

WDG-VCM

FLUE GAS OXYGEN, COMBUSTIBLES & HYDROCARBON ANALYZER

Close-coupled extractive design for fast response in a wide range of flue gas applications up to 3000°F (1648°C). Completely field serviceable.



SENSOR

Principle of Operation: Zirconium oxide for net oxygen measurement and dual hot-wire catalytic detectors for both combustibles and methane.

Output Range:

Oxygen: From 0-1 to 0-100%
 Combustibles: 0-1000 PPM with Overrange
 0-2,000 PPM to 0-10,000 PPM,
 0-2 to 0-5%
 Hydrocarbon: 0-5%

Accuracy:

Oxygen: $\pm 0.75\%$ of measured

value or $\pm 0.05\%$, whichever is greater

Combustibles: $\pm 2\%$ of full scale output range

Hydrocarbon: $\pm 5\%$ of full scale output range

Response:

Oxygen: 90% of a step change < 11 seconds with Flame Arrestors
 Combustibles & Hydrocarbon: 90% of a step change < 20 seconds with Flame Arrestors

Aspirator Air Requirements: 3 SCFH Typical at 3 to 6 psig, Instrument air or Nitrogen

Analog Output: Three isolated linear current outputs for O₂, combustibles and hydrocarbon. Each output can be 4-20 mA, 0-20 mA, 20-4 mA or 20-0 mA and is fully scalable. NAMUR Configurable. Hold or track during calibration. Max. load 1200 Ω

Alarms: Five independent, NO alarms

Set relays to energize or de-energize on alarm

Contact Rating: 0.5A, 30V, 10VA max. non-inductive load, AC or DC

Digital Communication: 2 wire MODBUS RTU, 57.6 Kbaud

Configuration: MODBUS RTU, AMETEK configuration software, or AMEvision HMI

Diagnostics: Low Sample Flow, Cell & Detector age tracking, Cell resistance, Calibration required, Analog current verification

Calibration: Calibrate or verify calibration.

Stored calibration and verification data. Selectable calibration gas run time and process recovery time. Timed automatic calibration with optional Remote Calibration Unit.

Sample Pressure: ± 6 in. water gauge

Max. Sample Dewpoint: 392°F (200°C)

Max. Flue Gas Temp. / Probe Type / Lengths:

1300°F (704°C) / 316 SS / 36" - 108" (91 cm - 274 cm)

1875°F (1024°C) / 310 SS / 36" - 108" (91 cm - 274 cm)

3000°F (1648°C) / Hexoloy® / 24" - 72" (60 cm - 182 cm)

Environment:

Ambient Temp.: -30°C to 65°C

Relative Humidity: 10% to 90%, non-condensing

Enclosure: Hinged IP65 (NEMA 4X), weather resistant, stainless steel, explosion-proof, purged, and floor mount versions available.

UL Class I, Div II, Gp B, C, D or ATEX Zone 2, T3 with Purge

Power Requirements: 115 VAC, $\pm 10\%$, 47-63 Hz, 740 VA max.; 230 VAC, $\pm 10\%$, 47-63 Hz, 1950 VA max.

Calibration Gas Requirements: Use calibration gases @ 10 psig, 1.5 SCFH (0.7 L/min.)

O₂ Span Gas: Air or from 1.0% to 100% O₂, balance N₂

O₂, Comb. & CH₄ Zero Gases: From 0.1 to 10% O₂, balance N₂

Comb. Span Gas: 60 to 80% (PPM ranges) or 40% to 60% (% ranges) of the selected comb. recorder output range in certified equal mixtures of CO + H₂, 3-4% O₂, balance N₂

Hydrocarbon Span Gas: 2% CH₄, 8% to 10% O₂, balance N₂

AMEVISION HMI



Display: 4.2" Color 1/4W VGA with Graphical User Interface. Password protected.

Keypad: 18 key, Membrane

Input: 2 wire MODBUS RTU from Sensor. Host capable up to 4 sensors

Digital Outputs: 2 or 4 wire MODBUS RTU, TCP/IP Ethernet with embedded Web Server (RJ45 connection), USB Port for Data collection or software update.

