

# Rosemount™ Oxymitter 4000

## Hazardous Area In-Situ Oxygen Transmitter



- Outstanding accuracy
- Electronics mounted to probe or separate
  - $\pm 0.75\%$  of reading or  $\pm 0.05\%$  O<sub>2</sub>
- Optional Xi advanced electronics
  - Large backlit LCD display
  - Advanced software features
  - Wireless — via THUM™ Adaptor
- Adaptable to any existing O<sub>2</sub> probe installation
- Advanced sensor diagnostics
  - Alarm indicates when calibration is recommended.
- Optional explosion-proof rating
  - ATEX II 2G Exd IIB +H2 T4 Gb
  - Class I, Div. I, Groups B, C and D
- Digital HART® communication
  - AMS/PlantWeb™ compatible
- Fully field-repairable
- HART wireless communication from probe or Xi

# The latest breakthrough for combustion flue gas analysis

The Oxymitter In-Situ Oxygen Transmitter was the world's first in-situ, zirconium oxide-based oxygen transmitter for flue gas measurement. These oxygen measurements can be used in a control system or by a boiler operator to fine tune burner fuel/ air ratios for maximum efficiency. Ideal for:

- Boilers
- Process heaters
- Kilns
- Reheat furnaces

Emerson is the leader in oxygen flue gas analyzer technology. Our in-situ, zirconium oxide oxygen analyzers have long been established as industry standards. We've combined our expertise with the latest Rosemount transmitter technology to create a truly revolutionary package — the Oxymitter.

The Oxymitter integrates an oxygen probe and field electronics into a single, compact package. The probe inserts directly into a flue gas duct to measure oxygen in combustion processes. No sampling system is required.

A Type 4X (IP65/IP66) Rosemount transmitter housing mounts directly to the probe and contains the transmitter's electronics, replacing common stand-alone field electronics. This integrated design minimizes the costs of installing separate probe cable, conduit and electronics. The Oxymitter electronics also require 95% less power to operate so its components last longer. We also offer traditional architecture with remote-mounted electronics.

The HART® protocol provides a link into Emerson's PlantWeb field-based architecture. Instrument technicians can interface with the Oxymitter from the control room or any location where the transmitter's signal wires terminate. Service diagnostics and calibrations can be performed remotely with a HART hand-held communicator or a personal computer equipped with AMS.

The Oxymitter is fully field-repairable. The probe's design provides convenient access to internal probe components so technicians can service the unit in house. The cell and heater/ thermocouple are fully field-replaceable. The Oxymitter contains no potentiometer adjustments or jumpers.

The Oxymitter In-Situ Oxygen Transmitter operates at process temperatures up to 1300 °F (700 °C), providing a fast response with high accuracy and reliability. Available lengths from 18 inches to 18 feet.

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Optional accessories for the Oxymitter include:

- Auto calibration gas sequencer
- Remote, loop-powered vacuum fluorescent display of oxygen reading
- High temperature accessories for temperatures up to 1832 °F (100 °C)
- Flame arrestor
- Abrasive shield

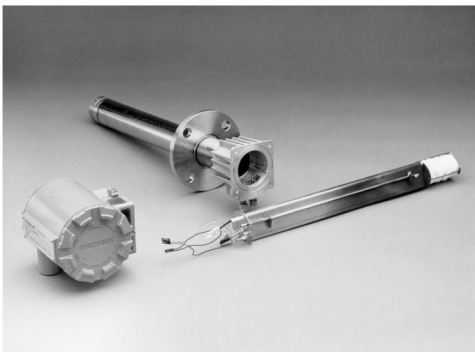
# The Oxymitter Oxygen Transmitter is completely field-repairable

## Diffusion filter and sensor cell assembly



- Outstanding accuracy –  $\pm 75\%$  of reading or 0.05% O<sub>2</sub>
- Special cells for tough service in SO<sub>2</sub> and HCL
- Rugged steel cell holder – cells will not crack

## Heater/thermocouple assembly



## Hazardous area - OXT4C



- ATEX II 2G Exd IIB +H2 T4 Gb
- CSA Class I, Div. I, Groups B, C and D
- Lengths from 18 in. (0.9 m) to 6 ft. (1.8 m)

**Electronics**

- -40 °F to 185 °F (-40 °C to 70 °C) ambient temperature limit
- HART® communications
- “Calibration recommended” diagnostic

**Hazardous area electronics integral to probe, or remote mounted**

- Lowest cost of installation
- Bright gas fluorescent local operator interface (LOI)
- Thru-glass infrared push buttons are suitable for hazardous areas.

**General purpose Xi electronics**

- Easy-to-read backlit display
- Easy-to-use keypad
- Type 4X (IP65/IP66) enclosure (general purpose only)
- Advanced software features
- Loss of flame relay option turns heater off upon flame loss

## Advanced software features

Available only with the Xi electronics.

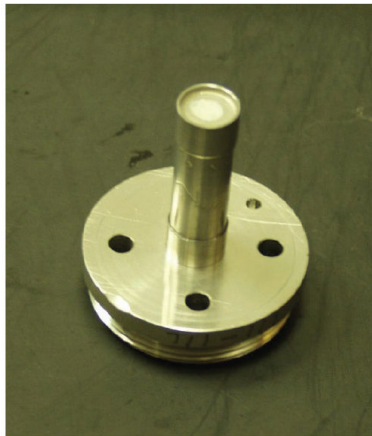
### Extended process temperature range to 1562 °F (800 °C)

The oxygen analyzer employs a heater and thermocouple to maintain a temperature setpoint at 1357 °F (736 °C). Temperature control is maintained within  $\pm 1$  °C to process temperatures of about 1300 °F (705 °C). This is satisfactory for most applications, but excursions to higher temperatures can occur in many processes. In these instances, the heater is turned off and the process temperature is utilized to heat the sensing cell.

The oxygen reading is adjusted immediately to compensate for the varying process temperatures. It should be noted that cell life will be reduced by continuous operation at temperatures above 1300 °F (705 °C). If process temperatures are expected to continuously be above 705 °C, we recommend the use of a bypass or probe mounting jacket accessory.

