FCO-951 Series Advanced Multi-Criteria Fire/CO Detector

General Description
The IntelliQuad® PLUS FCO-951/-IV and FCO-951A/-IV advanced multi-criteria fire/CO detector is a plug-in, addressable device that provides both fire and carbon monoxide (CO) detection. The detector combines four separate sensing elements in one unit 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 the 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).
• Carbon Monoxide sensors detect this by-product of fire for accurate fire detection.
• 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 IntelliQuad PLUS Series detector in applications where moderate to heavy nuisance conditions exist that might cause single sensing detectors to false alarm.

The IntelliQuad PLUS Series detector meets both UL 268 7th edition and UL 521 listing requirements for fire detection as well as the UL 2075 standard for system-connected life safety carbon monoxide detection. Canadian models meet listing requirements of CAN/ULC S529, CAN/ULC S530 and CSA 6.19-01.

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 (B200SCOA series in Canada) are recommended for use with FCO-951 Series IntelliQuad PLUS. These bases can generate either a Temp 3 pattern for fire or a Temp 4 pattern for CO alarm indication. The B200S/B200SCOA series bases recognize the System Sensor synchronization protocol, for use as a component of the general evacuation signal — along with other System Sensor horns, horn strobes, and chimes — when connected to a power supply or Fire Alarm Control Panel (FACP) output capable of generating the System Sensor synchronization pulses.

Features
• Unique ability to detect all four major elements of a fire
• Separate CO detection signal
• Highest nuisance alarm immunity
• Automatic drift compensation for smoke and CO sensors
• Uses only one address on the SLC
• RealTest® CO testing capability
• UL 268 7th edition, UL 521, and UL 2075 listed; CAN/ULC S529, CAN/ULC S530 and CSA 6.19-01 listed

Specifications
PHYSICAL
• 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)
• Color: White (-IV models are ivory)
• 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 are as follows:

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<tr>
<th>Parts Per Million</th>
<th>Detector Response Time</th>
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<tr>
<td>70 ± 5ppm</td>
<td>60 – 240 min.</td>
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<tr>
<td>150 ± 5ppm</td>
<td>10 – 50 min.</td>
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<tr>
<td>400 ± 10ppm</td>
<td>4 – 15 min.</td>
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Standards
Per UL standard 2075, the FCO-951 Series has been tested to the sensitivity limits defined in UL Standard 2034.
UL Standard: UL 268 7th Edition
ULC Standard: CAN/ULC S529

Agency Listings and Approvals
The listings and approvals below apply to the FCO-951 Series. 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/ULC: S1111
CSFM: 7272-0028:0510

Ordering Information
FCO-951: Advanced multi-criteria fire/CO detector, FlashScan, white, UL listed. For ivory, order FCO-951-IV.
FCO-951A: Advanced multi-criteria fire/CO detector, FlashScan, white, ULC listed. For ivory, order FCO-951A-IV.

BASES
Note: Canadian CO applications require base B200SCOA-W/-IV.
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
B200SCOA-WH: Intelligent addressable sounder base for Canadian CO applications, white, ULC-listed
B200SCOA-IV: Intelligent addressable sounder base for Canadian CO applications, ivory, ULC-listed
B200S-LF-WH: Intelligent addressable sounder base, low-frequency, white, UL-listed
B200S-LF-IV: Intelligent addressable sounder base, low-frequency, ivory, UL-listed
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. Note: Not for use in Canadian CO applications
RA100Z(A): Remote LED annunciator
M02-04-00: Detector test magnet
M02-09-00: Telescoping test magnet

ACCESSORIES

RA100Z(A)
Remote LED Annunciator

CK300-IR-BL
Color Kit

TR300
Trim Ring