CONSIGLI
Est. 1905

1569
Mike Murphy
Greg Brown
Adam Blais
Tim Sall
Paul Dilorio @ East Coast
Trish
File

Letter of Transmittal

To: Michael Murphy
Wayne J Griffin Electric Inc
116 Hopping Brook Road
Holliston, MA 01746
Ph: (508) 306-5269 / Fax: (508)429-2382

Transmittal #: **342**
Date: 8/3/2010
Job: 854 Maine Health Office Bldg Reno

Subject: Submittal

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples
☐ Copy of letter ☐ Change order ☐ Specifications ☑ Submittal

Document Type	Copies	Date	No.	Description
Submittal	1	8/3/10	283111-001 Rev 0	P/D: Fire Alarm Control Unit (para 2.3) Status: Approved as noted
Submittal	1	8/3/10	283111-002 Rev 0	P/D: System Printer (para 2.14) Status: Approved as noted
Submittal	1	8/3/10	283111-003 Rev 0	P/D: System Smoke Detectors (para 2.5 D) Status: Approved as noted
Submittal	1	8/3/10	283111-004 Rev 0	P/D: Manual Fire-Alarm Boxes (para 2.4) Status: Approved
Submittal	1	8/3/10	283111-005 Rev 0	P/D: System Smoke Detectors (para 2.5 B) Status: Approved as noted
Submittal	1	8/3/10	283111-006 Rev 0	P/D: Heat Detector (para 2.7) Status: Approved as noted
Submittal	1	8/3/10	283111-007 Rev 0	P/D: Projected Beam Smoke Detectors Status: Approved
Submittal	1	8/3/10	283111-008 Rev 0	P/D: Notification Appliances (para 2.8) Status: Approved as noted
Submittal	1	8/3/10	283111-009 Rev 0	P/D: Firemans Key Boxes (Para 2.15) Status: Approved
Submittal	1	8/3/10	283111-010 Rev 0	P/D: Batteries and Size Calculations (Para 1.7 B 3) Status: Approved
Submittal	1	8/3/10	283111-011 Rev 0	S/D: Fire Alarm System (para 1.7B) Status: Approved as noted

THESE ARE TRANSMITTED as checked below:

☐ For approval ☑ Approved as submitted ☐ Resubmit ___ copies for approval
☐ For your use ☑ Approved as noted ☐ Submit ___ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return ___ corrected prints
☐ For review and comment ☐ Other

If enclosures are not as noted, kindly notify us at once.

Consigli Construction Co., Inc. Construction Managers and General Contractors
84 Middle Street, Portland, Maine 04101 phone 207.773.3000 fax 207.773.2800 web www.consigli.com

Enfield, CT ▪ Portland, ME ▪ Milford, MA

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Date: 8/3/2010
Job: 854 Maine Health Office Bldg Reno

Subject: Submittal

☐ FOR BIDS DUE ☐ PRINTS RETURNED AFTER LOAN TO US

Remarks: 283111 A Digital Addressable Fire Alarm

Copy To:

Signature: Tim Schneider - CONSIGLI CONST. CO., INC. - ME

If enclosures are not as noted, kindly notify us at once.

Consigli Construction Co., Inc. Construction Managers and General Contractors
84 Middle Street, Portland, Maine 04101 phone 207.773.3000 fax 207.773.2800 web www.consigli.com

Enfield, CT ▪ Portland, ME ▪ Milford, MA

WAYNE J.
GRIFFIN ELECTRIC
INC.

May 21, 2010

PROJECT:	Maine Health 110 Free Street Portland, ME 04101
OWNER:	Maine Health 465 Congress Street Suite 600 Portland, ME 04101
GENERAL CONTRACTOR:	Consigli Construction Co., Inc. 84 Middle Street Portland, ME 04101
ARCHITECT:	Harriman Architects & Engineers 123 Middle Street Portland, ME 04101
ELECTRICAL ENGINEER:	Harriman Architects & Engineers 123 Middle Street Portland, ME 04101
ELECTRICAL CONTRACTOR:	Wayne J. Griffin Electric, Inc. 116 Hopping Brook Road Holliston, MA 01746

We herein submit the following electrical equipment on the Maine Health Project for your approval:

Section 283111 – Fire Alarm System

PROJECT: Maine Health

SUBMITTAL: Section 283111 – Fire Alarm System

WAYNE J. GRIFFIN ELECTRIC, INC.
116 Hopping Brook Road
Holliston, MA 01746

Reviewed by: Michael Murphy kas

Date: May 21, 2010

ITEM	DESCRIPTION	QTY
1	SIEMENS XLS MULTI LOOP FIRE ALARM PANEL	1
2	SIEMENS DLC LOOP CONTROL BOARD	2
3	SIEMENS ZIC-4A MUNICIPAL TIE/ SIGNAL CIRCUIT MODULE	1
4	SIEMENS NIC-C INTERFACE CARD	1
5	SIEMENS CRC-6 RELAY CARD	1
6	SIEMENS PSC-12/PSX-12 POWER SUPPLIES	1
7	SIEMENS RPM REMOTE PRINTER MODULE	1
8	SIEMENS TSP40A PANEL MTD THERMAL PRINTER	1
9	SIEMENS CAB1 EQUIPMENT CABINET	1
10	SIEMENS SSD-C-REM REMOTE LCD ANNUNCIATOR	1
11	SIEMENS SSD-C-BOX ANNUNCIATOR BACK BOX	1
12	SIEMENS HTRI-M ADDR MINI MONITOR MODULES	20
13	SIEMENS HTRI-S ADDR MONITOR MODULES FOR FLOWS, ETC	10
14	SIEMENS HTRI-R ADDR RELAY MODULES	10
15	SIEMENS AD2-PADDR DUCT SMOKE DETCTORS	4
16	SIEMENS ST-50 SAMPLING TUBES	4
17	SIEMENS TSM1 REMOTE TEST STATION	4
18	SIEMENS MSM-KD DUAL ACTION PULL STATIONS	16
19	SIEMENS HFP-11 ADDR PHOTO SMOKE DETECTORS	211
20	SIEMENS HFPT-11 ADDR HEAT DETECTORS	19
21	SIEMENS DB11 STANDARD BASES	230
22	SIEMENS F5000 BEAM DETECTORS	4
23	SIEMENS PAD3 BOOSTER POWER SUPPLY	3
24	SIEMENS ZH-MC-R MULTI CANDELA HORN/STROBES	20
25	SIEMENS ZH-MC-CR CEILING HORN/STROBES	19
26	SIEMENS ZR-MC-R ADA STROBE ONLY	57
27	SIEMENS ZR-MC-CR CEILING ADA STROBE ONLY	54
28	POWERSONIC PS-12550 55AH 12VOLT BATTERIES	2
29	POWERSONIC PS-1270 12VOLT 7AH BATTERIES(BOOSTERS)	6
30	ECSF BATTERY CALCULATIONS	1
31	ECSF TYPICAL WIRING DIAGRAM	1

RESPECTFULLY SUBMITTED,

PAUL C. DIIORIO
EAST COAST SECURITY
pdiiorio@ecss.com

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 001
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Fire Alarm Control Unit (para 2.3)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	001
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

-Provide all equipment for a complete system as shown, but not limited to specific devices indicated on submittals.
-Provide installer qualifications per section 1.8-A.

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED with notes

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

Para 2.3

SIEMENS

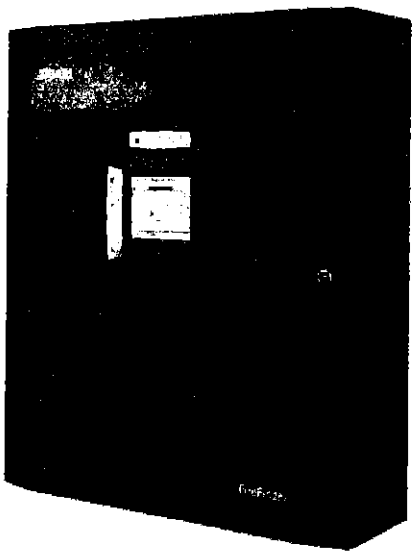
Catalog Sheet
Fire Safety & Security Products

FireFinder XLS

FireFinder XLS Fire Alarm Control Panel

ARCHITECT AND ENGINEER SPECIFICATIONS

- Standard 2500 addressable, point-capacity system
- Ability to network with other FireFinder XLS systems
- Powerful, easy-to-use programming capabilities
- Fully field programmable, via Windows® laptop PC
- 6" Backlit LCD display
- User-friendly system interface
- Touch screen for maintenance operations and function keys
- Global annunciation and control capability
- Multi-language display
- Universal AC power input: 120/240VAC, 50/60Hz
- 12 amps of system power (expandable to 48 amps)
- Numerous Relays: Alarm, Trouble, Programmable, etc.
- *SureWire* addressable-loop technology
- Polarity-insensitive detection circuits (patented)
- Useful diagnostic LEDs on all cards
- Supports *FirePrint* application-specific detection
- Security device monitoring
- Sprinkler Supervision
- Intelligent / analog detection circuits: Class A or Class B



- Detector Sensitivity Readout / Printout, per NFPA 72
- Supervised remote printer
- 32-character custom messages
- Thermal strip printer
- Alphanumeric pocket-pager interface
- UUKL Listed for smoke control
- ®UL 864 9th Edition Listed & ®ULC Listed; FM, CSFM & NYMEA Approved

- Multiple command stations
- Menu-driven operator commands
- 5000-event, history-logging capability with on-line & off-line reports
- User help screens
- Multiple levels of password protection
- Automatic environmental compensation for smoke detectors
- Alarm verification by Device or Zone
- Logic-controlled output functions
- Time-based-controlled output functions
- Holiday schedule
- City tie / leased line
- Coded outputs
- 200 notification-appliance-circuits capacity
- Up to 4.0 amps (24VDC) per NAC
- Built-in strobe synchronization protocol
- Supports pre-action, deluge and agent releasing
- Voice evacuation system (optional)
- Modular assembly
- NEC 760 power-limited circuits (UL 864 Compliant)
- Intelligent interface to building / process management systems
- Degrade-mode operation

System Overview

FireFinder XLS is a microprocessor-based, advanced life-safety system that has a 6" display and large, lighted buttons – making it the most intuitive fire-alarm user interface in the industry. Its use of the unique multiprocessor "Network" design, along with its ability to utilize analog and conventional detection devices, makes it an extremely flexible and configurable life-safety system.

The XLS is ideally suited for commercial, institutional and industrial fire detection and notification applications. The XLS complies with the requirements of NFPA Standard 72, and is listed by Underwriters Laboratories under their standard ®UL 864.

Underwriter's Laboratories of Canada also lists the XLS for fire applications under ®ULC-S527. The XLS is approved by Factory Mutual; as well as CSFM and NYMEA for use in those specific locales.

In addition to the standard fire applications, XLS is listed by Underwriters Laboratories under the category UUKL for smoke control. XLS can be used as a listed Fireman's Smoke Control Station in high-rise office buildings, malls and other large structures.

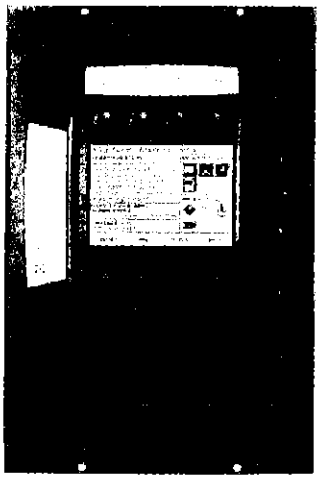
XLS is listed by ®UL and approved by FM for releasing Halon 1301, Sinorix clean agent systems and pre-action or deluge sprinkler systems. These include foam or water applications. XLS follows the releasing requirements, specified in the NFPA 12A, 13 and 2001.

SIEMENS Industry, Inc.
Building Technologies Division

FireFinder XLS Components

The basic XLS control unit consists of the following sub-assemblies: PMI Person Machine Interface; PSC-12 Power Supply; DLC Device Loop Card; ZIC-4A Zone Indicating Card; CC-5 Card cage; ID-SP Inner Door Blank Single Plate; CAB-1, CAB-2 or CAB-3 enclosures. Optional modules that can be installed with the XLS System include: CC-2 Card Cage; NIC-C Network Interface Card; ZIC-8B / ZIC-2C Zone Indicating Card 8 circuits; CRC-6 Control Relay Card; OCM-16 Output Control Module; SCM-8 Switch Control Module; LCM-8 LED Control Module; FCM-6 Fan Control Module; SIM-16 Supervised Input Module; PSX-12 Power Supply Extender; RNI Remote Network Interface; RPM Remote Printer Module; SSD System Status Display; MDACT Multi-Point Digital Alarm Communicator; REMBOX2 Two Module Remote Enclosure; REM BOX4 Four Module Remote Enclosure.

The XLS panel is compatible with a full line of intelligent initiating devices, highlighted by the FirePrint Application Specified Detectors, models HFP-11 and HFPT-11. It is also compatible with the NCC series of graphics command centers.



PMI Person Machine Interface

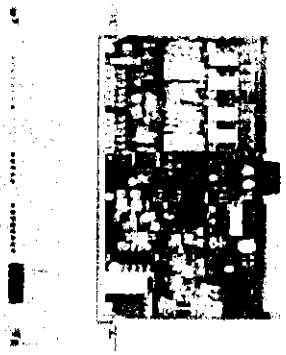
PMI Person Machine Interface

The Person Machine Interface is the core of the FireFinder XLS system. The PMI serves as both operator interface and central microprocessor for the FireFinder XLS system. From the PMI, the user can acknowledge events, control the system-notification appliance circuits and reset the system. Detailed information about the nature and location of the events can also be displayed.

The PMI contains the site-specific program configuration created in the Zeus tool. The controller in the PMI provides all system logic and supervision.

The PMI contains a large, 6" (1/4 VGA) monochrome LCD display, touch screen and LEDs for displaying system status. A sound is made when there is any unacknowledged event on the PMI. The display is surrounded by keys that are used to control the displayed information and to navigate through these screens. Keys are also provided to obtain and enter "Help" into the menu features of the PMI.

The FireFinder system is controlled and operated from the PMI. The intuitive person machine interface uses large, lighted buttons to prompt users as to the next correct system operation that is available (*Acknowledge, Silence, Unsilence, Audible* or *Reset*).



DLC Device Loop Card

DLC Device Loop Card

The DLC Device Loop Card is the interface for connection with FireFinder XLS detectors and initiating devices, including manual stations, control and input devices. The DLC plugs into one slot of the CC-2 or CC-5 card cage. Programming the DLC is accomplished using the FireFinder XLS Zeus configuration tool. The DLC takes one address on the network, and communicates with two device circuits for a maximum total of 252 detectors and devices. The DLC has 12 LEDs for diagnostic purposes, and provides ground-fault detection and zone-isolation circuitry.

ZIC-4A Zone Indicating Card

ZIC-4A Zone Indicating Card

The Zone Indicating Card provides four fully supervised, programmable output circuits for use on the FireFinder XLS Fire Alarm Control Panel. The ZIC-4A supplies four Class B (Style Y) or Class A (Style Z) type output circuits, power limited to 4.0 amps maximum per circuit.

Each circuit can be independently programmed for use with listed audible or visual notification appliances, listed emergency audio speakers, municipal tie boxes, leased lines, or as releasing circuits. The ZIC-4A plugs into one slot in the CC-5 or CC-2 Card Cage, and has on-board LEDs for system status and troubleshooting. Indication of power, communication, internal operation, and ground-fault conditions are provided, as well as indication of circuit activation or trouble conditions.

ZIC-8B / ZIC-2C

ZIC-8B / ZIC-2C

The Zone Indicating Card (ZIC-8B) provides eight fully supervised, programmable output circuits for use on the FireFinder XLS Fire Alarm Control Panel. The ZIC-8B supplies 8 Class B (Style Y) type output circuits, power limited to 2.0 amps maximum per circuit. Each circuit can be independently programmed for use with listed audible or visual notification appliances, or listed emergency audio speakers. The ZIC-8B plugs into one slot in the CC-5 or CC-2 Card Cage, and has on-board LEDs for system status and troubleshooting. The ZIC-2C mounts directly on the ZIC-8B, and allows each of the ZIC-8B output circuits to be used for 2-channel voice applications. Indication of power, communication, internal operation, and ground-fault conditions are provided, as well as indication of circuit activation or trouble conditions.

NIC-C

NIC-C

The Model NIC-C Network Interface Card provides HNET or XNET network communications between enclosures. In addition to the HNET or XNET communication, the NIC-C provides CAN network communication within an enclosure or external to the enclosure. The HNET or XNET can be wired Style 4 or Style 7, but the CAN network can be wired Style 4 only.

When the NIC-C is used for HNET communications, it provides communication between enclosures on a single system.

When the NIC-C is used for XNET communications, it provides communication between systems. The maximum of XNET NIC-Cs on a single system (single node) is one, for a total of 64 XNET NIC-Cs on a peer-to-peer networked System.

The NIC-C Card has diagnostic LEDs that indicate Card Fail, CAN Fail, HNET Fail, XNET Fail, Ground Fault, Loop A Fail and Loop B Fail. The NIC-C Card also has LEDs to indicate Power, Style and Active Networks.

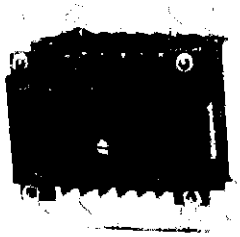
HLIM Line Isolator Module

HLIM Line Isolator Module

The HLIM loop isolator module provides short circuit protection on FireFinder XLS intelligent device circuits (DLC). When a short is detected by the HLIM, it isolates the affected segment of the circuit – allowing the remaining devices to continue operation. The HLIM is self-restoring, automatically reconnecting to circuit segment when the fault is removed.

It can be wired in either a Style 4 or Style 6 configuration.

The HLIM does not occupy a device address on the DLC circuit, and does not require programming. Up to fifteen HLIMs may be installed on each DLC loop.

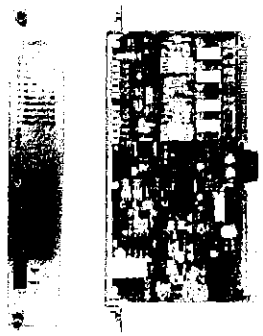


HCP

HCP

The HCP provides an intelligent control point for the FireFinder XLS Control Panel. The HCP can be programmed as an independent, remotely located telephone zone, speaker zone or notification appliance circuit. The HCP is designed to be used with the Siemens Fire Safety notification appliance product line.

The HCP communicates through the DLC analog loop and can be wired either Class A (Style Z) or Class B (Style Y). The 24 VDC power input comes from either the control panel or from any UL listed power-limited, auxiliary-power supply.



CRC-6 Controllable Relay Card

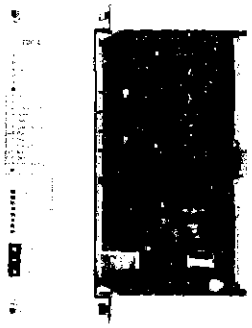
CRC-6 Controllable Relay Card

The Controllable Relay Card (Model CRC-6) is used with the FireFinder XLS Fire Alarm Control Panel. It is designed to provide auxiliary control of building functions, such as door-holder release, elevator capture, smoke control, lock release, etc. The CRC-6 plugs into one slot in the CC-5 or CC-2 Card Cage. It provides six, fully programmable relays. Each relay contains one set of SPDT contacts rated at 4 Amps 30 VDC/120 VAC resistive and 3.5 amps 120 VAC inductive (0.6 P.F.).

SIM-16 Supervised Input Module

SIM-16 Supervised Input Module

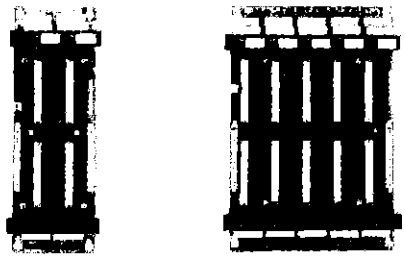
The SIM-16 Supervised input Module is a remotely located, general-purpose input module. It provides sixteen input circuits for remote system monitoring. Each input can be individually programmed as supervised (dry contact only) or unsupervised (general purpose input.) The SIM-16 has two Form C relays. The relays and inputs are programmed using the Zeus system programming tool.



CDC-4

CDC-4

The Model CDC-4 Conventional Detector Card is used to monitor Siemens Fire Safety conventional detectors on the FireFinder XLS system. The CDC-4 can be used in applications where conventional detectors are more suited than addressable detectors, like hallways or large meeting rooms. Also, the CDC-4 can be used to upgrade Siemens conventional fire-alarm panels to the FireFinder XLS system without requiring detector replacement.



CC-2 Card Cage-2 SlotsCC-5 Card Cage-5 Slots

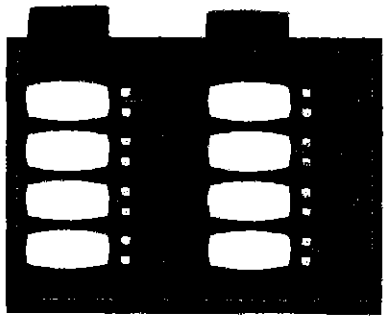
CC-5 / CC-2 Card Cages

The CC-5 / CC-2 card cages provide the physical mounting location and all wiring connection points for all fire-and-voice system options cards for the FireFinder-XLS system. The CC-5 has 5 slots, while the CC-2 has two slots.

All cards plugged into the CC-5 / CC-2 card cage communicate with other FireFinder-XLS modules via a common data bus. Connectors are provided on the left and right side of the CC-5 to connect a 60-pin cable for communications with the FireFinder-XLS' operator interface, power supplies and amplifiers modules.

Field wiring to devices and circuits terminates on the CC-5 / CC-2 card cage. All cards designed for use with the CC-5 / CC-2 route their field wiring terminations to the "top" of the CC-5 / CC-2. These connections are all power limited. Internal wiring connections distribute 24VDC to cards or high-level audio signals (depending on application used) connect to the "bottom" of the CC-5 / CC-2. These connections are all non-power limited.

All wiring connections to the CC-5 / CC-2 are to removable terminal blocks. Terminal blocks are rated for use with wire sized 12AWG to 24AWG. Each connector is numbered to make wiring terminations to the correct position on the terminal block simple in order to reduce potential wiring errors.



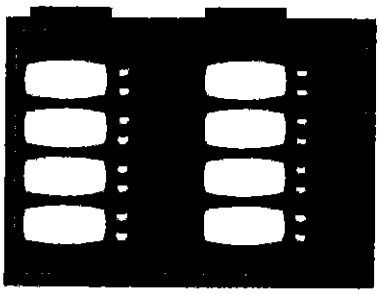
SCM-8

SCM-8 Switch Control Module

The SCM-8 is a FireFinder XLS option module which provides manual control to the Emergency Voice Evacuation System or manual fire system control. Each SCM-8 module provides eight momentary push-button switches and 16 LED's to indicate their status.

Each switch is assigned two LEDs, as well as a label to indicate the switch's programmed usage. The label slides behind a clear protective membrane. One of the LEDs assigned to each switch is a dual-colored LED, which is used to indicate what type of signal is active.

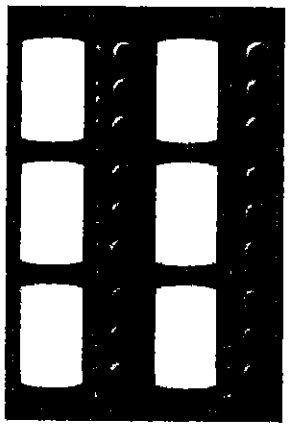
Each switch of the SCM-8 is fully programmable, and may be used to control speaker circuits and a wide range of general-system functions such as: *All Call, All Evac, Warden's Page, Speaker*, etc. Any number of circuits may be grouped and controlled by a single switch. Switch usages and zone groupings are assigned using the ZEUS system programming software. The SCM-8s are mounted on a hinged panel, as a part of the FireFinder XLS Command Console enclosure.



LCM-8

LCM-8 LED Control Module

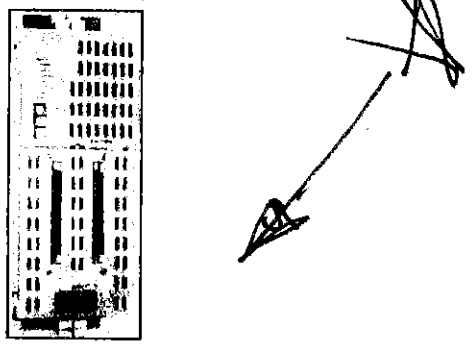
The LCM-8 is a FireFinder XLS option module which provides LED annunciation for FireFinder XLS system activity. Each LCM-8 module contains eight groups of 2 LEDs – each of which can be assigned to desired outputs using the ZEUS programming software. Eight LEDs are dual color capable (RED or GREEN, flashing or steady). The remaining LEDs are AMBER flashing or steady. A space is provided for labeling of LED functions. The label slides behind a clear, protective membrane. The LCM-8 dimensions are identical to the SCM-8, and the LCM-8 is mounted on the same hinged panel, as a part of the FireFinder XLS Command Console enclosure.



FCM-6

FCM-6 Fan, Motor, dampers Control Module

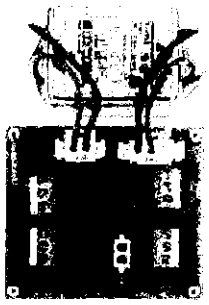
The FCM-6 is a FireFinder XLS command-console option module that provides manual control of building HVAC system fans, motors, and dampers. Each FCM-6 module provides (6) sets of (3) push button switches for manual system control. Each switch has 3, associated LEDs to indicate Fan / Damper / Motor status: OFF (Red LED), ON (Green LED), TROUBLE (Yellow LED).



PSC-12 Power Supply Charger Module

PSC-12 Power Supply Charger Module

The PSC-12 is a high-current power supply that provides the FireFinder XLS primary-regulated 24VDC power to operate. It is rated at 12Amps (Alarm)/5Amps (Standby), and has a built-in battery charger, capable of charging up to 100 AH batteries. The PSC-12 is an addressable-intelligent, microprocessor-controlled module that communicates it status to the system operator interface (PMI). The PMI is able to query the status of the power supply to obtain information regarding system-charging current, terminal-loading information, ground-fault conditions and more.

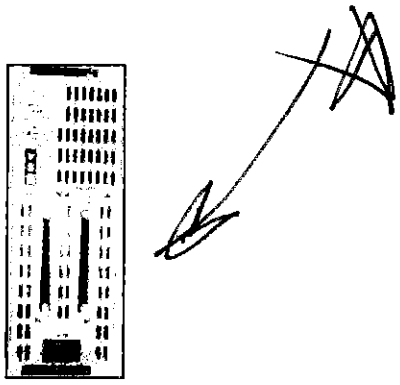


PTB Power Termination Board

PTB Power Termination Board

The PSC-12 comes packaged with a module called the PTB. The PTB is the Power Termination Board, which is required for operation with the PSC-12. The PTB filters the power from the incoming AC mains, and distributes it to the PSC-12 power supply and the optional PSX-12 power-supply extender.

The PTB has an optional connector that can be used during system installation, commissioning & service to provide the technician with a place to plug in their laptop PC, if required. The AC-ADPT is an optional accessory cable that allows connection on one side to the PTB, via a keyed connector and on the other end directly into to the laptop's transformer. Most laptop computer external power transformers have removable AC power cords, which can be replaced by the AC-ADPT to temporarily provide an AC power source for laptop-PC usage during system installation, service and maintenance calls when needed.



PSX-12 Power Supply Extender

PSX-12 Power Supply Extender

The PSX-12 is a high-current, auxiliary power supply that expands the main PSC-12 power supply and battery charger of the FireFinder XLS system with an additional 24VDC power. The PSX-12 is rated at 12Amps.

RNI Remote Network Interface

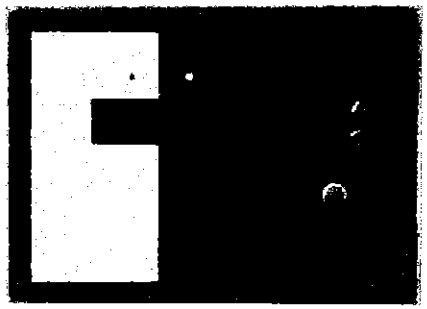
RNI Remote Network Interface

The Remote Network Interface (RNI) provides a connection point for use with equipment mounted in a remote-lobby enclosure on the FireFinder XLS Fire Alarm Control Panel. It is used to provide additional input, output and control features to the system remotely, via the main control panel. These additional features may include control switches and indicators (SCM-8, LCM-8 and FCM-6), remote-emergency paging microphones or telephones (LVM, FMT), or controls used in graphic annunciators (SIM16, OCM-16) or System Status Display with the ability to acknowledge alarms, silence audibles and reset the system (SSD-C-REM). The RNI allows the PMI to be mounted in the REMBOX2 or REMBOX4 remote lobby enclosure.

RPM Remote Printer Module

RPM Remote Printer Module

The Model RPM Remote Printer Module provides a means of connecting the FireFinder XLS system to a printer, such as the PAL-1, for creating a hard copy of system status and configuration reports. Simultaneously, it provides an output port that can be configured to communicate with external systems.

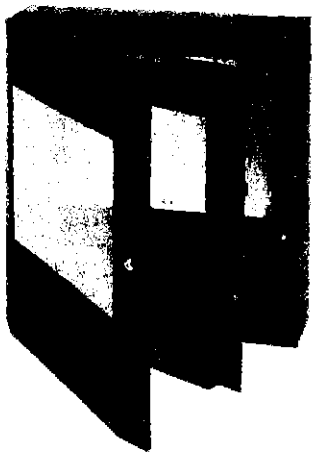


SSD Series

SSD Series

The SSD Series System Status Display is a remote LED / LCD display that shows the local status of a FireFinder XLS system. An LED illuminates when *Alarm*, *Supervisory*, *Trouble*, and *Security* events occur on the system. A four-line LCD will give details of the event in alphanumeric form. The display can be toggled to display additional events. Optional remote system control capabilities are available.

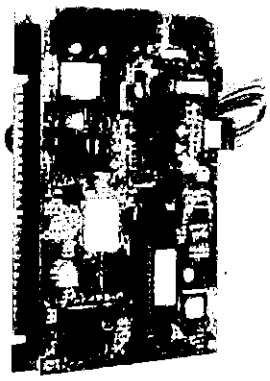
Models SSD-C, SSD-C-INT, and Model SSD-C-REM have three additional control buttons for acknowledging events, silencing audible circuits, and resetting the system. The SSD-C and SSD-C-INT have an integral keyswitch that enables these control buttons to operate. The SSD-C-REM is located within a locked cabinet. Hence, no additional keyswitch is required for enabling the control buttons.



