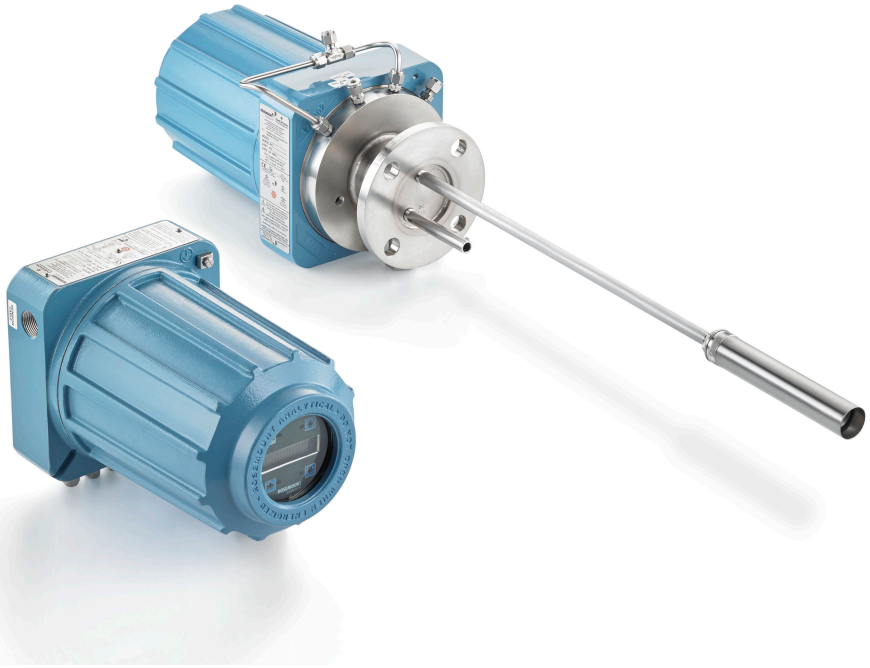
Product Data Sheet
00813-0100-4880, Rev AF
October 2025

Rosemount™ OCX8800

Oxygen and Combustibles Transmitter

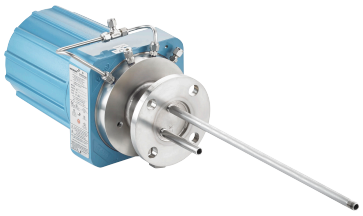


Continuous, accurate measurement for combustion processes

The Rosemount OCX8800 Oxygen and Combustibles Transmitter provides continuous and accurate measurement of combustion flue in a single, easy-to-install transmitter design. The patented Rosemount zirconia oxygen sensor coupled with a combustibles sensor using catalytic bead technology provide the basis for measurement in flue gases with temperatures up to 2600 °F (1427 °C).

Overview

Proven performance and reliability



- Robust zirconia oxygen-sensing cell with catalytic platinized beads increases cell lifetime in presence of sulfur and other poisoning agents.
- Robust combusibles equivalent (COe) sensor features a large active surface area and dilution air for accurate readings even in reducing conditions.
- Compact explosion-proof housings that are easy to mount directly to the process.

Adaptable to a range of processes

- FOUNDATION™ Fieldbus and HART® communication protocol options allow technicians to view diagnostic and operational information from the control room.
- The local operator interface (LOI) enables local commissioning and maintenance and permits visibility to diagnostics without additional tools.
- Integral or remote-mounted electronics and auto-calibration options simplify routine maintenance tasks.

Ordering information

Rosemount OCX8800 Oxygen and Combustibles Transmitter for general purpose locations

Example: OCX88A-11-10-1-1-H3-06-02

CONFIGURE >

VIEW PRODUCT >

Model

Code	Description
OCX88A	O_2 Combustibles Transmitter

Probe length and material

Code	Description
00	No probe or exhaust tube
11	18-in. (457 mm) 316 stainless steel, rated up to 1300 °F (704 °C)
12	3-ft. (0.91 m) 316 stainless steel, rated up to 1300 °F (704 °C)
13	6-ft. (1.83 m) 316 stainless steel, rated up to 1300 °F (704 °C)
14	9-ft. (2.7 m) 316 stainless steel, rated up to 1300 °F (704 °C)
21	18-in. (457 mm) Alloy 600, rated up to 1832 °F (1000 °C)
22	3-ft. (0.91 m) Alloy 600, rated up to 1832 °F (1000 °C)
23	6-ft. (1.83 m) Alloy 600, rated up to 1832 °F (1000 °C)
24	9-ft. (2.7 m) Alloy 600 up to 1832 °F (1000 °C)
31	18-in. (457 mm) ceramic, rated up to 2600 °F (1426 °C)
32	3-ft. (0.91 m) ceramic, rated up to 2600 °F (1426 °C)

Probe mounting assembly

Code	Description
10	Standard oxygen (O_2) cell: ANSI (four x ¾-in. diameter bolt circle, 6-in. diameter flange with four x ¾-in. diameter holes)

Code	Description
11	High sulfur O_2 cell: ANSI (four x ¾-in. diameter bolt circle, 6-in. diameter flange with four x ¾-in. diameter holes)
20	Standard O_2 cell: DIN (145 mm diameter bolt circle, 185 mm diameter flange, with four x 18 mm diameter holes)
21	High sulfur O_2 cell: DIN (145 mm diameter bolt circle, 185 mm diameter flange, with four x 18 mm diameter holes)

Mounting hardware: stack side

Code	Description
0	No adapter plate. You must choose *0* for the probe side mounting adapter.
1	New installation: square weld plates with studs
2	Mounting to Model 218/240 mounting plate (with Model 218/240 shield removed)
3	Mounting to existing Model 218/240 support shield
4	Adapter plate required. Must reference adapter plate part number.
5	Mounting to Model 132 adapter plate

