FIREX

Description

FIREX CARBON DIOXIDE FIRE SUPPRESSION SYSTEM

Carbon dioxide is an effective fire suppression agent applicable to a wide range of fire hazards. Carbon dioxide works quickly, with no residual clean up associated with a system discharge, which translates into minimal Carbon Dioxide is approximately 50% heavier than air, and is normally present in the atmosphere at about 0.03% by volume. Carbon Dioxide is instrumental in controlling respiration and other vital responses in animals and humans, but it will not support life.

Business interruption.

Carbon Dioxide extinguishes fire by reducing the oxygen content of the protected space and/or local flame front to a point where it will not support comb front to a point where it will not support combustion. Oxygen reduction below 16% by volume will extinguish most fires. Surface or "flash" type fires (oils, paints, etc.) are quickly extinguished. Deep seated or "smoldering" type fires (paper, baled cotton, clothing, etc.) are extinguished by the prolonged action of a high concentration of Carbon Dioxide. Retaining the agent within the protected space reduces the fire's ability to re-ignite. In addition, Carbon Dioxide has a cooling effect on the surrounding atmosphere that has been found to be a benefit to fire extinguishment.

Carbon Dioxide Fire Suppression System

consists of one or more bank of cylinder storage containers to supply the CO_2 extinguishing agent. Flexible discharge bends or hoses connects the cylinders into a piping manifold. The manifold in turn distributes the agent into the piping network. Nozzles regulate the flow of CO_2 into the protected area.

CO_2 is Electrically Non-conductive

Carbon Dioxide fire extinguishing systems can be used to protect a wide variety of hazards from delicate electronic equipment without danger or damage.

Co2 is Non-Damaging

When designed,engineered and installed properly,Carbon Dioxide fire suppression systems will not normally damage sensitive electronic equipment. Carbon Dioxide has no residual clean-up associated with its use as a fire suppressing agent.When it is properly ventilated,the gas escapes to atmosphere after the fire has been extinguished.

Distributor-

Unique Multi Engineering Ltd.

A Firm of Fire Detection,Protection,Ventilation & Cooling System Solution

Mail: info@unique-ltd.com,uniquebd0707@gmail.com

Mobile: +8801716592522, +8801825451599 Web: www.unique-ltd.com

FIREX

Application

- Flammable liquid storage areas
- Spray Booth
- Electrical areas
- Turbines
- Engine Room
- Machine Parts

Features and benefits:

- Fast and Effective - within seconds, CO penetrates the entire hazard area to smother the combustion.
- Electrically non-conductive - for a wide range of applications.
- Versatile - CO is effective on flammable and combustible materials and approved for Class A, B, and C hazards.
- Environmentally friendly because carbon dioxide is naturally found in the atmosphere, there is no environmental impact
- Strong Alloy Steel Cylinders
- Protection for large variety of hazards
- Electronically operated master valves
- Pressure actuated slave valves.
- Available for Total Flooding or Local Fire Protection
- Lower overall Maintenance cost
- Non-Corrosive & Non-conductive and leaves No Residue
- Suitable for Class A,B and C hazards.

How Does Carbon Dioxide Work?

FIREX Carbon Dioxide systems use intelligent, reliable, and fast acting controls to quickly sense a fire before it can cause costly damage to your property. Carbon dioxide gas has a high rate of expansion which allows it to work fast. When applied to a fire, CO2 provides a heavy blanket of gas that reduces the oxygen level to a point where combustion cannot occur. Since carbon dioxide is a gas, there is no clean up associated with a system discharge

FIREX

Item No.	Description
1	Co2 Gas Cylinder
2	Electric Actuator Control Head
3	Pneumatic and Manual Valve
4	Flexible Gas Discharge Hose
5	Non - Return Valve For Discharge
6	Pilot Flexible Loop Hose
7	CO2 System Manifold
8	Pressure Switch
9	Header Vent
10	Co2 Nozzle
11	Gas Releasing panel
12	Smoke Detector
13	Fire Alarm Bell
14	Horn with strobe
15	Abort switch
16	Manual Release

FIREX

Cylinder Assembly

All CO2 cylinders are factory filled to capacity; partial fills are not allowed. The cylinders may be utilized in single or multiple cylinder applications as needed.

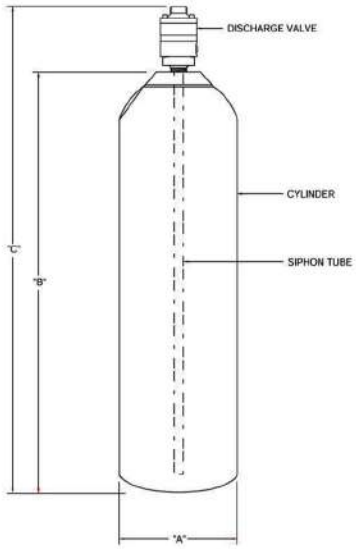
The cylinders are equipped with siphon tubes to enable a full discharge of CO2. The cylinder must be mounted in the upright, floor-mounted position only. Horizontal mounting is not allowed. All filled cylinders shall be secured during transport and storage in accordance with OSHA requirements. Upon installation, the cylinders shall be secured using either cylinder straps or a suitable racking arrangement. All cylinders are shipped from the factory with a protective shipping cap. These caps should be stored in a suitable area for future use. Shipping caps must be in place while transporting or handling cylinders.

Ordering Information

Carbon dioxide cylinders for use in engineered systems ordered in 45kg cylinder sizes.

Specifications:

Material : Steel
Thread Size : 1-11 1/2 NGT, Female
Head Valve Brass
Operating pressure is 58 bar at 21 c
Operating temperature -18 till 55 c
Test Pressure 250 bar
Cylinder size 45 Kg (68 Ltr.)



Data Sheet

Cylinder capacity	45 KG
Master Valve P/N	FXCO2 - 4002 - 1
Slave Valve P/N	FXCO2 - 4002 - 2
Master Valve W/Exp - Proof SOL P/N	FXCO2 - 4002 - 4
"A"	26.67cms
DIM. B	147.32cms
AVG.Shipping WT.	135 KG

