sensor

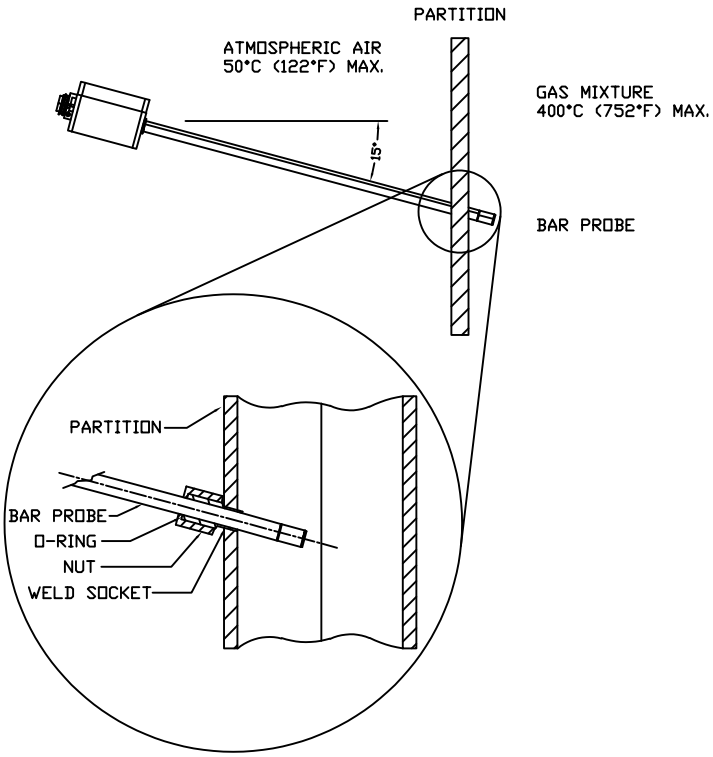
Mini-OX

Oxygen sensor for control in low temperature applications

Ideal for package boilers, the Mini-OX in-situ oxygen sensor measures %Oxygen concentrations in the exhaust of furnaces, boilers, and other applications.

Mini-OX Features

- High accuracy linear output
- Externally triggered automatic calibration
- Can be calibrated in normal air
- Mating connector supplied



Mini-OX Specifications

- **Supply voltage:** 24VDC +/- 10%
- **Supply current:** 500mA max at 24VDC
- **Analog output:** 4-20mA; load 600Ω max
  0-10VDC; load 10kΩ min
- **Warm up time (prior to sensor operation):** 60s
- **Output stabilization time:** ~180s
- **Housing temperature limits:** 14°F to 185°F (-10°C to +85°C)
- **Probe tip temperature limits:** -148°F to +752°F (-100°C to +400°C)
- **Gas flow rate:** 0 to 33 ft/s (10 m/s)
- **Oxygen range (analog output):** 0.1[1] - 25% O_2
- **Accuracy after calibration[2,3]:** 1% O_2
- **Repeatability after calibration[2,3]:** 0.5% O_2

NOTES

1) Prolonged operation below 0.1% O_2 can damage the sensing element.
2) Assuming barometric pressure remains constant.
3) As the O_2 sensor measures the partial pressure of oxygen within the measurement gas, deviations in the barometric pressure from that present during calibration will cause readout errors proportional to the change.
   Example: If the sensor reads 21% O_2 at 1013.25mbar and the barometric pressure increases by 1%, the sensor readout will also increase by 1% to 21.21% O_2.

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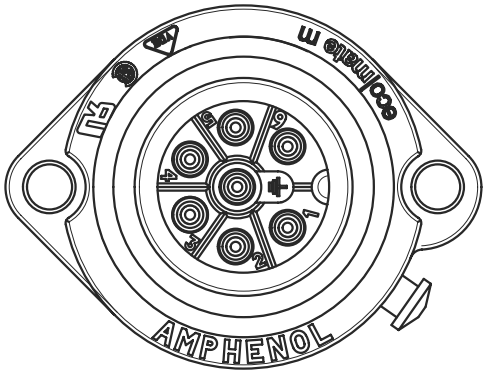
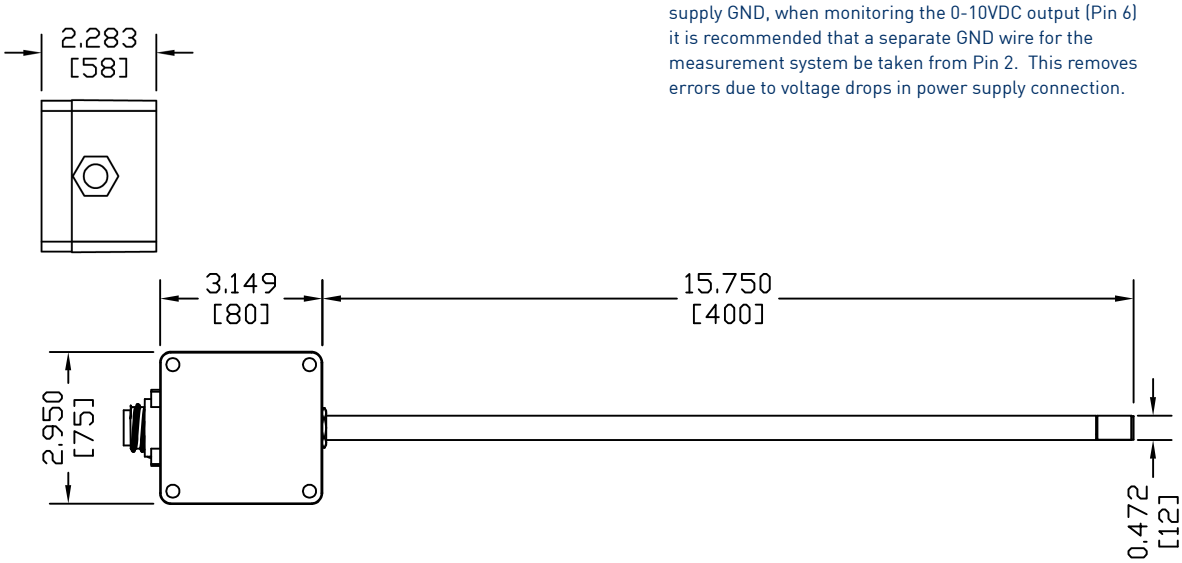
Electrical Interface



PIN	Assignment
1	24VDC +/- 10%
2	GND
3	Calibrate
4	Cycle
5	4-20mA (see note)
6	0-10VDC (see note)
Center	Housing/Probe Earth

Note: Output pins 5 and 6 are both referenced to the supply GND (Pin 2). Due to high current flow in the supply GND, when monitoring the 0-10VDC output (Pin 6) it is recommended that a separate GND wire for the measurement system be taken from Pin 2. This removes errors due to voltage drops in power supply connection.



System Requirements

Part Number	Description
13746.400	Mini-OX
A21069.10	Cable, 10ft
31349	Series 804 Controller
31194	Voltage divider
31135	Power supply

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