DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING PERMIT

This is to certify that
EASTERN FIRE SERVICES
PO BOX 1390
AUBURN, ME 04211

For installation at
225 INDUSTRIAL WAY

Job ID: 2012-03-3527-FAFS

CBL: 329- A-007-001

has permission to install a suppression supervisory system
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.	A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

58

Fire Prevention Officer **Code Enforcement Officer / Plan Reviewer**

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

Final Fire

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • *www.portlandmaine.gov*

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2012-03-3527-FAFS
install a suppression supervisory system

For installation at:
225 INDUSTRIAL WAY

CBL: 329- A-007-001

Conditions of Approval:

Fire

A sprinkler supervisory system shall be provided in accordance with NFPA 101, *Life Safety* Code, and NFPA 72, *National Fire Alarm and Signaling Code*. Sprinkler supervisory system shall monitor for water flow and sprinkler supervisory signals via an approved fire alarm panel to central station. One smoke detector shall be located over the FACP, a manual pull station located at the front door, and an audible water flow alarm provided. The FACP shall be located at the front door unless otherwise approved by the Fire Prevention Bureau.

In field installation shall be installed per code as conditions dictate.

All smoke detectors and smoke alarms shall be photoelectric.

Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.

Central Station monitoring for addressable fire alarm systems shall be by point.

All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".

Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance.

The fire alarm system shall be certified by a master fire alarm company and have a new fire alarm inspection sticker.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

City of Portland, Maine - Building or Use Permit Application
389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No:	Date Applied:	CBL:	
2012-03-3527-FAFS	**3/19/2012**	**329- A-007-001**	
Location of Construction: **225 INDUSTRIAL WAY**	Owner Name: **WOODWORKING & CABINETRY llc**	Owner Address: **40 PORTLAND PIER # 11 PORTLAND, ME 04101**	Phone:
Business Name:	Contractor Name: **EASTERN FIRE SERVICES**	Contractor Address: **PO BOX 1390 AUBURN MAINE 04211**	Phone: **(207) -784-1507**
Lessee/Buyer's Name:	Phone:	Permit Type: **FIRE ALARM**	Zone: **I-M**
Past Use: **Light manufacturing, warehousing & accessory offices**	Proposed Use: **Same: Light manufacturing, warehousing & accessory offices – To install a fire alarm in unit #2**	Cost of Work: **$4000.00**	CEO District:
		Fire Dept: ✓ Approved w/ conditions ___ Denied ___ N/A Signature:	Inspection: Use Group: Type: Signature:
Proposed Project Description: **Add Fire Alarm to Unit 2**		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Lannie		**Zoning Approval**	

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building Permits do not include plumbing, septic or electrial work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.

Special Zone or Reviews	Zoning Appeal	Historic Preservation
___ Shoreland	___ Variance	✓ Not in Dist or Landmark
___ Wetlands	___ Miscellaneous	___ Does not Require Review
___ Flood Zone	___ Conditional Use	___ Requires Review
___ Subdivision	___ Interpretation	___ Approved
___ Site Plan	___ Approved	___ Approved w/Conditions
___ Maj ___ Min ___ MM	___ Denied	___ Denied
Date: 3/19/12	Date:	Date:

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

Fire Alarm Permit

I-M

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Light Mfg and warehouse with Acces. office

Installation address: 225 Industrial Way CBL: 329-A-7

Exact location: (within structure) Unit 2 Office

Type of occupancy(s) (NFPA & ICC): Industrial

Building owner: Delkko, LLC Woodworking & Cabinetry LLC

Must be System Designer (point of contact): Marc Tardif

Designer phone: (207) 784-1507 E-mail: tardifm@teameastern.com

Installing contractor: Eastern Fire Services Certificate of Fitness No: M1024

Contractor phone: (207) 784-1507 E-mail: bairdbw@teameastern.com

This is a new application: YES ● NO ○ New AES Master Box: YES ○ NO ●
(Include Master Box approval form)

Amendment to an existing permit: YES ○ NO ● Permit no: ________

The following documents shall be provided with this application:

- [x] Floor plans
- [x] Wiring diagram
- [ ] Annunciator details
- [ ] Input/ Output Matrix
- [x] Equipment data sheets
- [ ] Electrical Permit Pulled (check alarm/com)
- [x] Scope of Work
- [x] 11 ½ x 17s
- [x] pdf copy (may be e-mailed)
- [ ] Designer qualifications
- [ ] Battery/ voltage drop calcs

COST OF WORK: $4,000.00

PERMIT FEE: $70.00
($10 PER $1,000 + $30 FOR THE FIRST $1,000)

Master box approval only: YES ○ NO ●
(If yes check *New AES Master Box* above)

The designer shall be the responsible party for this application. **Download a new copy of this application at www.portlandmaine.gov/fire for every submittal. Submit all plans in electronic PDF in addition to readable 11 ½ x 17s to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.**

Prior to acceptance of any fire alarm system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with the *City of Portland Technical Standard for Signaling Systems for the Protection of Life and Property*, available at www.portlandmaine.gov/fire .