Mounting hardware: probe side

Code	Description
0	No adapter plate
1	ANSI mounting assembly
4	DIN mounting assembly

Electronics housing communications

NEMA® 4X, IP66 HART® communications standard

Code	Description
F1	FOUNDATION™ Fieldbus communication, basic unit
F2	FOUNDATION Fieldbus communication, local operator interface
F3	FOUNDATION Fieldbus communication, blind unit with autocalibration solenoids
F4	FOUNDATION Fieldbus communication, local operator interface and autocalibration solenoids
H1	HART communication, basic unit
H2	HART communication, local operator interface
H3	HART communication, blind unit with autocalibration solenoids
H4	HART communication, local operator interface and autocalibration solenoids

Electronics mounting

Code	Description
01	Integral to sensor housing electronics
02	Split electronics and no cable
03	Split electronics and 20-ft. (6 m) cable [(1)]
04	Split electronics and 40-ft. (12 m) cable[(1)]
05	Split electronics and 60-ft. (18 m) cable[(1)]

Code	Description
06	Split electronics and 80-ft. (24 m) cable(1)
07	Split electronics and 100-ft. (30 m) cable(1)
08	Split electronics and 150-ft. (46 m) cable(1)

(1) *Rated up to 392 °F (200 °C). Electronics mounting hardware included.*

In situ filter

Code	Description
0	None
1	Stainless steel rated to 1000 °F (538 °C)
2	High surface area stainless steel, rated to 1000 °F (538 °C)
3	Alloy rated to 1832 °F (1000 °C)

Accessories

Code	Description
0	None
1	Sample probe, blowback only
2	Calibration flow meter, reference gas flow meter, and regulator set
3	Calibration flow meter, reference gas flow meter, and regulator set with sample probe blowback
4	Calibration flow meter, reference gas flow meter, and regulator set with sample probe blowback, panel mounted

Rosemount OCX8800 Oxygen and Combustible Transmitter: explosion-proof for hazardous areas

CONFIGURE > VIEW PRODUCT >

Model

Code	Description
OCX88C	Oxygen/combustibles transmitter, explosion-proof

Probe length and material

Code	Description
00	No probe or exhaust tube
11	18-in. (457 mm) 316 stainless steel, rated up to 1300 °F (704 °C)
12	3-ft. (0.91 m) 316 stainless steel, rated up to 1300 °F (704 °C)
13	6-ft. (1.83 m) 316 stainless steel, rated up to 1300 °F (704 °C)
14	9-ft. (2.7 m) 316 stainless steel, rated up to 1300 °F (704 °C)
21	18-in. (457 mm) Alloy 600, rated up to 1832 °F (1000 °C)
22	3-ft. (0.91 m) Alloy 600, rated up to 1832 °F (1000 °C)

Code	Description
23	6-ft. (1.83 m) Alloy 600, rated up to 1832 °F (1000 °C)
24	9-ft. (2.7 m) Alloy 600 up to 1832 °F (1000 °C)
31	18-in. (457 mm) ceramic, rated up to 2600 °F (1426 °C)
32	3-ft. (0.91 m) ceramic, rated up to 2600 °F (1426 °C)

Probe mounting assembly

Code	Description
10	Standard oxygen (O_2) cell: ANSI (four x ¾-in. diameter bolt circle, 6-in. diameter flange with four x ¾-in. diameter holes)
11	High sulfur O_2 cell: ANSI (four x ¾-in. diameter bolt circle, 6-in. diameter flange with four x ¾-in. diameter holes)
20	Standard O_2 cell: DIN (145 mm diameter bolt circle, 185 mm diameter flange, with four x 18 mm diameter holes)
21	High sulfur O_2 cell: DIN (145 mm diameter bolt circle, 185 mm diameter flange, with four x 18 mm diameter holes)

Mounting hardware: stack side

Code	Description
0	No adapter plate. You must choose *0* for the probe side mounting adapter.
1	New installation: square weld plates with studs
2	Mounting to Model 218/240 mounting plate (with Model 218/240 shield removed)
3	Mounting to existing Model 218/240 support shield
4	Adapter plate required. Must reference adapter plate part number.
5	Mounting to Model 132 adapter plate

Mounting hardware: probe side

Code	Description
0	No adapter plate
1	ANSI mounting assembly
4	DIN mounting assembly

Electronics housing communications

NEMA® 4X, IP66 HART® communications standard

Code	Description
F1	FOUNDATION™ Fieldbus communication, basic unit
F2	FOUNDATION Fieldbus communication, local operator interface
F3	FOUNDATION Fieldbus communication, blind unit with autocalibration solenoids
F4	FOUNDATION Fieldbus communication, local operator interface and autocalibration solenoids
H1	HART communication, basic unit
H2	HART communication, local operator interface
H3	HART communication, blind unit with autocalibration solenoids

Code	Description
H4	HART communication, local operator interface and autocalibration solenoids

Electronics mounting

For cold weather operation, preheat the instrument air by wrapping the stainless steel supply tubing around the heater neck several times and insulate with the insulating scarf, PN 6P00162H01. The entire sensor and electronics domes may also need to be separately insulated, depending on the temperatures and wind conditions. You may remove the dome insulation during the summer months.