Single cylinder mounting strap

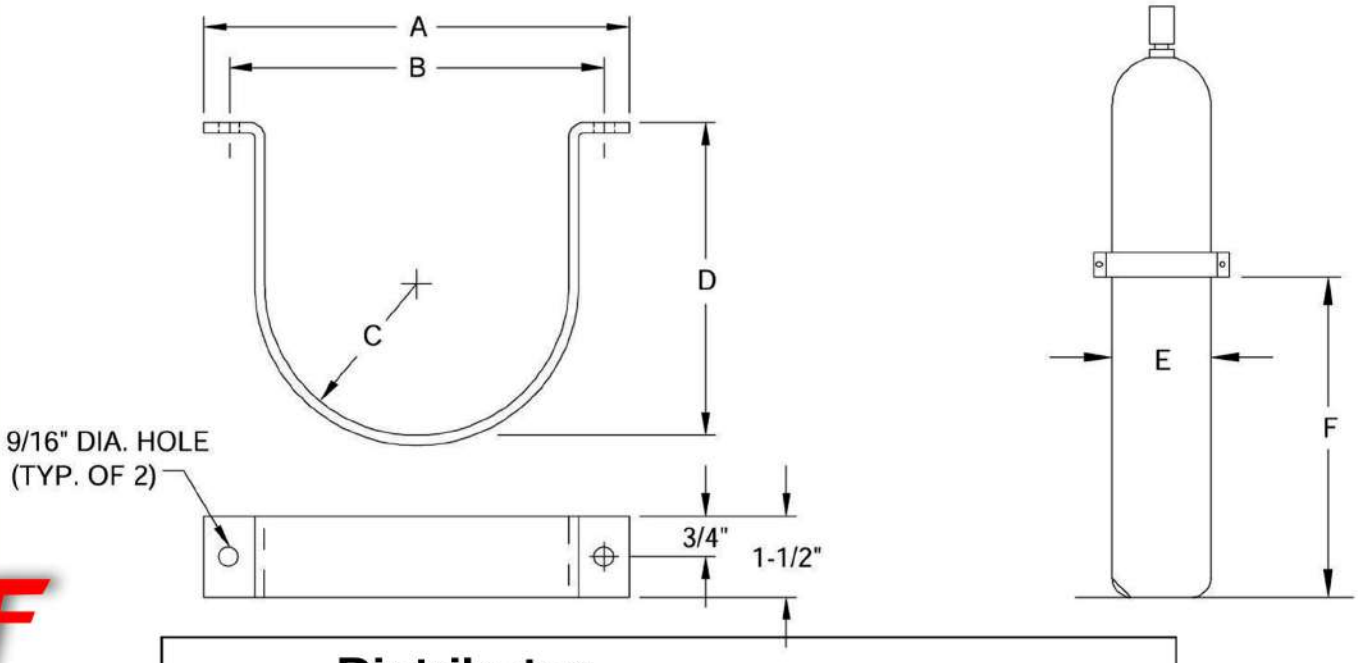
Application:

Cylinder Straps are used to secure the cylinder in place, on a single cylinder system, in accordance with OSHA and NFPA 12 requirements. The straps may be secured to any structurally solid surface. Anchoring into plaster or any other facing material is not acceptable.

Description:

Cylinder Straps are made of steel and painted red with a backed enamel finish for corrosion resistance. All mounting hardware is supplied by the system installer.

Cylinder Size	Strap Part no.	DIM."A"	DIM."B"	DIM."C"	DIM."D"	DIM."E"	DIM."F"
100 Lb	FXCO2 - 103	13"	12"	5-3/8"	10-3/8"	10-1/2"	38"



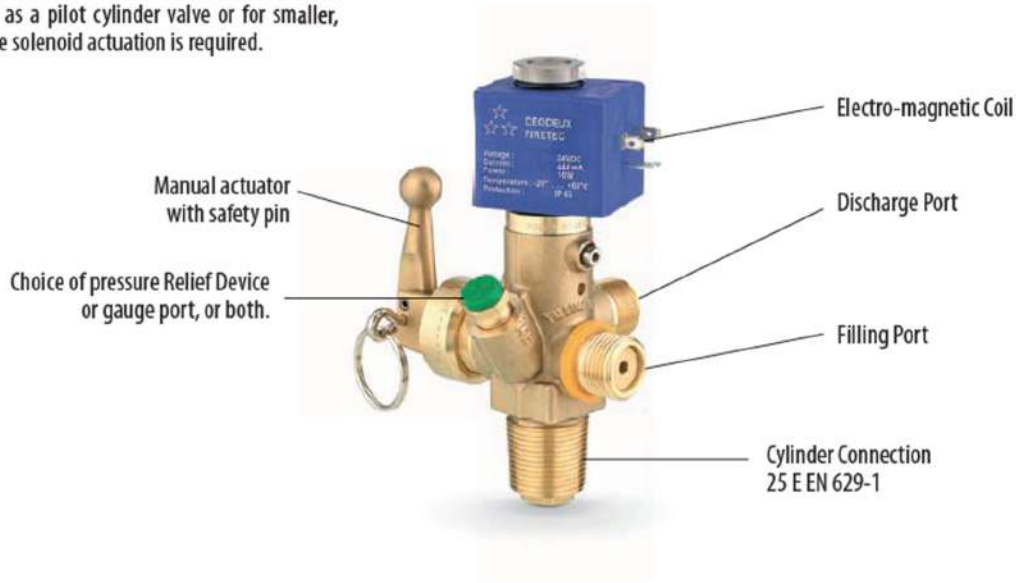
Electrical Actuator valve

Electric valve actuators shall be of brass construction and stackable design with swivel connections to allow removal of actuators for maintenance or testing.

VALVE TECHNOLOGIES (continued)

SERIES B0439

200 bar valve with Fixed and Solenoid Actuation for use in 25-50 bar clean agent applications. Can be used as a pilot cylinder valve or for smaller, single cylinder installations where solenoid actuation is required.



Specifications

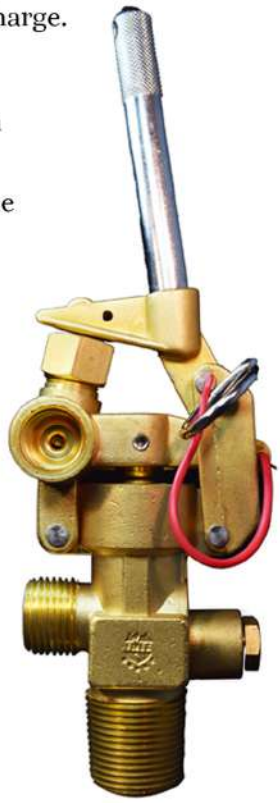
Max pressure	200 bar	Seat orifice size	7 mm	Operating voltage	24 VDC
Working pressure	25 - 50 bar	Temperature range	-20°C to +60°C	Power consumption	10 watt
Valve body	Brass	Burst disc pressure	Must be adapted to the working pressure		

FIREX

Manual Actuator valve

Description:

The Manual Actuator is comprised of an anodized aluminum body and actuator handle. A lock pin and chain are provided for safety locking purposes when a CO_2 discharge is not desired. A pressure relief hole is incorporated in the body to prevent a pressure build-up that could cause a system discharge.



Application:

The Manual Actuator provides a manual means of agent release on installations where a Solenoid Actuator is not used. A Manual Actuator is required on all systems utilizing Explosion-Proof Solenoid arrangement.Manual Actuation is accomplished by moving the hand lever to the "firing" position. For systems requiring two manual actuators, an appropriate link assembly must be installed to provide simultaneous operation of both actuators.

Specification

Working pressure	250 bar
Temperature range	-20deg C - + 60 deg C
Seat orifice size	12mm
Material	Brass
Valve body	Brass

Flexible discharge hose

The flexible discharge hoses are made to convey the CO2 gas from the cylinder head valves to the main manifold for gas distribution to nozzle piping network. The Discharge Hoses are equipped with an internal check valves to prevent the back flow of CO2 gas from the manifold to other cylinders.
The Discharge Bends comprised of a 5/8" (16mm) I.D. ,double wire braided hose,1/2" (15mm) NPT bronze coupling for the manifold connection and the check valve connection for the cylinder valve.
The overall length of the Discharge Bend is 20"(50 cm). All Discharge Bends are hydrostatically test to 6,000 psi (41,369kPa) in accordance with NFPA 12.