CAB1 Single Row Enclosure

CAB1 Single Row Enclosure

The Model CAB 1 is the smallest of the FireFinder XLS enclosures. It can house a single CAB-MP cabinet mounting plate for mounting card cages, power supplies and bulk amplifiers. The CAB1 also has four mounting slots on the inner door for mounting a PMI and a Model ID-MP switch module brackets. The CAB1 comes complete with a black back box; black inner and outer doors; a single lock and key set on the outer door; a single CAB-MP cabinet mounting plate (installed), and a single OD-LP outer door lens plate (installed). A red version, called the CAB1-R, is also available – approximate size: 27" (68.6cm.) high, 26" (66cm.) wide, and 8" (20.3cm.) deep.

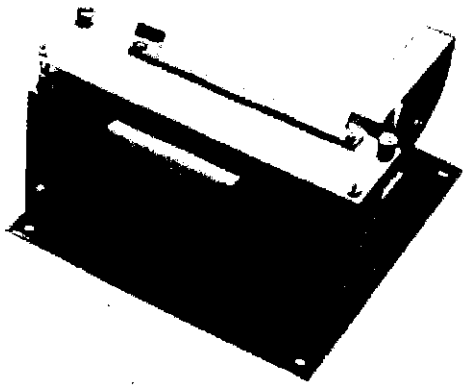


MDACT - Multi-Point Digital Alarm Communicator Transmitter

MDACT - Multi-Point Digital Alarm Communicator Transmitter

The Model MDACT Multi-point Digital Alarm Communicator Transmitter is used in FireFinder XLS systems where point identification of alarm, supervisory, security and trouble events is required at Central or Remote Receiving Stations. An intelligent RS-485 communications protocol transmits all system information to the MDACT.

The installer selects the specific event or groups of events that are set to transmit from the MDACT over phone lines to listed receiving station equipment. The MDACT can transmit point information, via the Ademco Contact ID and the SIA protocol. A (MOM2-XMP) Mounting Plate, MOM-2 card cage, and an XMI Interface Card are required for installation.



TSP-40A Thermal Strip Printer

TSP-40A Thermal Strip Printer

The TSP-40A is a thermal strip printer, designed for use with the FireFinder XLS system. The TSP-40A acts as an event-logging device, providing a permanent history report of all system activity. The TSP-40A mounts in the FireFinder XLS CAB 1, CAB2 or CAB3 enclosure, and its printout is visible through a window in the locked-door enclosure. Printouts are automatically spooled on a take-up reel for easy records storage.

CAB2 Two Row Enclosure

CAB2 Two Row Enclosure

The Model CAB2 is the mid-sized FireFinder XLS enclosure capable of housing up to two CAB-MP cabinet mounting plates. The inner door has two rows of four mounting slots. The outer door has space for mounting two outer door plates (Models OD-LP, OD-BP or OD-GP). The outer door can be configured to open from either side. The CAB2 consists of the CAB2-BB back box, the CAB2- BD black inner and outer door package, and one OD-LP lens plate. The outer door has a single lock and key set installed. A red version, known as model CAB2R, is also available. Approximate size is 45" (114.3cm.) high, 26" (66cm.) wide, and 8" (20.3cm.) deep.

CAB3 Three Row Enclosure

CAB3 Three Row Enclosure

The Model CAB3 is the largest single FireFinder XLS enclosure available. It can house a maximum three CAB-MP cabinet mounting plates in the enclosure, and three rows of inner-door mounting slots. The outer door can be configured to open from either side. The CAB3 consists of the CAB3-BB back box, the CAB3-BD black inner and outer door package, and one OD-LP lens plate. The outer door has two locks and key sets installed. A red version called the CAB3R is also available. Approximate size is 63" (160cm.) high, 26" (160cm.) wide, and 8" (20.3cm.) deep.

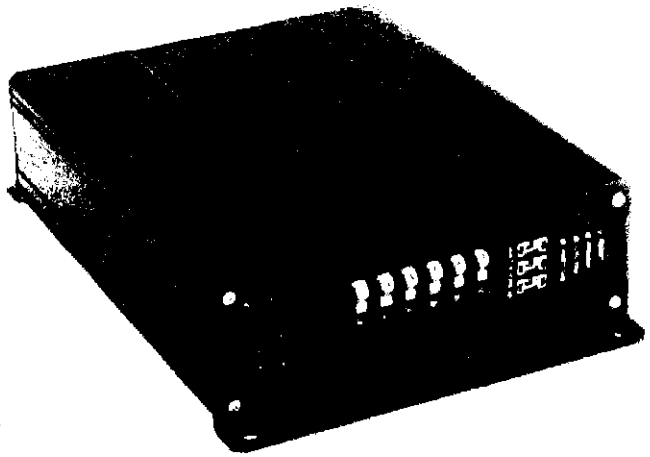
SIEMENS

Catalog Sheet
Fire Safety & Security Products

FireFinder XLS
Remote Printer Module
Model RPM

ARCHITECT AND ENGINEER SPECIFICATIONS

- Provides an interface to remote printers
- (2) serial ports and (1) parallel port provided
- Supervised intelligent module
- Plain-decimal addressing
- Supports Class B (Style 4) or Class A (Style 7) wiring
- Provided in its own enclosure
- Built-in transient protection
- Downloadable module firmware
- ®UL 864 9th Edition Listed & ®ULC Listed, FM, CSFM & NYMEA Approved



Product Overview

The Remote Printer Module (Model RPM) provides a means of connecting the FireFinder XLS system to a parallel printer for creating a hard copy of system status and configuration reports. Simultaneously, the RPM provides a Foreign System Interface (FSI) output port that can be configured to communicate with external systems, such as Building Management systems.

Specifications

The RPM is remotely connected to the H-Net communication bus from any NIC-C output in a FireFinder XLS system enclosure, and uses Class B (Style 4) or Class A (Style 7) wiring. There are two (2) RS-232 (serial) ports and a single parallel port that allow connection to a parallel printer (such as the PAL-1) with the simultaneous operation of the FSI port or a connected serial port.

The FSI serial port can be configured as RS-232 or RS-485, and will provide data to a monitoring system with no control capabilities.

The FSI is also to be used for primary or secondary monitoring of the FireFinder XLS by the foreign system.

Control of the FireFinder XLS through this port is only allowed for use with authorized ®UL approved products. The communication is bi-directional, and includes handshakes to verify that data sent by the FireFinder XLS has been received by the monitoring system.

When the PAL-1 is used with the RPM, the RPM supervises the printer for *On / Off Line, Power On, Paper Out, Paper Jam,* and wiring-fault conditions, as required by ®UL for NFPA 72 proprietary systems. Event and report printing is generated at the Person-Machine Interface (PMI) on the main FireFinder XLS system.

The RPM has integral mounting flanges to allow the module to be mounted unobtrusively under a table or behind a desk. 24VDC is required to run the RPM, and can be provided from a model PSC-12 Power Supply or PSX-12 Power Supply Extender in the FireFinder XLS system enclosure.

SIEMENS Industry, Inc.
Building Technologies Division

Specifications — (cont.'d)

Power from other ®UL Listed 24VDC power sources is also acceptable. The RPM has screw terminals capable of supporting 12 to 22 gage wires. Communication with the FireFinder XLS system is done by connection to the NIC-C network interface card using Class B (Style 4) or Class A (Style 7) wiring. The H-Net communication from the FireFinder XLS system can be terminated on the RPM, or may pass through for communication with other modules. Diagnostic LEDs on the RPM indicate power and communication status.

Electrical Ratings

24V Back Plane Current:	0
Screw Terminal 24V Current:	150mA
6.2V Back Plane Current:	0
24V Standby Current:	150mA

Details for Ordering

Model Number	Part Number	Description
RPM	500-033270	Remote Printer Module for the FireFinder XLS System
PAL-1	500-692407	® UL Listed Parallel Printer

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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Building Technologies Division

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(SII)
Printed in U.S.A.

October 2009
Supersedes sheet dated 9/07
(Rev. 2)

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 002
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: System Printer (para 2.14)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	002
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

-Provide all equipment and devices for a complete system as shown, but not limited to specific devices indicated on submittals.

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED with notes

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

para 2.14

SIEMENS

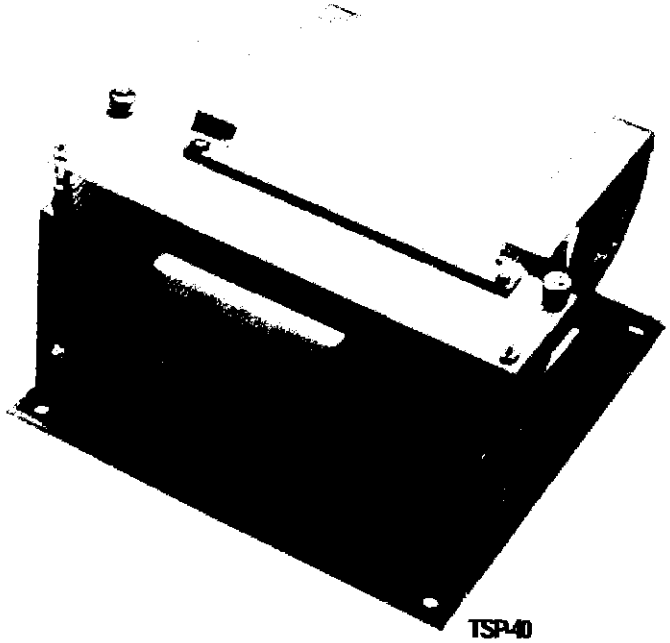
Fire Safety

TSP-40 Thermal Strip Printer

Fire Alarm Panel Accessory

ENGINEER AND ARCHITECT SPECIFICATIONS

- Event Logging
- 40/80 Character Line Modes
- System Reports
- Battery Backup
- Paper Take Up Reel
- Out of Paper Indication
- Event Buffer Full Message When Out of Paper
- RS-232C Communication
- UL Listed/ULC Listed, CSFM, NYMEA, FM, and City of Chicago Approved



Description

The TSP-40 is a thermal strip printer designed for use with the Siemens Building Technologies, Fire Safety Division MXL system. It mounts in the MXL enclosure and its printout is visible through a window in the locked enclosure door. Printouts are automatically spooled on a take up reel for easy record storage.

The TSP-40 acts as an event logging device providing a permanent history report of all MXL system activity. It can also be used to provide system status reports, including a listing of all smoke detector sensitivities and thresholds. It will also supply a listing of device analog voltages, device type and custom messages.

The TSP-40 operates from the MXL's main power and will continue to function if the MXL transfers to standby batteries. This battery backed up operation assures event logging during an AC power loss without the need for a UPS.

The TSP-40 uses thermal printer paper and can operate in both normal and compressed character modes. System events such as Alarm and Troubles are indented and printed in caps for easy identification. System reports are printed in compressed (80 character) mode. All events and reports are printed with the time and date. The MMB also performs a printer test at midnight each day.

Engineer and Architect Specifications

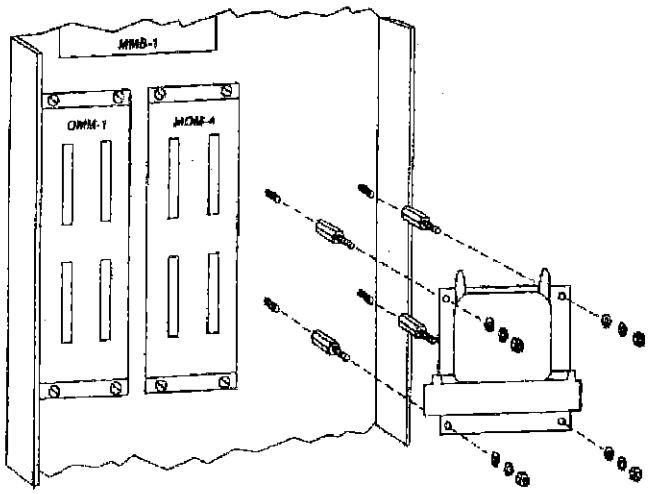
Permanent history logging of all system events shall be provided by the TSP-40 thermal strip printer. The printer shall be mounted in a locked enclosure and printout shall be visible through an opening in the enclosure door. All printouts shall be automatically spooled onto a take up reel.

The printer shall operate from a 24 VDC supply and shall continue to operate from the system standby batteries in the event of main power loss. No UPS system shall be required for backup power.

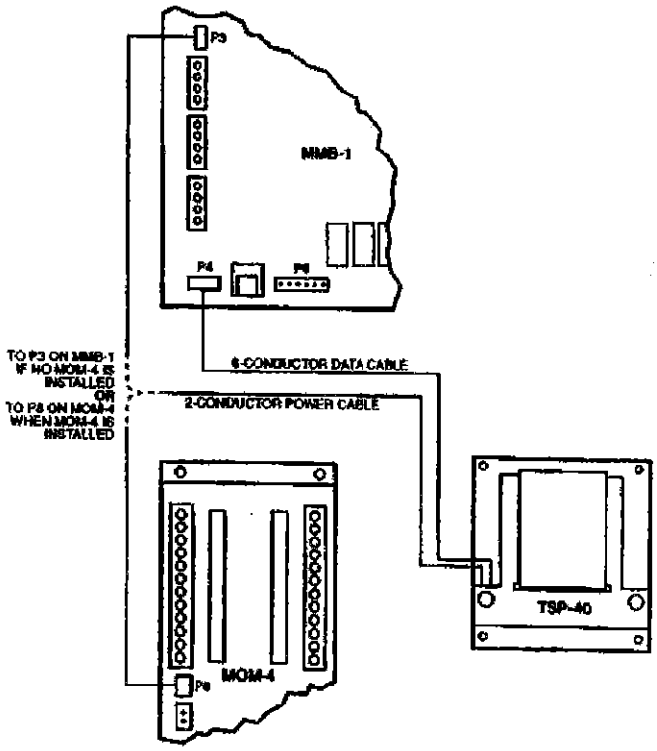
The TSP-40 shall record all system events including operator commands and shall be capable of providing a printed list of system condition such as detector sensitivities, thresholds, analog voltages, device type, and custom messages. A trouble condition shall be generated when printer paper has run out. An internal buffer shall continue to store events when paper is out.

CATALOG NUMBER **5007**

Mounting Data



Typical Wiring



Electrical Installation

The TSP-40 comes with two attached cables - a two-conductor power cable and six-conductor data cable. To complete the electrical installation

1. Connect the six-conductor, data cable to P4 on the MMB-1/2.
2. **If no MOM-4 is installed**, connect the two-conductor power cable to P3 on the MMB-1/2.
3. **If a MOM-4 is installed**, connect the two-conductor power cable to P8 on the MOM-4.

Siemens Building Technologies
Fire Safety

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4/03
5M
SFS-IG
Printed in U.S.A.

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Brampton, Ontario
Canada L6T 5E4
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April 2003
Supersedes sheet dated 12/00

SIEMENS

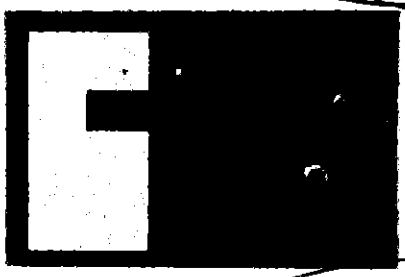
Catalog Sheet
Fire Safety & Security Products

FireFinder XLS

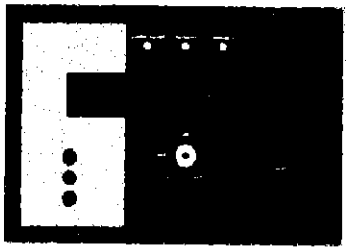
System-Display Status Series
Models SSD, SSD-C, SSD-INT, SSD-C-INT and SSD-C-REM

ARCHITECT AND ENGINEER SPECIFICATIONS

- 4 X 40 Backlit LCD display
- Event and audible status LEDs
- Scroll buttons to view additional events
- Local sounder
- Supports Style 4 or Style 7 wiring
- Built-in transient protection
- Mounts in its own enclosure or REMBOX
- Optional local-system control
- Downloadable firmware
- UL 864 9th Edition Listed and ULC Listed; FM, CSFM & NYMEA Approved



SSD



SSD-C with Control

Product Overview

The SSD Series System Status Display is a remote LED / LCD display that shows the local status of a FireFinder XLS system. A LED will illuminate when *Alarm*, *Supervisory*, *Trouble* and *Security* events occur on the system. A four-line LCD will give details of the event in alphanumeric form. The display can be toggled to display additional events. Optional remote-system control capabilities are available.

Specifications

The SSD Series display has separate LEDs for *Alarm*, *Supervisory*, *Trouble* and *Security* events on the FireFinder XLS system. Each LED will flash when unacknowledged events of that type are present on the system. The LED will change to steady, upon acknowledgment of the event. Also, there are two LEDs that indicate the state of audible circuits on the system: one LED to indicate that the circuits are active, and one to indicate that the circuits have been silenced.

The LCD display on the SSD Series display has four rows – 40 characters for each row. When the FireFinder XLS system is in its normal supervisory state with no events present, the display will annunciate the system ID information, along with the date and time.

When an event occurs on the system, the LCD display will show the event type and address, the time of the event, the custom message for that address, the usage of the device, and whether the event is acknowledged or not. Additionally, the display will show the total number of all types of events present on the system. The display has a backlight feature that operates upon receiving any event information or when any operator buttons are pressed.

A local sounder is included with the SSD Series display that operates when any events are displayed on the system. The sounder can be optionally disabled through software programming. Pressing any operator buttons will silence the local sounder when an event is present.

Specifications – (continued)

The SSD Series display has two display control buttons that are used to display the next or the previous event information in the sequence, and a local sounder silence button. Programming for the SSD display is done with the Zeus programming tool.

Models SSD-C, SSD-C-INT, and Model SSD-C-REM have three additional control buttons for acknowledging events, silencing audible circuits, and resetting the system. The SSD-C and SSD-C-I NT have an integral key switch that enables these control buttons to operate. The SSD-C-REM is located within a locked cabinet, so no additional key switch is required for enabling the control buttons.

The SSD Series display is remotely connected to the H-Net communication bus from any NIC-C interface in a FireFinder XLS system enclosure using Class B, Style 4 or Class A, Style 7 wiring. 24VDC is required to run the SSD Series display, and it can be provided from a Model PSC-12 Power Supply or PSX-12 Power Supply Extender in the FireFinder XLS system enclosure. Power from other UL Listed 24VDC power sources is also acceptable.

The SSD Series display has screw terminals capable of supporting 12-to-22-gage wires. The H-Net communication from the FireFinder XLS system can be terminated on the SSD Series display, or may pass through for communication with other modules. Diagnostic LEDs on the SSD Series display indicate power and communication status.

Models SSD, SSD-C, and SSD-C-INT can be mounted in a 2-gang electrical box or a 4-inch square electrical box. No flush-trim kit is required. The unit is approximately 10-1/2"(26.7cm.) wide, 6-1/8" (15.2cm.) high, and 1-1/2" (3.8cm.) deep.

The Model SSD-C-REM is mounted in a Model REMBOX2 or REMBOX4 Remote Lobby Enclosure, or any CAB enclosure inner door. The SSD-C-REM requires two module spaces in the remote lobby enclosure, and its bracket supports the mounting of four inner door modules (such as SCM-8s or LCM-8s) below the display. The inner door module spaces are arranged in two rows of two module spaces.

Products are ®UL 864 9th Edition listed for indoor dry locations within a temperature range of 120+/-3°F (49+/-2°C) to 32+/-3°F (0+/-2°C) and at a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C).

Details for Ordering

Model Number	Part Number	Description
SSD	500-034170	System Status Display
SSD-C	500-648733	System Status Display w/control
SSD-INT	500-034740	System Status Display w/international language overlays
SSD-C-INT	500-034750	System Status Display w/control & international language overlays
SSD-C-REM	500-634773	System Status Display w/control for remote lobby enclosure
REMBOX2	500-633772	Small remote lobby enclosure
REMBOX4	500-633814	Large remote lobby enclosure
BCM	500-033820	Blank control module plate

Electrical Ratings

SSD-C	
Typical	200mA (max.) at 24 VDC
Input Voltage	24 VDC (Nominal) (31 VDC max.) filtered

Notes: An auxiliary-regulated, power-limited power supply may be used to provide power to the SSD. The power supply must be UL approved for Fire-Protection Signaling Application. Be sure to also include the SSD-C in the battery calculations.

SSD / SSD-INTL	
Typical	200mA (max.) at 24 VDC
Input Voltage	24 VDC (Nominal) (31 VDC max.) filtered

Notes: An auxiliary-regulated, power-limited power supply may be used to provide power to the SSD. The power supply must be UL approved for Fire Protection Signaling Application.

SSD-C-REM	
Typical	200mA (max.) at 24 VDC
Input Voltage	24 VDC (Nominal) (31 VDC max.) filtered

Notes: An auxiliary-regulated, power-limited power supply may be used to provide power to the SSD-C-REM. The power supply must be UL / ULC approved for Fire Protection Signaling Application. Be sure to also include the SSD-C-REM in the battery calculations.

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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July 2009
Supersedes sheet dated 8/08 (Rev. 1)

SIEMENS

Fire Safety

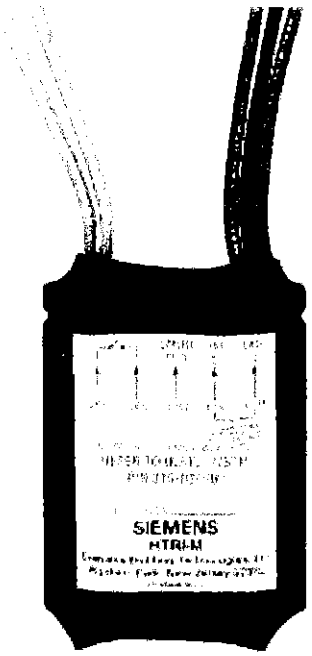
HTRI-M Intelligent Device Interface Module

For Use With the FireFinder-XLS and FS-250/FS-500 Control Panel

ENGINEER AND ARCHITECT SPECIFICATIONS

Intelligent Interface Modules For FireFinder™ XLS and FS-250/FS-500 Control Panels

- Interfaces and Supervises Normally Open (Fire Detection) or Normally Closed Contacts (Security Detection)
- Compact Size Allows Mounting in Single Gang Box Behind Equipment
- Polarity Insensitive with SureWire™ Technology
- Operates with FireFinder XLS DLC Circuit
- Innovative Technology Supports Comprehensive System and Interface Communication
- Dynamic Supervision
- Two Wire Operation
- DPU Device Program/Test Unit Electronically Programs and Verifies Device's Address and Tests Device's Functionality
- ULC Listed
  CSFM, FM and NYMEA Pending



Introduction

The HTRI-M Intelligent interface module is designed to provide the means of interfacing direct shorting devices to the FireFinder XLS or FS-250/FS-500 system's DLC loop circuit.

The HTRI-M Intelligent interface module provides the market's most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each HTRI-M interface module incorporates microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel.

Description

The HTRI-M is designed to monitor a normally open or closed dry contact and reports the contact's status to the control panel.

The device's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information.

Siemens Building Technologies, Inc., Fire Safety Division innovative technology allows all HTRI-M intelligent interface modules to be programmed by using the DPU Device Program/Test Unit. The DPU is a compact, portable, menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods. The DPU eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because it electronically sets the HTRI-M interface's address into the interface's microcomputer chip non-volatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern. This HTRI-M is connected to the program/tester with the programming cable provided with the tester. This cable (P/N 110-694927) utilizes two (2) alligator clip connectors, to attach to the HTRI-M.

The HTRI-M Series has five leads, one for grounding, which are wired to the system with user supplied wire nuts.

The HTRI-M is fully compatible on the same DLC circuit with all intelligent H Series detectors, HMS Series addressable manual stations or any other H Series addressable intelligent modules, such as the HZM or HCP.

All HTRI-M intelligent interface modules have been UL and ULC submitted.

Environmental operating conditions for all HTRI-M modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

Ordering Information

Model Number	Description	Shipping oz.	Weight kg.	Part Number
HTRI-M	Single Input	3.5	.1	500-034000
HTRI-MC	ULC Model for Canada	3.5	.1	500-034000C

Electrical Ratings

Current Draw (Active or Standby): 1.5mA

NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such void all warranties either expressed or implied with regard to loss, damage, liabilities and/or service problems.

Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

5/06
5M
SFS-IG
Printed in U.S.A.

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

May 2006
Supersedes sheet dated 1/03

SIEMENS

Fire Safety

HTRI Series

FireFinder XLS and FS-250 Intelligent Initiating Devices Interface Modules

ENGINEER AND ARCHITECT SPECIFICATIONS

Intelligent Interface Modules for FireFinder XLS and FS-250 Series Fire Alarm Control Panels HTRI-S, HTRI-D, HTRI-R

- Interfaces and Supervises Normally Open or Normally Closed Contacts
- Integral SPDT Relay (up to 4 amps) on HTRI-R Model
- Dual Input on HTRI-D Model using a single address
- Polarity Insensitive with SureWire™ Technology
- Multi-color L.E.D. indicates status (green, amber, red)
- Easy front access to programming port and wiring terminals
- Mounts 4 inch square 2 ⅛ deep box, or double gang box
- Dynamic Supervision
- Comes with 5x5 inch faceplate
- Two wire operation
- DPU Device Program/Test Unit programs and Verifies Device's Address and Tests Devices functionality
- Electronic Address Programming is Easy and Dependable
- ULC Listed
  CFSM, FM, NYMEA Approved

Introduction

The HTRI Series Intelligent interface modules are designed to provide the means of interfacing direct shorting devices to the FireFinder XLS and FS-250 Fire Alarm Control Panel loop circuit.

The HTRI Series Intelligent interface modules provide the market's most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each HTRI Series interface module incorporates a microcomputer chip. The HTRI Series microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel, achieve the state of an "Intelligence Device."

Description

The HTRI Series intelligent interface modules are available in three models. The HTRI-S and HTRI-R are designed to monitor a normally open or closed dry contact. The interface module reports the contact's status to the control panel. The HTRI-S model can only monitor and report the status of the contact, while the HTRI-R incorporates an addressable Form C relay. The HTRI-R relay and contact device input are controlled at the same address. For the control panel system, the relay and input contact can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required.

The HTRI-D is a dual input module and is designed to supervise and monitor two sets of dry contacts. The Dual Input Module only requires one address but responds independently to each input. The HTRI-D is ideal for monitoring a water flow switch and its respective valve tamper switch.

The HTRI has a multi-color Light Emitting Diode that flashes green when operating normally, amber if unit is in trouble condition, and red to indicate a change of state. The HTRI-D flashes twice, once for each address, the HTRI-R red L.E.D. indicates a change of state in the relay.

The device's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information.

Siemens Building Technologies, Inc., Fire Safety Division innovative technology allows all HTRI Series intelligent interface modules to be programmed by using the DPU Device Programming/Test Unit. The DPU is a compact, portable, menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods. The DPU eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because the DPU electronically sets the HTRI interface's address into the interface's microcomputer chip nonvolatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The HTRI Series is fitted with screw terminals for connection to an addressable circuit.

The HTRI Series is fully compatible on the same FireFinder XLS and FS-250 circuits with all intelligent H Series detectors, HMS Series addressable manual stations or any other addressable intelligent modules, such as the HZM or HCP.

All HTRI Series intelligent interface modules are UL listed.

Environmental operating conditions for all HTRI Series modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

Ordering Information

Model	Description	Shipping Wt. Lb.	Kg.	Part Number
HTRI-S	Single Input	7 oz.	2	500-033370
HTRI-R	Single Input w/Relay	7 oz.	2	500-033300
HTRI-D	Dual Input	7 oz.	2	500-033360

Mounting Data

Addressable Interface Model HTRI-S, HTRI-D, HTRI-R mounts directly into a 4 inch square 2 ¼ deep box or a double gang box (user supplied). A 5 inch square off-white faceplate is included with each HTRI.

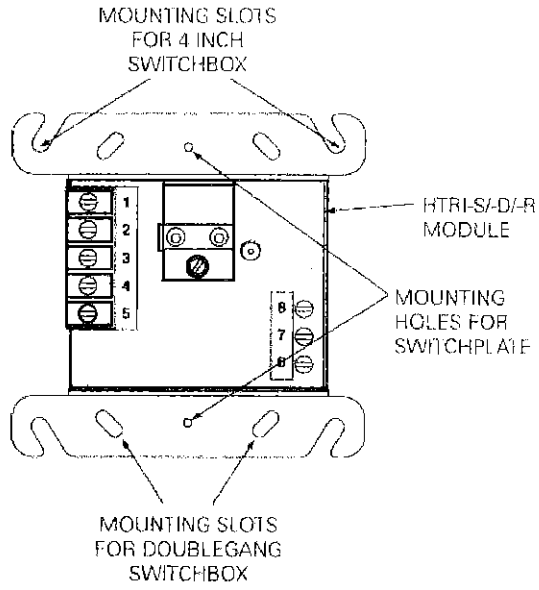


Figure A
Mounting the HTRI-S/-D/-R

Electrical Ratings

Current Draw (Active or Standby): 1mA

HTRI-R Relay Ratings
Resistive: 4A, 125 VAC
4A, 30 VDC

Inductive: 3.5A, 120 VAC (0.6P.F.)
3.0A, 30 VDC (0.6P.F.)
2.0A, 120 VAC (0.4P.F.)
2.0A, 120 VAC (0.35P.F.)
2.0A, 30 VDC (0.35P.F.)

Siemens Building Technologies
Fire Safety

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8 Fernwood Road
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FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

12/04
5M
SFS-IG
Printed in U.S.A.

