

CENELEC WDG-IV OXYGEN CENELEC WDG-IVC OXYGEN & COMBUSTIBLES FLUE GAS ANALYZERS FOR ATEX II 2 G HAZARDOUS AREA

Close-coupled extractive design for direct measurement of flue gases up to 3000°F (1648°C). Recommended for applications with natural gas and light oil or fuel.

SENSOR

Principle of Operation:

Close-coupled extractive oxygen and combustibles analyzer using zirconium oxide for net oxygen measurement and a catalytic detector for combustibles. Completely field serviceable.

Output Range:

Oxygen: From 0-1% to 0-100%
Combustibles: From 0-2,000 ppm to 0-10,000 ppm 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: 63% of step change < 20 s (cal gas) and < 130 s (process gas)

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

Aspirator Air Requirements: Oxygen: 20 psig ± 5%; Combustibles: 40 psig ± 5%

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

1300°F (704°C) / 316 SS / 36" to 108" (91 cm to 274 cm)
1875°F (1024°C) / 310 SS / 36" to 108" (91 cm to 274 cm)
3000°F (1648°C) / Hexoloy® / 24" - 72" (60 cm - 182 cm)

Max. Sample Dewpoint: 400°F (204°C)

Sample Pressure: Subatmospheric

Environment:

Ambient Temp.: -5°F to 160°F (-20°C to 71°C)
Relative Humidity: 10% to 90%, non-condensing

Enclosure:

Sensor: CE 0081, Ex II 2 G, EEx d IIC T5 (IP 65)
T5: -5°F to 104°F (-20°C to 40°C)
T4: 104°F to 160°F (40°C to 71°C)

RCU: CE 0081, Ex II 2 G, EEx d IIC T6 (IP 65)

Power Requirements: 115 VAC, ±10%, 47-63 Hz, 600 VA max.;
230 VAC, ±10%, 47-63 Hz, 1850 VA max.

Calibration Gas Requirements: Use calibration gases @ 10 psig, 250 cc/min. (0.53 scfh)

O₂ Span Gas: Air or from 1.0% to 100% O₂, balance N₂
Zero and Comb. Zero Gas: 2% or 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 mixtures of CO + H₂, 3 - 4% O₂, balance N₂



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.

Recorder Output: Two isolated linear current outputs for oxygen and one for combustibles. Select O₂, 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.

Alarms: Two independent oxygen alarms, each high or low selectable. One alarm can be assigned as oxygen, calibrate or verify. Two high combustibles alarms. Set relays to energize or de-energize on alarm.

Contact Rating: 0.5A, 30V, 10 VA 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: Approved for CE 0081, Ex II 2 G, EEx d II C T6 (IP65). For non-hazardous area: optional weatherproof NEMA 4 (IP 56) wall/panel mount, 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.

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.

