



Mammoth Fire Alarms
Incorporated

176 Walker Street Lowell, MA 01854



Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 12/08/17

FIRE ALARM SYSTEM SUBMITTAL

LOCATION:

**502 DEERING CENTER
PORTLAND, ME.**

INSTALLER:

**COREY ELECTRIC, INC.
WESTBROOKE, ME.**

September 14, 2017

“Servicing the installer before and after the installation.”

www.mammothfire.com

SALES (978) 934-9130 • 1-800-995-9808 • FAX (978) 934-9131



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FIRE ALARM SYSTEM
FOR

502 DEERING CENTER
PORTLAND, ME.

COREY ELECTRIC, INC.

PAGE	QTY	PART #	DESCRIPTION
1-10	1	FX-2003-6DSK	FACP 1/SLC 4/NAC 6A W/CABINET
1-10	1	RM/1008A	8 RELAY CIRCUIT MODULE
1-10	1	RAX/LCD	FX2000 LCD ANNUNCIATOR
1-10	1	BB/1001R	ENCLOSURE FOR RAM/RAX (INDOOR)
11-12	2	PS12120	12 AH 12V SEALED BATTERY
13	1		STANDBY BATTERY CALCULATION SHEET
14-17	2	DSM12/24R	SYNCHRONIZATION MODULE CLASS A
18-19	6	MIX-M500MAP	ADDRESSABLE MONITOR MODULE
18-19	2	MIX-M501MAP	ADDRESSABLE MONITOR MODULE
20-21	5	MS-710APU	ADDRESSABLE DBL ACTN PULL STAT W/BRK ROD
22-23	8	MIX-2251AP	ANALOG PHOTO DETECTOR
22-23	8	B210LP	ANALOG BASE FOR SYSTEM SENSOR DEVICES
24-25	2	CO1224T	12/24VDC CO DETECTOR W/RELAY & SOUNDER
26-27	6	SC7010BV	120VAC/9VDC SMOKE/CO DET MAX 18 INTRCNCT
28-29	16	7010B	120VAC/9VDC PHOTO SMK MAX 12 INTRCNT
30-33	3	HSR15	WALL MOUNT RED HORN STROBE 15CD
30-33	6	HSR110	WALL MOUNT RED HORN STROBE 110CD
30-33	2	STR15	WALL MOUNT RED STROBE 15CD
34-35	16	MIZ/24S/R	MINI HORN SYNC RED
	3	TS/SBO	TAMPER SWITCH - SUPPLIED BY OTHERS (Not Shown)
	3	FS/SBO	FLOW SWITCH - SUPPLIED BY OTHERS (Not Shown)
36	1		ADDRESS DIRECTORY
37	1		CONTRACTOR'S CHECKLIST
38	1		WIRING ESTIMATOR
39	1		MAMMOTH FIRE ALARMS, INC. POLICIES
40-43	4		PROPERTY PROTECTION MONITORING, INC. LITERATURE

INTELLIGENT FIRE ALARM CONTROL PANEL FX-2000 SERIES



Description

Mircom's FX-2000 Series Microprocessor Based Intelligent Fire Alarm Control Panel is designed to provide maximum flexibility of analog system requirements while also providing easy installation and operation at a cost-effective price.

The FX-2000 base panel consists of one intelligent analog loop controller capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4). The system can be expanded by adding additional Analog Loop Controller Modules. In addition the base panel supports 16 conventional hardwire adder modules such as the DM-1008A Initiating Circuit Module, SGM-1004A Indicating Circuit Module and the RM-1008A Relay Circuit Module. Additional conventional hardwire adder modules can be added with the ALC-H16 Adder Hardwire Loop Controller Module, which allows the system to support an additional 16 conventional adder modules. The base panel also consists of 4 Class A/B (Style Z/Y) Indicating Circuits rated at 1.7 Amps each and either a 6 or 12 Amp Power Supply.

Equipped with a large 4 x 20 Back-lit Alphanumeric LCD display, the FX-2000 utilizes a simple Menu system complete with a directional keypad, common control switches and LEDs, Alarm Queue switches and LEDs and two configurable input switches.

Features

- Listed to UL 864, 9th edition
- Large system capacity
- Modular design
- Each Analog Loop is capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4)
- Base system supports 16 conventional hardwired modules with the provision to add more using the ALC-H16 Hardwire Loop Controller Module
- 6 or 12 Amp power supply
- Four Class A/B (Style Z/Y) Indicating Circuits rated at 1.7 Amps each
- Configurable for Two Stage operation
- Three level password protection with field programmable definition which enables the installer to determine what functions are accessible for each password level
- Panel Security to protect site configurations
- Manual Control Enable which allows password protection for all front panel function switches
- Correlatable Switch Inputs which allows for multi-functional outputs
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- Auxiliary relay contacts for Common Alarm, Common Supervisory and Common Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 1000 Alarm History Log for alarm related events and a 2000 Event Log for all events
- Front Panel Auto-Configure and/or Computer laptop Programmable
- Large 4 by 20 character Back-lit LCD Display with user friendly menu
- Common Control switches and/or indicating LEDs for System Reset, Signal Silence, Fire Drill, Acknowledge, General Alarm, Lamp Test, A.C. On, Pre-Alarm and Ground Fault
- Built-in One Man Walk Test operation
- Configurable for Coded Operation
- Supports an RS-485 interface to the QX-5000 Voice Evacuation System
- Panel selection for Canadian (ULC) or U.S.A. (UL) requirements for smoke sensors (sensitivity) via computer laptop
- Capability to adjust Intelligent Smoke Detector sensitivity level



S7010



S7010



7165-1477-111
7170-1477-119



APPROVED
3013980



approved
313-97-E

City of
Chicago

Class I (Con) E15095
Class II (Con) E15096
Class I (Add) E15097
Class II (Add) E15098
Highrise

CATALOG NUMBER **5910**

NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.



Operation

The FX-2000 is field programmable via the front panel auto configuration or a laptop computer. In addition, it allows for a three level password protection that can be field defined via a laptop computer. This unique feature allows the installer to determine what functions are accessible for each password level.

The system is also equipped with two Event History Logs; one for Alarm and the other for full panel sequence events. The Alarm History Log (1000 events) contains all alarm related functions while the Event Log (2000 events) provides a full sequence log of all operations, as well as alarms and troubles. Both Event History Logs can be used during the One Man Walk Test operation. This allows the event logs to be downloaded to a laptop or printer for a permanent record.

The FX-2000 is a very flexible system which supports both internal and external annunciation modules. The internal annunciation modules consist of the RAX-1048TZDS Programmable Zone LED Annunciator, the IPS-2424DS Programmable Input Switches Module, the FDX-008 Fan Damper Module and the AGD-048 Adder Graphic Driver Module.

Input Correlations

All input circuits (addressable or hardwired) can be configured for non-verified alarm, verified alarm, waterflow, latching/non-latching supervisory, monitor, trouble only or remote switch inputs. All of the input configuration types listed above, with the exception of remote switch can be programmed to operate relays, signal and strobe circuits for hardwired or addressable devices. Please refer to the chart below for correlations. The input circuits configured as non-latching will cause the output circuits configured to them to follow the state of the input device. This feature allows for the connection of multiple panels together for signal operation.

All of these modules mount within the panel and are driven from the main LCD display. The external annunciator modules include the RAM-1032TZ Date: and RAX-1048TZDS LED Remote Annunciators, the MGD-32 Master Graphic Driver Module, and the RAX-LCD Remote LCD Shared Display. The RAX-LCD Remote LCD Shared Display provides the same features as the main display on the FX-2000. In addition the RAX-LCD also acts as a driver module that allows for the RAX-1048TZDS, IPS-2424DS, FDX-008 and AGD-048 to be connected to it. The RAX-LCD is required as a driver module any time any of the above mentioned external annunciator modules are programmed differently from those on the main panel or are mounted remote from the main panel.

In addition to these adder modules, the FX-2000 also supports the UDACT-300A Digital Communicator Module and the PR-300 Polarity Reversal/City Tie Module. The FX-2000 also supports an RS-485 interface to the QX-5000 Emergency Zoned Audio System.

The Remote Switch input, which must be momentary, allows any input type device (addressable or hardwired) to be configured as a common control functions such as fire drill, system reset, signal silence etc. The remote switches operate in a momentary mode like the control switches on the FX-2000 main panel. For functions such as fire drill, the remote switch functions in a toggle mode, with one press for "on" and one press for "off". The remote switch is supervised for "stuck in on" positions, where the switch input is activated (stuck) for more than 30 seconds. If this occurs, a trouble is generated and clears when the input goes away.

Intelligent or Conventional Input Types	Output			Control Switches
	Relay	Signal	Strobe	
Non-Verified Alarm	Yes	Yes	Yes	No
Verified	Yes	Yes	Yes	No
Waterflow	Yes	Yes	Yes	No
Non-Latching Supervisory	Yes	Yes	Yes	No
Latching Supervisory	Yes	Yes	Yes	No
Monitor	Yes	Yes	Yes	No
Trouble Only	Yes	Yes	Yes	No
Remote Switch Input	No	No	No	Yes



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FX-2000 Standard Series



FX-2003-6DS/FX-2003-12DS Compact Main Control Units

The FX-2003-6DS and FX-2003-12DS Compact Main Control Units come complete with one Intelligent Signaling Line Circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each and a 4 line by 20 character back-lit LCD display. The FX-2003-6DS is equipped with a 6 Amp Power Supply which charges 10-24 AH batteries while the FX-2003-12DS includes a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2003-6DS/FX-2003-12DS provides space for 3 adder modules and 2 internal annunciator adder modules. The FX-2003-6DS/FX-2003-12DS mount in a UB-1024DS backbox.



FX-2003-6DS-16LED Compact Main Control Unit

The FX-2003-6DS-16LED Compact Main Control Unit come complete with one Intelligent Signaling Line Circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each and a 4 line by 20 character back-lit LCD display with 16 LEDs for annunciation (DSPL-420-16TZDS). This display is functionally equivalent to the classic FX-2000 main display, but more compact adding in the 16 LEDs for annunciation in addition to all the standard functions. The FX-2003-6DS-16LED is equipped with a 6 Amp Power Supply which charges 10-24 AH batteries. The FX-2003-6DS-16LED provides space for 3 adder modules and 2 internal annunciator adder modules. The FX-2003-6DS-16LED mounts in a separate ordered UB-1024DS Backbox



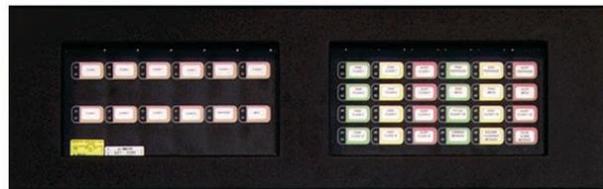
FX-2017-12ADS Mid-Size Main Control Unit

The FX-2017-12ADS Mid-Size Main Control Unit comes complete with one intelligent Signaling Line Circuit (SLC) Four Style Z/Y (Class A/B) NAC Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2017-12ADS has space for up to 17 adder modules and 3 internal annunciator adder modules. The FX-2017-12ADS mounts in the BBX-1072ADS enclosure.



FX-2009-12DS Large Size Main Control Unit

The FX-2009-12DS Large Size Main Control Unit comes complete with one Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2009-12DS supports 16 conventional adder modules and provides space for up to 9 adder modules and 3 internal annunciator adder modules. The FX-2009-12DS mounts in the BB-5000 Series enclosures.



ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12DS/FX-2009S-12 supports up to 12 adder modules and has space for 2 internal annunciator modules. The ECX-0012 mounts in the BB-5000 series enclosures.

FX-2000 Standard Series System Maximums

- 495 Input Circuits
- 150 Output Circuits
- 5 Intelligent Addressable Loops
- 4 Remote LCD Annunciators
- 4 Main LED Annunciators
- 100 Manual Control Switches

Adder Loop Controller Modules



ALC-198S Single Analog Loop Controller Module

The ALC-198S Single Analog Loop Controller Module provides an additional analog loop to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules. The ALC-198S occupies one module slot in the FX-2000 main or expander chassis.



ALC-396S Dual Analog Loop Controller Module

The ALC-396S Dual Analog Loop Controller Module provides two additional analog loops to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules per loop. The ALC-396S occupies one module slot in the FX-2000 main or expander chassis.



ALC-H16 Hardwire Loop Controller Module

The ALC-H16 Hardwire Loop Controller Module allows the FX-2000 to support an additional sixteen (16) conventional hardwire adder modules. The hardwire modules consist of the DM-1008 Eight Initiating Circuit Module, SGM-1004 Four Indicating Circuit Module and the RM-1008 Eight Relay Circuit Module. The ALC-H16 occupies one module slot in the FX-2000 main or expander chassis.

Adder Auxiliary Modules



UDACT-300A Digital Alarm Communicator Module

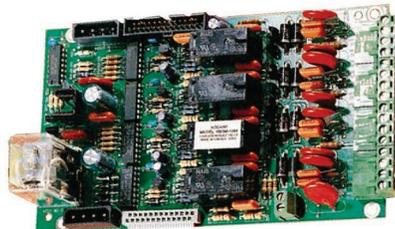
The UDACT-300A Digital Alarm Communicator Module allows the FX-2000 to transmit addressable point information to a central station. The UDACT-300A can be configured locally via the on-board keypad and the CFG-300 Configuration Tool or with a UIMA programming tool and a computer with an available serial or USB port. The UDACT-300A occupies one module slot in the FX-2000 main or expander chassis.

Adder Hardware Modules



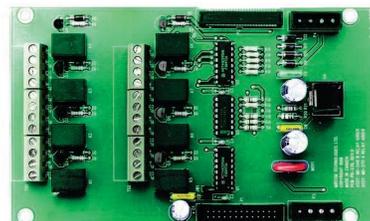
DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2000 main or expander chassis.