December 2004
Supersedes sheet dated 1/03

SIEMENS

Fire Safety

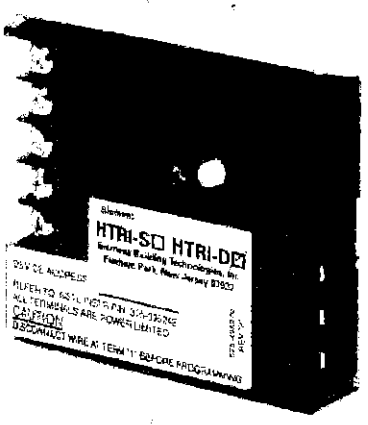
HTRI Series

FireFinder XLS and FS-250 Intelligent Initiating Devices Interface Modules

ENGINEER AND ARCHITECT SPECIFICATIONS

Intelligent Interface Modules for FireFinder XLS and FS-250 Series Fire Alarm Control Panels HTRI-S, HTRI-D, HTRI-R

- Interfaces and Supervises Normally Open or Normally Closed Contacts
- Integral SPDT Relay (up to 4 amps) on HTRI-R Model
- Dual Input on HTRI-D Model using a single address
- Polarity Insensitive with SureWire™ Technology
- Multi-color L.E.D. indicates status (green, amber, red)
- Easy front access to programming port and wiring terminals
- Mounts 4 inch square 2 ¼ deep box, or double gang box
- Dynamic Supervision
- Comes with 5x5 inch faceplate
- Two wire operation
- DPU Device Program/Test Unit programs and Verifies Device's Address and Tests Devices functionality
- Electronic Address Programming is Easy and Dependable
- ULC Listed
  CFSM, FM, NYMEA Approved



Introduction

The HTRI Series Intelligent interface modules are designed to provide the means of interfacing direct shorting devices to the FireFinder XLS and FS-250 Fire Alarm Control Panel loop circuit.

The HTRI Series Intelligent interface modules provide the market's most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each HTRI Series interface module incorporates a microcomputer chip. The HTRI Series microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel, achieve the state of an "Intelligence Device."

Description

The HTRI Series intelligent interface modules are available in three models. The HTRI-S and HTRI-R are designed to monitor a normally open or closed dry contact. The interface module reports the contact's status to the control panel. The HTRI-S model can only monitor and report the status of the contact, while the HTRI-R incorporates an addressable Form C relay. The HTRI-R relay and contact device input are controlled at the same address. For the control panel system, the relay and input contact can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required.

The HTRI-D is a dual input module and is designed to supervise and monitor two sets of dry contacts. The Dual Input Module only requires one address but responds independently to each input. The HTRI-D is ideal for monitoring a water flow switch and its respective valve tamper switch.

The HTRI has a multi-color Light Emitting Diode that flashes green when operating normally, amber if unit is in trouble condition, and red to indicate a change of state. The HTRI-D flashes twice, once for each address, the HTRI-R red L.E.D. indicates a change of state in the relay.

The device's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information.

Siemens Building Technologies, Inc., Fire Safety Division innovative technology allows all HTRI Series intelligent interface modules to be programmed by using the DPU Device Programming/Test Unit. The DPU is a compact, portable, menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods. The DPU eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because the DPU electronically sets the HTRI interface's address into the interface's microcomputer chip nonvolatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The HTRI Series is fitted with screw terminals for connection to an addressable circuit.

The HTRI Series is fully compatible on the same FireFinder XLS and FS-250 circuits with all intelligent H Series detectors, HMS Series addressable manual stations or any other addressable intelligent modules, such as the HZM or HCP.

All HTRI Series intelligent interface modules are UL listed.

Environmental operating conditions for all HTRI Series modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

Mounting Data

Addressable Interface Model HTRI-S, HTRI-D, HTRI-R mounts directly into a 4 inch square 2 ¼ deep box or a double gang box (user supplied). A 5 inch square off-white faceplate is included with each HTRI.

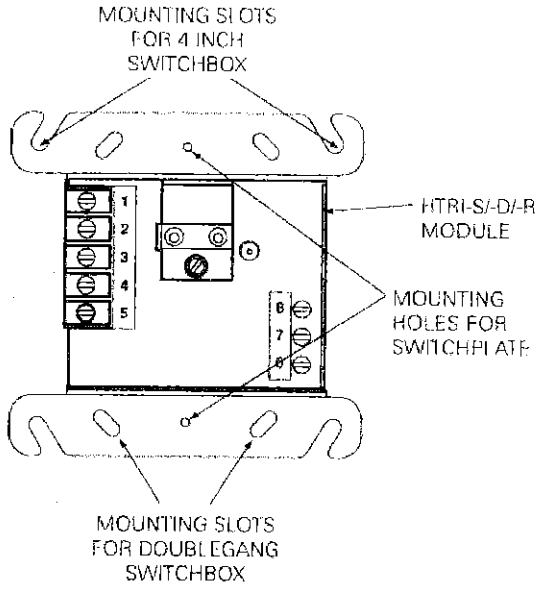


Figure A
Mounting the HTRI-S/-D/-R

Ordering Information

Model	Description	Shipping Wt. Lb.	Shipping Wt. Kg.	Part Number
HTRI-S	Single Input	7 oz.	2	500-033370
HTRI-R	Single Input w/Relay	7 oz.	2	500-033300
HTRI-D	Dual Input	7 oz.	2	500-033360

Electrical Ratings

Current Draw (Active or Standby): 1 mA

HTRI-R Relay Ratings
Resistive: 4A, 125 VAC
4A, 30 VDC

Inductive: 3.5A, 120 VAC (0.6P.F.)
3.0A, 30 VDC (0.6P.F.)
2.0A, 120 VAC (0.4P.F.)
2.0A, 120 VAC (0.35P.F.)
2.0A, 30 VDC (0.35P.F.)

Siemens Building Technologies
Fire Safety

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Fire Safety
2 Kenview Boulevard
Brampton, Ontario
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Tel: (905) 799-9937
FAX: (905) 799-9858

12/04
5M
SFS-HG
Printed in U.S.A.

December 2004
Supersedes sheet dated 1/03

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 003
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: System Smoke Detectors (para 2.5 D)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	003
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

-Provide all equipment and devices for a complete system as shown, but not limited to specific devices indicated on submittals.
-Provide all ceiling and wall mounted devices to be WHITE in color.

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED with notes

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

Para 2.5 D.

SIEMENS

Catalog Sheet
Fire Safety & Security Products

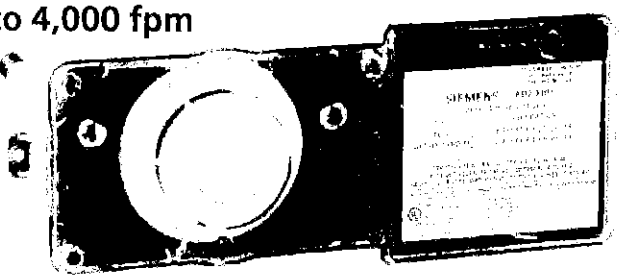
Air-Duct Housings and Detectors

Air-Duct Housings — AD2 Series

Models AD2-P, AD2-PR, AD2-XHR, AD2-4W, ST(s): 10, 25, 50 and 100

ARCHITECT AND ENGINEER SPECIFICATIONS

- For use with Series 11 detectors
- Relay models available
- Design for air-velocity range of 100 to 4,000 fpm
- Alarm LED visible from front
- Self-contained model available with 'on-board' power supply
- Clear housing cover for quick identification of detector type; removable with only four (4) captive screws
- ®UL and ®ULC Listed; FM, CSFM & NYMEA Approved



Product Overview

The Siemens Industry, Inc. — Fire Safety Air-Duct Detector Housings are designed to be used with the Series 11 detectors. Designed for installation directly to heating, ventilating and air-conditioning duct systems, they comply with National Fire Protection Association Standard No. 90A. When equipped, the air-duct detector housing will signal the presence of smoke being carried through the duct system. Air-duct detectors are not intended to be substituted for open-area detection.

Air-duct housings can be equipped with optional relays, which are utilized to operate any supplementary equipment when smoke is detected.

Notes: Most conventional time-control equipment guarantee only one (1) detector per zone when the detector operated relay function is critical. The connection of a remote lamp and a remote relay per detector is allowed with PXL or System 3™ only; other conventional systems may use either a remote lamp or a relay.

Notes - (cont.'d): With the MXL series of control panels, up to 60 detectors (per circuit) having relays may be used. The connection of a remote lamp or a remote relay is allowed for each detector, but not simultaneously.

With the FireFinder XLS series of control panels, up to 252 detectors (per circuit) having relays may be used. The connection of an intelligent remote lamp (ILED) and a remote Relay is allowed for each detector simultaneously.

Air-duct housings (see: **Details for Ordering**) are ®Underwriters' Laboratories, Inc. listed.

Specifications

The air-duct housings are uniquely designed to use with the photoelectric detector. Sensitivity of PE-11 detectors can be checked by viewing the LED or a RSAW- 11 or RSAC-11 multicolor remote lamp. A green flash indicates the detector has passed its self test.

Amber indicates a *'Trouble'* condition, and red indicates an *'Alarm'* state. HFP-11, HFPO-11 and FP-11 sensitivity may be viewed from the multi-color LED on the detector or, preferably, may be printed by command on an optional printer from the MXL control panel.

SIEMENS Industry, Inc.
Building Technologies Division

Specifications — (continued)

The detector unit employs a cross-sectional sampling principle of operation. Inlet sampling tubes are available in four (4) lengths (see: **Sampling Tube Selection Table**). Outlet sampling tubes are one (1) common length and draw. A continuous, cross-sectional sample of air moves through the duct. Stratification or skin affect phenomenon that occurs in the duct can prevent smoke (especially in large ducts) from reaching a spot-type detector.

In addition, the unique design of the sampling chamber insures uniform sensitivity in air velocities, ranging from a low of 10- feet-per-minute to as high as 4,000-feet-per-minute. Each housing comes with three (3) wiring entry ports:

- Two (2) 3/4" conduit knockouts
- One (1) 1/2" conduit opening

The inlet sampling tube length is determined by the width of the air duct being protected. The inlet tube — greater than and nearest to the duct width — should be used (see: **Sampling Tube Selection Table**). The inlet tube can then be trimmed at the job site to the exact width of the duct. The outlet sampling tube for all ducts — irrespective of width — has a fixed length of approximately 5.5 inches (14cm.), and is supplied with the air-duct housing.

Note: When the use of a remote relay is required, order model AD2-PR for conventional systems; AD2-XHR for addressable systems. When required the WP-2000 weatherproof enclosure for duct housing is available.

(For full details, refer to installation instructions part number 315-049708.)

Note: When a self-contained duct detector with power supply is required, order model AD2-4W.

(For full details, refer to installation instructions part number 315-049708.)

Sampling Tube Selection Table

Duct Width	Sampling Tube (Model No.)
For duct widths 6" to 1'	ST-10
For duct widths 1' to 3'	ST-25
For duct widths 3' to 5' (requires support)	ST-50
For duct widths 5' to 10' (requires support)	ST-100

Maintenance of the detector is easily accomplished by the removal of the Series 11 duct-housing sampling chamber cover. The detector, which plugs into the housing, is easily removed for cleaning by a trained technician.

All that is necessary for installation of the air-duct detector is the cutting of three (3) small holes for the Sampling Tube installation (template included), and the drilling of two (2) holes for mounting the air-duct housing. The unit is then easily mounted in place, and connection made to the existing wires or terminals — if optional accessories are utilized.

(For full details, refer to installation instructions part number 315-049708-4.)

ST-50 and ST-100 require support. ST-100 is shipped in two (2) 5-ft. (152 cm.) pieces with a coupling for field assembly.

Technical Data

Temperature Range:	32°F (0°C) -100°F (38°C)
Altitude Range:	No Altitude Limitations
Relative Humidity:	10 - 85% (non-condensing / non-freezing)
Air-Duct Velocity Range:	100 - 4,000 Ft. /Min.
Sampling Tube Pressure Range of Differences:	Greater than 0.01 inches; less than 1.2 inches of water column

Note to Architect: When building codes regulate the location of detectors within ventilating systems, make sure the number and locations of detectors is in accordance with the code regulations.

Details for Ordering

Model Number	Part Number	Description
AD2-P	500-649706	Air-Duct Housing for use with FP-11, HFP-11, HFPO-11 and PE-11
AD2-PR	500-649707	Air-Duct Housing for use with PE-11 relay
AD2-XHR	500-649708	Air-Duct Housing for use with FP-11, HFP-11 and HFPO-11, with relay
AD2-4W	500-649709	Self-contained Air-Duct Housing with 'on board' power supply and relay
ST-10	500-649710	Sampling tube for Ducts 6" to 1'
ST-25	500-649711	Sampling tube for Ducts over 1' to 3'
ST-50	500-649712	Sampling tube for Ducts 3" to 5'
ST-100	500-649713	Sampling tube for Ducts 5' to 10'

Product Includes:

- (1) short-return (outlet) tube
- (1) stopper
- (2) #12 + 3/4" sheet-metal screws
- (1) mounting template

Note: Detector and sampling tube to be purchased separately. Minimum hardware required is: one (1) air-duct housing assembly; one (1) sampling tube and one (1) detector.

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

SIEMENS Industry, Inc.
Building Technologies Division

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URL: www.SBT.Siemens.com/FIS

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
L6T 5E4 / Canada
Tel: (905) 799-9937
FAX: (905) 799-9858

SFS
Printed in U.S.A.

December 2009
Supersedes sheet dated 9/09
(Rev. 2)

SIEMENS

TSM-1

Duct Detector Test Switch

ENGINEER AND ARCHITECT SPECIFICATIONS

- T-45 Key Operated
- LED Indicates Detector in Alarm
- Mounts in Single Gang Box
- Compatible with All Siemens Building Technologies, Fire Safety Division Intelligent Duct Detectors
- UL Listed

Description

The TSM-1, Test Switch Module is a key activated device that will functionally test a detector. The module is compatible with Siemens Fire Safety intelligent fire, smoke and duct detectors used on MXL, MXLV and MXL-IQ systems.

The TSM-1 includes a red LED that illuminates when the corresponding duct detector is in alarm. The switch operates in conjunction with a TRI-R Interface Module with relay. Either that relay or the relay in the duct detector can be used for control of building equipment such as HVAC fans and elevators. The TSM-1 mounts in a single gang electrical box and includes a red cover plate.

When the switch is operated a signal is transmitted to the appropriate detector forcing it to alarm. That alarm will activate all functions programmed to follow that detector. The TSM-1 therefore provides a true functional test of the actions associated with duct detectors on MXL systems as require by many jurisdictions.

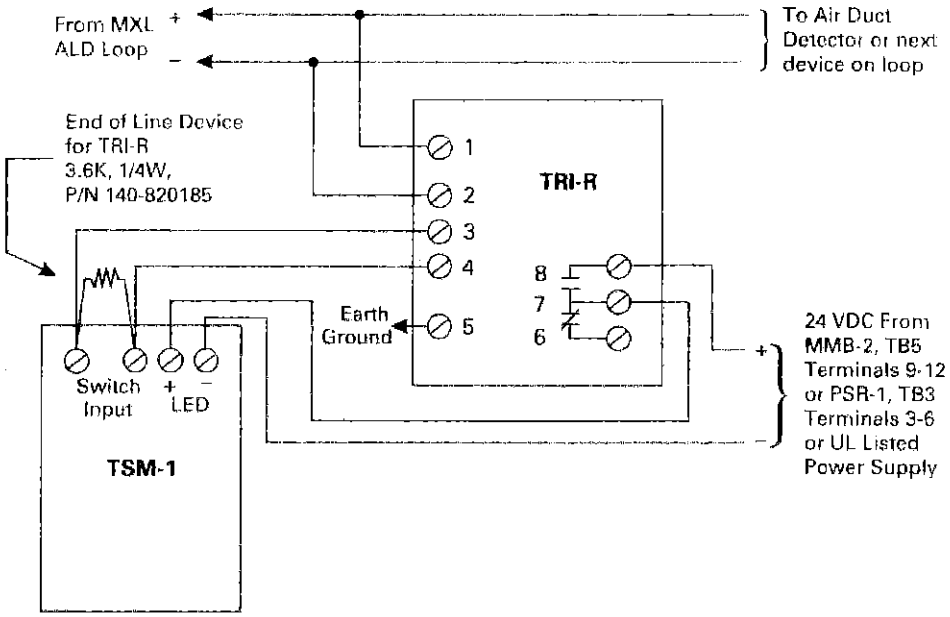
Underwriters' Laboratories, Inc has listed the TSM-1 as compatible with MXL intelligent detectors.

Ordering Information

Model	Description	Part Number
TSM-1	Detector Test Switch	500-696353

Refer to Installation Instructions, P/N 315-098285

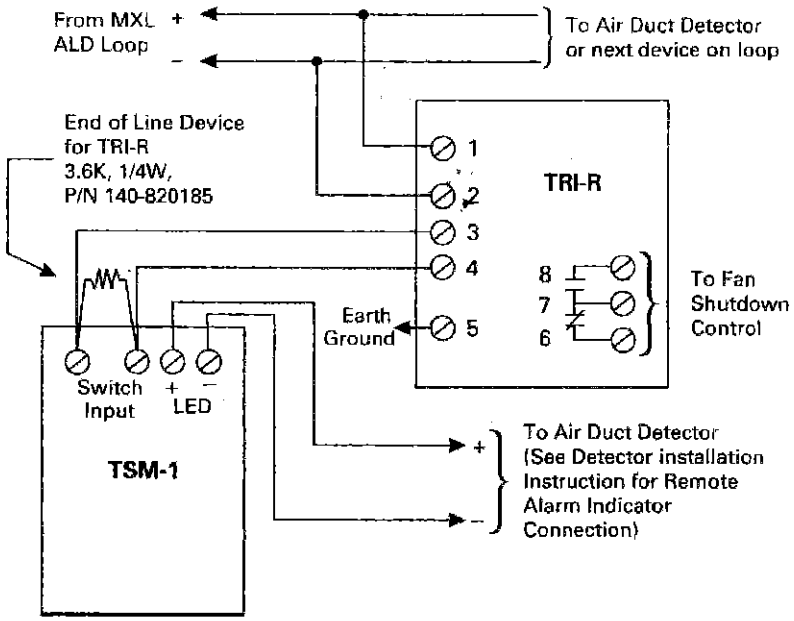
TSM-1 Interface to MXL System
TSM-1 LED operated by the TRI-R relay contacts.



Notes:

1. For use only with Air Ducts with an incorporated relay.
2. Refer to the *TRI Installation Instructions*, P/N 315-096242, for specific interface module wiring requirements.
3. Refer to the *AD-11P, AD-11XPR Installation Instructions*, P/N 315-095659, or the *AD-3I/-3ILP Installation Instructions*, P/N 315-093234, for specific duct detector wiring requirements, as applicable.

TSM-1 Interface to MXL System
TSM-1 LED operated by the Air Duct Detector.

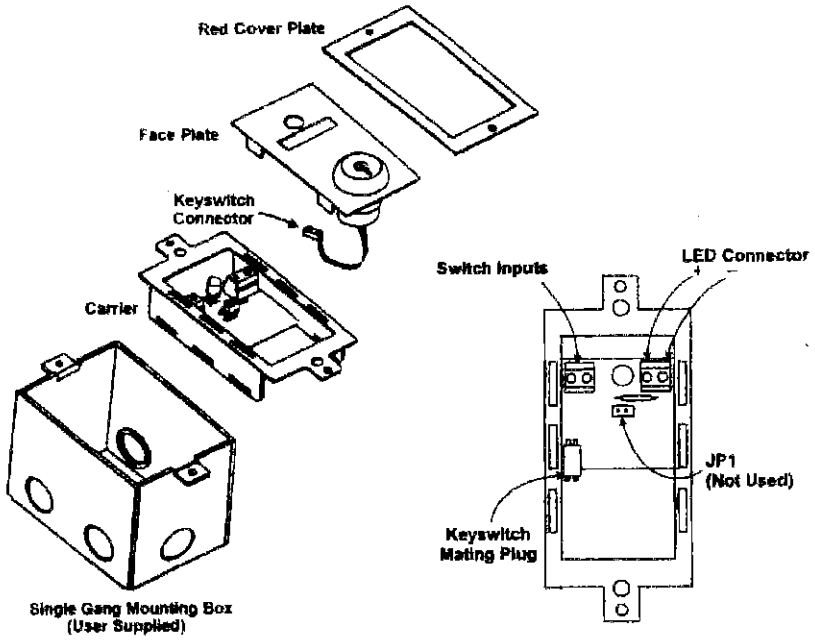


Notes:

1. For use only with Air Ducts without an incorporated relay.
2. Refer to the *TRI Installation Instructions*, P/N 315-096242, for specific interface module wiring requirements.
3 Refer to the *AD-11P Installation Instructions*, P/N 315-095659, or the *AD-3I/-3ILP Installation Instructions*, P/N 315-093234, for specific duct detector wiring requirements, as applicable.

Mounting Diagram

Caution: The TSM-1 switch module does not perform all of the required smoke detector test as specified in NFPA Standard 72. Please refer to the instructions that accompany the detector for the complete test requirements.



TSM-1 Assembly

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 004
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Manual Fire-Alarm Boxes (para 2.4)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	004
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 **BY:** R. Barbarino

Engineer / Government / Other Approval

Para 2.4

SIEMENS

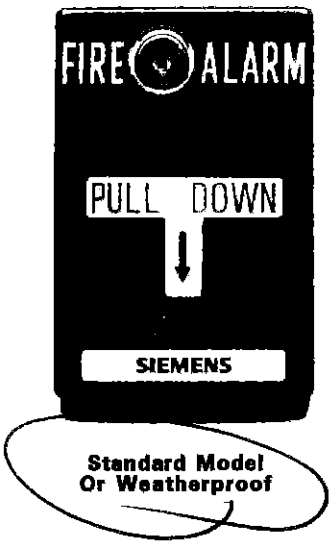
Fire Safety

MSM SERIES

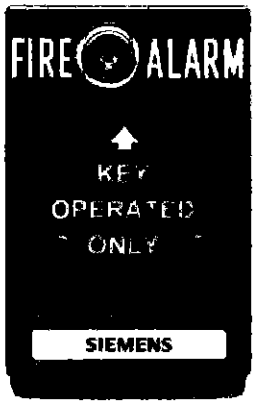
Metal Manual Fire Alarm Box

ENGINEER AND ARCHITECT SPECIFICATIONS

- Rugged Die-Cast Metal Housing
- Reset Key Matches Control Panel
- Optional Break Glass Operation
- Single-Gang Semi-Flush Mount
- Optional Surface Mount Backbox
- Double-Action Institutional, Weather-Proof and Explosion-Proof Models Available
- UL Listed, ULC Listed, CSFM, FM and NYMEA Approved



Standard Model
Or Weatherproof



Institutional Model

Description

The MSM Series manual stations feature a rugged die-cast metal housing that satisfies both architectural and code requirements for manual fire alarm box initiation devices. The MSM-Series box features keyed reset using the same key as the control panels.

The MSM Series models are low-profile with all surfaces either painted or plated to inhibit corrosion. These boxes have raised lettering and are shipped with two reset keys and a break glass rod (use of rod is optional.) Options include: double action, institutional, weatherproof, and explosion-proof.

These stations are equipped with a S.P. S.T. switch rated at 10amps @ 120 VAC and all connections are made to a terminal block. The explosion-proof model has a D.P. D.T. switch. **Both the weatherproof and explosion-proof models are shipped complete with backbox**. (Backbox is optional with other models, or you can mount to standard single-gang box.)

These models are intended for use with all Siemens Building Technologies, Fire Safety Division conventional zones, but can also be used with addressable zones when used in conjunction with a TRI-Series addressable module.

Dimensions

Station

Width 3.20 in.
Height 4.75 in.
Depth 1.20 in. (2.30 in. overall, including back of switch)

Station w/Double Action

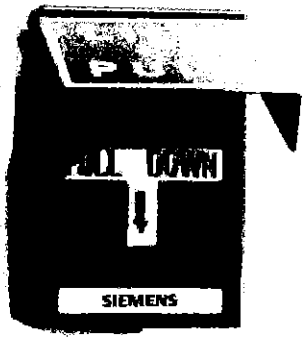
Width 3.33 in.
Height 4.57 in.
Depth 1.50 in. (2.60 in. overall, including back of switch)

Weatherproof Model

Width 3.20 in.
Height 4.75 in.
Depth 2.75 in.

Explosion-proof Model

Width 3.20 in.
Height 4.75 in. (6.00 in. overall, including mounting ears)
Depth 3.50 in.



Double Action Model

Explosion-proof Model

Ordering Information

Model Number	Description	Part Number
MSM-K	Manual Station, Metal w/Key	500-698215
MSM-KD	Manual Station, Metal w/Key, Double Action	500-698216
MSM-K-WP	Manual Station, Metal w/Key, Weatherproof	500-698217
MSM-KD-WP	Manual Station, Metal w/Key, Weatherproof, Double Action	500-698218
MSM-EXP	Manual Station, Metal w/Key, Explosion-proof	500-698219
MSM-INST	Manual Station, Metal w/Key, Institutional	500-698220
MSM-BOX	Surface Backbox for MSM-series Manual Stations	500-698221

Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

4/07
5M
SFS-IG
Printed in U.S.A.

Fire Safety
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Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

April 2007
Supersedes sheet dated 6/03

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 005
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: System Smoke Detectors (para 2.5 B)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review ☐ Revise & Resubmit
☐ Approved as Noted for A/E Review ☐ Rejected

Spec. Section	283111	Submittal No.	005
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

-Provide all equipment and devices for a complete system as shown, but not limited to specific devices indicated on submittals.
-Provide all ceiling and wall mounted devices to be WHITE in color.

Architect's Stamp

SUBMITTAL REVIEW

STATUS: APPROVED

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

para 2.5 b

SIEMENS

Fire Safety

HFP-11 FireFinder™ Detector

Intelligent Fire Detector for FireFinder XLS and FS-250 Control Panels

ENGINEER AND ARCHITECT SPECIFICATIONS

Model HFP-11

- Most Sophisticated "Detector Intelligence" available today
- Multi-Criteria fire detection for the price of a photoelectric detector
- FirePrint™ Technology to discriminate between deceptive phenomena and an actual fire
- Easily programmed to match specific hazard profiles from the control panel
- Polarity Insensitive with SureWire™ Technology
- Pre-Alarm reporting based on fire profile selected
- Remote sensitivity measurement capability
- System logic activation based on any of three inputs from detector (smoke, heat or neural network)
- Detectors are self-testing, completing diagnostics every 4 seconds
- Field cleanable chamber with replaceable chamber parts available
- Multi-color detector status LED
- Two-wire operation
- Compatible Model DPU field device programmer/tester unit
- Supports software based automatic environmental compensation
- Optional fully programmable relay base, audible base, and duct housing
- UL ULC Listed, CSFM, FM, NYMEA Approved

Introduction

The Siemens Building Technologies, Fire Safety Division HFP-11 Intelligent Fire Detector provides the life safety industry with the most highly evolved detection system available today. The HFP-11 utilizes advanced detection technology that allows the detector to distinguish non-threatening deceptive phenomena, such as cigarette smoke, from actual fire hazards, while optimizing detection for the area in which it is installed. No other detection system available today offers a higher level of protection or nuisance alarm immunity. The HFP-11 uses state-of-the-art microprocessor circuitry with error check, detector self-diagnostics and supervision programs.

The HFP-11 intelligent fire detector is compatible with the Fire Safety Model DPU field device programmer/tester unit, which is a compact, portable, menu-driven accessory for electronically programming and testing detectors, easily and reliably. The DPU eliminates the need for cumbersome, unreliable mechanical programming methods, such as dials or switches and reduces installation and service costs by electronically programming and testing the detector prior to installation. The HFP-11 fire detector is compatible with the Fire Finder XLS series of control panels.

CATALOG NUMBER **6301**

Description

The HFP-11 is a plug-in, two-wire, multi-sensor detector with both photoelectric and thermal inputs and is compatible with Fire Finder XLS and FS-250 series of control panel systems. Each detector consists of a dust resistant, field-cleanable photoelectric chamber, a solid state non-mechanical thermal sensor, and microprocessor based electronics with a low-profile plastic housing. The HFP-11 utilizes state-of-the-art ASIC circuitry and surface mount technology for maximum reliability. Every HFP-11 fire detector is shipped with a protective dust cover. The HFP-11 fire detector utilizes an infrared light emitting diode (IRLED), and light sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern. The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles and is received by the photodiode.

The HFP-11 also utilizes a modern, accurate, shock-resistant thermistor to sense temperature changes. The "on-board" FirePrint technology allows the detector to gather smoke and thermal data, and to analyze this information in the detector's "neural network." By comparing data received with the common characteristics of fires, or fire fingerprints, the HFP-11 can compare these "Fire Prints" to those of deceptive phenomena that cause other detectors to false alarm. The advanced FirePrint technology allows the HFP-11 to accurately determine a true fire hazard from a non-threatening deceptive phenomena WITHOUT needing to use alarm delaying verification and confirmation techniques, which can increase the probability of losses due to fire. The HFP-11 provides the highest level of detector intelligence available today with a detector/control panel link that allows the user to program the detector for the specific hazard profile using a simple software menu selection. Detectors are optimized by selecting one of the following eleven applications:

- Office/Retail
- Lobby
- Computer Room
- Dormitory
- Healthcare
- Parking Garage
- Utility/Transformer Room
- Hostile Environment
- Precious Storage
- Air Duct
- Warehouse/Light Manufacturing

The software does the rest; no guessing on detector sensitivities or alarm verification; the control panel programs the HFP-11 detector for the protected area without hassle and without confirmation delays. Once optimized for the hazards in the protected area, the HFP-11 provides the best detection you can buy.

Should the operator or installer forget to program the detector, the HFP-11 will revert to a default setting that allows it to operate as an office environment detector.

The HFP-11's FirePrint technology monitors input from both the photo chamber and the thermal sensor, evaluating this information with sophisticated mathematical formulas, or algorithms, comparing this input to characteristics of both threatening fires and deceptive phenomena that would "fool" any ordinary detector. This technology was developed over years of research and reviewing the results of over 20 years of fire test data in one of the world's most advanced fire research centers.

The results of this research are the mathematical models that form the algorithms used in FirePrint. No other fire detector has this level of intelligence or this amount of research and development supporting it's design. The microprocessor's software can identify and disregard false input caused by radio frequency (RFI) and electromagnetic (EMI) interference, and validates all trouble conditions before annunciating or reporting to the control panel. The HFP-11 detector's microprocessor uses an integral EEPROM to store the detector's address and other critical operating parameters which include the assigned program values for alarm and trouble thresholds.

Communications within the detector itself and between the HFP-11 and the control panel, or with the DPU field device programmer/tester unit, are supervised and safe-guarded against disruption by reliable, microprocessor based error checking routines. Additionally, the micro-processor supervises all EEPROM memory locations and provides a high degree of EEPROM failure fault tolerance.

