TECHNICAL SHEET

BlueBlink O_2 sensors

Description

BlueBlink is a contactless sensing system for the measurement of oxygen concentration in gases and liquids. It is made of two basic parts: an optical reader and a sensing spot. Basically, the sensing spot should be placed in contact with the medium of interest so the reader can obtain a measurement of the oxygen amount.

The BlueBlink system is based on the fluorescence quenching physical phenomenon and, therefore, it has a negligible influence on the oxygen concentration in the analyte, which makes it indicated to be operated in small volumes.

Optical readers can measure through almost any non-colored transparent thin wall in a noninvasive mode. Moreover, the software allows operating up to ten readers simultaneously and log the measurements for post-processing through a single PC connection.

Main features

- It can be configured to perform periodical non-invasive measurements.
- It uses a non-chemically-based measurement process.
- It can be adapted to almost any non-colored transparent vessel.
- Sensing spots are biocompatible, sterile and self-adhesive.
- Bus connection for of up to ten optical readers through a single USB connector.
- Each reader can be operated independently.
- It provides precise and robust measurements.

Applications

BlueBlink is a general purpose sensing system but, given its particular features, it is specially indicated for:

- Cell culture
- Microbiology
- Bioprocess development
- Water quality
- Food & beverage packaging

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BlueBlink O_2 sensors	
OPTICAL READER	
Sampling time	1-10 min (in 1 min. increments)
Wavelength illumination LEDs	450 nm
SENSING SPOT	
Analyte	Gaseous and dissolved oxygen
Sterility	Pre-sterilized
Measurement range	0-21% O_2 0-230 hPa 16 mg/l
Resolution at: - 1% O_2 - 10 hPa	 - 0.01% - 0.1 hPa
Resolution at: - 20.9% O_2 - 210 hPa	 - 0.03% - 0.3 hPa
Accuracy	2.5%
Temperature measurement range	0-50ºC
Calibration	Two-point calibration in oxygen-free environment (nitrogen, sodium sulfite) and air-saturated environment.
Number of measurements	~10.000
Attachment	Self-adhesive, spots attach well to most cell Culture surfaces. Non self-adhesive spots & sterile glue are also available. Disposable spots.
Incompatibilities	Organic solvents, chlorine gas
No cross-sensitivity with	pH, CO2, H2S, SO2, ionic species
OPERATION CONDITIONS	
Temperature Range	0-50 ºC
Humidity	0 – 100%
Pressure range	0 – 2000 hPa
STORAGE CONDITIONS	
Temperature	Room temperature
SOFTWARE REQUIREMENTS	
Operating System	Windows 7 or higher
DIMENSIONS	
Optical reader	24x24x36 mm
Sensing spot	15 mm in diameter

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