

Nitrogen Dioxide (NO₂) Gas Monitor



ITS-M5150-R



DESCRIPTION

Gas monitor with built-in nitrogen dioxide (NO₂) sensor, wall-mounted, for binary/relay output control.

APPLICATION

To detect and control levels of nitrogen dioxide (NO₂) in a wide variety of commercial and industrial applications such as vehicle exhaust in parking structures, engine repair shops, equipment rooms and ventilation systems, etc. The monitor's binary/relay outputs can control fans, remote alarms and other devices.

FEATURES

- Continuous monitoring
- One (1) built-in NO₂ electrochemical sensor, gas specific
- Two-stage relay outputs, w/status LEDs
- Built-in alarm horn (buzzer)
- Liquid Crystal Display (LCD)
- Push button programming
- Easy maintenance

SPECIFICATIONS

Electric

Power supply 24 VAC (12-28 VAC), floating, 50/60 Hz, 24 VDC (15-40 VDC)
 Protection Two (2) 2.0 A, socketed pico fuses
 Power consumption < 2 VA (100 mA) 250 mA turn-on surge

Sensor Performance

Gas detected Nitrogen dioxide (NO₂)
 Sensor element Electrochemical, diffusion
 Range Span field adjustable from 0-10 ppm via calibration, 0-6 ppm factory set
 Accuracy ± 2.5% of reading
 Repeatability ± 1% of reading
 Output drift Max. 5% of full scale/year
 Response time < 60 seconds to 90% of step change
 Sensor life expectancy 2-3 years, normal operating environment
 Sensor coverage Up to max. 5,000 sq.ft. (465 m²), "under ideal conditions"

Installation Location

Mounting height 1 to 2 ft. (0.3 to 0.6 m) above floor

Type of Control

General Single-stage or two-stage, two-position control, alarm levels/setpoints assignable over full NO₂ ppm range

Relay outputs (TB5 & TB6)

- type (2) SPDT, dry contacts
 - contact rating 115 VAC / 30 VDC, 1.0 A, contact resistance 50 mΩ, max.

- switching differential

- differential between relays
 - time delays

Audible alarm (buzzer)

Digital Display

Programming

Environmental

Permissible ambient
 - working temperature
 - storage temperature
 - humidity, continuous
 - humidity, intermitted
 - working pressure

Physical

Enclosure
 - material
 - color
 - cover
 - protection
 - installation

Adjustable, individual for cut-in and cut-out per relay

Adjustable
 0-60 minute(s) in 5-minute increments on or off, selectable switching for each cut-in and cut-out; 0 minute factory set
 Built-in, 85 db within 1 ft., enabled or disabled selectable; assignable to low or high alarm setpoint
 LCD, two lines x 8 characters, 1 digit resolution, displays CO ppm values
 Alarm level/setpoint set-up, differential, time delay and audible alarm via (3) push buttons and LCD display

-4°F to 104°F (-20°C to 40°C)
 32°F to 68°F (0°C to 20°C)
 15 to 90% RH, non-condensing
 0 to 99% RH, non-condensing
 Atmospheric ± 10%

Polycarbonate, ABS blend, fire-retardant, UL-V0
 Cool gray, 2U pantone
 Snap-on, secured by (2) screws
 NEMA 1, general purpose
 Wall (surface) mounted, or single gang electrical box

SPECIFICATIONS

Physical (cont...)

Dimensions (H x W x D)	6.0 x 3.5 x 1.09 in. (152 x 89 x 28 mm)
Cable entry	1 hole on back side of base plate for single gang electrical box mounting
Wire connection	Terminal blocks, screw type for lead wire
Wire size	Min. 26 AWG (0.4 mm ²) Max. 16 AWG (1.3 mm ²)
Weight	0.5 lbs. (0.3 kg)

Warranty

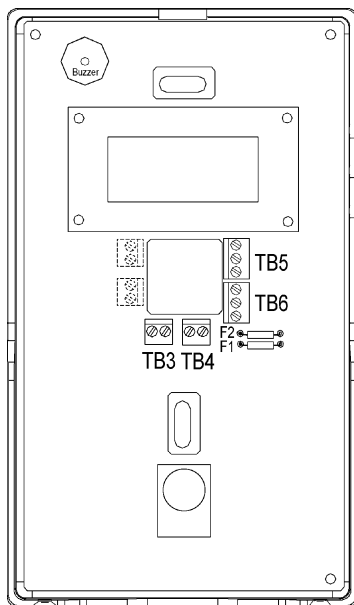
12 months material and
workmanship

ORDERING INFORMATION

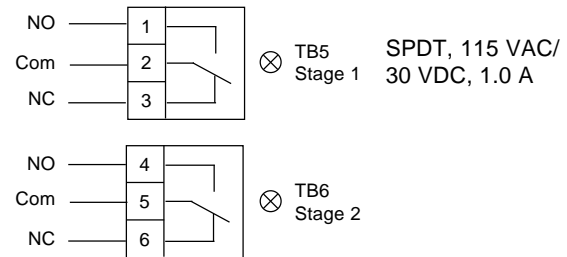
ITS-M5150-R	NO ₂ Monitor, 0-6 ppm, (2) SPDT 1 A relays, buzzer, LCD, wall-mount
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FIELD WIRING CONFIGURATION

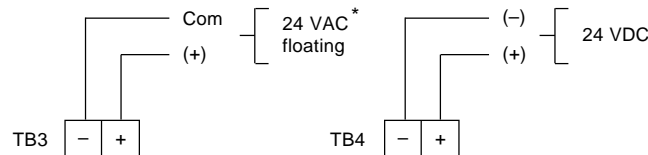
ITS-M5150-R



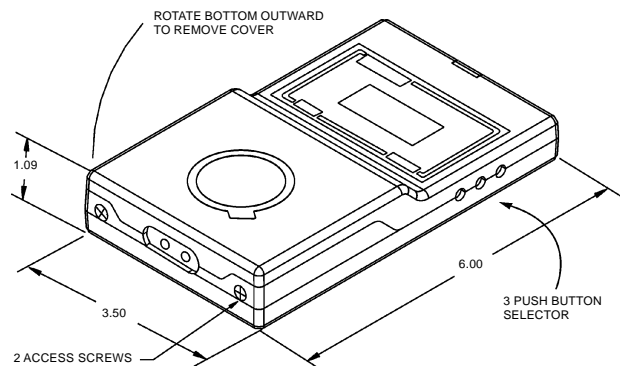
TB5 and TB6 Staged Relay Output Control w/Status LEDs



TB3 and TB4 Power Supply 24 VAC or 24 VDC



* Do not connect 24 VAC to earth ground



F1 and F2 Fuses