The HFP-11 determines its operating status to be normal, in alarm, or in trouble depending on the difference between the alarm threshold values stored in the detector's memory and the detector's latest analog measurement. The detector then communicates changes in its status to the control panel. In addition, the FireFinder XLS control panel will sample the value of the HFP-11's analog signal over a period of time in order to determine if those values indicate excessive buildup in the photo chamber; if so, the FireFinder XLS control panel will indicate that the particular detector requires maintenance.

The HFP-11 is listed as a self-testing device. The HFP-11's visible light emitting diode (LED) flashes green every 4 seconds to indicate it is communicating with the control panel and that it has passed its internal self-test. Should the detector sense a fault or failure within its systems, the LED will flash amber and the detector will transmit that information to the control panel. A quick visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the Fire Finder XLS panel indicating the status and settings assigned to each individual detector. When the HFP-11 moves to the alarm mode, it will flash red and to continue flashing until the system is reset at the control panel. At that

same time, any user defined system alarm functions programmed into the system are activated. Detector sensitivity, calibration, and identification are dynamically supervised by the control panel. Detector sensitivity and pre-alarm levels are a function of the application chosen at the control panel and are controlled by the panel. If an alternate, non-FirePrint mode is selected, then the sensitivity can be changed from the control panel.

The DPU Device Program/Test Unit accessory is used to program and verify the detector's address. The technician selects the accessory's program mode to enter the desired address. The DPU automatically sets and verifies the address and tests the detector. The DPU operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment almost anywhere.

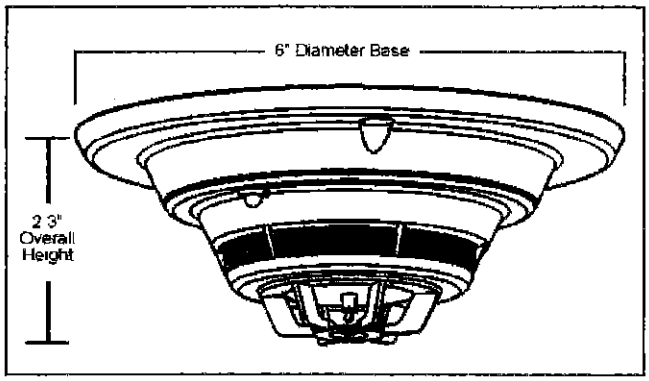
When in the test mode, the DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly. The HFP-11 fire detector may be installed on the same initiating circuit with HMS series manual stations, HTRI series interfaces, HCP output control devices, or HZM series of addressable, conventional zone modules. All HFP-11 detectors can be cleaned in the field, when required, by simply removing the detector cover and unsnapping the photo chamber. There is also the option of cleaning the interior of the detector with a clean, soft cloth or brush, or replacing the labyrinth and bug screen included in the detector maintenance kit, model DMK-11.

The HFP-11 uses the low-profile surface mounting base, model DB-11. This base mounts on a 4-inch octagon, square, or a single gang electrical box. The base utilizes screw clamp contacts for electrical connections and self-wiping contacts for increased reliability. The base can be used with the optional LK-11 detector locking kit which contains 50 detector locks and an installation tool, to prevent unauthorized removal of the detector head. The DB-11 base has integral decorative plugs to cover the outer mounting screw holes. All HFP-11 detectors are approved for operation within the UL specified temperature range of 32 to 100 degrees F (0 to 38 degrees C).

Application Data

Installation of the HFP-11 series of fire detectors requires a two-wire circuit. In many retrofit cases, existing wiring may be used. "T-tapping" is permitted only for Style 4 (Class B) wiring. The HFP-11 is polarity insensitive. This feature can greatly reduce installation an debugging time. HFP-11 fire detectors can be applied within the maximum 30 foot center spacing (900 sq. ft. areas) as referenced in NFPA 72. This applications guideline is based on ideal conditions, specifically, smooth ceiling surfaces, minimal air movement, and no physical obstructions between potential fire sources and the detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joints or beamed ceilings may also affect safe spacing limitations for detectors. Should questions arise regarding detector placement, observe NFPA 72 guidelines. Good fire protection system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Fire Safety distributor or sales office whenever you need assistance applying FirePrint in unusual applications. Be sure to follow NFPA guidelines and UL/ULC approved installation instructions, which are included with every Fire Safety detector, and local codes as for all fire protection equipment.

Dimensions



Technical Specifications

Operating Temperature: +32°F (0°C) to 100°F (38°C) per UL 268/268A

Humidity: 0-93% Relative Humidity Non-Condensing

Maximum spacing: 30 foot centers (900 sq. ft.) per NFPA 72 Chapter 5 and CAN/ULC-S524

Model	Description	Part Number
HFP-11	Addressable FirePrint Fire Detector	500-033290
DB-11	Detector Mounting Base for Series 11	500-094151
DB-11E	Detector Base (small)	500-094151E
AD-11P	Air Duct Housing for Series 11	500-095656
AD-HR	Air Duct Housing w/Relay for H-Series Intelligent Detector	500-033280
DB-HR	Relay Base for H-Series Intelligent Detectors	500-033220
ADBH-11	Audible base	500-033210
RL-HC	Remote (red) alarm indicator 4" octagon box mount	500-033230
RL-HW	Remote (red) alarm indicator single gang box mount	500-033310
LK-11	Base Locking Kit for Series 11 detectors	500-695350
DMK-11	Series 11 Maint Kit (replacement labyrinth and bug bug screen)	500-695338
In Canada Order:		
HFP-11C	Addressable FirePrint Fire Detector (ULC)	500-095112C
DB-11C	Detector Mounting Base for Series 11(ULC)	500-095687
AD-11PC	Air Duct Housing (ULC)	500-095984
DB-HRC	Relay Base for Series 11 Intelligent Detectors (ULC)	500-033220C
ADBH-11C	Audible Base for Series 11 Intelligent Detector (ULC)	500-033210C

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 006
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Heat Detector (para 2.7)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	006
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

-Provide all equipment and devices for a complete system as shown, but not limited to specific devices indicated on submittals.
-Provide all ceiling and wall mounted devices to be WHITE in color.

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED with notes

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

para 2.7

SIEMENS

Fire Safety

HFPT-11 Intelligent Thermal Detector

For FireFinder XLS™ and FS-250 Fire Alarm Control Panel

ENGINEER AND ARCHITECT SPECIFICATIONS

HFPT-11

- Microprocessor Based Design
- Rate of Rise and Fixed Temperature
- Innovative Technology Provides High Speed, Fault Tolerant System/Detector Communications
- Multi-Color Detector Status LED
- Polarity Insensitive Utilizing SureWire™ Technology
- Detectors are Self-Testing, Complete Diagnostics Every 4 Seconds
- Two-Wire Operation
- Compatible with DPU Device Programmer/Tester Unit
- UL ULC Listed, CSFM, FM, NYMEA Approved

Introduction

The HFPT-11 intelligent thermal detectors provide an advanced method of detection, address programming and supervision, combined with sophisticated control panel communication. The HFPT-11 detector uses a state-of-the-art thermistor providing 135°F fixed temperature and 15° per minute rate-of-rise alarm points. The user also has the option of disabling the rate-of-rise feature leaving just a fixed temperature sensor.

The HFPT-11 intelligent thermal detector is compatible with the Device Program/Test Unit (DPU). The DPU is a compact, portable, menu-driven accessory which makes programming and testing detectors faster, easier and more reliable than other methods. The DPU eliminates the need for cumbersome, unreliable mechanical programming methods and reduces installation and service costs by electronically programming addresses and functionally testing the HFPT-11's performance before the detector is installed.

The HFPT-11 thermal detector operates with the FireFinder XLS and FS-250 families of control panels.

The HFPT-11 intelligent thermal detector is Underwriters Laboratory and Underwriters Laboratory of Canada listed.

Description

The HFPT-11 is a plug-in, two-wire thermal detector, compatible with FireFinder XLS and FS-250 families of control panels. Each FPT-11 has microcomputer chip technology and highly stable solid state electronic circuitry.

The FPT-11 utilizes a modern, accurate, shock-resistant thermistor to sense temperature changes. This electronic sensing method virtually eliminates thermal lag associated with mechanical temperature sensing devices and provides almost instantaneous temperature information to the control panel. The HFPT-11, in its default mode, is a combination 135°F fixed temperature and 15° per minute, rate-of-rise detector. It can be programmed from the control panel as a fixed temperature detector without rate-of-rise, at the users option.

The HFPT-11 detector's microprocessor uses an integral EEPROM to store the detector's address. Communications within the detector itself and between the HFPT-11 and the control panel, or with the DPU, are supervised and safeguarded against disruption by reliable, microprocessor based error checking routines. Additionally, the microprocessor supervises all EEPROM memory locations and provides a high degree of EEPROM failure fault tolerance.

The HFPT-11 is listed as a self-testing device. The HFPT-11's visible light emitting diode (LED) flashes green every 4 seconds to indicate it is communicating with the control panel and that it has passed its internal self-test. Should the detector sense a fault

or failure within its systems, the LED will flash amber and the detector will transmit that information to the control panel. A quick visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the FireFinder XLS panel indicating the status and settings assigned to each individual detector.

When the HFPT-11 moves to the alarm mode, it will flash red and continue flashing until the control panel is reset. At that same time, any user defined system alarm functions programmed into the system are activated.

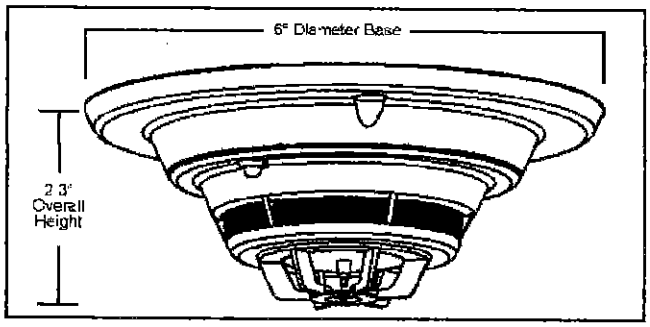
A Device Program/Test Unit (DPU) is used to program and verify the detector's address. The user selects the Program Mode to enter the desired address. The DPU Programmer/Tester then automatically sets and verifies the address as well as tests the detector. The DPU has rechargeable batteries, so a detector's address can be programmed by the user from the most convenient location. The user can also separately test the detector for functionality. When the user selects the Test Mode, a series of tests are automatically conducted and the user is informed whether the detector has passed or failed.

The HFPT-11 detector is compatible on the same FireFinder XLS or FS-250 initiating circuit with other H Series detectors, HMS manual stations, HTRI Series addressable interfaces, or HZM Series addressable conventional zone modules.

The HFPT-11 detectors use a surface mounting base, Model DB-11, which mounts on a 4-inch octagonal, square or single gang electrical box. Relay base Model DB-HR mounts to a 4-inch square deep electrical box.

Audible base Model ADBH-11 also mounts to a 4-inch square deep electrical box.

The DB-11, and the DB-HR and ADBH-11 use screw-clamp terminals for all electrical connections and self-wiping contacts for reliability. The bases also contain a provision for an optional concealed locking mechanism to prevent unauthorized removal of the detector head, Model LK-11.



Application Data

The FireFinder XLS and FS-250 control panels use loop circuits with each circuit capable of supporting up to 252 HFPT-11 intelligent detectors.

Locate the HFPT-11 on the ceiling, at least 4 inches from the side walls. For an ideal, smooth ceiling condition, place the detectors at a maximum center spacing of 50 feet (2500 square feet), 25 feet from side walls or room partitions.

Actual job conditions and sound engineering judgement must determine detector spacing. Consider environmental factors including ambient temperature fluctuation, and the nature of the fire hazard. Room or area configuration and ceiling type (sloped or flat, smooth or beamed) also dictates placement.

Should questions arise regarding detector placement, follow the drawing provided and/or approved by Siemens Fire Safety or by its authorized distributors. This is extremely important! The detector placements shown on these drawings were chosen after a careful evaluation of the area being protected. Extensive experience in design of the system assures the best detector placement by following these drawings.

Technical Specifications

Operative Temperatures:	+32°F (0°C) to 100°F (38°C)
Humidity:	0-93% Relative Humidity Non-condensating
Maximum Spacing:	50 Foot Centers (2500 Square Feet)
Current Draw:	1mA in alarm or supervisory mode

Ordering Information

Model	Description	Part Number
HFPT-11	Addressable Thermal Fire Detector	500-033380
DB-11	Detector Mounting Base	500-094151
DB-HR	Relay Base	500-033220
ADBH-11	Audible Base	500-033210
RL-HC	Remote (red) alarm indicator-octogan box mount	500-033230
RL-HW	Remote (red) alarm indicator-single gang box mount	500-033310
LK-11	Base Locking Kit for Series 11 detectors	500-695350
In Canada Order:		
ADBH-11C	Audible Base (ULC)	500-033210C
HFPT-11C	Addressable Thermal Fire Detector (ULC)	500-033380C
DB-11C	Detector Mounting Base (ULC)	500-095687
DB-HR-C	Relay Base (ULC)	500-033220C

Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

12/04
10M
SFSHG
Printed in U.S.A.

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

December 2004
Supersedes sheet dated 10/02

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 007
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Projected Beam Smoke Detectors

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	007
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 **BY:** R. Barbarino

Engineer / Government / Other Approval

Para 2.5

SIEMENS

Fire Safety

F5000

F5000 Projected Beam Smoke Detector

ENGINEER AND ARCHITECT SPECIFICATIONS

Features

- Range of 26.25 ft. to 330 ft. (8m to 100m)
- Modular Design
- *Easyfit* Mounting System
- Ground Level System Controller
- LASER Assisted Prism Mounting
- *AutOptimise* Beam Alignment
- Electronic Obscuration Test
- Contamination Compensation
- Building Shift Compensation
- Separate alarm and trouble contacts
- Remote display and control unit with LCD backlight
- Password protected settings
- Current monitoring for gimbals motor position
- User feedback of operating parameters
- ®UL Listed, CSFM approved

Description

The F5000 Reflective Beam Detector System is an auto-aligning infrared beam smoke detector. Once the detector head is installed, using the *easyfit mounting system* an integral LASER can be activated that is aligned along the optical path of the infrared beam. This allows the reflective prism to be located quickly and with confidence. The *AutOptimiser beam alignment system* then takes over and automatically steers and maintains the beam in the optimum position for reliable performance. The signal generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an alarm condition when a predetermined level is reached. The system is designed to be mounted so the beam will project between 1ft. (0.31m) and 2ft. (0.61m) below and parallel to the ceiling.

Lateral detection may be up to 30ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet or 1,829 square meters (60ft. x 330ft. or 18.29m x 100m). The F5000 detectors can interface with Siemens XLS, MXL, MXL-IQ, and FS-250 fire alarm panels via the TRI, HTRI, CZM-1B6 or HZM modules.

Engineering Specification

The projected beam type smoke detector shall be a 4-wire 24 VDC device to be used with an U.L. Listed separately supplied 4-wire control panel. Shall be powered by any UL category UTRZ power supply, such as the PAD-3. Unit shall be listed to U.L. 268 and shall consist of an integrated transmitter, receiver and remote control unit. The detector shall operate between a range of 26.25 ft. to 330 ft. (8m to 100m). The temperature range of the beam shall be -4°F to 131°F (-20°C to 55°C).

The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The Reflective Beam shall include AutoOptimise Beam Alignment feature to ensure unit is always receiving maximum signal available and shall be able to compensate for Building Shift.

The unit shall include a wall mounting remote display and control unit with LCD backlight.

Testing shall be carried out by using a UL listed internal obscuration test. The Reflective beam type smoke detector shall be a Fire Fighting Enterprises Fireray 5000.

Specifications

Construction Specification

Housing:	Flame Retardant ABS
Finish:	Light Grey/Black
Weight:	Head & Controller 3.24 lbs (1.47 kg)
Dimensions:	5.28" H x 5.31" L x 5.28" W
Head:	(135mm H x 134mm L x 132mm W)
Controller:	2.80" H x 9.25" L x 7.87" W (71mm H x 235mm L x 200mm W)
Prism:	0.37" H x 4.13" L x 3.94" W (9.5mm H x 105mm L x 100mm W)

Electrical Specification

Primary Input Power:	14 to 28 VDC
Standby Current:	Low Current Mode: 12mA @ 24VDC High Current Mode: 52mA @24VDC
Alarm Current:	52 mA @ 24 VDC
Relay Contacts:	1A at 30 VDC Resistive
Reset Time:	5 Seconds maximum
Start Up Time:	45 Seconds
Optical Wavelength:	850nm.
Sensitivity:	10% - 60% obscuration (% per foot) Default value = 35% obscuration (% per foot)
Temperature Rating:	-22°F to 131°F (-30°C to +55°C) *For UL Listed Installations,* 32°F to 100°F (0°C to 37.8°C).
Relative Humidity:	0% to 93% RH non-condensing
Range:	26.25ft. to 330ft. (8m to 100m)

Ordering Information

Model	Part	Description
F5000	500-050261	Reflective beam smoke detector
23901	500-050269	Replacement prism for F5000
5000-004	500-050270	Long range prism kit
5000-005	500-050273	Surface mount universal bracket for F5000
5000-006	500-050274	Surface mount wall bracket for prisms
5000-007	500-050275	4 prism alignment adaptor for use with 5000-005
5000-008	500-050276	1 prism alignment adaptor for use with 5000-005
5000-009	500-050277	F5000 controller back box
5000-010	500-050278	Semi-flush trim plate for controller back box
5000-011	500-050279	F5000 Detector back box
5000-012	500-050280	Cover plate for 5000-011 detector back box
5000-014	500-050281	Ceiling pendant mount universal bracket for F5000, F2000
5000-017	500-050282	F5000 Detector Wire Cage

Siemens Building Technologies
Fire Safety

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FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

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Fire Safety
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Brampton, Ontario
Canada L6T 5E4
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FAX: (905) 799-9858

October2008
Supersedes Sheet dated 10/08

SIEMENS

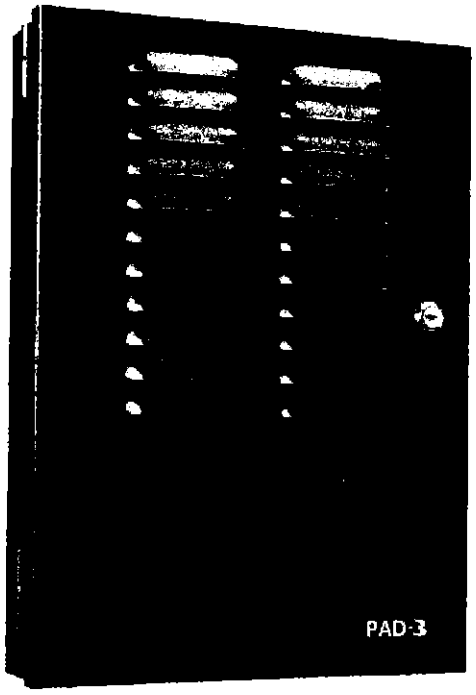
Fire Safety

PAD 3

Auxiliary Power Supply - Notification Appliance Extender

ENGINEER AND ARCHITECT SPECIFICATIONS

- 6 amps of Notification Appliance Power
- Advanced Microprocessor Control
- 24 VDC Output Voltage
- Four Power-Limited Notification Outputs
- Strobe Synchronization Option Built In
- Synchronized ANSI Temporal Pattern
- Class 'A' Selectable
- Ground Fault Detection
- Battery Supervision
- 3 Amp Auxiliary Power Output
- Trouble Contact for Monitoring
- Multiple Module Mounting in System 3 Enclosures
- Multiple Modules Share Battery Set
- UL, ULC Listed, CSFM, NYMEA and FM Approved



Introduction

The Model PAD-3 (PAD-3C for Canada) is a notification appliance circuit expander with a built-in auxiliary power output. It is designed for use with Siemens Building Technologies, Fire Safety Division fire alarm control panels. This power source is designed to provide the extra power required in buildings conforming to the Americans with Disabilities Act.

Features

The PAD-3 provides 6 amps of 24 VDC power for multiple uses. All 6 amps can be directed to 4 Notification Appliance Circuits (NAC s). Each is rated at 3 amps and is power limited. Either 1 or 2 inputs can control the four outputs. These outputs are compatible with all Fire Safety 24 VDC notification appliances.

The PAD-3 can be configured so that the inputs can be programmed as steady outputs, ANSI temporal outputs, or synchronized strobe outputs. It can also be programmed so that one input will silence U-MHU-Series horn/strobe horns while the strobes remain on using one set of wires.

The PAD-3 also offers a 3 amp auxiliary output for driving other portions of your fire alarm system such as door holders. This 24 VDC filtered output is power limited. When using this output, the total power available from the PAD-3 will not exceed 6 amps.

A trouble contact is provided for monitoring the PAD-3 with a fire alarm panel through the input. It also has a Form C dry contact for trouble monitoring. Therefore, the user has the option of connecting it to a conventional fire alarm panel's existing notification circuit, or controlling it with a TRI Series device on intelligent fire systems.

The PAD-3 offers battery supervision and management as is required of fire alarm system components. Ground faults are transmitted as are any other trouble conditions. Trouble conditions not only change the state of the trouble contact in the unit, but they also break the notification circuit input to create a trouble signal in the fire alarm control unit.

This product is packaged in its own sheet metal enclosure with enough space to house the 7 amp-hour battery set required for back-up. The enclosure comes in black or red. System 3 enclosures may also be used to house multiple PAD-3 modules in a single enclosure. Two modules are capable of sharing the same battery set when mounted in the same enclosure.

Options

One or both PAD-3 signal inputs control the notification outputs, depending on the specific configuration setup. Possible configurations for the PAD-3 are:

For Option:	These Inputs:	Control These Outputs:	As:
1	Input 1	All Outputs	Class B Circuits
2	Input 1 Input 2*	All Outputs Silences horns on 1	Class B Circuits
3	Input 1 Input 2	Outputs 1 and 2 Outputs 3 and 4	Class B Circuits Class B Circuits
4	Input 1 Input 2	Output 1 Outputs 2, 3 and 4	Class B Circuits Class B Circuits
5	Input 1	Outputs 1-2, 3 and 4	Class A Circuit Pairs
6	Input 1 Input 2*	Outputs 1-2, 3 and 4 Silences horns on 1	Class A Circuit Pairs
7	Input 1 Input 2	Outputs 1 and 2 Outputs 3 and 4	Class A Circuit Pairs Class A Circuit Pairs
8	Input 1 Input 2	Outputs 1-2 Outputs 3 and 4	Class A Circuit Pairs Class B Circuits

*When used with U-MHU-Series horn/strobe units

Supervision

The Model PAD-3 supervises a variety of functions including:

- Low AC power
- Low battery condition
- Earth ground fault
- Auxiliary output power limit condition
- EOL supervision trouble or power limited condition at an output

When a trouble condition occurs, the PAD-3 creates a trouble condition on the fire control signal circuits to which it is connected. It still maintains the ability to be activated by the fire control. In addition, the PAD-3 provides a Form 'C' trouble relay output as an alternative to using the notification circuit trouble.

Electrical Specifications

AC Input:	120VAC @ 2.5 amps
Output:	24VDC @ 6 amps
Auxiliary Power Circuit:	1
Notification Circuits:	4
Output Configuration:	2 Class A or 4 Class B or 1 Class A & 2 Class B
Amps per Output Circuit:	3.0
Notification Circuit Outputs:	24VDC at 3.0 amps each, 24K ohm EOL resistor required on each Class B circuit
No. of Inputs:	2
Input Configuration:	2 Class B or 2 Class A
Input Voltage Range:	9-32VDC
Maximum Input Current:	0.006 Amps
Battery Charging Capacity:	15.0 A.H
Trouble contact rating:	2.5A @250 VAC, 30 VDC
Ambient Temperature:	32°F to 120°F

Mechanical Specifications

Single Module Enclosure Model EN-PAD

Dimensions:	12"W x 16"H x 3"D
Color:	Black

Indicator Lights

AC Power On:	Green
Battery Trouble:	Yellow
Ground Fault:	Yellow
Auxiliary Trouble:	Yellow
Output 1 Trouble:	Yellow
Output 2 Trouble:	Yellow

Ordering Information

Model	Description	Part Number
PAD-3	Aux. power supply w/black enclosure	599-699189
PAD-3R	Aux. power supply w/red enclosure	599-699190
PAD-3-MB	Aux. power supply - main board only	500-699080
EN-PAD	Black enclosure for PAD-3	310-099073
EN-PADR	Red enclosure for PAD-3	310-099150

Siemens Building Technologies
Fire Safety

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FAX: (905) 799-9858

8/05
10M
SFS-IG
Printed in U.S.A.

August 2005
Supersedes sheet dated 9/03

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 008
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Notification Appliances (para 2.8)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	008
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

-Provide all equipment and devices for a complete system as shown, but not limited to specific devices indicated on submittals.
-Provide all ceiling and wall mounted devices to be WHITE in color.

Architect's Stamp

SUBMITTAL REVIEW

STATUS: APPROVED with notes

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

Para 2.8

SIEMENS

Catalog Sheet
Fire Safety & Security Products

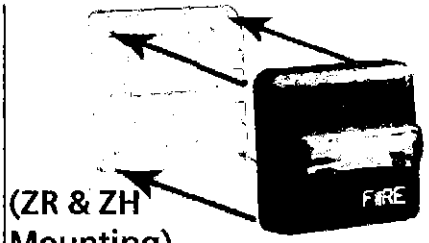
'08 Series Notification Appliances

ZH & ZR – Strobes, Horns, & Horn / Strobes

Application: Indoor

ZH Series

ZR Series



(ZR & ZH Mounting)

Product Overview

- Strobes can be synchronized using the Siemens DSC sync modules, FS-250 panel, XLS panel, or PAD-3 power supply with built-in sync protocol
- Selectable Continuous Horn or Temporal (Code-3) Tones with 90 or 95 dBA selectable setting (ZH)
- Ceiling-mount models feature field-selectable Candela settings of 15/30/75/95cd and 115/177cd
- Wall-mount models feature field-selectable Candela settings of 15/30/75/110cd and 135/185cd
- Base plate is protected by a disposable cover, and the appliances can quickly snap onto the base after the walls are painted
- Strobes produce 1 flash per second
- "Special Applications" listed with Siemens panels
- EZ Mount Universal Mounting Plate (ZBB) – uses single plate for ceiling and wall mount installations
- EZ Mount design – with separate base plate – provides ability to pre-wire the base and test the circuit wiring before the walls are covered
- ®UL Listed & ®ULC Listed; FM, CSFM & NYMEA Approved
- ADA / NFPA compliant

Specifications

- **General**

- Audible/Visual notification appliances shall be listed for indoor use only
- Appliances shall be listed under ®UL Standard 1971 (Standard for Safety Signaling Devices for Hearing Impaired) and ®UL Standard 464 (Fire Protective Signaling)
- Appliances shall use a universal back plate, which shall allow mounting to a single-gang, double-gang, 4-inch-square, 4"-octal, or a 3-1/2"-octal backbox
- Two-wire appliance wiring shall be capable of directly connecting to the mounting back plate
- Continuity check shall occur for entire NAC circuit prior to attaching any audible / visual-notification appliances
- Dust cover shall fit and protect the mounting plate
- Dust cover shall be easily removed when the appliance is installed over the back plate
- Removal of an appliance shall result in a trouble condition by the Fire Alarm Control Panel (FACP)

SIEMENS Industry, Inc.
Building Technologies Division

Specifications – (continued)

- **Strobes**

– Strobe appliances shall produce a minimum flash rate of 60 flashes per minute (1 flash per second) over the Regulated Input Voltage Range, and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens
– Strobes shall be available with two or four field-selectable settings in one unit, and shall be rated – per ®UL 1971 – for up to:
  - 15/30/75/110cd for wall mounted
  - 135/185cd for wall mounted
  - 15/30/75/95cd for ceiling mounted
  - 115/177cd for ceiling mounted
– Strobes shall operate over an extended temperature range of 32°F to 120°F (0°C to 49°C), and be listed for maximum humidity of 95% RH
– Strobe inputs shall be polarized for compatibility with standard reverse-polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP)

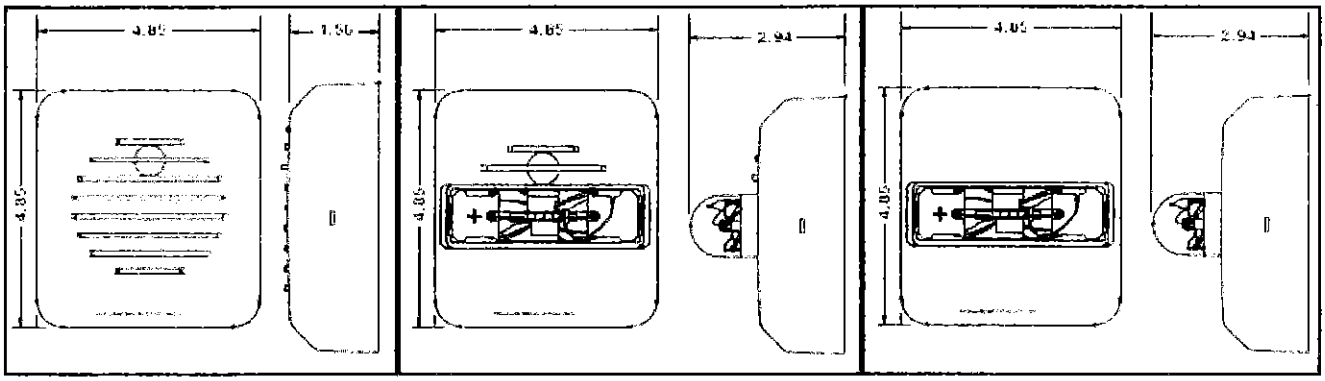
- **Audibles and Audible / Strobe Combinations**

– Horns and horn / strobes shall be listed for Indoor use under ®UL Standard 464
– Horns shall be able to produce continuous synchronized output or a temporal code-3 synchronized output
– Horns shall have at least 2 sound-level settings of 90 and 95 dBA

- **Synchronization Modules**

– The strobe portion, when synchronization is required, shall be compatible with DSC sync modules, FS-250 panel, XLS panel, or PAD-3 power supply with built-in sync protocol
– The strobes shall not drift out of synchronization at any time during operation
– Audibles and strobes shall be able to synchronize on a 2-wire circuit with the capability to silence the audible, if required
– Strobes shall revert to a non-synchronized flash-rate, if the sync module or Power Supply should fail to operate (i.e. – contacts remain closed)
– All notification appliances shall be listed for Special Applications:
  - Strobes are designed to flash at 1-flash-per-second minimum over their "Regulated Input Voltage Range"
    - **Note:** NFPA-72 specifies a flash rate of 1-to-2 flashes per second, and ADA Guidelines specify a flash rate of 1-to-3 flashes per second
  - All candela ratings represent minimum-effective Strobe intensity, based on ®UL Standard 1971
  - Series ZH 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%)
  - Series ZH horns are listed under ®UL Standard 464 for audible signal appliances (Indoor use only)

Mounting Diagram



(Shown In Inches)

Mounting Options

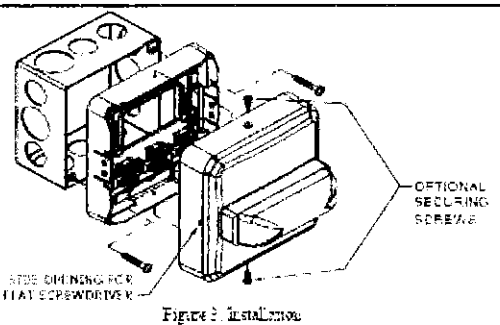


Figure 3: Installation

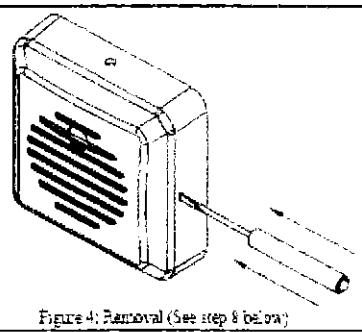


Figure 4: Removal (See step 8 below)

1. Install mounting plate as shown in figure 1 to a single-gang, double-gang, 4" square, 4" octagon, or a 3 ½" octagon backbox with the provided pan head screws. To remove dust cover, place thumb and index finger on top edges of cover and pull off cover.
2. Connect field wiring per figures 2 and 3.
3. Address wires back into backbox.
4. Place dust cover over mounting plate to protect the terminals while performing wiring continuity check.
5. Remove dust cover before snapping or installing the appliance onto the mounting plate per fig 3.
6. Important: Device only has one mounting orientation. Match the top of the base to the top of the device.
7. If it is desired to further secure the device to the base, then two optional screws are provided. To install these screws punch out the screw holes located at the top and bottom of the device.
8. To remove the appliance, push a small flat-bladed screwdriver into the side opening. The screwdriver must clear the snap release opening by ¼" to disengage the snap. Do not pry off housing with the screw driver. Apply pressure with screw driver, inserted in either side opening, as shown in Fig 4 to release the housing.