RECEIVED MAR 19 2012 Dept. of Building Inspections City of Portland Maine

Applicant signature: Paul Shaw Date: 03/19/12

Data Sheet

Cerberus PRO Fire Safety

50-Point Addressable Fire Alarm Control Panel

Model FC901

ARCHITECT AND ENGINEER SPECIFICATIONS

- **An addressable fire alarm control panel (FACP) comprised of the following three (3) system components:**
  - **Main board (Model FCM901-U3)**
  - **170-Watt power supply (Model FP2011-U1)**
  - **System enclosure (Model FH901-U3 / R3)**

- **System features:**
  - **Supports 50 addressable devices on one (1) 'Class A', or one (1) – two (2) 'Class B' circuits**
  - **Includes one (1) 'Class A', or two (2) 'Class B' notification appliance circuits (NACs)**
  - **Built-in digital alarm communication transmitter (DACT)**
  - **Built-in RS–485 connection for remote annunciators**
  - **Resettable and non-resettable 24VDC auxiliary power**
  - **Optional connectivity to a leased-line / city-tie module**
  - **Off-normal warning message prior to reset**
  - **Fast and easy set-up with custom-configuration tool**

- **Alphanumeric keypad for manual configuration**

- **®UL 864 9th Edition Listed; FM, CSFM & NYC Fire Department Pending**

Product Overview

Model FC901 is an addressable FACP that provides a cost-effective solution for simple fire-alarm system applications.

Small and compact in design, Model FC901 is ideal for small fire-protection applications using less than 50 addressable devices, such as:

- retail outlets / strip malls
- doctor offices
- dry cleaners
- restaurants

With its built-in DACT and two (2) NACs, Model FC901 is powerful enough to economically meet the needs of these applications.

Specifications

The Model FC901 FACP consists of a main board (Model FCM901-U3); a 170-Watt power supply (Model FP2011-U1), and a Model FH901-U3 / R3 system enclosure.

Main Board

The Model FCM901-U3 / R3 main board provides system display and control, as well as connections for system field wiring, via removable terminal blocks.

The 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) liquid-crystal display (LCD) screen shows all system messages and event status. Each event may have a custom message up to 28 characters that describes the event's location.

The backlit LCD screen illuminates on any system event, or manual key press. New, 'unacknowledged' events are indicated by a flashing exclamation point ('!'). Once 'acknowledged,' the exclamation point changes to a check mark ('√'). A system-status line shows the quantity of events presently active.

The main board supports system-status LEDs, based upon the following conditions of Model FC901:

- *Power*
- *Alarm*
- *Trouble*
- *Supervisory*
- *Ground Fault*

Cerberus™ PRO

Fire Safety & Security Products

9813

FACP for simple-size buildings

Answers for infrastructure

SIEMENS

Specifications — (continued)

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' The main board supports four (4) system-control buttons, including: *Acknowledge*; *Alarm Silence*; *Unsilence*, and *Reset*.

The system offers an off-normal warning feature, alerting users when active devices are not ready for reset. These active devices may include manual stations that have not been reset; smoke detectors with smoke remaining in the optical chamber, etc.

Additionally, the main board supports an alphanumeric keypad, as well as navigation keys, which are used for scrolling maintenance functions and system configuration.

The main board supports connection for up to 50 addressable devices, via one (1) 'Class A', or one (1) to two (2) 'Class B' circuits. The loop supports all C-NET devices, including the Cerberus PRO Fire Safety and Model 'H'-series devices. The main board also supports one (1) 'Class A' or two (2) 'Class B' NACs.

Each NAC supports a maximum 2.5 Amps — with 2.5 Amps, max. allowed between the NACs. Each NAC can be set to a synchronized strobe, for horn-strobe devices, or for audible devices. Audible devices can be set for:

- 'STEADY'
- 'ANSI Temporal 3'
- 'March Time 30 / 60 / 120 Codes'

The main board supports four (4) 'Form C' relays for *Alarm*, *Trouble*, *Supervisory* and user-programmable events. Each relay is rated at 2 Amps at 30VDC maximum, resistive. The main board supports two (2) auxiliary 24VDC connections. Upon system reset, one (1) connection interrupts the power for five seconds for use with (4) four-wire conventional detectors. Each auxiliary-power output is 24VDC, nominal — rated at 0.75 Amps.

The main board contains a built-in DACT (Model FCA2015-A1), which provides communication between Model FC901 and with the central or remote monitoring station. The built-in DACT supports two (2) separate programmable accounts, as well as two (2) connections to the public-switched telephone network. The connections support RJ31X male connectors.

The main board contains a battery-charging circuit, providing connection to lead-acid batteries rated at 24VDC, nominal. The main board can charge up to 18 AH batteries.

The main board contains a universal serial bus (USB) connector that supports connection for system configuration and module firmware upload, via the custom-configuration tool.

Model FC901 can be configured using the configuration tool or manually from the alphanumeric keypad on the main board. An auto-configuration feature creates a basic system configuration of all connected devices to accelerate initial system commissioning.

170-Watt Power Supply

The Model FCM901-U3 main board also supports connection to the system power supply. The 170-Watt power supply (Model FP2011-U1) incorporates a 4.0A, non-resettable slow-blow fuse on the primary input, and includes a built-in AC-line filter for surge and noise suppression. Model FP2011-U1 mounts in a standard Siemens — Fire Safety enclosure, and there are no serviceable Siemens — Fire Safety parts to be maintained.

50-Point Addressable System Enclosure

The Model FH901-U3 / R3 enclosure for the Model FC901 FACP is available in either black or red, and supports all system modules. The enclosure also supports 12AH batteries.

Note: For systems requiring larger than 12AH batteries, use a ®UL Listed battery box.

