MODEL IR-642
CARBON DIOXIDE SENSOR
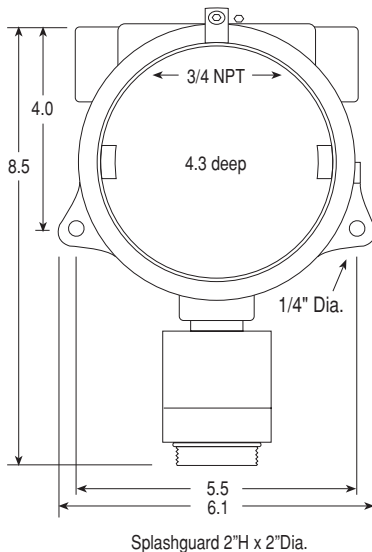
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SPECIFICATIONS

Sensor Type
Non-dispersive Infrared Optical (NDIR)

Measurement 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™
3 Relays (alarm 1, alarm 2, & fault)
Contacts rated 5 amps

Input Voltage
22.5-28 VDC

Power Consumption
<3 watts @ 24 VDC

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

Ingress Protection
NEMA 4X, IP66

Safety Approvals
CSA/NRTL (US OSHA Certified)

Sensor Life/Warranty
Sensor: 5 year warranty pro-rated
Transmitter: 2 year warranty

DIMENSIONS

3/4 NPT
4.0
8.5
4.3 deep
1/4" Dia.
5.5
6.1

Splashguard 2"H x 2"Dia.

Non-dispersive
Infrared Optical

**MicroSafe™
Intelligent Sensor**

DESCRIPTION

Detcon Model IR-642 sensors are non-intrusive "Smart" sensors designed to detect and monitor Carbon Dioxide. Available ranges of detection are 0-10%, 0-25%, 0-50%, and 0-100% 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

▷ CSA-NRTL Approved: Class I, Division 1, Groups B, C, & D
▷ Compatible with PLCs, SCADA, DCS, via 4-20 mA, and/or RS-485, and/or alarm relays
▷ Sensor status and parameters accessible via RS-485 (Modbus™)
▷ Menu programmable relays standard (two alarms plus fault)
▷ 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

ORDER GUIDE

PN 966-424520-_ _ _   Model IR-642 in Aluminum Junction Box
PN 966-42542B-_ _ _   Model IR-642-316SS in Stainless Steel Junction Box

Complete the part number by choosing range
010 = 10%
025 = 25%
050 = 50%
100 = 100%

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