3M™ Detcon™ Model IR-540
Non-dispersive Infrared Optical Carbon Dioxide Sensor

Description
Detcon Model IR-540 sensors are non-intrusive “Smart” sensors designed to detect and monitor Carbon Dioxide. Available ranges of detection are 0-0.3%, 0-1%, 0-3%, and 0-5% by volume. The sensor assembly consists of a miniature infrared optical sensor in a stainless steel housing that includes a splashguard with integral cal port, a plug-in control transmitter circuit, a base connector board and an explosion proof enclosure.

Features
- cCSAus approved: Class I, Division 1, Groups B, C, & D
- Simple menu driven calibration - takes less than 3 minutes
- Backlit LCD and LED indicators for FAULT and CAL status
- Unique miniature field-replaceable optical sensor
- Plug-in field-replaceable transmitter
- Low power consumption
- 5-year expected sensor life
System Specifications

Sensor Type
- Non-dispersive Infrared Optical (NDIR)

Measurement Range
- 0 - 0.3%/0 - 1%/0 - 3%/0 - 5% by volume

Accuracy/Repeatability
- ±5% full scale

Response/Clearing Time
- T50 <15 seconds
- T90 <40 seconds

Zero Drift
- <0.05% per year

Ambient Operating Temperature Range
- -40°C to +40°C; -40°F to 104°F (CANADA)
- -25°C to +40°C; -13°F to 104°F (USA)

Operating Humidity Range
- 0-99% RH non-condensing

Outputs
- Linear 4-20 mA DC

Input Voltage
- 11.5-28 VDC

Power Consumption
- <2 watts @ 24 VDC

Electrical Classification
- Explosion proof
- Class I, Division 1, Groups B, C, D

Safety Approvals
- CSA/NRTL (US OSHA Certified)

Ingress Protection
- NEMA 4X, IP66

Sensor Life/Warranty
- Sensor: 5 year warranty pro-rated

Order Guide

PN 965-415420-__ _ Model IR-540 in Aluminum Junction Box
PN 965-41542B-__ _ Model IR-540-316SS in Stainless Steel Junction Box

Complete the part number by choosing range
- 005 = 5%
- 003 = 3%
- 001 = 1%
- 0X3 = 0.3%

3M Gas & Flame Detection quality assurance programmes demand the continuous assessment and improvement of all our products. Information in this leaflet could thus change without notification and does not constitute a product specification.