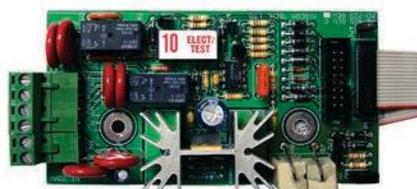
SGM-1004A Four Indicating Circuit Module

The SGM-1004A provides 4 Class A/B (Style Z/Y) Indicating Circuits configurable as Silenceable or Non-Silenceable. Each Indicating Circuits is rated at 1.7 Amps. Each of the indicating circuits have individual signal silence inputs which are jumper selectable. The SGM-1004A occupies one module slot in the FX-2000 main or expander chassis.



RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2000 with 8 individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load). The RM-1008A occupies one module slot in the FX-2000 main or expander chassis.



PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 mounts in the FX-2000 main chassis.

Programmable Modules



RAX-1048TZDS Programmable Zone LED Annunciator Module

The RAX-1048TZDS Programmable Zone LED Annunciator Module provides 48 programmable bi-coloured LEDs. The RAX-1048TZDS connects to the main panel or the RAX-LCD Shared Display when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



FDX-008 Fan Damper Module

The FDX-008 Fan Damper Module provides individually programmed circuits which can be used for fan or damper control. Each circuit has a slide-in label, a three position selector switch, green “run or open” LED and an amber “off or closed” LED. The three-position selector switch has a centre “auto” position, a left “off or close” position and a right “on or open” position. The FDX-008 connects to the main panel or the RAX-LCD when mounted remotely. It uses MIX-M500CH for control of fans or dampers and two MIX-M501A for status. The FDX-008 occupies one display position in the BB-1000 or BB-5000 enclosures.



IPS-2424DS Programmable Input Switches Module

The IPS-2424DS Programmable Input Switches Module provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The switches operate in a toggle operation with one press for “on” and one press for “off”. The IPS-2424DS connects to main panel or the RAX-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 enclosures.

Electrical Ratings

Current Consumption

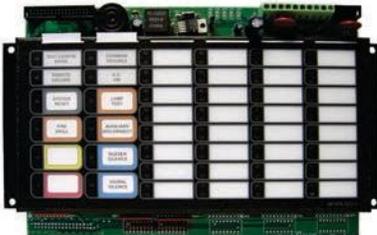
Model	Standby	Alarm
FX-2003-6DS-16LED	230 mA	380 mA
FX-2003-6DS	230 mA	380 mA
FX-2003-12DS	230 mA	380 mA
FX-2017-12ADS	230 mA	380 mA
FX-2009-12DS	230 mA	380 mA
ALC-198S/ALC-396S	35 mA	50 mA
ALC-H16	35 mA	50 mA
DM-1008A	80 mA	100 mA
SGM-1004A	35 mA	150 mA
RM-1008A	25 mA	150 mA
PR-300	50 mA	300 mA
UDACT-300A	40 mA	60 mA
RAX-LCD	100 mA	150 mA
IPS-2424DS	10 mA	144 mA
FDX-008	10 mA	100 mA
MGD-32	35 mA	1.6 Amps
AGD-048	25 mA	2.4 Amps
RAM-1032TZDS	50 mA	150 mA
RAX-1048TZDS	15 mA	100 mA

Remote Annunciators



RAX-LCD Remote Shared Display

The RAX-LCD Remote Shared Display is a remote annunciator that provides the same functions as the main display on the fire alarm control panel, less the 16 zone LEDs. In addition to operating as a remote annunciator, it can also be used as a driver module for standard LED annunciation or reduced zone annunciation (different from the main panel annunciation), graphic drivers programmed different from the main annunciators, programmable switch modules with a unique configuration and fan damper control also with a unique configuration. Each time a different type of annunciation configuration is needed an additional RAX-LCD is required. The RAX-LCD occupies one display position in the **BB-1000** or BB-5000 enclosures.



RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. Each display point can be identified by the slide-in label that slides in beside the LED. The RAM-1032TZDS is equipped with sealed membrane-like buttons for Common Control functions. The RAM-1032TZDS allows for the control switches to be disabled on a per function basis for areas that do not require certain common control functions to be remotely located from the fire alarm control panel. The RAM-1032TZDS can be programmed differently than the main panel annunciator or a remote RAX-LCD. All RAM-1032TZDS remote annunciators on the system must be programmed the same. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



RAX-1048TZDS Adder Remote LED Annunciator

The RAX-1048TZDS Adder Remote LED Annunciator provides an additional 48 points of LED annunciation. The RAX-1048TZDS is an expandable module that connects to the RAM-1032TZDS. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.

Graphic Annunciator Driver Modules



MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. Any or all of these switch inputs can be used. There are supervised outputs for all of the support LEDs and the common control switches. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. Mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. External power supply required for incandescent lamps and lamp test.



AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 Master Graphic Driver modules, or if located remotely it must be connected and mounted with the RAX-LCD Shared Display. The AGD-048 will support an additional 48 supervised outputs. As with the master modules, the AGD-048 will support both LEDs and incandescent lamps. Mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

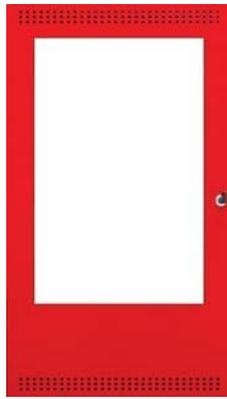
NOTE:

The combined total of RAM-1032TZDS and MGD-32 per system is eight. All RA-1000 Series annunciators or Graphic driver modules must have the zoned LED or graphic LED correlated to the same combination of addressable devices or hardwired zones. However, the zoned LED annunciator on the FX-2000 main panel can be programmed differently from the annunciators mounted remotely.

Enclosures



DOX-1024DS



DOX-1024DSR

UB-1024DS Universal Backbox

The UB-1024DS Universal Backbox houses the FX-2003-6DS or FX-2003-12DS main control unit and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately.

Dimensions (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

DOX-1024DS(R) Door

The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).



BBX-1072ADS

The BBX-1072ADS enclosure is capable of handling one FX-2017-12ADS Mid-Size Main Control Unit as well as up to 24 AH Batteries. The cabinet features the universal CAT-30 lock and a removable door for easy installation and servicing. The cabinet is available in a white or red exterior (BBX-1072ARDS).

Dimensions (minus built-in trim ring): 32.5"H x 25"W x 6.5"D

BB-5008

The BB-5008 is a lobby control centre enclosure which is capable of handling one FX-2009-12DS Large Main Control Unit which supports 2 internal annunciator modules such as the IPS-2424DS, FDX-008, RAX-1048TZDS, etc. In addition the BB-5008 allows for 4 footprints for mounting Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator modules. The cabinet hold up to 24 AH batteries. Door and Chassis hardware are ordered separately.

Dimensions: 36"H x 30"W x 7"D

Other Enclosures

BB-1001: 9"H x 12.75"W x 1.2"D

BB-1002: 18"H x 12.75"W x 1.2"D

BB-1003: 26.4"H x 12.75"W x 1.2"D

BB-1008: 33"H x 22.5"W x 1.25"D

BB-1012: 45"H x 22.5"W x 1.25"D



BB-5014

The BB-5014 is a lobby control centre enclosure which is capable of handling one FX-2009-12DS Large Main Control Unit which supports 2 internal annunciator modules such as the IPS-2424DS, FDX-008, RAX-1048TZDS, etc. In addition the BB-5014 allows for 10 footprints for mounting Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator modules. The BB-5014 can also support a graphic annunciator in place of these modules. The cabinet holds up to 24 AH batteries. Door and Chassis hardware are ordered separately.

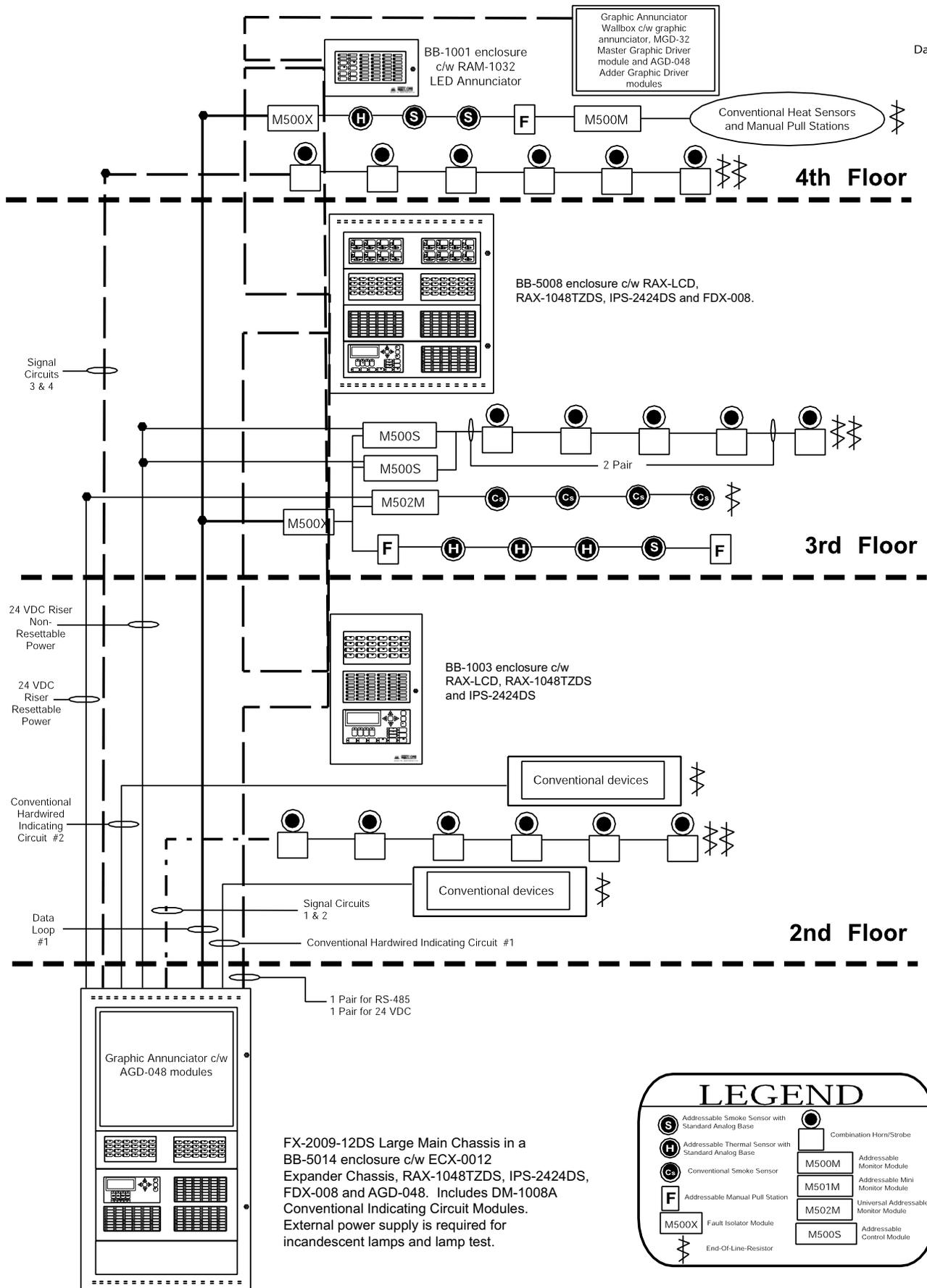
Dimensions: 60"H x 30"W x 7"D



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Typical FX-2000 Panel Wiring Class B (Style 4)



FX-2009-12DS Large Main Chassis in a BB-5014 enclosure c/w ECX-0012 Expander Chassis, RAX-1048TZDS, IPS-2424DS, FDX-008 and AGD-048. Includes DM-1008A Conventional Indicating Circuit Modules. External power supply is required for incandescent lamps and lamp test.

LEGEND

Addressable Smoke Sensor with Standard Analog Base	Addressable Thermal Sensor with Standard Analog Base	Conventional Smoke Sensor	Addressable Manual Pull Station	Fault Isolator Module	Combination Horn/Strobe Addressable Monitor Module
End-Of-Line-Resistor	Addressable Mini Monitor Module	Universal Addressable Monitor Module	Addressable Control Module		



Ordering Information

Model	Description
FX-2000 Standard Series	
FX-2003-6DS-16LED	Compact Main Control Unit c/w one Intelligent Signaling Line Circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each and a 4 line by 20 character back-lit LCD display with 16 LEDs for annunciation (DSPL-420-16TZDS). This display is functionally equivalent to the classic FX-2000 main display, but more compact adding in the 16 LEDs for annunciation in addition to all the standard functions. The FX-2003-6DS-16LED is equipped with a 6 Amp Power Supply which charges 10-24 AH batteries. The FX-2003-6DS-16LED provides space for 3 adder modules and 2 internal annunciator adder modules. Order UB-1024DS and DOX-1024DS(R) separately.
FX-2003-6DS	Compact Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), a 6 Amp power supply and a backbox. Supports up to 16 Conventional Adder Modules. Provides space for 3 Adder Modules and 2 internal annunciation modules. Order UB-1024DS and DOX-1024DS(R) separately.
FX-2003-12DS	Compact Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), a 12 Amp power supply and a backbox. Supports up to 16 Conventional Adder Modules. Provides space for 3 Adder Modules and 2 internal annunciation modules. Order UB-1024DS and DOX-1024DS(R) separately.
FX-2017-12ADS	Mid-Size Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each) and a 12 Amp power supply. Supports up to 16 Conventional Adder Modules. Provides space for 17 Adder Modules and 3 Internal Annunciation modules. Mounts in the BBX-1072ADS enclosure.
FX-2009-12DS	Large Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each) and a 12 Amp power supply. Supports up to 16 Conventional Adder Modules. Provides space for 9 Adder Modules and 3 Internal Annunciation modules. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-2009-12DS c/w space to add up to 12 adder modules and 2 Internal Annunciation modules. Mounts in the BB-5000 series enclosures
Adder Loop Controller Modules	
ALC-198S	Single Loop Intelligent Analog Loop Controller Module (99 Analog Sensors and 99 Addressable Modules)
ALC-396S	Dual Loop Intelligent Analog Loop Controller Module (198 Analog Sensors and 198 Addressable Modules)
ALC-H16	Hardwire Loop Controller Module. Supports 16 Conventional Hardwired Modules
Adder Hardwire Modules	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Indicating Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
Adder Auxiliary Modules	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
Programmable Modules	
RAX-1048TZDS	Programmable Zone LED Annunciator Module c/w 48 bi-coloured LEDs.
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module c/w 8 programmable switches
Remote Annunciators	
RAM-1032TZDS	Main Annunciator Chassis c/w Common Control Features, Indicators and 32 Bi-Coloured LEDs
RAX-1048TZDS	Adder Annunciator Chassis c/w 48 Bi-Coloured LEDs
RTI-1	Remote Trouble Indicator
Remote Shared Display Annunciators	
RAX-LCD	Remote Shared Display LCD Annunciator c/w Display Queues and Common Controls
Graphic Annunciator Driver Modules	
MGD-32	Master Graphic Driver Module c/w Fire Alarm Common Control Switch Inputs and 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs



