

# MCS-COF3 and MCS-COF3-IV

## Multi-Criteria Fire/CO Detector

### General Description

MCS-COF3 and MCS-COF3-IV are plug-in addressable devices that provide both fire and carbon monoxide (CO) detection. The detector combines four separate sensing elements to sense multiple components of a fire: smoke, CO, light/flame, and heat. This approach enables enhanced sensitivity to real fire with heightened immunity to nuisance particulates. For CO, the detector's electrochemical sensing cell creates a separate signal for life safety CO detection.

Multiple sensors and communication can greatly reduce nuisance alarms compared to single sensing methods. Sophisticated algorithms maximize the advantages of all four sensor types creating our best detection strategy offering heightened immunity to nuisance particulate and enhanced sensitivity to real fire.

- Photoelectric sensors detect airborne particles associated with smoke.
- Thermal sensors detect heat and rate-of-rise (135°F fixed temperature threshold).
- Infrared sensors discern light patterns in the environment as an additional data point for alarm determination.

This ability to reject certain nuisance alarm triggers, such as theater smoke, supports the use of the fire/CO detector in applications where moderate to heavy nuisance conditions exist that might cause single sensing detectors to false alarm.

UL models meet UL 268 7th edition and UL 521 listing requirements for fire detection and UL 2075 standard for system-connected life safety carbon monoxide detection.

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 mandating the use of CO detection in commercial spaces continues to grow.

B200S series intelligent sounder bases are recommended for use with MCS-COF3 and MCS-COF3-IV. These bases can generate either a Temp 3 pattern for fire or a Temp 4 pattern for CO alarm indication. The B200S series bases recognize the System Sensor synchronization protocol for use as a component of the general evacuation signal – along with other System Sensor Audible/Visible devices – when connected to a power supply or Fire Alarm Control Panel (FACP) output capable of generating the System Sensor synchronization pulses.



MCS-COF3 in B200S-WH sounder base



RA100Z Remote LED Annunciator



CK300-IR-BL  
Color Kit



TR300  
Trim Ring

## FEATURES & BENEFITS

- |   |  |  |   |  |
|---|--|--|---|--|
| <ul style="list-style-type: none"> <li>• Detects all four major elements of a fire</li> <li>• Separate CO detection signal</li> <li>• Operates in Velociti® SLC protocol</li> </ul> | <ul style="list-style-type: none"> <li>• Separate audible signal for fire or CO alarm when used with a B200S series base</li> <li>• Highest nuisance alarm immunity</li> </ul> | <ul style="list-style-type: none"> <li>• Automatic drift compensation for smoke and CO sensors</li> <li>• RealTest® CO testing capability</li> </ul> | <ul style="list-style-type: none"> <li>• New modern profile with expanded color options</li> <li>• Uses only one address on the SLC loop</li> </ul> | <ul style="list-style-type: none"> <li>• UL 268 7th edition, UL 521, and UL 2075 listed</li> <li>• 10-year CO cell with end-of-life warning</li> </ul> |
|---|--|--|---|--|

# MCS-COF3 and MCS-COF3-IV Technical Specifications

## PHYSICAL/OPERATING

### Dimensions:

Height: 2.7" (69 mm) installed in B200S series sounder base

Diameter: 6.875" (175 mm) installed in B200S series sounder base

Weight: 3.4 oz. (95 g)

**Operating Humidity Range:** 15% to 90% Relative Humidity, Non-condensing

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

**Air Velocity:** 0 to 4000 ft./min. (0 to 1219.2 m/min.)

## ELECTRICAL SPECIFICATIONS

**Operating Voltage Range:** 15 to 32 VDC

**Operating Current @ 24 VDC:** 200 uA (one communication every 5 seconds with green LED blink on communication)

**Maximum Alarm Current:** 2 mA @ 24 VDC (one communication every 5 seconds with red LED solid on)

**Maximum Current:** 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED solid on)

**Isolator Load Rating:** 0.0063

## CO MONITORING UL STANDARD REFERENCE

Alarm thresholds (in parts per million) are as follows for:

70 ± 5ppm: Detector response time 60 – 240 min.

150 ± 5ppm: Detector response time 10 – 50 min.

400 ± 10ppm: Detector response time 4 – 15 min.

## STANDARDS

Per UL standard 2075, the MCS-COF3 and MCS-COF3-IV have been tested to the sensitivity limits defined in UL Standard 2034.

UL Standard: UL 268 7th Edition

## AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to the MCS-COF3 and MCS-COF3-IV. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.

UL: S1195

CSFM: 7272-1703:0508

## ORDERING INFORMATION

MCS-COF3: Advanced multi-criteria fire/CO detector, Velociti, bright white color

MCS-COF3-IV: Advanced multi-criteria fire/CO detector, Velociti, ivory color

### Bases

B501-WHITE: 4" Mounting base, white

B501-WHITE-BP: 4" mounting base, white, 10-pack

B501-IV: 4" Mounting base, ivory

B501-BL: 4" Mounting base, black

B300-6: 6" Flanged mounting base, white

B300-6-BP: 6" Flanged mounting base, white, 10-pack

B300-6-IV: 6" Flanged mounting base, ivory

B200S-WH: Intelligent addressable sounder base, white

B200S-IV: Intelligent addressable sounder base, ivory

B200S-LF-WH: Intelligent addressable sounder base, low-frequency, white

B200S-LF-IV: Intelligent addressable sounder base, low-frequency, ivory

B224BI-WH: Isolator base, white

B224BI-IV: Isolator base, ivory

B224RB-WH: Relay base, white

B224RB-IV: Relay base, ivory

### Accessories

SMB600: Surface mounting kit (flanged)

TR300: Trim ring, white

TR300-IV: Trim ring, ivory

CK300-IR: IR color kit (includes cover and trim ring), white, 10 pack

CK300-IR-IV: IR color kit (includes cover and trim ring), ivory, 10 pack

CK300-IR-BL: IR color kit (includes cover and trim ring), black, 10 pack

RA100Z: Remote LED annunciator

M02-04-00: Detector test magnet

M02-09-00: Telescoping test magnet

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