



DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

# CITY OF PORTLAND

# BUILDING PERMIT



This is to certify that SIMPLEX GRINNELL  
of 20 Thomas Dr. Westbrook, ME 04092

For installation at 880 FOREST AVE  
Deering Pavillion

Job ID: 2011-11-2818-FAFS

CBL: 136-E-005-001

has permission to expand and renovate master box fire alarm system provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes 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.

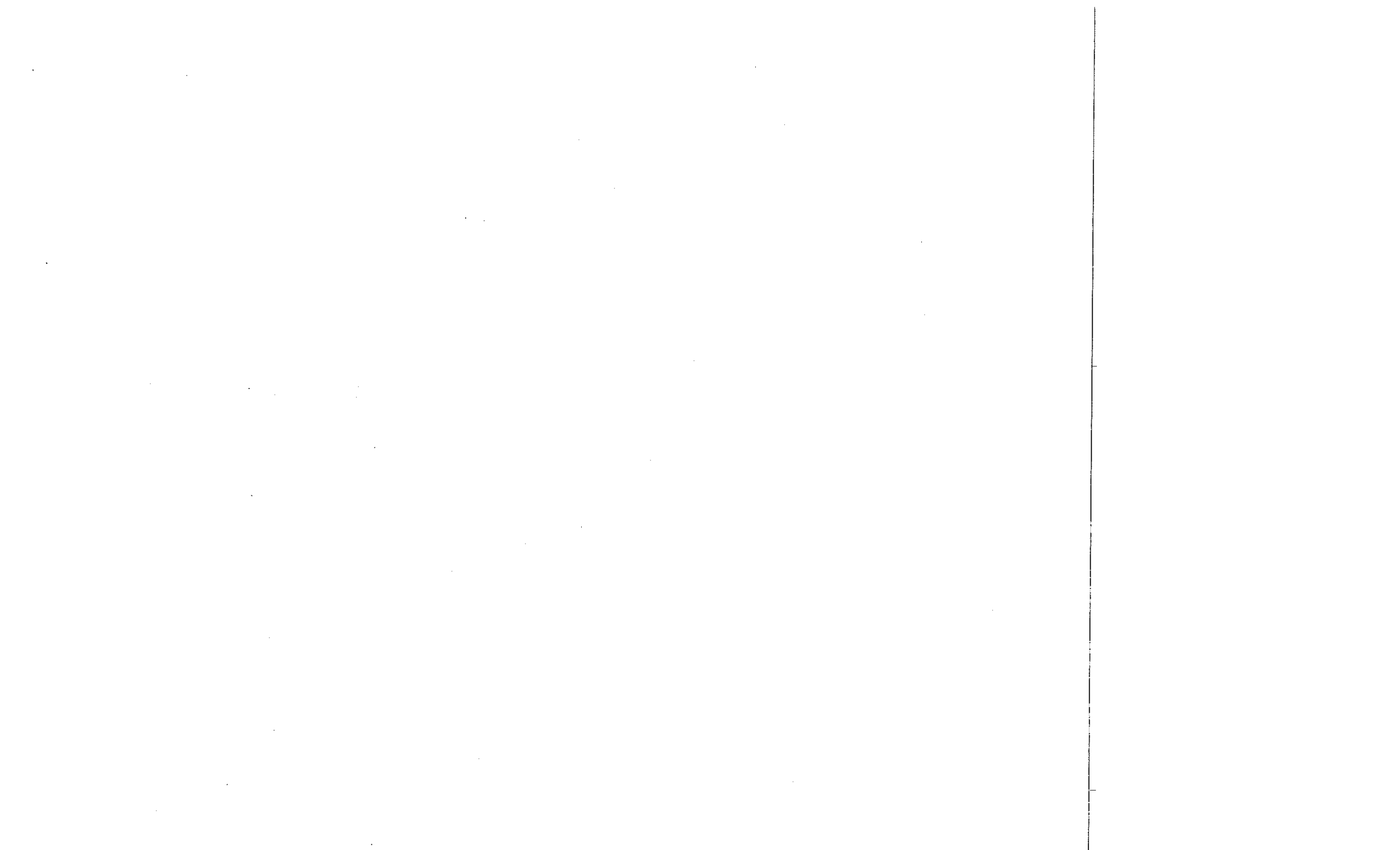
Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

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

*Bj Grinnell* 50  
**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](mailto:buildinginspections@portlandmaine.gov)

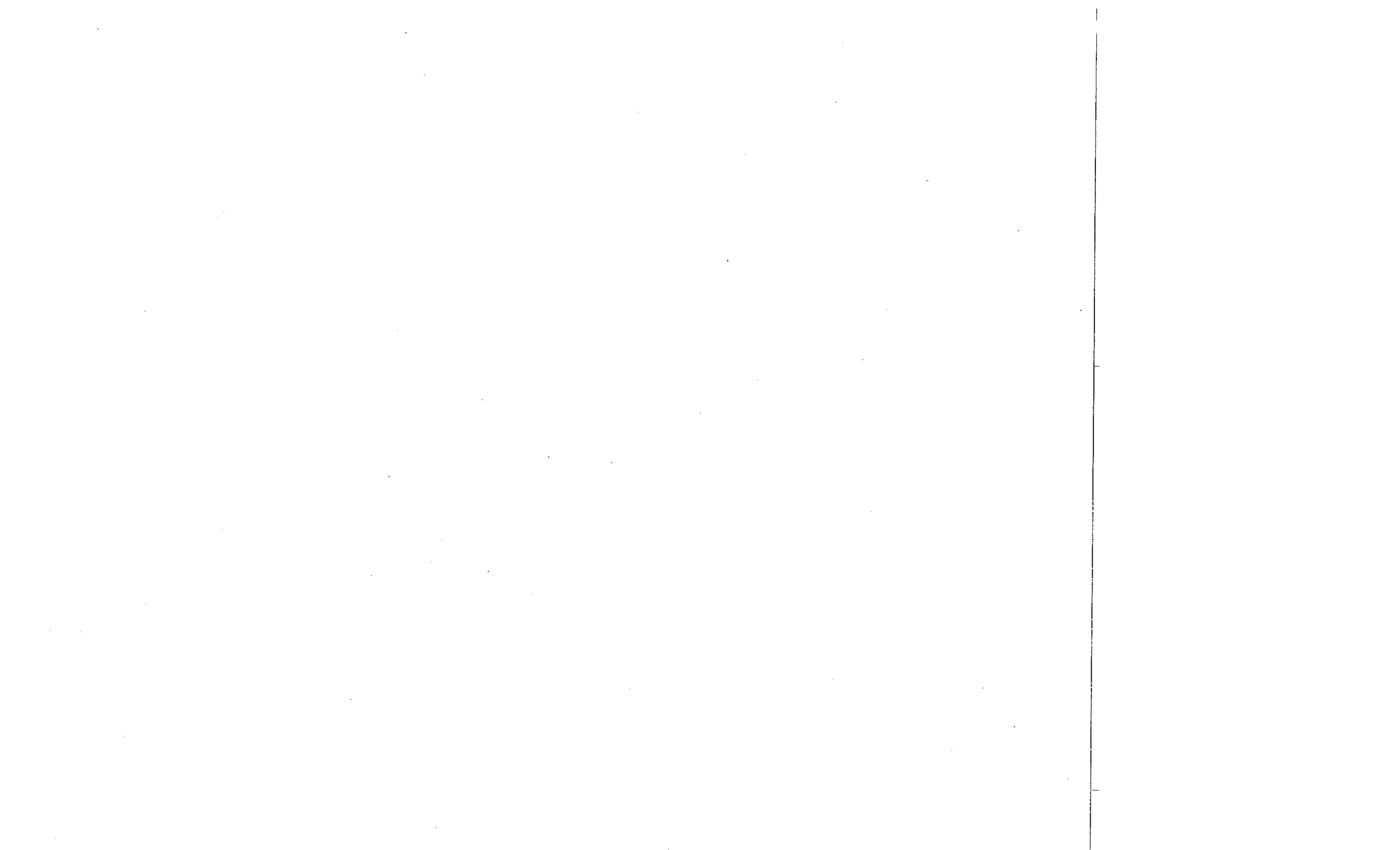
With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need 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](http://www.portlandmaine.gov)*