Reviewed for Code Compliance
 Inspections Division
 Approved with Conditions
 Date: 12/08/17

Ordering Information cont'd

Enclosures	
UB-1024DS	Universal backbox for FX-2003-6DS/FX-2003-12DS. Order DOX-1024DS separately
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
BBX-1072ADS	Black backbox enclosure for FX-2000 c/w removable door and CAT-30 lock and key. Houses one FX-2017-12ADS Mid-Size Main Control Unit and up to 24 AH batteries. Includes White door
BBX-1072ARDS	Black backbox enclosure for FX-2000 c/w removable door and CAT-30 lock and key. Houses one FX-2017-12ADS Mid-Size Main Control Unit and up to 24 AH batteries. Includes Red door
BB-5008	Lobby Control Centre Wallbox Enclosure. Supports 8 Module Footprints
DOX-5008M	White Metal Door for BB-5008
DOX-5008MR	Red Metal Door for BB-5008
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008
BB-5014	Lobby Control Centre Wallbox Enclosure. Supports 14 Module Footprints
DOX-5014M	White Metal Door for BB-5014
DOX-5014MR	Red Metal Door for BB-5014
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014

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CAT. 5910
 Rev. 11



The rechargeable batteries are of sealed lead calcium maintenance-free construction with a fully gelled electrolyte in a polypropylene case. These batteries will not leak or spill even if left upside down for extended periods of time.

ELECTRICAL SPECIFICATIONS

Nominal voltage	12 volts
Charging voltage	
Float	13.5 - 13.8 VDC
Cycle	14.4 - 14.8 VDC
Operating Temp. Range	
Discharge	-76° F to +122° F (-60° C to +50° C)
Charge	-4° F to +122° F (-20° C to +50° C)



PS12120



PS1270



PS12180



PS12350, PS12550

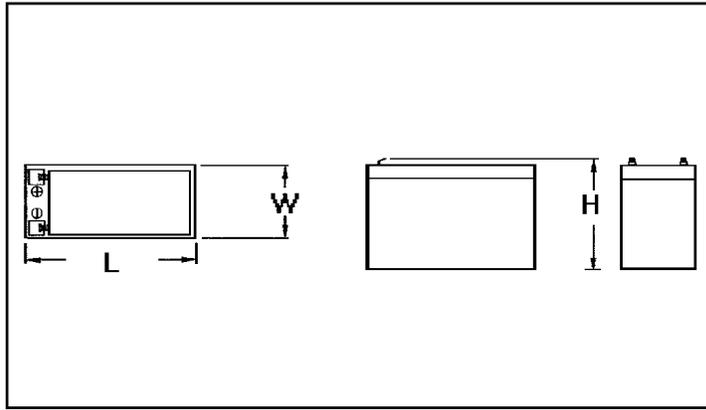
BATTERY FEATURES

- Long Life
- Completely Sealed
- Charge and Discharge in any Position
- Low Self Discharge
- Maintenance Free

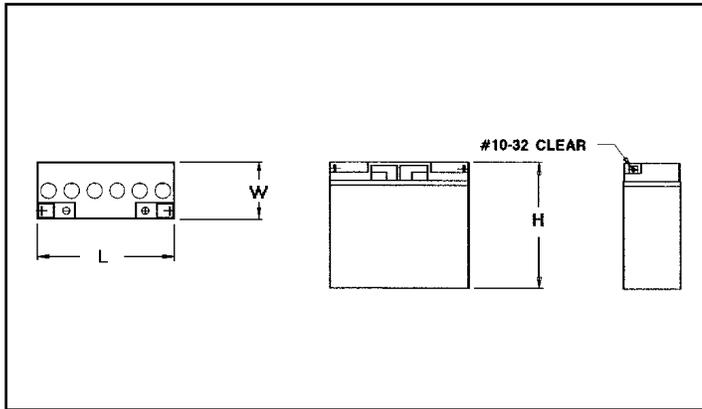
SPECIFICATIONS

Model	Capacity	Terminal Type	Dimensions	Weight
	(20 hr. rate)			
PS1270	7 AH	Faston tab “.187” series	5.11 cm L x 10.03 cm H x 6.6 cm W 5.95" L x 3.95" H x 2.6" W	5.75 lbs. (2.61 kg)
PS12120	12 AH	Faston tab “.250” series	12.48 mm L x 5.97 mm H x 4.72 mm W 5.94" L x 3.70" H x 3.98" W	9.33 lbs. (4.24 kg)
PS12180	18 AH	Terminal posts w/5 mm nut & bolt connectors	18.11 cm L x 16.69 cm H x 7.59 cm W 7.13" L x 6.57" H x 2.99" W	13.2 lbs. (5.99 kg)
PS12350	35 AH	"L" blade w/.64 mm hole	19.69 cm L x 18.54 cm H x 12.95 cm W 7.75" L x 7.3" H x 5.1" W	24 lbs. (10.89 kg)
PS12550	55 AH	"L" blade w/.64 mm hole at negative, 8.9 mm sq. cutout at positive	26.04 cm L x 22.23 cm H x 17.27 cm W 10.25" L x 8.75" H x 6.8" W	39 lbs. (17.69 kg)

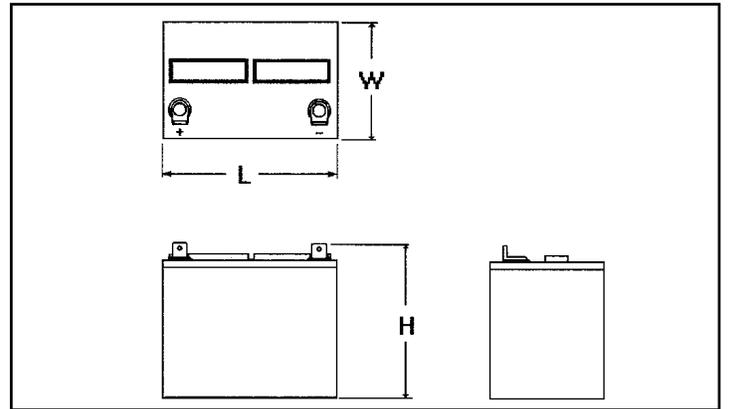
Specifications are provided for information only and are believed to be accurate. However, no responsibility is assumed by Mammoth Fire Alarms, Inc. for their use. Specifications subject to change without notice.
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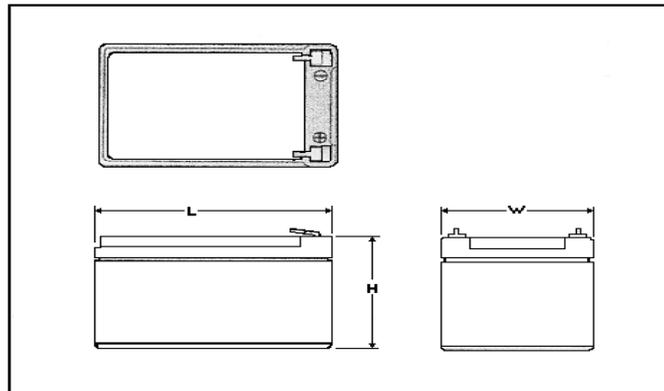
PS1270



PS12180



PS12350, PS12550



PS12120

ORDERING INFORMATION

Model	Description
PS1270	Sealed lead calcium battery, 7 AH
PS12120	Sealed lead calcium battery, 12 AH
PS12180	Sealed lead calcium battery, 18 AH
PS12350	Sealed lead calcium battery, 35 AH
PS12550	Sealed lead calcium battery, 55 AH

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Mammoth Fire Alarms

Incorporated

176 Walker Street, Lowell, MA. 01854-3126

Tel. (978) 934-9130 Sales 1-800-995-9808 Fax (978) 934-9131



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Inspections Division
Approved with Conditions
Date: 12/08/17

STANDBY BATTERY CALCULATIONS

Created: 4/7/2017

Updated: 9/5/2017

SOLD TO:

COREY ELECTRIC, INC.
609 MAIN STREET
WESTBROOK, ME. 04092

JOB NAME				
502 DEERING CENTER PORTLAND ME Fire Alarm				
QTY	PART #	DESCRIPTION	SUP CURRENT	ALARM CURRENT
1	FX-2003-6DSK	FACP 1/SLC 4/NAC 6A W/CABINET	0.2300	0.3800
1	RM/1008A	8 RELAY CIRCUIT MODULE	0.0250	0.1500
2	DSM12/24R	SYNCHRONIZATION MODULE CLASS A	-	0.1480
1	RAX/LCD	FX2000 LCD ANNUNCIATOR	0.1000	0.1500
1	BB/1001R	ENCLOSURE FOR RAM/RAX (INDOOR)	-	-
COMMON AREAS				
8	MIX-2251AP	ANALOG PHOTO DETECTOR	0.0024	0.0400
8	B210LP	ANALOG BASE FOR SYSTEM SENSOR DEVICES	-	-
5	MS-710APU	ADDRESSABLE DBL ACTN PULL STAT W/BRK R	0.0020	0.0275
2	CO1224T	12/24VDC CO DETECTOR W/RELAY & SOUNDER	0.0400	0.0800
2	MIX-M501MAP	ADDRESSABLE MONITOR MODULE	0.0008	0.0040
2	STR15	WALL MOUNT RED STROBE 15CD	-	0.1140
3	HSR15	WALL MOUNT RED HORN STROBE 15CD	-	0.2460
6	HSR110	WALL MOUNT RED HORN STROBE 110CD	-	1.1820
16	MIZ/24S/R	MINI HORN SYNC RED	-	0.4800
SPRINKLER				
3	TS/SBO	TAMPER SWITCH - SUPPLIED BY OTHERS	-	-
3	FS/SBO	FLOW SWITCH - SUPPLIED BY OTHERS	-	-
6	MIX-M500MAP	ADDRESSABLE MONITOR MODULE	0.0024	0.0312
2	PS12120	12 AH 12V SEALED BATTERY		
TOTAL			0.4026	3.0327
5	Ring Time, in Min	(Total Alarm Current / (60 / Ring Time))	0.2527	ALM A/H
24	Standby Time, in Hrs	(Total Supervisory Current * Standby Time)	9.6624	SUP A/H
Total Amp Hours Required			9.9151	
Standby Reserve 20%			20	11.8981



Series DSM Sync Modules



Series DSM

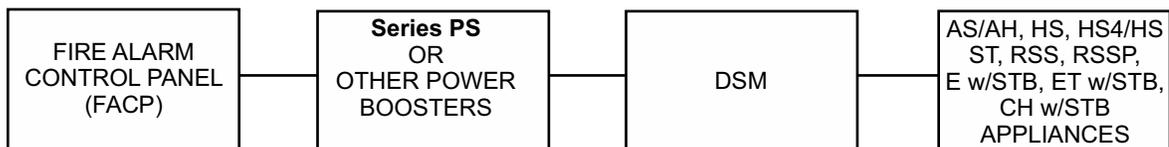
Description

The Wheelock Series DSM Sync Modules are utilized with the Series Exceder, Series AS/AH, Series RSS, Series RSSP, Series SLM and selected strobe applications with other Wheelock combination appliances.

When used with Series AS Audible Strobes and/or Series Exceder Horn Strobes, the DSM Sync Modules provide independent operation of synchronized temporal pattern (code 3) horn and synchronized strobe flash, as well as the ability to silence the horn while maintaining the strobe flash, while using only a single pair of wires. The DSM-12/24 Sync Modules control either a Class A or two (2) Class B NAC circuits.

Features

- Approvals include: UL Standard 1971, ULC, New York City (MEA), California State Fire Marshal (CSFM) and Chicago (BFP)
- Uniquely designed to accept an independent strobe and audible input from the FACP and convert to a single output that connects to Wheelock's Series AS or Series NS family of audible strobes
- Series DSM Sync Modules can also be used to synchronize Wheelock's Series Exceder, RSS, RSSP and SLM Sync Strobes
- 3 ampere per circuit current handling at 12 or 24 VDC
- Low operating current draw
- Compatible with all standard fire alarm control panels
- Meets the NFPA-72 requirement for Temporal Pattern when used with the Series AS/AH and/or Series Exceder
- 3 year warranty



DSM Connection Diagram with Power Booster





UL Voltage	ULC Voltage	Rated Average Current		Rated Peak Current		Rated Inrush Current	
		In1/In2	Audible	In1/In2	Audible	In1/In2	Audible
8.0 VDC	10.5 VDC	0.019	0.004	0.055	0.004	0.150	0.016
12.0 VDC	12.0 VDC	0.020	0.004	0.064	0.004	0.170	0.019
24.0 VDC	24.0 VDC	0.035	0.008	0.080	0.008	0.342	0.030
33.0 VDC	33.0 VDC	0.045	0.010	0.090	0.010	0.470	0.040
8.0 VRMS	8.0 VRMS	0.028	0.005	0.107	0.008	0.210	0.016
12.0 VRMS	12.0 VRMS	0.030	0.006	0.103	0.009	0.240	0.019
24.0 VRMS	24.0 VRMS	0.048	0.010	0.145	0.015	0.480	0.033
33.0 VRMS	31.0 VRMS	0.062	0.012	0.175	0.022	0.685	0.056

NOTE: All CAUTIONS and WARNINGS are identified by the symbol **▲**. All warnings are printed in bold capital letters.

