Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BU[illegible]TION

Please Read Application And Notes, If Any, Attached

PERMIT

PERMIT ISSUED

Permit Number: 10 0135

This is to certify that ELEVEN EXCHANGE LLC / [illegible]ern Fire P[illegible]tion Co., Inc.

SEP 16 2010

has permission to Install a fire alarm system

AT 9 EXCHANGE ST CE[illegible] 032 F010001

City of Portland

provided that the person or persons, fi[illegible] or co[illegible]on ac[illegible]ting this permit shall comply with all of the provisions of the Statutes of Ma[illegible]e and of the O[illegible]ces of the City of Portland regulating the construction, maintenance and use[illegible]f buildings and stru[illegible]res, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Noti[illegible]tion o[illegible]spectio[illegible]nust be give[illegible]d writte[illegible]ermissio[illegible]rocured befo[illegible]his bui[illegible]g or pa[illegible]ereof is lath[illegible]or oth[illegible]ed-in. 24 HOU[illegible]NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. [illegible]

Health Dept.

Appeal Board

Other

Department Name

Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Issue Date:	CBL:
10-1135		032 F010001

Location of Construction:	Owner Name:	Owner Address:	Phone:
9 EXCHANGE ST	ELEVEN EXCHANGE LLC	PO BOX 4894	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Eastern Fire Protection Co., Inc.	170 Kittyhawk Ave.,PO Box 1390 Au	2077841507
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Fire Alarm System	B-3

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Commercial	Commercial - install a fire alarm system	$120.00	$10,000.00	1

FIRE DEPT: ☒ Approved ☐ Denied
w/conditions
9/16/10
Signature:

INSPECTION:
Use Group: Mred Type: Fire Alarm
IBC,2003
Signature:

Proposed Project Description:
Install a fire alarm system

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)
Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied
Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	09/10/2010

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 electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☐ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: 9/14/10	Date:	Date:

PERMIT ISSUED

SEP 16 2010

City of Portland

RECEIVED

SEP 20 2010

City of Portland
Planning Division

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 application 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

CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

7-10 2010

Received from Eastern Company

Location of Work 11 Exchange

Cost of Construction $_____ Building Fee: _____

Permit Fee $_____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 120

Building (15) ___ Plumbing (15) ___ Electrical (12) ___ Site Plan (0/50) ___

Other _____

CBL: 32 F 10

Check #: CC Total Collected: 120

No work is to be started until permit issued.
Please keep original receipt for your records.

Taken by: J.P.

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy

CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

9. 10. 10

Received from Eastern Company

Location of Work 11 Exchange St

Cost of Construction $_____ Building Fee: _____

Permit Fee $_____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 55

Building (IL) ___ Plumbing (15) ___ Electrical (12) ___ Site Plan (50) ___

Other _____

CBL: 32-F10

Check #: ((Total Collected $ 55

No work is to be started until permit issued.
Please keep original receipt for your records.

Taken by: _____

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy

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

Permit No:	Date Applied For:	CBL:
10-1135	09/10/2010	032 F010001

Location of Construction:	Owner Name:	Owner Address:	Phone:
9 EXCHANGE ST	ELEVEN EXCHANGE LLC	PO BOX 4894	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Eastern Fire Protection Co., Inc.	170 Kittyhawk Ave.,PO Box 1390 Au	(207) 784-1507
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Fire Alarm System	

Proposed Use:	Proposed Project Description:
Commercial - install a fire alarm system	Install a fire alarm system

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 09/14/2010
Note: **Ok to Issue:** ☑

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jonathan Rioux **Approval Date:** 09/16/2010
Note: **Ok to Issue:** ☑

1) Separate permits are required for any electrical, plumbing, sprinkler, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
2) Fire Alarm systems shall be installed per Sec. 907 of the IBC 2003
3) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approrval prior to work.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Ben Wallace Jr. **Approval Date:** 09/16/2010
Note: No master box. **Ok to Issue:** ☑

1) The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.
2) Installation of a Fire Alarm system requires a Knox Box to be installed per city crdinance
3) Central Station monitoring for addressable fire alarm systems shall be by point.
4) As-built documents shall be submitted in pdf to the Building Inspections Office upon completion of job.
5) All smoke detectors and smoke alarms shall be photoelectric. Carbon Monoxide detectors are required in the dwelling units by State law.
6) System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
7) All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS". Records cabinate, FACP, annunciator(s), and pull stations shall be keyed alike.
8) Floor plans and updated wiring diagrams shall be provided at completion of each phase of installation.

PERMIT ISSUED

SEP 16 2010

City of Portland

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

Permit No:	Date Applied For:	CBL:
10-1135	09/10/2010	032 F010001

Location of Construction:	Owner Name:	Owner Address:	Phone:
9 EXCHANGE ST	ELEVEN EXCHANGE LLC	PO BOX 4894	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Eastern Fire Protection Co., Inc.	170 Kittyhawk Ave.,PO Box 1390 Au	(207) 784-1507
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Fire Alarm System	

Proposed Use:	Proposed Project Description:
Commercial - install a fire alarm system	Install a fire alarm system

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Note: **Ok to Issue:** ☑

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jonathan Rioux **Approval Date:** 09/16/2010
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8) Floor plans and updated wiring diagrams shall be provided at completion of each phase of installation.

PERMIT ISSUED

SEP 16 2010

City of Portland

Fire Alarm Permit

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.

Installation address: 11 EXCHANGE St. CBL: 32-F-10

Exact location: (within structure) All

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

Building owner: Joe Soley

Must be

System Designer (point of contact): BRIAN BAIRD

Designer phone: 207-784-1507 E-mail: BAIRDBW@TEAMEASTERN.com

Installing contractor: EASTERN FIRE SERVICES Certificate of Fitness No: T1084

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:

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

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

COST OF WORK: $10,000.-

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

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SEP 10 2010
Dept. of Building Inspections
City of Portland Maine

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 .

