



Model Series CX-DM

Toxic Gas Detectors

GAS DETECTION SENSORS ■ INTEGRATED CONTROL SYSTEMS ■ SMARTWIRELESS® ■ PIPELINE ANALYZERS ■ ALARMS

Description

Detcon Model CX-DM gas detection sensors are easily and economically deployable in both permanent and temporary installations. These low power sensor assemblies utilize electrochemical technology for a long list of toxic gases. Model CX-DM sensors are equipped with standard analog 4-20mA, and Modbus™ RTU RS-485 outputs and can be used with Detcon's SmartWireless® Site Sentinel CX/CXT Controllers as well as other Detcon control systems. Relay and battery options available.

Model DM-CX Series sensors feature non-intrusive operator interface and comprehensive fault diagnostics. The sensor is packaged in an electro-polished 316 stainless steel housing fitted with a ¾ inch NPT thread. The plug-in, field replaceable sensor cell features large surface area gold-plated pins that reduce the effects of corrosion in harsh industrial environments. Signal conditioning electronics are completely encapsulated in the sensor housing adding a high level of durability. This innovative design virtually eliminates sensor failure due to water ingress, corrosion, vibration, and transient spikes. The packaging is XP-intrinsically safe.

A primary feature of the Model CX-DM is embedded intuitive software that simplifies operator interface by guiding the user through routine calibration, configuration, and fault diagnostic functions using a built-in alpha/numeric display. Each sensor is shipped with a splash guard with integral calibration port. Detcon's toxic gas sensors have a long shelf life and are supported by an industry-leading warranty.



Features

- ▶ Low Power Gas Detection Sensors
- ▶ Built-in Display
- ▶ Class I, Div. 1, Groups C & D
- ▶ Non-intrusive Magnetic Interface
- ▶ Built-in Diagnostics
- ▶ Fully Encapsulated Electronics
- ▶ Electropolished 316SS Construction
- ▶ Quick Thread Release (for sensor replacement)
- ▶ Relays optional
- ▶ Battery power options

Applications

- ▶ Oil and Gas Drilling Rigs
- ▶ Work-over and pulling units
- ▶ Oil and Gas Production
- ▶ Turn-a-rounds in Refining and Petrochemical Plants
- ▶ One year run time on a single battery charge

Model Series CX-DM Toxic Gas Detection Sensor Assemblies

R031116

System Specifications

Outputs

Linear 4-20 mA DC
RS-485 Modbus™
3 Relays - alarm 1, 2, fault, contacts 5 amp (optional)

Electrical Classification

Explosion proof
Class I, Division 1, Groups C, D (Tamb = -40°C to +50°C)
Class I, Zone 1, Group IIB
Ex d ib IIB T4 Gb (Tamb = -40°C to +50°C)

Ingress Protection

NEMA 4X

Safety Approvals

cCSAus; ATEX; CE Marking; IECEx

Warranty

Plug-in detector - 2 years (typical); Transmitter - 2 Years

Mechanical Specifications

Dimensions

With Stainless Steel Mini J-Box
10"H x 3.62"W x 4.3"D; 254mmH x 92mmW x 109mmD
10"H x 5.5"W x 4.3"D; 254mmH x 140mmW x 109mmD (with XP Power Switch)
12.2"H; 310mmH (with splashguard)

Weight

5.2 lbs/2.36 kg

Environmental Specifications

Operating Temperature Range

-40°F to +122°F; -40°C to +50°C (typical)

Accessory Options

Tripod for Mounting (specify pole mount and/or leg mount brackets)
Mini Tripod for Mounting (specify pole mount and/or leg mount brackets)