Code	Description
01	Integral to sensor housing electronics
02	Split electronics with no cable

In situ filter

Code	Description
0	None
1	Stainless steel rated to 1000 °F (538 °C)
2	High surface area stainless steel, rated to 1000 °F (538 °C)
3	Alloy rated to 1832 °F (1000 °C)

Accessories

Code	Description
0	None
1	Sample probe, blowback only
2	Calibration flow meter, reference gas flow meter, and regulator set
3	Calibration flow meter, reference gas flow meter, and regulator set with sample probe blowback
4	Calibration flow meter, reference gas flow meter, and regulator set with sample probe blowback, panel mounted

Specifications

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

Rosemount OCX8800 Oxygen/Combustibles Transmitter

Performance specifications

Net O_2 range	0-1% to 0-40%
	Fully field-selectable via HART® or local operator interface (LOI)
Combustibles	0-1000 ppm to 0-5%
	Fully field-selectable via HART or LOI
Accuracy	Oxygen: ±0.75% of reading or 0.05% O_2, whichever is greater
	Combustibles: ±50 ppm
System response to test gas	Oxygen: 10 sec T90
	Combustibles: 25 sec T90
Calibration modes	Semi-automatic or automatic
Calibration gases	Low O_2: 0.4% O_2, balance N_2
	High O_2: 8% O_2, balance N_2
	Combustibles: 1000 ppm CO, balance air
	Regulate to 7 scfh (0.5 l/m)
Reference air	2 scfh (1 l/m), clean, dry, instrument-quality air (20.95% O_2), regulated to 35 psig (2.4 barg)
Eductor air	5 scfh (2.5 l/m), clean, dry, instrument-quality air (20.95% O_2), regulated to 35 psig (2.4 barg)
Dilution air	0.1 scfh (2.8 l/hr.), clean, dry, instrument-quality air (20.95% O_2), regulated to 35 psig (2.4 barg)
Blowback air (optional)	Clean, dry, instrument quality air (20.95% O_2) regulated to ≥ 60 psig (4.1 barg) or greater and ambient temperature of ≥ 0 °F (-18 °C)

Functional specifications

Table 1: Process temperature limits

Probe material	Temperature range
316L stainless steel	32 to 1300 °F (0 to 704 °C)
Alloy 600	32 to 1832 °F (0 to 1000 °C)
Ceramic	32 to 2600 °F (0 to 1427 °C)

Table 2: Ambient Temperature Limits

Housing	Temperature range
Sensor housing	-40 to +212 °F (-40° to +100 °C)
Electronics housing	-40 to +149 °F (-40° to +65 °C)

Process pressure

Maximum process pressure	8-in. water column

Electrical specifications

EMI/RFI effect	Meets all industrial environment requirements of EN61326 HART® analog No effect on the values being given if using 4-20 mA analog with shielded, twisted pair wiring. FOUNDATION™ Fieldbus and digital HART No effect on the values being given if using HART digital signal or FOUNDATION Fieldbus.
Line voltage	100-240 VAC 50/60 Hz
	No switches or jumpers required
Isolated output	O_2, 4-20 mA, 950 ohm maximum with HART capability COMB, 4-20 mA, 950 ohm maximum
Alarm output relay	Logic signals: dry contact, 30 mA and 30 VDC capacity
	SPA HART alarm module (optional)
	Low O_2 alarm
	High combustibles alarm
	Calibration status
	Unit failure
Power consumption limits	Heaters: 750 W nominal maximum
	Electronics: 50 W nominal maximum

Physical specifications

Materials of construction	Enclosures: Low-copper aluminum
Mounting and mounting position	Sensor housing: Flange
Electrical conduit size	Sensor housing: Two ¾-in. - 14 NPT conduit ports
	Electronic housing: Two ¾-in. - 14 NPT conduit ports

Table 3: Mounting hardware and adapter plates

Plate type	Outer diameter	Bolt circle	Studs
Square weld plate, ANSI studs	7.5 x 7.5 in. (190 x 190 mm)	4.75 in. (121 mm)	⅝ in. - 11
Square weld plate, DIN studs	6 x 6 in. (153 x 153 mm)	5.71 in. (145 mm)	M12 X 1.75

Table 4: Shipping weights

Probe length	Approximate shipping weight
18 in. (457 mm)	54 lb. (24.5 kg)
3 ft. (0.91 m)	55 lb. (24.5 kg)
6 ft. (1.83 m)	57 lb. (26 kg)
9 ft. (2.74 m)	59 lb. (26.8 kg)

Product certifications

A copy of the Declaration of Conformity can be found at the end of the Quick Start Guide.