Director of Planning and Urban Development  
Penny St. Louis

Job ID: 2011-11-2818-FAFS  
expand and renovate master box fire  
alarm system

For installation at:  
880 FOREST AVE  
Deering Pavillion

CBL: 136-E-005-001

## Conditions of Approval:

### **Fire**

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.

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

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

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.

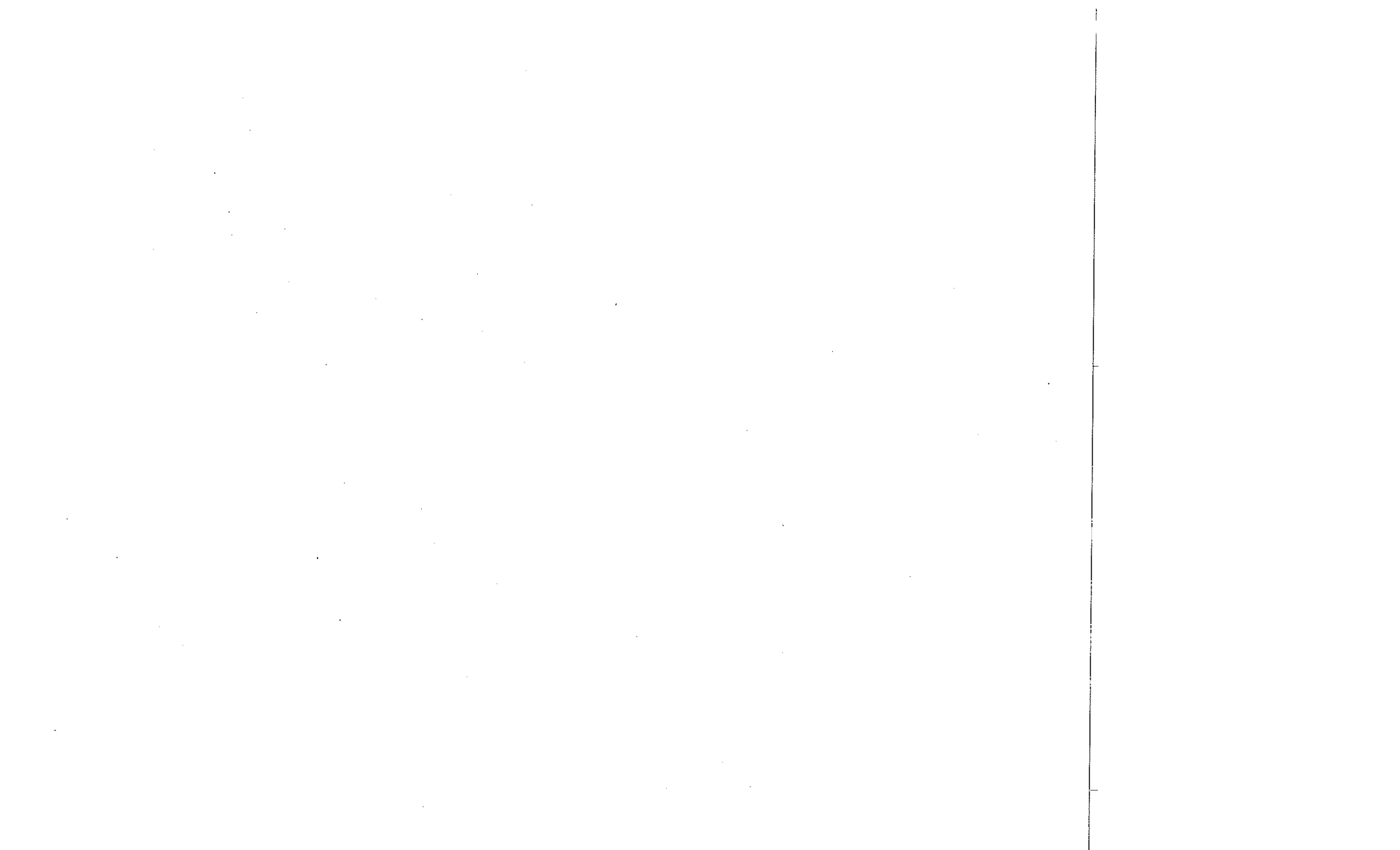
Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

Sprinkler supervision shall be provided in accordance with NFPA 101, *Life Safety Code*, and NFPA 72, *National Fire Alarm and Signaling Code*.

Fire alarm system requires a wireless master box connection per city ordinance. Masterbox design and installation shall be as approved by City Electrical Division.

AES Zones shall be:

1. Water flow
2. City disconnect: Water flow
3. Pulls and detectors FLRS 1 - 6
4. City Disconnect: FLRS 1 - 6
5. Pulls and detectors FLRS 7 - 11
6. City Disconnect: FLRS 7 - 11
7. Unassigned
8. AES Tamper switch



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**Benjamin Wallace - Deering Pavilion upgrade**

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**From:** "Doughty, Paul" <PDoughty@simplexgrinnell.com>  
**To:** "Benjamin Wallace" <wallaceb@portlandmaine.gov>  
**Date:** 11/30/2011 11:23 AM  
**Subject:** Deering Pavilion upgrade  
**CC:** "Hale, John" <Johale@simplexgrinnell.com>, "Martin, Sam" <SMartin@simplexgrinnell.com>

Hi Ben,

We met Monday morning and you reviewed and approved this project which mostly consists of adding sprinkler zones and tampers to an upgraded fire alarm panel with a new AES.

As you suggested, I went to City Hall and paid for the permit application. I was told, this morning, that it could take 15 business days to receive a permit. With your review on Monday, can we proceed with getting the AES on line and finishing our work? Ben Diaz had informed our technician that he can't proceed with the AES start-up without a permit.

