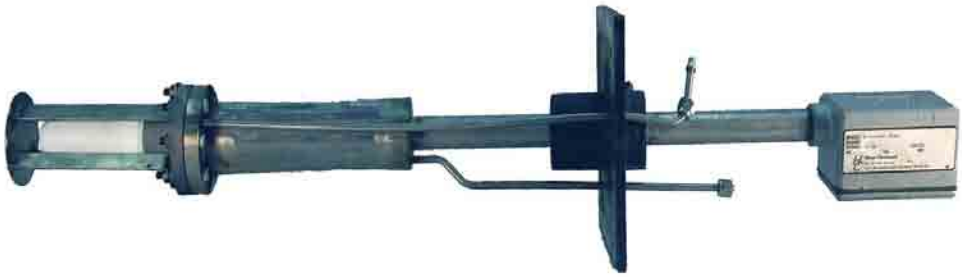
Model A-10018-A0

OXY-MIZER™

In Situ, Flue Gas, Net Excess Oxygen Analyzer



FEATURES

- **Ideal for Oxygen Trim**
- **Field Repairable Probe**
- **Rapid Response to Flue Gas Changes**
- **Highly Stable Probe; Eliminates Need for Expensive Auto-Calibration Equipment**
- **Simple Annual Calibration Check**
- **Reliable DPM Electronics**

DESIGN & APPLICATION

Hays Cleveland is a pioneer in the development and application of in-situ flue gas analyzers using an RTD temperature sensor for cell temperature control with a zirconium oxide cell. This combination provides the most stable probe available. **OXY-MIZER™**, offering this probe design and a quality-constructed electronics, performs reliably, with nearly zero drift, high accuracy and fast response. It is ideal for oxygen trim control.

The **OXY-MIZER™** is delivered as a package including the probe, DPM electronics, interconnecting cable (probe to electronics), flow (calibration) panel, and a single calibration gas.

The **probe** has an accuracy of ±2% net excess oxygen and a response time within one second. The probe failure reading is above 16%, where other less accurate and stable probes fail to 0%. The **OXY-MIZER™** failure reading eliminates confusion between probe failure and boilers operating with low excess air. This means true safety monitoring of fuel-rich conditions in burners.

The probe assembly is fully certified in-situ, with an adjustable insertion length of 18" to 24" (46 to 61 cm) for service in flue gas to 1000F (538C). The probe has an accuracy of ± 2% net excess oxygen and a response time within one second. It is field-repairable with standard kits.

The probe sensor includes the **Hays Cleveland** patented inverted zirconium oxide cell with low voltage heater and high temperature RTD. This sensor is controlled at a constant temperature in excess of 815C. Its unique design eliminates drift, reduces the effects of contamination from combustion by-products, and provides high accuracy, reliability, and long life, completely outperforming thermocouple-based sensors. This design needs only a single cylinder of test gas.

The **OXY-MIZER™** DPM ELECTRONICS unit is available in either panel or surface mounting enclosures with viewing windows. The modular design incorporates an integral probe sensor temperature controller. The full-range digital panel meter (0 to 21% oxygen) is independent of outputs, and also indicates sensor operating temperature. The 4-20 mADC control output

(continuously adjustable from 0 to 1% through 0 to 21% oxygen), is standard, as are the fully adjustable alarm outputs: analyzer fault and combustibles warning alarm.

The **OXY-MIZER™** FLOW PANEL includes hardware for continuous control of reference air, and for calibration air and test gas. The full initial calibration takes minutes to complete. Annually, calibration should be checked by following the same simple procedure, switching the valves and adjusting the electronics if necessary. Calibration of competing analyzers may require two or three test gas cylinders, a portable voltmeter with supplies, and semi-log graphs of the sensor output,or complex programming!

Please contact **Hays Cleveland** for additional information on oxygen trim, combustion efficiency, and combustion control packages using the **OXY-MIZER™**.

OXY-MIZER™ SPECIFICATIONS

PROBE: Model Suffix - A01:

Length: Adjustable insertion (tip to flange), 18" to 24" (46-61 cm).
Primary Materials: 304, 316, & 446 stainless.
Filter: 5 micron ceramic, bolt-on.
Service: Gas, oil, coal, bagasse, wood
Flue Gas Temp.: -40 to 1000F (-40 to 538C), non-condensing.
Speed of Response: Initial within 1 sec. in flue gas through filter.
Accuracy: ± 2% full scale, complete system
Wiring: Quick disconnect, 3 shielded pairs in 3/8 inch flex conduit.