The Model FH901-U3 / R3 enclosure for the 50-point panel is comprised of a dual-mounting setup that allows the main board to be partially mounted in a lower-to-upper position. When temporarily installed in the lower position, technicians are allowed more space to install field wiring at the time of system set-up. When field-wiring installation is complete, the main board shall be moved to the upper position for standard mounting prior to applying power to the system.

Additionally, the enclosure supports an optional battery bracket (Model FHA901-U1) that can be used to secure batteries up to 12AH. Model FHA901-U1 is required to comply with seismic certification, pursuant to ASC / SEI 7-05, Section 13.2.2.

A flush-mount trim kit (Model FHA902-U1 / R1) is also available for use when flush mounting Model FH901-U3 / R3.

Optional Accessories

The Model FC901 FACP has the capability of operating an optional leased-line, city-tie module (Model FCI2020-U1) that provides a local-energy output for municipal call-box connection. The leased-line, city-tie module is installed on the back of the main board of the Model FC901 FACP, and all field wiring is connected to the main board.

Specifications — (continued)

Model FC901 contains a built-in RS—485 connection on the main board, thus eliminating the need for an additional communication module. The fire-system displays (FSD901-U3 / R3) are remote LED / LCD units that show the existing status of the Model FC901 FACP.

The Model FSD901-U3 / R3 optional display supports the following LEDs for system-status conditions:

- *Power*
- *Alarm*
- *Trouble*
- ***Supervisory***
- ***Ground-Fault***

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' The main board supports four (4) system-control buttons, including: *Acknowledge*; *Alarm Silence*; *Unsilence*, and *Reset*.

For Model FSD901-U3 / R3, a LED will illuminate for any given *Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled to reveal additional events. Optional remote-system-control capabilities are also available.

The dimensions (based upon connection to a one-height-unit enclosure) for Model FC901 are as follows:

Approximate size: 16.25" (41.3 cm.) [H];
18" (46 cm.) [W];
5" (41.3 cm.) [D]

The weight (without operating unit or batteries) is approximately 9 Lbs [4082 g].

Temperature and Humidity Range

Model FC901 is ®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 a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C).

Related Documentation

Product	Data Sheet Number
170-Watt power supply	9806
Leased-Line / city-tie module	9810

Details for Ordering

Model Number	Part Number	Description
FCM901-U3	S54433-B101-A1	Cerberus PRO Main Board (for 50-point FACP)
FP2011-U1	S54400-Z59-A1	170-Watt Power Supply
FH901-U3	S54433-B103-A3	System Enclosure, Black (for 50-point FACP)
FH901-R3	S54433-B103-A4	System Enclosure, Red (for 50-point FACP)

Optional Accessories

Model Number	Part Number	Description
FHA901-U1	S54433-B107-A1	Battery Bracket
FHA902-U1	S54433-B106-A1	Flush-Mount Trim Kit, Black
FHA902-R1	S54433-B106-A2	Flush-Mount Trim Kit, Red
FCI2020-U1	S54400-A57-A1	Leased-Line / City-Tie Module
FSD901-U3	S54433-C102-A1	System Display, Black (for 50-point system)
FSD901-R3	S54433-C102-A2	System Display, Red (for 50-point system)

DSC

GSM Universal Wireless Commercial Fire Alarm Communicator

GS3055-ICF

The GS3055-ICF is a GSM universal wireless alarm communicator specifically designed for UL commercial fire installations.

The GS3055-ICF connects the alarm control panel to the GSM network and reports alarm signals directly to a monitoring station receiver (Sur-Gard™ System II/System III). The GS3055-ICF uses the GPRS data channel of the GSM network to ensure low-cost, high-speed and reliable alarm communications and is compatible with control panels that communicate using the Contact ID format.

The GS3055-ICF is compliant with the latest requirements for Communications Methods as per UL864 and NFPA72 2010 Edition. It can be used in Fire Monitoring applications as a single communications technology, in which case any failure of the communications path shall be annunciated at the supervising station within 5 minutes of the failure, or it can be used as part of a multiple communications technologies (for example in conjunction with a DACT). When used as a back-up provision shall be made to monitor the integrity of each communication path and failure of any communications path shall be annunciated at the supervising station and at the protected premises within not more than 24 hours of the failure.

- Compatible with control panels that communicate using the Contact ID format
- Full event reporting
- Uses GPRS data channel for high-speed, reliable and low-cost communications to an IP receiver
- 4 on-board inputs
- 4 on-board outputs (open collector)
- SIM card (included)
- Activation and initialization via automated telephone activation system (VRU) or web-user interface provided by CONNECT 24™
- Compatible with Sur-Gard System I/II/III monitoring station receivers
- Includes UL listed power supply, transformer and 7 Ah rechargeable battery
- UL 864 listed
- CSFM listed

How it Works

The GS3055-ICF can be used as either a Sole Communicator or as a Backup Communicator. When being used as a Sole Communicator the GS3055-ICF will replace the phone line connection on the panel and as soon as it detects that an alarm needs to be transmitted it will send the alarm across the GSM network immediately. When being used as a backup the communicator assesses the connection to the PSTN phone line, and only in the event of a phone line failure will it send all alarm traffic across the GSM network to the monitoring station.

In instances where the control panel does not support Contact ID, the GS3055-ICF has inputs pre-set to transmit fire alarm, fire supervisory or system trouble.