Application:

The Discharge Bend is used to provide the interconnection between the C02 cylinder valve and the distribution manifold. The Discharge Bend has an internal check valve that serves a dual purpose:
1) The plunger holds the ball check in the cylinder valve open; thus allowing the cylinder to discharge its contents when activated.
2) When disconnected from the cylinder valve. The check valve prevents the discharge of C02 from the open end of the manifold, if the system is activated.

Specifications

Material	rubber and steel coupling
Length Strength	(50 cm) Overall
Working Pressure	250 bar
Test pressure	400 bar

FLEXIBLE PILOT HOSE

The pilot flexible hose is used to interconnect the ports of the pressure actuators. The CO2 gas pressure applied on the pressure actuators open the cylinder valve simultaneously.

Specifications

Material	rubber and steel coupling
Length Strength	(30 cm) Overall
Working Pressure	250 bar
Test pressure	400 bar

FIREX

Pressure switch

The pressure switch is a double pole,single throw switch housed in a weather-proof backbox. The switch is activated by the presence of CO2 pressure from the discharge piping when the system is activated.When activated,The switch sends a trouble signal to the control panel indicating that the systrem has been discharged.

It should be noted that the pressure switch will not transfer during the pre-discharge periods. Therefore, the switch is not a suitable input device for an evacuation alarm signal.
NOTE : After operation, the pressure switch must be reset prior to resetting the control panel.

Installation

The switch should be mounted to a suitable mounting surface in the vertical position. Connection shall be surface in the vertical position. Connection shall be made using 1/4"piping in accordance with NFPA 12 requirements./ Additional pressure switches may be installed by using branch tees in the 1/4" supply piping to"daisy-chain" the pressure switches together.

CO2 DISCHARGE NOZZLE

Nozzle is made of brass and available in ½", ¾" and 1" sizes.Orifice design to particular requirement with computer aidedcalculation to assure the effectiveness of extinguishing agent andreliable system design. The nozzles can be located around theperimeter or in the center of the protected space. The nozzles areavailable for both 180° and 360° discharge pattern

Application

The Nozzle, is primarily used for local application systems but is also listed and approval for use in total flooding applications.

Application Recommendations

1) The generally recommended total flooding flow rate range is 15 lbs./min. to 130 lbs/min.

2) The generally recommended total flood nozzle spacing is 30 feet, or less;nozzle coverage - 15ft.Dia.

Mircom™

PRE-ACTION/DELUGE/AGENT RELEASING PANEL FR-320 SERIES

Description

Mircom's FR-320 is a dual releasing control panel that is field configurable for use on Deluge Sprinkler Systems, Pre-action Sprinkler Systems and Agent Release Systems.

The FR-320 is equipped with six Class "B" (Style "B") input circuits and four Class "B" (Style "Y") output circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) Optional Class A converter modules are available for both input and output circuits. In addition both internal and external relays are supported by the FR-320. The relays can be configured for both single and dual hazard applications.

The FR-320 is field configurable for three releasing type functions; Deluge, Pre-Action Sprinklers and Agent Releasing. The mode of operation is easily configured by selecting one of 14 pre-configured modes of operation. The simple configuration process is done via the front panel using the CFG-300 configuration tool thus eliminating the need for a laptop or complicated programming.

The FR-320 comes complete with a red or white door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

Features

- Listed to UL 864, 9th edition
- Field configurable to operate with a Deluge Sprinkler System, a Pre-action Sprinkler System and an Agent Release System
- Six Class B (Style B) Input Circuits
- Input Circuits One to Four can be configured as Non-Verified Alarm, Non Latching Supervisory, Latching Supervisory or Agent Release/Water Flow depending on the Mode of Operation selected
- Input Circuits Five & Six can be configured as Manual Release Input, Abort Input or Abort/Manual Release Combination Input depending on the Mode of Operation selected
- Input Circuits can be converted to Class "A" (Style "D") using the ICAC-306 Converter Module
- Four Class "B" (Style "Y") Output Circuits which can be configured for Silenceable Signal, Non-Silenceable Signal, Silenceable Strobe, Non-Silenceable Strobe or Releasing Circuit (Circuits 3 & 4 Only)
- Output Circuits can be converted to Class "A" (Style "Z") using the OCAC-304 Converter Module
- 5 Amp Power Supply
- 4-wire smoke power 22.3 VDC @ 300ma max. Supervised Aux Power 22.3 VDC @ 500ma max.
- Aux Power (Unregulated) 24 VDC @ 1.7 Amp max.
- Relay contacts for Common Alarm (Non Disconnectable), Auxiliary Alarm (Disconnectable), Common Supervisory (can be converted to common alarm if no Supervisory input) and Common Trouble
- Cross Zone option
- Counting Zones option
- Output signals can be configured for Steady (fixed) or Escalating (tone changes as input operation changes)
- Release Timer 0 to 60 Seconds (5 second increments)
- Manual Release Delay 0 to 30 Seconds (5 second increments)
- Soak Timer 0 to 15 Minutes (21 Intervals)
- Abort Release Timer (Standard UL Type Delay, IRL Type Delay, NYC Type Delay, Local Jurisdiction Delay)
- Special Releasing Power Supply and Release Activation Considerations preventing false dumps
- Configurable to perform two hazard areas
- Simple panel programming through 14 Pre-Configured Modes of Operations

S7005 S7005 7165-1477:149 313-97-E

Optional Modules

ICAC-306 Input Circuit Class "A" Converter Module
The ICAC-306 converts six Class "B" (Style "B" input circuits on the FR-320 to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FR-320 main board.

OCAC-304 Output Circuit Class "A" Converter Module
The OCAC-304 converts four Class "B" (Style "Y") output circuits on the FR-320 to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FR-320 main board.

RM-306 Relay Circuit Adder Module
The RM-306 provides six configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-306 can be configured for single or dual hazard applications.

SRM-312 Smart Relay Module
The SRM-312 provides the same features as the RM-306 module. The SRM-312 provides twelve configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The SRM-312 comes with a red enclosure and is mounted remotely from the panel on an RS-485 connection.

Remote Annunciators

RAM-208 Remote LED Annunciator
The RAM-208 provides eight points of LED annunciation and features bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). It has indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 is equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. The RAM-208 is available in a red or white finish and mounts in a 4-gang electrical box.

RAM-1016/RAM-1016TZ Remote LED Annunciators
The RAM-1016 Remote LED Annunciator provides sixteen points of LED annunciation and comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016 has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. The RAM-1016TZ has the same features and provides individual trouble LEDs. Both models mount in a BB-1000 series enclosure.