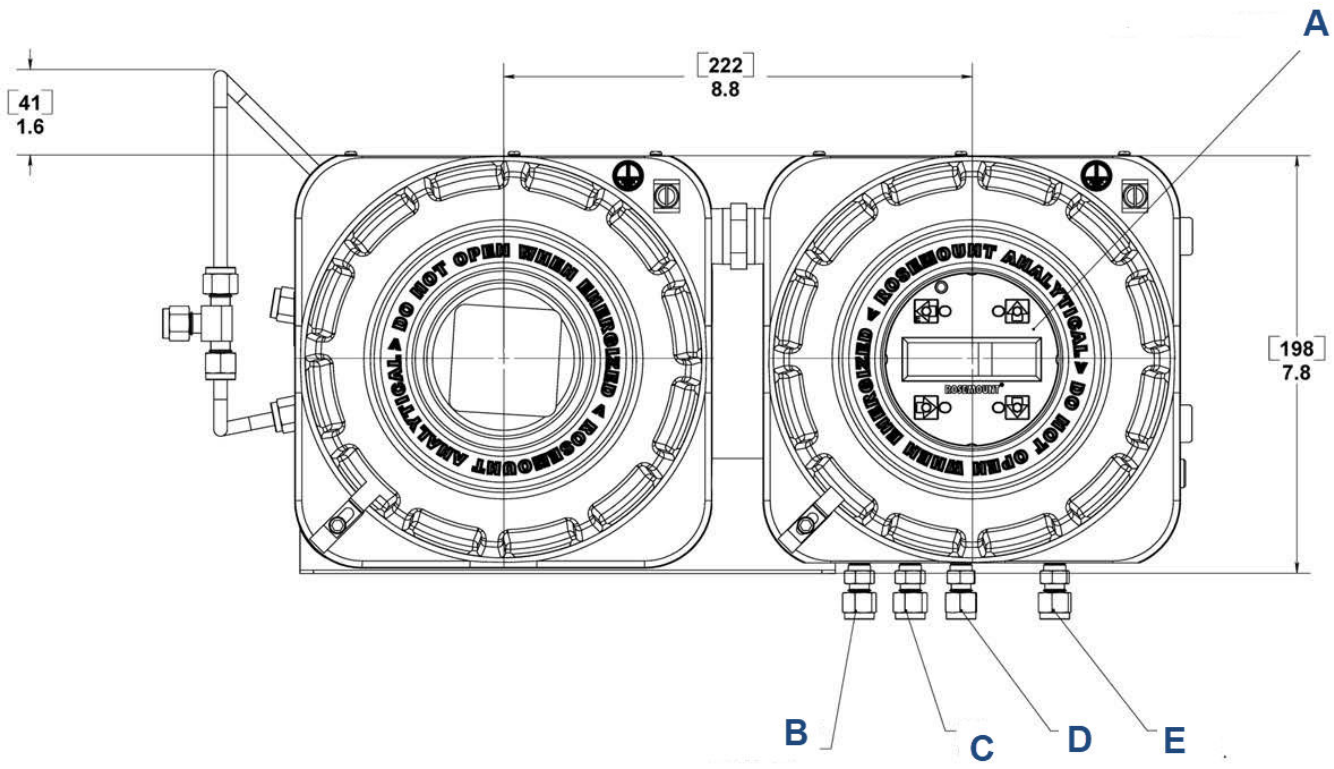
The most recent Declaration of Conformity can be found at Emerson.com/Rosemount.

Directive information

A copy of the Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the Declaration of Conformity can be found at Emerson.com/Rosemount.

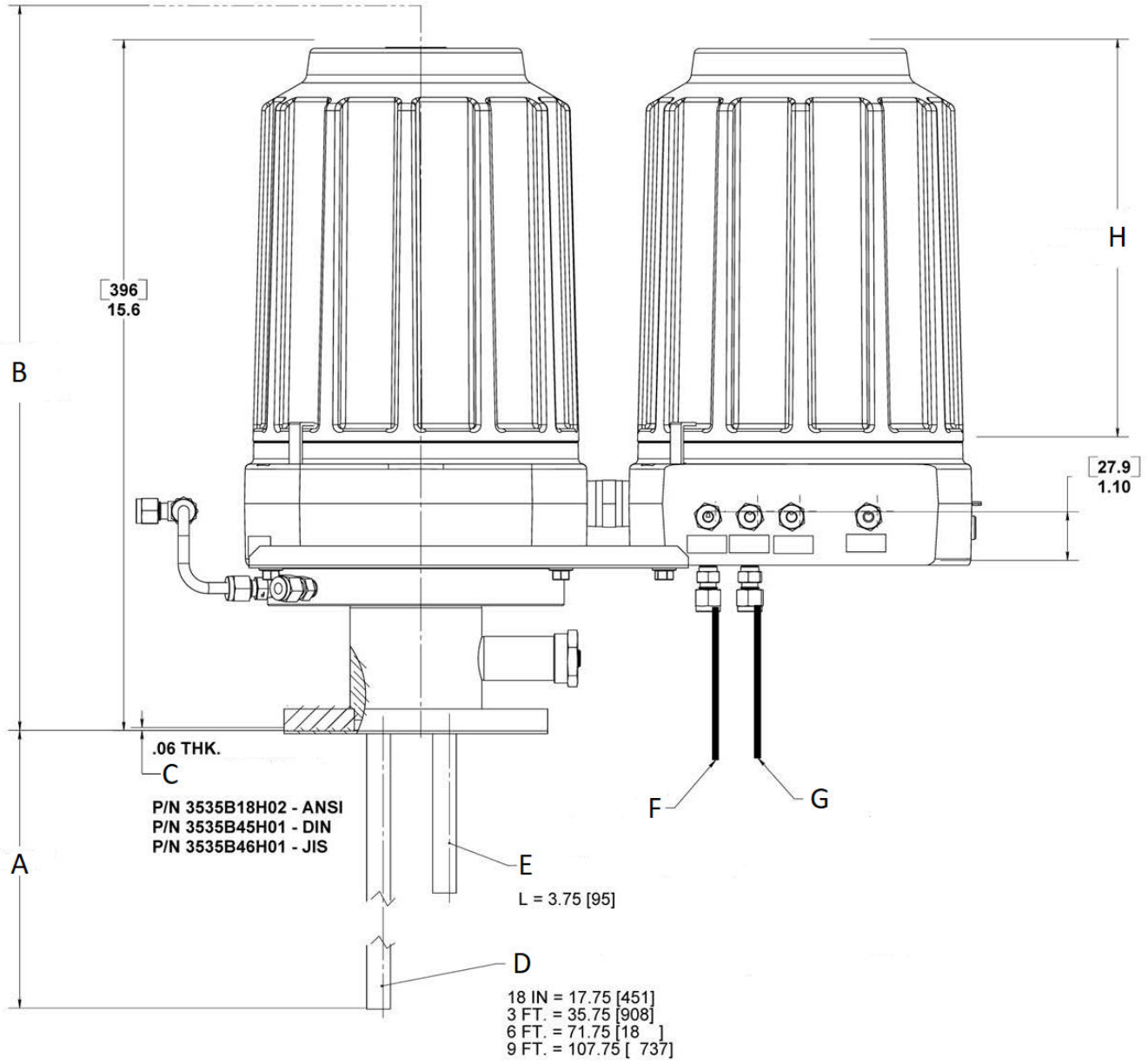
Dimensional drawings

Figure 1: Outline dimensions for Rosemount OCX8800 Oxygen/Combustible Transmitter with integral electronics



Note
Dimensions are in [millimeters] with inches below.