Technical Data

		ZH and ZH-MC Horn Reverberant dBA per UL464 [ZH-MC and ZH at 24V]		
		16.0V	24V	33.0V
Continuous Horn	High	83	87	90
	Low	77	81	83
Code 3 Horn or March Time*	High	79	82	86
	Low	72	76	79

*Available in sync mode only

In (Amps)	*ZH Horn Current Draw*	
	Horn Setting	16-33 Volts
DC	High*	0.044
	Low*	0.018
FWR	High*	0.075
	Low*	0.045

*Current Draw is the same for the Continuous Horn, Code 3 Horn and March Time Settings.

Technical Data – (continued)

Models*	Ⓤ UL Listed Models and Ratings: Operating Voltage (Special Application) [Per Ⓤ UL 1971] (VDC/VRMS)	Voltage Range [Per Ⓤ ULC-S526-02] (VDC/VRMS)	Horn	Mounting	Strobe Candela (cd)
ZR-MC	16.0-33.0	20.0-31.0	—	Wall	15/30/75/110
ZR-HMC	16.0-33.0	20.0-31.0	—	Wall	135/185
ZR-MC-C	16.0-33.0	20.0-31.0	—	Ceiling	15/30/75/95
ZR-HMC-C	16.0-33.0	20.0-31.0	—	Ceiling	115/177
ZH-MC	16.0-33.0	20.0-31.0	X	Wall	15/30/75/110
ZH-HMC	16.0-33.0	20.0-31.0	X	Wall	135/185
ZH-MC-C	16.0-33.0	20.0-31.0	X	Ceiling	15/30/75/95
ZH-HMC-C	16.0-33.0	20.0-31.0	X	Ceiling	115/177
ZH	16.0-33.0	20.0-31.0	X	Wall or Ceiling	— —

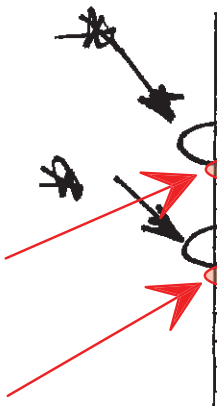
*Available in red and white

		Ⓤ UL Current Ratings (ZR Strobe Only) Maximum RMS Current (AMPS)											
		MC				HMC		MC-C				HMC-C	
		15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
DC	16-33VDC	0.064	0.096	0.175	0.233	0.318	0.445	0.069	0.111	0.200	0.264	0.318	0.445
FWR	16-33VRMS	0.108	0.164	0.268	0.368	0.462	0.684	0.117	0.180	0.297	0.398	0.462	0.684

			Ⓤ UL Current Ratings ZH Horn/Strobe Maximum RMS Current (AMPS)											
		Horn Setting	MC				HMC		MC-C				HMC-C	
			15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
DC	16-33VDC	High*	0.078	0.113	0.195	0.259	0.371	0.506	0.087	0.131	0.222	0.292	0.371	0.506
		Low *	0.070	0.107	0.188	0.246	0.324	0.455	0.075	0.121	0.213	0.277	0.324	0.455
FWR	16-33VRMS	High*	0.141	0.200	0.302	0.406	0.521	0.722	0.149	0.216	0.331	0.436	0.521	0.722
		Low *	0.123	0.179	0.290	0.391	0.497	0.699	0.131	0.195	0.319	0.421	0.497	0.699

* Current Draw is the same for the Continuous Horn, Code 3 Horn and March Time Settings

Details for Ordering — (Including Mounting Options & Agency Approvals)



Model Number	Part Number	Description	Mounting Options*	Agency Approvals: UL	ULC	FM	CSFM
ZH-R	500-636159	Z Horn: Red	B,D,E,F	X	X	X	X
ZH-W	500-636160	Z Horn: White	B,D,E,F	X	X	X	X
ZH-MC-R	500-636161	Z Horn: Multi Candela (Wall), Red	B,D,E,F	X	X	X	X
ZH-MC-W	500-636162	Z Horn: Multi Candela (Wall), White	B,D,E,F	X	X	X	X
ZH-HMC-R	500-636163	Z Horn: Hi Multi Candela (Wall), Red	B,D,E,F	X	X	X	X
ZH-HMC-W	500-636164	Z Horn: Hi Multi Candela (Wall), White	B,D,E,F	X	X	X	X
ZH-MC-CR	500-636165	Z Horn: Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZH-MC-CW	500-636166	Z Horn: Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZH-HMC-CR	500-636167	Z Horn: Hi Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZH-HMC-CW	500-636168	Z Horn: Hi Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZR-MC-R	500-636169	Z Strobe: Multi Candela (Wall), Red	B,D,E,F	X	X	X	X
ZR-MC-W	500-636170	Z Strobe: Multi Candela (Wall), White	B,D,E,F	X	X	X	X
ZR-HMC-R	500-636171	Z Strobe: Hi Multi-Candela (Wall), Red	B,D,E,F	X	X	X	X
ZR-HMC-W	500-636172	Z Strobe: Hi Multi-Candela (Wall), White	B,D,E,F	X	X	X	X
ZR-MC-CR	500-636173	Z Strobe: Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZR-MC-CW	500-636174	Z Strobe: Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZR-HMC-CR	500-636175	Z Strobe: Hi Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZRS-HMC-CW	500-636176	Z Strobe: Hi Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZBB-R	500-636193	Accessory — (Includes base, dust cover, mounting screws and installation sheet)					
ZBB-W	500-636194	Accessory — (Includes base, dust cover, mounting screws and installation sheet)					

X = listed / approved * = Refer to catalog sheet #: 2585 for detailed mounting options

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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FAX: (905) 799-9858

December 2009
Supersedes sheet dated 7/07
(Rev. 1)

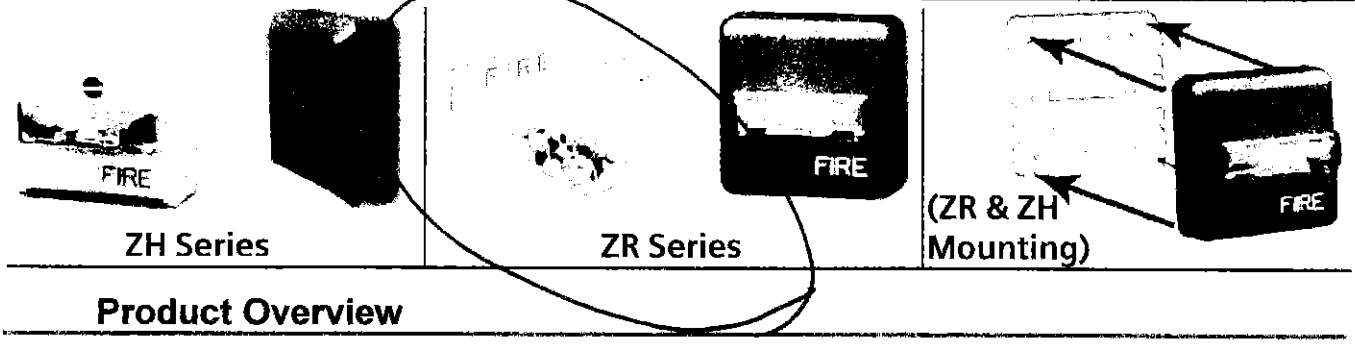
SIEMENS

Catalog Sheet
Fire Safety & Security Products

'08 Series Notification Appliances

ZH & ZR – Strobes, Horns, & Horn / Strobes

Application: Indoor



ZH Series | ZR Series | (ZR & ZH Mounting)

Product Overview

- Strobes can be synchronized using the Siemens DSC sync modules, FS-250 panel, XLS panel, or PAD-3 power supply with built-in sync protocol
- Selectable Continuous Horn or Temporal (Code-3) Tones with 90 or 95 dBA selectable setting (ZH)
- Ceiling-mount models feature field-selectable Candela settings of 15/30/75/95cd and 115/177cd
- Wall-mount models feature field-selectable Candela settings of 15/30/75/110cd and 135/185cd
- Base plate is protected by a disposable cover, and the appliances can quickly snap onto the base after the walls are painted
- Strobes produce 1 flash per second
- "Special Applications" listed with Siemens panels
- EZ Mount Universal Mounting Plate (ZBB) – uses single plate for ceiling and wall mount installations
- EZ Mount design – with separate base plate – provides ability to pre-wire the base and test the circuit wiring before the walls are covered
- ®UL Listed & ©ULC Listed; FM, CSFM & NYMEA Approved
- ADA / NFPA compliant

Specifications

- **General**

- Audible/Visual notification appliances shall be listed for indoor use only
- Appliances shall be listed under ®UL Standard 1971 (Standard for Safety Signaling Devices for Hearing Impaired) and ®UL Standard 464 (Fire Protective Signaling)
- Appliances shall use a universal back plate, which shall allow mounting to a single-gang, double-gang, 4-inch-square, 4"-octal, or a 3-1/2"-octal backbox
- Two-wire appliance wiring shall be capable of directly connecting to the mounting back plate
- Continuity check shall occur for entire NAC circuit prior to attaching any audible / visual-notification appliances
- Dust cover shall fit and protect the mounting plate
- Dust cover shall be easily removed when the appliance is installed over the back plate
- Removal of an appliance shall result in a trouble condition by the Fire Alarm Control Panel (FACP)

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Specifications – (continued)

- **Strobes**

– Strobe appliances shall produce a minimum flash rate of 60 flashes per minute (1 flash per second) over the Regulated Input Voltage Range, and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens
– Strobes shall be available with two or four field-selectable settings in one unit, and shall be rated – per ®UL 1971 – for up to:
  - 15/30/75/110cd for wall mounted
  - 135/185cd for wall mounted
  - 15/30/75/95cd for ceiling mounted
  - 115/177cd for ceiling mounted
– Strobes shall operate over an extended temperature range of 32°F to 120°F (0°C to 49°C), and be listed for maximum humidity of 95% RH
– Strobe inputs shall be polarized for compatibility with standard reverse-polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP)

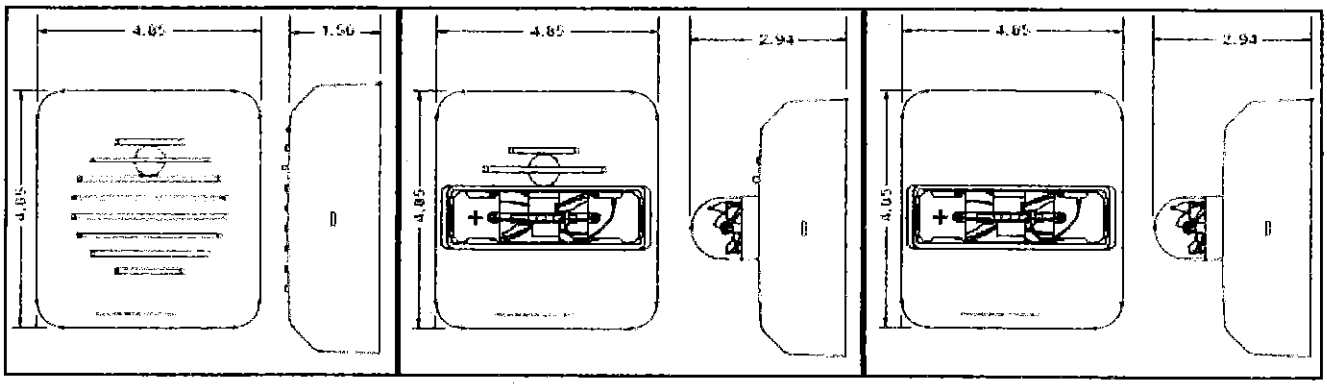
- **Audibles and Audible / Strobe Combinations**

– Horns and horn / strobes shall be listed for Indoor use under ®UL Standard 464
– Horns shall be able to produce continuous synchronized output or a temporal code-3 synchronized output
– Horns shall have at least 2 sound-level settings of 90 and 95 dBA

- **Synchronization Modules**

– The strobe portion, when synchronization is required, shall be compatible with DSC sync modules, FS-250 panel, XLS panel, or PAD-3 power supply with built-in sync protocol
– The strobes shall not drift out of synchronization at any time during operation
– Audibles and strobes shall be able to synchronize on a 2-wire circuit with the capability to silence the audible, if required
– Strobes shall revert to a non-synchronized flash-rate, if the sync module or Power Supply should fail to operate (i.e. – contacts remain closed)
– All notification appliances shall be listed for Special Applications:
  - Strobes are designed to flash at 1-flash-per-second minimum over their "Regulated Input Voltage Range"
    - **Note:** NFPA-72 specifies a flash rate of 1-to-2 flashes per second, and ADA Guidelines specify a flash rate of 1-to-3 flashes per second
  - All candela ratings represent minimum-effective Strobe intensity, based on ®UL Standard 1971
  - Series ZH 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%)
  - Series ZH horns are listed under ®UL Standard 464 for audible signal appliances (Indoor use only)

Mounting Diagram



(Shown In Inches)

Mounting Options

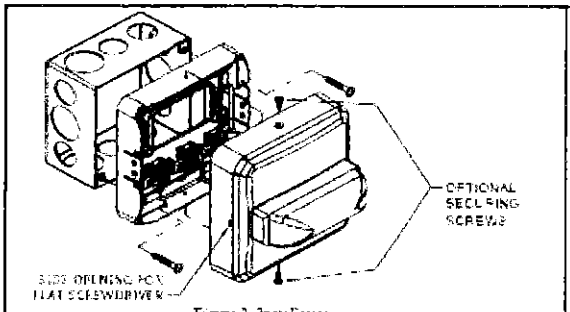


Figure 3: Installation

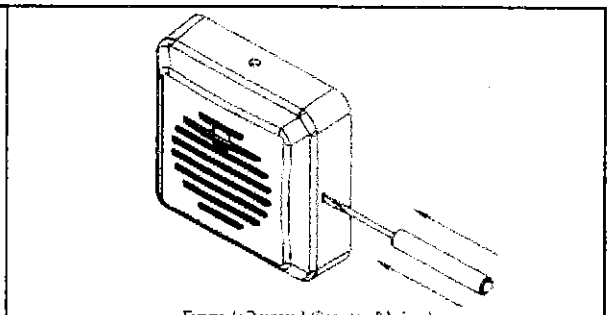


Figure 4: Removal (See step 8 below)

1. Install mounting plate as shown in figure 1 to a single-gang, double-gang, 4" square, 4" octagon, or a 3 ½" octagon backbox with the provided pan head screws. To remove dust cover, place thumb and index finger on top edges of cover and pull off cover.
2. Connect field wiring per figures 2 and 3.
3. Address wires back into backbox.
4. Place dust cover over mounting plate to protect the terminals while performing wiring continuity check.
5. Remove dust cover before snapping or installing the appliance onto the mounting plate per fig 3.
6. Important: Device only has one mounting orientation. Match the top of the base to the top of the device.
7. If it is desired to further secure the device to the base, then two optional screws are provided. To install these screws punch out the screw holes located at the top and bottom of the device.
8. To remove the appliance, push a small flat-blaced screwdriver into the side opening. The screwdriver must clear the snap release opening by ¼" to disengage the snap. Do not pry off housing with the screw driver. Apply pressure with screw driver, inserted in either side opening as shown in Fig 4 to release the housing.

Technical Data

		ZH and ZH-MC Horn Reverberant dBA per UL464 [ZH-MC and ZH at 24V]		
		16.0V	24V	33.0V
Continuous Horn	High	83	87	90
	Low	77	81	83
Code 3 Horn or March Time*	High	79	82	86
	Low	72	76	79

*Available in sync mode only

In (Amps)	*ZH Horn Current Draw*	
	Horn Setting	16-33 Volts
DC	High*	0.044
	Low*	0.018
FWR	High*	0.075
	Low*	0.045

*Current Draw is the same for the Continuous Horn, Code 3 Horn and March Time Settings.

Technical Data – (continued)

Models*	Ⓤ UL Listed Models and Ratings: Operating Voltage (Special Application) [Per Ⓤ UL1971] (VDC/VRMS)	Voltage Range [Per Ⓤ ULC-S526-02] (VDC/VRMS)	Horn	Mounting	Strobe Candela (cd)
ZR-MC	16.0-33.0	20.0-31.0	—	Wall	15/30/75/110
ZR-HMC	16.0-33.0	20.0-31.0	—	Wall	135/185
ZR-MC-C	16.0-33.0	20.0-31.0	—	Ceiling	15/30/75/95
ZR-HMC-C	16.0-33.0	20.0-31.0	—	Ceiling	115/177
ZH-MC	16.0-33.0	20.0-31.0	X	Wall	15/30/75/110
ZH-HMC	16.0-33.0	20.0-31.0	X	Wall	135/185
ZH-MC-C	16.0-33.0	20.0-31.0	X	Ceiling	15/30/75/95
ZH-HMC-C	16.0-33.0	20.0-31.0	X	Ceiling	115/177
ZH	16.0-33.0	20.0-31.0	X	Wall or Ceiling	— —

* Available in red and white

Ⓤ UL Current Ratings (ZR Strobe Only)
Maximum RMS Current (AMPS)

		MC				HMC		MC-C				HMC-C	
		15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
DC	16-33VDC	0.064	0.098	0.175	0.233	0.318	0.445	0.069	0.111	0.200	0.264	0.318	0.445
FWR	16-33VRMS	0.108	0.164	0.268	0.368	0.462	0.684	0.117	0.180	0.297	0.398	0.462	0.684

Ⓤ UL Current Ratings ZH Horn/Strobe
Maximum RMS Current (AMPS)

		Horn Setting	MC				HMC		MC-C				HMC-C	
			15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
DC	16-33VDC	High*	0.078	0.113	0.195	0.259	0.371	0.506	0.087	0.131	0.222	0.292	0.371	0.506
		Low*	0.070	0.107	0.188	0.246	0.324	0.455	0.075	0.121	0.213	0.277	0.324	0.455
FWR	16-33VRMS	High*	0.141	0.200	0.302	0.406	0.521	0.722	0.149	0.216	0.331	0.436	0.521	0.722
		Low*	0.123	0.179	0.290	0.391	0.497	0.699	0.131	0.195	0.319	0.421	0.497	0.699

* Current Draw is the same for the Continuous Horn; Code 3 Horn and March Time Settings

Details for Ordering — (Including Mounting Options & Agency Approvals)

Model Number	Part Number	Description	Mounting Options*	Agency Approvals: UL	ULC	FM	CSFM
ZH-R	500-636159	Z Horn: Red	B,D,E,F	X	X	X	X
ZH-W	500-636160	Z Horn: White	B,D,E,F	X	X	X	X
ZH-MC-R	500-636161	Z Horn: Multi Candela (Wall), Red	B,D,E,F	X	X	X	X
ZH-MC-W	500-636162	Z Horn: Multi Candela (Wall), White	B,D,E,F	X	X	X	X
ZH-HMC-R	500-636163	Z Horn: Hi Multi Candela (Wall), Red	B,D,E,F	X	X	X	X
ZH-HMC-W	500-636164	Z Horn: Hi Multi Candela (Wall), White	B,D,E,F	X	X	X	X
ZH-MC-CR	500-636165	Z Horn: Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZH-MC-CW	500-636166	Z Horn: Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZH-HMC-CR	500-636167	Z Horn: Hi Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZH-HMC-CW	500-636168	Z Horn: Hi Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZR-MC-R	500-636169	Z Strobe: Multi Candela (Wall), Red	B,D,E,F	X	X	X	X
ZR-MC-W	500-636170	Z Strobe: Multi Candela (Wall), White	B,D,E,F	X	X	X	X
ZR-HMC-R	500-636171	Z Strobe: Hi Multi-Candela (Wall), Red	B,D,E,F	X	X	X	X
ZR-HMC-W	500-636172	Z Strobe: Hi Multi-Candela (Wall), White	B,D,E,F	X	X	X	X
ZR-MC-CR	500-636173	Z Strobe: Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZR-MC-CW	500-636174	Z Strobe: Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZR-HMC-CR	500-636175	Z Strobe: Hi Multi Candela (Ceiling), Red	B,D,E,F	X	X	X	X
ZRS-HMC-CW	500-636176	Z Strobe: Hi Multi Candela (Ceiling), White	B,D,E,F	X	X	X	X
ZBB-R	500-636193	Accessory — (Includes base, dust cover, mounting screws and installation sheet)					
ZBB-W	500-636194	Accessory — (Includes base, dust cover, mounting screws and installation sheet)					

X = listed / approved * = Refer to catalog sheet #: 2585 for detailed mounting options

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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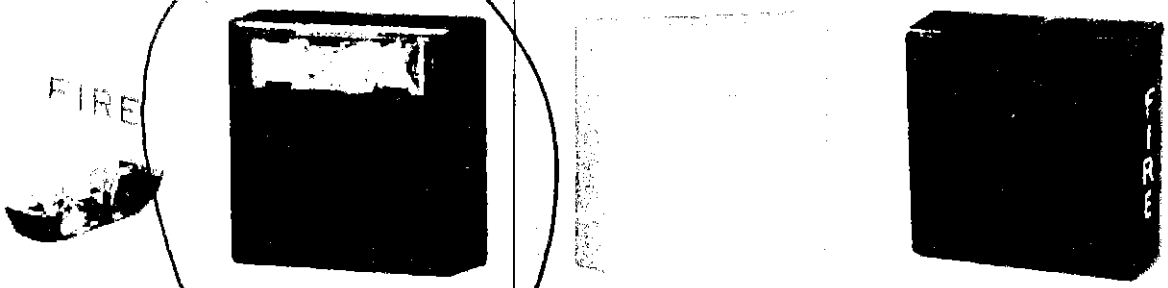
(SII)
Printed in U.S.A.

December 2009
Supersedes sheet dated 7/07 (Rev. 1)

'08 Series Notification Appliances

AS / AH & AS – Audible Strobe Appliances and AH Audibles

Application: Indoor / Outdoor



AS-MC-CW **AS-MC-R** **AH-W** **AH-R**

Product Overview

- Fast installation with In / Out screw terminals using #12 to #18 AWG wires
- Synchronization can be accomplished using the Siemens DSC sync modules, FS-250 panel, XLS panel, MXL panel, or PAD-3 power supply with built-in sync protocol
- 3 Selectable dBA settings of 90/95/99 dBA Anechoic in both tones
- Selectable Continuous Horn or Temporal (Code 3)
- Wall mounts are available with field-selectable Candela settings: 15/30/75/110cd or 135/185cd
- Ceiling-mount models are available with field-selectable Candela settings: 15/30/75/95cd or 115/177cd (multi-Candela ceiling models)
- Weatherproof models are available for outdoor use
- ®UL Listed & ®ULC Listed;
  FM, CSFM & NYMEA Approved
- ADA / NFPA / UFC / ANSI compliant

Specifications

- Notification appliances shall be Siemens Series AS Audible Strobe appliances and Series AH Audible appliances or approved equals
- Series AS Audible be listed for ®UL Standard 1971 (Emergency Devices for the Hearing-Impaired for Indoor Fire Protection Service)
- Series AH Audible shall be ®UL Listed under Standard 464 (Fire Protective Signaling)
- All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by the Fire Alarm Control Panel (FACP)
- The audible portion of the appliance shall have a minimum of three (3) field-selectable settings for dBA Anechoic levels, and shall have a choice of continuous or temporal (Code 3) audible outputs
- Strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Input Voltage Range, and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens

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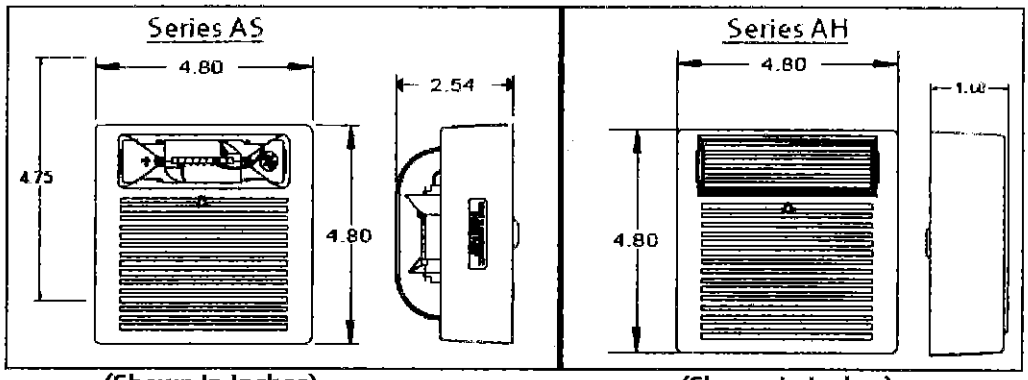
Specifications – (continued)

- Series AS shall be of low-current design
- Strobe intensity, where Multi-Candela appliances are specified, shall have field-selectable settings, and shall be rated per ®UL Standard 1971 for:
  - 15/30/75/110cd
  - 135/185cd
- The appliance, when synchronization is required, shall be compatible with Siemens' DSC Sync Modules or Siemens PAD-3 Power Supplies with built-in Siemens Proprietary Sync Protocol
- The strobes shall not drift out of synchronization at any time during operation
- The strobes shall revert to a non-synchronized flash-rate, if the sync module or Power Supply should fail to operate (i.e. – contacts remain closed)
- The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Siemens synchronization
- The Series AS Audible Strobe and Series AH Audible shall incorporate a Patented Universal Mounting Plate that shall allow mounting to a single-gang, double-gang, 4-inch square, 100mm European type backboxes, or the SHBBS Surface Backbox
- All notification appliances shall listed for Special Applications:
  - Strobes are designed to flash at 1-flash-per-second minimum over their "Regulated Input Voltage Range"
  - ➢ **Note:** NFPA-72 specifies a flash rate of 1-to-2 flashes per second, and ADA Guidelines specify a flash rate of 1-to-3 flashes per second
  - All Candela ratings represent minimum-effective Strobe intensity, based on ®UL Standard 1971

Mounting Diagram



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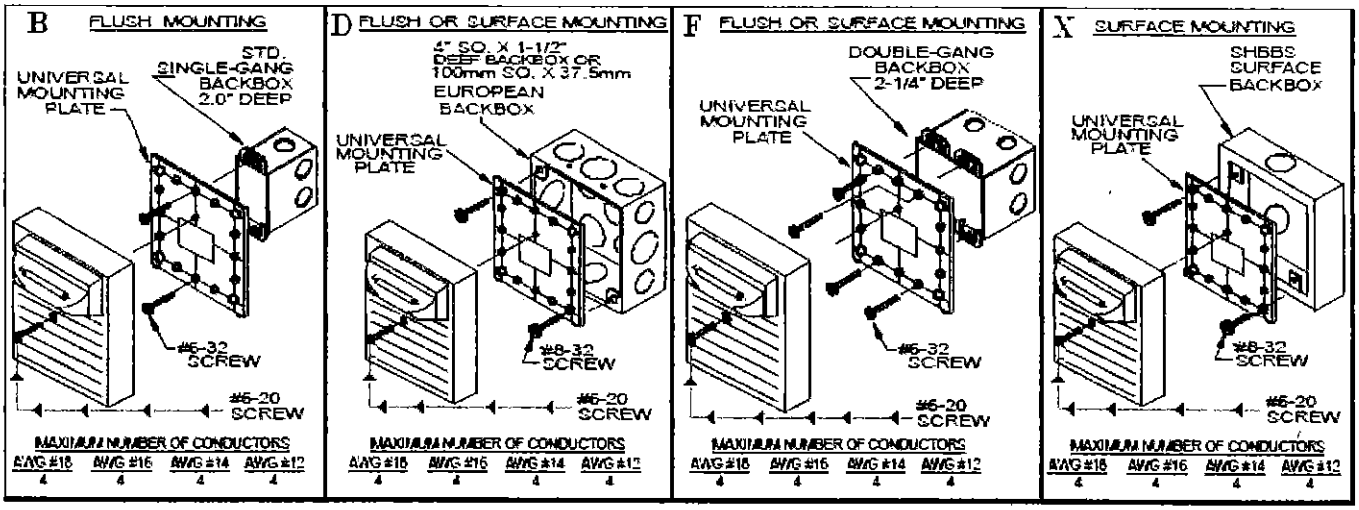
Mounting Options



Technical Data

Model*	®UL Listed Ratings: Operating Voltage (Special Application) [Per ®UL 1971/464] (VDC/VRMS)	®UL Listed Ratings: Strobe Candela (cd)
AS-MC	16.0-33.0	15/30/75/95

* Available in red and white

Description	Volume (LEVEL)	®UL dBA Sound Output: Reverberant [Per ®UL 464 @ 10 Ft.] 16.0 VDC	24.0 VDC	33.0 VDC
Continuous Horn	Low	80	83	86
	Medium	85	88	91
	High	88	91	93
Code 3 Horn or March Time**	Low	75	79	82
	Medium	80	84	86
	High	84	87	89

Available in sync mode only

Notes: 1. Strobe will produce 1 flash per second over the Input Voltage range.
2. This strobe/horn model meets the required light distribution patterns defined in ®UL 1971
3. This model is ®UL Listed for indoor use with a temperature range of +32°F to +120°F (0°C to +49°C) and maximum humidity of 93% + 2% RH. The effect of shipping and storage temperatures shall not adversely affect the performance of the appliance when it is stored in the original cartons and not subjected to misuse or abuse.