Ordering Information

Model	Description
Control Panels	
FR-320-W	Pre-Action/Deluge/Agent Releasing Panel (White enclosure)
FR-320-DW	Pre-Action/Deluge/Agent Releasing Panel with built-in UDACT (White enclosure)
FR-320-R	Pre-Action/Deluge/Agent Releasing Panel (Red enclosure)
FR-320-DR	Pre-Action/Deluge/Agent Releasing Panel with builit-in UDACT (Red enclosure)
Remote Annunciators and Modules	
RAM-208	Eight zone Remote LED Annunciator (White)
RAM-208R	Eight zone Remote LED Annunciator (Red)
RAM-1016	Sixteen zone Remote LED Annunciator
RAM-1016TZ	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312W	Smart Relay Module (White enclosure)
SRM-312R	Smart Relay Module (Red enclosure)
BB-1001	Enclosure for RAM-1016/RAM-1016TZ (White)
BB-1001R	Enclosure for RAM-1016/RAM-1016TZ (Red)
Adder Modules	
ICAC-306	Six Input Circuit Class "A" Converter Module
OCAC-304	Four Output Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
Accessories	
FA-300TRB	Black Semi-Flush Trim Ring for FR-320 enclosures
CFG-300	Configuration Tool (Required for programming)
MP-1500R	Current Limiter Module (Red Plate)
MP-1500W	Current Limiter Module (White Plate)
MP-320R	Solenoid End-Of-Line Module (Red Plate)
MP-320W	Solenoid End-Of-Line Module (White Plate)

Mircom™

PHOTOELECTRIC SMOKE DETECTORS — SD SERIES

Features

- Two and four wire models
- Photoelectric smoke sensing technology
- Uses smoke sensor in conjunction with a fixed temperature heat sensor to extend reliability
- Durable sensor head, no need for replacement
- N/C (normal close) or N/O (normal open) selectable relay output
- Easy installation and maintenance
- Attractive sleek housing
- UL listed

Description

The SD Series photoelectric smoke detectors are engineered to meet strict UL fire safety codes and effectively respond to a wide spectrum of fires. The SD Series smoke detectors are suitable for use in commercial, industrial, institutional and residential occupancies. The sleek low-profile design of the detectors emphasizes ease of installation and field maintenance.

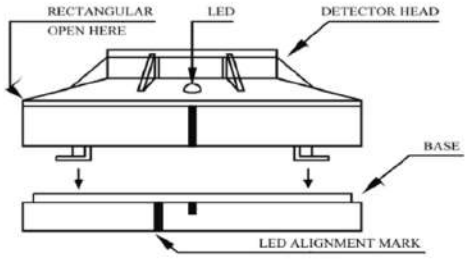
The SD Series consists of four models:

SD-2WP / SD-2WT
The SD-2WP is a two-wire photoelectric smoke detector for use with electrically compatible fire alarm control units. The SD-2WT is a two-wire smoke detector that uses photoelectric technology in conjunction with a fixed temperature heat sensor to further extend its sensing capabilities.

SD-4WP / SD-4WT
The SD-4WP is a four-wire photoelectric smoke detector. The SD-4WT is a four-wire photoelectric smoke detector with a fixed temperature heat sensor.

All SD Series smoke detectors come equipped with a sleek low-profile design and durable sensor head. Utilizing advanced detection and discrimination algorithms, the SD Series smoke detectors provide quality and reliability.

Installation Diagram



S6295

CATALOG NUMBER 5177

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.

MGC™

Photoelectric Smoke Detector
Installation Wiring Diagram

TYPICAL WIRING DIAGRAM

Figure 1.a shows the typical wiring diagram of 2-wire multiple-station smoke detector system.

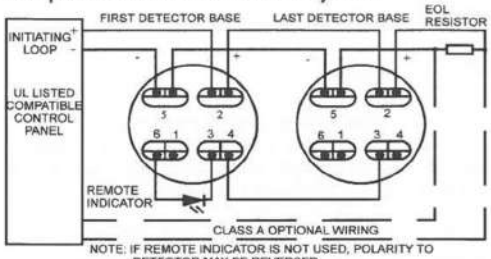


Fig. 1.a Installing the 2-wire multiple station smoke detector base

DO NOT USE LOOPED WIRE UNDER TERMINALS 2 AND 5 BREAK WIRE RUN TO PROVIDE SUPERVISION OF CONNECTIONS

Figure 1.b shows the typical wiring diagram of 4-wire multiple-station smoke detector system.

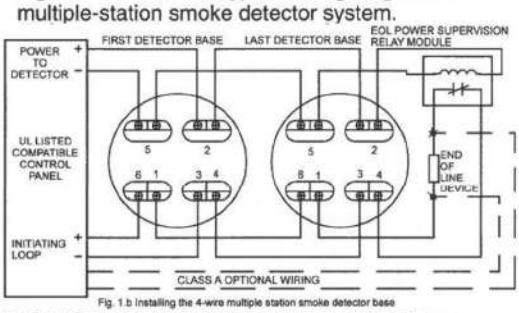


Fig. 1.b Installing the 4-wire multiple station smoke detector base

DO NOT USE LOOPED WIRE UNDER TERMINALS 2 AND 5 BREAK WIRE RUN TO PROVIDE SUPERVISION OF CONNECTIONS

WARNING

TO PREVENT DETECTOR CONTAMINATION AND SUBSEQUENT WARRANTY CANCELATION, SMOKE DETECTOR MUST REMAIN COVERED UNTIL AREA IS CLEAN AND DUST FREE.

INSTALLING THE BASE

1. To insure proper installation of the detector head to the base, all the wires should be properly addressed at installation:
   (A) Position all the wires flat against terminals.
   (B) Fasten the wires away from connector terminals.
2. If you use the jumper wire to connect the poles of terminal 2 and 5 when testing the detector loop continuity, be sure to remove the jumper wire prior to the installation of the detector head.
3. *The end-of-line device* shown in figure 1.A & 1.B should be compatible with the control unit. The end-of-line supervisory relay used should list the rated DC power voltage used.
4. Per UL listing, open area smoke detectors are intended for mounting on a ceiling no less than 6 inches from a wall or mounting on a wall than no less than 4 inches and no more than 12 inches from a ceiling.
5. The base of smoke detector can be mounted directly onto electrical junction box such as octagonal (3″, 3.5″ or 4″), round (3″), and square (4″ length) box without using any type of mechanical adapter.

INSTALLING THE HEAD

1. Align the components as shown in figure 2.
2. Mate the detector head onto the base and twist clockwise to secure it.
3. Do not install the detector head until the area is thoroughly cleaned of construction debris, dusts, etc. The maximum number of smoke detector installed in the same loop is 30 units.

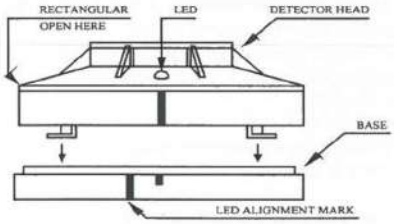


Fig. 2 Mating detector head onto base

ADJUSTMENT THE RELAY POSITION

4-wire type: Adjust the relay set-position for wiring unit to the security monitoring system by the following steps:.