▲ WARNING: PLEASE READ THESE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

▲ WARNING: MAKE SURE THAT THE TOTAL CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO A SM OR DSM DOES NOT EXCEED 3.0A OR EXCEED THE RATING OF THE FIRE ALARM CONTROL PANEL'S PRIMARY AND SECONDARY POWER SOURCES AND NAC CIRCUITS. OVERLOADING THESE SOURCES COULD RESULT IN LOSS OF POWER AND FAILURE TO ALERT OCCUPANTS DURING AN EMERGENCY, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

When calculating the total current, use Tables 1 & 2 to determine the highest value of "Rated Average Current" for the SM or DSM (across the listed voltage range), then add this value to the total current for any other appliances powered by the same source and include any required safety factors. Refer to Instruction Sheet for additional information.

▲ WARNING: MAKE SURE THAT ALL FUSES USED ON NAC CIRCUITS ARE RATED TO HANDLE THE MAXIMUM INRUSH OR PEAK CURRENT FROM ALL APPLIANCES ON THOSE CIRCUITS. FAILURE TO DO THIS MAY RESULT IN LOSS OF POWER TO THE NAC CIRCUIT AND THE FAILURE OF ALL APPLIANCES ON THAT CIRCUIT TO OPERATE, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Output Circuit Description of SM/DSM Module		SM Module	DSM Module	Ref. Fig.
Class "B" with Audible Silence	(dual circuit)		Y	1
Class "B" with No Audible Silence	(dual circuit)		Y	2
Class "A" with Audible Silence	(single circuit)		Y	3
Class "A" with No Audible Silence	(single circuit)		Y	4

Note: DSM Dual Sync Modules are rated for 3.0 amperes per circuit. **The maximum number of interconnected DSM modules is twenty (20).**

▲ CAUTION: Use DSM Sync Modules only on NAC circuits with continuously applied voltage. Do not use DSM Sync Modules on coded or interrupted NAC circuits in which the applied voltage is cycled on and off.

▲ CAUTION: Power Boosters may be used in conjunction with the DSM Sync Modules only in the order shown below. Only one DSM Sync Module shall be allowed on a NAC circuit. Do not connect Power Booster to the NAC circuit after the one DSM Sync Module.

Exception: The Wheelock Power Booster can be connected either before or after the DSM Sync Module. Refer to Power Booster instruction manual for proper application and installation.

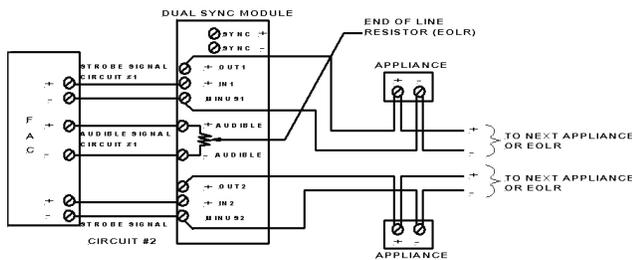


FIG. 1 DUAL CLASS "B" CIRCUIT WITH AUDIBLE SILENCE FEATURE

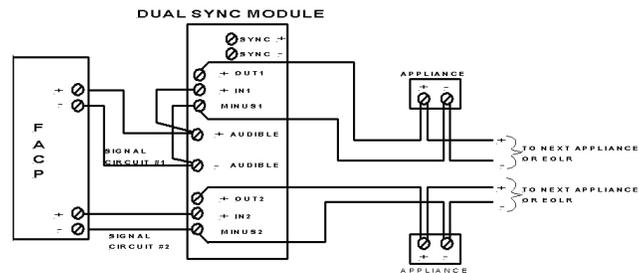


FIG. 2 DUAL CLASS "B" CIRCUIT WITH NO AUDIBLE SILENCE FEATURE

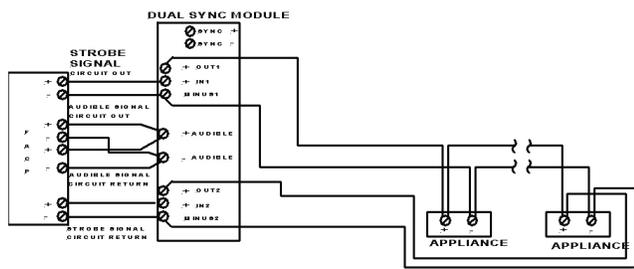


FIG. 3 SINGLE CLASS "A" CIRCUIT WITH AUDIBLE SILENCE FEATURE

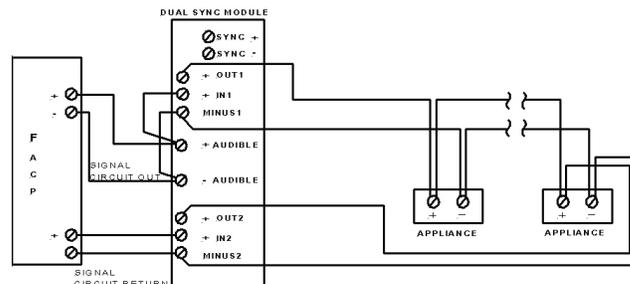


FIG. 4 SINGLE CLASS "A" CIRCUIT WITHOUT AUDIBLE SILENCE FEATURE

Notes

1. Non-Sync Appliances can be installed before or after a DSM. If the Non-Sync appliance requires audible silence, four wire connection is necessary with the strobe circuit connected before the DSM NAC circuit, and the audible leads connected to a silenceable NAC circuit from the FACP.
2. The audible appliance produces a momentary interruption (approximately 25ms) each time the strobes flash.
3. Circuit #2 may be omitted if only 1 circuit is required when using the DSM.
4. Non-Sync Audible Appliances can be installed on the audible NAC. Be aware of the current requirement for the SM or DSM module. See table 3.

Specifications and Ordering Information

Model	Order Code	Input Voltage VDC	Average Current @ 12 or 24 VDC	UL Max*	Mounting Options**
DSM-12/24-R***	6374	12	0.020	0.026	W
		24	0.035	0.055	W

R = Red

* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

** Refer to Data sheet # S7000 for Mounting Options.

*** The maximum number of interconnected DSM modules is twenty (20).

The total distance from the first to the last DSM shall not exceed 1,000 feet of #18 AWG wire. Use only #18 AWG wire.



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Inspections Division
Approved with Conditions
12/08/17

⚠ WARNING: THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 8-33 VOLTS USING FILTERED DC OR UNFI FULL-WAVE RECTIFIED (FWR). DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION. THE APPLICA IMPROPER VOLTAGE MAY RESULT IN DEGRADED OPERATION OR DAMAGE TO THESE PRODUCTS, WHICH COULD RESULT IN PR DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, o, -----, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

⚠ WARNING: CONTACT WHEELOCK FOR "INSTALLATION INSTRUCTIONS" (P83177-DSM) AND "GENERAL INFORMATION" SHEET ON THESE PRODUCTS. These documents do undergo periodic changes. It is important that you have current information on these products. These materials contain important information that should be read prior to specifying or installing these products including:

- TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES.
- FUSE RATINGS ON NAC CIRCUITS TO HANDLE MAXIMUM INRUSH OR PEAK CURRENTS FROM ALLAPPLIANCES ON THOSE NAC CIRCUITS.
- COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR RATED IN PUT VOLTAGE RANGE.
- INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.
- USE STROBES ONLY ON NAC CIRCUITS WITH CONTINUOUSLY APPLIED OPERATING VOLTAGE. DO NOT USE STROBE ON CODED OR INTERRUPTED NAC CIRCUITS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF AS THE STROBE MAY NOT FLASH.

Architects and Engineers Specifications

The sync modules shall be Wheelock Series DSM Sync Modules. Series DSM Sync Modules shall be the master controllers for Wheelock Series Exceder, AS/AH, RSS, RSSP and appliances where a synchronized audible/visual audible or visual only appliance is specified. All modules shall be UL listed under Standard 464. Series DSM modules shall be designed to interface with Series AS Audible Strobe Appliances and Horn Strobe Appliances to produce a synchronized temporal (Code 3) horn as well as synchronized strobe flash on a two-wire alarm circuit. Other synchronized products are the Wheelock Series Exceder, RSS, RSSP, SLM visual only appliances and Series AH and Exceder Horn Appliances.

DSM modules shall provide an additional strobe circuit input/output for control of either two Class "B" NAC circuits or a single Class "A" NAC circuit. Upon activation of the audible silence function at the Fire Alarm Control Panel, the audible signal component of Series AS Audible Strobe and/or the Series NS Horn Strobe may be silenced while maintaining strobe activation.

DSM module shall be DSM-12/24 for control of either Class A two (2) Class B NAC circuits. The DSM dual circuit version shall provide the additional capability of "daisy-chaining", that is, the ability to interconnect multiple DSM's for synchronous horn and strobe operation on multiple NAC circuits. Interconnection capability shall be for a maximum of 40 NAC circuits. All modules shall operate on either 12 or 24 VDC. The DSM 12/24 shall be .020 amperes @ 12 VDC and .035 amperes @ 24 VDC. The dual circuit DSM Sync Module shall be capable of handling a load of 3 amperes per NAC circuit at 12 or 24 VDC.

All versions shall be polarized for DC supervision and shall incorporate screw terminals for in/out field wiring of #18 to #12 AWG wire size. DSM Sync modules shall mount to a 4-11/16" x 2-1/8" deep backbox.

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.



WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

S3000 DSM 06/11

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www.coopernotification.com

ADVANCED PROTOCOL INTELLIGENT MONITOR MODULES MIX-M500AP SE



Features

- Designed to meet a wide range of applications
- SEMS screws for easy wiring
- Panel controlled status LED (except MIX-M501MAP)
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode (except MIX-M500X)
- Low standby current
- Mount in 4" square junction box

Description

Mircom's intelligent monitor modules are designed to meet a wide range of applications. The monitor modules provide an interface to contact devices, such as, manual stations, conventional smoke or heat detectors, waterflow switches, and more. The monitor modules are addressed with easy-to-use rotary code switches.

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 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

MIX-M500MAP Monitor Module

Mircom's MIX-M500MAP monitor module is a standard-sized module that supervises either a Style D (Class A) or Style B (Class B) circuit of dry-contact input devices. The MIX-M500MAP is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary decade switches. It provides either a 2-wire or 4-wire fault tolerant initiating circuit for normally open contact fire alarm, supervisory, or security devices. The module has a panel controlled LED indicator.

MIX-M501MAP Mini Monitor Module

The MIX-M501MAP is a miniature monitor module that supervises a Style B (Class B) circuit of dry-contact input devices. The small size of the module allows it to fit inside devices or junction boxes behind devices. The MIX-M501MAP is intended for use in intelligent, two-wire systems where the individual address of each module is selected using rotary decade switches. It provides a two-wire initiating circuit for normally open contact fire alarm and security devices.

MIX-M502MAP Zone Interface Module

The MIX-M502MAP Zone Interface Module is a standard-sized module that monitors and supervises compatible two-wire, 24 volt, smoke detectors on a Style D (Class A) or Style B (Class B) circuit. The module allows Mircom's intelligent panels to interface and monitor two-wire conventional smoke detectors. All two-wire detectors being monitored must be UL or ULC compatible with the module. The MIX-M502MAP is addressed through the communication line of an intelligent Mircom system. It transmits the status of one zone of two-wire detectors to the fire alarm control panel. Status conditions are reported as normal, open, or alarm. The interface module supervises the zone of detectors and the connection of the external power supply.



S5434



S5434



7300-1477-0167

CATALOG NUMBER **5950**

NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.



M500X Isolator Module

The M500X Isolator Module is a standard-sized module that enables part of the communications loop to continue operating when a short circuit occurs on it. An LED indicator blinks in the normal condition and turns on during a short circuit condition.

The module will automatically restore the en communications loop to the normal condition w/ the short circuit is removed

Specifications

MIX-M500MAP Monitor Module

Normal Operating Voltage	15 to 32 VDC
Max. Alarm Current (LED on)	5.0mA (LED on)
Average Operating Current	400 μ A, 1 communication every 5 sec, 47k EOL
EOL Resistance	47K Ohms
Max. IDC wiring resistance	40 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	400 μ A
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D

MIX-M501MAP Mini Monitor Module

Nominal Operating Voltage	15-32 VDC
Max. Alarm Current	600 μ A
Average Operating Current	400 μ A, 1 communication every 5 seconds, 47k EOL
EOL Resistance	47K Ohms
Max. IDC Wiring Resistance	40 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	400 μ A
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	1.3" H x 2.75" W x 0.65" D

MIX-M502MAP Zone Interface Module

Normal Operating Voltage	15 to 32 VDC
Maximum Alarm Current	5.1mA (LED on)
Average Operating Current	400 μ A, 1 communication and 1 LED flash every 5 seconds, 3.9k EOL
EOL Resistance	3.9K Ohms
Max. IDC wiring resistance	25 Ohms
IDC Supply Voltage	
Regulated DC Voltage	24 VDC power limited
Ripple Voltage	0.1 Volts RMS maximum
Current	90mA per module
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D

M500X Isolator Module

Normal Operating Voltage	15 - 32 VDC
Stand-by Current	450 μ A (not isolating)
Maximum Current Draw	17mA (device in isolation)
Temperature Range	32°F to 120°F (0°C to 49 °C)
Humidity	10 to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D

Ordering Information

Model	Description
MIX-M500MAP	Monitor Module
MIX-M501MAP	Mini Monitor Module
MIX-M502MAP	Zone Interface Module
MIX-M500X	Isolator Module

Add suffix "A" for ULC listed model.

