



SHOWN WITH SEC MILLENIUM SENSOR

## SEC 3100 Digital Gas Transmitter

### Features

- *Explosion Proof*
- *Back lighted LCD Display*
- *Low Cost*
- *Plug and play toxic, oxygen and combustible gas sensors*
- *Self-Check system*
- *4-20 mA output*
- *RS-485 Interface (Isolated)*
- *Alarm and fault relays*
- *Non-intrusive configuration*
- *Non-intrusive calibration*
- *Removable, non-volatile, time stamped data logging memory stick*
- *Optional IS barrier*
- *Digital communication link to SEC 3000 and SEC Millenium Gas Detectors*
- *Multi port housing for easy installation*

### Applications

- *Petrochemical Refineries*
- *Compost Facilities*
- *Semi-Conductor Industry*
- *Mining*
- *Pulp and Paper Mills*
- *Oil Rig Platforms*
- *Buildings*
- *Automotive Industry*
- *Engine Test Rooms*
- *LNG & LPG Facilities*
- *Sewage Industry*
- *Water Treatment Plants*
- *Parking Garages*
- *Chemical Industry*
- *Nuclear Industry*
- *Fertilizer Industry*
- *Tunnels*
- *Medical Facilities*

### Operation / Description

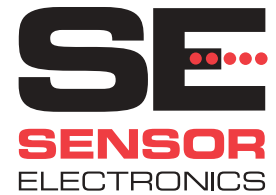
The SEC 3100 provides interface capabilities for the SEC 3000 Gas Detector and SEC Millenium Infrared Gas Detectors.

The SEC 3100 features:

- Back lighted LCD for Gas Level/Unit Parameter display
- Four (4) configurable Alarm/Fault Relays
- An isolated RS485 Modbus interface provides reliable communication in noisy environments and eliminates “Ground Loop” problems.
- Three magnetic switches for local configuration and calibration
- Time stamped data logging using a removable non-volatile memory module. Module can be removed from the unit to allow remote data downloading and data archiving.

An optional IS barrier allows “hot” sensor replacement in rated locations. This allows the user to install pre-calibrated/pre-configured sensor boards without removing unit power while maintaining EX rating. Removable circuit board stack and detachable connectors facilitate field-wiring installation.

# SEC 3100 Digital Gas Transmitter



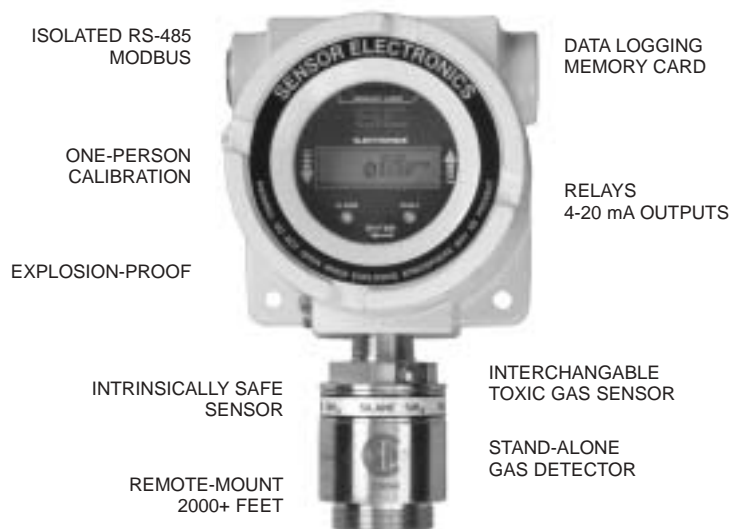
## SPECIFICATIONS

|   |  |
|---|--|
| Detection Method<br>Toxic Gases - Electrochemical<br>Combustible - Infrared                       | Power Consumption SEC 3100 (Sensor)<br>Toxic & O2 (SEC 3000) - 4W Max<br>HC & CO2 (SEC Millenium) - 9W Max |
| Gas Sensor Compatibility<br>SEC 3000 & SEC Millenium  | Temperature Rating<br>-40° to +70°   |
| Output (digital)<br>RS-485 LAN (Isolated)   | Humidity<br>0-99% RH (Non-condensing)  |
| Output (optional relays)<br>4-20 mA (source type), max. 1000 ohm load<br>at 24 VDC supply voltage | Housing Construction<br>Epoxy coated aluminum  |
| Display<br>Back Lighted LCD<br>LEDs for relay status  | Certification<br>CSA/NRTL Pending  |
| Operating Voltage<br>18-32 VDC  | Housing Dimensions<br>5.25 (W) x 5.30 (L) x 4.95 (H) inches<br>{131 (W) x 132 (L) x 124 (H) mm}            |
| Operating Current (No Sensor)<br>125mA Max @ 24 VDC   | Weight<br>Approximately 6 lbs. {2.8 Kg.}   |

### Partial Gas List

|                      |                          |
|----------------------|--------------------------|
| Oxygen (O2)          | Carbon Monoxide (CO)     |
| Hydrogen (H2)        | Germane (GeH4)           |
| Ammonia (NH3)        | Silane (SiH4)            |
| Nitric Oxide (NO)    | Phophine (PH3)           |
| Bromine (Br2)        | Sulfur Dioxide (SO2)     |
| Fluorine (F2)        | Nitrogen Dioxide (NO2)   |
| Arsine (AsH3)        | Chlorine Dioxide (ClO2)  |
| Ozone (O3)           | Hydrogren Sulfide (H2S)  |
| Chlorine (Cl2)       | Hydrogen Fluoride (HF)   |
| Phosgene (COCl2)     | Hydrogen Chloride (HCl)  |
| Diborane (B2H6)      | Hydrogen Cyanide (HCN)   |
| Formaldehyde (HCHO)  | Hydrogen Selenide (H2Se) |
| Ethylene Oxide (ETO) | Hydrogen Peroxide (H2O2) |
| Combustible (HC)     | Carbon Dioxide (CO2)     |

| Current Output | Status                |
|----------------|-----------------------|
| 0.0 mA         | Unit Fault            |
| 0.8 mA         | Unit warm up          |
| 1.2 mA         | Zero drift fault      |
| 1.6 mA         | Calibration fault     |
| 2.0 mA         | Unit spanning         |
| 2.2 mA         | Unit zeroing          |
| 4-20 mA        | Normal measuring mode |
| 4.0 mA         | Zero gas level        |
| 5.6 mA         | 10% Full Scale        |
| 8.0 mA         | 25% Full Scale        |
| 12 mA          | 50% Full Scale        |
| 16 mA          | 75% Full Scale        |
| 20 mA          | Full scale            |
| >20 mA         | Over-range            |



**SEC 3100 shown with SEC 3000 Sensor**