ADVANCED MULTI-CRITERIA FIRE/CO DETECTOR MIX-FC351AP/MIX-FC351APA

Advanced Multi-Criteria Fire/CO Detector installed in APB200-WH sounder base

Features

- Unique ability to detect all four major elements of a fire
- Separate CO detection signal
- Highest nuisance alarm immunity
- Automatic drift compensation of smoke sensor and CO cell
- RealTest® CO testing capability
- UL 268 7th edition, UL 521, and UL 2075 listed
- Separates audible signal for fire or CO alarm when used with the APB200 bases
- 10 year CO cell with end-of-life warning and fault
- Compatible with Mircom's Intelligent control panels operating in AP mode such as FlexNet Series; CLIP mode is not supported.

Description

The MIX-FC351AP is an intelligent, multi-criteria detector incorporating photoelectric, thermal, infrared and Carbon Monoxide (CO) detection principles that provide both fire and CO detection. For fire, 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.

Multiple sensors and communication can greatly reduce nuisance alarms compared to single sensing methods.

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.

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 increase across the U.S. and Canada. The MIX-FC351AP 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.

The MIX-FC351AP is recommended for use in conjunction with the APB200-WH or APB200-LF-WH intelligent sounder bases, which can generate either a Temp 3 pattern for fire or a Temp 4 pattern for CO alarm indication. The APB200-LF-WH low frequency sounder base is designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/– 10% with a square wave or its equivalent.

The APB200-WH/ APB200-LF-WH recognize the synchronization protocol. This enables it to be used as a component of the general evacuation signal, along with other horns, horn strobes, and chimes, when connected to a power supply or Fire Alarm Control Panel (FACP) output capable of generating the synchronization pulses. With each sounder base carrying a unique address, the FACP can then command an indvidual 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.

Mircom's Advanced Protocol (AP) devices use a high speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom's Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 159 sensors and 159 modules totaling to 318 devices per SLC circuit.

CATALOG NUMBER

5901

Specifications

Physical Specifications				
Height	2.7" (69mm) installed in APB200-WH style base			
Diameter	6.875" installed in APB200-WH style base			
Shipping Weight	3.4oz. (95gm)			
Color	White			
Operating Humidity Range	15 to 90% relative humidity (non-condensing)			
Application Temperature Range	32°F to 100°F (0°C to 38°C)			
Air Velocity	0 to 4000 ft/min (0 to 20 m/sec)			
Electrical Specifications				
Operating Voltage Range	15 to 32 VDC			
Maximum Standby Current	200 µA at 24 VDC (one communication every 5 seconds with LED blink enabled)			
Maximum Alarm Current (LED on)	4.5 mA at 24 VDC			
Sensitivity Settings and Suggested Applications				
Level	**UL**	**ULC**	**Sensitivity Setting**	**Suggested Application**
Level 1	Alert 1	Alarm 1	1%/ft of smoke	Very clean environments – laboratories
Level 2	Alert 2	Alarm 2	2%/ft of smoke	Clean environments – offices
Level 3	Alarm 1	Alarm 3	3%/ft of smoke. No Delay	Moderately clean environments – hotel rooms, dorm rooms
Level 4	Alarm 2	Alarm 4	3%/ft of smoke. Maximum of 10 minutes delay from processed photo output.	Hotel rooms near a shower, boiler rooms
Level 5	Alarm 3	Alarm 5	4%/ft of smoke	Equipment rooms, kitchens, paint shops
Level 6	Thermal Alarm, Heat Only at 135°F (57°C) or rate of rise limits			
*Once the CO cell has reached 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	Alert 1	Alarm 1	1%/ft of smoke	Very clean environments – laboratories
Level 2	Alert 2	Alarm 2	2%/ft of smoke	Clean environments – offices
Level 4	Alarm 2	Alarm 4	3%/ft of smoke. Maximum of 10 minutes delay from processed photo output.	Hotel rooms near a shower, boiler rooms
Level 6	Thermal Alarm, Heat Only at 135°F (57°C) or rate of rise limit			

CO Monitoring UL Standard Reference – Alarm Thresholds are as Follows:	
Parts Per Million	**Detector Response Time**
70 ± 5ppm	60 – 240 min.
150 ± 5ppm	10 – 50 min.
400 ± 10ppm	4 – 15 min.

Per UL standard 2075, the MIX-FC351AP has been tested to the sensitivity limits defined in UL standard 2034.

Ordering Information

Model	Description
MIX-FC351AP	Advanced Multi-Criteria Fire/CO Detector (UL)
MIX-FC351APA	Advanced Multi-Criteria Fire/CO Detector (ULC)
Bases	
B501-WHITE	4" Base - White (UL/ULC)
B501-IV	4" Base - Ivory (UL/ULC)
B300-6	6" Base - White (UL/ULC)
B300-6-IV	6" Base - Ivory (UL/ULC)
APB200-WH	Intelligent Sounder Base - White (UL)
APB200-IV	Intelligent Sounder Base - Ivory (UL)
APB200A-WH	Intelligent Sounder Base - White (ULC)
APB200A-IV	Intelligent Sounder Base - Ivory (ULC)
APB200-LF-WH	Addressable low frequency sounder base - White (UL)
APB200-LF-IV	Addressable low frequency sounder base - Ivory (UL)
APB200COA-WH	Intelligent Sounder Base. Includes CO detector markings in English and French - White (ULC)
APB200COA-IV	Intelligent Sounder Base. Includes CO detector markings in English and French - Ivory (ULC)
Accessories	
TR300	Trim Ring - White
TR300-IV	Trim Ring - Ivory
CK300-IR	Color Kit with IR opening - White (Includes cover and Trim ring)
CK300-IR-IV	Color Kit with IR opening - Ivory (Includes cover and Trim ring)
CK300-IR-BL	Color Kit with IR opening - Black (Includes cover and Trim ring)
The MIX-FC351AP(A) detectors are also backward compatible with the bases APB200, APB200COA and APB200-LF for retrofit applications.	

Compatible with Mircom's Intelligent control panels operating in AP mode such as FlexNet Series; CLIP mode is not supported.
Product specifications subject to change without notice.

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