## Stoichiometer

**Figure 1: Acid-resistant stoichiometer cell**



Process upsets can sometimes cause a combustion process to go into substoichiometric or reducing conditions. The oxygen readings from one or more probes may decline all the way to zero. The stoichiometer cell will measure the amount of oxygen deficiency during these reducing conditions. The trends in your DCS can be set up for a lower range limit of -1 or -2% oxygen to depict the level of oxygen deficiency.

The operator can see if his control actions to recover are having the desired effect. These types of events do not occur frequently, but knowing the parameters of the situation prevents overcorrecting while coming out of the reducing condition.

Figure 2: Typical DCS trend during a reducing process event

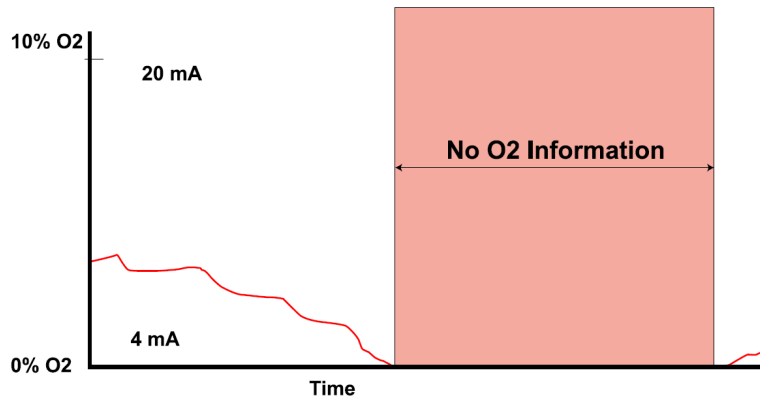
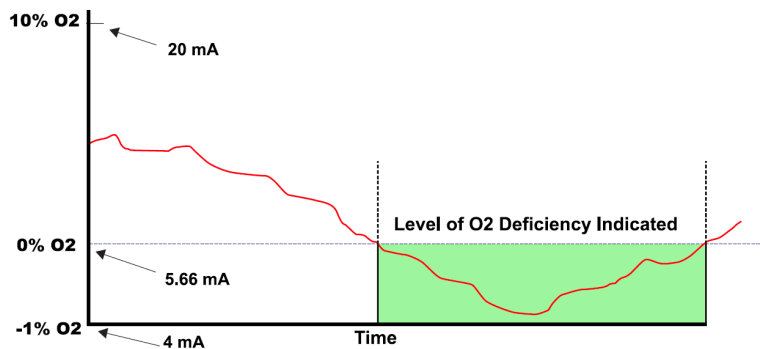


Figure 3: DCS trend with stoichiometer feature



## Programmable reference

The zirconium oxide sensing technology has historically measured process oxygen by using ambient or instrument air as a reference (20.95% oxygen). The sensor develops most of its signal at the low oxygen levels typically found in combustion flue gases (2–4% oxygen) and is most accurate at these levels. When measuring at levels near ambient, however, the sensor develops only a few millivolts of signal and accuracy degrades.

Typical applications include:

- Flue gas recirculation – controlling the mixing of flue gases into the burner windbox prior to the burner to reduce.
- Moisture monitoring – measuring the amount of moisture coming off of industrial dryers by noting the dilution effect.
- Enriched oxygen combustion – pure oxygen is sometimes mixed in with the combustion air to increase heat at the flame. This is used in steel and other metals reduction processes and also in some catalyst regenerators.

# Specifications

All static performance characteristics are with operating variables constant. Specifications subject to change without notice.

## Measurement specifications

### Net O<sub>2</sub> range

Variable 0–10% to 0–40%

(Xi electronics offer 0–50% O<sub>2</sub> range)

### Accuracy in oxidizing conditions

±0.75% of reading or 0.05% O<sub>2</sub>, whichever is greater

### Lowest detectable limit

0.02% O<sub>2</sub>

### Process temperature effect

Less than 0.05% O<sub>2</sub> from 212 to 1292 °F (100 to 700 °C)

### System speed of response to calibration gas

Initial response in less than 3 seconds, T90 in less than 8 seconds. Response to process gas changes will vary, depending on process gas velocity and particulate loading of the diffuser.

### Calibration validity

Presentation of calibration gases matches the normal process to within ±0.02% O<sub>2</sub>.

### Accuracy in reducing conditions

±0.10% of reading, or 0.1% O<sub>2</sub>, whichever is greater

### System response in reducing conditions

Going from oxidizing to reducing: T90 in 120 sec.

Going from reducing to oxidizing: T90 in 30 sec.

## Environmental specifications

### Transmitter probe

#### Transmitter probe

Process-wetted materials are 316L or 304 stainless steel.

#### Process temperature limits

32 to 1300 °F (0 to 705 °C) with Oxymitter electronics

32 to 1472 °F (0 to 800 °C) with Xi electronics<sup>(1)</sup>

#### Oxymitter transmitter electronics housing (integral to probe or remote mounted)

Low copper aluminum Type 4X (IP65/IP66), with reference air exhaust port piped to clean area.



**Oxymitter electronics ambient temperature limits**

-40 to 176 °F (-40 to 80 °C)

**Temperature limit as measured inside Oxymitter electronics**

-40 to 185 °F (-40 to 85 °C)

**Optional Xi electronics****Optional Xi electronics**

Type 4X (IP65/IP66), polycarbonate material

**Xi ambient temperature limits**

-4 to 122 °F (-20 to 50 °C)

**Xi temperature limits as measured inside the electronics housing**

-4 to 131 °F (-20 to 55 °C)

**Xi LCD display temperature limits**

-4 to 131 °F (-20 to 55 °C)

**Installation specifications****Probe mounting flange**

Vertical or horizontal — 2-in. 150# (4.75-in. (121 mm) bolt circle)

DIN (5.71-in. (145 mm) bolt circle)

**Note**

Flanges are flat-faced and for mounting only. Flanges are not pressure-rated.

Spool piece P/N 3D39761G02 is available to offset probe electronics housing from hot ductwork.

Many adapter flanges are available to mate to existing flanges.