Applicant signature: Paul Shu Date: 09/10/10

Form # P 01

ELECTRICAL PERMIT
City of Portland, Me.

To the Chief Electrical Inspector, Portland Maine:
The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date 09/10/10
Permit # 2010 4629
CBL# 32-F-10

LOCATION: 11 Exchange Street **METER MAKE & #**
CMP ACCOUNT # **OWNER**
TENANT Joe Soley Properties **PHONE #**

					TOTAL	EACH FEE
OUTLETS	Receptacles	Switches	Smoke Detector		.20	
FIXTURES	Incandescent	Fluorescent	Strips		.20	
SERVICES	Overhead	Underground	TTL AMPS	<800	15.00	
	Overhead	Underground		>800	25.00	
Temporary Service	Overhead	Underground	TTL AMPS		25.00	
					25.00	
METERS	(number of)				1.00	
MOTORS	(number of)				2.00	
RESID/COM	Electric units				1.00	
HEATING	oil/gas units	Interior	Exterior		5.00	
APPLIANCES	Ranges	Cook Tops	Wall Ovens		2.00	
	Insta-Hot	Water heaters	Fans		2.00	
	Dryers	Disposals	Dishwasher		2.00	
	Compactors	Spa	Washing Machine		2.00	
	Others (denote)				2.00	
MISC. (number of)	Air Cond/win				3.00	
	Air Cond/cent		Pools		10.00	
	HVAC	EMS	Thermostat		5.00	
	Signs				10.00	
	Alarms/res				5.00	
	✓ Alarms/com				15.00	
	Heavy Duty(CRKT)				2.00	
	Circus/Carnv				25.00	
	Alterations				5.00	
	Fire Repairs				15.00	
	E Lights				1.00	
	E Generators				20.00	
PANELS	Service	Remote	City Main		4.00	
TRANSFORMER	0-25 Kva				5.00	
	25-200 Kva				8.00	
	Over 200 Kva				10.00	
			TOTAL AMOUNT DUE			
	MINIMUM FEE/COMMERCIAL 55.00		**MINIMUM FEE**	45.00		

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SEP 10 2010
Dept. of Building Inspections
City of Portland Maine

CONTRACTORS NAME Eastern Fire Services **MASTER LIC. #** MS6001665 7
ADDRESS 170 Kitty Hawk Ave Auburn, Me 04211 **LIMITED LIC. #**
TELEPHONE 207-784-1507

SIGNATURE OF CONTRACTOR Paul Shea

White Copy - Office • Yellow Copy - Applicant

EASTERN FIRE SERVICES INCORPORATED

TESTING SERVICE EFSI INSPECTIONS

FIRE SUPPRESSION AND DETECTION
SAVE LIVES AND PROPERTY

*FIRE SPRINKLER * FIRE ALARM * CLEAN AGENT*

AUBURN PHONE (207) 795-6314 • AUBURN FAX (207) 782-0566
BANGOR PHONE (207) 942-8014 • BANGOR FAX (207) 942-5202
170 KITTY HAWK AVE. • P. O. BOX 1582 • AUBURN, ME 04211-1582

DESIGNER QUALIFICATIONS

Brian W. Baird

20years experience in fire alarm industry dealing with the design, installation, and servicing of both conventional and addressable fire alarm systems

Brian Baird

From: Brian Baird
Sent: Wednesday, September 08, 2010 8:50 AM
To: Benjamin Wallace
Cc: Keith Gautreau; plewis01022000@yahoo.com
Subject: RE: 11 exchange st.
Attachments: image001.gif; image002.jpg

Importance: High

Fire Alarm System Plan of Action:

1. Obtain Fire Alarm Permit
2. Replace existing 2nd floor FACP with new addressable FACP
3. Install new Remote Annunciator in 1st fl lobby
4. Troubleshoot each existing zone and connect to new FACP
5. Connect new FACP to Central Station Monitoring
6. Connect new devices/zones in new restaurant to new FACP
7. Install new addressable heat detectors in existing apartment units
8. Install devices as required in all other unprotected areas of the building

Please comment

Brian W. Baird
Eastern Fire Services Inc.
Eastern Fire Protection Inc.
170 Kitty Hawk Ave.
Auburn, Maine 04210
207-784-1507 ph
207-782-0566 fax
207-713-7354 cell
bairdbw@teameastern.com

Factory Authorized **Fire Safety Distributor**

Siemens FS-250 Battery Calculations

Job Name: 11 EXCHANGE ST
Date: 9/8/2010

	STANDBY	ALARM
TOTAL SYSTEM CURRENT	**0.305**	**8.106**

TOTAL FACP BATTERY CALCULATIONS

TOTAL STANDBY CURRENT A/H REQ'D				A/H STANDBY
0.305 Amps	X	24	HRS.	**7.325**
TOTAL ALARM CURRENT A/H REQ'D				A/H ALARM
8.106 Amps	X	5	MIN.	**0.844**

Required Battery Capacity	**8.169**

Always use a battery with higher AH rating than required.

BATTERY SUPPLIED: 2 x 12AH

EASTERN FIRE SERVICES INCORPORATED

TESTING SERVICE EFSI INSPECTIONS

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170 KITTY HAWK AVE. • P. O. BOX 1582 • AUBURN, ME 04211-1582

I/O MATRIX

INPUTS	OUTPUTS
SMOKE DETECTOR MANUAL STATION WATERFLOW HEAT DETECTOR	ACTIVATE HORN/STROBES ACTIVATE DIALER - ALARM SHOW ACTIVITY ON REMOTE ANN.
SPRINKLER TAMPER	ACTIVATE DIALER - SUPERVISORY SHOW ACTIVITY ON REMOTE ANN.
FACP TROUBLE	ACTIVATE DIALER - TROUBLE SHOW ACTIVITY ON REMOTE ANN.

