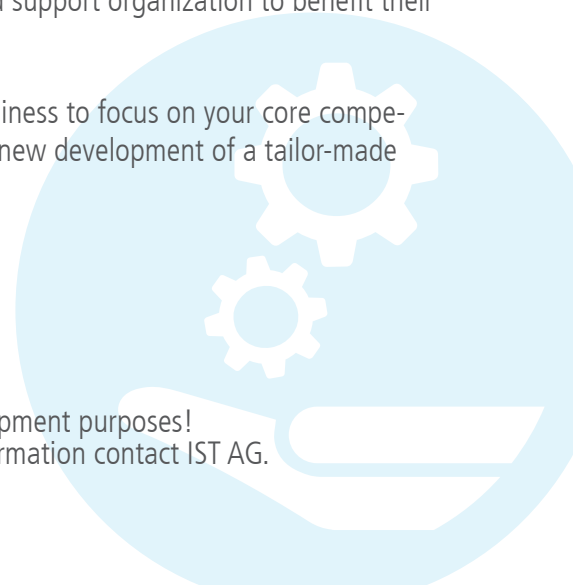
## Development & Technology Partner

Working with IST AG as innovation partner saves our customers a lot of time and effort. Instead of developing and manufacturing a sensor component, they can simply acquire our expertise and support organization to benefit their own product.

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.

### Disclaimer

Evaluation product for professionals to be used solely for research and development purposes!  
Not for medical and diagnostic use. Not to be used for humans. For more information contact IST AG.





# 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

- $\text{SiO}_2$
- $\text{Si}_3\text{N}_4$
- $\text{Ta}_2\text{O}_5$
- Polyimide

## METAL THICK FILM

- Pt
- Au
- Ag
- Alloys

## DIELECTRIC THICK FILM

- Glass
- Organic polymers

## PACKAGING

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

## PATTERING

- Photolithography
- Laser trimming
- Dry & wet etching

## ASSEMBLY

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

## 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

## DESIGN

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