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Fax Toll Free: (888) 660-4113

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Features

- Dual Action
- Key resettable
- Permanently attached Intelligent Addressable Module
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode
- High-gloss red enamel finish
- Plastic breakrod
- Meets ADA 5 lb. maximum manual-force
- Mounts on standard single gang box, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox

Description

Mircom's MS-710APU Advanced Protocol Intelligent Manual Station is made of a high quality, die-cast metal and is available as a dual-action device with key resets and a permanently attached intelligent module. The intelligent manual station has a pair of rotary decimal switches which allows for two digit address setting. Pulling the handle initiates the operation of the intelligent module.

The manual station is available with CAT-30 keys and mounts on a standard single gang backbox, Mircom model BB-700 interior surface metal backbox, or BB-700WP weather proof backbox.

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 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

Operation

The MS-710APU Dual Action Intelligent Manual Station is operated by pushing the bar labelled "PUSH BAR" and then pulling down the handle marked "PULL HANDLE". The MS-710APU is reset by opening the station with the key, placing the handle in the normal upright position and re-locking the station.

Specifications

The manual station shall be Mircom's MS-710APU. Operating instructions shall be in raised English lettering and the unit shall be constructed of high quality die-cast metal and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the intelligent addressable module. All manual fire alarm stations shall be installed as per the specific requirements outlined in the UL codes, as well as all other applicable national or local codes. Final acceptance is subject to the local authority having jurisdiction.





Specifications

Dimensions	4.93" H x 3.56" W x 2.9" D
Nominal Operating Voltage	15–32 VDC
Maximum Alarm Current @ 24V	600 μ A
Average Operating Current @ 24V	400 μ A

Surface Mount Backboxes



BB-700 Surface Mount Backbox

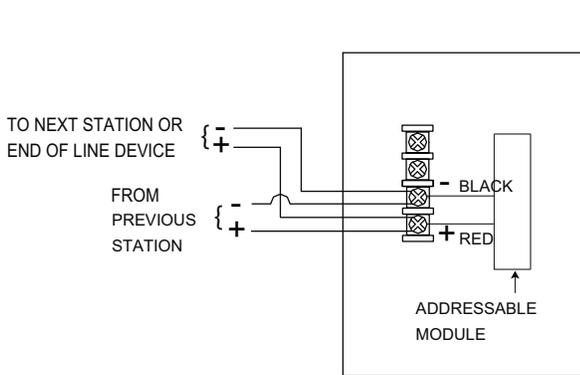
Dimensions:
5" H x 3.6" W x 2.0" D



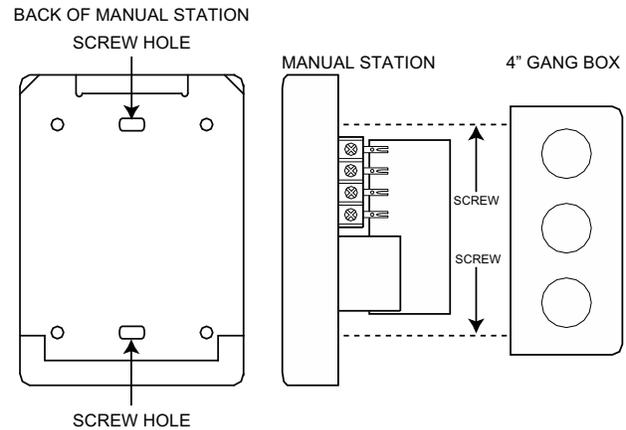
BB-700WP Weatherproof Surface Mount Backbox

Dimensions:
5" H x 3.6" W x 2.2" D

Wiring Diagram



Mounting Diagram



Ordering Information

Model	Description
MS-710APU	Advanced Protocol Intelligent Key Resettable Dual Action Manual Station
BB-700	Series 700 Interior Surface Mount Backbox, Red Finish
BB-700WP	Series 700 Weatherproof Surface Mount Backbox, Red Finish

NOT TO BE USED FOR INSTALLATION PURPOSES.



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Web page: <http://www.mircom.com>

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Model MIX-2251AP sensor mounted in a B210LP base

Features

- Sleek, low profile design
- Available with photoelectric or ionization technology
- Photoelectric detectors are available with additional fixed temperature detection
- Dual LEDs indicate communications and activate steady when in alarm
- Low profile base provides easy interchangeability
- Low standby current
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode
- Magnetic test feature
- Superior EMI protection
- Sealed against dirt, insects, and back pressure

Description

Mircom's low profile intelligent plug-in smoke detectors with integral communications provide features that surpass conventional detectors. Sensitivity is continuously monitored and reported to the panel where the desired detector sensitivity can be programmed. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level.

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 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

MIX-1251AP Intelligent Ionization Smoke Sensor

The MIX-1251AP ionization sensor incorporates a unique single source, dual chamber design to respond quickly and dependably to a broad range of fires.

MIX-2251AP Intelligent Photoelectric Smoke Sensor

The MIX-2251AP provides a unique optical sensing chamber that senses smoke produced by a wide range of combustion sources.

MIX-2251TAP Intelligent Photoelectric Smoke Sensor with 135°F Fixed Temperature Heat Detector

The MIX-2251TAP adds dual electronic thermistors to the MIX-2251AP to provide 135°F (57°C) fixed temperature thermal sensing.

MIX-2251TMAP Intelligent Acclimate™ Multicriteria Smoke Sensor

The MIX-2251TMAP is a photoelectric smoke detector with supplementary 135°F thermal. Also known as Acclimate™, it uses advanced on-board software to combine the signals from the photo and thermal elements. The MIX-2251TMAP is a true multicriteria detector capable of rejecting nuisance sources, but still responding quickly to real fires. Acclimate has the capability of adjusting its sensitivity according to the type of environment that it is installed in, and rate-of-rise thermal detection. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.



S6295



S6965


 7271-1477-0159
 (MIX-1251AP)
 7272-1477-0161
 (MIX-2251AP/TAP/TMAP)



Specifications

Voltage Range
15 to 32 VDC
Standby Current
300 uA @ 24 VDC (one communication every 5 sec. with LED blink enabled)
LED Current (max.)
6.5 mA @ 24 VDC (on)
Height
2.0 inches (51 mm)
Diameter
6.1 inches (155 mm) installed in B210LP Base 4.1 inches (104 mm) installed in B501 Base

Shipping Weight
Photoelectric models: 5.2 oz. (147 g) Ionization model: 5.4 oz. (153 g)
Operating Humidity Range
10% - 93% non-condensing
Operating Temperature Range
MIX-1251AP/MIX-2251AP: 32°F to 120°F (0°C to 49°C) MIX-2251TAP/MIX-2251TMAP: 32°F to 100°F (0°C to 38°C)
UL Listed Velocity Range
Ion: 0 - 1200 fpm (0 - 6.1 m/sec) Photo/Photo with Thermal: 0 - 4000 fpm (0 - 20 m/sec) (suitable for installation in ducts)

Ordering Information

Model	Description
Intelligent Smoke Sensors	
MIX-1251AP	Intelligent Ionization Smoke Sensor
MIX-2251AP	Intelligent Photoelectric Smoke Sensor
MIX-2251TAP	Intelligent Photoelectric Sensor with 135°F Fixed Temperature Heat Detector
MIX-2251TMAP	Intelligent Acclimate™ Multicriteria Smoke Sensor
Bases	
B501	Intelligent Flangeless Mounting Base
B210LP	Intelligent Flanged Mounting Base
B224RB	Intelligent Relay Base
B224BI	Intelligent Isolator Base
B200SR	Intelligent Standard Sounder Base (Compatible with B501BH Series)
Accessories	
RA-100Z	Remote LED Annunciator

Add suffix "A" for ULC listed model.

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Features

- RealTest® enables a functional test using canned CO
- Full compliance with UL 2075
- A code-required trouble relay
- Wiring supervision with SEMS terminals
- A six-year end-of-life timer
- 12/24 VDC
- A low current draw of 20 mA in standby and 40 mA in alarm
- Versatile mounting for wall and ceiling
- Accurate and reliable electrochemical sensing technology
- Optional CO-PLATE CO Detector Replacement Plate to upgrade previously installed competitor detectors to the CO1224T

Description

The System Sensor CO1224T and CO1224TR (round) Carbon Monoxide (CO) Detectors use a highly accurate and reliable electrochemical sensing cell to provide early warning of dangerous CO levels.

With RealTest® technology, the CO gas sensing cell used in the CO1224T and CO1224TR CO detectors can be tested using a CO gas agent, fully meeting the requirements of NFPA 720: 2009. Simply put the detector into RealTest mode, spray a small amount of CO into the detector per the installation instructions, and within seconds the detector will alarm, indicating successful gas entry. (See the reverse page or the user manual for complete instructions.)

When dangerous amounts of CO are detected, the CO1224T and CO1224TR detectors alert residents by sounding and flashing a temp 4 signal alarm. With 24/7 central station monitoring, residents are guaranteed protection whether they are away from home, sleeping, or already suffering from the effects of CO.

The CO1224T and CO1224TR are designed for system operation. These detectors are fully listed to UL 2075 and offer a code-required trouble relay to send a sensor failure or end-of-life signal to the control panel and the central station. The CO1224T and CO1224TR also use SEMS-type terminal Philips head screws for quicker and more positive wiring connections and code-required wiring supervision.

With a low current draw, these detectors enable more devices to be connected to the panel, limiting the need to purchase extra power supplies or more expensive panels. As 12/24 VDC detectors, the CO1224T and CO1224TR will operate on most industry security and fire alarm control panels.

Architectural/Engineering Specifications

Carbon monoxide detector shall be a System Sensor model number CO1224T or CO1224TR listed to Underwriters Laboratories UL 2075 for Gas and Vapor Detectors and Sensors. The detector shall be equipped with a sounder and a trouble relay. The detector's base shall be able to mount to a single-gang electrical box or direct (surface) mount to the wall or ceiling. Wiring connections shall be made by means of SEMS screws. The detector shall provide dual color LED indication that blinks to indicate normal standby, alarm, or end-of-life. When the sensor supervision is in a trouble condition, the detector shall send a trouble signal to the panel. When the detector gives a trouble or end-of-life signal, the detector shall be replaced. The detector shall provide a means to test CO gas entry into the CO sensing cell. The detector shall provide this with a test mode that accepts CO gas from a test agent and alarms immediately upon sensing CO entry.





Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 12/08/17

Electrical Specifications	
Operating Voltage	12/24 VDC
Audible Signal	85 dB in alarm
Standby Current	20 mA
Alarm Current	40 mA (75 mA test)
Alarm Contact Ratings	0.5 A @ 30 VDC
Trouble Contact Ratings	0.5 A @ 30 VDC
Physical Specifications	
Size	CO1224T Length: 5.1", Width: 3.3", Height: 1.3"
	CO1224TR Diameter: 6", Height: 1.3"
Approximate Weight	CO1224T: 7 oz; CO1224TR: 11 oz
Operating Temperature Range	32° – 104° F (0° – 40° C)
Operating Humidity Range	22 – 90% RH
Input Terminals	14 – 22 AWG
Mounting	Single-gang back box; surface mount to wall or ceiling

Operation Modes

Operation Mode	Green LED	Red LED	Sounder
Normal (standby)	Blink 1 per minute	—	—
Alarm	—	Blink in temp 4 pattern	Sound in temp 4 pattern

RealTest® Feature: The System Sensor CO1224T and CO1224TR Carbon Monoxide Detectors with RealTest enable evaluation of the functionality of the CO sensing cell using a canned CO test agent.



1. Push and hold the Test/Hush button for two seconds to enter RealTest mode. The green LED will flash once every second to indicate RealTest mode has started.

2. Spray canned CO agent into the detector.

3. Verify CO sensing at the control panel. The detector will automatically exit RealTest alarm mode after about 20-60 seconds.

NOTE: Check with local codes and the AHJ to determine whether or not a functional gas test is desired for an installation.

Hush Feature: Pushing the Test/Hush button will silence the sounder for 5 minutes (except in RealTest mode).

Trouble Feature: When the detector is in a trouble condition, it will send a trouble signal to the panel.

End-of-life Timer: After the detector's internal sensor has reached the end of its life, a trouble signal will be sent to the panel. This will indicate that it is time to replace the detector. An electrochemical carbon monoxide detector lifespan is approximately six years, and the detector must be replaced by the date marked on the inside of the product.

CO-PLATE: System Sensor also offers the CO-PLATE CO Detector Replacement Plate to cover the footprint (when necessary) of previously installed competitive carbon monoxide detectors that require replacement.



CO-PLATE

Ordering Information

Model	Description
CO1224T	12/24 volt, 4-wire system-monitored carbon monoxide detector with RealTest® Technology
CO1224TR	12/24 volt, 4-wire system-monitored round carbon monoxide detector with RealTest® Technology
CO-PLATE	CO detector replacement plate to cover the footprint of previously installed competitive detectors as necessary

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5172
Rev. 3



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SMOKE & CO COMBO ALARM PHOTOELECTRIC

BRK®

THE PROFESSIONAL STANDARD

CAT. **SC7010BV**



OptiPath 360™
Technology

VOICE WARNING WITH LOCATION

Exclusive! A voice will tell you the programmed location of the unit and danger detected.

SPREAD SPECTRUM HORN TONE

Easier for elderly with normal age related hearing loss to hear horn.

TWO LATCHING FEATURES

Alarm Latch and Low Battery Latch

TWO SILENCE FEATURES

Silence low battery chirp for up to eight hours or silence nuisance alarm.

OPTIPATH 360 TECHNOLOGY

Patented technology provides 360° of direct access to smoke sensor.

120V AC/DC, 60Hz

Wire-in with 3V (two 1.5V AA) Battery Backup

Description:

The BRK Cat. No. SC7010BV is a wire-in, 120V AC 60Hz single and/or multiple station combination smoke and carbon monoxide alarm specifically designed for residential and institutional applications including sleeping rooms of hospitals, hotels, motels, dormitories and other multi-family dwellings as defined in standard NFPA 101. Model SC7010BV complies with UL217 and UL2034, CSFM, NFPA 72 and NFPA 720, HUD, FHA and other agencies that model their codes after the above agencies. It meets building codes where AC/DC photoelectric smoke and carbon monoxide alarms with and without voice are required.