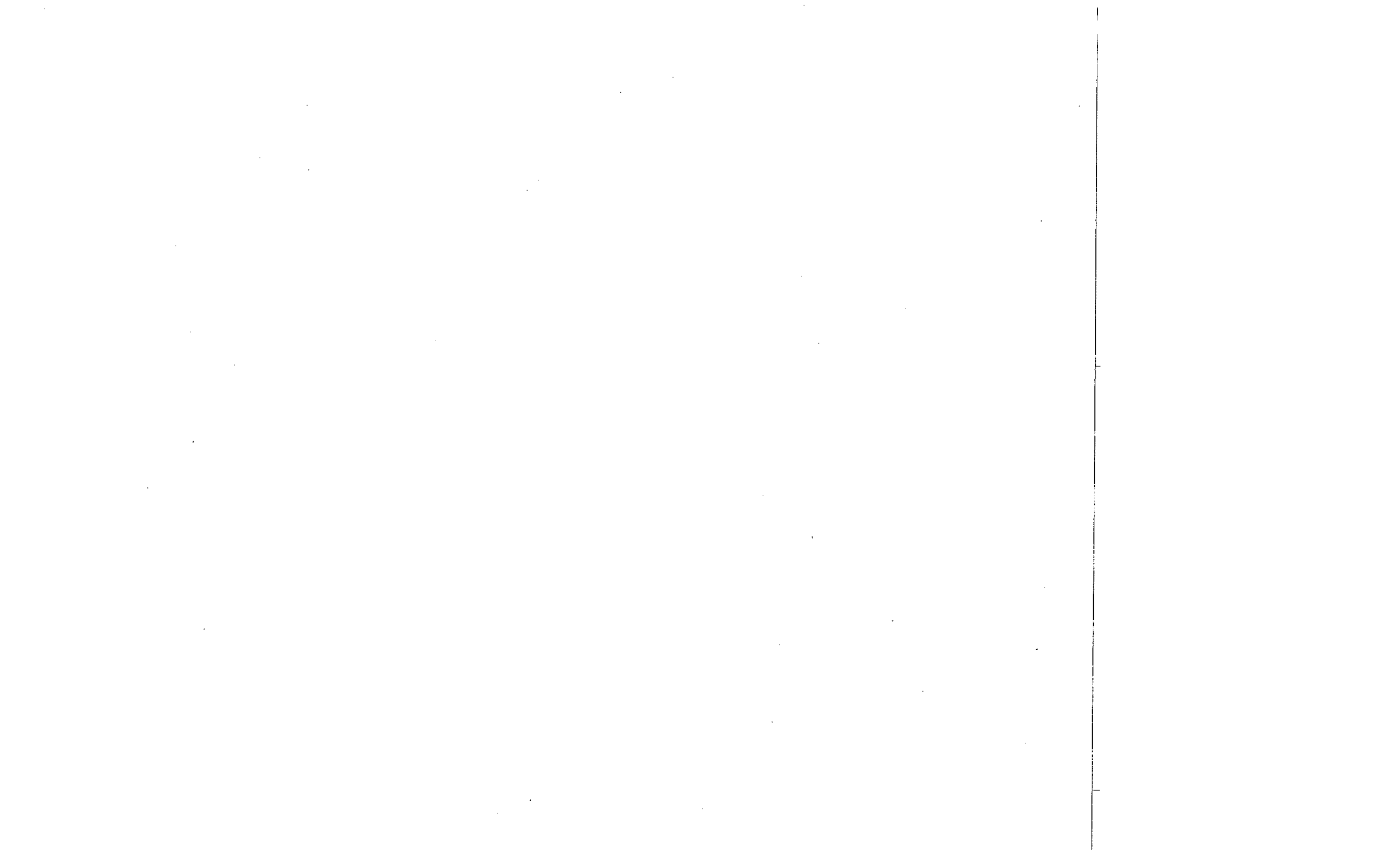
Please let us know if we can proceed as we discussed on Monday.

Thank you,

**Paul Doughty** | Operations Manager  
SimplexGrinnell, A Tyco International Company  
20 Thomas Dr., Westbrook, ME 04092 USA  
Tel: +1-207-842-6440 | direct +1-207-482-2343  
[pdoughty@Simplexgrinnell.com](mailto:pdoughty@Simplexgrinnell.com)  
[www.simplexgrinnell.com](http://www.simplexgrinnell.com)

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*Tyco's vision is Zero Harm to people and the environment. Please consider the environment before printing this message.*





Master Box Approval

Applicant: Ken Plourde  
App Phone #: 207-482-2324  
Building Name: Deering Pavillion  
Building Address: 880 Forest Ave  
Occupancy: Residential High-rise  
Assembly OL>300, 20 unit apartment building, etc.  
Emergency Contact: use former  
Emergency phone #: use former  
Date of Application: 10/28/11  
Billing Address: use former  
Comments: Replacement of existing box only. Use old contact name and numbers.

**1** FIRE PREVENTION:  Approved  Denied  
Date: 10 / 14 / 11 *B. Walsh*  
Fire Prevention Officer  
Zone 1: Water flow Zone 2: City disconnect - Water Flow  
Zone 3: Pulls and detectors FLRS 1 - 6 Zone 4: City disconnect - FLRS 1 - 6  
Zone 5: Pulls and detectors FLRS 7 - 11 Zone 6: City disconnect - FLRS 7 - 11  
Zone 7: Unassigned Zone 8: AES Tamper switch  
Modify City Box response to alarm sounding in CAD:  YES  NO

**2** FIRE ALARM: Box #: 3367 Converting existing mechanical box to AES

**3** ELECTRICAL DIVISION:  Approved  Denied  
Box Type: AES Radio Box / Other  
Test Date: / / In-Service Date: / /  
AES Fire Alarm Technician  
Circuit if applicable:

**4** FIRE ALARM: Same Running Assignment As Box: \_\_\_\_\_  
Notifications:  All Stations  Run Books  Digitizer  Computer  Cad Box Test  
 South Portland  \_\_\_\_\_ Other \_\_\_\_\_ Dispatcher