Order Guide

Part Number	Description
96C-340402-025	Model CX-DM-O2, 0-25 % Oxygen Deficiency
96C-170402-100	Model CX-DM-NH3, 0-100 PPM Ammonia
96C-190402-001	Model CX-DM-Ash3, 0-1 PPM Arsine
96C-750402-005	Model CX-DM-Br2, 0-5 PPM Bromine
96C-440402-100	Model CX-DM-CO, 0-100 PPM Carbon Monoxide
96C-740402-010	Model CX-DM-CL2, 0-10 PPM Chlorine
96C-760402-050	Model CX-DM-ClO2, 0-50 PPM Chlorine Dioxide
96C-770402-001	Model CX-DM-ClO2, 0-1 PPM Chlorine Dioxide
96C-210402-005	Model CX-DM-B2H6, 0-5 PPM Diborane
96C-E00402-100	Model CX-DM-C2H5OH, 0-100 PPM Ethanol
96C-EZ0402-100	Model CX-DM-C2H5SH, 0-100 PPM Ethyl Mercaptans
96C-ED0402-100*	Model CX-DM-C2H4, 0-100 PPM Ethylene
96C-270402-001	Model CX-DM-F2, 0-1 PPM Fluorine
96C-250402-002	Model CX-DM-GeH4, 0-2 PPM Germane

Electrical Specifications

Power Input

9-30 VDC
Internal "D" Size Disposable Battery Pack (optional)
Lithium Ion Rechargeable Battery Pack (optional)

Power Consumption

100mW (Typical); 660mW (Max)

RFI/EMI Protection

Complies with EN61362

Analog Output

Linear 4-20mA DC (750 ohms max loop load @ 24VDC)
0mA All Fault Diagnostics
4-20mA 0-100% full-scale
22mA Over-range condition

Serial RS-485 Output

RS-485 Modbus™ RTU

Baud Rate

9600 BPS (9600,N,8,1 Half Duplex)

Status Indicators

4-digit LED display with gas concentration & fault

Faults Monitored

Missing Sensor, Zero,
Calibration

Cable Requirements

Power/Analog
3-wire shielded cable
Maximum distance is 13,300 feet with 14 AWG
Serial Output (optional)
2-wire twisted-pair shielded cable specifically for use with RS-485 installations
Maximum distance is 4,000 feet to last sensor

I/O Protection

Over-voltage, Miswiring, EMI/RFI Immunity

Refer to the Model CX-DM Sensor data sheet for sensor specific specifications
Specifications subject to change without notice

Part Number	Description
96C-260402-001	Model CX-DM-N2H4, 0-1 PPM Hydrazine
96C-080402-030	Model CX-DM-Hbr, 0-30 PPM Hydrogen Bromide
96C-090402-030	Model CX-DM-HCL, 0-30 PPM Hydrogen Chloride
96C-130402-030	Model CX-DM-HCN, 0-30 PPM Hydrogen Cyanide
96C-330402-010	Model CX-DM-HF, 0-10 PPM Hydrogen Fluoride
96C-240402-100	Model CX-DM-H2S, 0-100 PPM Hydrogen Sulfide
96C-EE0402-100	Model CX-DM-CH3OH, 0-100 PPM Methanol
96C-EK0402-100	Model CX-DM-CH3SH, 0-100 PPM Methyl Mercaptans
96C-940402-100	Model CX-DM-NO, 0-100 PPM Nitric Oxide
96C-640402-010	Model CX-DM-NO2, 0-10 PPM Nitrogen Dioxide
96C-390402-001	Model CX-DM-O3, 0-1 PPM Ozone
96C-200402-005	Model CX-DM-PH3, 0-5 PPM Phosphine
96C-230402-050	Model CX-DM-SiH4, 0-50 PPM Silane
96C-550402-020	Model CX-DM-SO2, 0-20 PPM Sulfur Dioxide

To complete the part number please select from the options below.

X X X - X X X X X X - X X X — The last 3 digit of the part number designate range - other ranges available

*Ethylene sensors are not suitable for fruit ripening applications and warranty is not offered for this type of application.

Houston ■ Odessa ■ Shanghai ■ Dammam ■ Del Carmen ■ UK



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