



B.LV5

Biosensor array

A flow-through sensor for bioanalytical applications

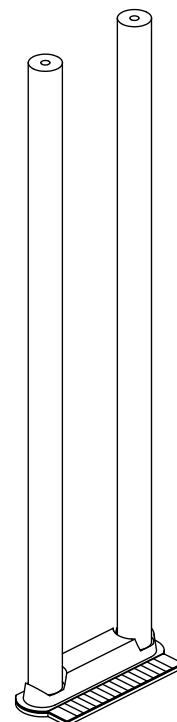
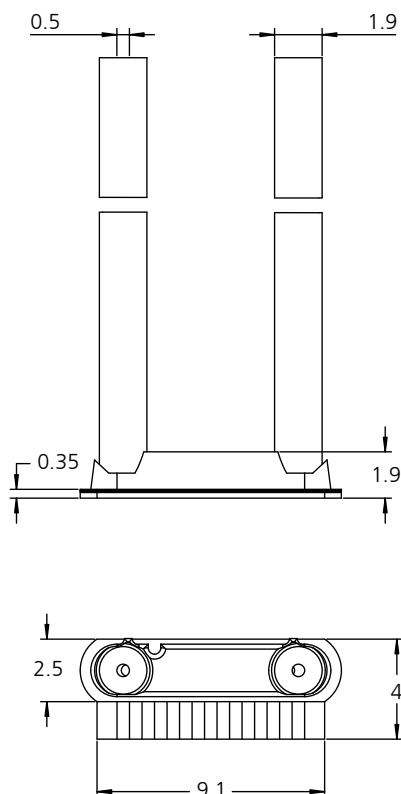
A product of Jobst Technologies

Benefits & Characteristics

- Enzyme-based amperometric measurement
- Excellent long-term stability
- Stable in continuous monitoring and analyzer mode
- Reference, counter and blank electrodes on-chip
- Integrated flow cell (small inner volume)
- For industrial and research applications
- Suitable for multiparametric measurements
- Outstanding reliability
- Fast response time
- Gamma and beta sterilization compatible
- Suitable for flow-through applications

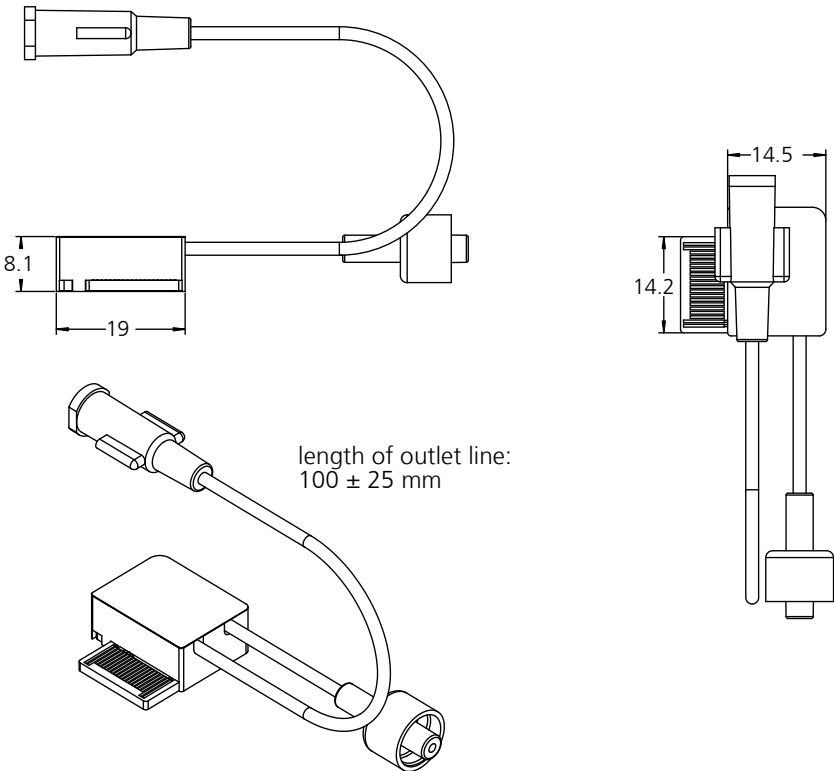
Illustration

B.LV5 sensor with tubes





B.LV5 sensor ruggedized (luer)



Technical Data

Dimensions:	see illustration above
Measurement principle:	Enzymatic amperometric (oxydase enzymes and H ₂ O ₂ oxydation)
Working electrode:	Platinum covered with enzyme membrane
Blank electrode:	For background compensation
Reference electrode:	Silver / silver chloride
Counter electrode:	Platinum
Measurable analytes:	Glucose, Lactate
On request:	Glutamine, Glutamate, Pyruvate
Operating measurement range at +37 °C	Glucose: 0.05 mM to 25 mM Lactate: 0.02 mM to 15 mM Glutamine: contact IST AG Glutamate: contact IST AG Pyruvate: contact IST AG



