

# G850 6-Gas Monitor PLUS ToxAlert Broad Range



- Exceptional HAZMAT and confined space performance
- Compact 1-to-6 sensor design plus...
- Optional broad range ToxAlert sensor protects against hundreds of toxic gases
- Built-in motorized pump operated in diffusion or sample-draw mode
- Highly configurable smart sensor design
- Extended battery life
- Three alarm modes

## ToxAlert

Electrochemical sensors are standard in virtually all portable confined space monitors because they can identify specific known gases. However, in many environments such as sewers or storage vessels, unknown gases may be present. For protection in these cases, **a broad range sensor** is essential. The ToxAlert sensor literally protects you from hundreds of toxic gases with no false alarms. Today's G850 remains the premier instrument to successfully combine the unique characteristics and benefits of both electrochemical and **broad range** MOS sensors.

# Beyond the Safety Standard

The G850 combines smart sensor technology with advanced electronics for a truly superior confined space instrument. The G850's ground breaking features are user-friendly and simple to operate. The **broad range** ToxAlerT sensor ensures you superior protection from hundreds of unknown toxic gases, without false alarms.

The AutoCal® feature simplifies and reduces calibration time. With these key features, an internal pump, and other useful accessories, the G850 provides both protection and convenience.

The versatile G850 recognizes the sensor type, detection range, calibration interval, and alarm threshold values. Two gas supply modes (diffusion and internal pump) make this the ideal warning instrument to use before entering confined spaces.

The optional built-in pump allows for increased safety in confined spaces. If the pump is switched on, the diffusion outlet automatically shuts down to avoid distortion of the measurement results.

## What does OSHA think about broad range sensors?

"Where the employer has already identified (atmospheric) hazards, substance-specific sensors are preferable, because they accurately indicate the concentrations of identified air contaminants. By contrast, where the employer has not been able to identify the specific atmospheric hazards present or potentially present in a sewer, **broad range sensors are preferable** because they indicate that the hazardous threshold of a class (or classes) of contaminants (i.e. hydrocarbons) in the sewer have been exceeded."



## The G850's broad range ToxAlerT protects you from hundreds of gases!

Conventional toxic gas detectors can protect you from only two or three gases.

|  |   |  |  |   |   |
|--|---|--|--|---|---|
| acetic acid (C <sub>2</sub> H <sub>4</sub> O <sub>2</sub> )                        | cyclohexene (C <sub>6</sub> H <sub>10</sub> )                     | ethyl mercaptan (C <sub>2</sub> H <sub>5</sub> SH)               | isobutyl alcohol (C <sub>4</sub> H <sub>10</sub> O)                | methyl ketone (C <sub>4</sub> H <sub>8</sub> O)               | trichloroethylene (C <sub>2</sub> HCl <sub>3</sub> )                                      |
| acetone (C <sub>3</sub> H <sub>6</sub> O)  | dichlorobenzene (C <sub>6</sub> H <sub>4</sub> Cl <sub>2</sub> )  | flourotrichloromethane (CCl <sub>3</sub> F)                      | isopropyl alcohol (C <sub>3</sub> H <sub>8</sub> O)                | methyl mercaptan (CH <sub>3</sub> SH)                         | turpentine (UVCB)   |
| acrylonitrile (C <sub>3</sub> H <sub>3.5</sub> N)                                  | dichloroethylene (C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub> ) | formaldehyde (CH <sub>2</sub> O)                                 | isopropylamine (C <sub>3</sub> H <sub>9</sub> N)                   | methyl styrene (C <sub>9</sub> H <sub>10</sub> )              | vinyl chloride (C <sub>2</sub> H <sub>3</sub> Cl)   |
| ammonia (NH <sub>3</sub> )   | dimethylamine ((CH <sub>3</sub> ) <sub>2</sub> NH)                | heptane (C <sub>7</sub> H <sub>16</sub> )                        | jp8  | naphthalene (C <sub>10</sub> H <sub>8</sub> )                 | xylene (C <sub>8</sub> H <sub>10</sub> )  |
| benzene (C <sub>6</sub> H <sub>6</sub> )   | diisobutyl ketone (C <sub>9</sub> H <sub>18</sub> O)              | hexane (C <sub>6</sub> H <sub>14</sub> )                         | lpg  | nitropropane (C <sub>3</sub> H <sub>7</sub> NO <sub>2</sub> ) | xylydine ((CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>3</sub> NH <sub>2</sub> ) |
| butanone (meK) (C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> )                     | ethanolamine (NH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OH) | hexone (C <sub>6</sub> H <sub>12</sub> O)                        | methanol (CH <sub>3</sub> OH)                                      | nitrotoluene (C <sub>7</sub> H <sub>7</sub> NO <sub>2</sub> ) | ...and dozens more  |
| butyl acetate (C <sub>8</sub> H <sub>16</sub> O <sub>2</sub> )                     | ethyl acetate (C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> )     | hydrogen chloride (HCl)  | methyl acetate (C <sub>3</sub> H <sub>6</sub> O <sub>2</sub> )     | styrene (C <sub>8</sub> H <sub>8</sub> )                      |   |
| butyl alcohol (CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OH) | ethylamine (CH <sub>3</sub> CH <sub>2</sub> NH <sub>2</sub> )     | hydrogen cyanide (HCN)   | methyl alcohol (CH <sub>4</sub> O)                                 | propyl alcohol ((CH <sub>3</sub> ) <sub>2</sub> CHOH)         |   |
| carbon monoxide (CO)   | ethanol (C <sub>2</sub> H <sub>6</sub> O)                         | hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> )               | methyl chloride (CH <sub>3</sub> Cl)                               | sulfur dioxide (SO <sub>2</sub> )                             |   |
| carbon tetrachloride (CCl <sub>4</sub> )   | ethyl chloride (C <sub>2</sub> H <sub>5</sub> Cl)                 | hydrogen sulfide (H <sub>2</sub> S)                              | methyl chloroform (C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> ) | tetrachloroethylene (C <sub>2</sub> Cl <sub>4</sub> )         |   |
| chlorobenzene (C <sub>6</sub> H <sub>5</sub> Cl)                                   | ethyl ether (C <sub>4</sub> H <sub>10</sub> O)                    | isoamyl acetate (C <sub>7</sub> H <sub>14</sub> O <sub>2</sub> ) | methylene chloride (CH <sub>2</sub> Cl <sub>2</sub> )              | toluene (C <sub>7</sub> H <sub>8</sub> )                      |   |

