GEM-II Multi-Purpose Gas Detector

Critical Environment Technologies™

The GEM-II Multi-Purpose gas detector represents excellent value for the end user. Available in one or two channel configurations, it accommodates accurate "smart" sensors and provides a wide range of features, including CSA, UL and C-Tick certifications, RoHS compliant circuit boards, two 5-amp dry contact relays, electronic adjustable set points, audible alarm, time delays, analog output and pluggable wiring terminal. Depending on the monitoring environment, a standard enclosure (above) or watertight enclosure (above right) is available, either model with or without an optional 4-digit display.

KEY FEATURES

» Single or dual channel operation
» Network multiple units
» Integral or remote sensors, including plug and play "smart" sensors
» Door mounted silence push button
» Integral audible alarm
» 4 - 20 mA linear output signal
» Three conduit entry ports
» Thermal resetting fuse
» LED indicators
» Two 5-amp SPDT relays
» RoHS compliant circuit boards
» Economical
» CSA & UL certified

APPLICATIONS

» Parking Garages
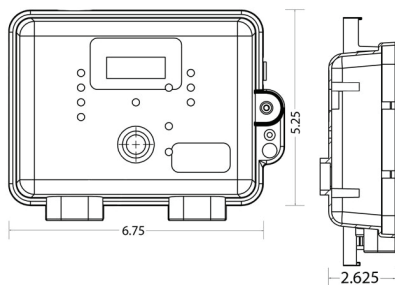» Repair Shops
» Ice Arenas
» Ice Cleaning Machine Rooms
» Manufacturing Plants
» ... and many more

TECHNICAL DRAWING

Standard Enclosure

5.25

6.75

2.625

Watertight Enclosure

5.1"

7.1"

4.0"

GEM-EECO-END-NJ model (picture to the right) contains two integral sensors, carbon monoxide (CO) & nitrogen dioxide (NO_2), enclosed in a standard PVC enclosure with a LED digital display and 120 VAC transformer attached.
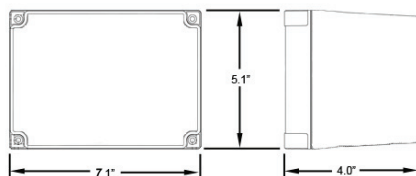
GEM-EECO-END-5W model (picture to the left) contains two integral sensors, carbon monoxide (CO) & nitrogen dioxide (NO_2), enclosed in a water / dust tight polycarbonate enclosure with a splash guard attached.

GEM-II Multi-Purpose Gas Detector

FIXED SYSTEM DATASHEET

TECHNICAL SPECIFICATIONS

GAS TYPE

Carbon Monoxide (CO)

Combustible Gas (catalytic)
  Hydrogen (H_2), Methane (CH_4), Propane (C_3H_8), etc.

Nitrogen Dioxide (NO_2)

Nitric Oxide (NO)

Oxygen (O_2)

Refrigerants (solid state)
  R22, R134A, R402A, R404A, R407C, R410A, R422A, R422D, R507A

Sulphur Dioxide (SO_2)

TVOCs (solid state)

MECHANICAL

Standard Enclosure	General purpose PVC
Watertight Enclosure	Water / dust tight polycarbonate
Weight	
Standard Enclosure	600 g (1.2 lb)
Watertight Enclosure	700 g (1.4 lb)
Size	
Standard Enclosure	5.3" x 6.8" x 2.6"
	(135 mm x 173 mm x 66 mm)
Watertight Enclsoure	5.1" x 7.1" x 4.0"
	(130 mm x 181 mm x 102 mm)

ELECTRICAL

Power Requirement	15 - 30 VDC or 12 - 28 VAC
Current Draw	Approximately 125 mA
Wiring	VDC three-conductor shielded VAC four-conductor shielded
Circuit	Analog design with microprocessor and user settable time delays, accessible with DIP switches on circuit board.
Fuse	Automatic resetting thermal

INPUT / OUTPUT

Outputs	Linear 4 - 20 mA (single)
Relay	Dry contact relays Two rated 5 amps @ 240 VAC SPDT

ENVIRONMENTAL *(sensor dependant)*

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Humidity	15 - 90% RH non-condensing

CERTIFICATION

CSA	Certified
UL	Certified

PRODUCT CODES

GEM - ☐☐☐ - ☐☐☐ - ☐ - W
(for watertight enclosure)

Single / Dual Channel Sensor: ⎯⎯⎯⎯⎯⎯⎯⎯⎯

Options:
(Select all that applies)

Type A: Single Channel (Integral Electrochemical)

AECO	CO sensor (0 - 200 ppm)
AEND	NO_2 sensor (0 - 10 ppm)
AENO	NO sensor (0 - 100 ppm)
AEO2	O_2 sensor (0 - 25% volume)
AESO	SO_2 sensor (0 - 20 ppm)

Options:

-	None	
N	LED digital display	
J	Internal 120 VAC transformer	
S	Splash guard *(for watertight enclosure)*	

Type B: Single Channel (Remote Sensor)

B	No sensor
BSCB	Catalytic sensor (0 - 50% LEL)
BSR2	Refrigerants (R22, R134A, R402A, R404A, R407C, R410A, R422A, R422D, R507A) sensor (0 - 2,000 ppm)
BSOS	TVOCs sensor (0 - 500 ppm)

Type D: Dual Channel (Integral & Remote Sensor)

DECO-SCB	Integral CO sensor (0 - 200 ppm) & remote catalytic sensor (H_2, CH_4, or C_3H_8) (0 - 50% LEL)
DECO-ECO	Integral CO sensor (0 - 200 ppm) & LPT-TCO Carbon monoxide (CO) analog transmitter
DECO-END	Integral CO sensor (0 - 200 ppm) & LPT-END Nitrogen dioxide (NO_2) analog transmitter
DEO2-EO2	Integral O_2 sensor (0 - 25% volume) & LPT-A-O2 Oxygen (O_2) analog transmitter
DEND-END	Integral NO_2 sensor (0 - 10 ppm) & LPT-END Nitrogen dioxide (NO_2) analog transmitter

Type E: Dual Channel (Integral Sensors)

EECO-END	CO sensor (0 - 200 ppm) & NO_2 sensor (0 - 10 ppm)
EECO-ENO	CO sensor (0 - 200 ppm) & NO sensor (0 - 100 ppm)
EECO-EO2	CO sensor (0 - 200 ppm) & O_2 sensor (0 - 25% vol)
EECO-ESO	CO sensor (0 - 200 ppm) & SO_2 sensor (0 - 20 ppm)
EEND-ESO	NO_2 sensor (0 - 10 ppm) & SO_2 sensor (0 - 20 ppm)

ACCESSORIES

Calibration kit for 17 - 103 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder	CET-715A-CK1
Heavy duty, large, metal protective guard, 16 gauge, galvanized	SCS-8000-SPG
Strobe & horn combo, remote	RSH-24
Enclosed external transformer, 120 - 22 VAC	TIB-2250