



## **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 inletconnection: 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

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