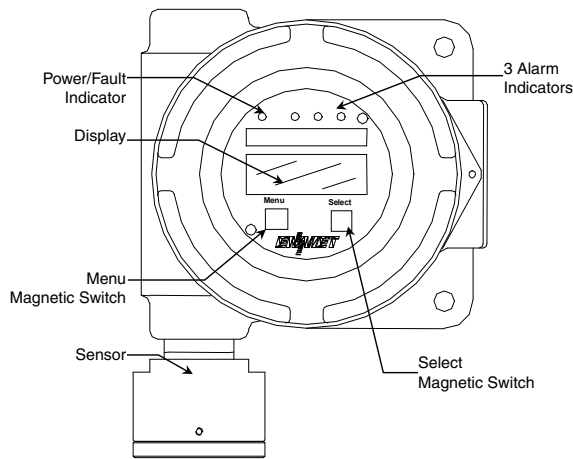


# EX-5165

## Infrared Sensor/Transmitter For Carbon Dioxide, CO<sub>2</sub>

### FEATURES

- Infrared Sensor
- Three Alarm LEDs
- NEMA 4X, NEMA 7 and IP66 Rated Enclosure
- 24 VDC, 4-20 mA
- Operates in Anaerobic Atmospheres
- Minimal Maintenance
- Liquid Crystal Display
- Non-intrusive Calibration
- Approved for Class I, Division 1, Groups B, C, & D
- Non-contact Sensor Technology
- Immune to Saturation
- Long-term Stability



### CO<sub>2</sub> Calibrations Available

Range	PPM or % by Volume
0-500.....	ppm
0-1,000.....	ppm
0-2,000.....	ppm
0-5,000.....	ppm
0-10,000.....	ppm
0-1.....	% by volume
0-2.....	% by volume
0-3.....	% by volume
0-4.....	% by volume
0-5.....	% by volume
From 0-10.....	% by volume
to 0-100.....	% by volume
in increments of 10% by volume	

### Description/Operation

The EX-5165 incorporates a miniature NDIR type sensor for the measurement of carbon dioxide concentrations ranging from 500 ppm to 100% by volume.

The sensor is comprised of dual pyroelectric detectors, one active and one reference unit, with individual optical filters for specific radiation bands. Features of the sensor include a temperature monitor and a durable tungsten filament as the IR light source.

The EX-5165 Sensor/Transmitter operates on 24 VDC power, and provides a 4-20 mA output signal, which can be connected to a PLC or various ENMET controllers.



# EX-5165 Infrared Sensor/Transmitter For Carbon Dioxide, CO<sub>2</sub>

## SPECIFICATIONS

**Voltage:** 24 VDC, Loop powered  
**Output:** 4-20 mA  
**Installation:** 3-wire, typically 16 to 18 AWG, depending upon distance  
**Connection:** 1/2 inch NPT, conduit  
**Humidity Range:** 0-95% rH, non-condensing  
**Response Time, T<sub>90</sub>:** <30 seconds @ 500 cc/min.  
**Temperature Range:** -4° to +122°F (-20° to +50°C)  
**Performance:** ±10% of reading to mid-scale  
 ±15% of reading from 50% to 100% FSD over the range of -4° to 122°F  
**Display:** 8-character, single-line, backlit LCD  
**Alarm Indicators:** 3 LEDs at programmable set points  
**Menu/Calibration:** Magnet-actuated switches  
**Sensor:** Infrared, NDIR (non-dispersive infrared)

Resolution to:	Mid-scale	Full-scale
Range	0-50%	50-100%
0-500 ppm	10 ppm	20 ppm
0-1,000 ppm	20 ppm	40 ppm
0-2,000 ppm	50 ppm	100 ppm
0-5,000 ppm	50 ppm	100 ppm
0-10,000 ppm	100 ppm	200 ppm
0-5% by vol.	0.5% of range	1% of range
0-100% by vol.	0.5% of range	1% of range

### Approvals:

Approved for Class I, Div. 1, Groups B,C, & D

Classified to:

UL 916 ( 3rd ed.) and UL 1203 (4th ed.)

CSA 22.2, No. 0-M91, 30-M1986 and 142-M1987

## OPTIONS & RELATED PRODUCTS

### CONTROLLERS:

CP-10, CP-60 and MX Series

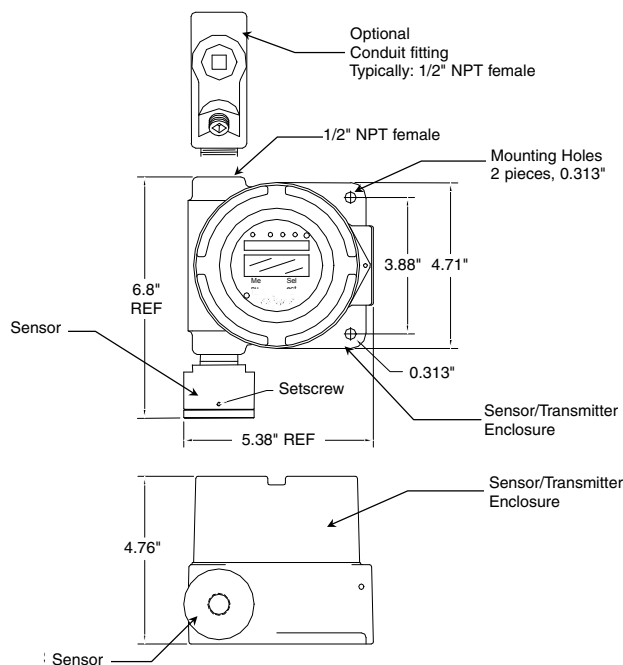
Controllers are available, 1 to 16 Channels.

### TOXIC GAS SENSOR/TRANSMITTER:

SDS-XXXX-97D Series Sensor/Transmitters are available for monitoring oxygen and a wide range of toxic compounds, primarily inorganic gases.

### COMBUSTIBLE SENSOR/TRANSMITTER:

The EX-5120 is an infrared-based sensor/transmitter for % LEL hydrocarbons.



## ORDERING INFORMATION

Description	Part Number
EX-5165 Sensor/Transmitter.....	10014-024
supplied with magnet and instruction manual	

### Replacement Parts & Accessories

Replacement Magnet.....	50030-001
Instruction Manual.....	80003-094
Optional Sealing Fitting.....	73152-000
Replacement Sensor (concentration dependent).....	From 03053-021 To 03053-059

### Calibration Equipment

Gas Regulator Assembly for 103 liter Gas Cylinders.....	02506-005
Calibration Adapter for Sensor.....	03700-034
Calibration Gas, 103 liters, 1000 ppm CO <sub>2</sub> .....	03223-1000
Calibration Gas, 103 liters, 2000 ppm CO <sub>2</sub> .....	03223-2000
Case – Holds Calibration Hardware and up to.....	73083-002
two 103 liter Gas Cylinders	

### Additional Calibration Gas Cylinders — See Price List

**NOTE:** Loss of primary power renders continuous gas monitors inoperative. Contact factory for specifications and pricing for backup battery systems compatible with ENMET monitors.

Specifications subject to change without notice