**5** BILLING:  Entered \_\_\_\_\_ Financial Officer



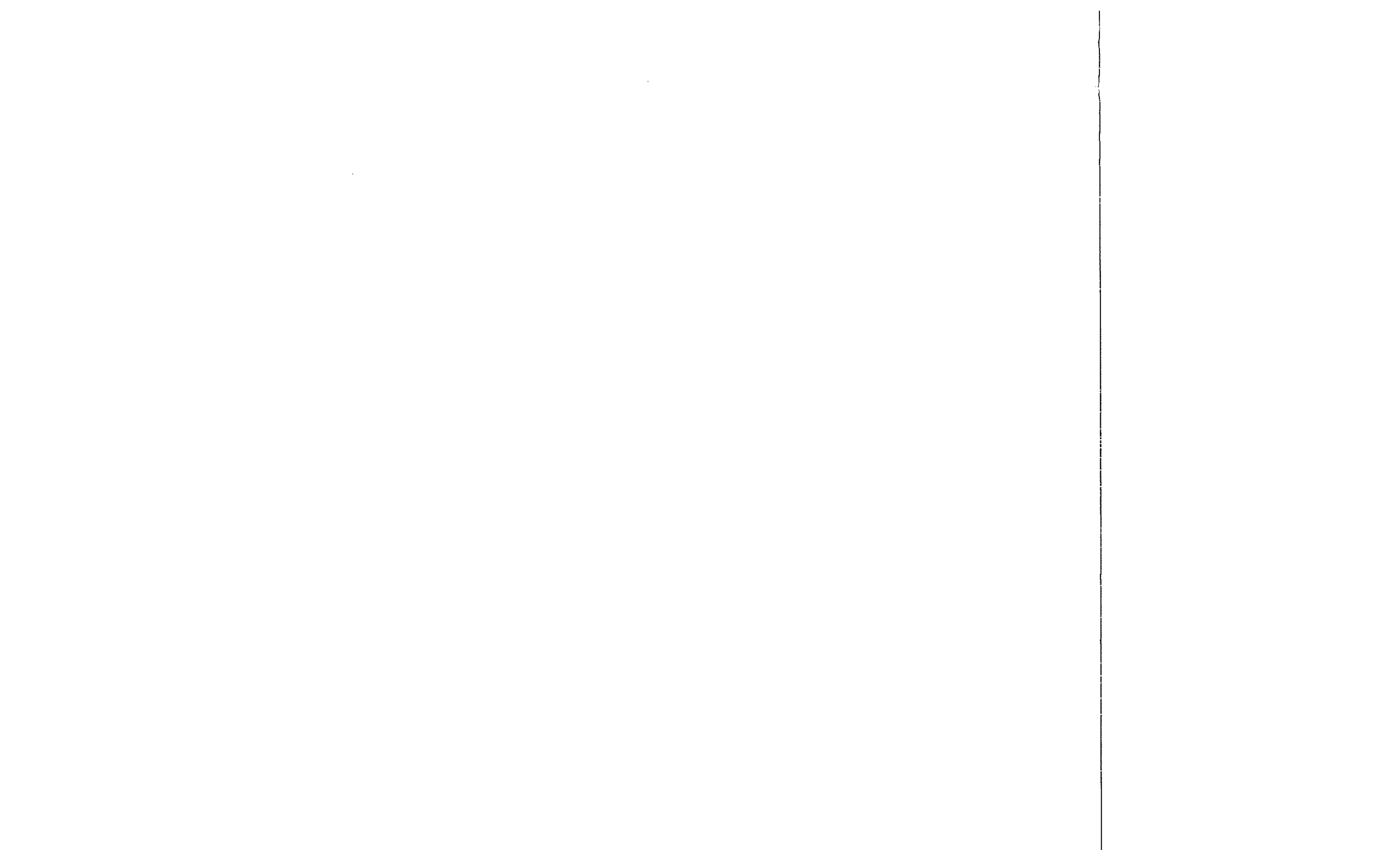
Job No: 2011-11-2818-FAFS	Date Applied: 11/28/2011	CBL: 136- E-005-001
Location of Construction: 880 FOREST AVE	Owner Name: DIOCESAN BUREAU OF HOUSING	Owner Address: 880 FOREST AVE PORTLAND, 04103 ME - MAINE
Business Name:	Contractor Name: Simplex Grinnell - Ken Plourde	Contractor Address:
Lessee/Buyer's Name:	Phone:	Permit Type: FIRE ALARM - Fire Alarm
Past Use: Deering Pavillion - 200 residential units	Proposed Use: Same - 200 Residential units - install a fire alarm	Cost of Work: 13000.00
Proposed Project Description: Fire alarm	Fire Dept: Signature: <i>[Signature]</i> (59) Approved w/conditions Denied N/A	Inspection: Use Group: Type: Signature:
Permit Taken By:	Pedestrian Activities District (P.A.D.)	

Zoning Approval		
Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan ___ Maj ___ Min ___ MM Date: <i>11/20/11</i> <i>[Signature]</i>	<input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	<input checked="" type="checkbox"/> Not in Dist or Landmark <input type="checkbox"/> Does not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>[Signature]</i>

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 \_\_\_\_\_



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# Fire Alarm Permit

SF

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.

Division Bureau  
of Housing

Peering Pavilion

Installation address: 880 Forest Ave.

CBL: MAINTENT

136 E 003

Exact location: (within structure) MAIN entrance

Type of occupancy(s) (NFPA & ICC): ALUMINISE RENOVATION

Building owner: \_\_\_\_\_

System Designer (point of contact): Ken Plourde

Designer phone: 207-482-2324

E-mail: kplourde@SimplexGrinnell.com

Installing contractor: B.H. Milliken

Contractor phone: 207-879-1877

Certificate of Fitness No: \_\_\_\_\_

E-mail: \_\_\_\_\_

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:

- Floor plans
- Wiring diagram
- Annunciator details
- Input/ Output Matrix
- Equipment data sheets
- Electrical Permit Pulled (check alarm/com)
- Scope of Work
- 11 1/2 x 17s
- pdf copy (may be e-mailed)
- Designer qualifications
- Battery/ voltage drop cales

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 City of Portland Maine

www.portlandmaine.gov/fire for every submittal. Submit all plans in electronic PDF in addition to readable 11 1/2 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: Ken Plourde

Date: 10/28/11

Sen accountant - 482 2333  
DOW

COST OF WORK: \$ 13,000.00

PERMIT FEE: \$ 150.00  
(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

**RECEIVED**

NOV 28 2011

Dept. of Building Inspections

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Master Box Approval

Applicant: Ken Plouffe Emergency Contact: \_\_\_\_\_  
App Phone #: 207-462-2324 Emergency phone #: \_\_\_\_\_  
Building Name: Deering Pavilion Date of Application: 10-28-11  
Building Address: 880 Forest Ave. Billing Address: 20 Thomas Drive  
\_\_\_\_\_  
West bank ME, 04092

Occupancy: High Rise Apartment bldg. Comments: Installing New AES Radio Box  
Assembly OL>300, 20 unit apartment building, etc.

Applicant completes above and submits with Fire Alarm Permit

FIRE PREVENTION:  Approved  Denied

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_ Fire Prevention Officer \_\_\_\_\_  
Zone 1: \_\_\_\_\_ Zone 2: City disconnect Zone 3: \_\_\_\_\_  
Zone 4: \_\_\_\_\_ Zone 5: \_\_\_\_\_ Zone 6: \_\_\_\_\_  
Zone 7: \_\_\_\_\_ Zone 8: AES Tamper switch  
 Modify City Box response to alarm sounding in CAD

FIRE ALARM: Box #: \_\_\_\_\_

ELECTRICAL DIVISION:  Approved  Denied

Box Type: AES Radio Box / \_\_\_\_\_ Other \_\_\_\_\_  
New

Test Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ In Service Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Fire Alarm Technician \_\_\_\_\_  
AES

Circuit if applicable: \_\_\_\_\_

FIRE ALARM: Same Running Assignment As Box: \_\_\_\_\_

Notifications:  All Stations  Run Books  Digitizer  Computer  Cad Box Test  
 South Portland  \_\_\_\_\_ Other \_\_\_\_\_ Dispatcher \_\_\_\_\_

