# TELEDYNE ANALYTICAL INSTRUMENTS



# SERIES 3110 Trace Portable Oxygen Analyzer

The Model 3110 represents the new generation of portable trace oxygen analysis capability for the natural gas industry.

The 3110 combines a rugged, portable analyzer design with the high reliability of Teledyne trace level sensors. This ensures highly accurate ppm oxygen readings in a variety of background gases -- including hydrocarbons. The batteries supply at least 100 hours of continuous power to the analyzer, with a low-battery indicator LED.

The analyzer includes quick-disconnect fittings (to take measurements without hassle) and can be equipped with an external sample system. The microprocessor-based electronics provide accurate, high resolution readings and easy-to-use features.

#### Model 3110 comes standard with a heavy plastic carrying case with foam interior.

## Ideal for the Natural Gas industry

### **APPLICATIONS**

- Air separation and liquefaction
- Pure gaseous hydrocarbon stream monitoring
- · Semiconductor manufacturing
- Protective atmosphere blanketing of primary liquid feedstocks and flammable liquids
- Process analysis of gaseous monomers vinyl chloride, propylene, butadiene, isoprene, or ethylene
- · Gas purity certification
- · Glove box or pipeline leak detection
- Natural gas treatment and transmission
- Catalyst protection
- · Inert gas welding of exotic metals
- · Wave and reflow soldering
- · Heat treating and bright annealing
- Nuclear fuel processing and isotope separation
- Analysis of chemical reactions
- · Headspace gas analysis
- Crystal growth
- · Plastics manufacturing



# Model 3110 Portable O2 Analyzer

#### SPECIFICATIONS

Ranges:	Autoranging from 0-10 ppm to 0-25%
Display resolution:	10 ppb
Response time:	90% in 61 seconds at 0-10 ppm range
System operating temp	perature: 0 to 40°C
Reproducibility:	±1% at constant temperature
Sensor type:	Micro-fuel Cell, Class B-2C
System power	AC power for battery recharge circuit of two current limited rechargeable NiCad batteries,115 VAC, 50/60 Hz (100 / 220 VAC optional) 0.25 amps
Weight:	6 lbs. (2.71 kg)
Approval:	Intrinsically safe (Class I, Division 1, (Standard) Groups A, B, C, and D)
	Factory Mutual (FM) (pending)
	(Cenelec) BASEEFA certified for EExiblICT4 intrinsically safe for zone

EExibilC14 intrinsically safe for zone 1 and 2; hydrogen, ethelyene, oxide; temperature class - no surface temperatures above 135°C (pending)



#### OPTIONS

- Real-time data-logging capabilities with digital output that can be downloaded directly to a PC
- External pump for non-hazardous areas
- Stainless steel quick disconnect gas fittings
- Sturdy carrying case
- Sample system consisting of coalescing filter, tubings and fittings

#### FEATURES

- · Digital meter readout
- 0-1 VDC output, data logging capabilities
- Ideal for measuring O2 in natural gas and a variety of other background gases
- Long-life, maintenance-free, Micro-fuel Cell oxygen sensor
- 100 or 220 VAC; charged by universal AC charging circuit
- The electrical and mechanical designs meet the specifications for intrinsic safety.
- Can interface with Total Flow™ natural gas flow monitoring system (with 1-5V option)

Model 3110 is available with an optional sample system consisting of coalescing filter, regulator, tubings and fittings

## TELEDYNE ANALYTICAL INSTRUMENTS

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#### Warranty

Instrument  $\bar{\rm is}$  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.

