AMETEK® PROCESS INSTRUMENTS

THERMOX®

WDG-HPIIC FLUE GAS OXYGEN & COMBUSTIBLES ANALYZER

Close-coupled convective design for high particulate applications. Suitable for flue gas temperature up to 2800°F (1537°C). Completely field serviceable.

SENSOR

Principle of Operation: Zirconium oxide for net oxygen measurement.

Output Range:
Oxygen: From 0-1% to 0-100%
Combustibles: From 0-2,000 ppm to 0-10,000 ppm or from 0-1% to 0-5%

Accuracy:
Oxygen: ±0.75% of measured value or ±0.05% oxygen, whichever is greater
Combustibles: ±2% of full scale output range

Response:
Oxygen: 90% of a step change <30 seconds with 24" probe

Drift: < 0.1% of cell output per month; < 0.005% O_2 per month with 2% O_2 applied

Max. Flue Gas Temp. / Probe Type:
1300°F (704°C) / 316 SS
1875°F (1024°C) / 310 SS
2800°F (1537°C) / Ceramic

Probe Lengths: 24", 36" & 48" (0.60m, 0.91m & 1.21m)

Max. Sample Dewpoint: 392°F (200°C)

Sample Pressure:
± 10 in. water gauge

Environment:
Ambient Temp.: -5°F to 160°F (-20°C to 71°C); -5°F to 140°F (-20°C to 60°C) with Div. 2 Option
Relative Humidity: 10% to 90%, non-condensing

Enclosure: Lift-off NEMA 3R, weather resistant, stainless steel. Optional hinged NEMA 4X (IP56), explosion-proof, purged, and floor mount versions available.

Power Requirements: 115 VAC, ±10%, 47-63 Hz, 600 VA max. (650 VA max. w/floor mount option); 230 VAC, ±10%, 47-63 Hz, 1850 VA max. (1900 VA max. w/floor mount option)

Calibration Gas Requirements: Use calibration gases @ 10 psig, 1.5 scfh (0.70 kg/cm^2, 0.7 L/min.)

O_2 Span Gas: Air or from 1.0% to 100% O_2, balance N_2

O_2 Zero Gas: 2% or from 0.1% to 10% O_2, balance N_2

Comb. Span Gas: 60 to 80% (ppm ranges) or 40 to 60% (% ranges) of the selected comb. recorder output range in certified mixture of CO + H_2, 3-4% O_2, balance N_2

SERIES 2000 CONTROL UNIT

Display: Four-line x 20-character vacuum fluorescent. Displays combinations of oxygen, % or ppm combustibles, time and date, cell temperature, user-programmable text, thermocouple mV or cell mV. Password protection, programmable pressure compensation and context-sensitive help are also provided.

Analog Output: Two isolated linear current outputs for oxygen and one for combustibles. Select O_2, combustibles, cell temperature, thermocouple mV or cell mV. Each output can be 4-20 mA, 0-20 mA, 20-4 mA or 20-0 mA and is fully scalable. Hold or track during calibration and select degree of damping. Maximum load 1200 ohms.

Contact Rating: 1 A, 30V max. noninductive load, AC or DC

Diagnostics: Watchdog timer and service alarms. System test for A/D, RAM, EEPROM, and keypad. Display line 4 reserved for full text error and diagnostic messages. Twenty-entry event log.

Communications: RS-485, 2-way addressable

Environment:
Ambient Temp.: 14°F to 122°F (-10°C to 50°C)
Relative Humidity: 10% to 80%, non-condensing

Enclosure: Standard weatherproof NEMA 4 (IP 56) wall/panel mount. Optional GP (General Purpose) wall mount, GP 19" rack mount, GP panel mount, or stainless steel weatherproof NEMA 4X (IP 56) wall/panel mount. All are UL Listed for NEC Class I, Division 2 areas. Purged and explosion-proof versions also available.

Calibration: Oxygen cell lifetime extender. Calibrate or verify calibration. Store last calibration and verification data. Selectable calibration gas run time and process recovery time. Timed automatic calibration with optional Remote Calibration Unit.

Power Requirements: Nominal 115-230 VAC ±10%, 47-63 Hz, 75 VA max.

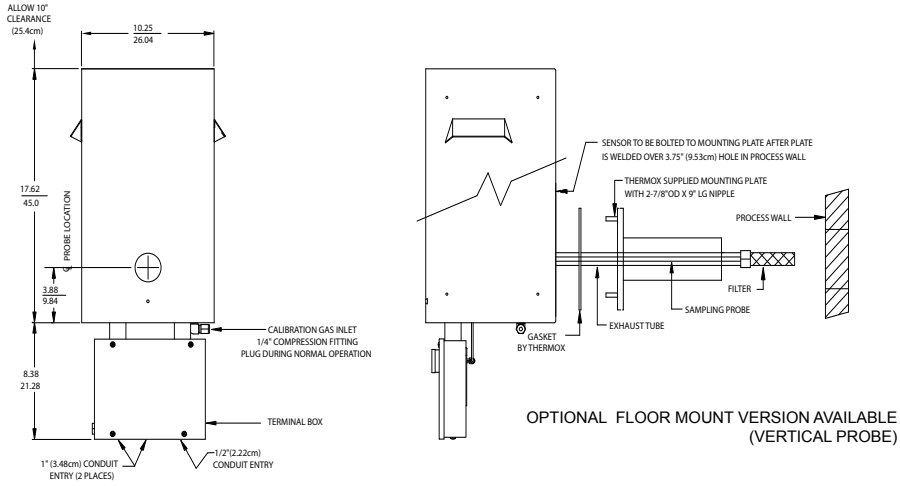
System Compliance:
EMC Directive: 2004/108/EC
Low Voltage Directive: 73/23/EEC