1. The reset position for the relays is at "normal open" (NO) position, when energizing all the relays.
2. If one needs to adjust the relay set point, use a screwdriver to push up the rectangular hole located on the side between the front cover and base to remove the front cover. See figure 3. There is a jump head next to the relay on the PCB, adjust it to select set point either "normal close" (NC) or "normal open" (NO) position.
3. Relay contact rating:
   1A@30VDC,
   0.5A@125VAC.
   Operating voltage:
   Max.: 26VDC
   Min.: 8.4VDC

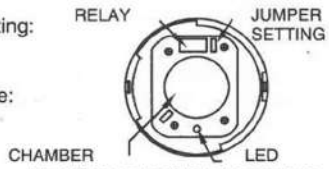


Fig. 3 Schematic of detector structure when front cover is open.

TESTING

1. All the alarm signal services, releasing device and extinguisher system should be disengaged during the test period and must be reengaged immediately at the conclusion of testing.
2. For 2-wire/4-wire type: turn power on and energize the detector head for at least 1 minute before proceeding the following testing procedures.
   After energizing the detector head for approximately one minute, check to see the indicator LED flashing. If LED fails to flash, the detector is not functioning or the wiring is faulty. Recheck the wiring or replace the detector if necessary.
3. Allow smoke from a cotton wick or a punk to enter the detector's sensing chamber for at least 10 seconds.

When sufficient smoke has entered the chamber, an alarm signal will take place by indicating with a continuous illumination of the LED. After it alarms, Reset each detector and/or control unit before attempting to test the additional detector in the same zone. If the alarm fails in this step, it indicates a defective unit which requires service.

HEAT SENSOR TESTING

The detector to be tested should be subject to a flow of warm air at a temperature between 140°F and 180°F. Some domestic hair dryers can meet such requirements. Proceed as follows:

1. Switch on the warm airflow and check that temperature is correct and stable.
2. From a distance of inches, direct the airflow at the guard protecting the thermistor. The detector should alarm within 30 seconds.
3. When alarm is on, immediately remove the heat source and check that the detector's red LED is lit. Reset the detector from the control panel.
4. If the detector fails to go into alarm within 30 seconds it is too insensitive and needs to be returned to the distributor for servicing.
5. After testing check that the system is set for normal operation and notify the appropriate authorities that the testing operation is complete and the system is active again.

NOTES FOR USING DETECTOR

The National Fire Protection Association (NFPA) states that duct smoke detector must not used as a substitute for open area smoke detector. Duct smoke detector is solely intended to use in the air handing equipments for such purposes like dampers or shutting down the air handing units.

NOT SUITABLE FOR INSTALLATION IN AREAS WHERE AIR VELOCITIES EXCEED 300 ft/min

MAINTENANCE

The recommended minimum requirement for detector maintenance consists of an annual cleaning of dust from the detector head by using a vacuum cleaner cleaning program should be agreed to the individual environment in conformance with NFPA-72A standard.

CAUTION: DO NOT ATTEMPT TO REMOVE THE SCREWS, WHICH HOLD THE ASSEMBLY OF SMOKE-SENSING CHAMBER AND PRINTED CIRCUIT BOARD (PCB). THIS ASSEMBLY IS SEALED FOR YOUR PROTECTION AND IS NOT INTENDED TO BE SEPARATED FOR SERVICING BY USERS. OPENING SUCH ASSEMBLY WILL VOID THE WARRANTY.

REFERENCE TO THE TECHNICAL BULETIN ISSUE NO. SDTB19960306 REV.E, JAN 13, 1998

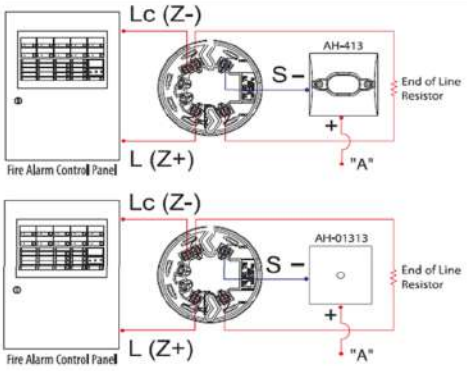
SPECIFICATION

Model	2/4 wire	Heat Sensor Setting	Voltage DC (Max./Min.)	Standby Current (Max.)	Alarm Current (Max./Min.)	Alarm Impedance (Max./Min.)	Surge Current (Max.)	Star-Up Time (Max.)	Permissible Current (Max.)	Frequency	Alarm contact	Base model
SD-4WT	4	135 ±5 °F	24/12V	370 μA	35/10mA	-	-	60 Sec.	-	3-5 Sec.	Form A	SDB-4W
SD-4WP	4	-	24/12V	370 μA	35/10mA	-	-	60 Sec.	-	3-5 Sec.	Form A	SDB-4W
SD-2WT	2	135 ±5 °F	28/12V	150 μA	70/10mA	620/150Ω	160 μA	60 Sec.	80mA	3-5 Sec.	—	SDB-2W
SD-2WP	2	-	28/12V	150 μA	70/10mA	620/150Ω	160 μA	60 Sec.	80mA	3-5 Sec.	—	SDB-2W
SD-2WT-LED	2	135 ±5 °F	28/12V	150 μA	70/10mA	700/300Ω	160 μA	60 Sec.	80mA	3-5 Sec.	—	SDB-4W
SD-2WP-LED	2	-	28/12V	150 μA	70/10mA	700/300Ω	160 μA	60 Sec.	80mA	3-5 Sec.	—	SDB-4W

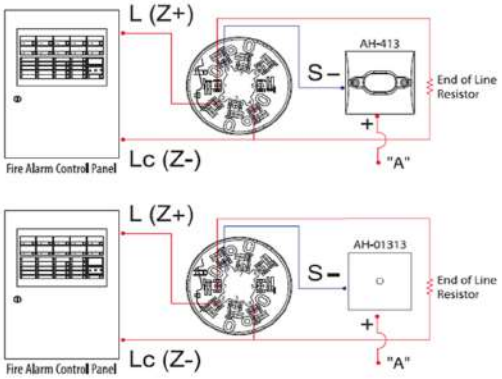
Distributor-
Unique Multi Engineering Ltd.
A Firm of Fire Detection,Protection,Ventilation & Cooling System Solution
Mail: info@unique-ltd.com,uniquebd0707@gmail.com
Mobile: +8801716592522, +8801825451599 Web: www.unique-ltd.com

FIREX

AHMB-071



AHMB-031



Contacts "A" to
(1) Fire 24V AUX contacts
(2) Fire Zone L(Z+)

Features

This unit is designed to ensure that alarm signal can be actually transmittedto all locations. Especially for a closed room , any fire inside can be indicate outside.

