Honeywell | Addressable Devices

Velociti® Series MCS-COF

Advanced Multi-Criteria Fire/CO Detector

Description

The Advanced Multi-Criteria Fire/CO Detector (MCS-COF) is an addressable device that provides both fire and carbon monoxide (CO) detection. For fire detection, the detector combines the following four separate sensing elements in one unit.

- Smoke
- Carbon Monoxide (CO)
- Light/flame
- Heat

These elements sense multiple components of a fire. This approach enables an enhanced sensitivity to real fire with a heightened immunity to nuisance particulate. For CO, the detector's electrochemical sensing cell creates a separate signal for life safety CO detection.



MCS-COF with B200S

Released through the incomplete burning of various fuels, CO is a colorless, odorless and deadly gas that is virtually impossible to detect with the human senses. Because the potential exists for dangerous levels of CO to accumulate in almost any building, legislation mandates the use of CO detection in commercial spaces in the U.S. The MCS-COF is Listed to the UL® 2075 Standard for system-connected life safety carbon monoxide monitoring.

It is designed to be used with the Gamewell-FCI, E3 Series or S3 Series fire alarm control panel only. The MCS-COF should be used in conjunction with the B200S intelligent sounder base, which can generate either of the following patterns:

Temp 3 pattern for fire.

Temp 4 pattern for CO alarm indication.

The B200S recognizes the System Sensor synchronization protocol. This feature enables it to be used as a component of the general evacuation signal, along with other System Sensor horns, horn strobes, and chimes, when the MCS-COF is connected to a power supply or Fire Alarm Control Panel (FACP) output that is capable of generating the System Sensor synchronization pulses. With each sounder base carrying a unique address, the FACP can then command an individual sounder, or a group of sounders, to activate. The command set from the panel can be tailored to the specific event, allowing selection of volume, tone, and group.

FEATURES & BENEFITS

- Offers the unique function to detect the following four major elements of a fire:
  - Smoke
  - Carbon Monoxide (CO)
  - Light/flame
  - Heat
- Supplies a separate CO detection signal
- Presents the highest nuisance alarm immunity
- Uses only one address on the SLC
- Includes the EasyTest CO testing capability
- Complies with UL® Listed Standard 268 and UL® Listed Standard 2075
- Separates the audible signal for fire or CO alarm when it is used with the B200S Base
- Provides the CO cell end-of-life warning and fault
- Produces an automatic drift compensation of smoke sensor and CO cell

Table 1 lists the Sensitivity Settings and suggested applications.

SENSITIVITY SETTINGS	APPLICATIONS
Level 1:	1% per foot (30.48 cm) of smoke. Very clean environments: Used in Laboratories.
Level 2:	2% per foot (30.48 cm) of smoke. Clean environments: Used in offices.
Level 3:	3% per foot (30.48 cm) of smoke. Moderately clean environments: Used in hotel rooms, dorm rooms.
Level 4:	3% per foot (30.48 cm) of smoke with different algorithm processing and weighting of sensor elements. Used in hotel rooms near a shower, boiler rooms.
Level 5:	4% per foot (30.48 cm) of smoke. Used in equipment rooms, kitchens, paint shop.
Level 6:	Thermal alarm at 135° F (57° C).
Note: Warning: After the CO cell has reached the end-of-life, the CO sensor no longer provides life safety protection. However, when the fire detector enters Photo, Thermal, Infrared (PTIR) mode, the following sensitivities apply:	
Level 1:	1% per foot (30.48 cm) of smoke. Very clean environments: Used in Laboratories.
Level 2:	2% per foot (30.48 cm) of smoke. Clean environments: Used in offices.
Level 5:	3% per foot (30.48 cm) of smoke. Moderately clean environments: Used in hotel rooms, dorm rooms.
Level 6:	Thermal alarm at 135° F (57° C).

Table 1: Sensitivity Settings & Suggested Applications

Ordering Information

MCS-COF: Advanced Multi-Criteria Fire/CO Detector (base not included)

Note: Due to the unique nature of this detector, please consult your Fire Alarm Control Panel Manufacturer for the specific model and compatibility.

Accessories:

B200S: Addressable Sounder Base

B200S-LF: Low Frequency Addressable Sounder Base

B210LP: 6" Mounting Base

B200SR: Sounder Base

B224RB: Relay Base

M02-04-01: Detector Test Magnet

M02-09-01: Telescoping Test Magnet

Velociti® Series MCS-COF Technical Specifications

SYSTEM

Physical Specifications

Base Diameter: 6.875" (17.46 cm) installed in a B200S base

Base Height: 3.46" (8.79 cm) installed in B200S base

Shipping Weight: 4.6 oz

Color: Ivory

Material: Bayblend FR110

Operating Temperature Range: 32° F to 100° F (0° C to 38° C)

Operating Humidity Range: 15 to 90% relative humidity (non-condensing)

Table 2 lists the CO Monitoring UL Standard for Alarm Thresholds.

Parts per Million	70 ± 5ppm	150±5ppm	400± 10ppm
Detector Response Time, min.	60-240	10-50	4-15
Note: Per UL Standard 2075, the MCS-COF has beentested to the sensitivity limits defined in UL Standard 2034.			

Table 2 CO Monitoring UL Standard Reference - Alarm Thresholds

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

STANDARDS

The Velociti® Series MCS-COF is designed to comply with the following standards:

UL Standards: UL 268
UL 464

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: S1195

CSFM: 7275-1703:0175

ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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For more information

Learn more about Gamewell-FCI's Velociti® Series MCS-COF and other products available by visiting www.Gamewell-FCI.com

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