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.

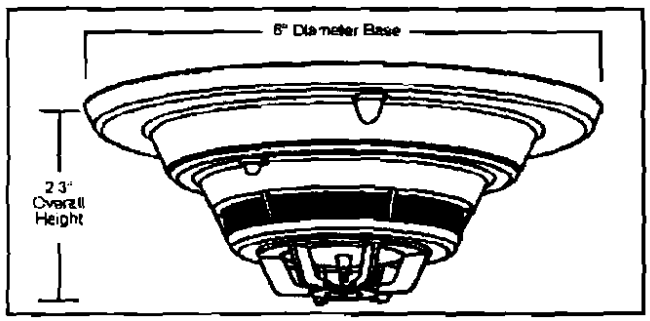
A Device Program/Test Unit (DPU) is used to program and verify the detector's address. The user selects the Program Mode to enter the desired address. The DPU Programmer/Tester then automatically sets and verifies the address as well as tests the detector. The DPU has rechargeable batteries, so a detector's 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: 1 mA 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/fs

12/04
10M
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

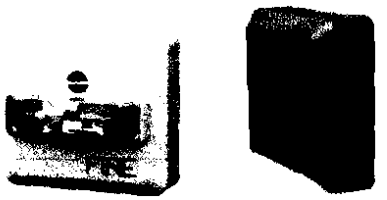
December 2004
Supersedes sheet dated 10/02

Z

Strobes, Horns, Horn/Strobes

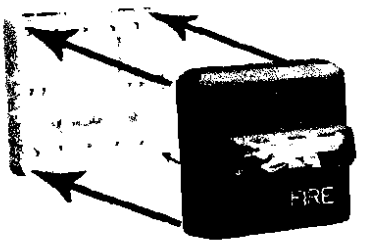
ENGINEER AND ARCHITECT SPECIFICATIONS

- UL listed. ULC, CSFM, and FM pending.
- ADA/NFPA compliant
- EZ Mount design, with separate base plate, provides ability to pre-wire the base and test the circuit wiring before the walls are covered
- The base plate is protected by a disposable cover and the appliances can quickly snap onto the base after the walls are painted.
- EZ Mount Universal Mounting Plate (ZBB) – uses single plate for ceiling and wall mount installations
- Wall Mount models feature field selectable candela settings of 15/30/75/110cd and 135/185cd
- Ceiling Mount models feature field selectable candela settings of 15/30/75/95cd and 115/177cd
- 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
- "Special Applications" listed with Siemens panels
- Strobes produce 1 flash per second
- Selectable Continuous Horn or Temporal (Code-3) Tones with selectable 90 or 95 dBA setting (ZH model)



Series ZH

Series ZR



ZR AND ZH Mounting

Description

The Siemens Series Z notification appliances feature an easy snap on base that is designed to simplify the installation and testing of horns, strobes, and horn/strobes. The separate Series Z snap on base can be pre-wired so circuit wiring can be fully tested before the appliance is installed and before the walls are covered. Once all surrounding work is complete, the appliance can be simply installed by snapping it on the base. Shorting contacts in the base, which provide continuity for circuit testing, are permanently opened when the appliance is installed so any subsequent removal of the appliance will indicate a trouble condition on that circuit at the control panel when circuit supervision is enabled. The same base is used for all Series Z horns, strobes and horn/strobes to provide consistent installation and easy replacement of appliances if required. A locking screw is also included for the appliance to provide extra secure installation.

The Siemens Series Z appliances incorporate the same dependable circuitry and high efficiency optics that are used in Siemens ST strobes, NS horn/strobes and NH horns and have the same high performance ratings. The Series Z appliances are "Special Applications" listed with Siemens panels.

Engineering Specifications

General

Audible/visual notification appliances shall be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. These appliances shall be listed under UL Standard 1971, (Standard for Safety Signaling Devices for Hearing Impaired) and UL Standard 464 (Fire Protective Signaling). The appliances shall use a universal backplate that 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 checking of the entire NAC circuit prior to attaching any audible/visual notification appliances shall be allowed. A dust cover shall fit and protect the mounting plate. The dust cover shall be easily removed when the appliance is installed over the backplate. Removal of an appliance shall result in a trouble condition by the Fire Alarm Control Panel (FACP).

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. The strobes shall be available with two or four field selectable settings in one unit and shall be rated, per UL 1971, for up to 185 cd for wall mounting and 177 cd for ceiling mounting. The 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. The horns shall be able to produce a continuous output or a temporal code-3 output that can be synchronized. The horns shall have at least 2 sound level settings of 90 and 95 dBA.

Synchronization Modules

When synchronization of strobes or temporal Code-3 audibles is required, the appliances shall be synchronized using the Siemens DSC sync modules, FS-250 panels, XLS panels, or PAD-3 power supplies 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 be synchronized on a 2-wire circuit with the capability to silence the audible if required. If the sync module or power supply fails to operate (i.e., contacts remain closed), the strobes shall revert to a non-synchronized flash rate. 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".
- 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).

Technical Information

For complete technical information, please consult the relevant installation sheets as well as the Siemens Compatibility Guide.