BILLING:  Entered \_\_\_\_\_ Financial Officer \_\_\_\_\_

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**PROJECT**

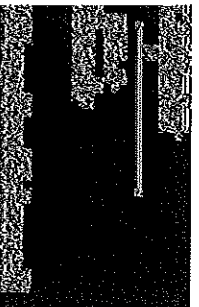
Deering Pavilion  
880 Forest Avenue  
Portland, ME

**FIRE ALARM SYSTEM**

**CONTRACTOR**

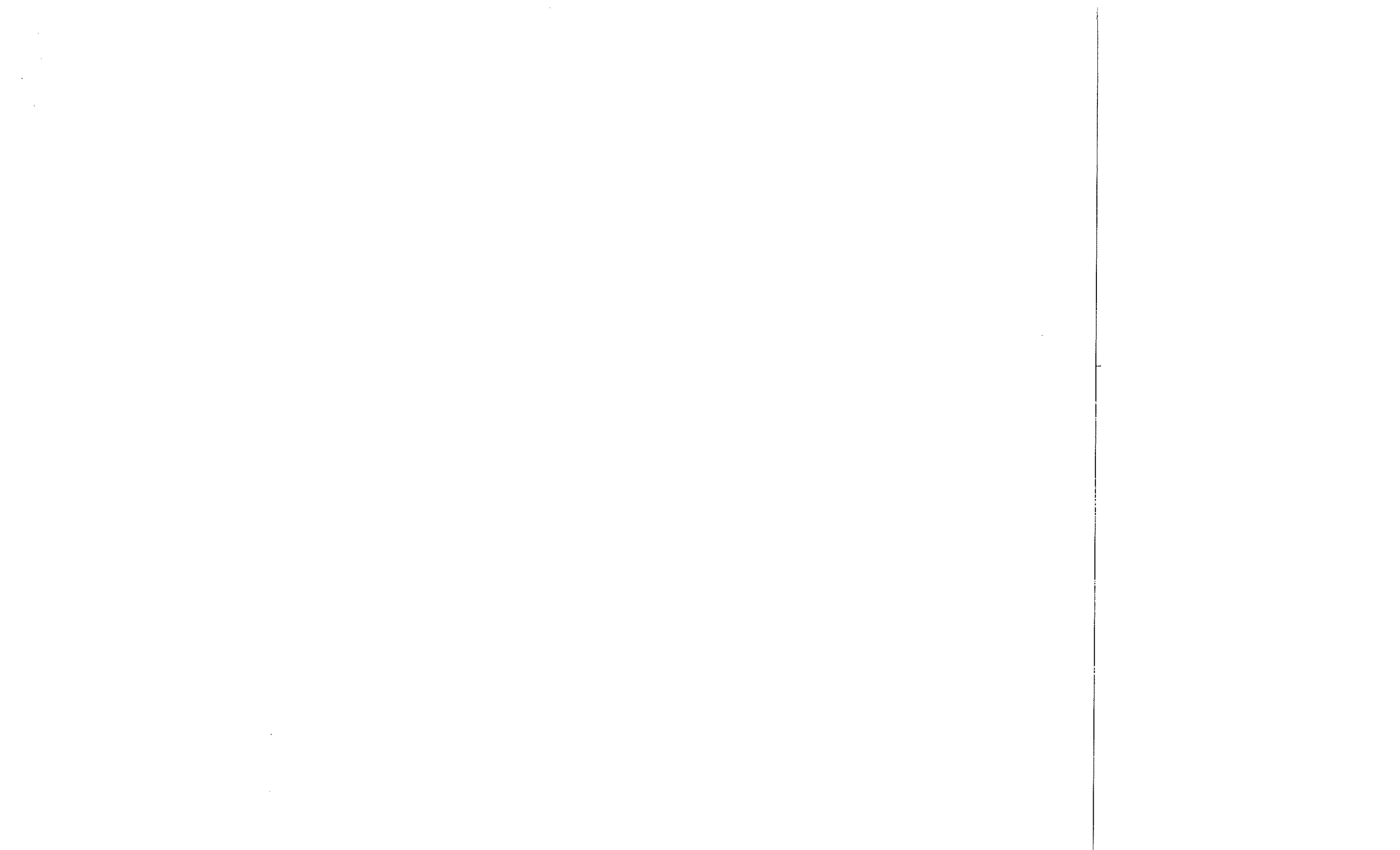
B. H. Milliken  
Electrical Contractors  
175 Anderson Street  
Portland, ME

*PRESENTED BY:*



20 THOMAS DRIVE  
WESTBROOK, ME 04092  
(207) 842-6440





# Simplex

UL, ULC, CSFM Listed; FM Approved;  
MEA (NYC) Acceptance\*

## 4100U Fire Control Panels

Addressable Fire Detection and Control  
MINIplex® Transponders

### Features

4100U Series MINIplex transponders allow remotely located initiating and notification functions:

- Transponder operation is available as standard or with local mode operation
- Communications with the host fire alarm control panel use the Remote Unit Interface (RUI) format

Initiating functions include:

- Conventional initiating device circuit (IDC) support
- Addressable device support including TrueAlarm® analog sensor compatibility\*\*

Notification functions include:

- Conventional DC notification appliance circuits
- Emergency voice/alarm communications
- TrueAlert® addressable strobe and horn notification

Local mode operation provides:

- Default local initiating and notification operation in the event of a communications loss with the host control panel
- Enabling of an optional Local Mode Controller with a local alarm sounder, LED status indicators, and keyswitch enabled control switches

- Support for IDNeT™ addressable devices, conventional and TrueAlert addressable notification appliances, and default output tones from local amplifiers\*\*

Optional modules include:

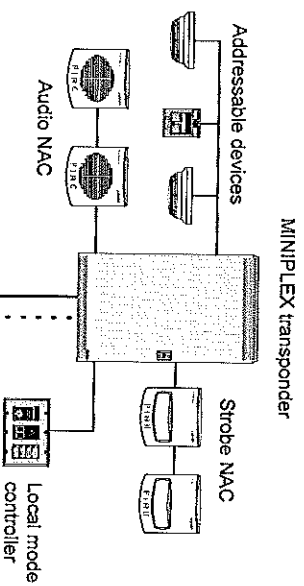
- Digital or Analog audio riser modules for connection to system audio signals
- Digital or analog input audio amplifiers with integral on-board NACs
- Power supplies with or without battery chargers
- City Connect modules and RS-232 ports for printers or maintenance terminals
- Alarm relays, auxiliary relays, additional IDC modules, and NAC expansion modules

Cabinets are equipped with solid doors (beige or red) and in one, two, or three bay sizes

Listed to:

- UL Std. 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL)
- UL Std. 2017, Process Management Equipment (QVAX)
- UL Std. 1076, Proprietary Alarm Units-Burglar (APOU)
- UL Std. 1730, Smoke Detector Monitor (UULH)
- ULC Std. S527-99

\* See pages 4 and 5 for product that is listed as UL or ULC. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7165-0026251 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEAS-95E. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



4100U Fire Alarm Control Panel  
with Voice Control

Typical 4100U MINIplex System One-Line Drawing

### Introduction

4100U MINIplex transponders connect to a host 4100U Fire Alarm Control Panel using Simplex® remote unit interface (RUI) communications. At the transponder, RUI communications are received by the transponder interface module and translated into the same internal communications format that is used in the host control panel.

