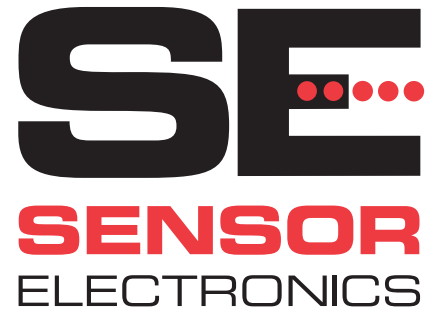




SHOWN WITH SEC MILLENIUM SENSOR



## SEC 3100 Digital Gas Transmitter

Document #: 1460047 Revision: 1

### 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*
- *Digital communication link to SEC 3000, SEC 3300, SEC 5000 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

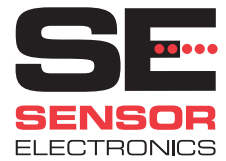
The SEC 3100 provides interface capabilities for any and all SEC gas detectors.

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.

Removable circuit board stack and detachable connectors facilitate field-wiring installation.

# SEC 3100 Digital Gas Transmitter



## SPECIFICATIONS

### Gas Sensor Compatibility

SEC 3000 & SEC 3300 Toxic Detector  
SEC Millenium Infrared Detectors  
SEC 5000 IREvolution Infrared Detectors

### Output (digital)

RS-485 LAN (Isolated)

### Output (optional relays)

4-20 mA (source type), max. 1000 ohm load at 24 VDC supply voltage

### Display

Back Lighted LCD  
LEDs for relay status

### Operating Voltage

18-32 VDC

### Operating Current (No Sensor)

314mA Max @ 24 VDC - All Options  
w/Relays Only: 90mA Max @ 24V  
100mA Max @ 18V  
No Options: 50mA @ 24V  
65mA Max @ 18V

### Power Consumption SEC 3100 (No Sensor)

Nominal (no options, 24V): 1.2 W  
Relays Option: Add 1 W  
Heater option: Add 5.9 W

### Ambient Temperature Range (Ta):

-50°C to +60°C (CUS)  
-40°C to +70°C (IECEX)

### Humidity

0-99% RH (Non-condensing)

### Housing Construction

Epoxy coated aluminum

### Certification

CSA/NRTL: CI I, Div 1, Groups B,C,D T5  
IECEX: Ex d IIB + H2 T5 Gb

### Housing Dimensions

5.25 (W) x 5.30 (L) x 4.95 (H) inches  
{131 (W) x 132 (L) x 124 (H) mm}

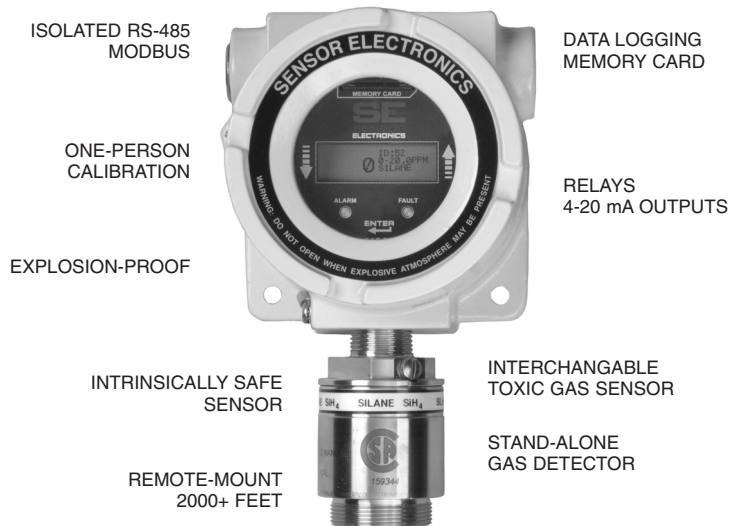
### Weight

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)	Phosphine (PH3)
Bromine (Br2)	Sulfur Dioxide (SO2)
Fluorine (F2)	Nitrogen Dioxide (NO2)
Arsine (AsH3)	Chlorine Dioxide (ClO2)
Ozone (O3)	Hydrogen 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



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