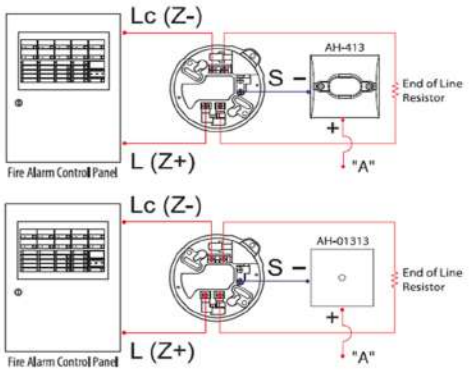
Characteristics

- Outstanding look from the design of art
- Low current consumption
- High intensity LED for quick identification
- Larger indicating lamp. (Model. AH-413)
- Applicable for 12VDC and 24VDC (Model. AH-413)
- Flash light is available for optional feature (Model. AH-413)

Specifications

Model	AH-413	AH-01313
Power Source	12/24V DC	24V DC
Alarm Current @24V DC	15mA	12mA
Standby Current	N/A	
Ambient Temperature	-10℃ ~ +55℃	
Material	Fire-proof plastic	
Color	White surface/ Red LED	
Dimensions	85mm(H)x85mm(W) x23mm(D)	70mm(H)x70mm(W) x15mm(D)
Weight	About 28g	About 32g

Wiring Diagram



HORING LIH INDUSTRIAL CO.,LTD.

FIREX

MIRCOM®

MOTOR BELLS — BL-SERIES

Features

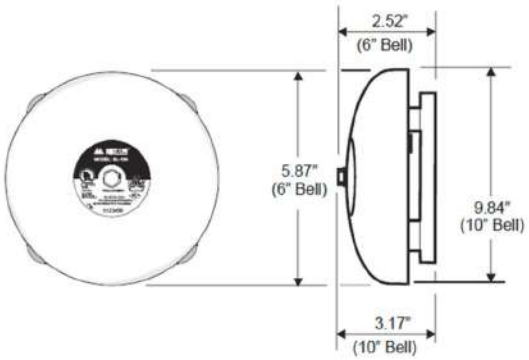
- Low current draw (15 mA)
- 6 and 10 inch diameter steel shells for long term reliability
- RFI and EMF suppression prevents noise problems to the fire alarm control panel
- Polarized for DC supervision
- Low Current requirements
- Standard 4 inch square electrical box mounting
- Red finish

Description

Mircom's BL-Series of motor driven bells are designed for today's fire alarm applications. The durable steel construction provides loud resonant tones necessary for fire alarm installations. The new BL-Series bells use a varistor suppression element to prevent RFI and EMF noise problems to modern fire alarm control panels.

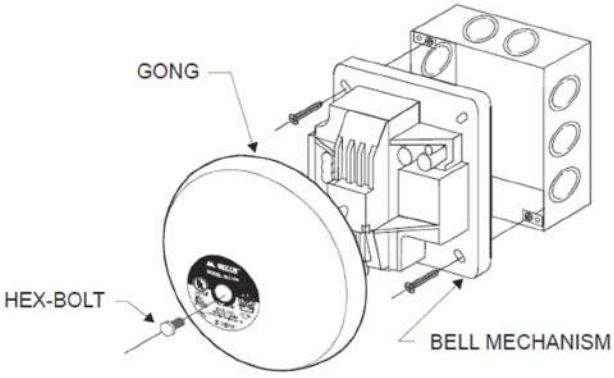
The motor used on the BL-Series operates at a very low current (15 mA) to maximize the number of bells per circuit. A common mounting plate on both the 6 and 10 inch diameter bells facilitates interchanging bell sizes. A solid aluminium base completely houses the bell mechanism.

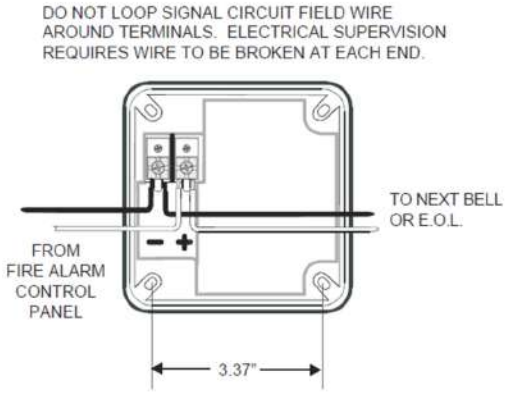
Dimensions



UL S5375 ULC CS843

Installation Instructions





1. REMOVE THE GONG BY UNSCREWING THE HEX-BOLT.
2. LOCATE TERMINALS, OBSERVE POLARITY AND WIRE THE BELL AS SHOWN.
3. THE BELL SHOULD BE MOUNTED NO LESS THAN 6 FT (1800 MM) FROM FLOOR TO CENTRE OF BELL.
4. SECURE THE BELL MECHANISM TO A 4" SQUARE STANDARD OUTLET BOX.
6. PLACE GONG BACK ON BELL MECHANISM AND FASTEN IT WITH THE HEX-BOLT.

Specifications

Model	Diameter	Voltage	Rated Current	UL dB Rating (dB at 10 ft.)	Indoor Measurement
BL-6A	6"	24 VDC	15 mA	85	86-89
BL-10A	10"	24 VDC	15 mA	85	92-94

Note: *Sound level in an indoor installation may vary depending upon the space surroundings.*

Ordering Information

Model	Description
BL-6A	24 VDC Motorized Bell, 6" diameter
BL-10A	24 VDC Motorized Bell, 10" diameter
BL-120-6	120 VAC Motorized Bell, 6" diameter
BL-120-10	120 VAC Motorized Bell, 10" diameter
MP-101	Universal Bell Mounting Plate
M-1995	Yard Hood
WBB-R	Weather-Resistant Backbox
BB-206	Flush Wall Box for 6" diameter bells
BB-206C	Flush Ceiling Box for 6" diameter bells
SG-206	Grill for BB-206 and BB-206C
SG-206S	Brushed Stainless Steel Grill for BB-206 and BB-206C
BB-210	Flush Wall Box for 10" diameter bells
SG-210	Grill for BB-210 and BB-210C

Mircom™

WALL MOUNT HORN/STROBES — FHS-340 SERIES

Features

- UL and C-UL listed
- 12 VDC with 15, 35 or 60 cd settings
- 24 VDC with 15, 35, 60, 75, 95 or 110 cd settings
- 6 distinct candela settings
- Candela selection view window
- 15/75 ADA compliant on 60cd setting
- 33 sound output settings
- Horn or chime sound output
- Pre-wire back plate
- Universal back plate mounting (single gang, double gang, octagon, or 4" square)
- Single screw mounting
- For indoor applications

Description

The FHS-340 Horn/Strobe Series provides a wide range of candela light output options in a single device. The candela settings include a 12 or 24 volt DC operation for the 15, 35 and 60 (75 on axis) candela settings and 24 volt DC operation for the 15, 35, 60, 75, 95 and 110 candela settings. The candela setting is displayed through the front window and is selectable using a drum wheel.

The horn settings include Temporal, Non-Temporal, March Time and a Chime sound. The horn also has Low, Mid and High volume settings for each pattern and tone. The tones include 2400 Hz, Electro-Mechanical, Broadband and Chime.

The voltage input can be either regulated DC or full wave rectified (FWR) 12 volt or 24 volt operation with an operating range from 8 to 33 V DC. The strobes can be synchronized using a control panel with the Mircom (Amseco) sync protocol or an SDM-240 sync module.