Model AH	®Operating Voltage (Special Application) [Per ®UL 464]	®/ULC Listed Models & Ratings: ULC Voltage Range	Maximum RMS Current (AMPS) Lo	Med	Hi
DC	16-33VDC	20-31VDC	0.021	0.043	0.060
FWR	16-33VRMS	20-31VRMS	0.041	0.051	0.090

Volume (LEVEL)	ULC Current Ratings (for Model AH): Average Current (AMPS) 20.0 VDC	24.0 VDC	31.0 VDC
Low	.014	.017	.021
Medium	.020	.025	.030
High	.035	.050	.065

Description	Volume (LEVEL)	®/ULC dBA Sound Output: Reverberant [Per ®UL 464 @ 10 Ft] 16.0 VDC	24.0 VDC	33.0 VDC	Anechoic dBA [Per ULC-S525-99] 20.0 VDC	24.0 VDC	31.0 VDC
Continuous Horn	Low	80	83	86	88	90	92
	Medium	85	88	91	90	95	97
	High	86	91	93	92	97	99
Code 3 Horn or March Time**	Low	75	79	82	88	90	92
	Medium	80	84	86	90	95	97
	High	84	87	90	92	97	99

Available in sync mode only

ULC Directional Characteristics
-3 dBA: 48 degrees left, 41 degrees right
-6 dBA: 50 degrees left, 58 degrees right

Note: All models are ®UL / ULC Listed for indoor use with a temperature range of +0°C to +49°C (+32°F to +120°F) and maximum humidity of 93%.

Technical Data – (continued)

		®UL Current Ratings (AMPS) Maximum RMS Current with Hi dBA Setting			
		15cd	30cd	75cd	95cd
DC	16-33VDC	0.101	0.147	0.235	0.303
FWR	16-33VRMS	0.144	0.202	0.324	0.424

		®UL Current Ratings (AMPS) Maximum RMS Current with Med dBA Setting			
		15cd	30cd	75cd	95cd
DC	16-33VDC	0.085	0.130	0.213	0.285
FWR	16-33VRMS	0.132	0.185	0.312	0.414

		®UL Current Ratings (AMPS) Maximum RMS Current with Low dBA Setting			
		15cd	30cd	75cd	95cd
DC	16-33VDC	0.079	0.120	0.210	0.279
FWR	16-33VRMS	0.122	0.180	0.308	0.409

Note: These notification appliances are ®UL Listed as "Special Application". They are intended to be used only with Siemens notification appliance circuits.

Model	®UL Listed Ratings	
	Operating Voltage (Special Application) [Per ®UL 1971] (VDC/VRMS)	Strobe Candela (cd)
AS-HMC-C*	16.0-33.0	115/177

* Available in red and white

Description	Volume	®UL dBA Sound Output Reverberant [Per ®UL 464 @ 10 Ft.]		
	(LEVEL)	16.0 VDC	24.0 VDC	33.0 VDC
Continuous Horn	Low	80	83	86
	Medium	85	88	91
	High	88	91	93
Code 3 Horn or March Time**	Low	75	79	82
	Medium	80	84	86
	High	84	87	90

Available in sync mode only

Notes: 1. Strobe will produce 1 flash per second over the Input Voltage range.
2. This strobe/horn model meets the required light distribution patterns defined in ®UL 1971
3. This model is ®UL Listed for indoor use with a temperature range of +32°F to +120°F (0°C to +49°C) and maximum humidity of 93% + 2% RH. The effect of shipping and storage temperatures shall not adversely affect the performance of the appliance when it is stored in the original cartons and not subjected to misuse or abuse.

Technical Data – (continued)

UL Current Ratings (AMPS) Maximum RMS Current with Hi dBA Setting			
		135cd	185cd
DC	16-33VDC	0.335	0.460
FWR	16-33VRMS	0.470	0.665

UL Current Ratings (AMPS) Maximum RMS Current with Med dBA Setting			
		135cd	185cd
DC	16-33VDC	0.340	0.465
FWR	16-33VRMS	0.480	0.675

UL Current Ratings (AMPS) Maximum RMS Current with Low dBA Setting			
		135cd	185cd
DC	16-33VDC	0.335	0.470
FWR	16-33VRMS	0.460	0.665

Details for Ordering – (Including Mounting Options & Agency Approvals)

						Agency Approvals			
Model Number	Part Number	Wall Mount	Ceiling Mount	Description	Mounting Options*	UL	ULC	FM	CSFM
AS-MC-R	500-636010	X	–	AS Horn: Multi-Candela, Red	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-MC-W	500-636011	X	–	AS Horn: Multi-Candela, White	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-HMC-R	500-636012	X	–	AS Horn: Hi Multi-Candela, Red	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-HMC-W	500-636013	X	–	AS Horn: Hi Multi-Candela, White	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-MC-CR	500-636006	–	X	AS Horn: Multi-Candela Ceiling, Red	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-MC-CW	500-636007	–	X	AS Horn: Multi-Candela Ceiling, White	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-HMC-CR	500-636008	–	X	AS Horn: Hi Multi-Candela Ceiling, Red	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-HMC-CW	500-636009	–	X	AS Horn: Hi Multi-Candela Ceiling, White	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AS-75-R-WP	500-636016	X	–	AS Horn: 75CD Red, Weatherproof	I	X	X	X	X
AS-75-CR-WP	500-636015	–	X	AS Horn: 75CD Ceiling Weatherproof, Red	I	X	X	X	X
AH-R	500-636003	X	X	AH Horn, Red	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AH-W	500-636004	X	X	AH Horn, White	A,B,D,E,F,G,J,N,R,X	X	X	X	X
AH-R-WP	500-636005	X	X	AH Horn: Weatherproof, Red	K	X	X	X	X

X = listed / approved *= Refer to catalog sheet #: 2585 for detailed mounting options

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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December 2009
Supersedes sheet dated 7/07
(Rev. 1)

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 009
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Firemans Key Boxes (Para 2.15)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review ☐ Revise & Resubmit
☐ Approved as Noted for A/E Review ☐ Rejected

Spec. Section 283111	Submittal No. 009
Date 6/29/2010	By Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

Architect's S

SUBMITTAL REVIEW

STATUS: APPROVED

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval

KNOX-BOX®

Rapid Entry System

Helping the Fire Department Protect Your Property

Para 2.15

KNOX-BOX® access provides faster emergency response without forced entry damage.

KNOX

The Complete UL Listed, One-Key Fire Department Emergency Access System.

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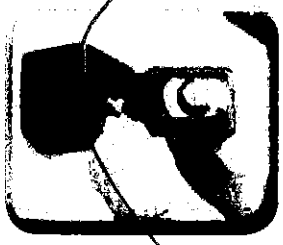
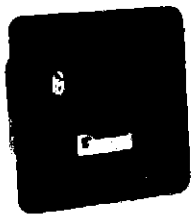
Serving Fire Departments Since 1975

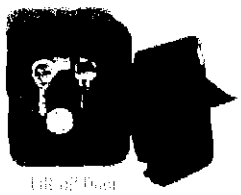
Knox-Box® 3200 Series



3200 Series KNOX-BOX®

This leading high security, heavy-duty key box is used for most commercial applications including businesses, schools, government and public buildings, community associations and apartment complexes.





Dimensions: Surface - Lift-Off Door 5"H x 4"W x 3-3/4"D
Hinged Door 4"H x 5"W x 3-3/4"D
Recessed - 7"H x 7"W (flange only)

Weight: Approx. 10 lbs.

Options:
- Hinged or lift-off door models.
- UL listed alarm tamper switches that connect to building's security system.
- Recessed Mounting Kit for new concrete or masonry construction.

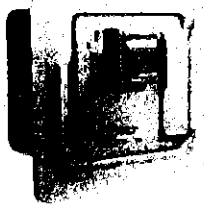
Finish: Knox-Coat® proprietary coating system with 6 times longer protection than standard powder coat.

Colors: Dark bronze, black or aluminum.

Knox-Vault® 4100 Series

NEW 4100 Series KNOX-VAULT®

A new Knox-Box that's for those applications where a 3200 Series is too small yet the 4400 Series is too large. In addition to keys and access cards, the 4100 also holds the Knox FDC Keywrench allowing departments to keep a keywrench on site.



Dimensions: Surface - 6"H x 6"W x 4-1/2"D
Recessed - 8-1/2"H x 8-1/2"W(flange only) x 4-1/2"D

Weight: Approx. 19 lbs.

Options:
- UL listed alarm tamper switches that connect to building's security system.
- Recessed Mounting Kit for new concrete or masonry construction.
- Access card/Keywrench holder
- Dual lock options.

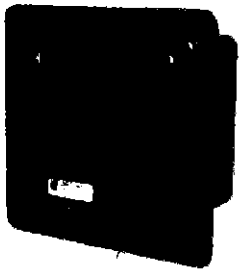
Finish: Knox-Coat® proprietary coating system with 6 times longer protection than standard powder coat.

Colors: Dark bronze, black or aluminum.

Knox-Vault® 4400 Series

4400 Series KNOX-VAULT®

Key vaults protect building keys, access cards and floor plans for larger businesses, industrial properties, public buildings and universities.



Dimensions: Surface - 7"H x 7"W x 5"D
Recessed - 9-1/2"H x 9-1/2"W(flange only) x 5"D

Weight: Approx. 29 lbs.

Options:
- UL listed alarm tamper switches that connect to building's security system.
- Recessed Mounting Kit for new concrete or masonry construction.
- Dual lock options.

Finish: Knox-Coat® proprietary coating system with 6 times longer protection than standard powder coat.

Colors: Dark bronze, black or aluminum.

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 010
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: P/D: Batteries and Size Calculations (Para 1.7 B 3)

Contractor:
Consigli Construction Co., Inc.

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review
☐ Approved as Noted for A/E Review
☐ Revise & Resubmit
☐ Rejected

Spec. Section	283111	Submittal No.	010
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect:
Harriman Associates
Hart, Timothy

Architect's Stamp

SUBMITTAL REVIEW

STATUS: APPROVED

Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 **BY:** R. Barbarino

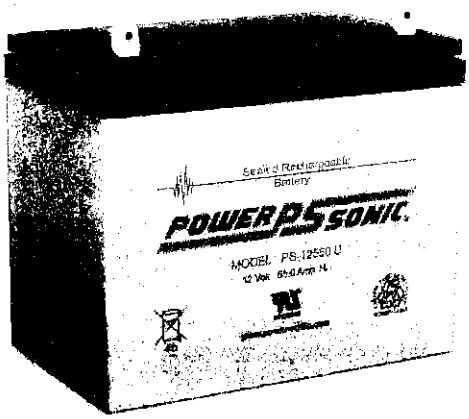
Engineer / Government / Other Approval

PS-12550 12 Volt 55.0 AH

Rechargeable Sealed Lead Acid Battery

Para 1.7 b 3

We've Got The Power.™

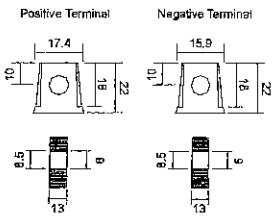


Features

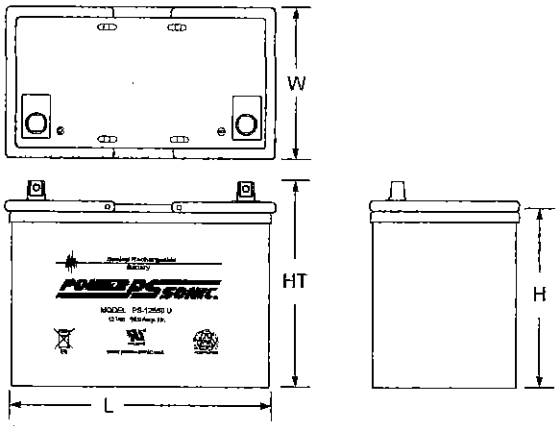
- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Integrated ABS carrying handles for ease of movement
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

Terminals (mm)

- U: Universal terminals: Heavy-duty posts with 'nut & bolt' fasteners



Physical Dimensions: in (mm)



L: 9.04 (230) **W:** 5.45 (138) **H:** 8.15 (207) **HT:** 8.98 (228)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

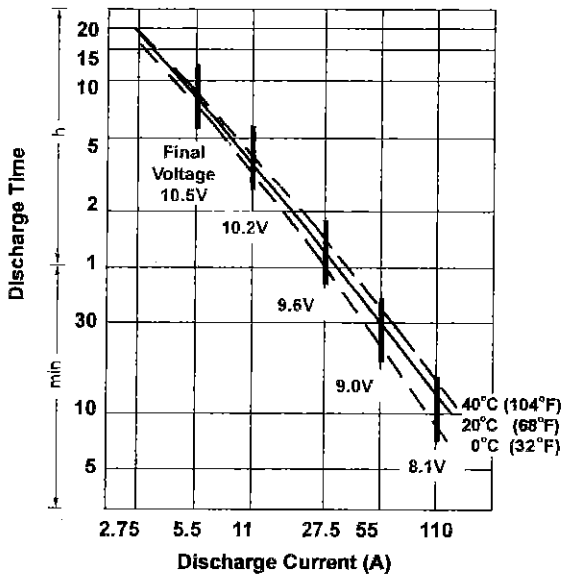
Performance Specifications

Nominal Voltage	12 volts (6 cells)
Nominal Capacity	
20-hr. (2.75A to 10.50 volts)	55.0 AH
10-hr. (5.1A to 10.50 volts)	51.0 AH
5-hr. (8.8A to 10.20 volts)	44.0 AH
1-hr. (30.6A to 9.00 volts)	30.6 AH
15-min. (96A to 9.00 volts)	24.0 AH
Approximate Weight	36.0 lbs. (16.33 kg)
Energy Density (20-hr. rate)	1.64 W-h/in3 (100.30 W-h/l)
Specific Energy (20-hr. rate)	17.65 W-h/lb (38.91 W-h/kg)
Internal Resistance (approx.)	7 milliohms
Max Discharge Current (7 Min.)	165.0 amperes
Max Short-Duration Discharge Current (10 Sec.)	410.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C))	
1 Month	97%
3 Months	91%
6 Months	83%
Operating Temperature Range	
Charge	-4°F (-20°C) to 122°F (50°C)
Discharge	-40°F (-40°C) to 140°F (60°C)
Case	ABS Plastic
Power-Sonic Chargers	PSC-1210000A-C

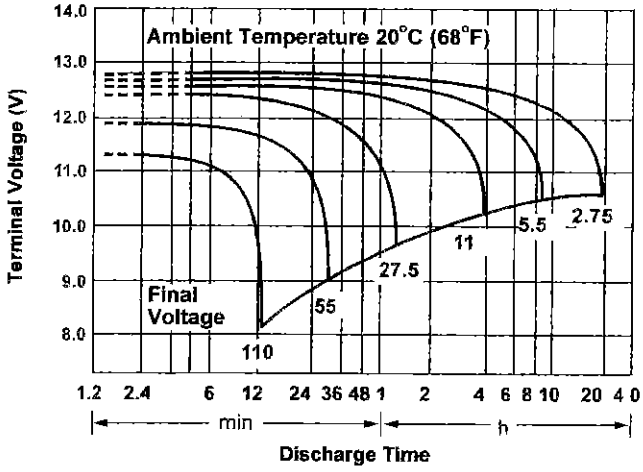
Constant Power Discharge Ratings

MODEL	FINAL VOLTAGE	WATTS PER CELL @ 25° C						
		5 MIN	10 MIN	15 MIN	20 MIN	30 MIN	45 MIN	60 MIN
PS-12550	1.75	320	210	184	153	115	87	72
	1.70	342	225	190	158	118	89	73
	1.67	354	230	194	160	120	90	74

Discharge Time vs. Discharge Current



Discharge Characteristics



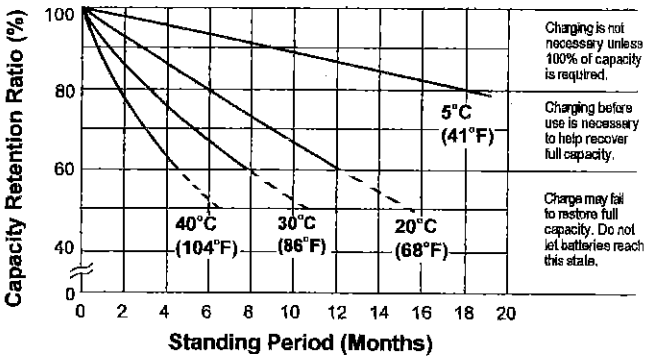
Charging

Cycle Applications: Limit initial current to 16.5A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 550mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

"Float" or "Stand-By" Service: Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Note: Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Shelf Life & Storage



Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

Further Information

Please refer to our website www.power-sonic.com for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc..

Contact Information

www.power-sonic.com

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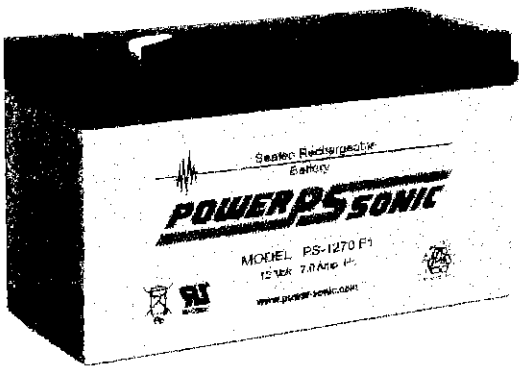
Tel: +1-650-364-5001
Fax: +1-650-366-3662
battery@power-sonic.com

CORPORATE OFFICE • 7550 Panasonic Way • San Diego, CA 92154 • USA • Tel: +1-619-661-2020 • Fax: +1-619-661-3650

PS-1270 12 Volt 7.0 AH

Rechargeable Sealed Lead Acid Battery

We've Got The Power.™



Features

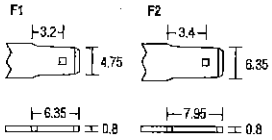
- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

Terminals (mm)

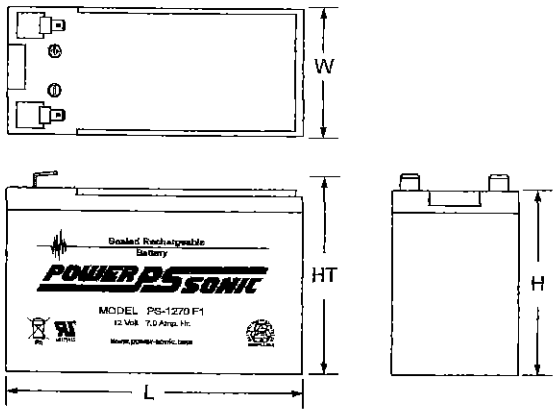
- F1 - Quick disconnect tabs, 0.187" x 0.032"- Mate with AMP. INC. FASTON "187" series

----- OR -----

- F2 - Quick disconnect tabs, 0.250" x 0.032" - Mate with AMP. INC FASTON "250" series



Physical Dimensions: in (mm)



L: 5.95 (151) W: 2.56 (65) H: 3.70 (94) HT: 3.86 (98)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

Performance Specifications

Nominal Voltage ..... 12 volts (6 cells)

Nominal Capacity

20-hr.	(350mA to 10.50 volts)	7.00 AH
10-hr.	(650mA to 10.50 volts)	6.50 AH
5-hr.	(1.2A to 10.20 volts)	6.00 AH
1-hr.	(4.5A to 9.00 volts)	4.50 AH
15-min.	(14A to 9.00 volts)	3.50 AH

Approximate Weight ..... 4.80 lbs. (2.18 kg)

Energy Density (20-hr. rate) ..... 1.49 W-h/in3 (90.95 W-h/l)

Specific Energy (20-hr. rate) ..... 17.50 W-h/lb (38.58 W-h/kg)

Internal Resistance (approx.) ..... 23 milliohms

Max Discharge Current (7 Min.) ..... 21.0 amperes

Max Short-Duration Discharge Current (10 Sec.) ..... 70.0 amperes

Shelf Life (% of nominal capacity at 68°F (20°C))

1 Month	97%
3 Months	91%
6 Months	83%

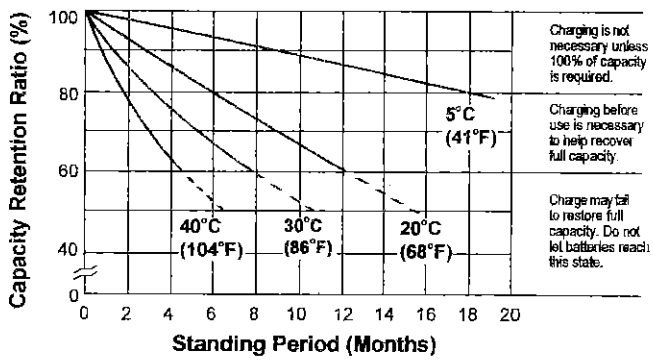
Operating Temperature Range

Charge	-4°F (-20°C) to 122°F (50°C)
Discharge	-40°F (-40°C) to 140°F (60°C)

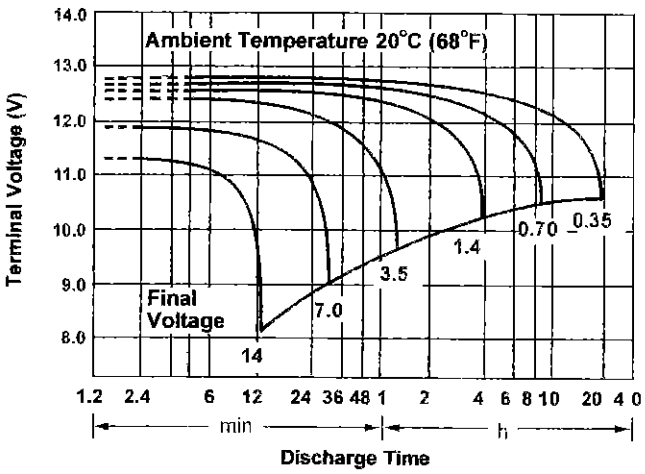
Case ..... ABS Plastic

Power-Sonic Chargers PSC-12800A, 12800A-C

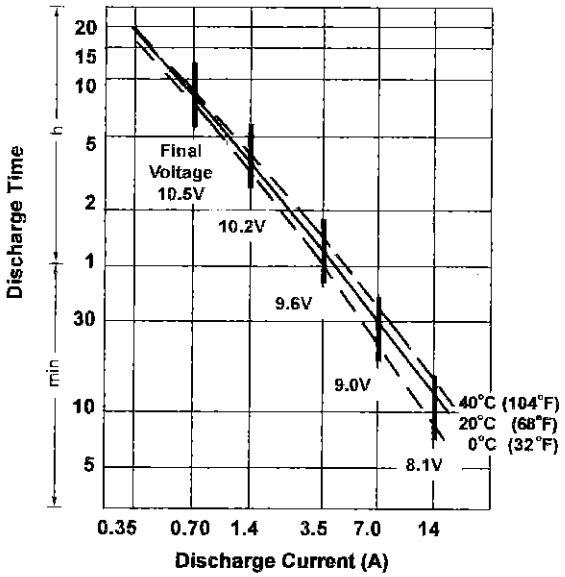
Shelf Life & Storage



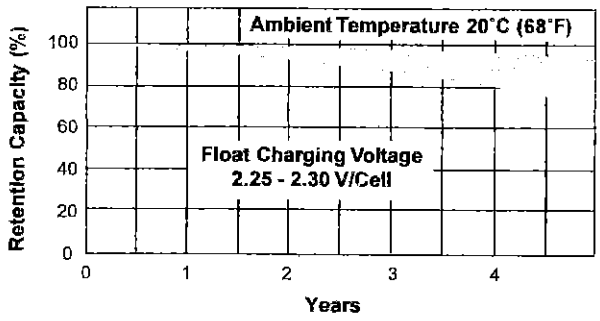
Discharge Characteristics



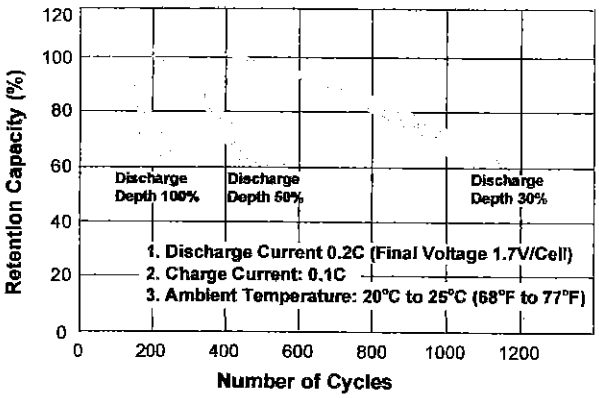
Discharge Time vs. Discharge Current



Life Characteristics in Stand-By Use



Life Characteristics in Cyclic Use



Charging

Cycle Applications: Limit initial current to 2.1A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 70mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

"Float" or "Stand-By" Service: Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Note: Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

Further Information

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Contact Information

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national-sales@power-sonic.com

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Fax: +1-619-661-3648
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INTERNATIONAL SALES
Tel: +1-650-364-5001
Fax: +1-650-366-3662
battery@power-sonic.com

CORPORATE OFFICE • 7550 Panasonic Way • San Diego, CA 92154 • USA • Tel: +1-619-661-2020 • Fax: +1-619-661-3650

MAIN FIRE ALARM CONTROL PANEL

BATTERY CALCULATIONS - SIEMENS XLS SYSTEM

	UNIT STANDBY	TOTAL STANDBY	UNIT ALARM	TOTAL ALARM
FACP:				
PSC-12 (1)	.15	.150	.15	.150
DLC (2)	.015	.030	.015	.030
ZIC-4A (2)	.019	.038	.019	.038
CRC-6 (1)	.051	.051	.051	.051
DAC-NET(0)	.023	.000	.023	.000
LPB (0)	.050	.000	.050	.000
LVM (0)	.025	.000	.050	.000
NIC-C (1)	.150	.150	.302	.302
SCM-8	.014	.000	.220	.000
ZAC-40 (0)	.000	.000	.150	.000
MDACT (1)	.010	.010	.010	.010
PAD3 (3)	.015	.045	.015	.045
		.474		.626

DEVICES:				
SMOKE(211)	.0018	.380	.0018	.380
HEATS(19)	.0018	.034	.0018	.034
PULL(16)	.0018	.029	.0018	.029
MON. MOD(10)	.0018	.018	.0018	.018
RELAY MOD(10)	.0018	.018	.0018	.018
DUCT SMOKE(4)	.0018	.072	.0018	.072
ISOLATOR MOD (0)	.0018	.000	.0018	.000
Horn/Strobe(15cd))	6		.060	.360
Horn/Strobe(75cd)			.165	.000
Horn/Strobe(110cd)	6		.220	1.32
Horn/Strobe(177cd)			.420	
Strobe(15cd)			.060	.000
Strobe(75cd)	12		.165	1.98
Strobe(110cd)			.220	.000
DOOR HOLDER(0)			.063	.000
BEACON(1)			.375	.375
TOTAL:		0.725		5.212
60/10 :		X60=		X.0663
TOTALS:		43.55		0.345

TOTAL AMP/HOURS REQUIRED: 43.90AH
WE ARE PROVIDING (2) 55AH BATTERIES FOR THIS PROJECT

BATTERY CALCULATIONS - BOOSTER POWER SUPPLY
Typical 3 Boosters

	UNIT STANDBY	TOTAL STANDBY	UNIT ALARM	TOTAL ALARM
PAD3:				
MAIN	.035	.035	0	0
DEVICES:				
Horn/Strobe(15cd)		(14)	.060	.840
Horn/Strobe(75cd)		(5)	.165	.825
Horn/Strobe(110cd)			.220	0.00
Horn/Strobe(177cd)			.420	0.00
Strobe(15cd)		17	.060	1.02
Strobe(75cd)		15	.165	2.475
Strobe(110cd)			.220	0.00
Door Holder			.063	0.00
BEACON(0)			.375	.000
TOTAL:		.035		5.163
60/10 :		X60		X.0663
TOTALS:		2.10		0.344

TOTAL AMP/HOURS REQUIRED: 2.45 AH

WE ARE PROVIDING (2) 7AH BATTERIES FOR THIS PROJECT

For internal use only

SIEMENS

Building Technologies
Fire Safety & Security Products

Product Information

Product Line: Fire Detection

Date: November 17, 2009

Distribution (please mark):

Product ☐ **Solution** ☐ **Multi-channel** ☒

Product family:
Siemens Fire Systems

Siemens Fire Systems Compliant with 2009 American Recovery and Reinvestment Act (ARRA) Funded Job Requirements

Pertaining to the Buy American Act as it relates to ARRA funded projects (FAR 52.225-21 through FAR 52.225-24), Fire safety systems are treated as a special case as identified in FAR 52.225-21.

FAR 52.225-21
"Construction material" means an article, material, or supply brought to the construction site by the Contractor or subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material."

Under ARRA funding requirements fire alarm and life safety systems are treated in their entirety as one product. Siemens Fire Alarm system installations located in the United States are considered to be a "domestic product".

Additional information

If you need additional information, please contact Evan Barna.

