

NITROGEN DIOXIDE SENSOR

MODEL TOX-NO₂/ANA

FEATURES:

- Linear 4-20mA output signal
- Optional relay contacts
- Sensor fault indication
- Loop up indication
- Convenient diagnostic

BENEFITS:

- Industry standard signal can be directed to most controllers
- Reliable operation and monitoring integrity
- False alarm avoidance
- Simple maintenance
- Meets or exceeds commercial/industrial safety requirements

GENERAL DESCRIPTION:

The ToxAlert Model Tox-NO₂/ANA Nitrogen Dioxide Sensor utilizes an electrochemical sensing element and is designed for ambient monitoring applications. It is intended for use in fixed monitoring installations, and therefore continuous operation. The sensor module has a 4 to 20mA transmitter, designed for use in conjunction with ToxAlert's model Tox-4ANA and ToxControl controllers, or any industry standard 4 to 20mA loop controller. The Tox-NO₂/ANA has an effective range of 0-10 ppm. The sensor module requires a three-wire connection from a controller that provides a nominal 24VDC power source, common, and return signal input. The module sources current in proportion to the gas concentration. Optional relay contacts are available.

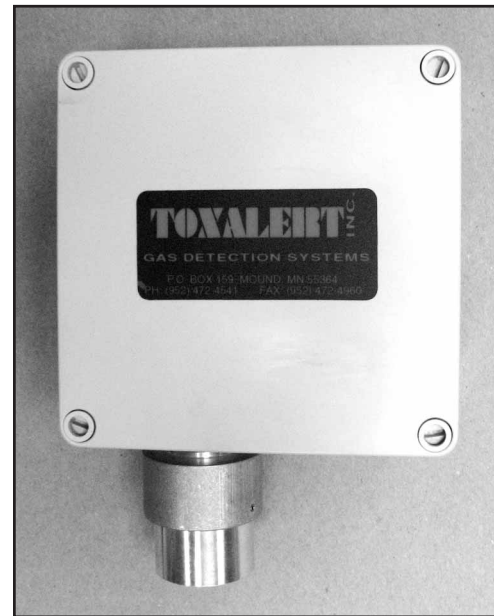


Fig. 1
Tox-NO₂ 1

Previous electrochemical sensors of this general type have used very thin plastic membranes. This results in handling and stability problems and high temperature and pressure coefficients which limit the usefulness of the device. The ToxAlert Sensor applies its proven technology, allowing gas to diffuse into the sensor through a stabilizing capillary. Not only is this extremely reliable, but entirely different diffusion laws apply resulting in low temperature and pressure coefficients and the capability to monitor gas as a percent volume.

SPECIFICATIONS:

- **Type:** Electro-chemical cell diffusion barrier type
- **Range:** 0 to 10 ppm nitrogen dioxide in air
- **Response Time:** 30 seconds to 90% indication
- **Typical life:** Two years in normal service
- **Accuracy:** +/-5% of Full Scale
- **Resolution:** 0.1 ppm

Electrical Data:

- **Input voltage:** 24VDC
- **Input power:** 1.2W
- **Input current:** 46mA @ 24 VDC
- **Loop resistance:** 850 Ohms

Unit Construction:

- **Mounting:** Conduit ³/₄" NPT or flexible cable
- **Housing:** Polystyrene, impact-resistant, nonflammable, IP66

- **Operating Temperature:** 4° to 122°F
(-20°C to 50°C)
- **Relative Humidity:** 15 to 90% RH
non-condensing

- **Output Signal:** Linear 4 to 20 mA std.
Optional Relays
- **Signal Output - Trouble:** 3 mA
- **Wiring:** 3 wire non-isolated (Additional wiring required for relay option)

- **Physical:** H: 5.11", W: 5.11", D: 2.95"
(13.0 x 13.0 x 7.5 cm)
- **Weight:** 14.2 oz.

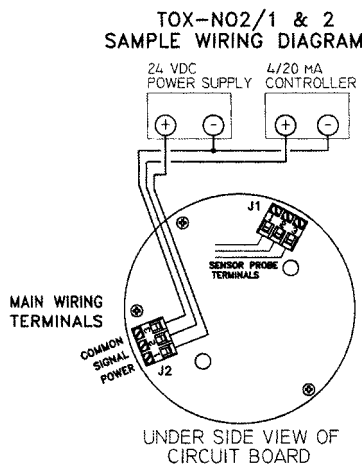


FIGURE 2

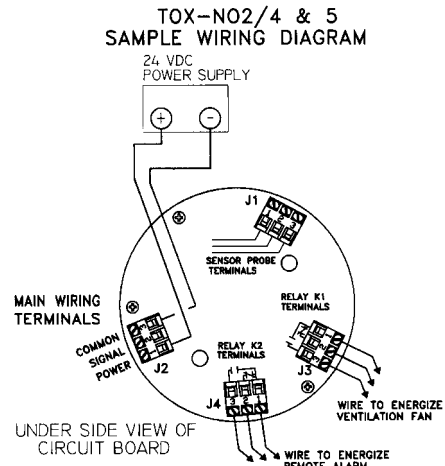
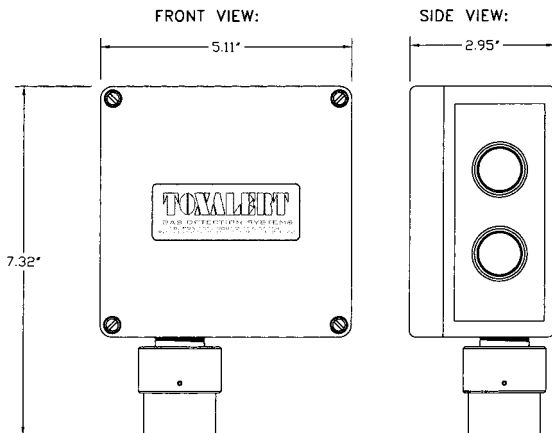


FIGURE 3

MOUNTING ORIENTATION:



TOX-NO2/ANA Revised 3/09 TM

How to order (sensor part numbers)

Tox-No₂/X

(Replace "X" with one of the following)

- 1 = 4-20mA output
- 2 = 4-20mA output with optional Nema 7 enclosure
- 4 = 4-20mA & relays
- 5 = 4-20mA & relays with optional Nema 7 enclosure