

## WDG IVC/IQ OXYGEN & COMBUSTIBLES

## WDG IVM/IQ OXYGEN & METHANE

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### SMART FLUE GAS ANALYZERS

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

### SPECIFICATIONS

**Principle of Operation:** Zirconium oxide for net oxygen measurement and catalytic detectors for both combustibles and methane.

**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%

Methane: From 0-1% to 0-5%

**Accuracy:**

Oxygen:  $\pm 0.75\%$  of measured value or  $\pm 0.05\% O_2$ , whichever is greater

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

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

**Response - Oxygen:** 90% of a step change <13 sec.

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

**Aspirator Air Requirements:** 10 to 20 scfh (4.72 to 9.4 L/min) at 15 to 100 psig (1.05 to 7.04 kg/cm<sup>2</sup>)

**Max. Flue Gas Temp./Probe Types/Probe 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 - 152 cm)

**Max. Sample Dewpoint:** 392°F (200°C) standard

**Alarms:** Three dry contact alarms. Alarms can be set to oxygen, high combustibles and high methane. One can be set to start-of-calibration, start-of-verify, or both.

**Contact Rating:** 1 A, 30 V max., non-inductive load, AC or DC

**Diagnostics:** Watchdog timer and service alarm (trouble alarm). System test for A/D, RAM, and EEPROM. Twenty-entry event log.

**Communications:** RS-485, RS-232 (IQ Links), HART® Option available.

**Analog Output:** Three isolated linear current outputs. Select  $O_2$ , combustibles, methane, 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 cal and select degree of damping. Maximum load 1100 ohms.

**Sample Pressure:**  $\pm 10$  in. water gauge



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

**Environment:**

Ambient Temp.: -5°F to 150°F (-20°C to 65°C); -5°F to 140°F (-20°C to 60°C) with Div. 2 Option

Operating Temp.: -20°C to 85°C (See Note 1)

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

**Power Requirements (WDG IVCM/IQ):**

115 VAC,  $\pm 10\%$ , 47-63 Hz, 740 VA max. (750 VA max. floor mount version); 230 VAC,  $\pm 10\%$ , 47-63 Hz, 1990 VA max. (2000 VA max. floor mount version)

**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.

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

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

$O_2$  Comb. &  $CH_4$  Zero Gas: 2% or from 0.1 to 10%  $O_2$ , balance  $N_2$

Comb. Span Gas (WDG IVC/IQ & WDG IVCM/IQ): 60 to 80% (ppm ranges) or 40 to 60% (% ranges) of the selected comb. recorder output range in certified equal mixtures of  $CO+H_2$ , 3-4%  $O_2$ , balance  $N_2$

$CH_4$  Span Gas (WDG IVM/IQ & WDG IVCM/IQ): 2%  $CH_4$ , 8 to 10%  $O_2$ , balance  $N_2$

