

WDG 1200/INSITU and WDG 1210/INSITU

Flue gas oxygen analyzers with automatic calibration and Modbus output

The WDG 1200/Insitu and the WDG 1210/Insitu are rugged, reliable flue gas analyzers for net oxygen that use industry-proven zirconium oxide sensor technology. The outer probe tube is 316 stainless steel so no abrasion shield is needed for most applications. The controller features precision temperature control for optimum stability, built-in diagnostics, and over-temperature protection. Modbus and 4-20 mA outputs are standard; automatic calibration is available. The unique sensor design allows the entire sensor assembly, including the heater, to be removed without disturbing the outer protection tube which remains in the process. This makes field service fast and easy, and because there is no need to return the probe to the factory for repair, there's no expensive downtime.

APPLICATIONS

- Combustion efficiency and control
- Gas, oil, or coal-fired boilers
- NOx reduction systems
- Shipboard boilers
- Excess air measurement
- Pollution control

INSITU Probe

Accuracy (O₂):
±1% of measured value or ±0.05% oxygen, whichever is greater

Response:
Cal Gas < 3 seconds; process < 20 seconds (63% of step change)

Drift:
< 0.1% of cell output per month (less than 0.005% O₂ per month with 2% O₂ applied)

Linearity: ±1% of output span

Repeatability: ±1% of output span

Max. Flue Gas Temp:

1250°F (677°C)

Environment: Indoor/Outdoor Use

Ambient Temp:
-5°F to 160°F (-20°C to 71°C)

Relative Humidity:
10% to 95%, non-condensing

Probe Lengths: 18" (0.45m), 36" (0.9m), 72" (1.8m), 96" (2.7m)

INDUSTRIES

- Bio-fuel Boilers
- Package Boilers
- Power Generation
- CCGT
- Petrochemicals
- Process Industries
- Pharmaceuticals
- Incineration Furnaces

Mounting Flanges

Standard: 2" NPT
ANSI Optional: 2", 3", 4"

Enclosure: NEMA 4X/IP65.

Calibration Gas Requirements:

Use all calibration gases @ 10 psig, 3 to 6 scfh (0.7 bar, 1.41 to 2.82 l/min.)

O₂ Span Gas: Air or from 5% to 25% O₂, balance N₂

O₂ Zero Gas: 2% or from 0.1% to 10% O₂, balance N₂

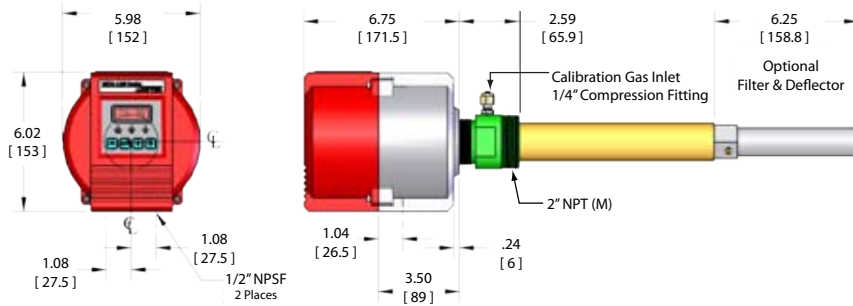
NOTES: 1. All static performance characteristics are with operating variables constant. 2. System accuracy referenced to 0.1 to 10% calibrated range. 3. Response is to calibration gas.



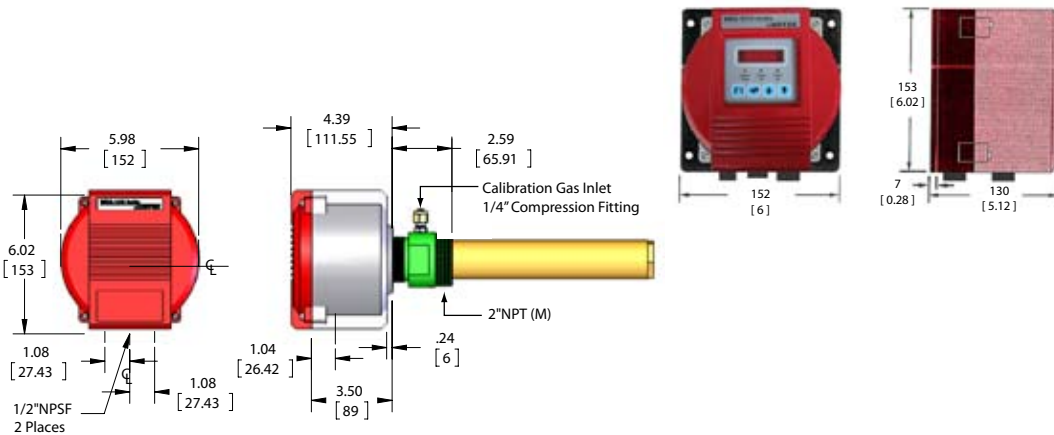
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WDG-INSITU 1200 and 1210

THERMOX®



Dimensions
Model WDG 1200/Insitu



Dimensions
Model WDG 1210/Insitu

Control Unit

Display Type: Single-line 4 digit LED

Parameters:

O₂ Concentration, Calibration Gas Concentration, Cell Temperature, Fault Messages, Cell/Thermocouple information

Analog Outputs:

Single channel isolated 0 to 20; 4 to 20 mA menu selectable, 500 Ω max.

Ranges:

Selectable range 0 to 5 up to 0 to 25% v/v O₂

Serial Output: RS485 Modbus protocol (2-wire, half-duplex)

Alarm Relays: Single pole change-over 7A at 30 VDC /250 VAC.

Alarms: High/Low customer selectable, System Fault, Maintenance/Cal. in Progress

Fault Indication: LED indication and error codes

Calibration: Option to track or hold

Calibration Types: Manual, *Automatic

**Requires Automatic Calibration Gas Control Unit*

Power Supply:

85 to 264 VAC; 48 to 62 Hz

Power Rating: 250 VA

Max. Distance to Probe: 985 ft (300m)

Operating Temperature: -5°F to 160°F (-20°C to 71°C)

Enclosure: NEMA 4X/IP65

Weight: 5.95 lb / 2.7 kg

Compliance: Conforms to EN 50 081, EN 50 082, EN61010-1



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1200/1210 (10/08)

One of a family of innovative process analyzer solutions from AMETEK Process Instruments.
Specifications subject to change without notice.

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