The BRK SC7010BV is a state-of-the-art hardwired with battery backup smoke/CO combo alarm that features a photoelectric smoke sensing chamber, an electrochemical CO sensor and voice warning with location. This exclusive feature incorporates a voice that will speak one of 11 pre-programmed locations and the danger detected. When the alarm sounds (if programmed for "basement", for example) it will speak "Warning, evacuate, smoke in basement". All other interconnected SC7010BV's will announce warning without location ("Warning, evacuate, Smoke"). All other interconnected hardwired alarms will sound their normal smoke and/or CO horn pattern. The Spread Spectrum Horn Tone has a lower and varying frequency that makes it easier for the elderly with normal age related hearing loss to hear the horn. This alarm features two latching features and two silence features. Alarm Latch: Easily identifies initiating alarm even after alarm condition has subsided. Low Battery Latch: Identifies which unit is in low battery condition by blinking the green power light. Low Battery Silence: Temporarily silence the low battery chirp for up to eight hours. Alarm Silence: Silence alarm for several minutes. Other features include an 85dB horn, single button test/silence, an easy access battery drawer. OptiPath 360 Technology: Exclusive patented technology provides 360° of direct access to the smoke sensor. The alarm is interconnectable with up to 18 devices, of which 12 can be smoke alarms. The unit mounts to any standard electrical box up to 4" size. Keyhole slots in the mounting bracket eliminate the need to remove the electrical

box screws for installation. Includes Perfect Mount, a mounting bracket that keeps the alarm secure over a wide rotation range to allow for perfect alignment. Dust cover is included to keep the alarm clean during construction. Battery installation and removal can occur while the unit is mounted to the ceiling or wall via the side battery compartment. Two locking features are provided to prevent battery theft and/or theft of the unit. Connection to AC power is made with a "Quick-Connect" wiring harness. Installation is quick, easy and cost effective.



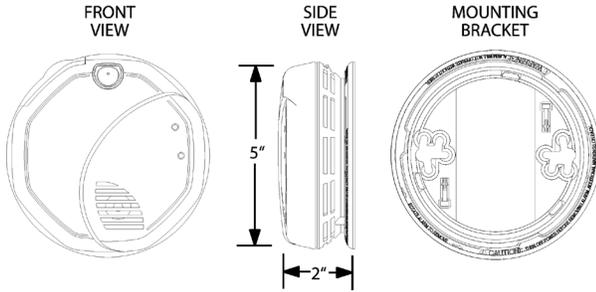
Exclusive!
Voice Warning!
WITH LOCATION!



CAT. SC7010BV



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Inspections Division
Approved with Conditions
Date: 12/08/17



TECHNICAL SPECS:

Alarm Dimensions:	5.0" dia x 2"H
Weight:	9.3 oz.
Operating Voltage:	120V AC, 60Hz with two 1.5V Alkaline AA battery backup.
Operating Current:	.05 amps (standby/alarm)
Temperature Range:	40°F (4°C) to 100°F (38°C)
Humidity Range:	10% to 95% relative humidity (RH)
Audio Alarm:	85dB at 10 feet
Voice Output:	Choice of 11 pre-programmed locations warns of danger and location.
Test/Silence:	Electronically simulates smoke and carbon monoxide conditions, causing the unit to alarm and temporarily quiets the alarm.
Alarm Reset:	Automatic when smoke and/or carbon monoxide clears
Interconnections:	Up to 18 units with smoke, heat, CO alarms and relays. Maximum of 12 smoke alarms (see user's manual).
Smoke Sensor:	Photoelectric
CO Sensor:	Electrochemical
Indicator Lights:	
AC Power:	Constant Green Light
DC Power:	Intermittent Green Light
Local Alarm:	Audio alarm, Voice with location, rapidly flashing red light by corresponding indicator light.
Remote Alarm:	Audio alarm, Voice without location, red light not flashing
Latching Alarm Indicator:	Audio off and corresponding red lights flashing 2 seconds on, 2 seconds off after local alarm unless reset by test/silence button
Low Battery Latch:	"Power" LED flashes green on for 2 seconds, off for 2 seconds.

ARCHITECTURAL AND ENGINEERING SPEC

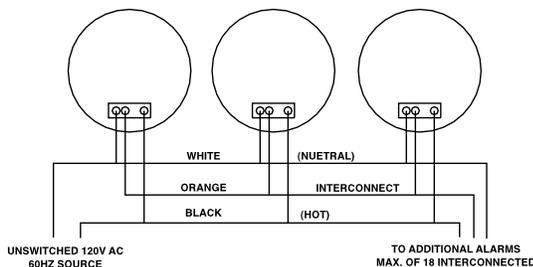
1. A photoelectric sensing chamber and electrochemical CO sensor.
2. A Voice Warning of danger detected (Smoke or Carbon Monoxide) in addition to speaking one of 11 pre-programmed locations, e.g. "Warning, Evacuate, Smoke in Basement".
3. The unit shall have a lower and varying horn frequency to make it easier for the elderly with normal age related hearing loss to better hear the horn and be rated 85db at 10 ft.
4. The unit shall be capable of self restoring.
5. A fully screened smoke sensing chamber to prevent entry of small insects thereby reducing the probability of unwanted alarms.
6. Powered by 120V AC, 60Hz and have a monitored battery backup (two 1.5V Alkaline AA batteries).
7. Two Latching features: Alarm Latch to easily identify initiating alarm after alarm condition has subsided by displaying a blinking red light by corresponding alarm indicators. Low battery latch to visually identify which unit is in low battery condition by displaying a blinking green light by the Power indicator.
8. Two Silence Features: Alarm Silence to temporarily silence nuisance alarms. Low Battery Silence to silence low battery chirp for up to 8 hours
9. Optipath 360 technology that provides 360 (degree symbol) of direct access to the smoke sensor
10. A visual LED (green) power-on indicator to confirm unit is receiving power. A visual LED (red) power-on indicator to confirm unit has switched to battery backup.
11. A single button test/silence feature. Test button should check all alarm functions by simulating a smoke or CO condition, causing the unit to alarm.
12. The unit shall be capable of operating between 40°F (4°C) and 100°F (38°C) and relative humidity between 10% and 95%.
13. The unit shall mount to any standard electrical box up to 4" size without screw removal and shall be listed for wall or ceiling mounting.
14. The unit shall have a locking mechanism to deter battery removal and/or theft of the unit.
15. Feature a quick-connect wiring harness and be capable of interconnecting up to 18 devices, 12 of which can be smoke alarms.
16. The unit shall at a minimum meet the requirements of UL217, UL 2034, CSFM, NFPA 72, NFPA 720, NFPA 101, ICC.

SHIPPING SPECS:

Individual Carton Dimensions:	5.13"L x 2.38"W x 5.13"H
Weight:	.74 lbs.
Cube:	.04 ft ³
UPC:	0 29054 00229 7
Master Carton Dimensions:	10.75"L x 7.88"W x 11.06"H
Master Pack:	12
Weight:	9.4 lbs.
Cube:	.54 ft ³
I2of5:	100 29054 00229 4
Pallet Information:	
Cases per Layer:	22
Number of Layers:	4
Cases per Pallet:	88
Cube:	54.04 ft ³
Weight:	892.2 lbs.

INSTALLATION OF ALARM

Installation of this smoke and carbon monoxide alarm must conform to all local electrical codes and Article 760 of the National Electrical Code (NFPA 70) and NFPA 72. Interconnected units must meet the following requirements: Total length of wire interconnecting units should be less than 1000 feet, be #18 gauge or larger and be rated at least 300V. It is recommended that all units be on the same fuse or circuit breaker. If local codes do not permit, be sure the neutral wire is common to both phases. Only those BRK® user's manual catalog numbers listed in the user's manual may be connected to these smoke alarms.



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SMOKE ALARM

PHOTOELECTRIC

CAT. **7010B**



OptiPath 360™
Technology

PHOTOELECTRIC

Photoelectric technology is generally more sensitive at detecting large particles, which tend to be produced in greater amounts by smoldering fires.

LATCHING ALARM INDICATOR

Remembers which unit initiated an alarm.

OPTIPATH 360 TECHNOLOGY™

Provides 360 degrees of direct access to the smoke sensing chamber.

SILENCE FEATURE

Silences nuisance alarms.

TWO LOCKING FEATURES

Pins are provided to lock battery drawer and/or alarm to base. Perfect for apartment, dormitory or hotel applications.



BRK®

THE PROFESSIONAL STANDARD

120V AC, 60Hz Wire-in with 9V Battery Backup

Description:

The BRK Brands, Inc. model number 7010B is a wire-in, 120V AC 60Hz single and/or multiple station photoelectric smoke alarm specifically designed for residential and institutional applications including sleeping rooms of hospitals, hotels, motels, dormitories and other multi-family dwellings as defined in standard NFPA 101. Model 7010B complies with UL217, CSFM, NFPA 72, HUD, FHA and other agencies that model their codes after the above agencies. It meets building codes where AC/DC with silence photoelectric smoke alarms are required. The alarms are inter-connectable with up to 18 devices, of which 12 can be smoke alarms.

The BRK 7010B features a photoelectric smoke sensing chamber, an 85dB horn, a 9V battery back-up and a "silence" feature. Optipath 360 technology provides 360 degrees of direct access to the smoke sensing chamber. Alarm Latch: Easily identifies initiating alarm even after alarm condition has subsided. The "Perfect Mount" system features a gasketless base and a mounting bracket that keeps the alarm secure over a wide rotation range to allow for true alignment. This will allow fine-tuning on the positioning to compensate for out of aligned wall studs and to keep the wording level when wall mounting. Battery installation and removal can occur while the unit is mounted to the ceiling or wall via the side load battery compartment. Other Contractor Preferred features include a dust cover to keep alarm clean during construction, keyhole slots in the mounting bracket eliminate the need to remove the electrical box screws for installation. Two locking features are provided to prevent battery theft and/or theft of the unit. Connection to AC power is made with a "Quick-Connect" wiring harness. Installation is quick, easy and cost effective.

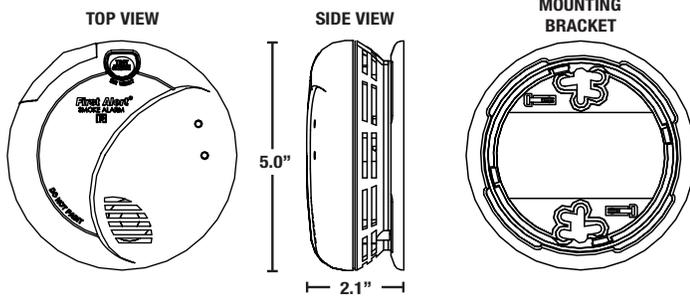


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Inspections Division
Approved with Conditions
Date: 12/08/17

CAT. 7010B



Reviewed for Code Compliance
Inspection Division
Approved with Conditions
Date: 12/08/17



TECHNICAL SPECS

Alarm Dimensions:	5.0" Dia. x 2.1"H
Weight:	8.4 oz
Operating Voltage:	120V AC 60Hz w/ 9V battery backup
Temperature Range:	40°F (4°C) to 100°F (38°C)
Humidity Range:	10% to 95% relative humidity (RH)
Audio Alarm:	85dB at 10 feet
Test/Silence:	Electronically simulates smoke condition, causing the unit to alarm. Press and hold test/silence button.
Alarm Reset:	Automatic when smoke clears
Interconnections:	Up to 18 units of First Alert or BRK Smoke, CO and Heat Alarms. Maximum of 12 smoke alarms. See user's manual for details.
Smoke Sensor:	Photoelectric
Indicator Lights/Sounds:	
AC Power:	Constant Green LED
DC Power:	Intermittent Red LED
Local Alarm:	Red LED flashes rapidly
Latching Alarm:	Red LED flashes once per second for 3 seconds after local alarm. Pattern repeats approximately every 45 secs.
Remote Alarm:	Audio alarm and Red LED out.
Listing:	Listed to UL217 Standard

ARCHITECTURAL AND ENGINEERING SPEC

The smoke alarm shall be a BRK Model 7010B and shall provide at a minimum the following features and functions:

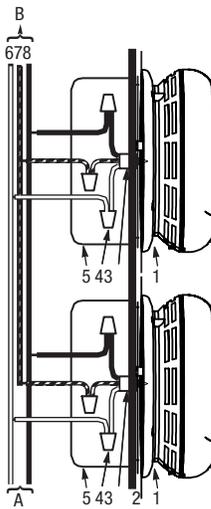
1. A photoelectric smoke sensing chamber.
2. The unit shall be capable of self restoring.
3. A fully screened sensing chamber to resist entry of small insects thereby reducing the probability of unwanted alarms.
4. Powered by 120V AC, 60Hz and have a monitored 9V battery backup and a solid state piezo horn rated at 85dB at 10 ft.
5. A visual LED power-on indicator to confirm unit is receiving power or is in alarm.
6. A full function test button. The test button should check all alarm functions by stimulating the chamber to simulate a smoke condition, causing the unit to alarm.
7. Latching & silence features: Alarm Latch to easily identify initiating alarm after alarm condition has subsided. Silence feature - Temporarily silence unwanted nuisance alarms.
8. Two Locking features - tamper resistant locking pins that lock battery drawer and/or alarm to mounting bracket.
9. The unit shall be capable of operating between 40°F (4°C) and 100°F (38°C) and relative humidity between 10% and 95%.
10. The unit shall have a gasketless base for easy installation and be capable of keeping alarm secure over a wide rotation range to allow for true alarm alignment.
11. The unit shall have a plug in connector and be capable of interconnection of up to 18 alarms, 12 of which can be smoke alarms.
12. The unit shall at a minimum meet the requirements of UL217, CSFM, NFPA 72, NFPA 101, ICC.

