

## FGA311 In-Situ Flue Gas O2 Transmitter



### Economical Solution for Multiple Applications

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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.

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{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 s

### Performance

Accuracy  $\pm 3\%$  of reading or 0.1% O<sub>2</sub>  
Measurement Resolution Output 4 to 20 mA: 0.01 mA  
RS232 Terminal Interface 0.01% O<sub>2</sub>  
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% O<sub>2</sub>

### 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  $-4^{\circ}\text{F}$  to  $160^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ ) ambient

### Calibration

Methods

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

Recommended Gas Mixture 5-95% O<sub>2</sub>, balance N<sub>2</sub> (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% O<sub>2</sub>), regulated to 3

### 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

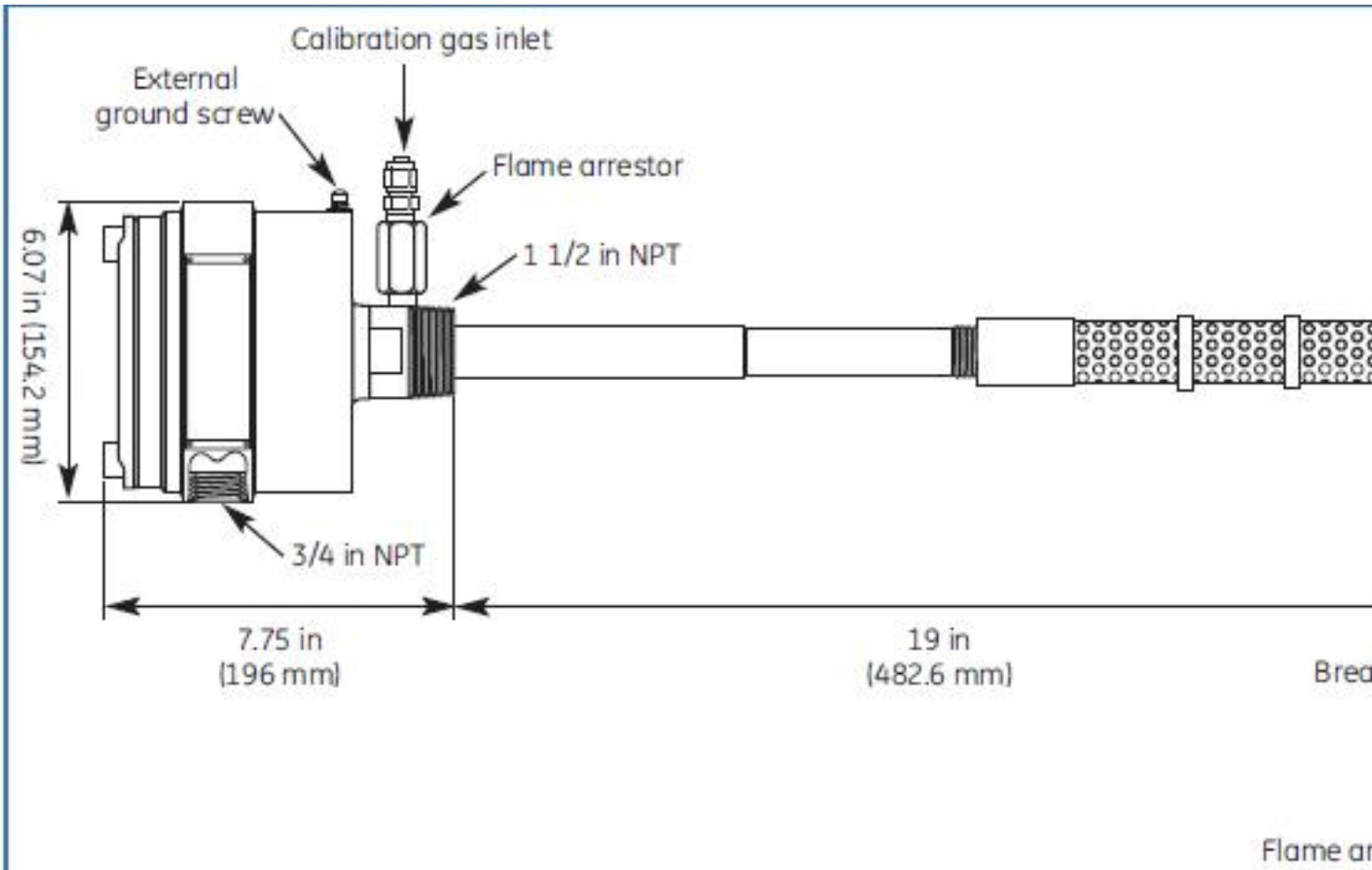
Dimensions 15 lb (6.8 kg); 19 in (482.6 mm) probe length

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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