The FHS-340 utilizes a universal mounting plate that will mount on a single gang, double gang, octagon and 4" square electrical boxes. The back plate allows the installer to mount the plate and connect the wire connections. The strobe attaches in a hinge fashion from the top and is secured by a single mounting screw. The strobe completely covers the mounting back plate, therefore it can be mounted before other trades work is completed and not affect the final look.

Engineering Specifications

The installer shall provide and install the FHS-340 selectable horn/strobe. The strobe shall have six (6) candela settings. The candela settings shall be selectable using a drum roller and shall display the candela setting on the front of the device. The horn shall have 33 selectable settings configurable by dip switches. The sounder shall be capable of ANSI Temporal Code 3, March Time and produce a chime output. The horn shall have three distinct volume levels. The horn/strobe shall operate at 12 or 24 VDC regulated or full wave rectified. The horn/strobe shall have an operating range between 8 and 33 VDC. The strobes can be synchronized using a control panel with the Mircom sync protocol or the SDM-240 sync module. The strobe shall utilize a mounting plate that allows the installer to pre-wire the mounting plate. The mounting plate shall be universal and mount on a single gang, double gang, octagon or 4 inch square box. The mounting plate shall be completely covered by the strobe and shall be secured by a single screw. The strobe shall be UL listed to standard 1638, General Signaling, and standard 1971, Signaling Devices for the Hearing Impaired. In addition, the strobes shall be C-UL listed to CAN-ULC S526. The horn shall be UL listed to standard 464, Audible Signaling Devices.

c UL us S5375 ADA

CATALOG NUMBER 5269

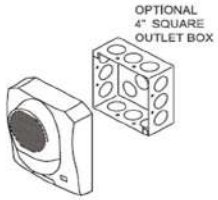
FIREX

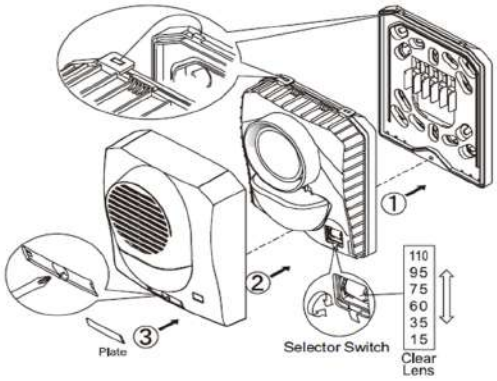
Installation

⚠ CAUTION

A jumper plug is provided to test for correct wiring in the supervisory mode only. Do not pass alarm current through the jumper.

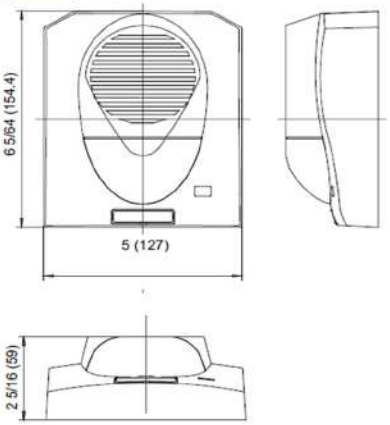
Note: Installation must comply in accordance with applicable standards.





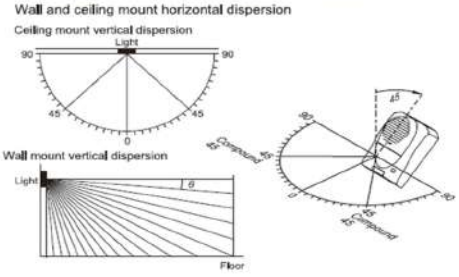
Dimensions

Inches (mm)



Light Output

Light output in precentage when measured from the following directions per UL 1971.



Degrees	% of Rating	
	Horizontal	Vertic
0	100	100
5~25	90	90
30	75	90
35	75	65
40	75	46
45	75	34
50	55	27
55	45	22
60	40	18
65	35	16
70	35	15
75	30	13
80	30	12
85~90	25	12

⚠ WARNING

High voltage may be present inside the light assembly even though power is not connected. If access to the component board is required (removal or replacement), the capacitor must be discharged by touching a wire to both ends of the flash tube.

DO NOT attempt to touch or move the assembly until the capacitor has been discharged.

Specifications

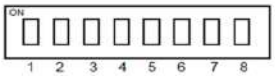
Strobe Current

Light Output	Max. RMS Operating Current (mA RMS)			
	Reg. 12 VDC	Reg. 12 FWR	Reg. 24 VDC	Reg. 24 FWR
15cd	116	152	62	99
35cd	209	267	102	152
60/75cd	254	258	131	190
75cd	NA	NA	146	208
95cd	NA	NA	177	243
110cd	NA	NA	196	268

Voltage	12/24V	
UL Designation	Regulated 12 DC/FWR	Regulated 24 DC/FWR
Operating Voltage Range	8 - 17.5V	16 - 33V
Flash Rate	60 times/min.	
Sync Module (SDM-240)	N/A	Available
Operating Temperature Range	Indoor model: 32°F to 120°F (0°C to 49°C)	

Dipswitch Settings

Horn Dipswitch



Pattern

1 ON - Non-temporal
1 OFF - Temporal
Both 2 = OFF
1 and 2 ON = March Time

Tone

3 and 4 ON = 2400Hz
3 ON and 4 OFF = Electromechanical
3 and 4 OFF = Chime
3 OFF and 4 ON = Broadband

Volume

5 and 6 ON = High
5 ON and 6 OFF = Mid
5 and 6 OFF = Low
7 and 8 ON = Horn/strobe on 2 wires
7 and 8 OFF = Horn and strobe on 4 wires

Mircom™

NOT TO BE USED FOR INSTALLATION PURPOSES.

CAT. 5269

FIREX

Specifications

Non-Temporal Horn Current

Pattern	Volume	Max. RMS Operating Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	119	79	87	125	87	87	99	100
	Mid	44	46	28	74	82	82	94	96
	Low	30	30	18	41	79	80	92	92
Electro-Mechanical	High	118	77	81	121	86	87	100	100
	Mid	43	43	26	67	82	84	96	97
	Low	27	29	16	36	79	80	93	93
Broadband	High	146	125	78	148	86	86	101	102
	Mid	41	63	26	64	81	82	96	98
	Low	28	40	16	39	77	79	94	95
Chime	High	27	35	21	27	70	70	86	86
	Mid	11	15	8	13	62	62	79	80
	Low	9	11	7	12	58	57	75	75

Temporal Horn Current

Pattern	Volume	Max. RMS Operating Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	124	70	87	132	82	82	100	100
	Mid	46	38	30	83	77	79	95	96
	Low	30	28	18	36	74	75	92	92
Electro-Mechanical	High	114	69	80	134	83	82	100	101
	Mid	42	40	27	67	78	80	95	96
	Low	28	27	16	36	75	76	93	93
Broadband	High	151	117	80	146	82	82	101	102
	Mid	45	59	26	73	77	78	97	98
	Low	30	42	16	31	75	76	94	95
Chime	High	29	35	21	28	68	70	86	86
	Mid	10	17	9	12	61	61	79	79
	Low	9	12	8	9	55	55	75	76