SHIPPING SPECS

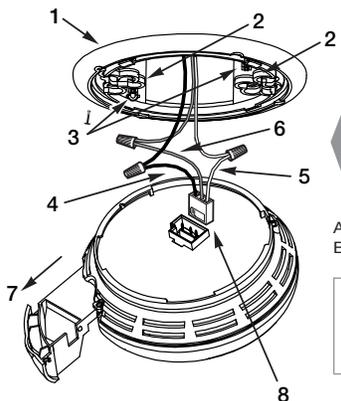
Individual Carton Dimensions	5.13"L x 2.38"W x 5.13"H
Weight	0.55 lbs.
Cube	0.04 ft ³
UPC	0 29054 11201 9
Master Carton Dimensions	10.75"L x 7.88"W x 11.06"H
Master Pack	12
Weight	7.1 lbs.
Cube:	0.54 ft ³
I2of5:	100 29054 11201 6
Pallet Information	
Cases per Layer	22
Number of Layers:	4
Cases per Pallet:	88
Units per Pallet:	1,056
Cube:	54.0 ft ³
Weight:	678 lbs.

INSTALLATION OF ALARM

Installation of this smoke alarm must conform to all local electrical codes and Article 760 of the National Electrical Code (NFPA 70) and NFPA 72. Interconnected units must meet the following requirements: Total length of wire interconnecting units should be less than 1000 feet, be #18 gauge or larger and be rated at least 300V. It is recommended that all units be on the same fuse or circuit breaker. If local codes do not permit, be sure the neutral wire is common to both phases.



THE PARTS OF THIS ALARM



- | | |
|-------------------------------|-------------------------------|
| 1. Mounting bracket | 5. Junction Box |
| 2. Mounting Slots | 6. Neutral Wire (White) |
| 3. Locking Pins | 7. Interconnect Wire (Orange) |
| 4. Hot (Black) AC Wire | 8. Hot Wire (Black) |
| 5. Neutral (White) AC Wire | |
| 6. Interconnect (Orange) Wire | |
| 7. Pull out Battery Drawer | |
| 8. Quick-Connect Plug | |
-
- | |
|--|
| A. Unswitched 120VAC 60 Hz source |
| B. To additional units; Maximum = 18 total (Maximum 12 Smoke Alarms) |
-
- | | |
|--------------------|-------------------------------|
| 1. Smoke Alarm | 5. Junction Box |
| 2. Ceiling or Wall | 6. Neutral Wire (White) |
| 3. Power Connector | 7. Interconnect Wire (Orange) |
| 4. Wire Nut | 8. Hot Wire (Black) |



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Company (NYSE: JAH)
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Aurora, IL 60504-8122
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BRK is a registered trademark of BRK Brands, Inc.
CM3250



Strobe, Horn Strobe, and Horn Notification Appliances



Description:

The Wheelock® Exceder™ Series of notification appliances feature a sleek modern design that will please building owners with reduced total cost of ownership. Installers will benefit from its comprehensive feature list, including the most candela options in one appliance, low current draw, no tools needed for setting changes, voltage test points, 12/24 VDC operation, universal mounting base and multiple mounting options for both new and retrofit construction.

The Wheelock® Exceder™ Series incorporates high reliability and high efficiency optics to minimize current draw allowing for a greater number of appliances on the notification appliance circuit. All strobe models feature an industry first of 8 candela settings on a single appliance. Models with an audible feature 3 sound settings (90, 95, 99 dB). All switches to change settings, can be set without the use of a tool and are located behind the appliance to prevent tampering. Wall models feature voltage test points to take readings with a voltage meter for troubleshooting and AHJ inspection.

The Wheelock® Exceder™ Series of wall and ceiling notification appliances feature a Universal Mounting Base (UMB) designed to simplify the installation and testing of horns, strobes, and combination horn strobes. The separate universal mounting base can be pre-wired to allow full testing of circuit wiring before the appliance is installed and the surface is finished. It comes complete with a Contact Cover for protection against dirt, dust, paint and damage to the contacts. The Contact Cover also acts as a shunting device to allow pre-wire testing for common wiring issues. The Contact Cover is polarized to prevent it from being installed incorrectly and prevents the appliance from being installed while it is on the UMB. When the Contact Cover is removed the circuit will show an open until the appliance is installed. The UMB allows for consistent installation and easy replacement of appliances if required. Wall models provide an optional locking screw for extra secure installation, while the ceiling models provide a captivated screw to prevent the screw from falling during installation.

- Save up to **48%** in current draw*
- Up to **9** models now in **1** appliance
- Save up to **14%** cost of installation**

- Sleek Modern Aesthetics
- Finger Slide Switches
- Voltage Test Points
- Multiple Voltages
- 3 Audible Settings
90, 95, 99 dB
- 8 Candela Settings ***
Wall - 15/1575/30/75/95/110/135/185
Ceiling - 15/30/60/75/95/115/150/177
- Universal Mounting Base ***
Ceiling and Wall
Mounts to 5 Backbox Types
- Environmentally Friendly
Low Current Draw

Compatibility and Requirements

- Synchronize using the Wheelock® Sync Modules or panels with built-in Wheelock® Patented Sync Protocol
- Compatible with UL "Regulated Voltage" using filtered VDC or unfiltered VRMS input voltage
- Strobes produce 1 flash per second over the "Regulated Voltage" range

* Compared to competitive models

*** Patented

** Compared to previous models



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 12/08/17

NOTE: All CAUTIONS and WARNINGS are identified by the symbol . All warnings are printed in bold capital letters.

WARNING: PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. VISIT WWW.COOPERNOTIFICATION.COM OR CONTACT COOPER NOTIFICATION FOR THE CURRENT INSTALLATION INSTRUCTIONS. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

General Notes:

General Notes:

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range".
- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series Exceder Strobe products are Listed under UL Standards 1971 and 464 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%) UL 464 (85% UL 1971).
- Series Exceder horns are under UL Standard 464 for audible signal appliances (Indoor use only).

Low Current Draw = Fewer Power Supplies

Strobe Ratings per UL Standard 1971

		UL Max Current*													
		24 VDC / 24 FWR												12 VDC	
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
ST	8.0-33.0	0.057	0.070	0.085		0.135	0.163	0.182		0.205			0.253	0.110	0.140
STC	8.0-33.0	0.061		0.085	0.103	0.135	0.163		0.182		0.205	0.253		0.110	

Horn Strobe Ratings per UL 1971 & Anechoic at 24 VDC

		UL Max Current* at Anechoic 99 dBA													
		24 VDC												12 VDC	
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
HS	8.0-33.0	0.082	0.095	0.102		0.148	0.176	0.197		0.242			0.282	0.125	0.159
HSC	8.0-33.0	0.082		0.102	0.141	0.148	0.176		0.197		0.242	0.282		0.125	

		UL Max Current* at Anechoic 95 dBA													
		24 VDC												12 VDC	
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
HS	8.0-33.0	0.073	0.083	0.087		0.139	0.163	0.186		0.230			0.272	0.122	0.153
HSC	8.0-33.0	0.073		0.087	0.128	0.139	0.163		0.186		0.230	0.272		0.122	

		UL Max Current* at Anechoic 90 dBA													
		24 VDC												12 VDC	
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
HS	8.0-33.0	0.065	0.075	0.084		0.136	0.157	0.184		0.226			0.267	0.120	0.148
HSC	8.0-33.0	0.065		0.084	0.120	0.136	0.157		0.184		0.226	0.267		0.120	

Horn Ratings per UL Anechoic

Model	Regulated Voltage Range VDC	99 dB	95 dB	90 dB
HN	16-33.0	0.064	0.044	0.022
HNC	16-33.0	0.084	0.044	0.022
HN	8.0-17.5	0.047	0.026	0.017
HNC	8.0-17.5	0.047	0.026	0.017



* UL max current rating is the maximum RMS current within the listed voltage range (16-33 VDC for 24 VDC units). For strobes the UL max current is usually at the minimum listed voltage (16 VDC for 24 VDC units). For audibles the max current is usually at the maximum listed voltage (33 VDC for 24 VDC units). For unfiltered ratings, see installation instructions.



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Inspections Division
Approved with Conditions

Date: 12/08/17

Specification & Ordering Information

Model	Strobe Candela	Sync w/ DSM or Wheelock Power Supplies	12/24 VDC*	Mo Options
Horn Strobes				
HSR	15/1575/30/75/95/110/135/185	X	X	UMB**
HSW	15/1575/30/75/95/110/135/185	X	X	UMB**
HSRC	15/30/60/75/95/115/150/177	X	X	UMB**
HSWC	15/30/60/75/95/115/150/177	X	X	UMB**
Strobes				
STR	15/1575/30/75/95/110/135/185	X	X	UMB**
STW	15/1575/30/75/95/110/135/185	X	X	UMB**
STRC	15/30/60/75/95/115/150/177	X	X	UMB**
STWC	15/30/60/75/95/115/150/177	X	X	UMB**
Horn				
HNR		X	X	UMB**
HNW		X	X	UMB**
HNRC		X	X	UMB**
HNWC		X	X	UMB**

*12 VDC models feature 15 & 15/75 settings

**UMB = Universal Mounting Base

Model Legend

HN = Horn
ST = Strobe
HS = Horn Strobe
C = Ceiling Mount
W = White
R = Red

A = Agent Lettering (Strobes only)
AL = Alert Lettering (Strobes only)
N = No Lettering (Strobes only)

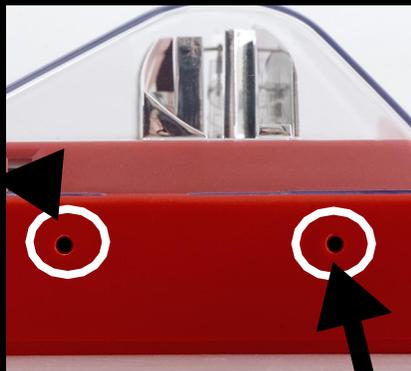
Example 1: STRC = Strobe, Red, Ceiling Mount
Example 2: HSR = Horn Strobe, Red, Wall Mount
Example 3: HSW = Horn Strobe, White, Wall Mount
Example 4: STW-AL = Strobe, White, Wall Mount, Alert Lettering



Example: HSR



Example: HSWC



Voltage test points for quick troubleshooting and easy spot checking (wall models only)

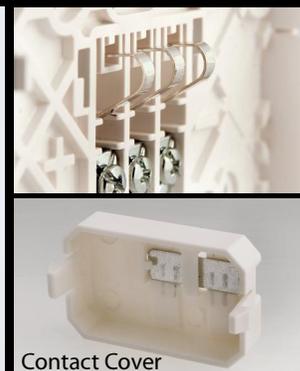


8 candela settings



*UMB

Common base for wall and ceiling with 5 mounting options



Contact Cover

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Cooper Wheelock Inc., dba Cooper Notification standard terms and conditions.

Architects and Engineers Specifications



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The notification appliances shall be Wheelock® Exceder™ Series HS Audible Strobe appliances, Series ST Visual Strobe appliances and Series HN Audible appliances or approved equals. The Series HS and ST Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The Series HS and HN Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All Series shall meet the requirements of FCC Part 15 Class B. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 8 to 33 VDC. Indoor wall models shall incorporate voltage test points for easy voltage inspection.

The Series HS Audible Strobe and ST Strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The Series shall be of low current design. Where Multi-Candela appliances are specified, the strobe intensity shall have 8 field selectable settings at 15, 15/75, 30, 75, 95, 110, 135, 185 candela for wall mount and 15, 30, 60, 75, 95, 115, 150, 177 candela for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 15/75 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance). Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The audible shall have a minimum of three (3) field selectable settings for dBA levels and shall have a choice of continuous or temporal (Code 3) audible outputs.

The Series HS Audible Strobe, ST Strobe and Series HN Audible shall incorporate a patented Universal Mounting Base that shall allow mounting to a single-gang, double-gang, 4-inch square, 3.5-inch octal, 4-inch octal or 100mm European type back boxes. Two wire appliance wiring shall be capable of directly connecting to the mounting base. Continuity checking of the entire NAC circuit prior to attaching any notification appliances shall be allowed. Product shall come with Contact Cover to protect contact springs. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). The mounting base shall be the same base among all horn, strobe, horn strobe, wall and ceiling models. All notification appliances shall be backwards compatible.

The Series HS and ST wall models shall have a low profile measuring 5.24" H x 4.58" W x 2.19" D. Series HN wall shall measure 5.24" H x 4.58" W x 1.6" D. The Series HSC and STC shall be round and have a low profile with a diameter of 6.68" x 2.63" D. Series HNC ceiling shall have a diameter of 6.68" x 1.50" D.

When synchronization is required, the appliance shall be compatible with Wheelock®'s DSM Sync Modules, Wheelock® Power Supplies or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Wheelock® synchronization protocol.

Wall Appliances – UL Standard 1971, UL Standard 464, California State Fire Marshal (CSFM), ULC, FM

Ceiling Appliances – UL Standard 1971, UL Standard 464, California State Fire Marshal (CSFM), ULC, FM



WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

Exceder - Spec Sheet 6/11

NJ Location
273 Branchport Ave.
Long Branch, NJ 07740
P: 800-631-2148
F: 732-222-8707
www.coopernotification.com

Series MIZ Mini Horn Appliances



SERIES MIZ

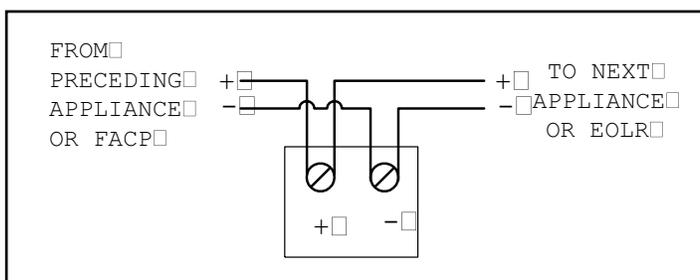
Description:

Wheelock Series MIZ piezoelectric Mini Horns are compact electronic alarm appliances that are listed under UL Standard 464 for Audible Appliances in Public Mode Fire Protection Systems. The Series MIZ-24S models provide a field selectable Continuous or Code 3 horn tone when connected directly to a fire alarm control panel. They can also provide a synchronized code 3 horn tone using the Wheelock SM, DSM Sync Modules or PS-24-8MC power supply. The series MIZ appliances are attractive, offer high sound output along with low current draw and are ideal for alarm signaling in individual rooms, apartments, hotels, motels and offices. Color choices of red or off-white will blend with any décor.