Ordering Information / Mounting Requirements / Approvals

Model Number	Order Code	Mounting Options*	Agency Approvals			
			UL	ULC	CSFM	FM
ZH-MC-R	500-636161	B, D, E, F	X	#	#	#
ZH-MC-W	500-636162	B, D, E, F	X	#	#	#
ZH-HMC-R	500-636163	B, D, E, F	X	#	#	#
ZH-HMC-W	500-636164	B, D, E, F	X	#	#	#
ZH-R	500-636159	B, D, E, F	X	#	#	#
ZH-W	500-636160	B, D, E, F	X	#	#	#
ZH-MC-CR	500-636165	B, D, E, F	X	#	#	#
ZH-MC-CW	500-636166	B, D, E, F	X	#	#	#
ZH-HMC-CR	500-636167	B, D, E, F	X	#	#	#
ZH-HMC-CW	500-636168	B, D, E, F	X	#	#	#
ZR-MC-R	500-636169	B, D, E, F	X	#	#	#
ZR-MC-W	500-636170	B, D, E, F	X	#	#	#
ZR-HMC-R	500-636171	B, D, E, F	X	#	#	#
ZR-HMC-W	500-636172	B, D, E, F	X	#	#	#
ZR-MC-CW	500-636174	B, D, E, F	X	#	#	#
ZR-MC-CR	500-636173	B, D, E, F	X	#	#	#
ZR-HMC-CR	500-636175	B, D, E, F	X	#	#	#
ZRS-HMC-CW	500-636176	B, D, E, F	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 # = pending * = Refer to Data Sheet #2585 for mounting options.

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

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July 2007
New Issue

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.

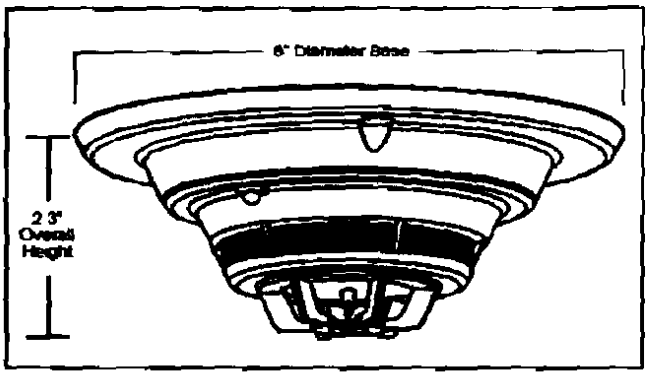
When in the test mode, the DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly. The HFP-11 fire detector may be installed on the same initiating circuit with HMS series manual stations, 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	500-095350
DMK-11	Series 11 Maint Kit (replacement labyrinth and bug bug screen)	500-095338
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

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

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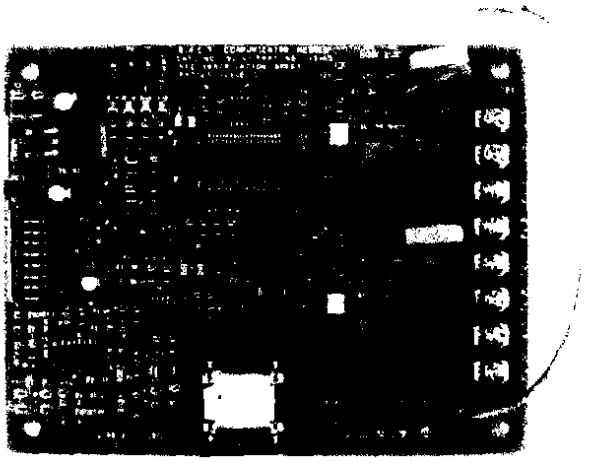
October 2005
Supersedes sheet dated 7/03

FS-DACT

Digital Alarm Communication Transmitter for the FireSeeker FS-250 System

ENGINEER AND ARCHITECT SPECIFICATIONS

- UL Listed for Central Station/Remote Station Monitoring (NFPA 72 Chapter 4)
- Four separate monitoring accounts available
- Two phone lines available
- Can send serial information to monitoring station
- Reports in 8 standard communication formats
- Automatic 24 hour test available
- Mounts within the FS-250 enclosure directly on the main processor board
- All programming is done as part of the FS-250 configuration



The Model FS-DACT Digital Alarm Communication Transmitter is used to provide communication between the FS-250 and a central or remote monitoring station. The FS-DACT supports two lines and four accounts, and can transmit serial information (including the address of the event) to the monitoring station. Any of the accounts can send alarm, supervisory, trouble, reset, or trouble restore information (or any combination) as required. Communication protocols available include SIA DCS 8, SIA DCS 20, Ademco Contact ID, 3/1 1400 Hz, 3/1 2300 Hz, 4/2 1400 Hz and 4/2 2300 Hz. The FS-DACT can perform the automatic 24 hour test required by NFPA.

The FS-DACT mounts within the FS-250 enclosure on an 8-pin connection point on the main board. No external enclosure is required, and no wires are required between the panel and the dialer. Programming of account and dialing information is done as part of the system configuration. No external programmer for the dialer is required, and dialer information can be downloaded as part of the system configuration.

Ordering Information

Model Number	Description	Part Number
FS-DACT	Digital dialer for the FS-250	500-699464

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 voids all warranties either expressed or implied in regard to loss, damage, liabilities and/or service problems.

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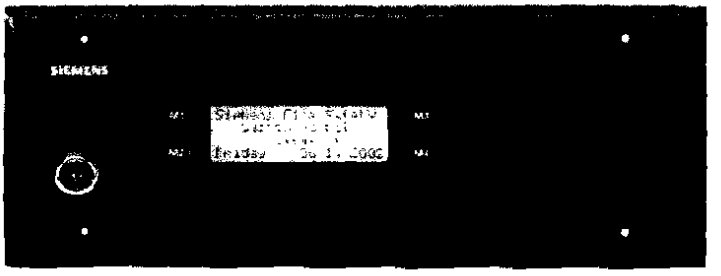
January 2004
Supersedes sheet dated 6/03

FS-RD2

Remote LCD Annunciator for the FireSeeker FS-250 System

ENGINEER AND ARCHITECT SPECIFICATIONS

- 4 x 20 Character Backlit Display
- System Status LEDs
- Optional local sounder
- Built-in lamp test button
- Integral System Control Capabilities (with keyswitch)
- Integral System Maintenance access (with keyswitch and password)
- UL Listed



The Model FS-RD2 Remote Display is used for annunciating system events remotely from the fire alarm control panel on the FireSeeker FS-250 system. The FS-RD2 will mimic the system status LEDs and the 80-character event message found on the main system panel. The 4 x 20 LCD backlit display will illuminate upon receiving any event from the system, or upon pressing any button on the FS-RD2.

