

# TELEDYNE ANALYTICAL INSTRUMENTS



## **MODEL 3000TA-XL** *High Sensitivity Trace Oxygen Analyzer*

- 0-1 ppm oxygen
- No scrubbers
- No zero gas
- No maintenance
- No hassle

Teledyne's Model 3000TA-XL is a precision, cost effective instrument specifically designed to measure trace oxygen in the 0-1 ppm region. Drawing on the solid performance of Teledyne's highly successful 3000 series platform, the 3000TA-XL provides the user with a wide variety of performance features and options to satisfy virtually any application.

### **FLEXIBILITY**

The analyzer offers three dynamic, user-configurable ranges and can be calibrated in any range. Two fully programmable concentration alarms and relays provide the versatility to satisfy nearly any requirement.

### **CONVENIENCE**

The analyzer comes standard with two sets of analog outputs, 0-1 VDC and isolated 4-20 mA DC for oxygen concentration and range identification. Additionally, a bi-directional RS-232C serial communication interface provides for remote monitoring and control of span and zero functions.

### **MAINTENANCE FREE SENSOR**

The heart of the 3000TA-XL analyzer is Teledyne's micro-fuel cell sensor that sets the industry standard for oxygen analysis. The unit incorporates the B-2CXL sensor, which is specifically designed for 0-1 ppm full scale oxygen analysis applications.

The micro-fuel cell is specific to oxygen and can be used in a variety of background gases including hydrocarbons. With no electrolyte to change or electrodes to clean, it is maintenance free.

### **APPLICATIONS**

- Air liquefaction and separation
- Pure, gaseous hydrocarbon stream monitoring
- Semiconductor manufacturing
- Protective atmospheric blanketing of primary liquid feedstock and flammable liquids
- Process monitoring of gaseous monomers
- Gas purity certification

### **ADVANTAGES**

- 0-1 ppm full scale capability
- Linearity of analysis across three user-selectable ranges
- Remote access to auto span and auto zero functions
- Autoranging to follow process upsets
- Maintenance-free sensor

**Built for Reliability and Performance**

# MODEL 3000TA-XL TRACE OXYGEN ANALYZER

## STANDARD FEATURES

- Class B-2CXL micro-fuel cell sensor
- Three user-selectable ranges plus cal range
- Signal output: 0-1 VDC & isolated 4-20 mADC
- Programmable autoranging
- Range ID output: 0-1 VDC & isolated 4-20 mADC
- Range ID contacts (quantity 4) Form A normally open contacts, 3A resistive
- Two fully adjustable concentration alarm set points with programmable relay functions, Form C contacts, 3A resistive
- Calibration contact span/zero, Form A normally open contact, 3A resistive
- 12 VDC output to drive remotely operated calibration valves (Customer supplied valves and 24 VDC signal to instrument)
- Self diagnostics with Form C failure alarm contacts
- Full duplex RS-232C communication link
- Five digit oxygen concentration LED display
- 2x20 alphanumeric vacuum fluorescent display for set up and diagnostics
- 316 stainless steel sampling system
- Sample flow indicator and control valve
- Universal power supply: 85-230 VAC / 50-60 Hz

## OPTIONS

- V Vacuum service
- K 19" rack mount with either one or two units mounted side by side

## SPECIFICATIONS

- Ranges: 3 range customer selectable (Minimum 0-1 ppm FS)
- Calibration range: Unit may be calibrated in any range up to 25%

- Accuracy:  $\pm 100$  ppb if the instrument is not zeroed (at constant temperature)  
 $\pm 10$  ppb if the instrument is zeroed (at constant temperature)
- Sensitivity: 0.5% of FS
- Response time: 90% of FS at 77°F (25°C) 10 seconds for 0-1000 ppm or higher ranges; 60 seconds for 0-10 ppm range 100 seconds for 0-1 ppm range
- Operating temp: 50° to 95°F (5° to 35°C)
- Signal output: Analytical measurement 0-1 VDC and isolated 4-20mADC
- Range ID output: 0-1 VDC and isolated 4-20 mADC
- Max. load impedance: 4-20 mA isolated output -- 1000 ohms
- Analysis display: 5 digit red LED, 3/5" high numerals
- Menu display: 20 character, 2 line vacuum fluorescent
- Data lines: Bi-directional RS-232C serial interface, baud rate 2400
- Power requirements: Universal AC input ranges, 85 to 230VAC, 50 / 60 Hz
- Max. power consumption: 20 VA
- Oxygen sensor: Micro-fuel cell, Class B-2CXL
- Sample gas inlet pressure: Min 2-3 psig
- Wetted parts: 316 stainless steel
- Sample inlet connection: 1/4" VCR
- Area classification: General purpose
- Mounting: Flush panel mount
- Dimensions: 8.70" W x 6.96" H x 12.2" D (case)  
10.79" W x 7.46" H (front panel)
- Sample temperature: 0 to 50°C
- Detector wetted parts: Glass, steel, gold, viton, acrylic glass, epoxy resin

## 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.