**System Compliance:**

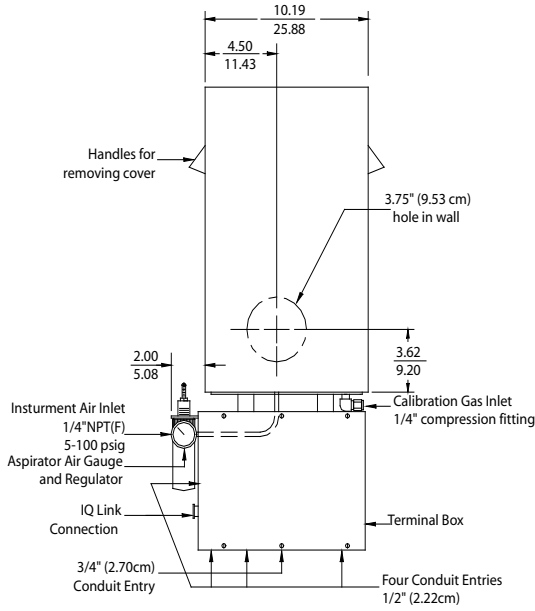
EMC Compliance: 2004/108/EC

Safety Compliance: 73/23/EEC

### OPTIONAL

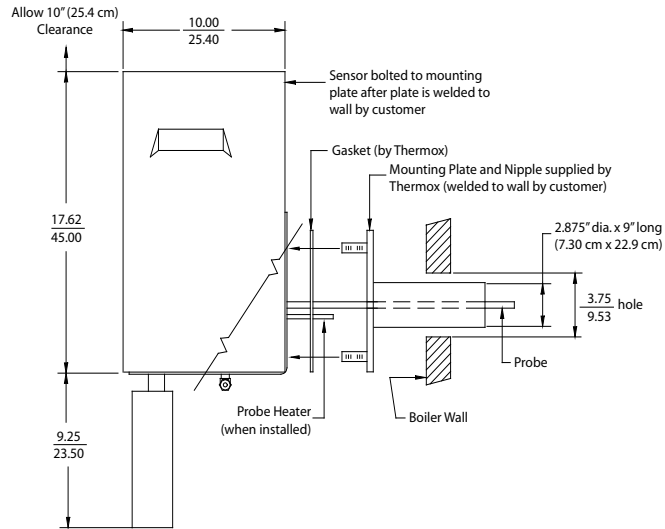
IQ Link provides a local interface to set up and display system parameters, initiate calibrations, initiate system tests, and trouble-shooting. Handheld or dedicated wall mount versions available. Refer to Bulletin P-620 for more IQ Link information.

STANDARD LIFT-OFF SENSOR ENCLOSURE  
 APPROX. WEIGHT: 37.6 LB (17KG)



STANDARD MOUNTING  
 (Preferred Method)

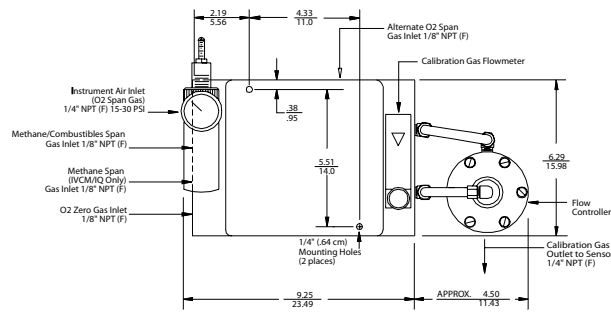
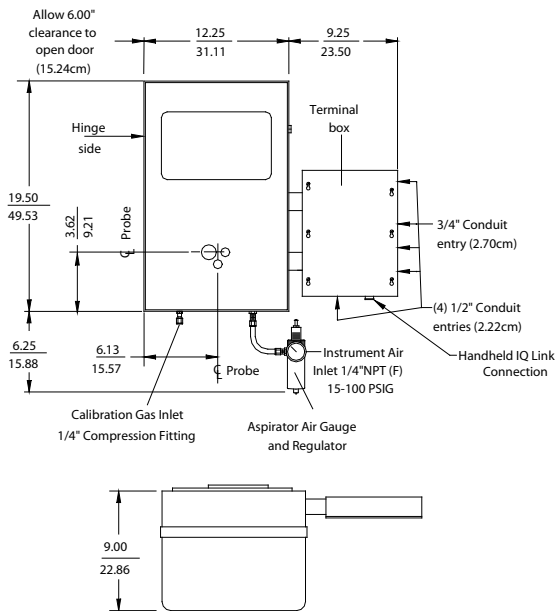
INCHES  
 CM



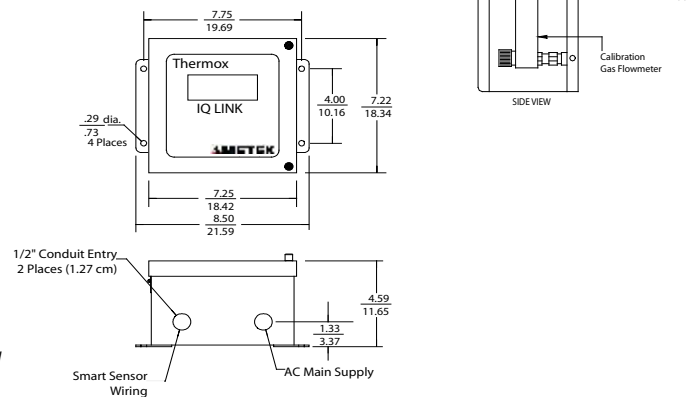
REMOTE CALIBRATION UNIT

RCU ENCLOSURE NEMA 4X - APPROX. WEIGHT: 11 LB / 5.0 KG

OPTIONAL HINGED ENCLOSURE  
 APPROX. WEIGHT: 53.0 LB / 24.0 KG



WALL MOUNT IQ LINK - OPTIONAL  
 APPROX WEIGHT: 10 LB / 4.53 KG



OPTIONAL FLOOR MOUNT VERSION AVAILABLE (VERTICAL PROBE)

NOTES:

1. Operating temperature of electronics inside the electronics housing as measured by IQ Link, RS-247 Web Enabled Remote System, Series 2000 Host, or Hart Communicator.
2. All static performance characteristics are with operating variables constant.
3. System accuracy referenced to 0.1 to 10% calibrated range.
4. Response is to calibration gas (without flame arrestors).



PROCESS INSTRUMENTS

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