System Acknowledge, Silence and Reset Capabilities are available on the FS-RD2. The control functions must be enabled using the integral keyswitch. Up to sixteen supervised FS-RD2 annunciators can be used simultaneously on the FireSeeker FS-250 system.

Mounting is accomplished using a standard 6 gang 2" deep electrical box. The FS-RD2 requires a 2-wire data connection from the RS-485 port on the FS-250, as well as 24 VDC power. Maximum wire loop resistance is 25 ohms.

Ordering Information

Model Number	Description	Part Number
FS-RD2	Remote LCD display for the FS-250	500 648980

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 voids all warranties either expressed or implied in regard to loss, damage, liabilities and/or service problems.

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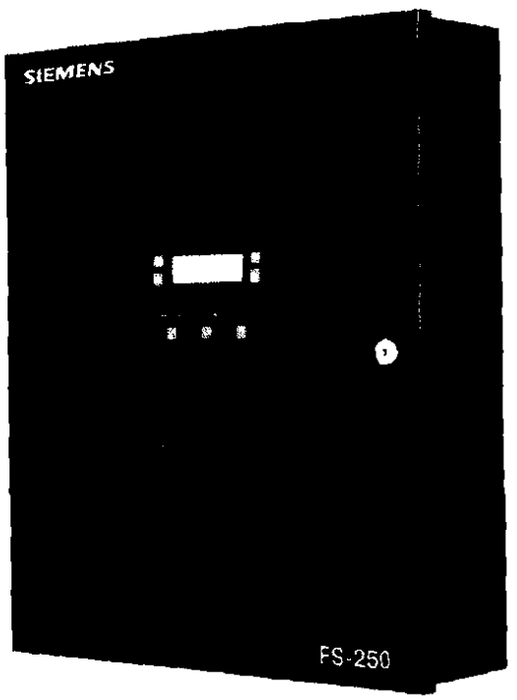
January 2004
Supersedes sheet dated 6/03

FireSeeker Model FS-250

Addressable Fire Alarm Control Panel

ENGINEER AND ARCHITECT SPECIFICATIONS

- One intelligent signaling line circuit (Style 4 or 6)
- SureWire polarity insensitive loop wiring
- Utilizes H-Series detectors and devices
- Supports up to 252 addressable inputs AND signal/relay outputs
- Devices operate on standard wire, no twist or shield required
- FirePrint application specific fire detection
- 4 Class B/2 Class A NAC circuits
- Up to 6 amps of NAC power
- Built in strobe synchronization protocol
- One man walk test (silent or audible)
- 80 Character backlit LCD display
- Optional internal DACT capable of transmitting point or group information
- Programmable from front keypad or Windows based PC configuration tool
- Built in RS-232 port for computer programming
- 2000 event history log
- Alarm, trouble, supervisory and power fail relays built-in
- Auto program feature makes system start-up faster
- Maintenance and technician level passwords
- UL, MEA and CSFM listed



The FS-250 addressable fire alarm control panel is a small, low cost fire alarm panel suited for stand-alone operation in small to medium sized facilities. It features a single addressable input device circuit and four notification appliance circuits. The system is available with both a black or red enclosure, with operating controls and indicators behind a locked door. The FS-250 is Listed by Underwriters Laboratories.

Main System

The FS-250 indicates alarm, trouble and supervisory conditions with an 80 character backlit LCD display and integral system status LEDs. Acknowledge, alarm silence, and system reset are accomplished with built-in membrane control buttons. Basic user and maintenance level functions such as viewing history or system enable/disable are also accomplished through the membrane control buttons. Password protection of maintenance level functions is present. The main system can support up to 38 AH battery sets, up to 10 AH will fit inside the enclosure.

The basic FS-250 features a single addressable signaling line circuit (Style 4 or 6) capable of supporting up to 252 addressable input devices, whether they are detectors, manual pull stations, or contact monitoring points. Each detector can also have an optional audible detector base, relay detector base, or remote lamp associated with it. These auxiliary devices are completely controlled through logic, and are not required to activate simultaneously with the detector.

The system also has four class B or 2 class A Notification Appliance Circuits built into the main board. Each circuit has a capacity of 1.5 amps of 24VDC for powering horns, strobes, chimes, and other notification appliances. The total base system capacity for the four circuits is 3.0 amps and can be expanded to 6A. Each NAC is fully programmable, and supports standard and custom coded outputs of audible devices. Systems can be configured to sound different codes on the same NAC to indicate different conditions.

The FS-250 has four Form C relays on the main board for monitoring alarm, supervisory, power fail and trouble conditions. Each relay is rated at 1 amp @ 28VDC. Auxiliary 24VDC power is also available on the main board, with a capacity of up to 0.5 amps.

The Loop

The FS-250 utilizes the advanced P-2 protocol for the detection circuit. The P-2 loops features include SureWire™ technology providing, 252 addresses (inputs AND outputs), polarity insensitivity, response time under 3 seconds, retrofit installations using almost any type of wire (shielded, non-shielded, twisted, etc.)

You can install an FS-250 using any of the H-series P-2 devices including the HFP-11 FirePrint™ detector. But we also offer a new low-cost HFPO-11 detector that is a non-FirePrint photoelectric device for the less-demanding, more cost-competitive applications.

If you require two detector accessories, such as a relay or audible base AND a remote lamp, you can install the new ILED-HC or ILED-HW Intelligent Remote L.E.D. that con be programmed to mimic the detector L.E.D. or can respond to panel logic (see ILED installation or catalog sheet for details.)

