



Sensing Versatility Enabled By Fiber Optic Technology

Reading dissolved oxygen and pH optical sensors has never been easier. SBI's ID-Fiber Optic Reader can access the most challenging spots to take readings from sensors placed inside bioreactors, organ-on-chip devices, shake flasks, and other culture vessels.

Combine the ID-Fiber Optic Kit with minimally invasive, single-use accessories to collect real-time pH and dissolved oxygen measurements, making your cell culture and biomanufacturing process more efficient, reliable, and reproducible.

Use with



Includes

ID-Fiber Optic Reader
ID-Fiber Optic Cables
ID-Converter
ID-Data Hub

Accessories

ID-Fiber Optic Probe
ID-External Star Adaptor
ID-Flow Through Cell Single
ID-Flow Through Cell Dual



How can I incorporate fiber optic sensors into my cell/tissue/organ culture system?

The ID-Fiber Optic Kit is designed to be used in conjunction with at least one of SBI's Fiber Optic Accessories. The customizable configuration of the ID-Fiber Optic Kit enables you to measure pH and DO in commercially available or custom bioreactors, shake flasks, flow systems, and organ-on-a-chip devices.

- ID-Sensors for pH and DO fit even the smallest culture systems.
- Fiber Optic Accessories allow you to take readings in media flow loops, within bioreactor chambers, and at varying locations within a standard culture vessel.
- ID-Data Hub software loaded onto your laptop collects pH and DO data through the included ID-Converter.

✓ ID-Fiber Optic Kit Advantages

- Real-time monitoring of pH and dissolved oxygen
- Can be adapted to fit many culture systems
- Minimally invasive and biocompatible
- Single use, disposable accessories with pH and DO sensors
- State-of-the-art fluorescence technology
- High resolution and unmatched accuracy
- Quick and easy setup
- Long sensor half-life

+ ID-Fiber Optic Reader Features

- Compatible with a range of accessories for a variety of culture vessels
- Each reader has one set of detachable fiber optic cables
- Fiber optic cable attachment allows for sensing in two different locations within the same vessel or in multiple vessels
- Fiber optic cables are inserted into each accessory and secured in alignment with the ID-Sensors

+ ID-Data Hub Features

- Real-time monitoring of up to 8 sensors
- pH and DO graphical display
- Data acquisition and logging
- Review, save and export data
- Programmable scan intervals

Sensor Specifications

	pH	DO
MEASUREMENT RANGE	6-8	0-100%
ACCURACY	1.5% at pH 7	0.2% at full scale
RESOLUTION	±0.01 at pH 7	±0.1% at 21% O ₂
RESPONSE TIME	<15 sec	
TEMPERATURE RANGE	+5 to +60°C	
DRIFT	< or = 0.005 pH per day at 1 minute scan interval	
CALIBRATION	Pre-calibrated; recalibration is possible	
STERILIZATION	Autoclave, gamma irradiation; inquire about other methods	
SENSOR LIFE	45 days (continuous monitoring), several months (intermittent monitoring)	
SHELF LIFE	12 months	
SENSOR DIMENSIONS	ID-Sensors pH: 3mm or 7mm diameter x 0.3mm height sensors ID-Sensors DO: 3mm or 5mm diameter x 0.3mm height sensors (sensor size varies with accessory type)	
SCAN INTERVAL	10 seconds or greater	
OPERATING SYSTEM	Windows 7/8/10	
WARRANTY	24 months	

FAQs

How is the ID-Fiber Optic Kit different from the ID-Developer's Kit?

- The ID-Fiber Optic Kit contains SBI's adapted ID-Fiber Optic Reader with ID-Fiber Optic Cables. While the ID-Developer's Kit is excellent for monitoring cell culture conditions in culture vessels that can be placed on top of an ID-Reader, the ID-Fiber Optic Kit and its accessories offer versatility in sensor placement and measurement readings in bioreactors, organ-on-a-chip devices, perfusion flow loops and other challenging geometries.

How many vessels can I monitor with an ID-Fiber Optic Kit?

- Each kit includes an ID-Converter that supports up to 4 readers. With two sensing channels per reader, you can monitor up to 8 channels (pH and/or DO).

Does the ID-Fiber Optic Kit come with sensors?

- The ID-Fiber Optic Kit includes the ID-Fiber Optic Reader, ID-Fiber Optic Cables, ID-Converter, and ID-Data Hub software. Pair the kit with one of SBI's Fiber Optic Accessories to integrate optical sensing into your bioprocess.

What accessory should I purchase for my application?

- [Watch compilation video](#)