**Probe lengths and approximate shipping weights**

Length	Weight
18-in. (457 mm) package	16 lb. (7.3 kg)
3 ft. (0.91 m) package	21 lb. (9.5 kg)
6 ft. (1.83 m) package	27 lb. (12.2 kg)

**Reference air (optional)**0.5 scfh (0.24 L/m), clean, dry, instrument quality air (20.95% O<sub>2</sub>), regulated to 2.5 psi (34 kPa)**Calibration**

Semi-automatic or automatic

**Calibration gases**0.4% O<sub>2</sub> and 8%, balance N<sub>2</sub> recommended

(1) Reduced cell life can be expected if operated continuously at temperatures above 1300 °F (705 °C) optional bypass and jacket accessories permit operation to 1922 °F (1050 °C).

**Calibration gas flow**

5 scfh (2.5 L/m)

**Heater electrical power**

100 to 240 V, ±10% 50/60 Hz ½-in. — 14-in. NPT conduit ports

**Traditional architecture cable**

200 ft. (61 m) maximum length

**Power consumption of probe heater**

776 VA maximum during warm-up

**Electrical power of Oxymitter or optional Xi Electronics**

120 to 240 V, ±10% 50/60 Hz

**Power consumption of Xi**

10 watts maximum

**Xi alarms relays**

2 provided – 2 amps, 30 Vdc

**Xi optional loss of flame contact**

Removes heater power

**Electrical noise**

Meets EN 61326, Class A

**Optional hazardous area certifications**

<b>Hazardous area Oxymitter with integral electronics</b>	
With cell-end flame arrestor	ATEX II 2G Exd IIB +H2 T4 Gb
Without cell-end flame arrestor	ATEX II 2/-G Exd IIB +H2 T4 Gb/- CSA Class I, Division 1, Groups B, C, D, and T2 Class I, Zone 1, Ex d IIB+H2 T2 Class I, Zone 1, AEx d IIB+H2 T2
<b>Hazardous area Oxymitter with remote electronics</b>	
With cell-end flame arrestor	ATEX II 2G Exd IIB +H2 T4 Gb
Without cell-end flame arrestor	ATEX II 2/-G Exd IIB +H2 T4 Gb/- (remote electronics) ATEX II 2G Exd IIB +H2 T5 Gb CSA Class I, Zone 1, Ex d IIB+H2 T2 (remote probe) Class I, Zone 1, Ex de IIB+H2 T6 (remote electronics) Class I, Zone 1, AEx d IIB+H2 T2 (remote probe) Class I, Zone 1, AEx de IIB+H2 T6 (remote electronics)

**Note**

Optional Xi electronics are designed for general purpose use only.

**Traditional architecture cable**

200 ft. (61 m) maximum length

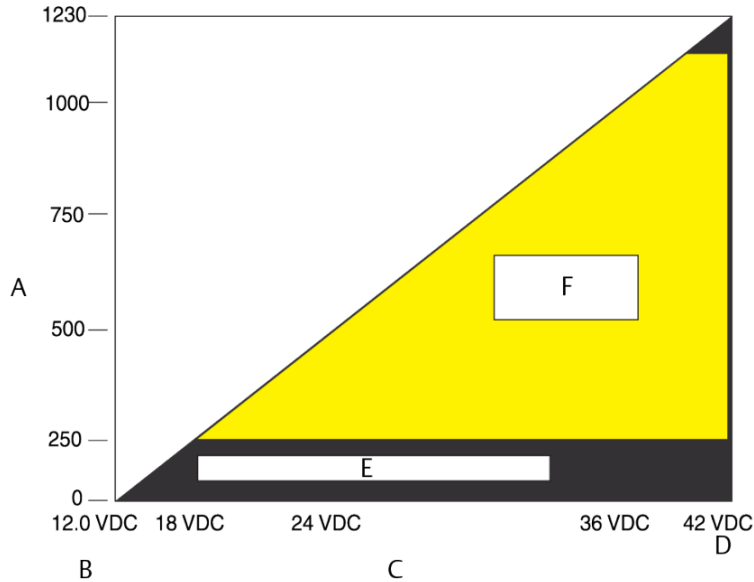
**Power consumption of probe heater**

776 VA maximum during warm-up

**Transmitter electrical power**

12 to 42 Vdc, (loop-powered from the control room or from the Xi box)

**Figure 4: Integral or remote electronics**



- A. Load (ohms)
- B. Minimum lift off
- C. Power supply voltage
- D. Maximum
- E. Without HART communicator
- F. Operating region