Optional Modules

Remote LCD Annunciator
The FS-250 supports a remote LCD display called the FS-RD2. This remote display uses the same 80 character backlit LCD display found on the main system panel. The FS-RD2 has remote acknowledge, silence, and reset capability, secured with a keyswitch. User and maintenance level functions are also possible from this remote display. Maintenance level functions require the system maintenance password for activation. The FS-RD2 communicates with the main system board via an RS-485 communication network. Up to sixteen FS-RD2 remote displays can be supported on a single FS-250 system. The FS-RD2 mounts in a 2" deep 6 gang electrical box, and the plate on the display is suitable for flush mounting.

Digital Alarm Communicator Transmitter (DACT)
Communication between the FS-250 and a monitoring station is accomplished with the Model FS-DACT Digital Alarm Communication Transmitter. The FS-DACT supports two lines and four accounts, and can transmit serial information by point to the Central or Remote station. Communication protocols available include SIA DCS 8, SIA DCS 20, Ademco Contact ID, 3/1 1400 Hz, 3/1 2300 Hz, 4/2 1400 Hz and 4/2 2300 Hz. The FS-DACT mounts within the FS-250 enclosure on an 8-pin connection point on the main board. No external enclosure is required, and no wires are required between the panel and the dialer. Programming of account and dialing information is done as part of the system configuration. No external programmer for the dialer is required.

Municipal Tie/Leased Line
For installations that require connection to a municipal call box or a leased line, the Model FS-MT municipal tie module is used. The FS-MT provides a local energy output for municipal call box connection and a reverse polarity output for lease line connection. The unit mounts within the FS-250 enclosure on an 8-pin connection point on the main board. Configuration of the FS-MT parameters is done as part of the system configuration.

Programmable Relays
Programmable relays are available on the FS-250. A remote processor board communicates with the main system board via an RS-485 communication network. This processor board controls a relay board mounted adjacent to it. The relay board has eight Form C relay contacts, rated at 1 amp @ 28VDC maximum. Model FS-RU relay unit contains one processor board and one relay board to add eight relays to an FS-250 system. Each processor board can support up to three relay boards simultaneously, for a total of 24 programmable relays per processor board. Additional relay extender boards are available as Model FS-RE8. A total of eight processor boards (including serial annunciator processor boards) can be supported simultaneously by the FS-250. All programmable relay processors and modules can be mounted in a Model FS-AE accessory enclosure.

Programmable Serial Annunciator Drivers
Programmable serial annunciator drivers are available on the FS-250. A remote processor board communicates with the main system board via an RS-485 communication network. This processor board controls a serial annunciator driver board mounted adjacent to it. The driver board has sixteen outputs for LEDs. All serial annunciator outputs are supervised. Model FS-SAU-2 serial annunciator unit contains one processor board and one serial annunciator driver board to add 16 LED drivers to an FS-250 system. Each processor board can support up to four additional driver boards simultaneously, for a total of 64 programmable serial annunciator drivers per processor board. Additional serial annunciator extender boards are available as Model FS-SAE16. A total of eight processor boards (including relay processor boards) can be supported simultaneously by the FS-250. All programmable serial annunciator processors and modules can be mounted in a Model FS-AE accessory enclosure.

Programming/Configuration Options
Configuration of the FS-250 can be accomplished in two ways. The operator interface includes a 16 button keypad. This keypad can be used to configure all system parameters, including custom messages and logic, right at the panel with no other configuration tools. Alternately, the

Model FS-CT2 configuration tool can be used on a laptop computer to upload, download, and edit the system configuration. The Model FS-CT2 configuration tool includes a connection cable for use between the FS-250 and a 9-pin serial connection, and the FS-CT2 software. Use of the FS-CT2 software requires a computer running Windows 98, Windows 2000, or Windows XP. The FS-CT2 tool can be used to generate configuration reports and download and print history.

If an alarm or other system event occurs during system configuration, the event will cause the panel to annunciate the alarm and operate the appropriate outputs.

Custom messages for system addresses consist of two lines of twenty characters each. The characters include both upper and lower case letters as well as numbers, punctuation marks, and control characters. This forty character custom message will be displayed for all events at that address.

General Specifications

Environmental
Operating temperature: 32-120°F (0-49°C) Relative Humidity - 85% @ 86°F

Primary Supply
Primary input voltage -
120 Vac (50/60 Hz.)
Maximum primary input current -
1.3 amp @ 120 Vac

Secondary and Trouble Power Supply
24 volt lead-acid battery with 7 AH-38 AH capacity

Auxiliary Power Outputs
Current - 0.5 amp resettable/non-resettable power outputs

Status System Relays
4 relays rated @ 1 amp, 28 Vdc resistive

NAC Circuits
Rating per NAC circuit, 1.5A ea., 6 max.

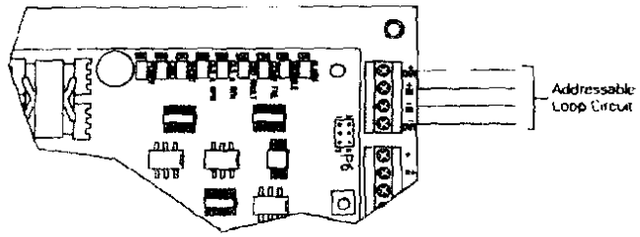
Battery
Base cabinet will accommodate a 10 A battery set. Larger batteries will require separate enclosure

FS-250 Dimensions
22" x 18" x 5 1/4" deep – enclosure only
22 9/32" x 18 3/8" x 5 1/4" deep – enclosure with door

