DCC-SD Sample Draw System

Critical Environment Technologies™

FIXED SYSTEMS

TECHNICAL DRAWING

267 mm (10.5")

223 mm (8.78")

159 mm (6.25")

bottom view

The DCC-SD is a self-contained, single sensor, sample draw monitoring system that is designed to draw samples of air from hard to access locations such as shafts, tall ceilings, wells, pits, small rooms and many other locations where it is difficult to install gas detectors. The DCC-SD provides continuous sampling of target air over long periods of time.

The DCC-SD system is designed to be installed outside the target location, at a viewable height, with sample tubing running from the monitoring system to the sampled environment. The sample draw pump pulls air from the area through the tubing, in through the inlet port and over the sensor. The air is then exhausted through the outlet port. If the gas readings are higher than a specified set point, the DCC-SD will go into alarm.

The DCC-SD can be configured with a toxic, combustible or refrigerant sensor and comes with a flow detector, a sample draw pump and an internal adjustable flow meter. Features include one configurable 4 - 20 mA output, one alarm level line voltage relay with field configurable time delays and trigger levels, a blocked flow alarm indicating a dirty filter or clogged tubing, a side mounted audible buzzer and an LCD digital display with LED indicators for channel alarm status and fault conditions.

The filter should be replaced with it becomes dirty and the tubing should be checked regularly to ensure it remains unblocked. The device has been factory tested with a maximum of 15.24 m (50 ft) of sample tubing. For the best response, the sample tubing between the sample point and the inlet port should be kept as short as possible.
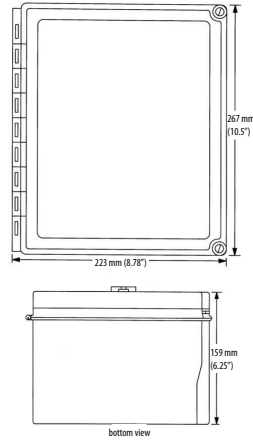
KEY FEATURES

» Single sensor - toxic, combustible or refrigerant sensor options
» 2x16 character LCD display with LED indicators
» Loud side mounted buzzer
» Blocked flow alarm
» Sample draw pump
» Adjustable flow meter
» One 5-amp SPDT dry contact relay
» One configurable 4- 20 mA output
» Thermal resetting fuses
» RoHS compliant circuit boards
» Standard water / dust tight, corrosion resistant enclosure (drip proof)

APPLICATIONS

» Wastewater Treatment Plants
» Meat Packing Plants
» Aerospace Industry
» Automotive Manufacturing
» ... and many more

TECHNICAL SPECIFICATIONS

GAS SENSOR TYPES

Electrochemical	Carbon Monoxide (CO), Ethylene (C_2H_4), Ethylene Oxide (C_2H_4O), Formaldehyde (CH_2O), Hydrogen (H_2), Hydrogen Fluoride (HF), Hydrogen Sulphide (H_2S), Nitric Oxide (NO), Sulphur Dioxide, (SO_2),
Solid State	R22, R134A, R402A, R404A, R407C, R410A, R422D, R438A, R507A, TVOCs
Catalytic	Hydrogen (H_2), Methane (CH_4), Propane (C_3H_8)

MECHANICAL

Enclosure	Water / dust tight corrosion resistant polyester reinforced fiberglass
Weight	7.5 lb (3.4 kg)
Size	223 x 267 x 159 mm (8.8 x 10.5 x 6.3 inches)
Tubing (not supplied)	1/4" OD Factory tested distance: 15.24 m (50 ft)

USER INTERFACE

Display	2x16 character LCD digital display with LED panel indicating "CH1" state, "CH2" state, and FAULT"
"SILENCE" Push Button	Temporarily clears buzzer and latched relay

DCC-SD Sample Draw System

TECHNICAL SPECIFICATIONS CON'T

INPUT / OUTPUT

Output	One configurable 4-20 mA analog output
Relays	One SPDT dry contact relay, rated 5 amps @ 240 VAC
Audible Alarm	Side mounted buzzer, rated 90 dB @ 30 cm (1 ft)
Flow	Normal operation: 1.0 LPM Flow alarm: less than 0.5 LPM