**Electrical power for Xi**

100 to 240 V ±10%, 50–60 Hz

**Power consumption of Xi**

12 VA maximum or 776 VA maximum with traditional architecture, 120 V, probes.

450 VA maximum with traditional architecture, 44 V probes.

**Alarm relay outputs**

Two provided – 2 Amperes, 30 Vdc, Form-C

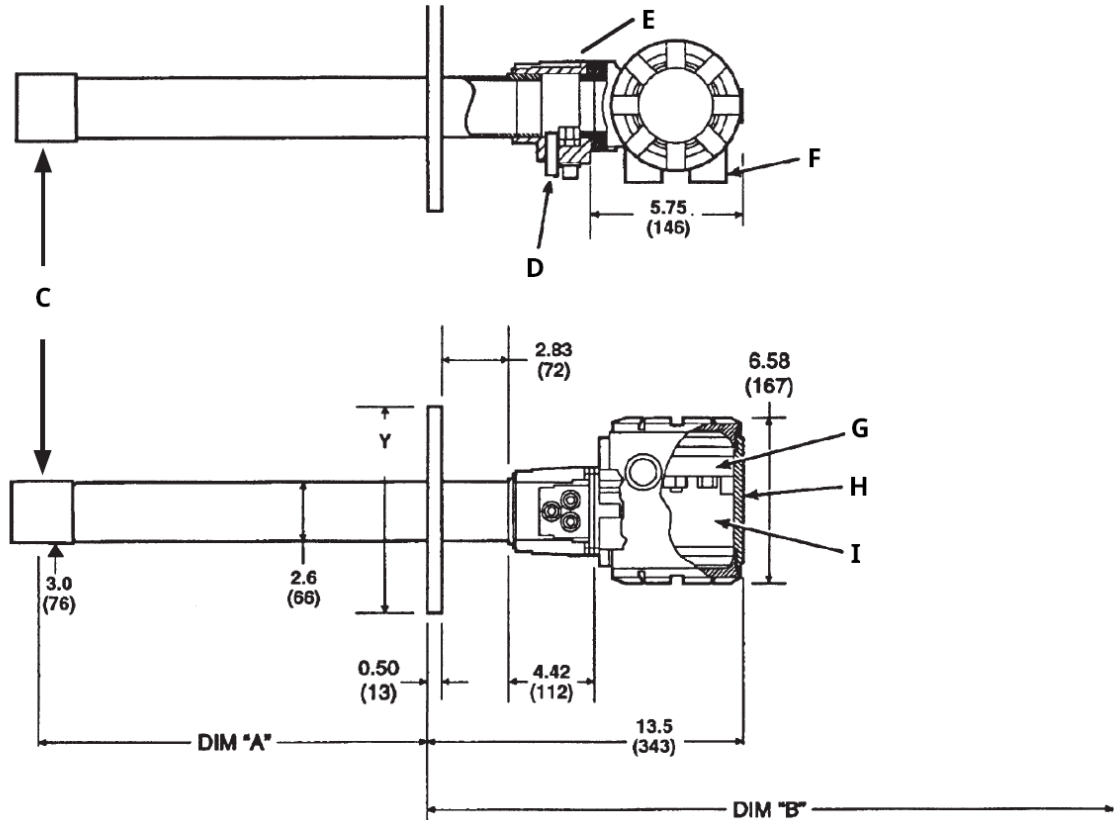
**Optional loss of flame input**

Internally power input to remove heater power, actuated via dry contact output from prove of flame device.



Emerson has satisfied all obligations coming from the European legislation to harmonize the product requirements in Europe.

# Outline dimensions for Oxymitter Hazardous Area Oxygen Transmitter



- A. Dimension A (see [Table 1](#))
- B. Dimension B (see [Table 1](#))
- C. Cell flame arrestor provided only on OXT4C, OXT5C, OXT4ADR.
- D. 1/4-in. Tube ref/cal. gas and vent ports
- E. External earth ground
- F. 3/4-in. NPT electrical connections
- G. Internal earth ground and customer terminations
- H. Electrical isolation barrier
- I. Electronics

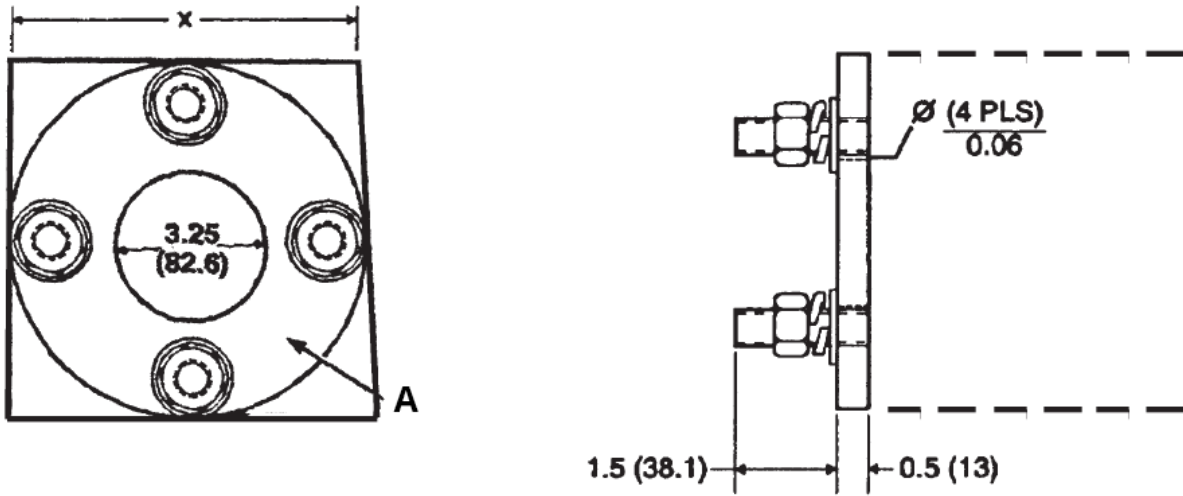
**Note**

Dimensions are in inches (millimeters).

**Table 1: Removal/Installation**

Probe length	Dim "A" insertion depth	Dim "B" removal envelope
18-in. (457 mm) probes	18.1 in. (460 mm)	31.6 in. (803 mm)
3 ft. (0.91 m) probes	36.1 in. (917 mm)	57.0 in. (1448 mm)
6 ft. (1.83 m) probes	72.1 in. (1831 mm)	85.6 in. (2174 mm)

Figure 5: Mounting Plate Outline



A. Gasket included

**Note**

Dimensions are in inches (millimeters).

Refer to [Table 2](#) for dimensions.

**Table 2: Mounting plate dimensions**

	Dimensions are in inches (mm).	
	ANSI	DIN
Mounting plate (x)	7.75 (197)	8.5 (215)
Stud size	5/8 in. - 11	M16 X 2
Four studs equally spaced on BC	6.00 BC (152.4) BC	6.70 BC (170) BC
Flange (Y)	7.5 (190)	8.27 (210)

# Ordering information - Rosemount Oxymitter

## Rosemount OXT4C

Hazardous Area Oxymitter with HART® Communications. Cell flame arrestor included (process gases are considered to be within hazardous area). Optional Xi electronics not applicable.

