

FGA311 In-Situ Flue Gas O2 Transmitter



Economical Solution for Multiple Applications

The FGA311 is a low-cost, in situ, flue-gas oxygen transmitter. Its compact transmitter design incorporates the electronics and oxygen probe into one weatherproof or explosion-proof package. This microprocessor-based oxygen transmitter is designed to stay on the job with minimum downtime. The transmitter is ideal for clean-burning applications such as boilers, process heaters and furnaces. It offers an economical solution for multiple installation applications.

{tab=Features}

- Microprocessor-based

- Fail-safe diagnostics
- RS232 digital and 4mA to 20mA analog outputs
- Easily serviced
- Weatherproof and explosion-proof packages available

{tab=Applications}

An in situ oxygen transmitter for use in:

- Natural gas or oil-fired utility boilers

- Natural gas or oil-fired process heaters

{tab=Specifications}

The FGA311 transmitter is economical to own and maintain. Proprietary coatings on the zirconia oxide sensor

Performance

Accuracy $\pm 3\%$ of reading or 0.1% O₂
Measurement Resolution Output 4 to 20 mA: 0.01 mA
RS232 Terminal Interface 0.01% O₂
Response Time Less than 5 seconds for 63% of step change
Measurement Range Fully field selectable via RS232 interface or onboard switches: • 0% to 5% O₂

Temperature

Process

- Standard: 300°F to 1200°F (150°C to 650°C)
- High temperature: 300°F to 1920°F (150°C to 1050°C)

Electronics -4°F to 160°F (-20°C to 70°C) ambient

Calibration

Methods

- Semiautomatic by push-button
- RS232 interface
- Digipot adjustment

Recommended Gas Mixture 5% O₂, balance N₂ (dependent on application and range)

Calibration Gas Flow 2000 cc/min (4 SCFH)

Reference Air 20 to 50 cc/min, clean, dry instrument quality air (20.93% O₂), regulated to 30 psig

Functional

Output

- Analog output: 4 to 20 mA DC, 600 S maximum, isolated
- Digital output: RS232 communications

Power Consumption

- 115 VAC, 75 W
- 230 VAC, 135 W

Process Connection

- Standard: 1 1/2 in NPTM
- Optional: 2 in (50 mm) and larger flanges

Physical

Materials

- Probe: Process wetted or welded parts
- Standard temperature: 316 stainless steel
- High-temperature: Inconel® alloy

Enclosure

Epoxy-coated aluminum

Dimensions

15 lb (6.8 kg); 19 in (482.6 mm) probe length

Mounting

Vertical or horizontal, 1 1/2 in NPT, flanges available in most sizes

Hazardous Location Certification

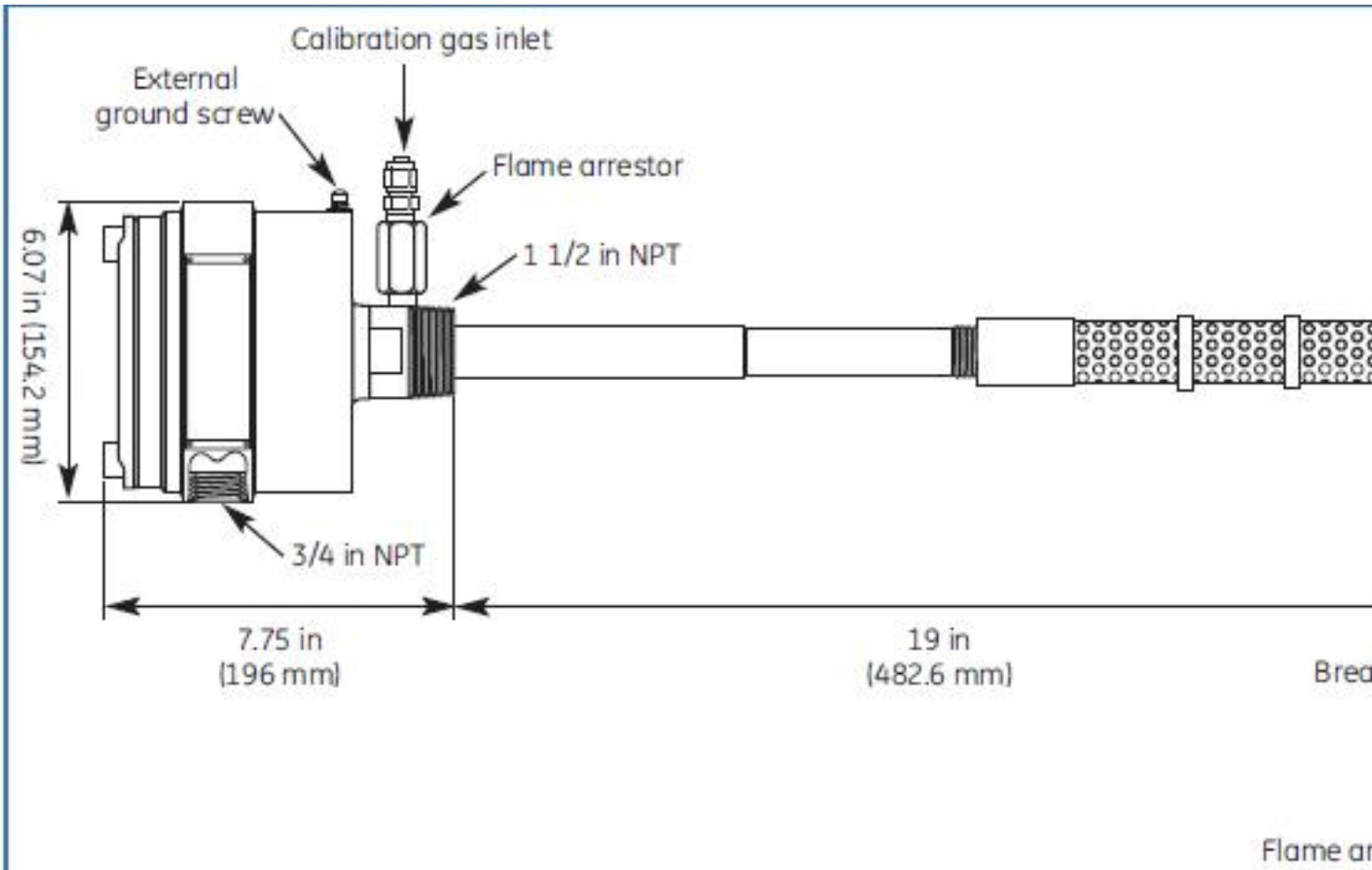
Explosion-proof/flameproof: Class I, Division 1, Groups B,C&D T6 (electronic)

Environmental

Weatherproof Type 4x/IP66

European Compliance

Complies with EMC Directive 89/336/EEC, 73/23/EEC LVD (Installation Cat



Order Information

Record selected option in blank indicated at bottom of form.

FGA 311 In Situ Flue Gas Analyzer

Package

- 1 Weatherproof
- 2 Explosion-proof; 19 in (0.5 m) only

Power

- 1 115 V
- 2 230 V

Probe Length

- 1 19 in (0.5 m)
- 2 39 in (1 m)
- 3 60 in (1.5 m)
- 4 79 in (2 m)

Temperature

- 1 Standard temperature, 1202°F (650°C) maximum
- 2 High temperature, 1922°F (1050°C) maximum

Special

- 0 None
- 1 Special (consult GE)

FGA 311 - - - - Use this number to order product

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