Customer Support:
E-mail: evan.barna@siemens.com

CONSIGLI
Est. 1905

Submittal

Job: 854
Maine Health Office Bldg Reno
110 Free Street
Portland, ME 04101

Spec Section No: 283111
Submittal No: 011
Revision No: 0
Sent Date: 6/29/2010
Due Date: 7/13/2010

Spec Section Title: Digital, Addressable Fire-Alarm System

Submittal Title: S/D: Fire Alarm System (para 1.7B)

Contractor:
Consigli Construction Co., Inc.

Architect:
Harriman Associates
Hart, Timothy

SEE DRAWINGS FOR NOTES

Contractor's Stamp

Consigli Construction Co., Inc.
84 Middle Street - Portland, ME 04101

☒ Approved for A/E Review ☐ Revise & Resubmit
☐ Approved as Noted for A/E Review ☐ Rejected

Spec. Section	283111	Submittal No.	011
Date	6/29/2010	By	Tim Schneider

If so marked, approval is given for design only. It does not relieve the subcontractor from complying with the requirements of the contract, contract drawings and specifications. The subcontractor shall be responsible for all dimensions, quantities, schedules and field conditions.

Architect's S

SUBMITTAL REVIEW

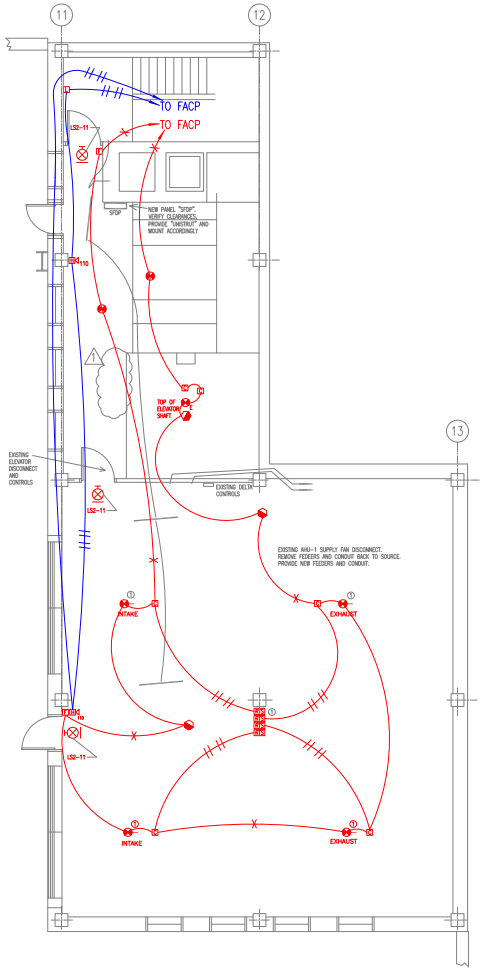
STATUS: APPROVED WITH NOTES

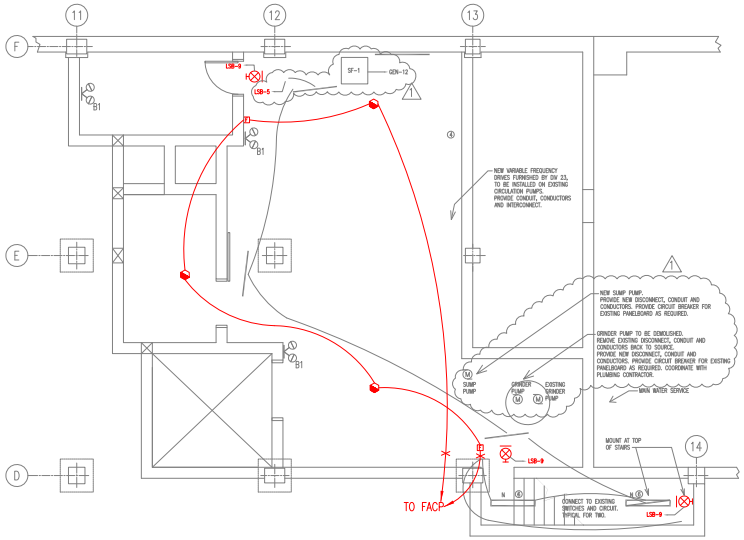
Review is only for conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for the dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication process or the means, methods, techniques, sequences and procedures of construction and for coordination of the work of all trades.

HARRIMAN
ARCHITECTS - ENGINEERS
AUBURN, ME - PORTLAND, ME - MANCHESTER, NH

DATE: 8/3/2010 BY: R. Barbarino

Engineer / Government / Other Approval





LEGEND:

- PS = PULL STATION
- = SMOKE DETECTOR
- H/L = HORN/LIGHT / C = DENOTES CEILING MOUNTED
- L = LIGHT ONLY / C = DENOTES CEILING MOUNTED
- BPS = BOOSTER POWER SUPPLY
- FATC = FIRE ALARM TERMINAL CABINET
- = BEAM SMOKE DETECTOR / T = DENOTES TRANSMITTER / R = DENOTES RECEIVER
- = HEAT DETECTOR
- FAAN = FIRE ALARM ANNUNCIATOR
- = DUCT SMOKE DETECTOR
- RTS = REMOTE TEST STATION
- C = CONTROL MODULE
- = SLC LOOP
- = NAC CIRCUITS
- X = 2Cφ14AWG TW FPLR - SLC LOOP
- // // = 4Cφ14AWG - NAC CIRCUITS

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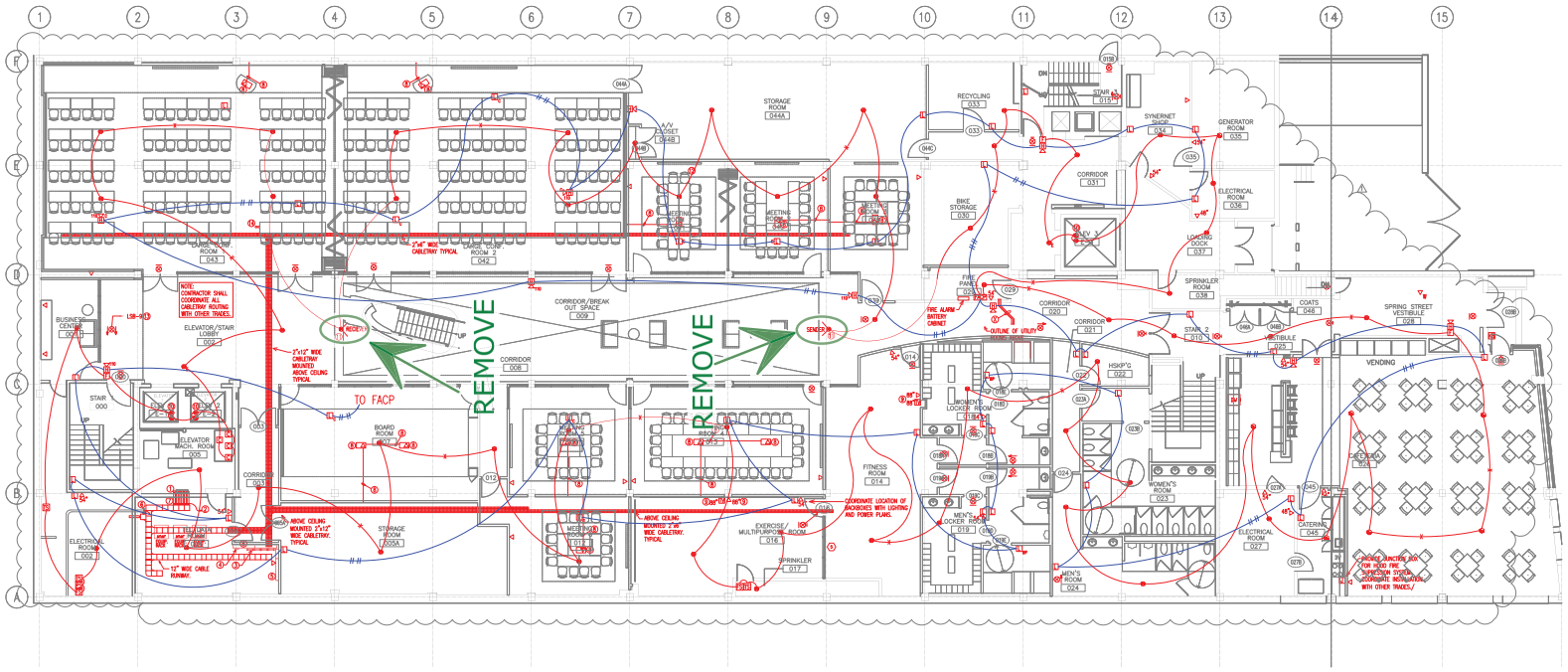
ELECTRICAL NEW WORK
PENTHOUSE &
SUB-BASEMENT PLAN

WRH RJB

E20.5



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LEGEND:

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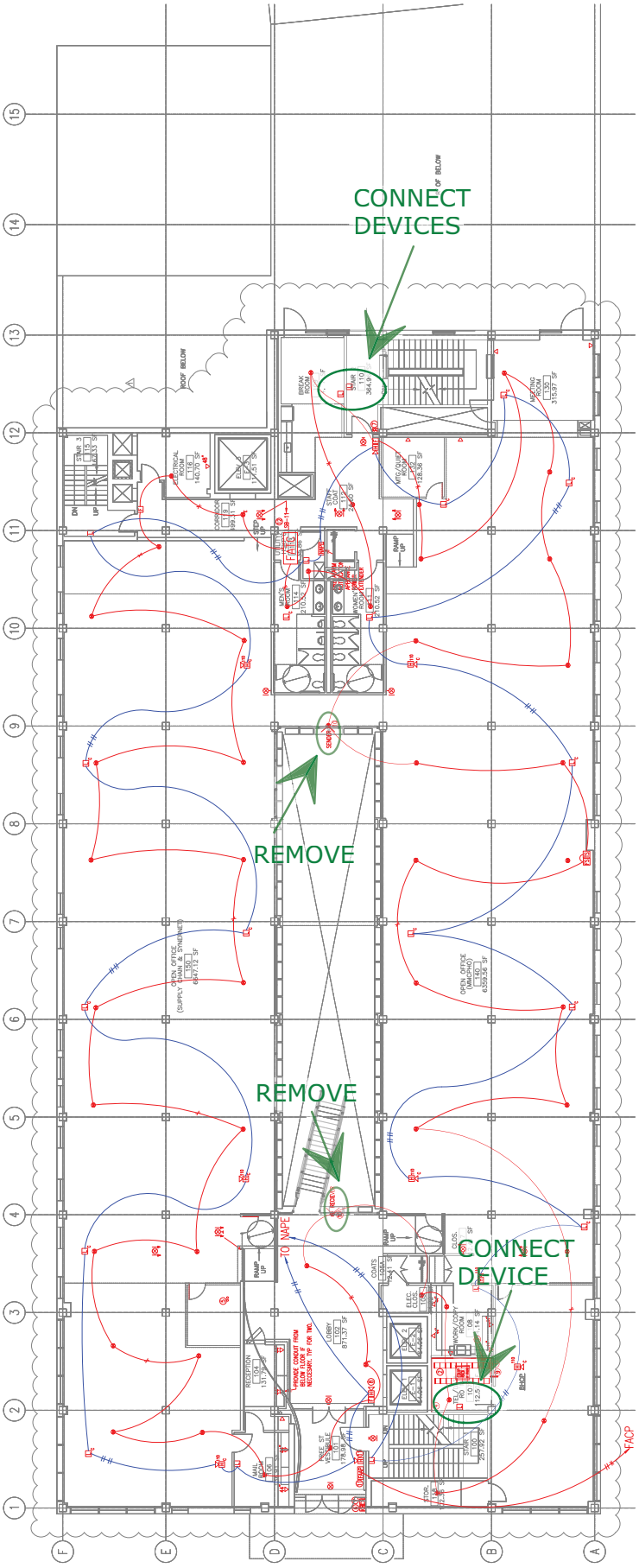
- = DUCT SMOKE DETECTOR
- = REMOTE TEST STATION
- = CONTROL MODULE
- = SLC LOOP
- = NAC CIRCUITS
- = 2C@14AWG TW PAIR - SLC LOOP
- = 4C@14AWG - NAC CIRCUITS

ELECTRICAL SYSTEMS
GROUND FLOOR PLAN
WRH RJB

E30.0

GROUND FLOOR PLAN | E1
1/8" = 1'-0" | 0 4" 8" 12" | REF: -



- BEAM SMOKE DETECTORS TO BE RELOCATED TO THE SKYLIGHT OPENING AT ROOF LEVEL.

- CEILING MOUNTED DEVICES IN "TECH ZONE" TYPE CEILING SHALL BE MOUNTED IN THE 6" UTILITY STRIP OF CEILING.

LEGEND:
- = PULL STATION
- = SMOKE DETECTOR
- = HORN/LIGHT / C = CEILING MOUNTED
- = LIGHT ONLY / C = CEILING MOUNTED
- = BOOSTER POWER SUPPLY
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- = BEAM SMOKE DETECTOR / T = DENOTES TRANSMITTER / R = DENOTES RECEIVER
- = HEAT DETECTOR
- = FIRE ALARM ANNUNCIATOR
- = DUCT SMOKE DETECTOR
- = REMOTE TEST STATION
- = CONTROL MODULE
- = SLC LOOP
- = NAC CIRCUITS
- X = #18/4AWG TW PAIR - SLC LOOP
- = #12/4AWG - NAC CIRCUITS

ELECTRICAL SYSTEMS
FIRST FLOOR PLAN
RJB
VRH
E30.1

FIRST FLOOR PLAN
1/8" = 1'-0"
E1
REF: -

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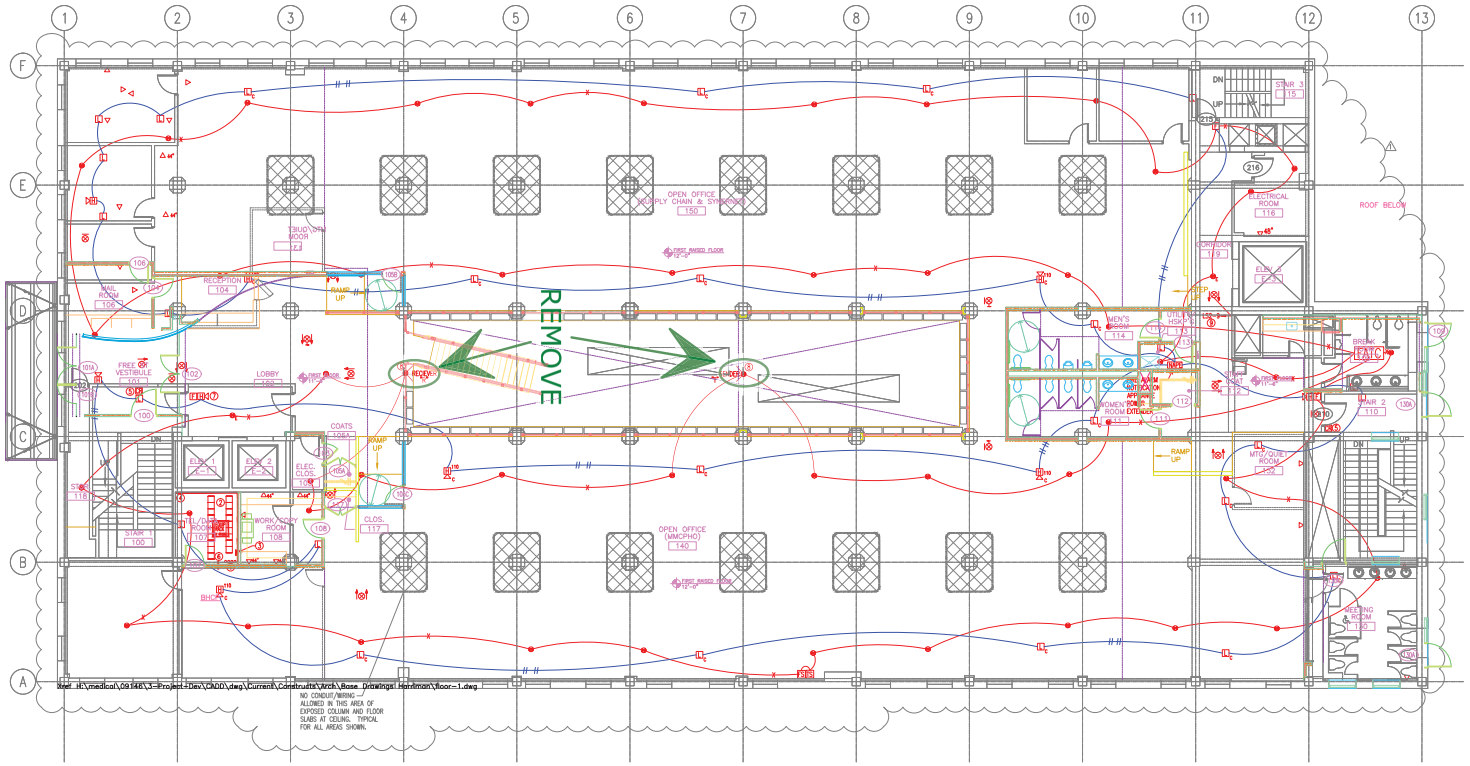

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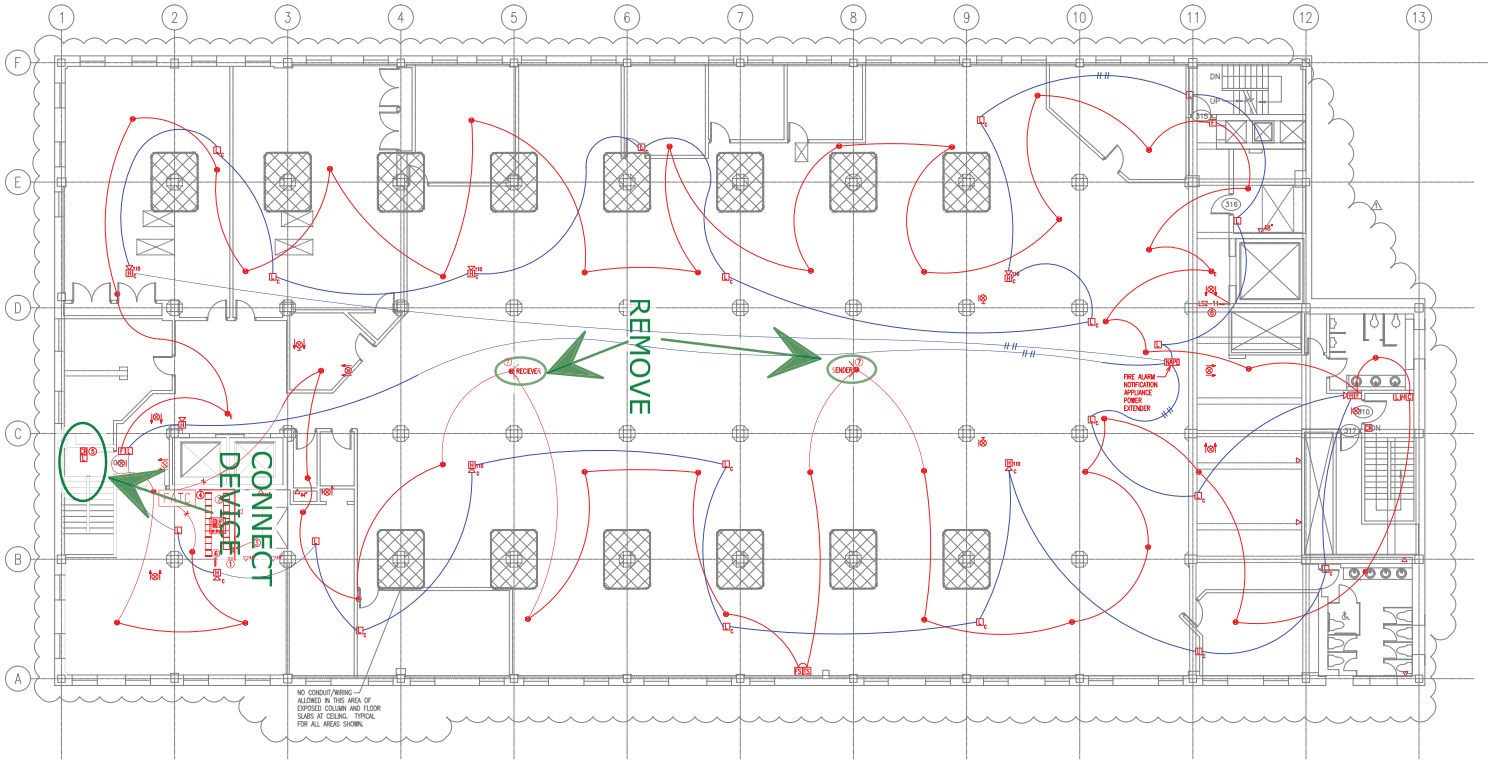
- L = LIGHT ONLY / C = DENOTES CEILING MOUNTED
- BAPS = BOOSTER POWER SUPPLY
- FACP = FIRE ALARM TERMINAL CABINET
- = BEAM SMOKE DETECTOR / T = DENOTES TRANSMITTER / R = DENOTES RECEIVER
- = HEAT DETECTOR
- FANP = FIRE ALARM ANNUNCIATOR
- = DUCT SMOKE DETECTOR
- RTS = REMOTE TEST STATION
- C = CONTROL MODULE
- = SLC LOOP
- = NAC CIRCUITS
- X = 2C@14AWG TW PAIR - SLC LOOP
- // // = 4C@14AWG - NAC CIRCUITS

SECOND FLOOR PLAN
1/8" = 1'-0" | 0 4' 8' 12' | REF: – | E1

ELECTRICAL
SYSTEMS
SECOND FLOOR PLAN
WRH RJB

E30.2



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- RTS = REMOTE TEST STATION
- C = CONTROL MODULE
- —X— = SLC LOOP
- —//—// = NAC CIRCUITS
- X = 2C@14AWG TW FAR – SLC LOOP
- // // = 4C@14AWG – NAC CIRCUITS

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- CEILING MOUNTED DEVICES IN "TECH ZONE" TYPE CEILING SHALL BE MOUNTED IN THE 6" UTILITY STRIP OF CEILING.

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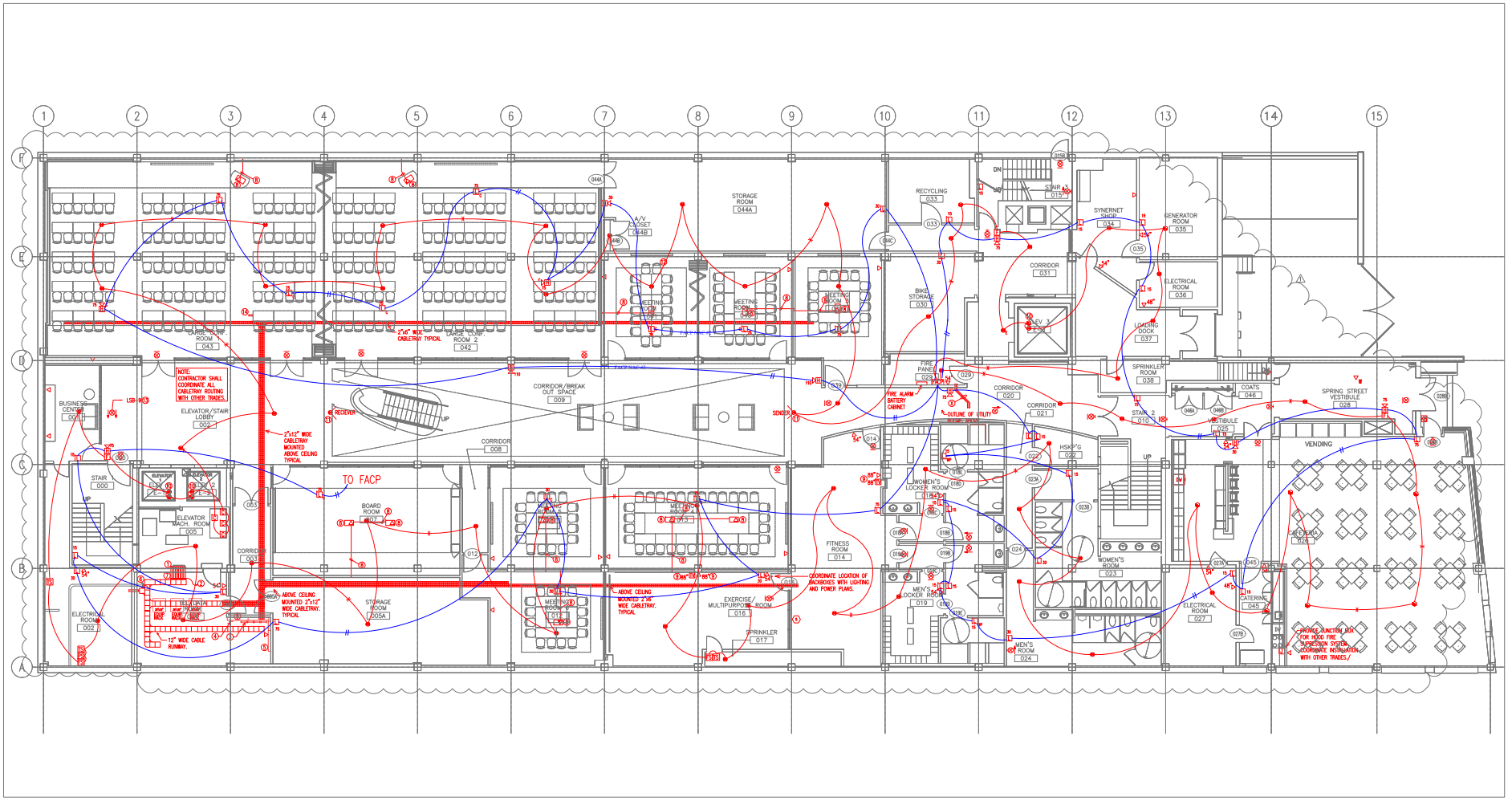
THIRD FLOOR PLAN		
1/8" = 1'-0"	0 4' 8' 12'	REF: –

E1

ELECTRICAL SYSTEMS
THIRD FLOOR PLAN

WRH RJB

E30.3



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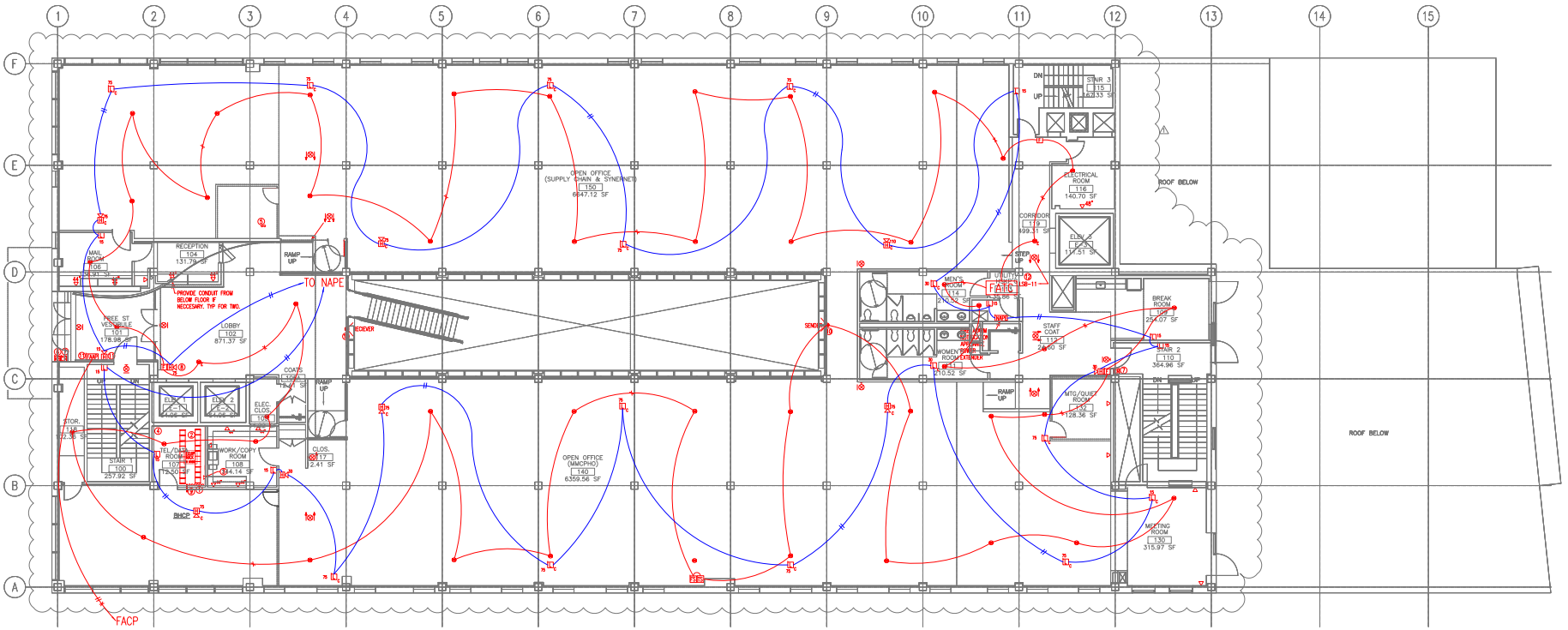
GROUND FLOOR PLAN | E1
1/8" = 1'-0" | 0 4' 8' 12' | REF: –

ELECTRICAL SYSTEMS
GROUND FLOOR PLAN
WRH RJB

E30.0



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LEGEND:

