



Detcon Model IR-700-CO2

ISO 9001: 2000
Certified

888-367-4286
281-367-4100
fax 281-292-2860
www.detcon.com
sales@detcon.com

Specifications

Sensor Type

Non-dispersive Infrared Optical (NDIR)

Measurement Range

Low Range: 0-0.3%/0-1%/0-3%/0-5% by volume

High Range: 0-10%/0-25%/0-50%/0-100% by volume

Accuracy/Repeatability

±5% full scale

Response/Clearing Time

T50 <15 seconds; T90 <40 seconds

Zero Drift

<0.05% per year

Operating Temperature Range

-40°F to +167°F; -40°C to +75°C

Operating Humidity Range

0-99% RH non-condensing

Outputs

Linear 4-20 mA DC

RS-485 MODBUS-RTU

Input Voltage

11.5-28 VDC

Power Consumption

<2 1/2 watts @ 24 VDC

Electrical Classification

Explosion proof

Class I, Division 1, Groups B, C, D

Class I, Zone 1, Group IIB+H2 (ATEX)

Safety Approvals

cCSAus, ATEX

SIL2 FMEDA Rating

Sensor Life/Warranty

Sensor - 5 Year Pro-rated; Transmitter 2 Years

Dimensions

7" High x 2 1/8" Diameter (sensor only)

Carbon Dioxide Sensor

Non-dispersive Infrared Optical

(shown as PN 967-404520-005 in SS junction box)



Description

Detcon Model IR-700-CO2 Carbon Dioxide sensors are non-intrusive "Smart" sensors designed to detect and monitor Carbon Dioxide. Available in a low and a high range version, ranges of detection (by volume) are 0-0.3%, 0-1%, 0-3%, 0-5% (low range version) and 0-10%, 0-25%, 0-50%, and 0-100% (high range version). The sensor assembly consists of a miniature infrared optical sensor in an electropolished 316SS housing, an encapsulated Intelligent Transmitter Module, and sensor splashguard with integral cal port. Operator interface is via a small handheld magnet. One of the main features is the embedded intuitive software that guides the user through routine calibration and configuration menus using a built-in LED alpha/numeric display.



www.detcon.com

Features

Failsafe User-Friendly Interface

- ▶ LED Display (With Antiglare Cover)
- ▶ Full Text Display Method
- ▶ Non-intrusive Interface
- ▶ Auto Zero/Auto Span
- ▶ Pre-emptive Fault Diagnostics

- ▶ Scrolling Full Message/Text Display



(Input Voltage Range, Operating Temperature Range, Detector Signal Amplitude, Output Signal Loop Integrity)

Environmentally Bulletproof

- ▶ Electropolished 316SS Construction
- ▶ 100% Epoxy Encapsulated Circuitry
- ▶ Bullet-Proof I/O Protection (Over-voltage, Miswiring, EMI/RFI Immunity)
- ▶ Water-Proof, Corrosion-Proof, Vibration-Proof

Modular and Serviceable

- ▶ Modular Design
- ▶ Plug and Play Components
- ▶ Quick Thread Release (For Sensor Replacement)
- ▶ Integral Calibration Port

Order Guide Specify junction box options (below)

Part Number	Description
▶ 967-405520-005	IR-700-CO2 (5% Range) Sensor Assembly (no junction box)
▶ 967-401520-005	IR-700-CO2 (5% Range) Sensor Assembly with Aluminum Junction Box
▶ 967-404520-005	IR-700-CO2 (5% Range) Sensor Assembly with 316 SS Junction Box
▶ 967-425520-025	IR-700-CO2 (25% Range) Sensor Assembly (no junction box)
▶ 967-421520-025	IR-700-CO2 (25% Range) Sensor Assembly with Aluminum Junction Box
▶ 967-424520-025	IR-700-CO2 (25% Range) Sensor Assembly with 316 SS Junction Box

Accessory Modules

- ▶ Remote Control/Alarm Relay Module
- ▶ Hart Integration Module
- ▶ Profibus Integration Module
- ▶ Foundation Fieldbus Integration Module
- ▶ Wireless Integration Module