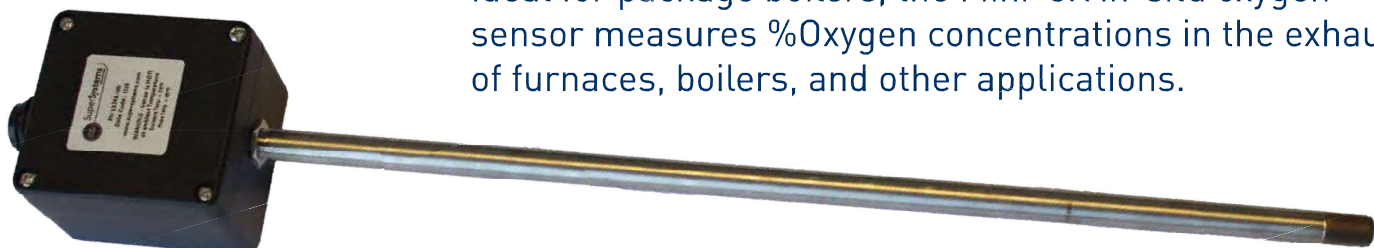


Mini-OX Oxygen sensor for control in low temperature applications

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

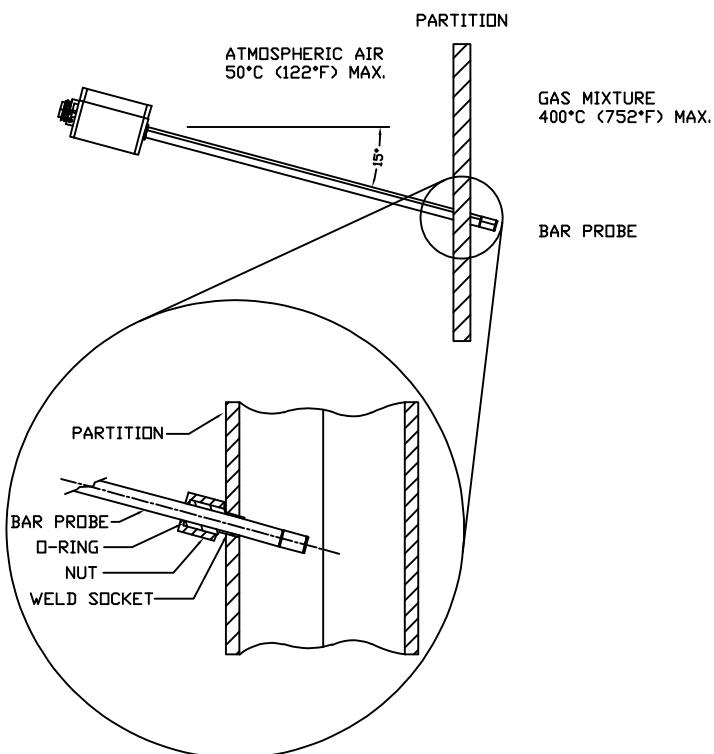


Mini-OX Features

- 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): 0.1¹ - 25% O₂
- Accuracy after calibration^{2,3}: 1% O₂
- Repeatability after calibration^{2,3}: 0.5% O₂



NOTES

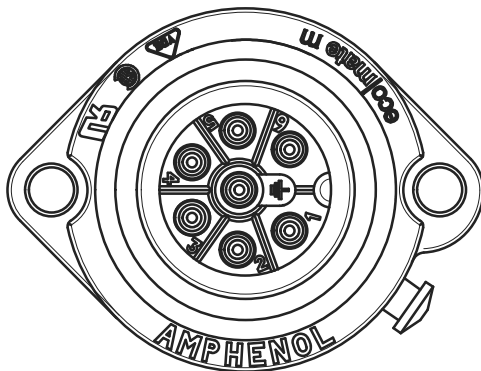
- 1) Prolonged operation below 0.1% O₂ can damage the sensing element.
- 2) Assuming barometric pressure remains constant.
- 3) As the O₂ sensor measures the partial pressure of oxygen within the measurement gas, deviations in the barometric pressure from that present during calibration will cause readout errors proportional to the change.

Example: If the sensor reads 21% O₂ at 1013.25mbar and the barometric pressure increases by 1%, the sensor readout will also increase by 1% to 21.21% O₂.

Mini-OX

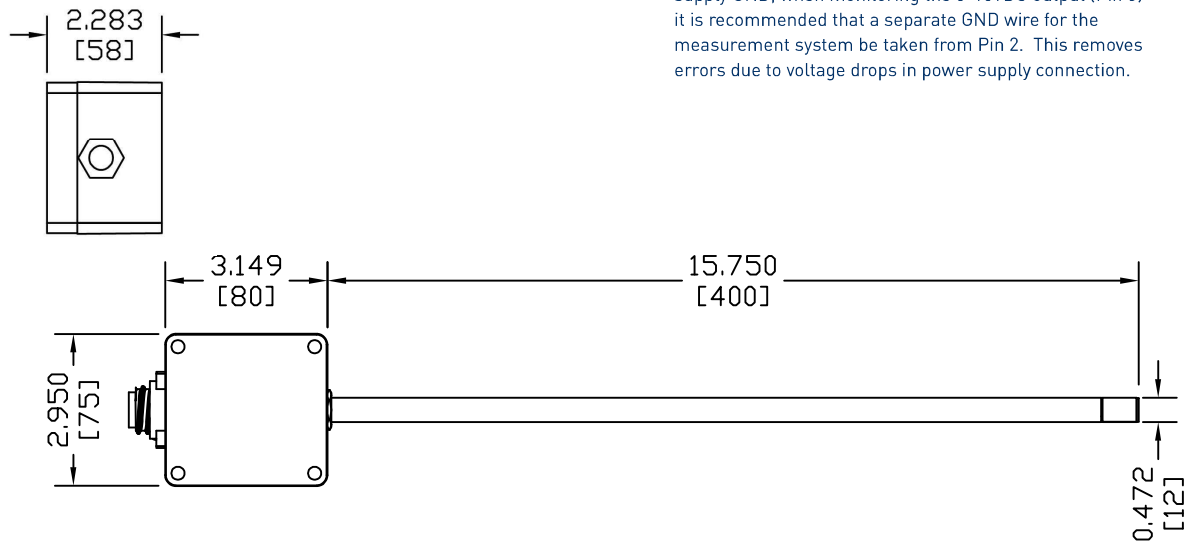
Oxygen sensor for control in low temperature applications

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