A. *Internal local operator interface (LOI) has standard orientation as shown and can be rotated for desired orientation (90 ° increments) for viewing through the window. Refer to manual for details.*
B. *Instrument air output*
C. *Low oxygen*
D. *High oxygen*
E. *High combustibles*

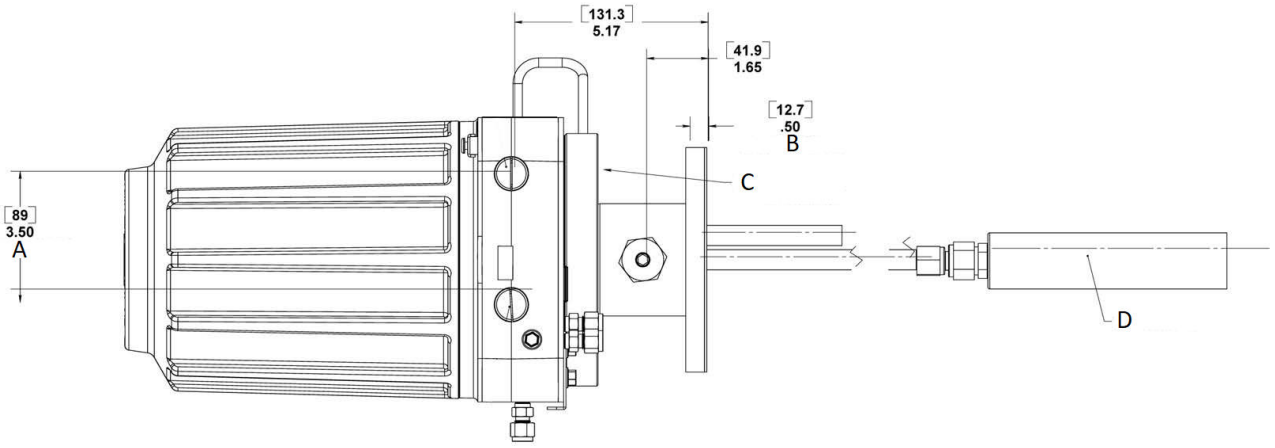


Note
Dimensions are in [millimeters] with inches below.

A. *Dimension "A": insertion depth*
B. *Dimension "B: removal envelope*
C. *Mounting gasket*
D. *Extractive ¼ NPT tube (O.D. = .54) length*
E. *Exhaust tube (¼ NPT)*
F. *Instrument air input*
G. *Calibration gas output*
H. *Allow 9.0 in. (228 mm) for cover removal*

Table 5: Installation/removal

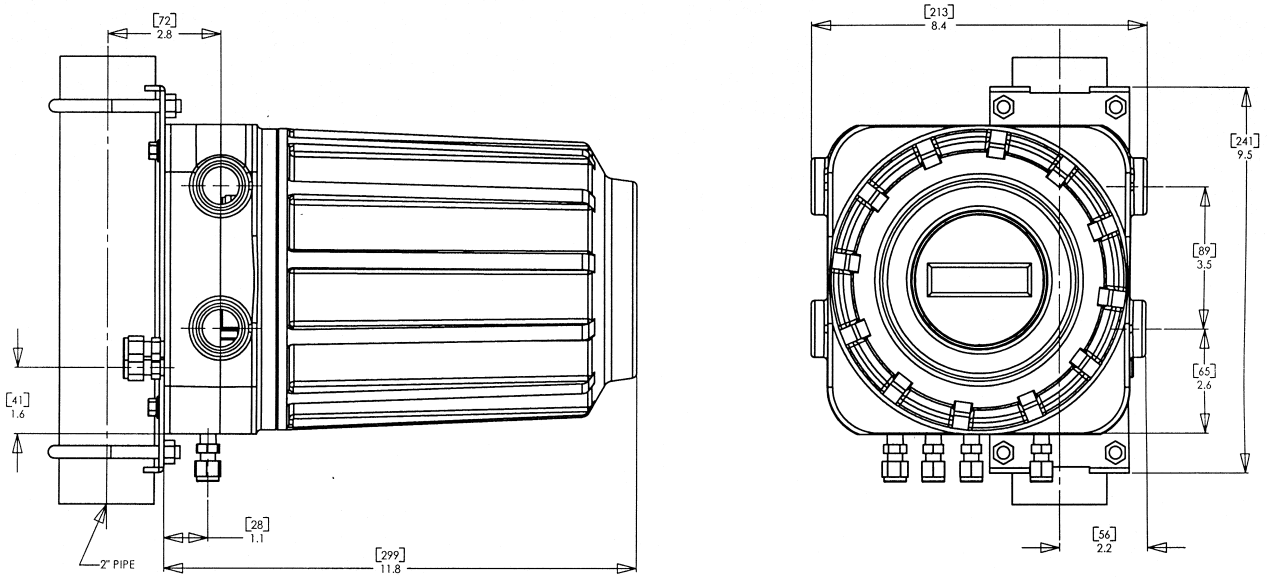
Probe length	Dimension "A": insertion depth	Dimension "B": removal envelope
18 in. (457 mm)	18 in. (457 mm)	34 in. (864 mm)
3 ft. (914 mm)	36 in. (914 mm)	52 in. (1321 mm)
6 ft. (1829 mm)	72 in. (1829 mm)	88 in. (2235 mm)
9 ft. (2743 mm)	108 in. (2743 mm)	124 in. (3150 mm)



Note
Dimensions are in [millimeters] with inches below.