**Remotely located modules.** With RUI communications, the transponder can remotely provide the same initiating and notification functions that occur at the host control panel without requiring multiple long distance wiring runs. Connections to the host panel are low current communications and audio wiring with distances up to 2500 ft (762 m).

**Software Revisions.** Some of the features detailed and products listed in this document may require the latest 4100U System Software Revision and/or hardware updates. Contact your local Simplex® product supplier for details.

\*\* Simplex fire alarm technology is protected by the following U.S. Patent Numbers:  
TrueAlarm analog smoke detection: 5,155,488; 5,173,883 and 5,543,777. IDNet and MAPNET II addressable communications: 4,796,025. TrueAlert addressable notification: 6,313,744 and 6,426,697. SmartSync horn/strobe control: 6,281,789. Flex-35 and Flex-50 amplifier operation: 6,452,491.

## Introduction (Continued)

Please refer to document S4100-0031 and the other documents listed on page 3 for additional information concerning the extensive initiating and notification features of the 4100U fire alarm control panels.

## Module Bay Description

**Transponder model 4100-9600** includes a bay assembly, a power distribution interface module (PDI), a Basic Transponder Interface Module, and an interconnect harness. Communications with the host fire alarm control panel are via a Remote Unit Interface (RUI) connection that allows for up to 2500 ft (762 m) distance. RUI can communicate with up to a total of 31 remote devices and can be either Style 4 or Style 7 communications.

**Transponder model 4100-9601** substitutes a Local Mode Transponder Module for the Basic Transponder Module.

**Optional Expansion Bays** each include a PDI and accept a variety of optional modules (refer to list starting on page 4).

**The Battery Compartment** (bottom) accepts two batteries, up to 50 Ah, that can be mounted within the cabinet. Battery mounting does not interfere with available module space. A power supply with battery charger is required for each battery set.

## Packaging Availability

- Modules are power-limited (except as noted, such as relay modules)
- Enclosure are available for one, two, or three bay sizes or for cabinet rack mounting
- Boxes and solid doors are available in beige or red (ordered separately)
- Up to eight close-nipped cabinets can be connected at one transponder location (close-nipped is mounted within 20 ft (6 m) and with interconnecting wiring enclosed in conduit)
- Refer to document S4100-0037 for enclosure details

## Local Mode Control Operation

**Default Stand-Alone Operation.** In the event of a communications loss with the host fire alarm control panel, model 4100-9601 MINIPLEX Local Mode Transponders provide fire alarm response default operation for its connected devices and appliances per the following.

- Input Operation.** During local mode operation, TrueAlarm initiating devices connected to the transponder will cause an alarm at their least sensitive alarm threshold.
- Photoelectric sensors will alarm at 3.7%/ft smoke obscuration
  - Ionization sensors will alarm at 1.3%/ft obscuration
  - Heat sensors will alarm at a fixed temperature of 135° F (57° C)
  - TrueAlarm device LEDs will be activated to indicate a device in alarm

## Local Mode Control Operation (Continued)

**Notification Operation.** Fire alarm conditions reported against a fire alarm point type within a transponder in local mode will cause all notification appliance circuits in that transponder to:

- Sound a general alarm temporal pattern horn tone
- Activate visible notification appliance circuits

**Local Mode Module Support.** Local mode operation provides support for the following 4100U modules:

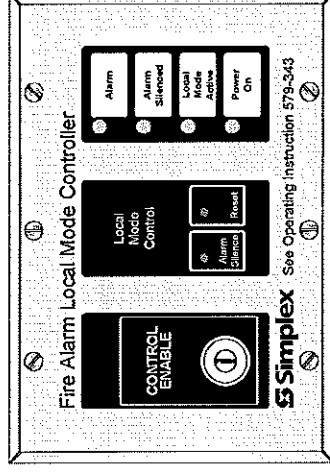
- System Power Supplies (SPS), Expansion Power Supplies (XPS), and Remote Power Supplies (RPS), including on-board notification appliance circuits (NACs) and expansion signal modules, operated at a temporal pattern,
- TrueAlert Power Supplies (TPS) including the on-board signaling line circuits (SLCs)
- IDNet addressable device circuits, including those on-board the SPS, IDNet expansion modules, and the quad isolator when used for IDNet communications
- 4100U amplifiers will provide their on-board horn tones (500 Hz) at a temporal pattern through their on-board amplifier NACs

**Local Mode Operation Module Exclusion.** Modules not listed above but that are listed as compatible with MINIPLEX transponders per this document, do not interfere with local mode operation but are **not supported** during local mode operation.