Analog Outputs: Optional

Environment:

Ambient Temp.: -25° to 60°C

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

Enclosure: Division 2, Zone 2, IP65 (NEMA 4X)

System Compliance:

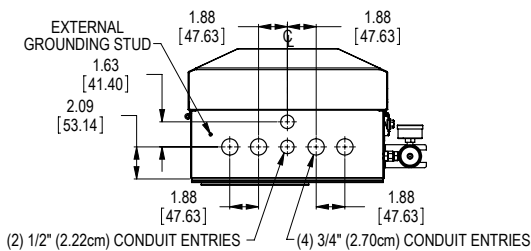
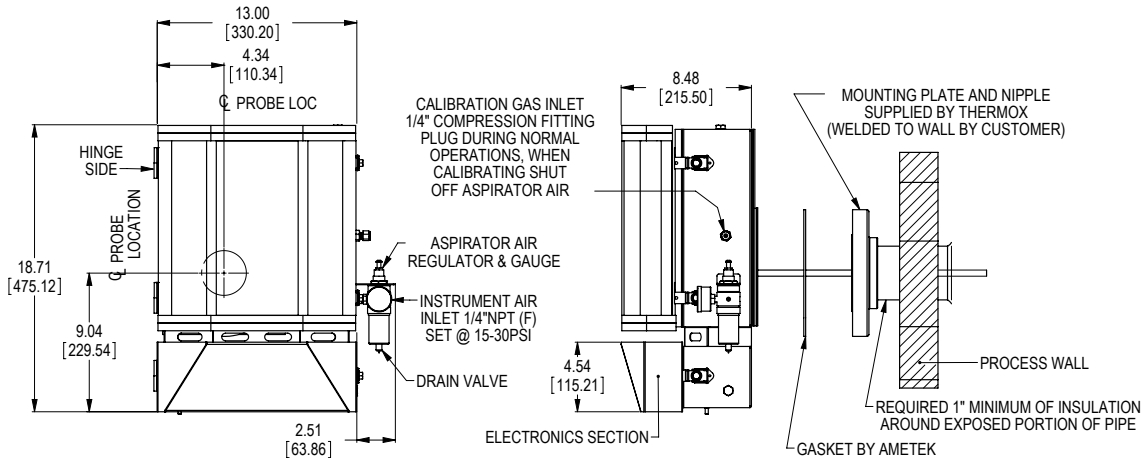
EMC Directive 2004/108/EC

Low Voltage Directive 73/23/EEC

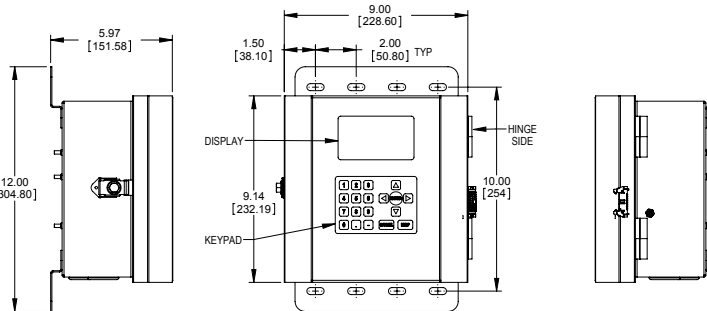
WDG-VCM ANALYZER

STANDARD SENSOR ENCLOSURE
APPROX. WEIGHT: 44 LB (20kg)

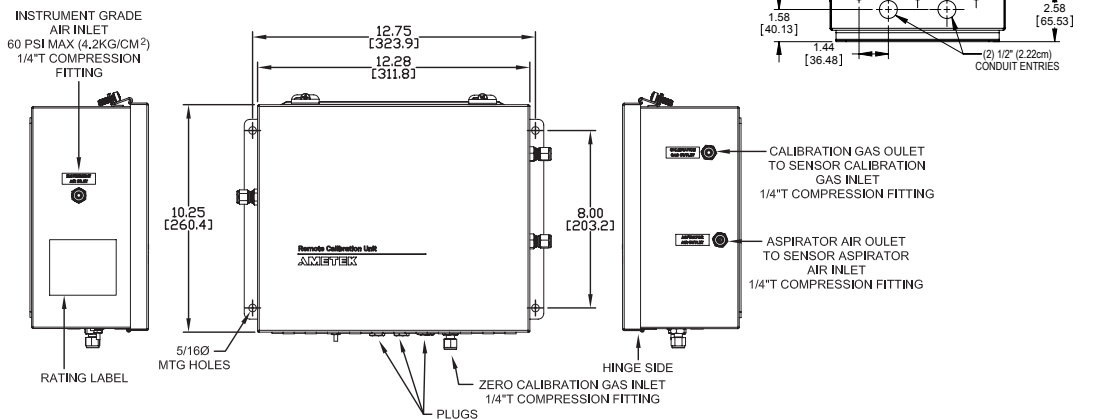
INCHES
MM



AMEVISION HMI



REMOTE CALIBRATION UNIT RCU ENCLOSURE NEMA 4X



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Specifications subject to change without notice.

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