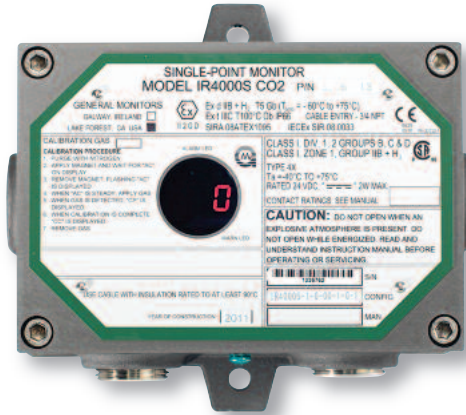




**GENERAL MONITORS**  
Protection for life.

# MODEL IR4000S CO<sub>2</sub>

Single-Point Monitor for use with  
Model IR700 Point IR Gas Detector



## Features

- Explosion-proof enclosure with magnetic interface
- Local interface
- LED display
- Optional 8 A relays

## Benefits

- Allows installation and calibration in hazardous locations
- Provides ease of maintenance and accessibility
- Bright display permits clear indication
- Expands system functions, potentially eliminating the need for additional equipment like a PLC

## Description

The IR4000S CO<sub>2</sub> Monitor features a three-digit LED display and user interface for our Model IR700 Point IR Carbon Dioxide gas detector. The monitor allows local calibration and displays gas concentration. It is housed in an explosion-proof junction box enclosure that can be installed in hazardous locations adjacent to the detector.

Optional relays provide output for Alarm, Warn, and Fault conditions. Users can select operating mode, warn, and alarm setpoints via a magnetically activated switch. The relays are user-programmable as Latching or Non-Latching, normally De-Energized or normally Energized. Latching relays can be reset via a remote reset input or via the magnetic switch.

The IR700 IR point detector is available in either an aluminum or stainless steel housing and is designed for use in Class I, Div. 1, Groups B, C & D and Zone 1 areas for North America and Zones 1 and 21 internationally. The housing is IP66/Type 4X rated.

## Applications

- Carbon Capture and Storage
- Chemical Plants
- Coal Gasification
- Enhanced Oil Recovery
- Fertilizers
- Food & Beverage Bottling Plants
- Metals
- Wastewater Treatment Facilities



# MODEL IR4000S CO<sub>2</sub>

## System Specifications

**Classification:** Class I, Divisions 1 & 2, Groups B, C & D  
Class I, Zone 1, IIB +H<sub>2</sub> T5, Type 4X (Ta = -40°C to +75°C)  
Ex d, IIB+H<sub>2</sub> T5 Gb (Ta = -60°C to +75°C)  
Ex t IIIC, T100°C Db IP66

**Warranty:** Two years  
Fifteen years (aluminum housing)

**Approvals:** CSA, ATEX, IECEx, CE Marking.

## Environmental Specifications

**Operating Temperature Range:**  
IR4000S-CO<sub>2</sub>: -40°F to +167°F (-40°C to +75°C)  
IR700: -40°F to +122°F (-40°C to +50°C)

**Storage Temperature Range:**  
-76°F to +185°F (-60°C to +85°C)

**Humidity:** 10% to 95% RH, non-condensing

## Mechanical Specifications

**Length:** 6.5 inches (165 mm)

**Width:** 6.0 inches (152 mm)

**Height:** 3.21 inches (82 mm)

**Weight:** 5.9 lbs (2.7 kg) - Aluminum  
14.8 lbs (6.7 kg) - Stainless steel

**Mounting Holes:** 5.05 inches (127 mm)  
Center to center

**Housing:** Marine aluminum or 316 stainless steel

## Electrical Specifications

**Input Power:** 20-36 VDC @ 83 mA max.  
24 VDC nominal

**Analog Signal:** 0-21.7 mA (500 ohms max.)  
Start up, Fault (non-HART) 0 mA  
Start up, Fault (HART)\* 1.25 mA  
Cal, Zero, Gas Check 1.5 mA  
Dirty Optics 2.0 mA  
0 to 100% LEL 4 to 20 mA (proportional)  
Over-range 21.7 mA

\* HART from IR700.

**RFI/EMI Protection:** EN 50270, EN 61000-6-4

**Status Indicators:** Three-digit LED display with gas concentration in 100 ppm's, Warn and Alarm LED's, calibration prompts, fault codes, and setup options

**Relay Ratings:** 8A @ 250 VAC/8A @ 30 VDC res. max. (3x) SPDT - Warning, Alarm & Fault

**Faults Monitored:** Maintenance Required, Signal Fault, Low Input Voltage, Memory Error

**Sample Cable Requirements:** For cable resistance of 3 ohms/1,000 ft, maximum distance between IR4000S and power source @ 24 VDC: 14 AWG (2.5 mm<sup>2</sup>) - 2,360 ft (790 m)

For 16 AWG cable with cable resistance of 5 ohms/1,000 ft, maximum distance of analog output (100 ohms max.): 10,000 ft. (3,050 m)

**Standard Configuration:** IR4000S-1-0-40-1-0-1  
IR700 (CO<sub>2</sub> 0-5000 ppm, 0-20 mA/HART, splashguard w/screen), no relays, aluminum housing

*Specifications subject to change without notice.*

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