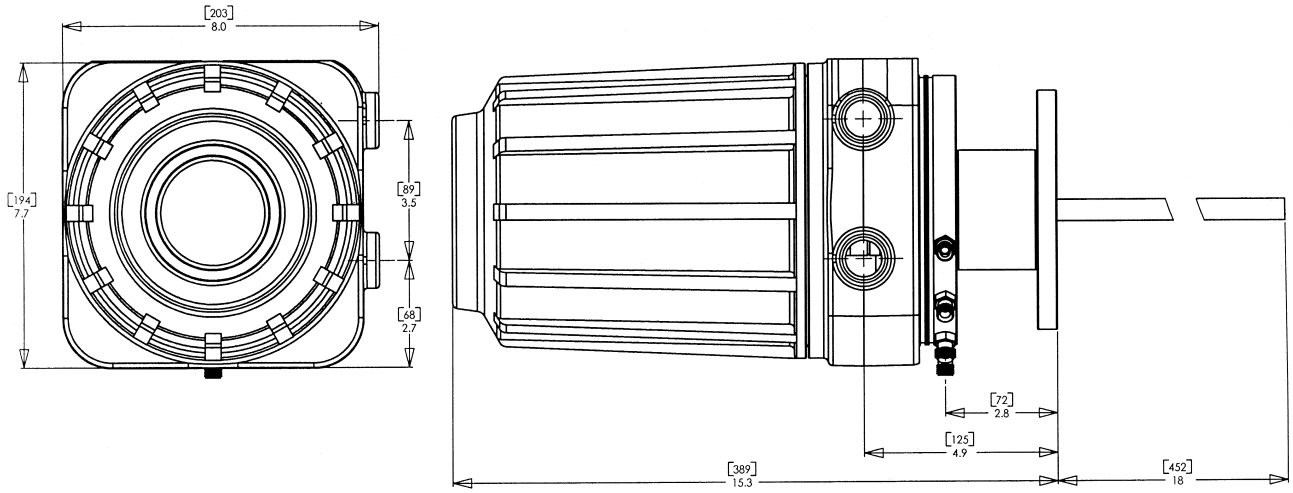
A. ¾ NPT ports
B. Mounting flange
C. ⅛ NPT air vent hole
D. In-situ filter option

Figure 2: Electronics housing



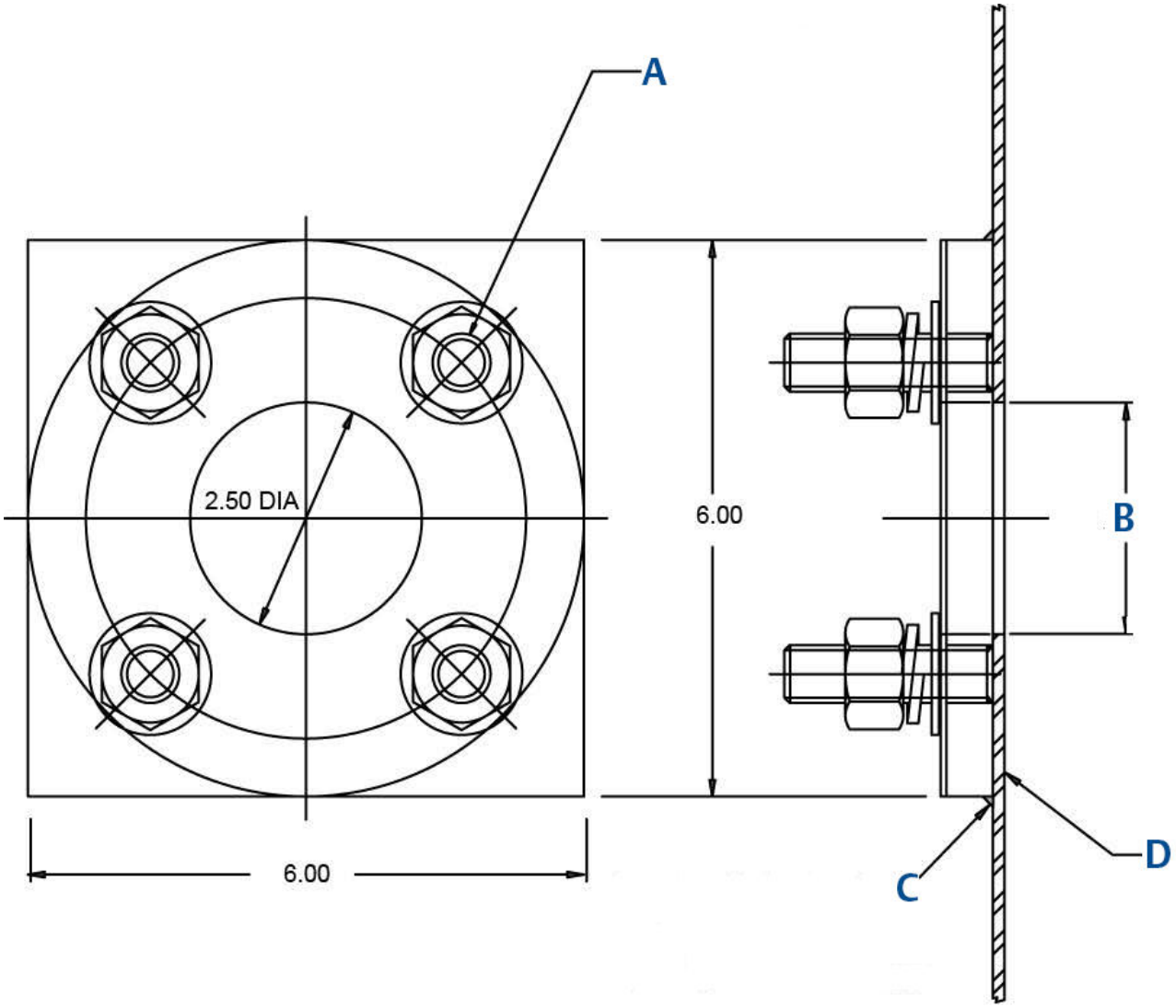
Note
Dimensions are in [millimeters] with inches below.