Alarm signals are transmitted directly without the need of a clearinghouse to the IP linecard of the monitoring station receiver (Sur-Gard System I/System II/System III).

Activating & Initializing the Unit

Activating and initializing the GS3055-ICF can be done using the automated telephone activation system (VRU).

UL Listing

The GS3055-ICF is UL listed under File S4019, Listing guide UOXX, as a sole or backup communicator for Commercial Fire monitoring installations. When used as a sole communicator the GS3055-ICF will send its heartbeat once every 97 seconds ensuring that three heartbeats will be received at the supervising station within the 300 second window. When used as a backup communicator the GS3055-ICF will monitor the other communication method (DACT) and send a daily test transmission to the supervising station.

Ordering Information:	
GS3055-ICF	Universal Wireless Commercial Fire Alarm Communicator (U.S. Model/ SIM Card Included)

CSFM Listing

The GS3055-ICF has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code.

Rate Plan

Cost-effective rate plans have been negotiated and are available through authorized master resellers. Contact your monitoring station or visit www.connect24.com to find a master reseller.

Specifications

Dimensions	11 1/2" x 10" x 3"
Input Voltage	120 VAC
Current Draw	300 mA
Operating Environment	32° to 120° F
Weight	12.8 lbs

PN 30000986 R002

DSC

For product information
www.dsc.com

SIEMENS

Catalog Sheet
Fire Safety & Security Products

FireFinder XLS & FS-250 Control Panels

Addressable *FirePrint*™ Detector
Model HFP-11

ARCHITECT AND ENGINEER SPECIFICATIONS

- Most sophisticated 'detector intelligence' available
- Multi-criteria fire detection for the price of a photoelectric detector
- *FirePrint*™ technology to differentiate between deceptive phenomena and an actual fire
- Easily programmed to match specific hazard profiles from the control panel
- Polarity insensitive utilizing *SureWire*™ technology
- Pre-alarm reporting based on fire profile selected
- Remote sensitivity-measurement capability
- System logic activation based on any of three (3) inputs from the detector (smoke, heat or neural network)
- Detectors are self-testing:
  - complete diagnostics every four (4) seconds
- Two-wire operation
- Multi-color detector status LED
- Field-cleanable chamber with replaceable chamber parts available
- Compatible with Model DPU (device programmer / tester unit)
- Supports software-based automatic environmental compensation
- Optional fully programmable relay base, audible base and duct housing
- ®UL and ®ULC Listed;
  FM, CSFM & NYMEA Approved

Product Overview

Model 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 it is intended to detect. Model HFP-11 uses state-of-the-art microprocessor circuitry with error check, detector self-diagnostics and supervision programs.

Model HFP-11 is compatible with the Siemens — Fire Safety field device program / test unit (Model DPU), which is a compact, portable, menu-driven accessory for electronically programming and testing detectors, easily and reliably. Model 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. Model HFP-11 is compatible with FS-250 and Fire Finder XLS-series control panels.

Model HFP-11 is ®Underwriters' Laboratory and ®Underwriters' Laboratory of Canada listed.

Specifications

Model HFP-11 is a plug-in, two-wire and multi-sensor detector (with both photoelectric and thermal inputs) that is compatible with Fire Finder XLS and FS-250 series of control-panel systems. Each detector consists of a dust-resistant, field-cleanable and photoelectric chamber; a solid state, non-mechanical thermal sensor, and microprocessor-based electronics with a low-profile plastic housing. Model HFP-11 utilizes state-of-the-art ASIC circuitry and surface-mount technology for maximum reliability.

Every Model HFP-11 fire detector is shipped with a protective dust cover. Model HFP-11 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.

SIEMENS Industry, Inc.
Building Technologies Division

Specifications – (continued)

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.

Model HFP-11 also utilizes a modern, accurate and shock-resistant thermistor to sense temperature changes. The 'on-board' *FirePrint*™ technology allows the detector to first gather smoke and thermal data, and then analyze this information in the detector's 'neural network.' By comparing data received with the common characteristics of fires or fire fingerprints, Model HFP-11 can compare these 'fire prints' to those of deceptive phenomena that cause other detectors to false alarm.

FirePrint

The advanced *FirePrint* technology allows Model HFP-11 to accurately determine a true fire hazard from unthreatening, deceptive phenomena. Further, the advanced *FirePrint* technology will not require a need to use alarm-delaying verification and confirmation techniques, which can increase the probability of losses due to fire. Model 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.

Model HFP-11's *FirePrint* application 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 mislead any ordinary detector.

Detectors are optimized by selecting one (1) of the following 11 applications:

- Office / Retail
- Lobby
- Computer room
- Dormitory
- Healthcare
- Parking garage
- Utility / Transformer room
- Hostile environment
- Precious storage
- Air Duct
- Warehouse / Light Manufacturing

The control panel programs Model HFP-11 detector for the protected area without hassle and without confirmation delays. Once optimized for the hazards in the protected area, Model HFP-11 provides the best detection. Should the operator or installer forget to program the detector, Model HFP-11 will revert to a default setting, allowing operation as an office-environment detector.

The *FirePrint* 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 its design. The microprocessor's software can identify and disregard false input caused by radio frequency (RFI) and electromagnetic (EMI) interference, while validating all *Trouble* conditions before annunciating or reporting to the control panel.

Model HFP-11

The Model 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.

