
CARBON MONOXIDE AND NITROGEN DIOXIDE STAND-ALONE DUAL GAS MONITOR

MODEL TSM

TYPICAL INSTALLATIONS:

Parking Garages
Bus Garages
Fire Stations
Warehouse
Car Dealers

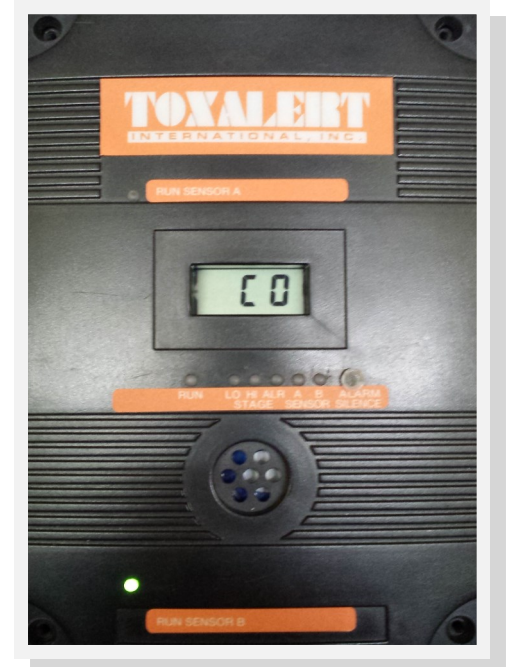
Vehicle Maintenance & Storage
***Highway Departments**
***Utilities**
***Public Works**

Ice Arenas
Post Offices
Police Stations
Tunnels

GENERAL DESCRIPTION:

TOXALERT'S Model TSM Stand-Alone Monitors are compact, electro-chemical, cost effective gas monitors designed for fixed installation, continuous monitoring of commercial & industrial facilities. The TSM Series is a carbon monoxide (CO) sensor, nitrogen dioxide (NO₂) sensor or a combination of both CO and NO₂ sensors in one monitor. For design flexibility, there is an option to locate one of the sensors remote from the monitor. Each Stand-Alone Monitor is microprocessor based to ensure trouble free, long-term stability and has three (3) field adjustable stages of operation. Relay outputs for each stage are designed for fail-safe operation and to energize remote equipment such as ventilation fans and visual alarms.

The Model TSM is a self-contained monitor in an architecturally appealing ABS housing with indicators for power on, microprocessor running (malfunction), warning or fan stage, alarm stage, and high alarm stage. Options available are an LCD display of gas concentration and audible alarm with silence. The audible alarm silence pushbutton temporarily silences the audible horn until the next alarm occurrence.



TSM with Optional LCD

STANDARD FEATURES:

- Single or dual gas monitor
- Fully electronic for long life
- 24 Volt DC power
- User adjustable warning, alarm, and high alarm levels
- Indication of sensor end of life
- Relay outputs for remote control and alarming
- Operating range meets OSHA std. 1910.1000
- Indicators for power on, warning, alarm, and high alarm

OPTIONS:

- LCD display of gas concentration in PPM
- Audible Alarm with silence, 70db
- One or two sensors remote

SPECIFICATIONS:

- Gas Detected: CO, NO₂
 - Sensor Type: Electro-Chemical
 - Range: CO 0-200 PPM, NO₂ 0-10PPM
 - Input Power: 24 VDC +/-10%
0.2 Amps max
 - Relay Contacts: 24VDC, .5A resistive
- Environment Operation Range
- Temperature: -4°F to 122°F
(-20°C to 50°C)
 - Relative Humidity: 0-95% non-condensing
- Enclosure:
- Dimensions: 7.2”H x 4.9”W x 2.2” D
 - Type: Surface Mount
 - Color: Black
 - Material: ABS
- Response Time:
- CO Sensor 40 Seconds to reach 90% of indication
 - NO₂ Sensor 60 seconds to reach 90% of indication

- Indicators:

Power On	Alarm Stage
Malfunction	Warning Stage
High Alarm Stage	

- Storage Range
- Temperature: -4°F to 122°F
(-20°C to 50°C)
 - Relative Humidity: 0-95% non-condensing
- Resolution:
- CO Sensor = 1 PPM; NO₂ sensor = 0.02 PPM
- Typical Life:
- CO Sensor 7 years in normal service
 - NO₂ Sensor 3 years in normal service

FIELD WIRING

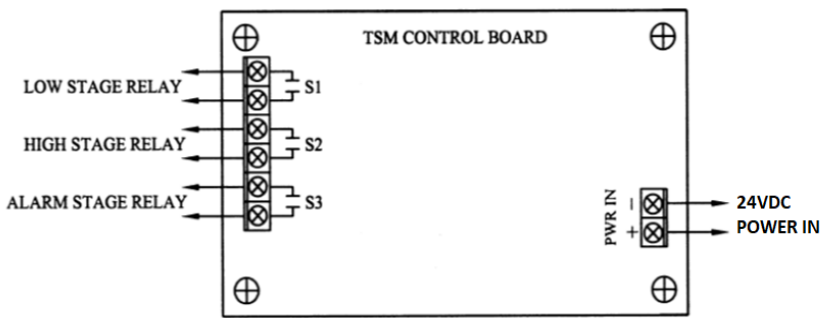
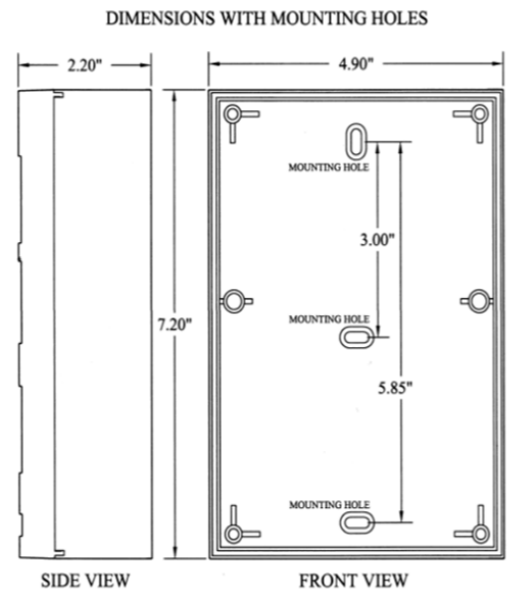


FIGURE 1

FIGURE 2



ORDERING INFORMATION:

Model	First Sensor (A)	Second Sensor (B)	LCD Display
TSM	-XXX	-XXX	-Z
	COL = CO Sensor Local	NO ₂ L = NO ₂ Sensor Local	Ø = None Standard
	COR = CO Sensor Remote	NO ₂ R = NO ₂ Sensor Remote	D = Included
	NO ₂ L = NO ₂ Sensor Local	COL = CO Sensor Local	
	NO ₂ R = NO ₂ Sensor Remote	Ø = No 2nd Sensor (B)	