WDG-HPIIC ANALYZER

STANDARD LIFT-OFF SENSOR ENCLOSURE

APPROX. WEIGHT: 37.6 LB (17KG)

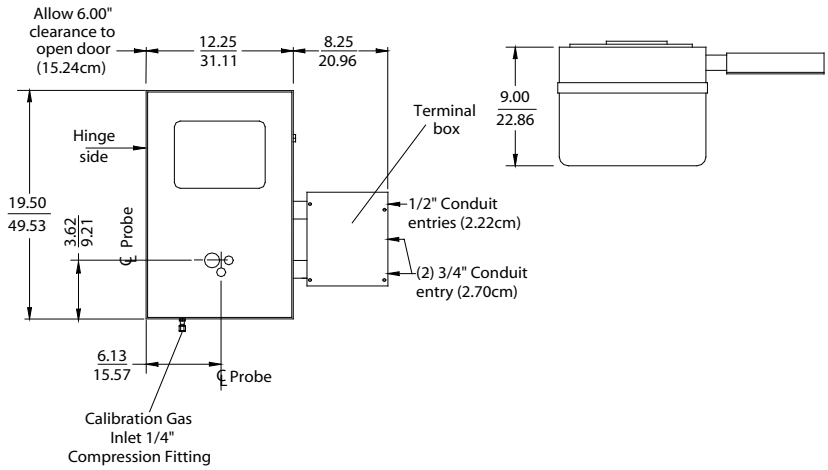
INCHES
CM



OPTIONAL FLOOR MOUNT VERSION AVAILABLE (VERTICAL PROBE)

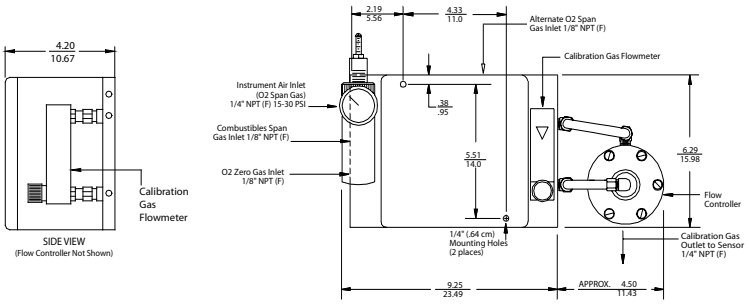
OPTIONAL: HINGED SENSOR ENCLOSURE

APPROX. WEIGHT: 53 LB (24 KG)

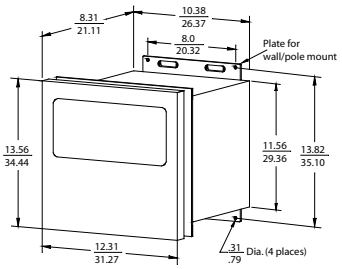


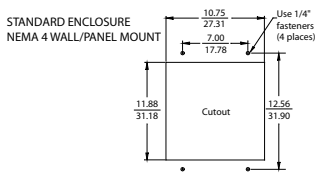
REMOTE CALIBRATION UNIT

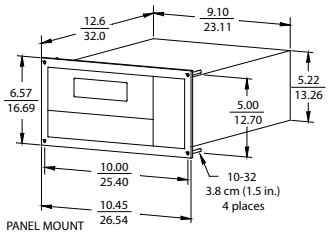
RCU ENCLOSURE NEMA 4X - APPROX. WEIGHT: 8.0 LB (3.6 KG)

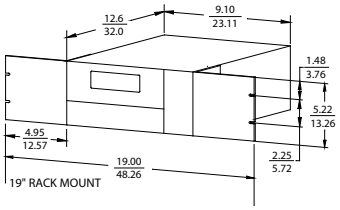


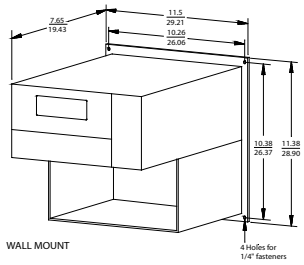
CONTROL UNIT











APPROX. WEIGHTS
NEMA 4 WALL/PANEL MOUNT: 28 LB (12.7 KG)
19" RACK MOUNT: 14 LB (6.35 KG)
PANEL MOUNT: 14 LB (6.35 KG)
WALL MOUNT: 14 LB (6.35 KG)

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.*

AMETEK®
PROCESS INSTRUMENTS

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P270 (8/07)

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

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