## Local Mode Controller

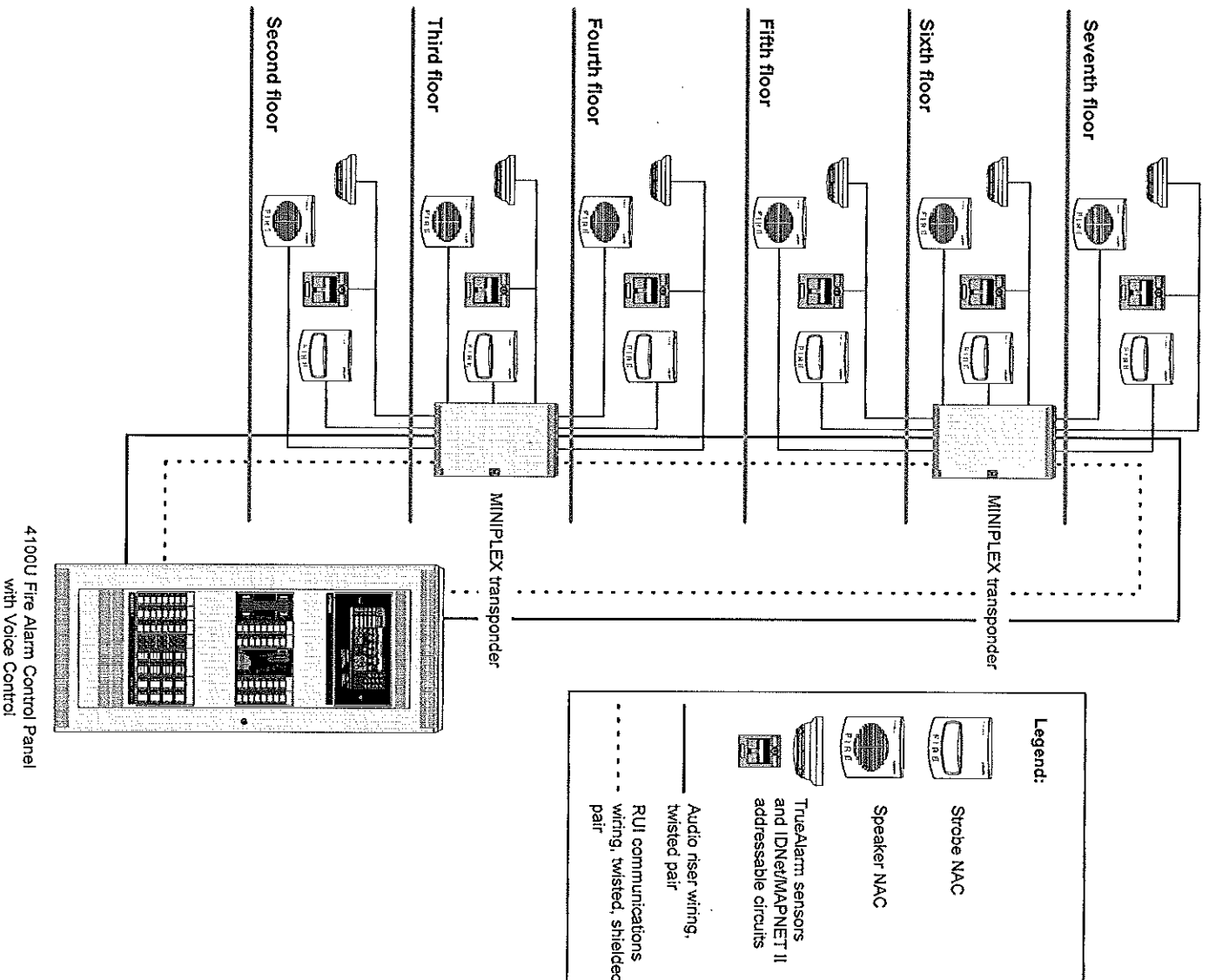
**Operation.** During local mode operation, an optional Local Mode Controller will indicate status (see illustration below) and can be enabled using a keyswitch to perform local alarm silence or reset. If alarms occurring during local mode are reset using a Local Mode Controller, upon restoration of communications, **those alarms will not be sent to the master controller**. If alarms are still present upon restoration of communications, then the alarm condition will be reported and host fire alarm control panel programmed alarm functions will occur. When communications are re-established, the local mode transponder restores automatically.

**Mounting.** Local Mode Controllers are mounted on three-gang plates, are available in beige or red, and for either flush or semi-flush mounting. (See page 7 for details).



Local Mode Controller Module

**Typical Multi-Floor MINIPLEX Audio System**



First floor

**Additional 4100U Data Sheet Reference**

Subject	Data Sheet	Subject	Data Sheet
Enclosures	S4100-0037	Basic Panel Modules and Accessories	S4100-0031
LED/Switch Modules	S4100-0032	Network Display Unit (NDU)	S4100-0036
4100U Audio/Phone Modules	S4100-0034	Remote Annunciators	S4100-0038
TrueAlert Addressable Products	S4009-0003	Remote Battery Charger	S4081-0002
IDNet+ Module with Quad Isolator	S4100-0046	Addressable Device Compatibility	S4090-0011

## MINIPLEX Transponder Product Selection

### Transponder Type

Model	Description	Supv.	Alarm
4100-9600	Basic Transponder, includes bay equipment with power distribution interface, and 4100-0620 Basic Transponder Interface Module mounted in Block A	87 mA	87 mA
4100-9601	Local Mode Transponder, includes bay equipment with power distribution interface, and 4100-0625 Local Mode Transponder Interface Module mounted in Block A	87 mA 112 mA	87 mA 112 mA

### Local Mode Controller Selection

Model	Description	Supv.	Alarm
4601-9108	Flush mount	12 mA	12 mA
4601-9109	Surface mount		
4601-9110	Flush mount		
4601-9111	Surface mount		

Local Mode Controller, 3-gang plate mounted; flush mount requires a 1-1/2" (38 mm) deep 3-gang box; surface mount controllers include a matching mounting box; see p. 7 for details

### Communication Modules

Model	Description	Size	Supv.	Alarm
4100-6031	City Circuit, with disconnect switches	MOUNTS	20 mA	36 mA
4100-6032	City Circuit, without disconnect switches	on SPS or RPS	20 mA	36 mA
4100-6033	Alarm Relay, 3 Form C relays, 2 A @ 32 VDC; for SPS or RPS	RPS	15 mA	37 mA
4100-6038	Dual RS-232 Interface	1 Slot	132 mA	132 mA
4100-6045	Decoder Module	3 Slots	85 mA	163 mA
4100-6048	VESDA® Aspiration System Interface	1 Slot	132 mA	132 mA
4100-9816	Master Clock Interface Module with one standard RS-232 port (see S4100-0033)	1 Slot	132 mA	132 mA

**Expansion, System, Remote, and TrueAlert Power Supplies and Accessories (XPS, SPS, and RPS are rated 9 A for "Special Application" appliances, 3 ANAC; and 5 A for "Regulated 24 DC" power, 2 ANAC; TPS is rated per below)**

Model	Voltage/Listing	Description	Size	Supv.	Alarm
4100-5101	120 VAC	UL	2 Blocks	50 mA	50 mA
4100-5103	120 VAC, Canadian	ULC	N.A.	25 mA	25 mA
4100-5102	220-240 VAC	UL	4 Blocks	175 mA	185 mA
4100-5115	NAC Expansion Module, 3 NACs, Class A/B, mounts on XPS only		4 Blocks	150 mA	185 mA
4100-5111	120 VAC	UL			
4100-5112	120 VAC, Canadian	ULC			
4100-5113	220-240 VAC	UL			
4100-5125	120 VAC	UL			
4100-5126	120 VAC, Canadian	ULC			
4100-5127	220-240 VAC	UL			
4100-5120	120 VAC	UL			
4100-5121	120 VAC, Canadian	ULC			
4100-5122	220-240 VAC	UL			
4100-5124	TrueAlert SLC Class A Adapter for all 3 SLCs, mounts on TPS only				
4100-5152	12 VDC Power Option, 2 A, maximum				
4100-0636	Box Interconnection Harness Kit (non-audio); order one for each close-nipped cabinet				

**Special Application Appliances** Simplex 4901, 4903, 4904, and 4906 Series horns, strobes, and combination horn/strobes and speaker/strobes (contact your Simplex product representative for compatible appliances)

**Regulated 24 DC Appliances** Power for other UL listed appliances; use associated external synchronization modules where required

### Miscellaneous Options and Accessories

Model	Description
4100-1290	24 Point I/O Module for external connections, select each point as either a switch input (momentary or maintained) or an output (for lamp/LED/relay); requires 1 Slot (refer to data sheet S4100-0032 for additional information)
4100-0632	Terminal Block Utility Module with 2, 16 position terminal blocks on 4" x 5" single block, for of up to 12 AWG wire (3.31 mm <sup>2</sup> )
4100-0633	Door Tamper Switch, connects into Transponder Interface Module, one per cabinet assembly if required
4100-0634	120 VAC
4100-0635	Power Distribution Module (PDM) select per system voltage; <b>one required per box</b>
4100-9837	Green LED Power-on Indicator Kit, <b>required for ULC listing of MINIPLEX transponder</b> ; mounts on solid door knockout
2081-9031	Series resistor for WSO IDCs (N.O. water flow and tamper on same circuit, wires after water flow and before tamper) 470 Ω, 1 W, encapsulated, two 18 AWG leads (0.82 mm <sup>2</sup> ), 2-1/2" L x 1-3/8" W x 1" H (64 mm x 35 mm x 25 mm)

\* Standard power supply NACs can provide synchronized strobe or SmartSync™, two-wire operation.

