Critical Environment Technologies™

SPECIALTY GAS DETECTORS DATASHEET

DCC-SD Sample Draw System

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 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.

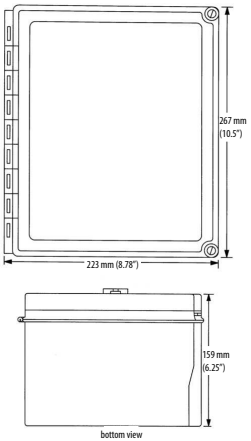
KEY FEATURES

» Single sensor
» 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 DRAWING



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), Oxygen (O_2), Sulphur Dioxide, (SO_2),
Solid State	R22, R134A, R402A, R404A, R407C, R410A, R422D, R438A, R507A, TVOCs

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 in
Tubing (sold separately)	1/8" ID x 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

INPUT / OUTPUT

Output	One configurable 4-20 mA analog output
Relays	One SPDT dry contact relay, rated 5 amps @ 240 VAC

DCC-SD Sample Draw System

TECHNICAL SPECIFICATIONS CON'T

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

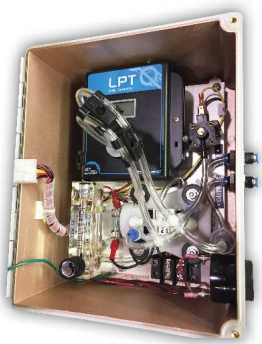
Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 17):2007

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.

Caution: The DCC-SD sample draw system should not be used inside classified hazardous areas or to sample draw combustible gases because the pump is not intrinsically safe.



Inside of the DCC-SD showing an LPT-A gas detector mounted inside 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-CH2O	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-NO	Nitric Oxide (NO) sensor (0 - 100 ppm)	2 yrs
DCC-SD-O2	Oxygen (O2) sensor (0 - 25% volume)	3 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

REMOTE DEVICES

RSA-24V-R	Remote LED strobe light with audible, red lens, 24 VDC/ VAC, 8.9 cm / 3.5" dia, comes with mounting bracket
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 lens

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
CET-8000-CMT	Sample Draw Tubing, clear, 15.24 m (50 ft) roll, 1/8" ID x 1/4" OD

Calibration Notes:
For the most accurate calibration a demand flow regulator should be used, connected to the DCC-SD system with the flow rate of the DCC-SD system set to 1.0 LPM after the length of tubing to be used has been connected. The tubing should not exceed 50 ft or 20 m.