Figure 3: Sensor housing



Note
Dimensions are in [millimeters] with inches below.

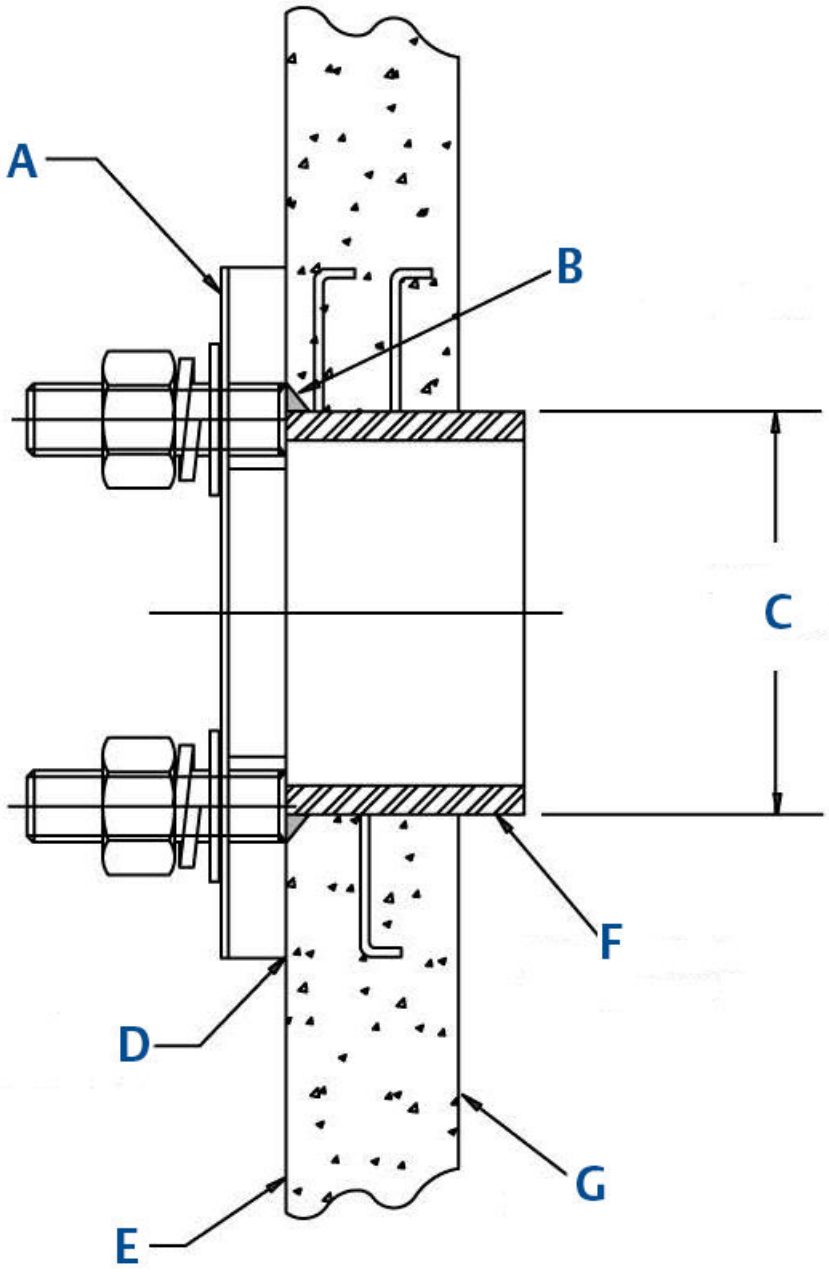
Figure 4: Metal wall stack or duct construction



Note
Dimensions are in inches.

A. ⅝-11 studs, four places equally spaced on a 4.75 BC
B. 2.50 in. minimum diameter in wall
C. Weld or bolt adapter plate to metal wall of stack or duct joint must be airtight.
D. Stack or duct metal wall