March Time Horn Current

Pattern	Volume	Max. RMS Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	121	70	92	132	83	84	99	100
	Mid	47	39	31	76	79	81	95	96
	Low	36	25	19	35	76	77	92	92
Electro-Mechanical	High	114	69	86	125	83	83	100	100
	Mid	42	37	27	67	80	81	95	96
	Low	30	26	19	37	77	77	92	93
Broadband	High	153	121	77	126	83	84	101	102
	Mid	42	55	28	56	79	80	97	98
	Low	29	42	16	26	76	77	94	95

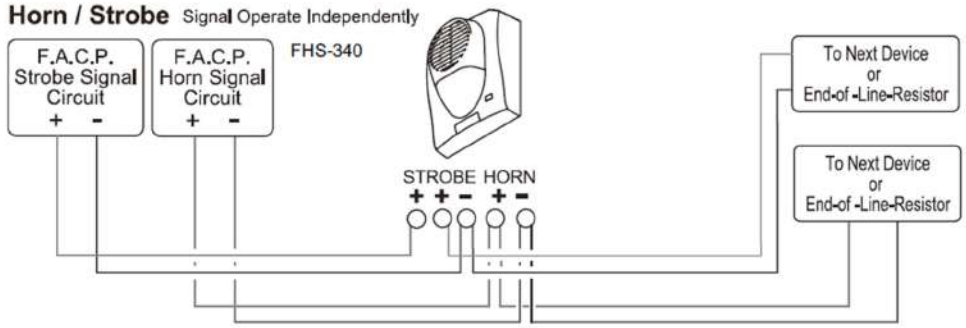
Mircom

NOT TO BE USED FOR INSTALLATION PURPOSES.

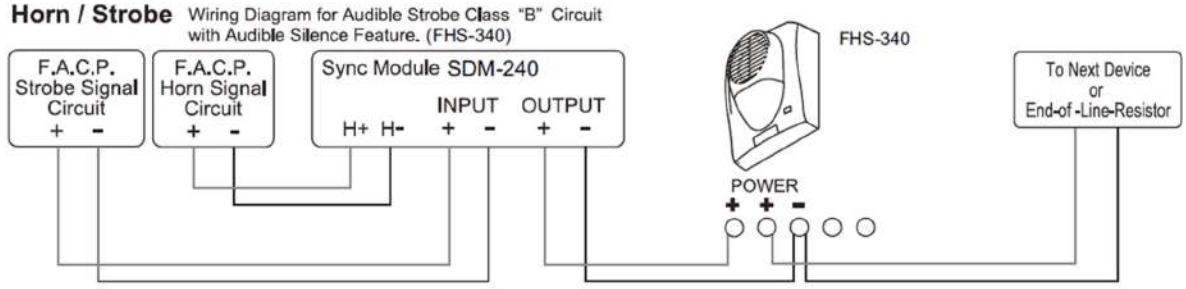
CAT. 5269

Wiring Diagram

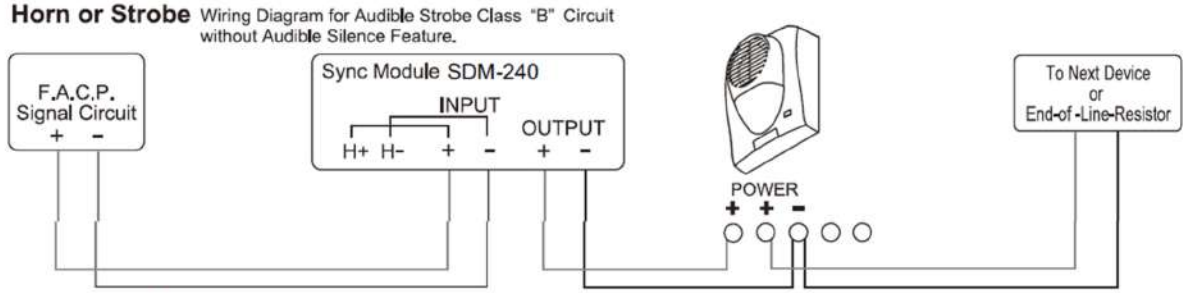
Horn / Strobe Signal Operate Independently



Horn / Strobe Wiring Diagram for Audible Strobe Class "B" Circuit with Audible Silence Feature. (FHS-340)



Horn or Strobe Wiring Diagram for Audible Strobe Class "B" Circuit without Audible Silence Feature.



Refer to the SDM-240 Sync Module instruction manual for Class "A" wiring or other application diagrams.

Ordering Information

Model Number	Description
FHS-340R	Wall Mount Horn/Strobe, Red
FHS-340W	Wall Mount Horn/Strobe, White

FIREX

Manual Release (Electric)

The electric manual release switch shall be a dual action device which provides a means of manually discharging the Suppression System when used in conjunction with the control system.

The Manual Release switch shall be a PYRO-CHEM model , or equal in quality, performance and features.

Electrical Details

Type : XB2-BA51

UI : 600V UIMP:6KV

ITN : 10A Ac15 240V-8A

Box Dimension

Back Box : Mield Steel (104*100*60)mm

Frame : Stainless Steel (116*116*8)mm

Abort Switch

Abort Switches are often used in conjuction with a time delay . The abort switch is of the "dead - man" type. When the switch is depressed, the agent discharge is inhibited until the switched is released. Upon Release of the switch, agent discharge will occur when the panel is in discharge mode.

Electrical Details

Type : XB2-BA51

UI : 600V UIMP:6KV

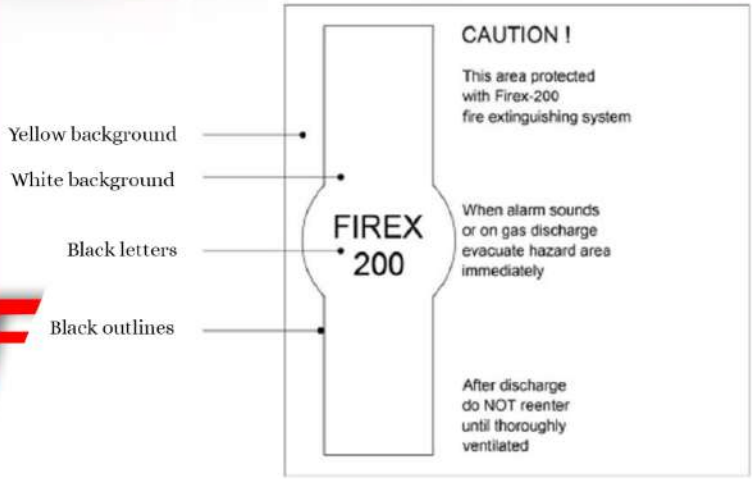
ITN : 10A Ac15 240V-8A

Box Dimension

Back Box : Mield Steel (104*100*60)mm

Frame : Stainless Steel (116*116*8)mm

Warning Sign



Technical specification

Material : Rigid Polyvinyl

Dimensions	
Width	210mm
Height	210mm
Thickness	1.0mm