Note:		- measured in acetate buffer at 37 °C - contact IST AG for buffer composition - other measurement ranges on request
Sensitivity (typical):	Glucose	0.8 nA/mM
	Lactate:	2 nA/mM
Note:		- measured in acetate buffer at 37 °C - contact IST AG for buffer composition - other measurement ranges on request - info on other analytes on request
Compatible sterilization method:		Irradiation (beta, gamma) - recommended dose: < 25kGy - sensitivity increases with applied dose - lifetime decreases with applied dose Product is delivered not sterile Do not use organic solvents For more information contact IST AG
Time (t _{90%}) to first measurement:		~15 min at 37 °C in acetate buffer after storage
Time response (t _{90%}):		< 25 s at 37 °C in acetate buffer
Temperature influence:	Glucose:	~3.8 %/°C
	Lactate:	~3.2 %/°C
Storage conditions:		+2 °C to 28 °C, dessicated
Shelf life at recommended storage conditions		> 6 months (from delivery)
		> 2 years from fabrication
Operational life time:	Glucose:	> 60 days at 20 mM
	Lactate:	> 7 days at 8 mM
Note:		- measured in acetate buffer at 37°C - life time may vary in other buffer systems
Operating temperature:		15 °C - 42 °C
pH Range:		6 - 8
Drift at 37°C:		< 5 %/day
Suitable media:		Bicarbonate, acetate, imidazole buffers - to be used in buffered media only - buffer must contain chloride, [Cl ⁻] ca. 110 mM - not suitable for direct use in tap water or DI-water - for information on buffer systems please contact IST AG
Flow cell internal volume:		approx. 1 µl (other volumes available on request)
Tubing inner diameter:		0.5 mm
		0.15 mm available on request
Fluidic connection:	Inlet:	male luer lock (only with 0.5-mm tubing)
	Outlet:	female luer lock (only with 0.5-mm tubing)
Minimal:		0.3 µl/min
Maximal:		10 ml/min
Recommended:		> 30 µl/min
Pressure drop:		~ 33 mbar/(ml/min)
Note:		measured with a 1 µl flow cell and 0.5-mm tubing with luer locks



Electrical connection:

B.LV5 Sensor (FPC)

flex-print circuit, 8 pins, 1 mm pitch, 0.3 mm thickness, compatible with FFC/FPC ZIF connectors

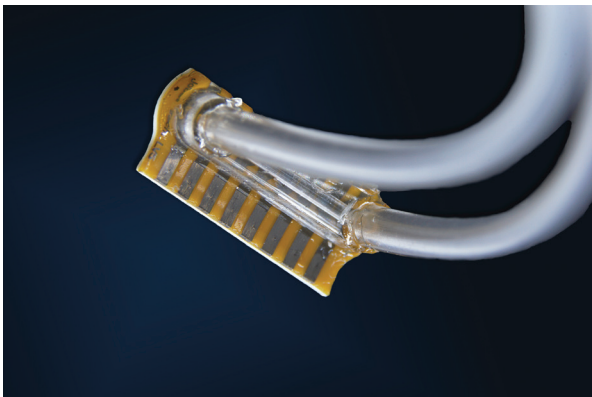
B.LV5 Sensor ruggedized (ECC)

edge-card connector, 40 pins in two rows (only 8 are used), 0.635 mm pitch, 1.6 mm thickness, compatible with MEC6-RA socket

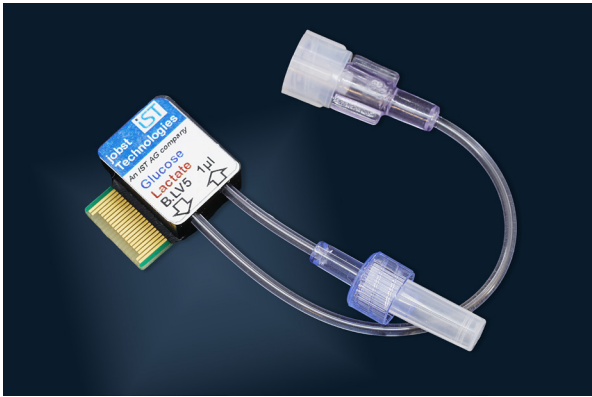
General note: Performance data in this document was determined in acetate buffer at 37 °C, pH 7 and normal atmospheric conditions.

Product Photos

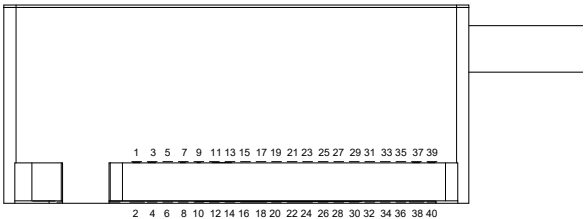
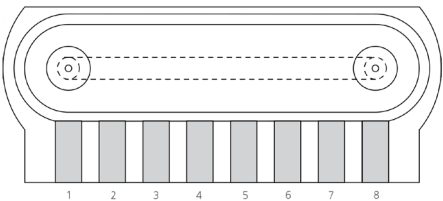
B.LV5 sensor with tubes



B.LV5 sensor ruggedized (luer)



Pin Assignment



Electrode	B.LV5 Sensor	B.LV5 Sensor ruggedized (luer)
Blank 1	8	26
Glucose1	7	22
Lactate 1	6	28
Blank 2	5	20
Glucose 2	4	16
Lactate 2	3	14
Reference	2	11
Counter	1	7



Order Information

Construction	B.LV5 sensor with tubes (0.5 mm)	B.LV5 sensor ruggedized (0.5 mm luer)	On request
Measured analytes	Glucose, Lactate	Glucose, Lactate	other analytes
Measurement range	standard	standard	other ranges
Reference	B.LV5.GL.C010.ST.050.FPC	B.LV5.GL.C010.ST.L050.ECC.R	on request
Order code	105117	105128	on request
Former order code	390.00129	390.00154	

Disclaimer

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



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