ELECTRONICS: Model Suffix - B03 or B04:

Indicator: 0 to 21% oxygen (DPM), 0 to 1000C cell temp. (linear), with "push to read" switch.
Outputs: 4-20 mADC into 0-1200 ohms, 0 to 10% oxygen (std.), rangeable 0 to 1% through 0 to 25% oxygen.
Alarms: Two, independent, fully adjustable. Dry, Form "C," 2A at 115 VA (res.)
Temp. Control: RTD input from Probe. Open & short protection. Proportional 55 VA to heater.
Ambient Temp.: 32 to 130F (0 to 55C).
Electrical Power: 115 or 230 VA ±15%, 50/60 Hz, 170 VA start-up, 40-100 VA operating.
Distance: To 300 feet (90m) from Probe.

FLOW PANEL: Model Suffix - C06:

General: Two flowmeters & two toggle valves.
Connections (4): ¼ inch O.D. tube fittings.
Air Input: Instrument or dry & oil-free. Continuous 1 LPM at 10 psig (70 KPa).
Test Gas Input: 4 to 5% oxygen, certified. 2 LPM at 10 psig (70 KPa).

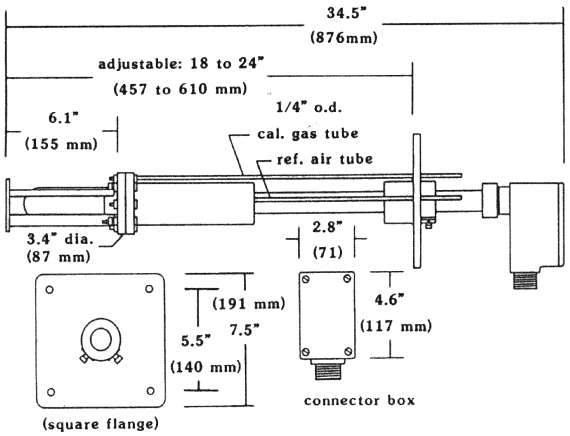
OPTIONS (With Model Suffixes):

Probe Flame Arrestor (-A02)
Electronics Case (-B03 or -B04, see outlines)
Instrument Air Filter/Regulator with Gauge (-C05)
Cable, Probe to Electronics:
20 ft. / 6 m (-D02)
50 ft. / 15 m (-D04)
Connector Only (-D05)
Test Gas, Cylinder (-FZ1)
Test Gas, Regulator with Gauges (-FZ2)
Probe Mounting Box for Brickset Flues (-G01)

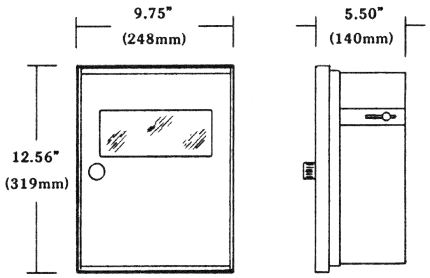
Specifications Subject to Change

Distributed By:

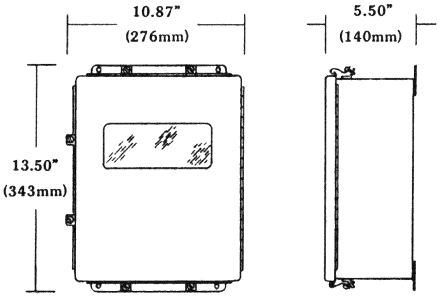
OXY-MIZER™ DIMENSIONS
INCHES
(MILLIMETERS)



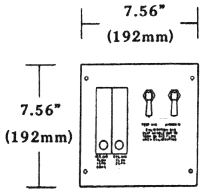
OXY-MIZER™ PROBE
-A01



ELECTRONICS: NEMA 12, PANEL MOUNTING ENCLOSURE
-B03



ELECTRONICS: NEMA 4, SURFACE MOUNTING ENCLOSURE
-B04



FLOW PANEL
-C06

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