Ordering Information

Model Number	Description	Part Number
FS-250R	FS-250, Single Loop Panel, Red	599-049346
FS-250	FS-250, Single Loop Panel, Black	599-049345
FS-RD2	Remote Annunciator, Black	500-648980
FS-RU2	Relay Processor Card	500-649308
FS-RE8	8 Relay Extender	500-699467
FS-SAU2	Serial Annun. Processor Card	500-649307
FS-SAE16	16 Output Annunciator Extender	500-699469
FS-AE	Acc. Enclosure for Serial Drivers	500 699470
FS-DACT	Serial DACT	500-699464
FS-MT	Municiple Tie Module	500 699462
FS-SFT-R	Semi Flush Trim, Red	500-648955
FS-SFT	Semi Flush Trim, Black	500-648954
FS-NPE	Nac Power Expander Transformer	500-649120
HFPO-11	Photo Only Detector	500-034800
FS-250-CON	FS-250 Electronics package	500-649110
FS-250 ENCL	FS-250 Enclosure, Black	500 648952
FS-250-ENCL-R	FS-250 Enclosure, Red	500-648953

Wiring, Main Termination Board

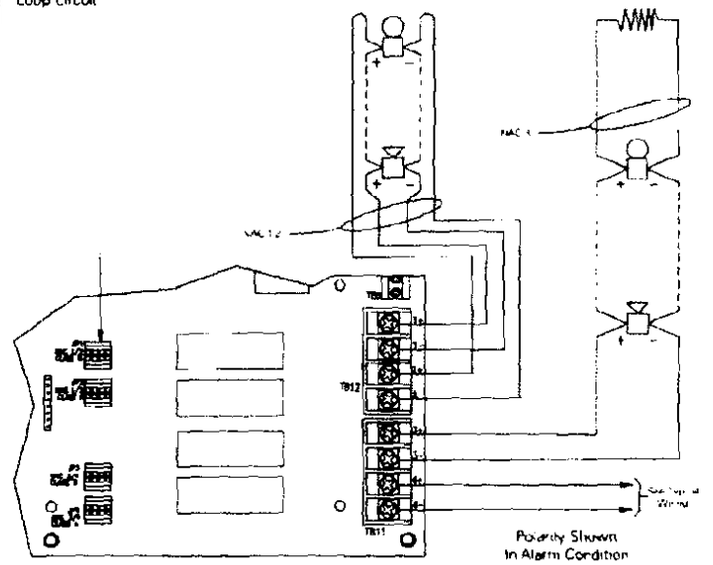


Addressable Device Circuit
Style 4 or 6 Operation
24VDC nominal
Wire Resistance-50 ohms max
(see Line Resistance Graph)
Supervised, Power Limited
See Owner's Manual for Comparible Devices

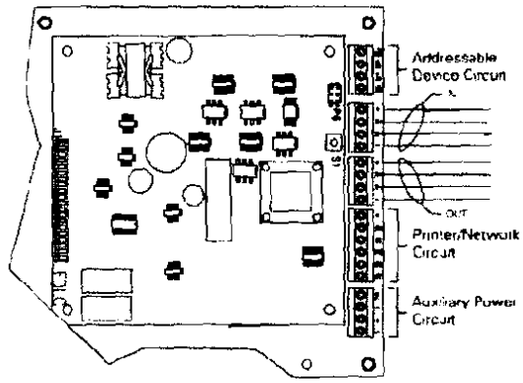
NAC Rating:
Alarm Voltage 24V FW nominal
Max Alarm Current 1.5A/NAC circuit
Max Ripple 16VAC
Max Wire Voltage Drop 1.0VDC
Max Standby Current 1.0mA
NOTE:
The maximum total current for the FS-250 NACs is 3.0A and 6.0A with the optional additional Transformer P/N FS-N°E

Typical Notification
Appliance Circuit
Style Z, Class A
Supervised, Power Limited
See Owners Manual for
Compatible Devices

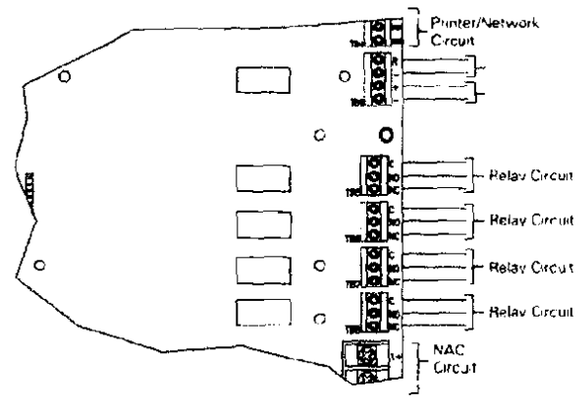
Typical Notification
Appliance Circuit
Style Y, Class B
Supervised Power Limited
See Owners Manual for
Compatible Devices



Polarity Shown
In Alarm Condition



Serial Interface Circuit,
[illegible] 24VDC nominal, 0.4 max
(X+, X-) RS-485 levels
Wire Type Twisted Pair For Data
Wire Resistance-[illegible] ohms/line (4000' max)
Supervised, Power Limited,
See Owner's Manual for
Compatible Devices



Auxiliary Power Outputs
0.4A max @24VDC nominal
Unsupervised, Power Limited
Maximum current of all auxiliary outputs circuits, Serial Interface Circuit and option boards is 0.5A

Status Relay Contacts
(Shown in normal standby condition)
1A 28VDC max Resistive For Power Limited Source, Unsupervised

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

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

8/05
5M
SFSIG
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August 2005
Supersedes sheet dated 1/04

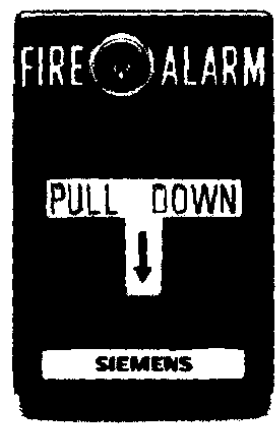
SIEMENS

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 @ 120VAC 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)

