

Model IR4000S CO₂

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



General Monitors



Applications

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



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 CO₂ 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.



The Safety Company

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System Specifications	
CLASSIFICATION	Class I, Divisions 1 & 2, Groups B, C & D Class I, Zone 1, IIB +H2 T5, Type 4X (Ta = -40°C to +75°C) Ex d, IIB+H2 T5 Gb (Ta = -60°C to +75°C) Ex t IIC, T100°C Db IP66
WARRANTY	Two years Fifteen years (aluminum housing)
APPROVALS	CSA, ATEX, IECEx, CE Marking
Environmental Specifications	
OPERATING TEMPERATURE RANGE <i>IR4000S-CO₂</i> <i>IR700</i>	-40°F to +167°F (-40°C to +75°C) -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" (165 mm)
WIDTH	6.0" (152 mm)
HEIGHT	3.21" (82 mm)
WEIGHT	5.9 lbs (2.7 kg) - Aluminum 14.8 lbs (6.7 kg) - Stainless steel
MOUNTING HOLES	5.05" (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 START UP, FAULT (<i>non-HART</i>) START UP, FAULT (<i>HART</i>)* CAL, ZERO, GAS CHECK DIRTY OPTICS 0 TO 100% LEL OVER-RANGE	0-21.7 mA (500 ohms max.) 0 mA 1.25 mA 1.5 mA 2.0 mA 4 to 20 mA (<i>proportional</i>) 20 to 21.7 mA
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 (<i>OPTIONAL</i>)	8 A @ 250 VAC/8 A @ 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 ²) - 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 ₂ 0-5000 ppm, 0-20 mA/HART, splashguard w/screen), no relays, aluminum housing

* HART from IR700.

Specifications subject to change without notice.

Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products. Specifications subject to change without notice.



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