### Model

Code	Description
OXT4C	In-Situ Oxygen Transmitter – explo-proof – HART Smart (Oxymitter 4000)

### Sensing probe type with flame arrestor

Code	Description
1	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 150 lb. (68 kg) bolt circle
2	Snubber diffusion element (ANSI) 3-in. (76.2 mm) 150 lb. (68 kg) bolt circle
3	Ceramic diffusion element probe (DIN 2527) ¼-in. (6.35 mm) tube fittings
4	Snubber diffusion element (DIN 2527) ¼-in. (6.35 mm) tube fittings
7	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 300 lb. (136.1 kg) bolt circle
8	Ceramic diffusion element probe (ANSI) 4-in. (101.6 mm) 300 lb. (136.1 kg) bolt circle

### Probe assembly

Code	Description
0	18-in. (457 mm) probe
3	3 ft. (0.91 m) probe
5	6 ft. (1.83 m) probe

### Mounting adapter (stack side)

Code	Description
0	No adapter plate (0 must also be chosen under mounting adapter – probe side)
1	New installation – square weld plate with studs
2	Model 218 mounting plate (with Model 218 shield removed)
3	Competitor's mount

### Mounting adapter (probe side)

Code	Description
0	No adapter plate
1	Probe only (ANSI)
4	Probe only (DIN)

### Electronic housing and filtered customer termination – Type 4X (IP65/IP66)

Code	Description
12	HART® electronics, mounted integral to probe, transient protected termination, ATEX II 2G Exd IIB +H2 T4 Gb
14	HART electronics, mounted remotely, transient protected termination, requires cable ATEX II 2G Exd IIB +H2 T4 Gb
22	HART electronics, mounted integral to probe, transient protected termination, Class I, Div I, Group B, C, and D
24	HART electronics, mounted remotely, transient protected termination; requires cable CSA Class I, Div. I, Group B, C, and D

### Communications

Code	Description
1	Membrane keypad – HART capable
2	Membrane keypad – HART capable, glass window
3	Gas fluorescent LOI HART capable, glass window, English only

### Language

Code	Description
1	English
2	German
3	French
4	Spanish
5	Italian

### Termination filtering

Code	Description
00	Specified as part of electronic housing

### Calibration accessories

Code	Description
00	No hardware
01	Cal./ref. flowmeter and reference pressure regulator
02	Autocalibration systems – order by separate part number (for safe areas only)

### Hazardous area approval

Code	Description
00	Specified as part of electronic housing

**Electronics to probe cable**

Code	Description
00	No cable - integral electronics
10	20 ft. (6 m) cable - remote electronics
11	40 ft. (12 m) cable - remote electronics
12	60 ft. (18 m) cable - remote electronics
13	80 ft. (24 m) cable - remote electronics
14	100 ft. (30 m) cable - remote electronics
15	150 ft. (45 m) cable - remote electronics
16	200 ft. (61 m) cable - remote electronics

**Rosemount OXT4CDR**

Hazardous Area direct replacement Oxymitter probe replaces older Westinghouse and Rosemount probes as well as most competitive probes. Cell flame arrestor included (process gases are considered to be within hazardous area). Optional Xi Electronics may be used, but in a general purpose area only.

**Model**

Code	Description
OXT4CDR	Direct replacement probe

**Sensing probe type with flame arrestor**

Code	Description
1	Ceramic diffusion element probe (ANSI) 115 V heater
2	Snubber diffusion element (ANSI) 115 V heater
3	Ceramic diffusion element probe (DIN) 115 V heater
4	Snubber diffusion element (DIN) 115 V heater
7	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 300 lb. (136.1 kg)
8	Ceramic diffusion element probe (ANSI) 4-in. (101.6 mm) 300 lb. (136.1 kg)

**Probe assembly**

Code	Description
0	18-in. (457 mm) probe
3	3 ft. (0.91 m) probe
5	6 ft. (1.83 m) probe



### Mounting adapter (stack side)

Code	Description
0	No adapter plate
1	Mounting to stack (new installation)
2	Model 218 mounting plate (with Model 218 shield removed)
3	Competitor's mount-supply existing flange dimensions

### Mounting adapter (probe side)

Code	Description
0	No mounting hardware
1	Mounting probe only (ANSI)
4	Mounting probe only (DIN)

### Termination unit

Code	Description
11	Standard filtered termination
12	Transient protected filtered termination

### Arrangement-existing electronics

Code	Description
03	No hardware, for use with 218A Electronics, World Class IFT, or Oxymitter or X, V Electronics
07	Westinghouse/Rosemount digital 132 electronics
08	Yokogawa ZA-8 series electronics - max. operating temp of junction box is 149 °F (65 °C).
09	Other competitive electronics - specify brand and model

### Hazardous area approval

Code	Description
10	ATEX
20	CSA

#### Note

Order manual calibration accessories separately:

263C152G01 Reference gas regulator/filter

771B635H01 (Two required) Calibration and reference air flow meters

## Rosemount OXT4CNF

Hazardous area Oxymitter 4000 – In-Situ Oxygen Transmitter without process end flame arrestor (process gases are not to be considered in hazardous area).

### Model

Code	Description
OXT4CNF	Oxymitter 4000 In-Situ Oxygen Transmitter

### Sensing probe type

Code	Description
1	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 150 lb. (68 kg) flange
2	Snubber diffusion element (ANSI) 3-in. (76.2 mm) 150 lb. (68 kg) flange
3	Ceramic diffusion element probe (DIN) 8.27-in. (210 mm) dia. flange
4	Snubber diffusion element (DIN) 8.27-in. (210 mm) dia. flange
7	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 300 lb. (136.1 kg) flange for acidic service
8	Ceramic diffusion element probe (ANSI) 4-in. (101.6 mm) 300 lb. (136.1 kg) flange for acidic service

### Probe assembly

Code	Description
0	18-in. (457 mm) probe
3	3 ft. (0.91 m) probe
5	6 ft. (1.83 m) probe

### Mounting adapter (stack side)

Code	Description
0	No adapter plate (0 must also be chosen under mounting adaptor- probe side below)
1	New installation – square weld plate with studs
2	Model 218 mounting plate (with Model 218 shield removed)
3	Competitor's mount

### Mounting adapter (probe side)

Code	Description
0	No adapter plate
1	Probe only (ANSI)
4	Probe only (DIN)