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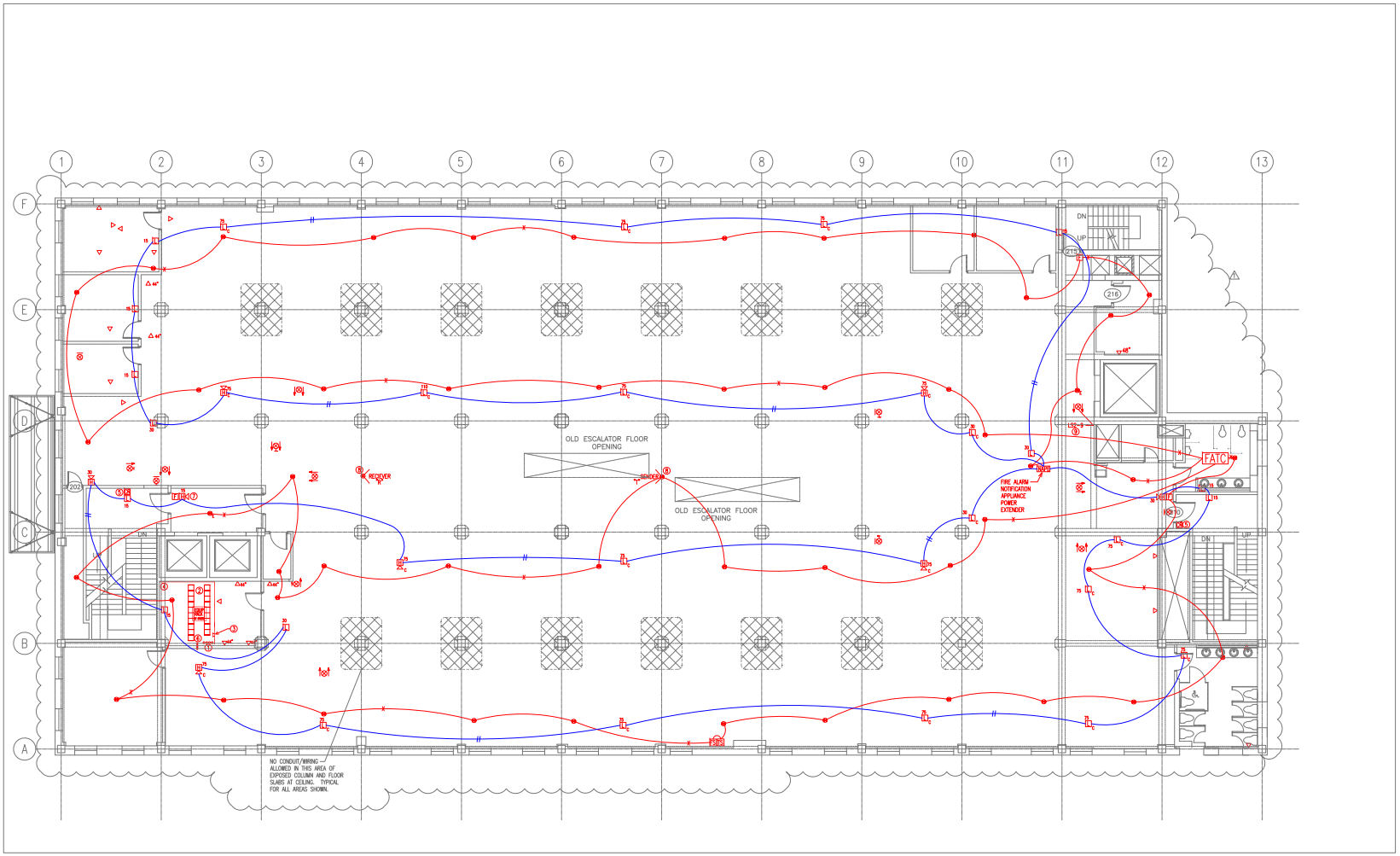
FIRST FLOOR PLAN		
1/8" = 1'-0"	0 4' 8' 12'	REF: -

E1

ELECTRICAL SYSTEMS
FIRST FLOOR PLAN

WRH RJB

E30.1



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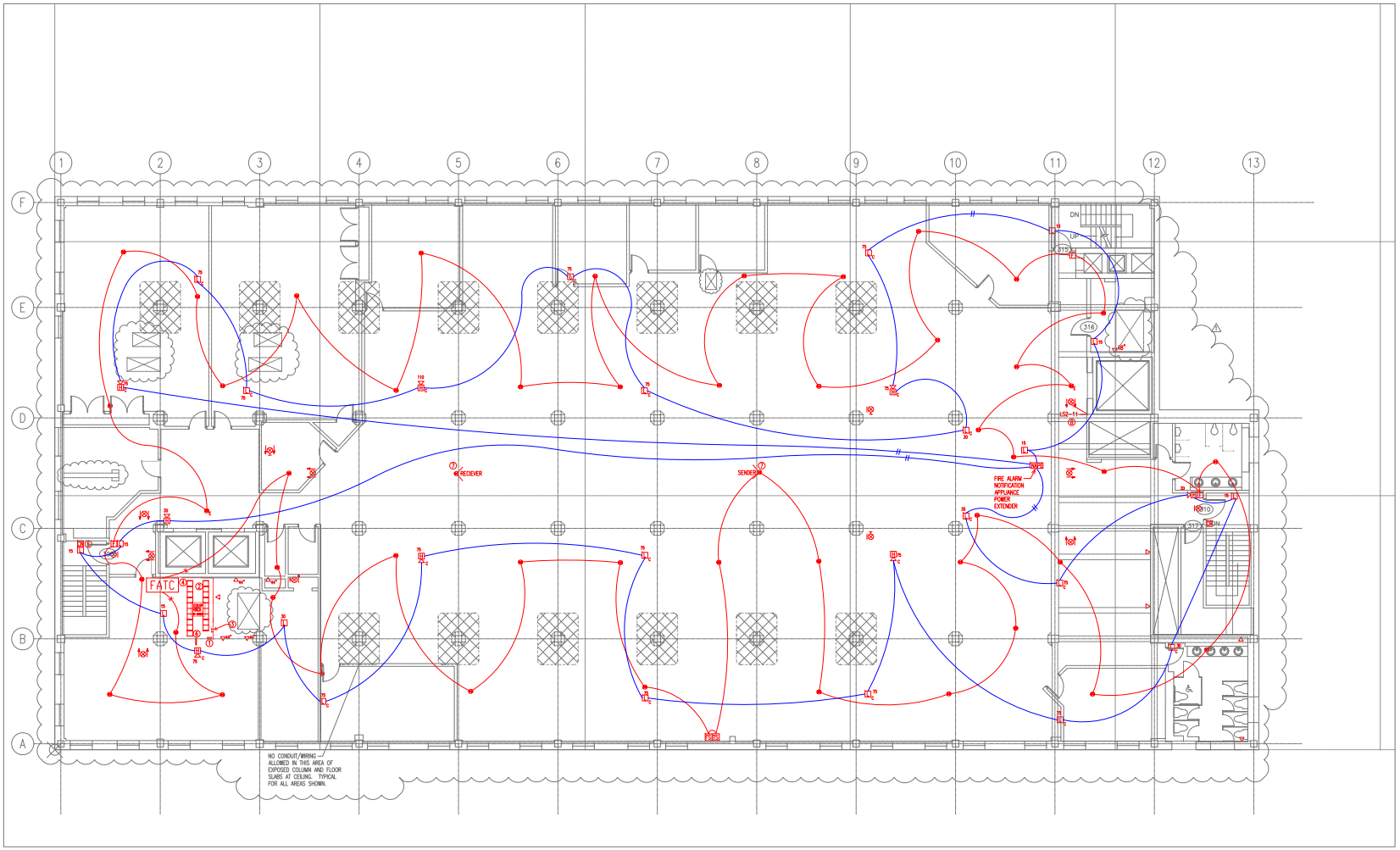
ELECTRICAL
SYSTEMS
SECOND FLOOR PLAN

WRH RJB

E30.2

SECOND FLOOR PLAN		
1/8" = 1'-0"	0 4' 8' 12'	REF: –

E1



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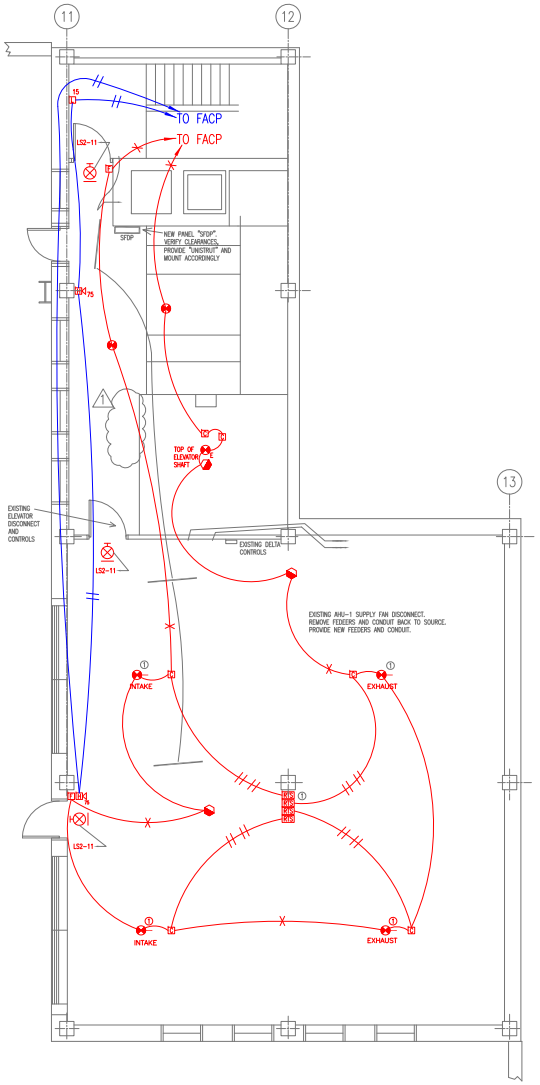
ELECTRICAL
SYSTEMS
THIRD FLOOR PLAN

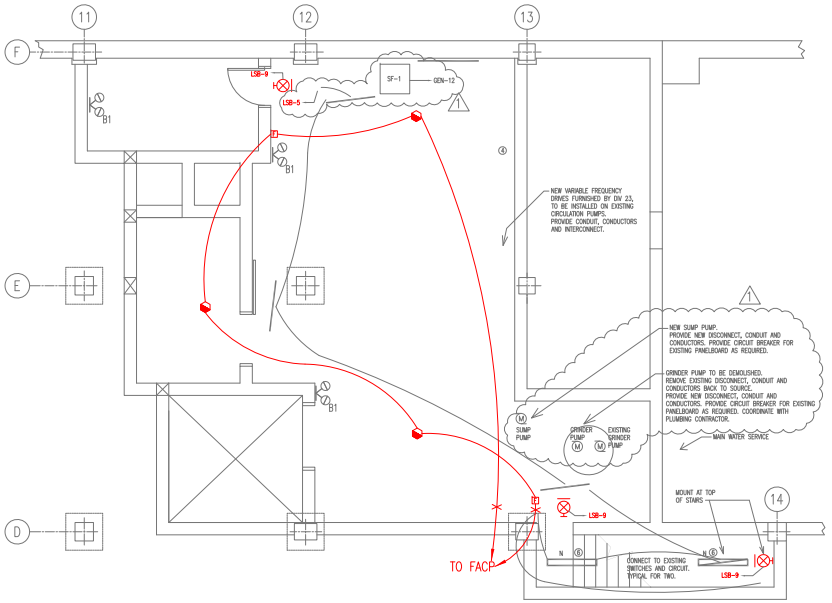
WRH RJB

E30.3

THIRD FLOOR PLAN		
1/8" = 1'-0"	0 4' 8' 12'	REF: -

E1





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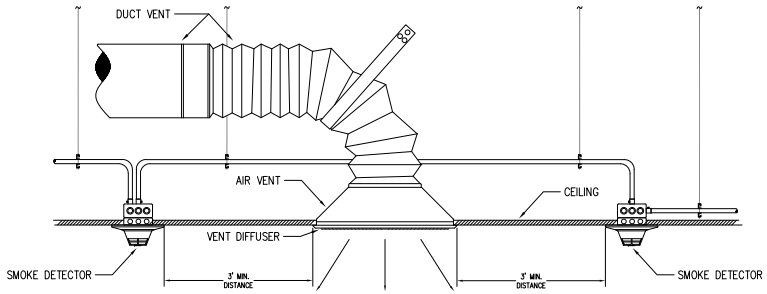
ELECTRICAL NEW WORK
PENTHOUSE &
SUB-BASEMENT PLAN

VRH RJB

E20.5

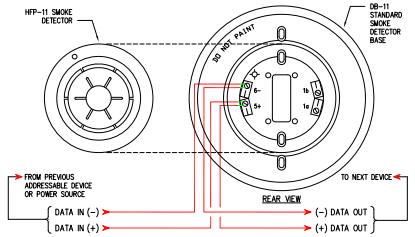


1 TYPICAL MINIMUM REQUIREMENT INSTALLATION DISTANCE FROM DIFFUSER OR FLORESCENT LIGHT
SCALE: NONE

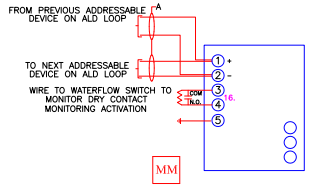
NOTE: FOR ADDITIONAL SPECIFICATIONS SEE PRODUCT DOCUMENTATION.

OPERATING TEMPERATURE: +32° F (0° C) TO 100° F (38° C)
HUMIDITY: 0-93% RELATIVE HUMIDITY, NON-CONDENSING

DEVICE IS LISTED FOR AIR VELOCITY APPLICATIONS OF 300-4000 FT/MIN WHEN USED IN CONJUNCTION WITH DUCT HOUSINGS AD-11P OR AD-11XPR

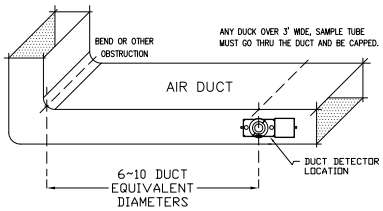


2 TYPICAL HFP-11 SMOKE & DB-11 DETECTOR BASE - WIRING DETAIL.
SCALE: NONE

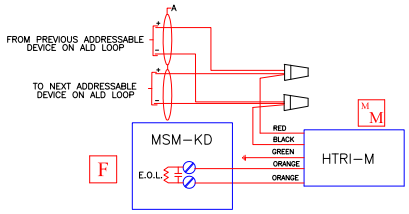


3 TYPICAL HTRI-S SINGLE POINT TRANSPONDER MODULE - WIRING DETAIL.
SCALE: NONE

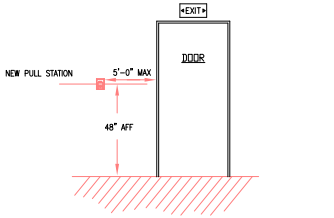
THE DUCT SMOKE DETECTOR ASSEMBLY SHOULD BE INSTALLED IN ACCORDANCE WITH NFPA 72. THE PREFERRED INSTALL LOCATION OF THE HOUSING IS IN A LENGTH OF STRAIGHT DUCT AT LEAST SIX DUCT WIDTHS FROM ANY BEND OR OTHER OBSTRUCTIONS AS INDICATED.
THE MECHANICAL CONTRACTOR "SHALL" INSTALL THE DUCT SMOKE DETECTOR AS REQUIRED PER NFPA 90A.



4 TYPICAL DUCT SMOKE DETECTOR INSTALLATION REQUIRMENT.
SCALE: NONE



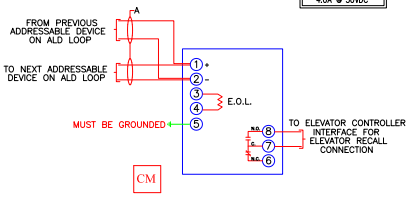
5 TYPICAL MSM-KD MANUAL STATION WITH HTRI-M MODULE WIRING DETAIL
SCALE: NONE



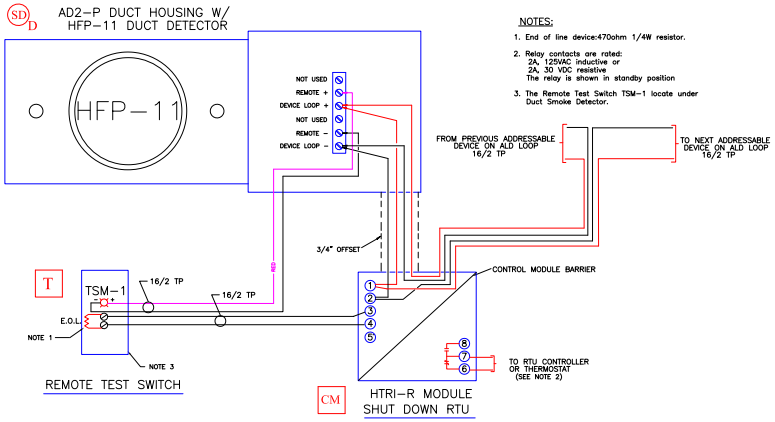
6 TYPICAL PULL STATION MOUNTING HEIGHT DETAIL
SCALE: NONE

NOTE: FOR ADDITIONAL SPECIFICATIONS SEE PRODUCT DOCUMENTATION.

*CONTACT RATINGS:
4.0A @ 125VAC
4.0A @ 30VDC

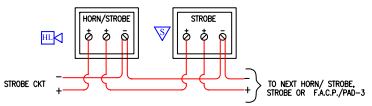


7 TYPICAL HTRI-R MODULE FOR ELEVATOR RECALL - WIRING DETAIL
SCALE: NONE

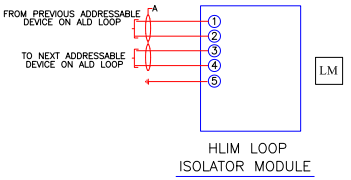


NOTES:
1. End of line device:470ohm 1/4W resistor.
2. Relay contacts are rated: 2A, 125VAC inductive or 2A, 30 VDC resistive. The relay is shown in standby position
3. The Remote Test Switch TSM-1 locate under Duct Smoke Detector.

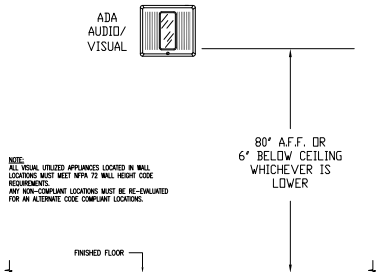
8 TYPICAL AD-2P DUCT SMOKE DETECTOR - WIRING DETAIL
SCALE: NONE



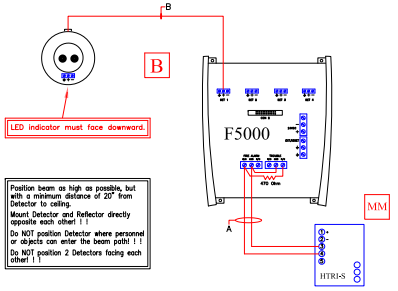
9 TYPICAL ZH-MC-R HORN/STROBE & ZR-MC-R STROBE ONLY- WIRING DETAIL
SCALE: NONE



10 TYPICAL HLIM LOOP ISOLATOR MODULE - WIRING DETAIL
SCALE: NONE



11 TYPICAL AUDIO /STROBE DEVICE HEIGHT REQUIREMENT
SCALE: NONE



12 TYPICAL F5000 BEAM SMOKE DETECTOR WITH HTRI-S MODULE- WIRING DETAIL
SCALE: NONE

STANDARD ELECTRICAL NOTES

1. ALL WIRING MUST CONFORM WITH LOCAL CODES.
2. POLARITY MUST BE OBSERVED WHEN MAKING ANY CONNECTION..
3. ALL CIRCUIT WIRING SHALL BE SIZED IN CONFORMANCE WITH THE CABLE LEGEND INDICATED BELOW.
4. FEED AND RETURN WIRING TO SUPERVISED DEVICES MAY NOT BE LOOPED AROUND TERMINATION SCREWS. WIRING MUST BE CUT TO INSURE PROPER SUPERVISION.
5. NO LINE VOLTAGE OR HIGHER VOLTAGE WIRING TO BE INSTALLED IN THE SAME RACEWAY AS LOW VOLTAGE FIRE ALARM WIRING. THIS INCLUDES HVAC CONTROL WIRING, 120 VOLT NOTIFICATION APPLIANCE CIRCUIT WIRING, AND SYSTEM POWER FEED.
6. ADDRESSABLE LOOPS (SIGNAL LINE CIRCUITS) REQUIRE INDIVIDUALLY TWISTED CABLE PAIRS, AND ARE LIMITED TO 50 OHM LOOP RESISTANCE. ROUTE CABLES TO AVOID HIGH ELECTRICAL NOISE SOURCES, SUCH AS MOTORS AND FLOURESCENT LIGHTS.
7. ALL DEVICES TO BE MOUNTED AND WIRED AS PER DETAIL INDICATED ON THE CATALOG CUT OR DEVICE CONNECTION DRAWING.
8. ALL CIRCUITS MUST BE CHECKED FOR OPENS, GROUND FAULTS AND SHORTS BEFORE CONNECTING TO CONTROL PANEL.
9. ALL DETECTION, AUDIBLE / VISUAL AND INDICATOR DEVICE CIRCUIT WIRES MUST BE SUPERVISED. THEREFORE, NO PARALLEL BRANCHING OF NON-ADDRESSABLE CIRCUITS IS PERMISSABLE.
10. DETECTORS SHALL NOT BE LOCATED IN DIRECT AIR STREAM FROM SUPPLY AIR OUTLETS. MINIMUM 3 FEET.
11. NO CONDUIT ENTRY PERMITTED AT THE BOTTOM OF EQUIPMENT ENCLOSURES CONTAINING BATTERIES. BATTERIES MUST REST FLAT ON THE BOTTOM OF THE ENCLOSURE.
12. ALL VISUAL DEVICES TO BE MOUNTED AT 6"-8" WHERE POSSIBLE OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER.
13. ALL MANUAL PULL STATIONS SHALL BE MOUNTED SUCH THAT THE HANDLE IS 4 FEET ABOVE FINISHED FLOO AND MAX. 5 FEET FROM THE DOOR.
14. ALL SHIELDS TO BE CONTINUOUS AND ISOLATED FROM GROUND.
15. ALL TEFLON WIRING DRAIN SHIELDS WILL BE GROUNDED AT MAIN FIRE ALARM CONTROL PANEL. DRAIN SHIELDS IN OTHER PANELS (REMOTES, AUXILLARY, JUNCTION BOXES) TO BE SPLICED, TIED TOGETHER AND TAPED FREE OF GROUND.
16. E.O.L. (END OF LINE RESISTER) SHALL BE INSTALLED ON END OF THE LAST DEVICE FOR SUPERVISION OF LOOP.
17. NO CHANGES MAY BE MADE TO THIS SYSTEM WITHOUT FORMAL WRITTEN APPROVAL BY EAST COAST SECURITY SERVICES, INC.
18. IF THERE IS ANY DOUBT AS TO THE PROPER INSTALLATION, CONTACT EAST COAST SECURITY & FIRE FOR TECHNICAL ASSISTANCE.

STANDARD WIRING LEGEND

** WIRING TO BE RATED 150 DEGREE **

A -- 2 # 16AWG
B -- 2 # 16AWG TWISTED SHIELDED
C -- 3 # 12AWG POWER
D -- 1 # 10AWG GROUND
E -- 2 # 14AWG
F -- 2 # 12AWG
G -- 2 # 16AWG TWISTED
H -- 2 # 14AWG TWISTED SHIELDED

** WIRING TO BE RATED 150 DEGREE **

EAST COAST SECURITY & FIRE LLC

XLS

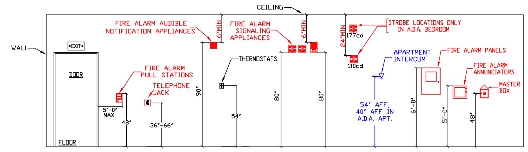
NO.	DATE	REVISION	BY

SHEET TITLE :
FIRE ALARM DEVICE DESCRIPTION AND DEVICE CONNECTIONS

PROJECT :
MAINE MEDICAL FAC.

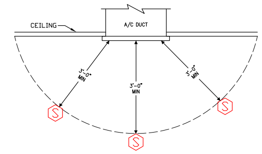
EAST COAST SECURITY & FIRE LLC.
68 STILES ROAD, UNIT "C"
SALEM, N.H. 03079
1-800-639-2086

SCALE : N/A
DRAWN BY : Z.K.
CHECKED BY : Z.K.
DATE : 06/10/10
DRAWING NO. : DRW DEV.
1 OF 1 SHTS.



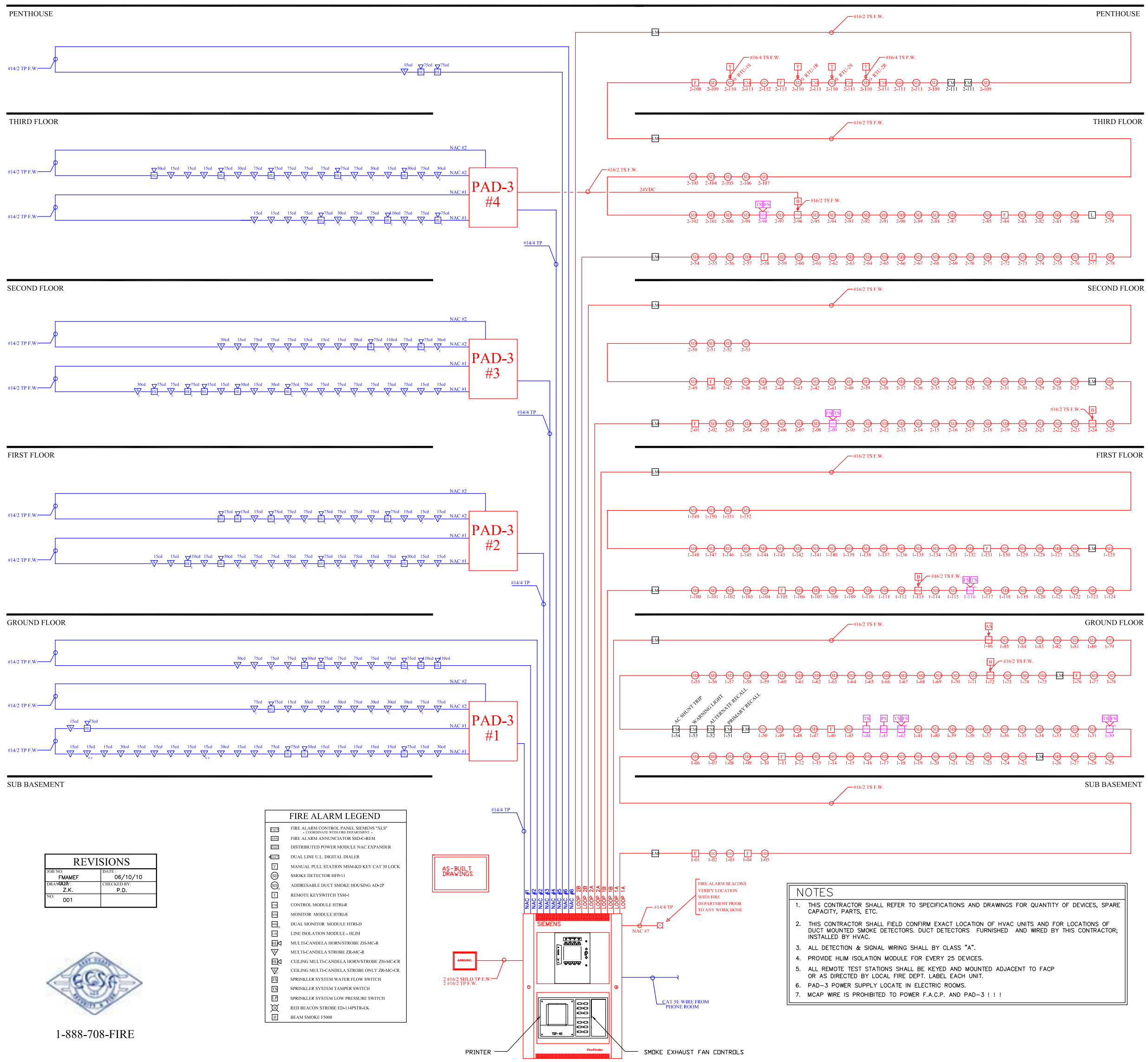
TYPICAL DEVICE MOUNTING HEIGHT ELEVATIONS

NOT TO SCALE



SMOKE DETECTOR MIN CLEARANCE

NOT TO SCALE



REVISIONS	
JOB NO: FMAMEF	DATE: 06/10/10
DRAWN BY: Z.K.	CHECKED BY: P.D.
NO: 001	

1-888-708-FIRE

FIRE ALARM LEGEND

Symbol	Description
FACP	FIRE ALARM CONTROL PANEL SIEMENS "XLS" - COORDINATE WITH FIRE DEPARTMENT -
ANN	FIRE ALARM ANNUNCIATOR SSD-C-REM
PAD3	DISTRIBUTED POWER MODULE NAC EXPANDER
DACT	DUAL LINE U.L. DIGITAL DIALER
F	MANUAL PULL STATION MSM-KD KEY CAT 30 LOCK
SD	SMOKE DETECTOR HFP-11
SD D	ADDRESABLE DUCT SMOKE HOUSING AD-2P
T	REMOTE KEYSWITCH TSM-1
CM	CONTROL MODULE HTRI-R
MM	MONITOR MODULE HTRI-S
MM D	DUAL MONITOR MODULE HTRI-D
LM	LINE ISOLATION MODULE - HLIM
HL	MULTI-CANDELA HORN/STROBE ZH-MC-R
S	MULTI-CANDELA STROBE ZR-MC-R
HL C	CEILING MULTI-CANDELA HORN/STROBE ZH-MC-CR
S C	CEILING MULTI-CANDELA STROBE ONLY ZR-MC-CR
FS	SPRINKLER SYSTEM WATER FLOW SWITCH
TS	SPRINKLER SYSTEM TAMPER SWITCH
LP	SPRINKLER SYSTEM LOW PRESSURE SWITCH
B	RED BEACON STROBE ED-114PSTR-EK
B	BEAM SMOKE F5000

NOTES

1. THIS CONTRACTOR SHALL REFER TO SPECIFICATIONS AND DRAWINGS FOR QUANTITY OF DEVICES, SPARE CAPACITY, PARTS, ETC.
2. THIS CONTRACTOR SHALL FIELD CONFIRM EXACT LOCATION OF HVAC UNITS AND FOR LOCATIONS OF DUCT MOUNTED SMOKE DETECTORS. DUCT DETECTORS FURNISHED AND WIRED BY THIS CONTRACTOR; INSTALLED BY HVAC.
3. ALL DETECTION & SIGNAL WIRING SHALL BY CLASS "A".
4. PROVIDE HLIM ISOLATION MODULE FOR EVERY 25 DEVICES.
5. ALL REMOTE TEST STATIONS SHALL BE KEYED AND MOUNTED ADJACENT TO FACP OR AS DIRECTED BY LOCAL FIRE DEPT. LABEL EACH UNIT.
6. PAD-3 POWER SUPPLY LOCATE IN ELECTRIC ROOMS.
7. MCAP WIRE IS PROHIBITED TO POWER F.A.C.P. AND PAD-3 ! ! !

Fire Alarm Riser Diagram - Maine Medical Facility - 110 Free Street - Portland, ME

SCALE: NTS