Features:

- Approvals include: UL Standard 464, California State Fire Marshal (CSFM), New York City (MEA), Factory Mutual (FM), and Chicago (BFP)
- Field selectable settings for Temporal (Code 3) or Continuous Horn
- Synchronized code 3 horn when used with Wheelock Sync Module
- Designed to meet or exceed NFPA/ANSI standards
- Convenient mounting to any standard single-gang box
- Beauty plugs to cover mounting screws
- No additional trimplate required for flush mounting
- Fast installation with In/Out screw terminals using #12 to #18 AWG
- High sound output with low current draw
- Available in red or off-white color

Wiring Diagrams (for all models)



Applications:

- Individual Rooms
- Apartments
- Hotels
- Motels
- Offices

Specifications and Ordering Information

Model	Order Code	Description	Mounting Options**	Agency Approvals				
				UL	MEA	CSFM	FM	BFP
MIZ-24S-R	8485	24 Volt, Red	B	X	X	X	X	*
MIZ-24S-W	8484	24 Volt, White	B	X	X	X	X	*

*PENDING

**Refer to Data Sheet S7000 for Mounting Options.

General Notes:

- Mini Horn models are Listed for indoor use with a temperature range of 32° F to 120° F (0° C to 49° C) and maximum humidity of 93% RH ±2%.
- Rated Input voltage (either filtered DC or unfiltered full-wave-rectified FWR): 16-33 VDC (for 24 VDC MIZ-24S models)



The notification appliance shall be a Wheelock MIZ-24S audible appliance or approved equal. The Notification Appliance shall be electronic and shall have field selectable settings for Temporal (Code 3) or continuous horn and support coded systems operation. The anechoic sound pressure measurement on Temporal (Code 3) setting shall be 87 dBA minimum at 24VDC. The anechoic sound pressure measurement on Continuous Horn setting shall be 87 dBA minimum at 24 VDC. Operating voltages shall be 24 VDC using filtered power or unfiltered power supply (full-wave-rectified). All models shall have provision for standard reverse polarity supervision and IN/OUT wiring using terminals that accept #12 to #18 AWG wiring. The appliances shall be mounted indoors and shall be mounted on standard single-gang electrical backboxes requiring no additional trimplates or adapters.

Table 1: UL Listed Models and Ranges

Model	Regulated UL Voltage	Average RMS Current* (AMPS)	Reverberant dBA Per UL 464 @ 10 ft		Anechoic dBA @ 10 ft		Mounting Options
			Continuous	Code 3	Continuous	Code 3	
			dBA	dBA	dBA	dBA	
MIZ-24S	24 VDC	0.025	83.2	78.8	87.9	87.9	B
	UL max*	0.026	85.8	81.3	90.6	89.7	B

* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

NOTE: All CAUTIONS and WARNINGS are identified by the symbol . All warnings are printed in bold capital letters.

▲ WARNING: PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

▲ WARNING: CONTACT WHEELLOCK FOR THE CURRENT "INSTALLATION INSTRUCTIONS" (P84408) AND "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THESE DOCUMENTS UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:

- TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES.
- FUSE RATINGS ON NOTIFICATION APPLIANCE CIRCUITS TO HANDLE PEAK CURRENTS FROM ALL APPLIANCES ON THOSE CIRCUITS.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR RATED VOLTAGE RANGE.
- FAILURE TO COMPLY WITH THE INSTALLATION INSTRUCTIONS OR GENERAL INFORMATION SHEETS COULD RESULT IN IMPROPER INSTALLATION, APPLICATION, AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.
- CONDUCTOR SIZE (AWG), LENGTH AND AMPACITY SHOULD BE TAKEN INTO CONSIDERATION PRIOR TO DESIGN AND INSTALLATION OF THESE PRODUCTS, PARTICULARLY IN RETROFIT INSTALLATIONS.

Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.



WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

S1700 MIZ 02/08

<p>NJ Location 273 Branchport Ave. Long Branch, NJ 07740 P: 800-631-2148 F: 732-222-8707 www.coopernotification.com</p>	<p>FL Location 7565 Commerce Ct. Sarasota, FL 34243 P: 941-487-2300 F: 941-487-2389</p>	<p>VA Location P: 877-459-7726 F: 703-294-6560</p>
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Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 12/08/17



Mammoth Fire Alarms Incorporated

176 Walker Street Lowell, MA 01854-3126
Tel: 978-934-9130 Fax: 978-934-9131

Contractor Checklist Addressable System

Date: _____

Contractor Name: _____

Site Contact Person: _____

Address: _____

Telephone #: _____

Job Name: _____

PO #: _____

Address: _____

Salesperson: _____

NOTICE

The following must be completed, by the installer, prior to a Mammoth Fire Alarms, Inc. technician's arrival to program the addressable fire alarm control panel. A complete copy of the address directory is supplied in your submittal, submit changes 5 days before start-up. Changes required after the program has been completed will be billed accordingly. We will provide final test and inspection during normal working hours. Anything beyond normal working hours will be billed accordingly. Mammoth Fire Alarms, Inc. is not responsible for field wiring.

Allow a minimum of 5 business days for scheduling site visit, your cooperation is appreciated.

PLEASE FILL OUT AND RETURN	YES	NO
1. Have data loops been read and checked for continuity?		
2. Are all data/AV loops clear of any grounds?		
3. Has 110V been applied to the panel?		
4. Have batteries been connected to the panel?		
5. When you power-up, are all loops satisfactory?		
6. If an annunciator is provided, is it installed and connected?		
7. Have all devices been installed and/or addressed?		
8. Is there Central Station Monitoring via a dialer?		
9. Has the NFPA-72 Record of Completion been filled out by the installer? MFA will complete the panel manufacturer and firmware revision information. All other fields must be completed by the installing contractor per NFPA-72.		
10. A complete copy of the address directory is required to be signed by a member of your company and returned with this form.		
11. Contractors MUST supply at least one technician familiar with this job.		
12. Contractor will be met at _____ (location) at _____ (time).		
13. Other information:		

Form Completed by: _____

Date: _____



Mammoth Fire Alarms

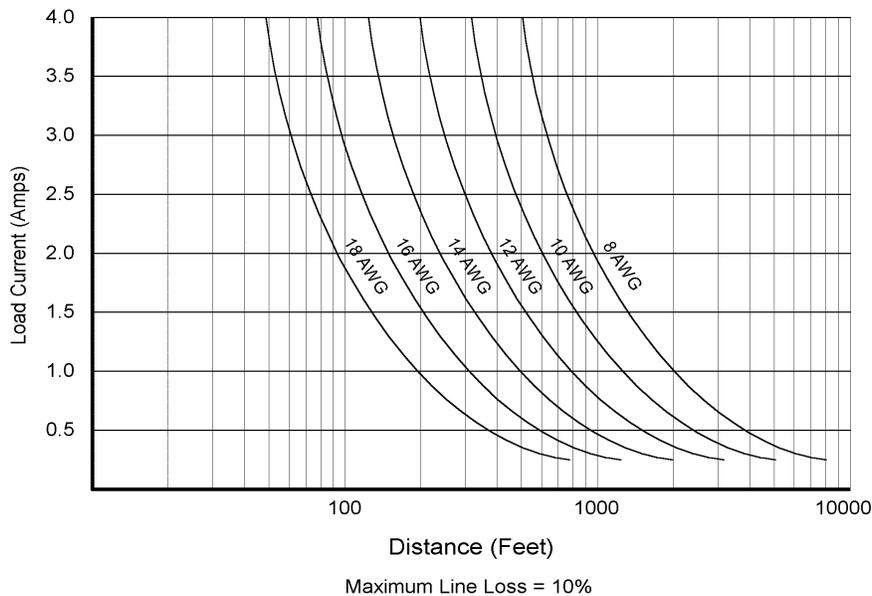
Incorporated

176 Walker Street, Lowell, MA 01854-3126



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Inspection Division
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Notification Appliance Circuit Wiring Estimator



To determine the required wire size for each notification appliance circuit, use the above chart and the following steps.

- ◆ Compute the notification appliance current. (Number of devices multiplied by the device current = amperes)
- ◆ Compute the distance in feet from the panel to the last notification appliance.
- ◆ Locate total appliance load (amperes) on the vertical axis of the chart; locate wire distance (in feet) on the horizontal axis; find the point where they intersect.
- ◆ Read wire size in AWG on the curved line to the right of the point of intersection.

“Servicing the installer before and after the installation”

SALES (978) 934-9130 * 1-800-995-9808 * FAX (978) 934-9131



Mammoth Fire Alarms

Incorporated

176 Walker Street Lowell, MA 01854



Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 12/08/17

POLICIES

WARRANTY:

Mammoth Fire Alarms, Inc. warranties all equipment supplied by it to be free from defects for one (1) year from the date of shipment. Mammoth Fire Alarms, Inc. will repair or replace, at its option, any equipment that it determines to be defective. Said equipment will be returned to the purchaser. Mammoth Fire Alarms, Inc. shall not be obligated to repair or replace equipment that has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged in any way, including damage caused by any Acts of God. Mammoth Fire Alarms, Inc. will not be responsible for any on-site dismantling, reassembling or reinstallation charges or costs.

TROUBLESHOOTING/SERVICE:

All field troubleshooting/service performed by Mammoth Fire Alarms, Inc. personnel will be billed per hour portal to portal, plus all costs for parts. All defective equipment that is under warranty will be replaced or repaired, at the option of Mammoth Fire Alarms, Inc. provided the equipment was not damaged during installation, damaged because of poor or improper installation, or damaged by any Acts of God. No troubleshooting will be performed, either over the telephone or in the field, if the customer's account is not current.

RETURNS FOR CREDIT:

Authorizations for merchandise to be returned for credit must be previously authorized and cannot exceed 60 days from the date of original Mammoth Fire Alarms, Inc. invoice. Merchandise authorized for return must be sent PREPAID and insured within 30 days of the date of the authorization. When merchandise is returned for credit and is returned for other than a Mammoth Fire Alarms, Inc. shipping error, a 20% charge will be made to cover handling, inspection and testing. Non-stock items will be assessed a 50% restocking charge. For credit to be issued, the item(s) must be in the original factory packaging. Custom and special ordered items will not be accepted for credit. Items damaged in transit will be deducted from the credit. Acceptance of goods returned for credit shall be at the sole discretion of Mammoth Fire Alarms, Inc. Receiving an RMA number from Mammoth Fire Alarms, Inc. is not a guarantee of issuance of credit.

RETURNS FOR REPAIR OR REPLACEMENT:

Mammoth Fire Alarms, Inc. requires prior approval before return of equipment for repair. The information required for equipment to be returned for repair is the product model number and the problem that existing with the unit. Confirmation will be faxed/mailed to you and then the return may be made. If the item(s) is under warranty (one year from the date of shipment) it will be repaired or replaced at our option. All items shipped to Mammoth Fire Alarms, Inc. must be shipped PREPAID. If the item(s) is out of warranty, but repairable, it will be repaired at a cost not to exceed 50% of the cost of a new unit.

MATERIALS DAMAGED UPON RECEIPT:

Any material physically damaged upon receipt must remain at the original place of delivery and in the original packaging. If the packaging is visibly damaged, the delivery driver should be instructed to make note of it prior to signing for the delivery. Mammoth Fire Alarms, Inc. Shipping Manager must then be contacted to arrange a replacement and an on-site evaluation of the damaged equipment. Mammoth Fire Alarms, Inc. cannot warranty any damaged equipment that has been removed from its original delivery location or does not contain the original packaging.

“Servicing the installer before and after the installation”

www.mammothfire.com

Policies 02/02/15



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*Property Protection Monitoring
Incorporated*



Listed Central Station

**Protect Your
Investment!**

Attention!

**To Connect your Dialer/Radio/
Communicator to our UL Listed
Central Station Today Call!**

978-459-3344

We make it very easy to connect and have
off premises protection now!

Thank You
PPM/Sales



Listed Central Station

SALES (978) 459-3344 • (877) 794-3344 • FAX (978) 459-6655
176 Walker Street www.ppmmonitoring.com Lowell, MA 01854



Property Protection Monitoring
Incorporated



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 12/08/17

Account Reservation

Fill Out Top Portion and Fax to (978) 459-6655 or Email at: www.ppmmonitoring.com

Date: _____ Time: _____ From: _____

Communicator Type: _____ Connected to: _____
(Panel Model #)

Installation Company: _____

Contact Name: _____

Contact #: _____ Email: _____

Job Name: _____

Address: _____

City: _____

State: _____ Zip: _____

PPM Will Fax or Email this Information Back to You

CSID:

--	--	--	--	--	--

 Date: _____ From: _____

Only last 4 digits required on program

Testing Time: _____ Time: _____

Number to Dial 1 _____

Number to Dial 2 _____

Contact ID:

DACT (General)

SIA:

UDACT (By Point)

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*Property Protection Monitoring
Incorporated*

**Answering
Service**

Attention Business Owners!



**PPM offers
Telephone
Answering Service**
With professionally trained operators

Effective March 1, 2013. PPM offers Telephone Answering Services to our line of services provided. All calls are greeted with your company name. No added fees for holidays, after hours, number of calls, etc...

Your Cost For This Service:

\$99 Per Month



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**Property Protection Monitoring
Incorporated**



Listed Central Station

**Protect Your
Investments!**

Attention!

If you have a set of Dry Contacts on Any device we can Monitor it!



PPM Offers 24/7 Notification of:

- Generators - Alerts for Low Battery, Fuel, Coolant, etc...
- Water Alert
- Machine Break down
- Gates Open/Close Alert
- High/Low Temp. Alert
- Carbon Monoxide and Natural Gas Monitoring
- Call for more Info or to discuss specific needs



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