### Electronic housing and filtered customer termination – Type 4X (IP65/IP66)

Code	Description
12	Integral - transient protected filtered termination – ATEX II 2/-G Exd IIB +H2 T4 Gb/-
14	Split architecture - transient protected filtered termination – ATEX II 2/-G Exd IIB +H2 T4 Gb/-
22	Integral - transient protected filtered termination – CSA
24	Split architecture - transient protected filtered termination – CSA

### Communications

Code	Description
1	Electronics with membrane keypad with blind cover
2	Electronics with membrane keypad with window cover
3	Electronics with LOI display with window cover (English only)

### Language

Code	Description
1	English
2	German
3	French
4	Spanish
5	Italian

### Calibration accessories

Code	Description
00	No hardware
01	Cal/ref flowmeters and ref pressure regulator

### Electronics to probe cable

Code	Description
00	No cable – integral electronics or reusing existing cable
10	20 ft. (6 m) cable
11	40 ft. (12 m) cable
12	60 ft. (18 m) cable
13	80 ft. (24 m) cable
14	100 ft. (30 m) cable
15	150 ft. (45 m) cable
16	200 ft. (61 m) cable

## Rosemount OXT4CDRNF

Hazardous area Oxymitter DR – In-Situ Oxygen Transmitter without process end flame arrestor. Optional Xi electronics may be used, but in a general purpose area only.

### Model

Code	Description
OXT4CDRNF	Oxymitter DR In-Situ Oxygen Transmitter, optional Xi Advanced Electronics may be used safe area only.

### Sensing probe type

Code	Description
1	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 150 lb. (68 kg) flange
2	Snubber diffusion element (ANSI) 3-in. (76.2 mm) 150 lb. (68 kg) flange
3	Ceramic diffusion element probe (DIN) 8.27-in. (210 mm) dia. flange
4	Snubber diffusion element (DIN) 8.27-in. (210 mm) dia. flange
7	Ceramic diffusion element probe (ANSI) 3-in. (76.2 mm) 300 lb. (136.1 kg) flange for acidic service
8	Ceramic diffusion element probe (ANSI) 4-in. (101.6 mm) 300 lb. (136.1 kg) flange for acidic service

### Probe assembly

Code	Description
0	18-in. (457 mm) probe
3	3 ft. (0.91 m) probe
5	6 ft. (1.83 m) probe

### Mounting adapter (stack side)

Code	Description
0	No adapter plate (0 must also be chosen under mounting adaptor- probe side below)
1	New installation – square weld plate with studs
2	Model 218 mounting plate (with Model 218 shield removed)
3	Competitor's mount

### Mounting adapter (probe side)

Code	Description
0	No adapter plate
1	Probe only (ANSI)
4	Probe only (DIN)

### Electronic housing and filtered customer termination – Type 4X (IP65/IP66)

Code	Description
12	Transient protected filtered termination

### Arrangement

Code	Description
03	No hardware. For use with 218 analog electronics, world-class IFT electronics or Oxymitter electronics, Xi electronics.
04	(1A) digital
05	(1A) digital
07	(1A) Model 132 digital
08	Yokagawa electronics
09	Other competitive electronics

### Hazardous area approval

Code	Description
10	ATEX
20	CSA

#### Note

Order manual calibration accessories separately:

263C152G01 Reference gas regulator/filter

771B635H01 (Two required) Calibration and reference air flow meters

## Option notes for all preceding matrices

### General notes

In-Situ Oxygen Transmitter – explo-proof – HART® Smart

### High sulfur service:

High sulfur cell can be selected for any probe. Add a line item note to your purchase order requesting the high sulfur. ZrO<sub>2</sub> cell in place of the standard ZrO<sub>2</sub> cell. Add 4232 UOM to the system matrix UOM total.

### Example:

Delete – standard cell P/N 4847B63G01

Add – high sulfur cell P/N 4847B63G02

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### Note

Cell replacement kits for high sulfur service are also available. Consult P/N 4849B94XX in the Combustion Solutions Center spare parts list.

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### Level 1

Option: 7, 8

Probe is set up for high acid service in catalytic regenerators; includes: SO<sub>2</sub>/HCL resistant cell, Hastelloy C and Viton materials for calibration gas line larger than standard flange.

### Level 3

Option: 3

Where possible, specify SPS number; otherwise provide details of the existing mounting plate as follows:

- Plate with studs: bolt circle diameter, number and arrangement of studs, stud thread, stud height above mounting plate.
- Plate without studs: bolt circle diameter, number and arrangement of holes, thread, depth of stud mounting plate with accessories.