ELECTRICAL

Power Requirement	24 VAC nominal, 10 W, Class 2
Current Draw	400 mA RMS @ 24 VAC
Wiring	24 VAC two-conductor shielded
Fuses	Thermal, resetting

ENVIRONMENTAL *(sensor dependant)*

Operating Temperature	-20°C to 40°C (-4°F to 104°F)
Humidity	15 - 90% RH non-condensing

CERTIFICATION

Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 17):2007
Conforms to: EMC Directive 2004/108/EC EN 50270:2006, Type 1, EN61010
Conforms to: FCC. This device complies with Part 15 of the FCC Rules.
For indoor use only.

Inside of the DCC-SD showing an LPT-A gas detector with with a toxic, combustible or refrigerant sensor on right hand side of the enclosure.

PRODUCT CODES

Electrochemical Toxic Gas Sensors		Lifespan
DCC-SD-COA	Carbon Monoxide (CO) sensor (0 - 200 ppm)	3 yrs
DCC-SD-TCO	Carbon Monoxide (CO) sensor (0 - 200 ppm)	6 yrs
DCC-SD-C2H4	Ethylene (C_2H_4) sensor (0 - 200 ppm)	2 yrs
DCC-SD-EETO	Ethylene Oxide (C_2H_4O) sensor (0 - 20 ppm)	2 yrs
DCC-SD-CH20	Formaldehyde (CH_2O) sensor (0 - 5 ppm)	2 yrs
DCC-SD-EH2	Hydrogen (H_2) sensor (0 - 2,000 ppm)	2 yrs
DCC-SD-HF	Hydrogen Fluoride (HF) sensor (0 - 10.0 ppm)	1-2 yrs
DCC-SD-H2S	Hydrogen Sulphide (H_2S) sensor (0 - 50 ppm)	2+yrs
DCC-SD-H2SB	Hydrogen Sulphide (H_2S) sensor (0 - 50 ppm)	5+yrs
DCC-SD-NO	Nitric Oxide (NO) sensor (0 - 100 ppm)	2 yrs
DCC-SD-SO2	Sulphur Dioxide (SO_2) sensor (0 - 20 ppm)	2+ yrs
Solid State Gas Sensors		Lifespan
DCC-SD-SR22	Refrigerants (R22) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR134A	Refrigerants (R134A) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR402A	Refrigerants (R402A) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR404A	Refrigerants (R404A) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR407C	Refrigerants (R407C) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR410A	Refrigerants (R410A) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR422D	Refrigerants (R422D) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR438A	Refrigerants (R438A) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-SR507A	Refrigerants (R507A) sensor (0 - 2,000 ppm)	5 yrs
DCC-SD-STVOC	TVOCs sensor (0 - 500 ppm)	5 yrs
Catalytic Combustible Gas Sensors		Lifespan
DCC-SD-CH2-100	Hydrogen (H_2) sensor (0 - 100% LEL)	5 yrs
DCC-SD-CCH4-100	Methane (CH_4) sensor (0 - 100% LEL)	5 yrs
DCC-SD-CC3H8-100	Propane (C_3H_8) sensor (0 - 100% LEL)	5 yrs

REMOTE DEVICES

RAA-90	Remote Audible Alarm rated 90 dB @ 30 cm (1 ft)
RAA-90-W	Remote Audible Alarm, water tight rated 85 dB @ 60.96 cm (2 ft)
RSH-24VDC	Remote Strobe and Horn combo, mounted, 24 VAC/VDC, rated 100 dB @ 3 m (10 ft)
RSH-24V-A RSH-24V-B RSH-24V-R	Remote Horn/Strobe Combo, unmounted, 24 VAC/VDC, rated 99 dB @ 3 m (10 ft) (VAC), 97 dB @ 10 ft (3 m) (VDC), choice of **A**mber, **B**lue or **R**ed lense

ACCESSORIES

CET-715A-SDP	Sample Draw Pump Calibration Kit for 17, 34, 58, 74, 100 L cylinders, 1.0 LPM demand flow regulator & adapter to fit 17 L cylinder