Communication within the detector, as well as between Model HFP-11 and the control panel, or with Model DPU (field device programmer / test 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. Model HFP-11 determines its operating status to be *Normal* in *Alarm* or in *Trouble* modes, 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 analog signal for Model HFP-11 over a period of time, in order to determine if those values indicate excessive buildup in the photo chamber. If such is the case, the FireFinder XLS control panel will indicate the particular detector requires maintenance.

Model HFP-11 is listed as a self-testing device. The visible light emitting diode (LED) for Model HFP-11 flashes 'green' every four (4) seconds to indicate it is communicating with the control panel, as well as to indicate 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 data to the control panel.

A quick visual inspection is enough 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 Model HFP-11 moves to the *Alarm* mode, it will flash 'red,' and will continue flashing until the system is reset at the control panel. Simultaneously, any user-defined, system-alarm functions programmed into the system are activated.

Specifications – (continued)

Detector sensitivity, calibration and identification are dynamically supervised by the fire-alarm control panel (FACP). 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.

All Model HFP-11 detectors use a surface mounting base, Model DB-11, which mounts on a 4-inch octagonal, square or single gang electrical box. The base utilizes screw-clamp contacts for electrical connections and
self-wiping contacts for increased reliability. Model DB-11 can be used with the optional Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has integral decorative plugs to cover the outer mounting screw holes.

Model HFP-11 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 Model 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 by replacing the labyrinth and bug screen included in the detector maintenance kit, Model DMK-11.

All Model HFP-11 detectors are approved for operation within the ®UL-specified temperature range of 32 to 100°F (0 to 38°C).

Model DPU

The Device Program / Test Unit accessory is used to program and verify the address of the detector. The technician selects the accessory's program mode, and enters the desired address. Model DPU automatically sets and verifies the address and tests the detector.

Model DPU operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location.

When in the test mode, Model 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.

Application Data

Installation of the Model 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. Model HFP-11 is polarity insensitive, which can greatly reduce installation and debugging time. Model HFP-11 fire detectors can be applied within the maximum 30 foot center spacing (900 sq. ft. areas,) as referenced in NFPA 72. This application guideline is based on ideal conditions, specifically, smooth ceiling surfaces, minimal air movement, and no physical obstructions between potential fire sources and the actual 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.

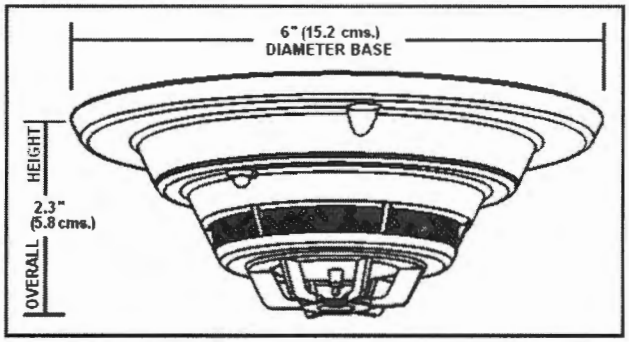
Should questions arise regarding detector placement, observe NFPA 72 guidelines. Good fire-protection system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Siemens Industry – Fire Safety distributor or sales office whenever you need assistance applying *FirePrint* in unusual applications. Be sure to follow NFPA guidelines and ®UL Listed / ®ULC Listed installation instructions – included with every Siemens – Fire Safety detector – and local codes as for all fire protection equipment.

Technical Data

Operating Temperatures:	+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 Square Feet), per NFPA 72 Chapter 5 and ®ULC-S524

SIEMENS Industry, Inc.
Building Technologies Division

Mounting Diagram



Details for Ordering

Model Number	Part Number	Description
HFP-11	500-033290	Addressable *FirePrint*™ Fire Detector
DB-11	500-094151	Detector Mounting Base for Series 11
DB-11E	500-094151E	Detector Base {small}
AD2-P	500-649706	Air-Duct Housing
AD2-XHR	500-649708	Air-Duct Housing {with relay}
DB-HR	500-033220	Relay Base for H-Series Intelligent Detectors
ADBH-11	500-033210	Audible Base
RL-HC	500-033230	Remote Alarm Indicator: 4" octagon-box mount, red
RL-HW	500-033310	Remote Alarm Indicator: single-gang box mount, red
LK-11	500-695350	Base Locking Kit for Series 11 Detectors
DMK-11	500-695338	Series 11 Maintenance Kit {replacement labyrinth and bug screen}

In Canada, order:

Model Number	Part Number	Description
DB-11C	500-095687	Detector Mounting Base for Series 11 Detectors (ULC)

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-FS]
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October 2010
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(Rev. 3)

SIEMENS

Catalog Sheet
Fire Safety & Security Products

FireFinder XLS and FS-250 Panels

HTRI Series Interface Modules
Models HTRI-D, HTRI-R and HTRI-S

ARCHITECT AND ENGINEER SPECIFICATIONS

- Interfacing and supervising normally open (NO) or normally closed (NC) contacts
- Integral SPDT relay on Model HTRI-R (up to 4 amps)
- Dual input on Model HTRI-D, using a single address
- Polarity insensitive with *SureWire*™ technology
- Multi-color light-emitting diode (LED) 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 5-x-5" faceplate
- Two-wire operation
- Model DPU programs and verifies address of the device and tests for proper functionality
- Electronic address programming is easy and dependable
- ®UL Listed & ®ULC Listed; FM, CSFM and NYMEA Approved

Product Overview

The Siemens Industry, Inc. — Fire Safety 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 modules provide the most advanced method of address programming and supervision on the market — 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 'intelligent device.'

