Wall & Duct
CO & NO2 Sensor/Controller

Analog and BACnet/Modbus protocol options
Field replaceable sensing elements
Standard LCD with intuitive set up menu
Integrated LED indicators and audible alarm

DESCRIPTION

The TG Series sensors can be ordered as individual CO or NO2 sensors or as a combination CO/NO2 sensor in a shared enclosure.

The analog output model features 2 outputs that support daisy chain wiring - multiple sensors may be used in a parallel sequence (0-10V) for cost effective coverage of large areas. The unit can also act as a stand alone controller, utilizing the relay for exhaust fan operation or the output for direct control of a VFD.

The BACnet/Modbus model supports BACnet MS/TP & Modbus network communication in one unit. Standard features include network auto-configuration, a programmable fan relay, LED indicators, integrated display and audible alarm.

APPLICATIONS

- Ensure adequate air flow in occupied spaces
- Monitor multiple toxic gases with one mounted unit
- Alert occupants of elevated gas levels
- Directly control exhaust fans

Designed and Assembled
In the U.S.A

7 year limited warranty

FEATURES

Cost-effective dual gas sensing and control

- Integrated display, LED indicators, audible alarm
- Order as individual CO or NO2 sensor, or specify both sensing elements in one enclosure

Flexibility of analog output model

- Menu selectable 0-5/10V, 1-5V and 4-20mA outputs (0-10V default)
- Dual outputs support daisy chain wiring to cost-effectively sense and control large areas

Versatility with BACnet/Modbus model

- Supports BACnet MS/TP and Modbus RTU networks
- Auto-configuration detects network baud rate, serial format, protocol type and self-addresses

High reliability reduces call backs

- Temperature compensated elements for maximum accuracy
- UL2034 recognized electrochemical CO sensing element
- 5 year life expectancy on CO and NO2 elements
- Warning indicators alert occupants when element's lifecycle is near end for replacement
- 7-year limited warranty on electronics; 2-year on elements

Easy to install

- Test mode speeds up field commissioning for verifying warning indicators and relay functions
- Push buttons and LCD to navigate setting parameters
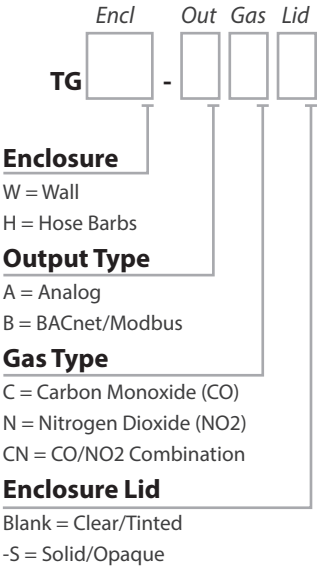
Standard LCD and LED indicators

Removable terminal block

Field Replaceable Sensing Elements

Audible alarm

Push button menu for easy setup and programming

ORDERING

```
        Encl    Out Gas Lid

  TG  [  ]  - [ ][ ][ ]
```

Enclosure
W = Wall
H = Hose Barbs

Output Type
A = Analog
B = BACnet/Modbus

Gas Type
C = Carbon Monoxide (CO)
N = Nitrogen Dioxide (NO2)
CN = CO/NO2 Combination

Enclosure Lid
Blank = Clear/Tinted
-S = Solid/Opaque

Replacement Elements
TGS-CO = Carbon Monoxide
TGS-NO2 = Nitrogen Dioxide

SPECIFICATIONS

Power Supply		15-30VDC/24VAC[1], 4W max, 120mA max.
Analog Outputs	2 programmable outputs	0-10V (default), 0-5V, 1-5V and 4-20mA (menu selectable)
	CO output scaling	0-200ppm (default), 0-1000ppm (menu selectable)
	NO2 output scaling	0-10ppm (default), 0-20ppm (menu selectable)
	Temperature output scaling	-20 to 85°C
BACnet/Modbus	Baud Rates	9600, 19200, 38400, 57600, 76800, 115200
Fan Relay	Fan relay characteristics	N.C. 10A@125VAC, 5A@30VDC
	CO fan relay setpoint	25ppm (default), 0-1000 ppm (menu selectable)
	NO2 fan relay setpoint	1ppm (default), 0-20ppm (menu selectable)
Alarm Relay (Analog model only)	Alarm relay characteristics	N.C. 1A@30VDC
	CO alarm relay setpoint	100ppm (default), 0-1000ppm (menu selectable)
	NO2 alarm relay setpoint	3ppm (default), 0-20ppm (menu selectable)
Display	3-1/2 digit LCD	Indicates CO ppm, NO2 ppm (menu selectable)
LEDs	Green, Yellow, Red	Green = Normal, Yellow = Relay, Red = Alarm
Audible Alarm Exposure	85dB Piezo transducer	30 minutes above alarm setpoint per UL2034 (menu selectable)
CO Sensor Performance	Type	Electrochemical
	Accuracy	+/-10% of reading @ 20°C
	Reproducibility	<+/-2% of reading
	Response time	<15 seconds
	Certifications	UL2034 Recognized Component
	Long term stability	<+/-5% per year
	Life expectancy	>5 years
NO2 Sensor Performance	Type	Electrochemical
	Accuracy	+/-10% of reading @ 20°C
	Reproducibility	<+/-3% of reading
	Response time	<15 seconds
	Long term stability	<+/-5% per year
	Life expectancy	>5 years
Operating Environment	Temperature, continuous	-20 to 40°C
	Temperature, intermittent	-30 to 55°C
	Humidity	15-95% continuous, 0-95% intermittent
Enclosure	Material	ABS/Polycarbonate
	Dimensions	4.0"h x 4.4"w x 2.1"d
	Conduit Opening	Tapped 1/2" NPT

(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.