# Technical Data

## G850 Multi-gas monitor

### Gases

|         |   |
|---------|---|
| EX      | Combustible gases<br>Methane (CH <sub>4</sub> ) 0 to 100% LEL<br>Methane (CH <sub>4</sub> ) 0 to 100% volume  |
| OX      | Oxygen (O <sub>2</sub> ) 0 to 25% volume  |
| TOX     | Ammonia (NH <sub>3</sub> ) 0 to 200 ppm and 0 to 500 ppm<br>Carbon monoxide (CO) 0 to 300, 1,000, or 2,000 ppm<br>Chlorine (Cl <sub>2</sub> ) 0 to 10 ppm<br>Chlorine dioxide (ClO <sub>2</sub> ) 0 to 2 ppm<br>Ethylene oxide (C <sub>2</sub> H <sub>4</sub> O) 0 to 20 ppm<br>Hydrogen chloride (HCl) 0 to 30 ppm<br>Hydrogen cyanide (HCN) 0 to 50 ppm<br>Hydrogen sulfide (H <sub>2</sub> S) 0 to 100 ppm<br>Nitrogen dioxide (NO <sub>2</sub> ) 0 to 30 ppm<br>Nitrogen monoxide (NO) 0 to 100 ppm<br>Phosphine (PH <sub>3</sub> ) 0 to 10 ppm<br>Silan (SiH <sub>4</sub> ) 0 to 20 ppm<br>Sulfur dioxide (SO <sub>2</sub> ) 0 to 10 ppm |
| DualTox | Hydrogen sulfide (H <sub>2</sub> S) 0 to 100 ppm and carbon monoxide (CO) 0 to 300 ppm<br>Hydrogen sulfide (H <sub>2</sub> S) 0 to 100 ppm and carbon monoxide (CO) 0 to 500 ppm  |

Additional gases and ranges are available, please contact GfG for more information.

### Detection principles (sensors)

|          |   |
|----------|---|
| EX       | Catalytic combustion / thermal conductivity |
| OX       | Electrochemical                             |
| TOX      | Electrochemical                             |
| ToxAlerT | Metal oxide sensor (MOS)                    |

### Response time

5 to 60 seconds depending on type of gas

### Expected life of sensors

Greater than 2 years

### Gas supply

Diffusion  
Diffusion and sampling pump (optional)

### Display

Auto-backlight, graphic alphanumeric display

### Operation

Touch keys for on / off, auto zeroing, peak values / display functions

### Alarms

Visual: 360° flashing LEDs  
Audible: 99 dB at 30 cm / 1 foot  
Vibrating alarm (optional)

### Operational time

In continuous diffusion operation, the monitor will run more than 10 hours. The continuous runtime will be reduced by the alarms and the use of the sample pump.

### Power source

NiMh battery pack (four hour charging time)

### Temperature range

-4 to +122°F (-20 to +50°C)

### Ambient pressure

800 to 1,300 hPa

### Casing

IP 64, RF resistant

### Data logger

Adjustable intervals of 2 minutes for 55 hours

### Weight and dimensions

21 ounces (600 grams)  
3.08x5.56x1.76 inches (77 x 139 x 44 mm) (WxHxD)

### Approvals

UL Class 1, Div.1

Specifications subject to change without notification

Distributed by:



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