Specifications

The HTRI Series intelligent interface modules are available in three (3) models. Models HTRI-S and HTRI-R are designed to monitor a (NO) or (NC) dry contact.

The interface module reports the status of the (NO) or (NC) contact to the control panel. Model HTRI-S can only monitor and report the status of the contact, while Model HTRI-R incorporates an addressable Form C relay.

The Model 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 Model HTRI-D is a dual-input module that is designed to supervise and monitor two (2) sets of dry contacts. Model HTRI-D only requires one (1) address, but responds independently to each input. Model HTRI-D is ideal for monitoring a water-flow switch and its respective valve tamper switch.

Model HTRI has a multi-color LED that flashes 'green' when operating in *normal*; 'amber' if unit is in *trouble* condition, and 'red' to indicate a change of state.

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Building Technologies Division

Specifications (continued)

Model HTRI-D flashes twice — once for each address, and Model HTRI-R LED 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 Industry, Inc., — Fire Safety innovative technology allows all HTRI Series intelligent interface modules to be programmed by using the Device Programming / Test Unit. Model DPU is a compact, portable and menu-driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods.

Model DPU eliminates the need for mechanical addressing mechanisms, such as: program jumpers, DIP switches or rotary dials, since Model DPU electronically sets the HTRI Series interface address into the interface microcomputer-chip non-volatile 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 Model HZM or Model 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 no greater than 93%, non-condensing.

Electrical Ratings

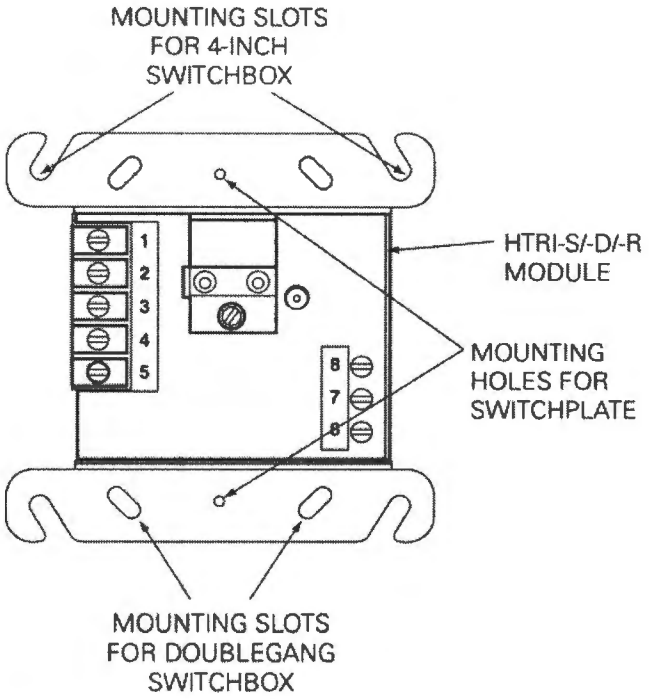
Current Draw
(Active or Standby) 1mA

Model HTRI-R Relay Ratings

Resistive:	4 Amps, 125 VAC 4 Amps, 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.)

Mounting Diagram

Models HTRI-S, HTRI-D and HTRI-R mount 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 Series module.



Details for Ordering

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

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.

June 2010
Supersedes sheet dated 12/04
(Rev. 1)

SIEMENS

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.

CATALOG NUMBER **6184**

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
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April 2007
Supersedes sheet dated 6/03

SIEMENS

Fire Safety

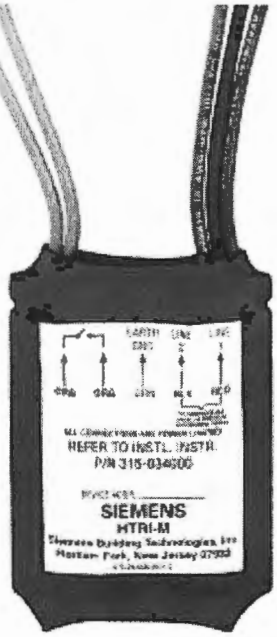
HTRI-M Intelligent Device Interface Module

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

ENGINEER AND ARCHITECT SPECIFICATIONS

Intelligent Interface Modules For FireFinder™ XLS and FS-250 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
- InnovativeTechnology 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 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 BuildingTechnologies, Inc. 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.

CATALOG NUMBER **6308**

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June 2006

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

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June 2006
Supersedes sheet dated 5/06

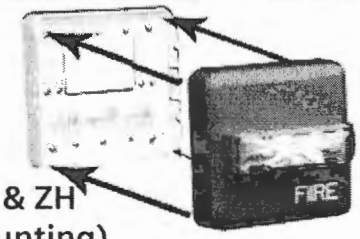
'08 Series Notification Appliances

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)