Figure 5: Masonry wall stack construction

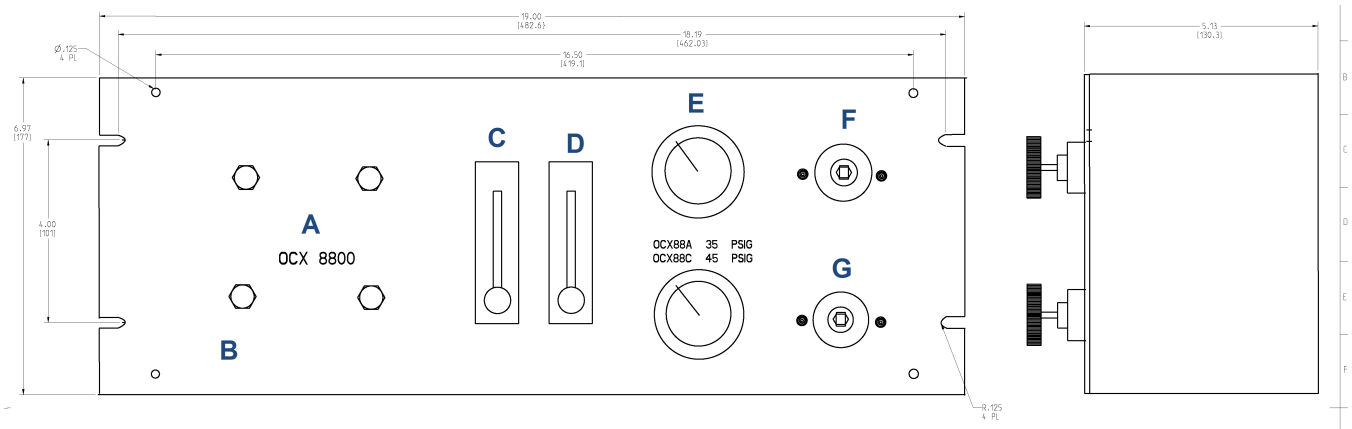


A. Bolt adapter plate to outside wall surface
B. Field weld pipe to adapter plate
C. 3.50-in. O.D. reference
D. Joint must be airtight.
E. Outside wall surface
F. 3.00 schedule 40 pipe sleeve
G. Masonry stack wall

Table 6: Mounting plate

	ANSI	DIN
Flange (x)	6.00 in. (153 mm)	7.5 in. (190 mm)
Stud size	⅝ in. - 11	M12 X 1.75
4 Studs equally spaced on B.C.	4.75 BC	5.71 in. BC (145 mm)

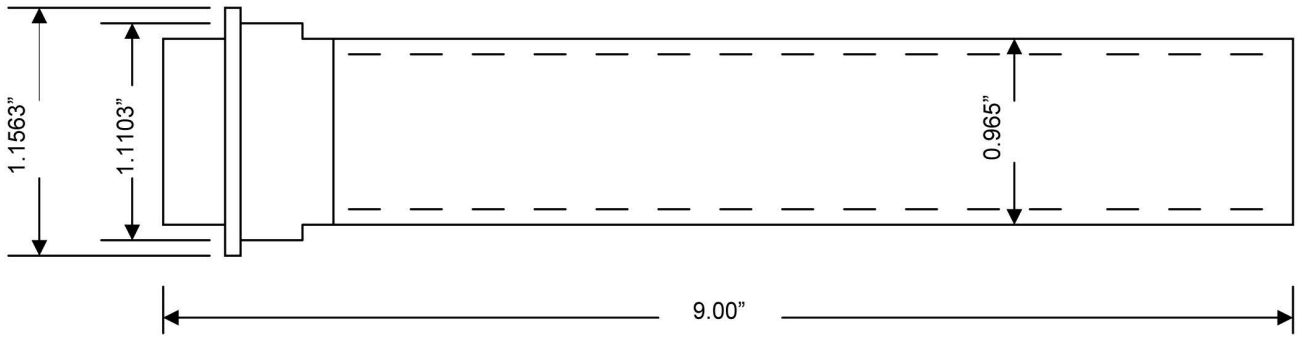
Figure 6: Blowback panel



Note
Dimensions are in inches [millimeters].

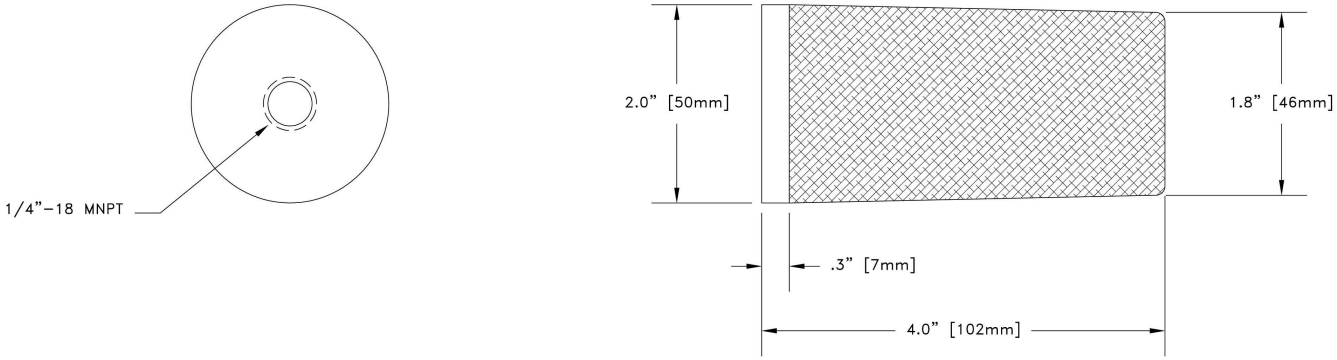
A. Calibration/blowback panel
B. Pressure analytic division
C. Dilution air
D. Calibration gas
E. Set to 55 psig
F. Blowback air pressure
G. Reference air pressure

Figure 7: Standard stainless steel and alloy filters



Note
Dimensions are in inches.

Figure 8: Stainless steel high surface area filter



Note
Dimensions are in inches [millimeters].

00813-0100-4880
Rev. AF
October 2025

For more information: **Emerson.com/global**

ROSEMOUNT™

EMERSON™