



Teledyne Analytical Instruments

3190 / 3290



OEM Trace / Percent Oxygen Analyzer

Good things come in small packages. One look at Teledyne's Model 3190 Trace or 3290 Percent Oxygen Analyzer proves that fact. These microprocessor based units offer high accuracy, easy use, and all the standard features demanded by the end-user. Membrane command switches and a large, 4-digit LED display make setup and operation clear and quick. When you need the latest technology in oxygen analysis, the quality that comes with the Teledyne name, and an unbeatable value, the 3190 or 3290 provides the pocket-sized solution.

Field-Configurable Range Options

These units utilize one of Teledyne's patented, Micro-fuel Cell sensors to assure accuracy to within 2% of full scale. With a long expected sensor life and a six month (B2, B2C, Z2) to two year warranty (E-2),(application dependent) the 3190 or 3290 is as inexpensive to maintain as it is to purchase. Teledyne has even provided a sensor failure alarm, taking the worry and work out of the end-user's hands.

Two ranges are standard on Model 3190 at 0-100 ppm and 0-1000 ppm with a 0-25% calibration range. Optional ranges can be set between 10 ppm and 10,000 ppm. The 3290 ranges are field-configurable between 1% and 25% oxygen and offers AutoRanging capability

and 0-25% oxygen calibration. An optional full scale range is available up to 100%. Two programmable failsafe concentration alarms (one high and one low setpoint) provide the versatility to satisfy nearly any requirement. And because it's a Teledyne product, you can rely on many years of quality service.

Convenient Outputs For Data

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. A unidirectional RS-232 serial interface is incorporated to relay information to a host computer for remote monitoring of all functions. Configuration information and analysis results are as close as your personal computer.

Advantages

- AutoRanging capabilities
- Insta Trace™ sensor option for 3190
- One high and one low alarm setpoint with corresponding relay contacts
- Sensor failure alarm

Standard Features

- Two field configurable ranges plus cal range (0-25%)
- Signal output: 0-10 vDC for range identification
- Analytical output: 4-20 mADC negative ground and 0-10 vDC signals
- Universal AC power supply (Optional configuration available)

Optional Configuration

- **-DCV** Power requirement: 10-36 vDC

Applications

- Wave solder reflow ovens
- Glove box manufacturers
- Nitrogen membrane skids
- PSA skids
- Helium recovery systems
- Diving applications
- Clean air systems for medical applications

MODEL 3190 / 3290 OEM TRACE / PERCENT OXYGEN ANALYZER

Specifications 3190

Ranges: 0-100 ppm and 0-1000 ppm and 0-25% calibration range (nominal)
(user selectable percent ranges)
(user selectable ranges can be set between 10 ppm and 10,000 ppm)

Display: LED

Accuracy: $\pm 2\%$ of full scale at constant temperature
 $\pm 5\%$ of full scale over operating temperature
(once temperature equilibrium is reached;
at 100 and higher user-defined ranges)

Response time: 90% in less than 65 seconds at 25°C

System operating temperature: 0-50°C

Signal output: 4-20 mA and 0-10 vDC negative ground, non-isolated

Range identification: 0-10 vDC

Alarm output: One high alarm relay, adjustable
One low alarm relay, adjustable
One sensor calibration fail relay
(all alarms are failsafe)

System power requirements: 10-36 vDC or 100V-240 vAC,
47-440 Hz, user specified

System enclosure Panel mount: 2.81" H x 6" W x 2.87" D
71.4mm x 152.4mm x 72.9mm

Face plate: 3.75" H x 7" W
95.3mm x 178mm
Face plate rated to NEMA-4

Analysis unit: Bulkhead mount: 4" H x 6" x 2.5" D
101.6mm x 152.4mm x 63.5mm

Oxygen sensor: Class Z-2
(minimum range of 0-200 ppm oxygen)
OR
Class B-2
(for ranges lower than 0-200 ppm oxygen)

Specifications 3290

Ranges: 0-3% and 0-10% oxygen (standard ranges) and 0-25% calibration range (nominal)
(user selectable percent ranges)
(user selectable ranges can be set between 1% and 25% O₂)

Display: LED

Accuracy: $\pm 2\%$ of full scale at constant temperature
 $\pm 5\%$ of full scale over operating temperature
(once temperature equilibrium is reached;
at 3% and higher user-defined ranges)

Response time: 90% in less than 20 seconds at 25°C

System operating temperature: 0-50°C

Signal output: 4-20 mA and 0-10 vDC negative ground, non-isolated

Range identification: 0-10 vDC

Alarm output: One high alarm relay, adjustable
One low alarm relay adjustable
One sensor calibration fail relay
(all alarms are failsafe)

System power requirements: 10-36 vDC or 100V-240 vAC,
47-440 Hz, user specified

System enclosure Panel mount: 2.81" H x 6" W x 2.87" D
71.4mm x 152.4mm x 72.9mm

Face plate: 3.75" H x 7" W
95.3mm x 178mm
Face plate rated to NEMA-4

Analysis unit: Bulkhead mount: 4" H x 6" x 2.5" D
101.6mm x 152.4mm x 63.5mm

Oxygen sensor: Class E-2

* Contact factory if strong inorganic oxidizing gases are present in the background

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.