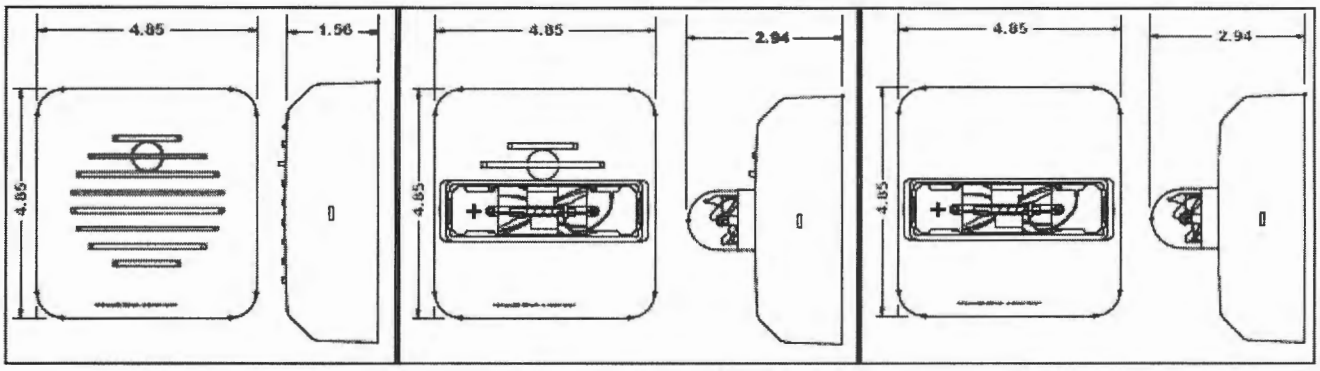
- **Audibles and Audible / Strobe Combinations**

– 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

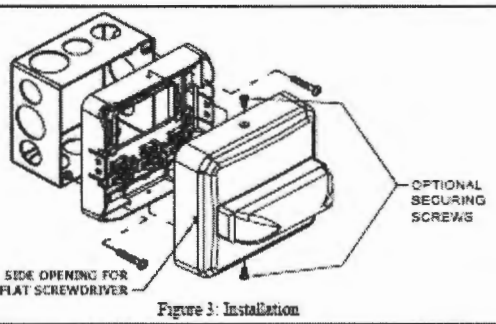


Figure 3: Installation

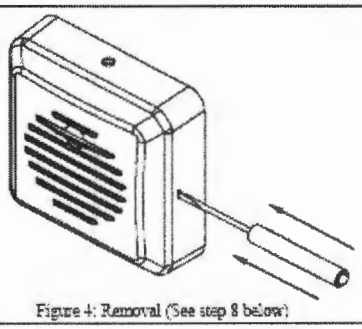


Figure 4: Removal (See step 8 below)

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 ¾" 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*	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	0.098	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	0.482	0.684	0.117	0.180	0.297	0.398	0.482	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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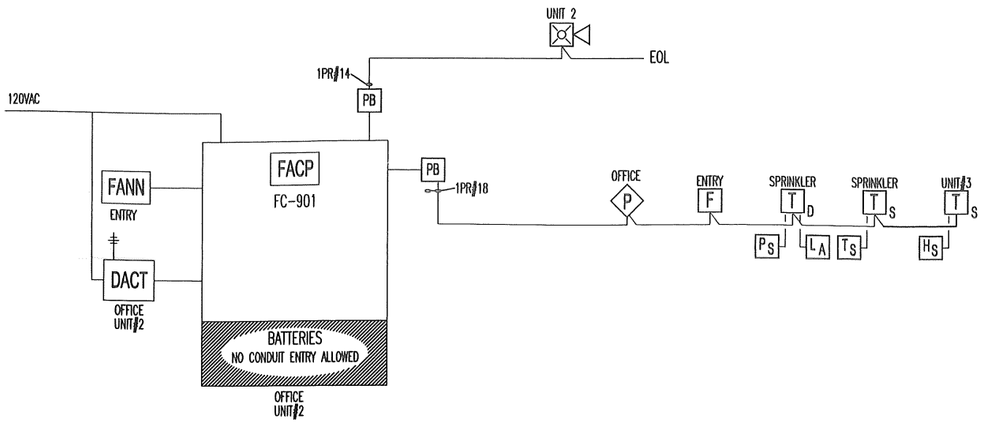
December 2009
Supersedes sheet dated 7/07
(Rev. 1)



