

# TELEDYNE ANALYTICAL INSTRUMENTS

## Series 3300



### Trace & Percent Oxygen Analyzers Fuel Cell • Zirconium Oxide • Paramagnetic Sensing Technologies

The 3300 series of low cost, microprocessor-based instruments are specifically designed to satisfy industry's need for a simple yet highly reliable process analyzer. These units offer excellent accuracy, ease of use, high reliability, low maintenance and a variety of standard features usually found on more expensive instruments.

#### One Platform, Multiple Configurations

The 3300 series is a cost-effective solution to many process applications. With three different sensing technologies to choose from and multiple design configurations, a customized unit for a given application is easily secured.

Sensing ranges are varied based on the oxygen sensor and technology used. All units come with auto ranging capability and a 0-25% calibration range. Fully adjustable high or low concentration alarms provide the versatility to satisfy nearly any requirement.

#### Sensing Technologies

The 3300 Series is available with three sensing technologies, each with their own benefits.

##### Micro-fuel Cell - 3300T, 3300P

- Disposable, no maintenance sensor design
- Specific to oxygen
- Linear from 0 - 100% O<sub>2</sub>
- Absolute Zero (no O<sub>2</sub>, no output); single point calibration only

- Unaffected by hydrocarbons, H<sub>2</sub>, or CO<sub>2</sub>
- Easy to handle, inexpensive, and easy to replace
- Can apply to ppb, ppm, and percent ranges

##### Zirconium Oxide -- 3300Z

- Quick response time
- Long life / service on clean, non-corrosive streams
- No shelf life concerns
- Can be applied on a wide variety of applications

##### Paramagnetic -- 3300M

- Long life / service in clean gas streams
- High accuracy
- Can be applied on corrosive, high temperature applications
- Fast response times (even on CO<sub>2</sub> streams)

#### Outputs for Data Transmission

A standard 0-10 VDC output provides range identification, while the oxygen concentration is output through 4-20 mADC negative ground and 0-10 VDC negative ground signals.

An optional unidirectional RS-232 serial interface can be incorporated to relay information to a host computer for remote monitoring, making information and analysis results as close as a personal computer.

#### Configurations

- (A) - 19" rack mount
- (B) - Wall mount enclosure

#### Advantages

- Customer selectable ranges
- Auto ranging capabilities
- Fully adjustable high or low alarm setpoints with corresponding relay contacts
- Digital interface allows monitoring from a remote station
- Sensor failure alarm

#### Options

- RS-232 serial interface for remote monitoring

Built for reliability and performance

# SERIES 3300 TRACE / PERCENT OXYGEN ANALYZERS

## SPECIFICATIONS

	3300T	3300P	3300M	3300Z
<b>Ranges:</b>	Two ranges with auto-ranging capability; field configurable between 0-10 ppm and 0-10,000 ppm	0-1 to 0-25% oxygen (0-3% and 0-10% default)	Two ranges with auto-ranging capability; field configurable between 0-3% and 0-10%	Please contact the factory
<b>Calibration range:</b>	0 to 25% O <sub>2</sub>	0 to 25% O <sub>2</sub>	0 to 25% O <sub>2</sub>	0 to 25% O <sub>2</sub>
<b>Display:</b>	4 digit LED	4 digit LED	4 digit LED	4 digit LED
<b>Accuracy:</b>	±2% FS at constant temp, ±5% FS over operating temperature (once temperature equilibrium is reached). Higher accuracy is available for special configurations.			
<b>Response time:</b>	90% in less than 45 seconds at 77°F (25°C)	90% in less than 10 seconds at 77°F (25°C)	90% in less than 6 seconds at 77°F (25°C)	
<b>Operating temp:</b>	32-122°F (0-50°C); special temperature ranges available			
<b>Signal output:</b>	For oxygen concentration: 4-20 mADC negative ground and 0-10 VDC signals For range identification: 0-10 VDC signal			
<b>Range ID:</b>	0 - 10 VDC	0 - 10 VDC	0 - 10 VDC	0 - 10 VDC
<b>Alarm output:</b>	Two fully adjustable high or low alarms; one sensor fail relay (all alarms are fail-safe)			
<b>Power requirements:</b>	Universal AC 85-265 VAC, 47-63 Hz			
<b>Sampling system:</b>	Various options available. Contact factory.			
<b>Connections:</b>	1/4 inch or 6mm -- user specified			
<b>Oxygen sensor:</b>	Micro-fuel Cell	Micro-fuel Cell; Class I-22	Paramagnetic	Zirconium oxide

### **TELEDYNE ANALYTICAL INSTRUMENTS**

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### 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.

