

# **TELEDYNE ANALYTICAL INSTRUMENTS**



## **MODEL 3000TB** *Process Trace Oxygen Analyzer*

**T**eledyne's Model 3000TB and 3010TB Bulkhead Mount Process Trace Oxygen Analyzers are versatile, microprocessor-based instruments for detecting oxygen in a variety of gases.

The 3000TB serves as a general purpose unit, while the 3010TB is designed as a "split architecture" instrument -- a general purpose, wall mounted Control Unit for non-hazardous areas controls a remote Analysis Unit that can operate in hazardous areas. Simple menu choices, membrane command switches, and a large LED display make setup and operation clear and quick.

### **Three Analysis Ranges**

Three user-configurable ranges are standard, with excellent linearity precluding recalibration when changing ranges. Two fully programmable concentration alarms and relay functions provide the versatility to satisfy nearly any requirement. All features offer a sophistication that assure years of reliable service.

### **Convenient Outputs for Data**

Standard 0-1 VDC and isolated 4-20 mADC outputs are provided for oxygen measurements and range identification. An RS-232C serial port allows the user to introduce span and zero gases through a host computer.

### **Extended Life, Maintenance Free Oxygen Sensor**

The instruments use a long life Micro-fuel Cell to measure traces of O<sub>2</sub> in the sample gas. The L-2C (L-2LC for CO<sub>2</sub>) sensor sets industry standards for accuracy and sensitivity, and comes with a 1 year warranty. Expected life for the sensor is two years. The sensor is specific to oxygen and accurately monitors gas streams containing up to 100% hydrocarbons.

The Micro-fuel Cell produces an output that is linear from 0 ppm to 100% O<sub>2</sub> enabling the use of ambient air for calibration. These units can also accommodate the use of a certified ppm O<sub>2</sub> span or zero gas which speed calibration when necessary.

### **Standard Features**

- NEMA 4/7 rated enclosure
- RFI hardened
- Security code protection
- Microprocessor based electronics
- Signal output: 0-1VDC & 4-20 mADC
- Programmable Auto Ranging
- Two fully-adjustable concentration alarms and a system failure alarm
- Self diagnostics



*3010TB Split architecture version*

**Built for Reliability and Performance**

# MODEL 3000TB / 3010TB TRACE OXYGEN ANALYZER

## Options

- C Electrically operated cal/zero valves
- V Vacuum service
- F Flame arrestors for Group C&D service (3010TB)
- H Flame arrestors for Group B service (3010TB)
- S Stainless steel cell block

## Applications

- Monitoring inert gas blanketing
- Air separation and liquefaction
- Chemical reaction monitoring
- Semiconductor manufacturing
- Petrochemical process control
- Quality assurance
- Gas analysis certification

## Specifications

Area classification:

3000TB - General purpose bulkhead mount

3010TB - Analysis unit: Explosion proof enclosure

Control unit: General purpose bulkhead mount

Sensor: Class L-2C, two year life expectancy

Ranges: Three user-definable ranges  
(Min: 0-10 ppm full scale)

Sample connections: User specified 1/4" or 6mm fittings

Alarms: • One system failure alarm contact to detect power, calibration, zero and sensor failure  
• Two adjustable concentration threshold alarms with fully programmable set points

- Diagnostics: Comprehensive self testing function
- Accuracy:  $\pm 2\%$  of full scale at constant temperature or  $\pm 5\%$  of full scale over operating temperature ranges (once temperature equilibrium has been reached) (except 0-10 ppm range which is  $\pm 1$  ppm)
- Sensitivity: 0.5% of FS
- Displays: One LCD screen for setup, one five-digit LED for O<sub>2</sub> value
- Digital interface: RS-232C
- Power: 110 or 220V (user specified), 50/60 Hz
- Operating temp: 32° to 122°F (0-50°C)
- Signal output: Analytical measurement: 0-1 VDC and 4-20 maDC isolated
- Range ID output: 0-1 VDC and 4-20 maDC isolated
- Response time: 99% of FS at 77°F (25°C) < 61 seconds
- Dimensions: 11.81" W x 20.28" H x 8.9" D  
(3000TB and 3010TB Control Unit)
- Enclosure:  
(3000TB and 3010TB Control Unit): Sheet steel, NEMA 4/7  
(3010TB Analysis Unit) - Explosion proof. U/L and CSA listed for Class I, Division 1, Groups B, C, and D service, NEMA 4/7 rated

## TELEDYNE ANALYTICAL INSTRUMENTS

A Teledyne Technologies Company

16830 Chestnut Street

City of Industry, California 91748, USA

TEL: 626-934-1500 or 888-789-8168

FAX: 626-934-1651 EMAIL: ask\_tai@teledyne.com

[www.teledyne-ai.com](http://www.teledyne-ai.com)

## Warranty

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

