

# EM2

## GAS DETECTION ENTRANCE MONITOR



### Key Features

- At-a-glance visual indication of gas concentrations before room entry
- Single channel
- For stand-alone or feed-through applications
- Onboard 8A relay with adjustable alarm setpoint
- Large 3" diagonal LCD display operates down to -40°F (-40°C)
- Electronics are potted to protect against water damage and corrosion
- Industry standard linear 4/20 mA input and output
- Calibration mode allows alarm inhibiting during maintenance or calibration
- Watertight IP68 enclosure designed for washdown areas and outdoors
- Use with CTI sensor line or any other 4/20 mA device

What's lurking behind your doors?  
Protect your personnel from entering potentially dangerous areas.

The EM2 provides plant personnel an at-a-glance visual indication before entering potentially dangerous areas. Simple menu-driven programming through the LCD operator interface, and one relay output with adjustable alarm setpoint. Great for engine rooms, air handlers, and stand-alone applications.

The EM2 can be used as a stand-alone monitor or in series with the sensor signal to provide remote display / remote relay operation. As a feed-through device, the sensor signal is re-transmitted back to any industry standard 4/20 mA device such as a PLC or gas detection control panel.

The watertight polycarbonate enclosure will stand up to corrosive washdown, temperature swings, and any other harsh environment encountered in the food industry. The electronics are completely potted to protect against corrosion, allowing for installation in washdown areas and outdoors.

### Applications

- Compressor Room Entrances
- Rooftop Air Handling Units
- Confined Spaces
- Oxygen Deficiency Monitoring
- Remote Relay Activation and Readout
- Stand Alone Gas Detection Controller

### Benefits

- Low cost solution
- Remote gas concentration display
- Remote relay output



The EM2 entrance monitor is a great solution for providing a visual display at all entrances into Compressor Rooms and other potentially hazardous areas.

The EM2 simply connects in series between the sensor and the control panel, re-transmitting the analog signal back to the control panel. Multiple entrance monitors can be used on a single channel.



The **EM2** is a low cost solution that provides multiple configurations to meet many needs for remote display and alarm applications. Use the **EM2** as a stand-alone device, or a feed-through device to provide remote display and alarm output capability located at or near the sensor.

Since sensors often end up in wet and harsh environments, an onboard relay is not always ideal. The **EM2** provides alarm activation remote of the sensor, in a safe enclosure out of harm's way. The onboard relay is rated at 5A @ 24VDC or 8A @ 120VAC.

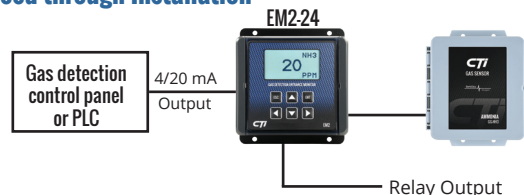
The **EM2** provides an at-a-glance indication of dangerous gas concentrations with a large LCD. Alarm indications are displayed by a flashing ALARM status on the LCD. Calibration mode, Test mode and analog In/Out Adjust mode are handy features of the operator interface.

## Ordering Information

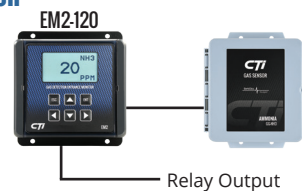
The **EM2-24** is delivered ready to install. Use the model numbers below to order. The **EM2-120** includes a power supply for hard-wired 100-240 VAC power.

**Order #:** [EM2-24](#) (does not include sensor or power supply)  
[EM2-120](#) (does not include sensor (includes 1.1A power supply))

### Feed-through Installation



### Stand-Alone Installation



### OEM Installation



## SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

### Power Requirements:

EM2-24: 24 VDC, 350 mA max (not including other connected devices).

EM2-120: 100-240 VAC, 0.7A 50/60 Hz  
 Output 24 VDC Power available for sensors and audio/visual devices:  
 0.75A @ 40°C (104°F).  
 0.50A @ 50°C (122°F).

### Signal Input:

4-20 mA, 261 Ohm input impedance

### Dimensions:

6.1" high x 6.0" wide x 2.8" deep (EM2-24)  
 6.1" high x 6.0" wide x 4.0" deep (EM2-120)

### Weight:

1.5 lbs (EM2-24)  
 2.5 lbs (EM2-120)

### Enclosure:

Polycarbonate IP68, with PU gasket and hinged lid. Powder-coated aluminum mounting plate. For non-classified areas.

### Temperature Range:

-40°F to +122°F (-40°C to +50°C)

### Humidity Range:

0-100% RH, condensing

### Alarm Level Setting:

1% of scale increments.

### Relay Output:

(1) SPDT relay, Form C contacts, 5A @ 24 VDC or 8A @120/240 VAC  
 Adjustable On/Off delays  
 Adjustable Latching/Non-Latching  
 Adjustable Normally energized/de-energized

### Terminal Block Plugs: (Field Wiring)

12-26 AWG, torque 4 lbs-in

### Wiring Connections:

3 conductor, shielded, stranded, 18 AWG cable (General Cable C2535A or equivalent) up to 1000 ft (total length between sensor and power supply)

### Analog Output:

4/20 mA (max input impedance: 700 Ohms)

### LCD:

Monochrome, 2.7" x 1.5" viewing area

### Monitor Functions:

Calibration Mode: Locks relay outputs for sensor calibration or maintenance.

Relay Test Function: Allows for easy testing of relay output function.

Adjustable Alarm Setpoint.

Downscale Alarm Setting: for Oxygen Monitoring.

Latching relay (programmable)

Failsafe relay (programmable)

Relay set/reset delays (programmable)

Deadband (programmable)

Analog in/out adjust allow fine tuning of the signal to match transmitter to EM2 to PLC

Force output mode provides adjustable analog output signal to test connected analog input device.

Real-Time Status Display: Displays gas concentrations and any current alarm conditions.

Analog input and output offset adjustment to fine-tune the signal and display readings.

### Certification:

ETL listed to UL standard 61010-1, and CSA standard C22.2 No. 61010-1-12

### Warranty:

2-years