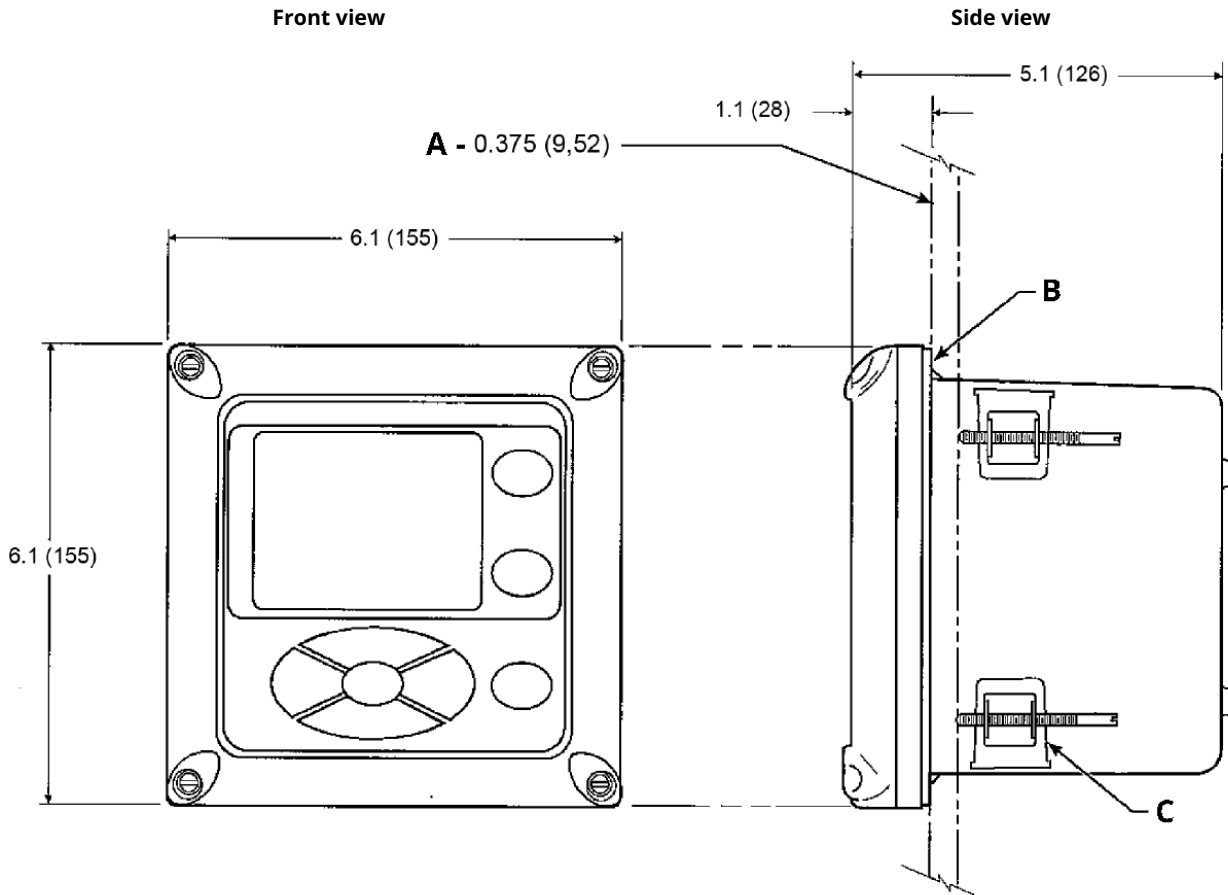
### Level 6

Option: 1

Start-up, calibration and operation can be implemented using the standard membrane keypad. Remote access and additional functionality available via HART Communications (Model 375 hand-held communicator or AMS) with Oxymitter device descriptor (DD) required.

# Xi enhanced interface mounting details

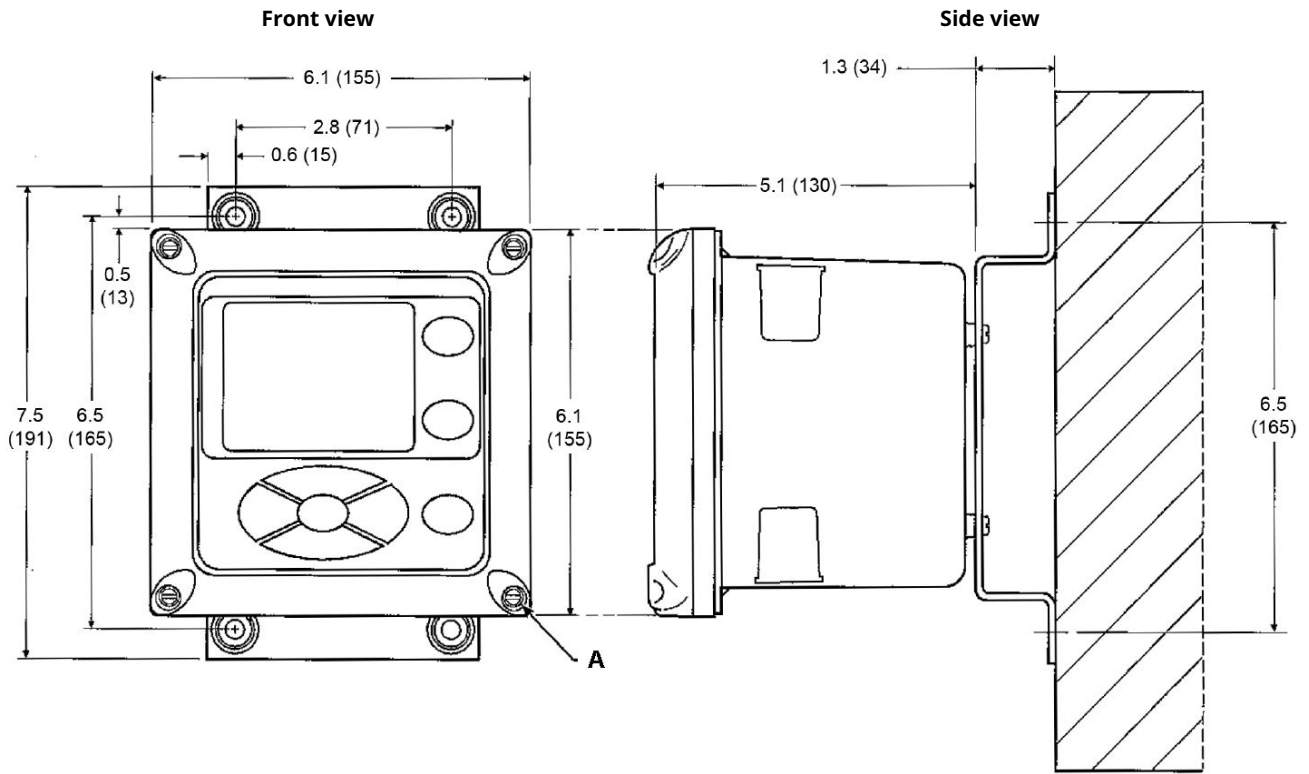
## Panel mounting details



- A. Maximum panel thickness
- B. Panel mount gasket
- C. 4X Mounting brackets and screws provided

Dimensions are in inches (millimeters).