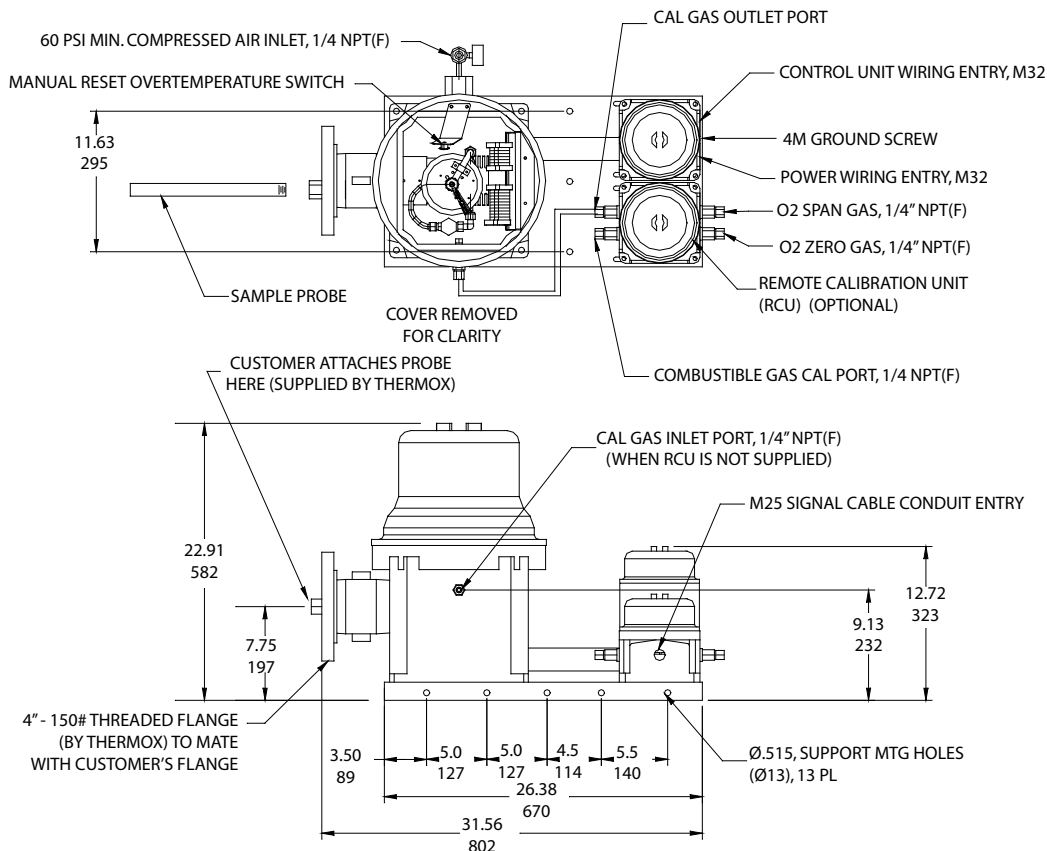
Power Requirements: Nominal 115-230 VAC ±10%, 47-63 Hz, 75 VA max.

SYSTEM COMPLIANCE:

ATEX Directive 94/9/EC
LCIE03 ATEX 6275X (Sensor)
LCIE01 ATEX 6028 (Controller)
EN50014 and EN50018
EMC Directive 2004/108/EC
Low Voltage Directive 73/23/EEC

CENELEC WDG-IV ANALYZER CENELEC WDG-IVC ANALYZER

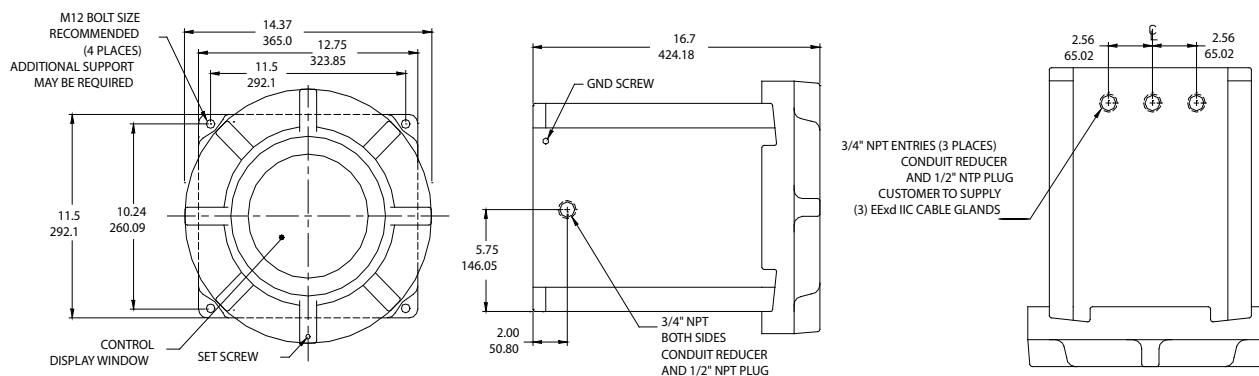
SENSOR



- NOTES:
 1) TOTAL WEIGHT APPROX. 145 LBS (66 KG).
 2) UNIT MUST BE FIELD SUPPORTED BY STRUCTURE OTHER THAN NIPPLE AND FLANGE.

IN
MM

CONTROL UNIT



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 PROCESS INSTRUMENTS

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