FIRE ALARM RISER DETAIL

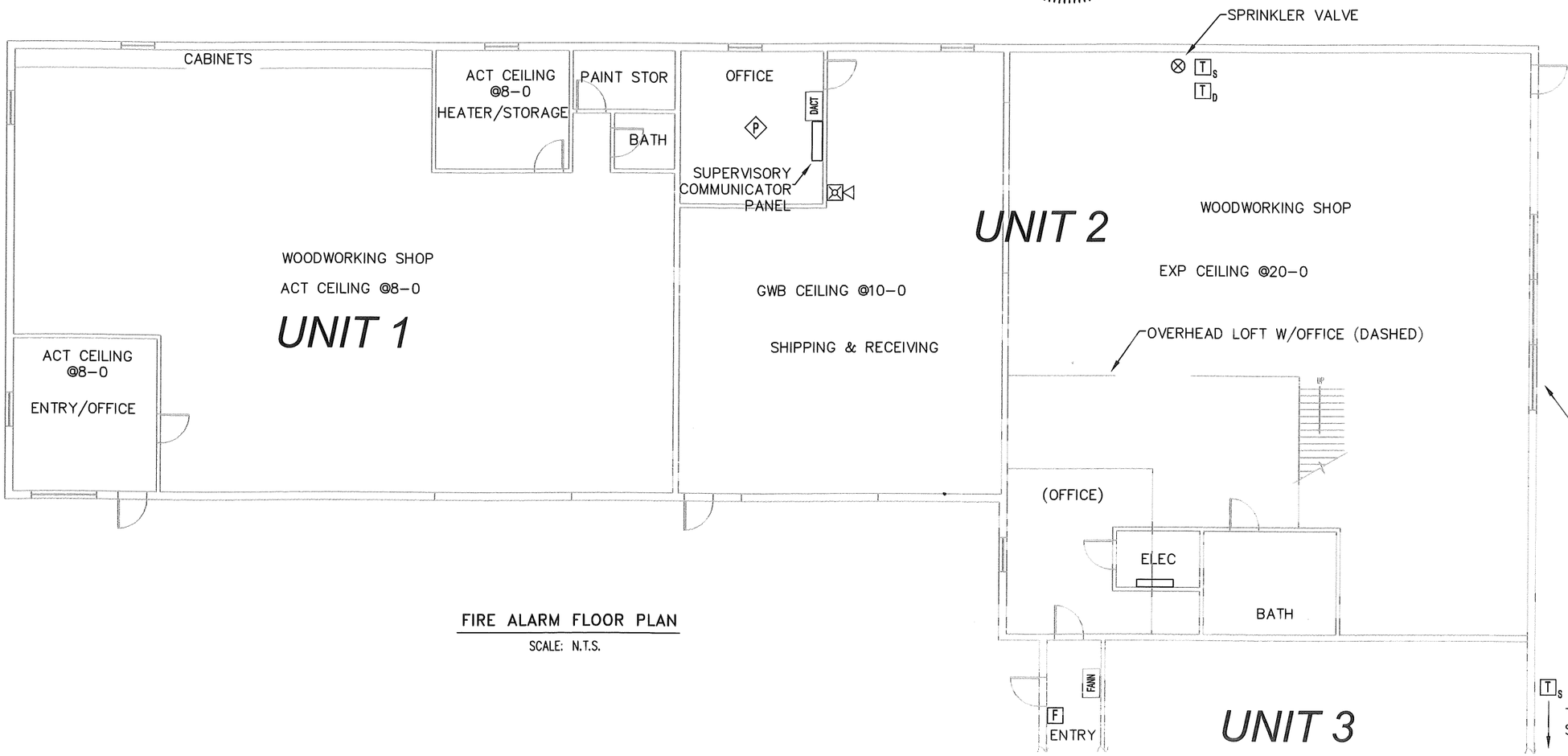
SCALE: N.T.S.

SCOPE OF WORK: INSTALL REMOTE STATION MONITORING FOR DRY SPRINKLER SYSTEM AND FOR PAINT BOOTH IN UNIT #3 PER NFPA 72 AND PER THE CITY OF PORTLAND TECHNICAL STANDARD FOR SIGNALING SYSTEMS FOR THE PROTECTION OF LIFE AND PROPERTY, 2011 ED.

STATE OF MAINE
MARC L FARDIF
NO. 8105
LICENSED
PROFESSIONAL ENGINEER

DEVICE LEGEND

ITEM					
1	1	FACP	FIRE ALARM CONTROL PANEL	FCS01-U3	TOP @ 6'-0" AFF
2	1	FANN	FIRE ALARM ANNUNCIATOR	FSD901-R3	
3	1	DACT	DSC CELLULAR COMMUNICATOR	GS3055-ICF	
4	1	F	MANUAL PULL STATION	NSM-KD/HTR-M	MT. 48" TO TOP
5	1	P	SMOKE DETECTOR	HFP-11	
6	0	PD	DUCT SMOKE DETECTOR HOUSING	AD2-XHR	
7	0	H	HEAT DETECTOR	HFPT-11	
8	1	TM	SINGLE INPUT INTERFACE MINI MODULE	HTRI-M	MT. ON 4" SQ BOX
9	2	TS	SINGLE INPUT INTERFACE MODULE	HTRI-S	MT. ON 4" SQ BOX
10	1	TD	DUAL INPUT INTERFACE MODULE	HTRI-D	MT. ON 4" SQ BOX
11	0		STROBE	ZR-MC-R	MT. TOP 6'-8" AFF
12	1		HORN/STROBE	ZH-MC-R	
13	1	PS	EXISTING PRESSURE SWITCH	F.B.O.	
14	1	LA	EXISTING LOW-AIR SWITCH	F.B.O.	
15	1	TS	EXISTING TAMPER SWITCH	F.B.O.	
16	1	HS	EXISTING PAINT BOOTH SUPPRESSION SYSTEM	F.B.O.	



FIRE ALARM FLOOR PLAN

SCALE: N.T.S.

NO.	REVISIONS

REQUIRED APPROVALS

CONTRACTOR/ENGINEER
LOCAL FIRE DEPARTMENT

DRAWN BY: DRS

CHECKED BY: BWB

PROJECT:

DEKKO, LLC

225 INDUSTRIAL WAY
PORTLAND, MAINE

FIRE ALARM CONTRACTOR:

EASTERN FIRE SERVICES, INC.
AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210
170 KITTYHAWK AVENUE, P.O. BOX 1390
Phone: (207)784-1507 Fax: (207)782-0568

CONTRACT WITH: OWNER

DWG. NO.	JOB NUMBER
FA-1	EFSFA47771
LAYOUT DETAIL	SCALE: AS NOTED
	DATE: 3/14/12