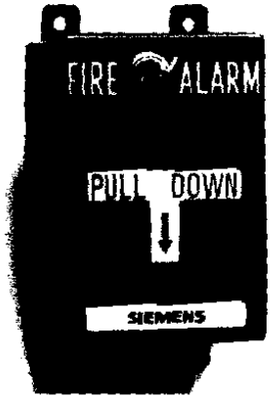
Weatherproof Model

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

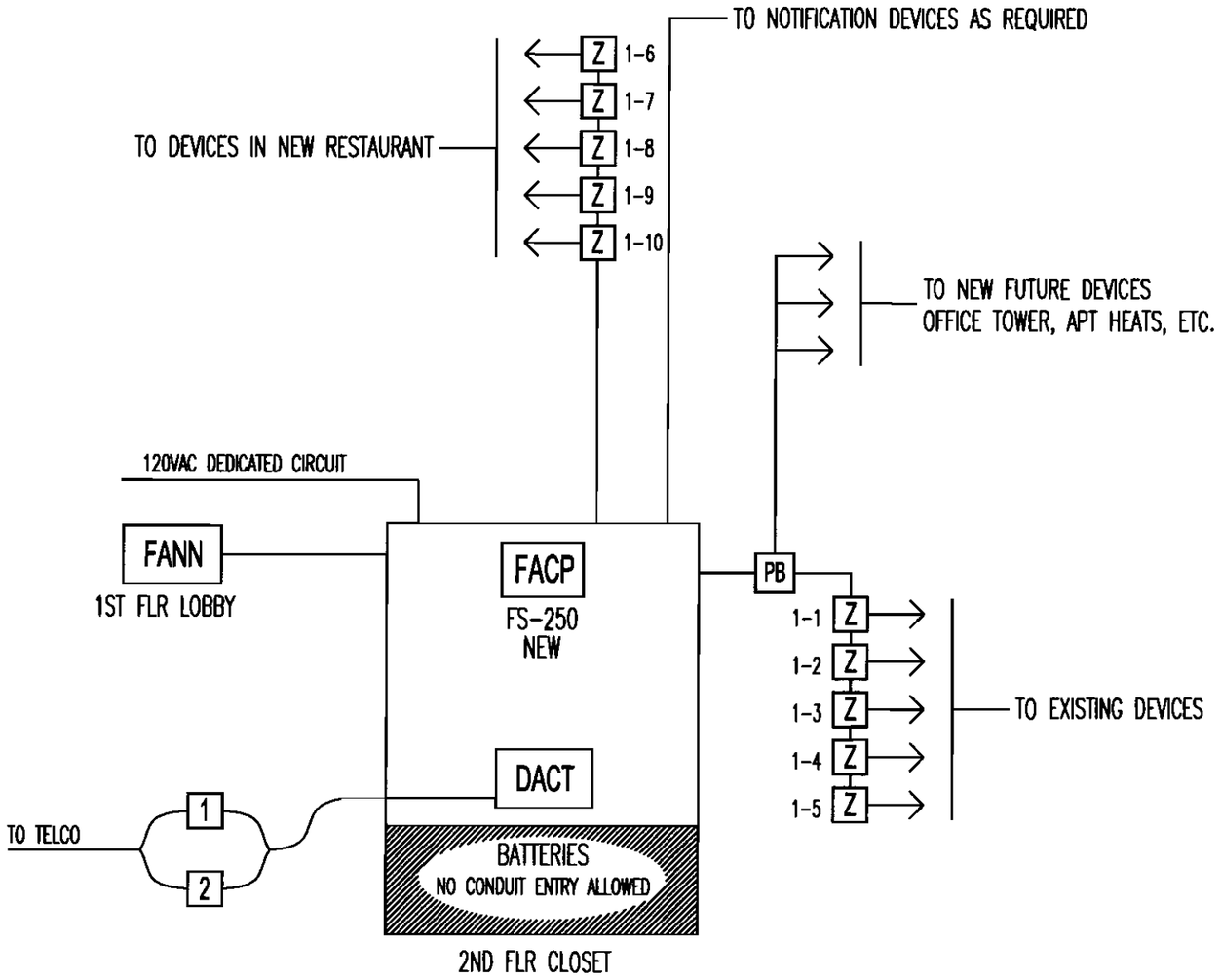
Siemens Building Technologies
Fire Safety

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

4/07
SM
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

April 2007
Supersedes sheet dated 6/03



DEVICE LEGEND

ITEM	QTY	SYM	ITEM	P/N	NOTE
1	1	FACP	FIRE ALARM CONTROL PANEL	FS-250	
2	1	FANN	FIRE ALARM ANNUNCIATOR	FS-RD2	
3	1	DACT	DIGITAL ALARM COMMUNICATION/TRANSMITTER	FS-DACT	
4	0	F	MANUAL PULL STATION	MSM-KD	
5	0	P	SMOKE DETECTOR	HFP-11	
6	0	Z	CONVENTIONAL ZONE MODULE	HZM	
7	0	H	HEAT DETECTOR	DT-135R	
8	0	T_M	SINGLE INPUT INTERFACE MINI MODULE	HTRI-M	
9	0	T_D	DUAL INPUT INTERFACE MODULE	HTRI-D	
10	0	T_S	SINGLE INPUT INTERFACE MODULE	HTRI-S	
11	0	T_R	SINGLE INPUT INTERFACE MODULE WITH RELAY	HTRI-R	

NO.	REVISIONS

REQUIRED APPROVALS

OWNER

DRAWN BY: DRS

CHECKED BY: BWB

PROJECT:

11 EXCHANGE ST

PORTLAND, MAINE

FIRE ALARM CONTRACTOR:

EASTERN FIRE SERVICES, INC.
AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210
176 KITTYHAWK AVENUE, P.O. BOX 1350
Phone: (207)784-1507 Fax: (207)782-0568

CONTRACT WITH:

JOE SOLEY PROPERTIES

DWG. NO.	JOB NUMBER
FA-1	EFSFA-40951
SYSTEM DETAIL	SCALE 1/8"=1'-0"
	DATE 9/8/10