Wall/surface mounting details



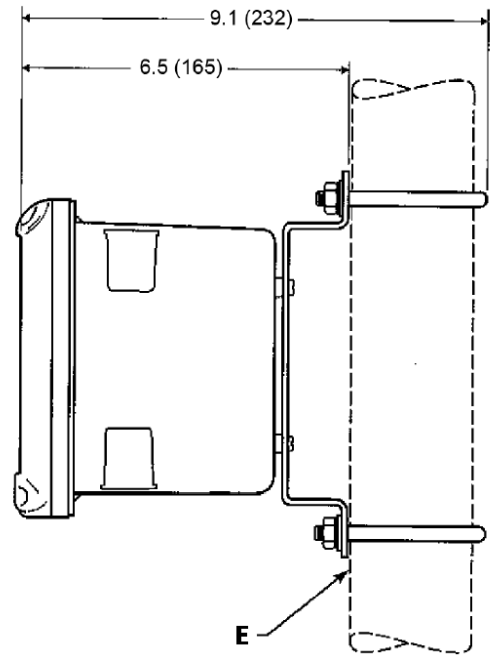
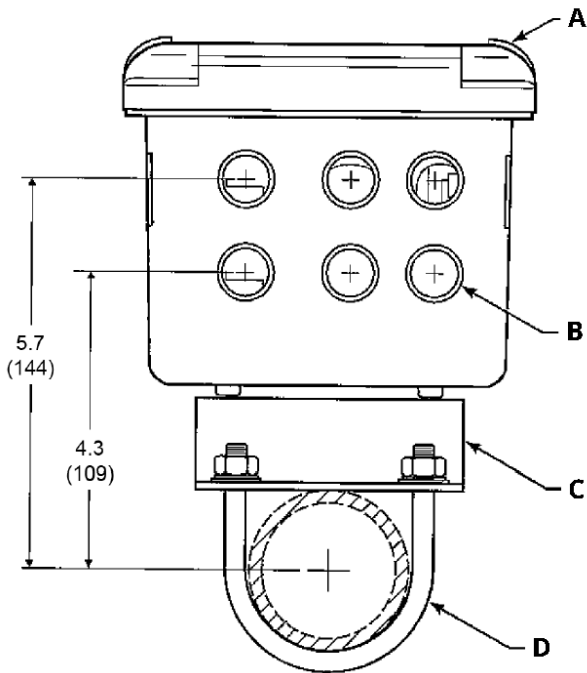
A. 4X Cover screw

Dimensions are in inches (millimeters).



Pipe mounting details

Bottom view



- A. Front panel
- B. 6X ½-in. NPT conduit openings
- C. Mounting bracket
- D. U-bolts
- E. 2-in. pipe supplied by customer

Dimensions are in inches (millimeters).

## Ordering information - Xi Advanced Electronics

Optional Xi Advanced Electronics safe area only.

### Model

Code	Description
Xi	O <sub>2</sub> Advanced Electronics

### Xi type

Code	Description
01	Future
02	Future
03	Future
04	Traditional architecture Xi - all signal conditioning and operator interface via the Xi. Cable required, single channel only.
05	Traditional architecture Xi - all signal conditioning and operator interface via the Xi. Cable required, single channel only, set up to run 44 V world class probe.

### Mounting

Code	Description
00	None
01	Panel mount kit with gasket
02	2-in. pipe/wall mount kit

### Cable (for traditional architecture Xi only)

Code	Description
00	None
10	20 ft. (6 m) cable
11	40 ft. (12 m) cable
12	60 ft. (18 m) cable
13	80 ft. (24 m) cable
14	100 ft. (30 m) cable
15	150 ft. (45 m) cable
16	200 ft. (60 m) cable

## Stoichiometer function

Code	Description
00	No
01	Single channel
02	Dual channel (second channel not available for traditional architecture Xi)

## Programmable reference function

Code	Description
00	No
01	Single channel
02	Dual channel (second channel not available for traditional architecture Xi)

## 825 °C Process function

Code	Description
00	No
01	Single channel
02	Dual channel (second channel not available for traditional architecture Xi)

### Note

Order Direct Replacement Oxymitter probe separately.

## Ordering information - XSO2CAL

Autocalibration accessories - must be mounted in a safe area.

### Model

Code	Description
XSO2CAL	O <sub>2</sub> autocalibration accessories - apply to Oxymitter or Xi electronics. General purpose only.

### Single probe sequencers autocalibration options

Code	Description
00	None
01	SPS 4001 Single Probe Sequencer, general purpose NEMA 4X, includes check valve for probe.

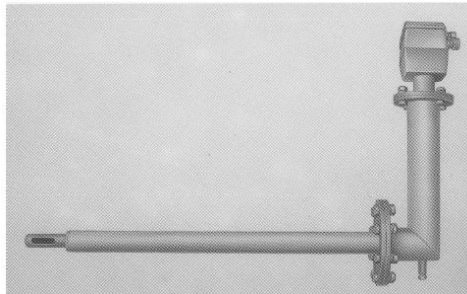
## Oxymitter accessories

### HART® hand-held communicator

The hand-held communicator is an interface device that provides a common communication link to HART compatible instruments. HART communications protocol permits all the information available from the electronics to be transmitted over standard 4–20 mA signal wires. By attaching the hand-held communicator at a termination point along the signal line, a technician can diagnose problems and configure and calibrate as if he or she were standing in front of the instrument.

For more information, call Emerson at 800-999-9307.

### Bypass Packages



The specially designed Rosemount Bypass Package for oxygen analyzers has proven to withstand the high temperatures in process heaters while providing the same advantages offered by the in-situ sensor. Inconel tubes provide effective resistance to corrosion, and the other components common to other sampling systems.

For more information, call Emerson at 800-999-9307.

### O<sub>2</sub> Calibration Gas Kits PN 6296A27G01



Rosemount O<sub>2</sub> Calibration Gas and Service Kits have been carefully designed to provide a more convenient and fully portable means of testing, calibrating, and servicing Rosemount's oxygen analyzers. These lightweight, disposable gas cylinders eliminate the need to rent gas bottles.

For more information, call Emerson at 800-999-9307.

## Wireless THUM™ Adaptor



The Smart Wireless THUM Adaptor converts the standard 4–20 mA signal from the Oxymitter or Xi Electronics to a wireless signal. All HART® information is transmitted in addition to the process O<sub>2</sub> value. Safe area only.

For more information, call Emerson at 800-999-9307.

## Special arrangements

### Special cells for high acid service



Many combustion processes use fuels that contain sulfur or HCl. Special cells provide extended life in these difficult applications.

For more information: [Emerson.com/global](https://emerson.com/global)

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