Continued on next page

**MINIPLEx Transponder Product Selection (Continued)**

**Audio Riser Modules**

Model	Description	Size	Supv.	Alarm
4100-0621	Dual Channel Analog Audio Riser Module; accepts one or two separate audio signals from host control panel; mounts in Block B, is controlled by Transponder Interface Module	1 Block	0 mA	15 mA
4100-0622	3-8 Channel Digital Audio Riser Module; similar to analog module, except receives and decodes a digital input signal with up to eight audio channels; with Non-Alarm Audio Input	1 Block	70 mA	70 mA

**Analog Emergency Voice/Alarm Communications Equipment, Constant Supervision Compatible\***

Model	Description	Details		
		NAC rating = 1.4 A	NAC rating = 0.5 A	NAC rating = 2 A
4100-1361	25 VRMS output	Includes three on-board Class B audio NACs; power is supplied from an XPS, RPS, or SPS	NAC rating = 2 A	35 W, or 100 speakers
4100-1362	70.07 VRMS output			
4100-1312	25 VRMS output	Includes three on-board Class B audio NACs; power is supplied from an XPS, RPS, or SPS	NAC rating = 2 A	50 W, or 100 speakers
4100-1313	70.7 VRMS output			

**100 W Analog Amplifiers with Power Supply, Constant Supervision Compatible**

Model/Output Voltage	Power Supply Input/Listing	Description	Details
4100-1314	4100-1315	120 VAC, 60 Hz	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS
4100-1316	4100-1317	120 VAC, 60 Hz	
4100-1318	4100-1319	220/230/240 VAC, 50/60 Hz	ULC models have low battery dropout circuit
4100-1320	4100-1321	120 VAC, 60 Hz	
4100-1322	4100-1323	120 VAC, 60 Hz	ULC
4100-1324	4100-1325	220/230/240 VAC, 50/60 Hz	

**Digital Emergency Voice/Alarm Communications Equipment\***

Model	Description	Details
4100-1364	70.07 VRMS output	
4100-1326	25 VRMS output	NAC rating = 1.4 A NAC rating = 0.5 A NAC rating = 2 A NAC rating = 0.707 A
4100-1327	70.7 VRMS output	

**100 W Digital Amplifiers with Power Supply, Constant Supervision Compatible**

Model/Output Voltage	Power Supply Input/Listing	Description	Details
4100-1328	4100-1329	120 VAC, 60 Hz	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS
4100-1330	4100-1331	120 VAC, 60 Hz	
4100-1332	4100-1333	220/230/240 VAC, 50/60 Hz	ULC models have low battery dropout circuit
4100-1334	4100-1335	120 VAC, 60 Hz	
4100-1336	4100-1337	120 VAC, 60 Hz	ULC
4100-1338	4100-1339	220/230/240 VAC, 50/60 Hz	

**Options for use with either Analog or Digital Amplifiers**

Model	Description	Details and Mounting Reference
4100-1245	Flex-35/50 Expansion NAC Module; adds three Class B audio NACs	Mounts on Flex-35/50 assembly; NAC ratings = 1.5 A, 35/50 W, or 100 speakers maximum; Supv = 8 mA, Alarm = 60 mA
4100-1246	Flex-35/50 Class A Adapter Module; converts three on-board NACs to Class A operation	Mounts on Flex-35/50 assembly; NAC ratings = 2 A, 50 W, or 100 speakers maximum; Supv = 10 mA, Alarm = 30 mA
4100-1248	100 W Amplifier Expansion NAC Module; NAC ratings = 1.5 A, 50 W, or 100 speakers max.	Provides six additional Class B audio NACs; mounts on 100 W amplifier assembly; Supv = 17 mA, Alarm = 60 mA
4100-1249	100 W Class A Adapter Module; NAC ratings = 2 A, 50 W, or 100 speakers max.	Converts six on-board NACs to Class A operation; mounts on 100 W amplifier assembly; Supv = 1 mA, Alarm = 60 mA
4100-1259	25 VRMS Output; NAC rating = 2 A, 50 W, or 100 speakers max.	Supv = 10 mA on batteries; Alarm = 35 mA
4100-1260	70.7 VRMS Output; NAC rating = 0.707 A, 50 W, or 100 speakers max.	Supv = 38 mA on batteries; Alarm = 70 mA

**Firefighters Telephone Options**

Model	Description	Size	Supv.	In Use
4100-1272	Expansion Telephone Control Module with three Class B telephone NACs; required when telephone circuits are mounted in transponder.	1 Block	80 mA	130 mA
4100-1273	Telephone Class A Adapter Module; mounts on 4100-1272; no additional current required			

\* Refer to document S4100-0034 for additional audio information.

## MINIPLX Transponder Product Selection (Continued)

### Audio Expansion Signal Module and Options

Model	Description	Details and Mounting Reference
4100-5116	Expansion Signal Module; three, 1.5 A Class B NACs for Audio applications; up to five maximum per amplifier; NAC rating = 1.5 A, 50 W, or 100 speakers maximum	Converts one NAC input to three NAC outputs; selects between two inputs; for Flex-35/50 amplifiers only, two input NACs are required; Single Block module mounts in expansion bay; Supv = 20 mA; Alarm = 80 mA
4100-1266	Expansion Signal Module NAC Expander; NAC rating = 1.5 A, 50 W, or 100 speakers max.	Expands module capacity to six, Class B NACs; Supv = 0.84 mA; Alarm = 60 mA
4100-1267	Expansion Signal Module Class A Adapter; NAC rating = 1.5 A, 50 W, or 100 speakers maximum	Converts 3 Class B, NACs to Class A; Supv = 0 mA; Alarm = 30 mA
4100-1268	Expansion Signal Module Constant Supervision Adapter; Converts 3 Class B NACs to Constant Supervision Class B or Class A NACs; for 25 VRMS or 70.7 VRMS audio	NAC rating = 1.4 A, 50 W, or 100 speakers max.; Supv = 38 mA on batteries (constant supervision deactivated); Alarm = 70 mA as required

### General Audio Options

Model	Description
4081-9018	End-of-line resistor harness for 70.7 VRMS NACs; 10 k $\Omega$ , 1 W
4100-2320	Audio Bay-to-Bay Interconnection Harness Kit; order one for each audio bay addition
4100-0637	Audio Box Interconnection Harness Kit; order one for each close-nipped audio cabinet

### Initiating Device Circuits (IDCs)

Model	Description	Size	Supv.	Alarm
4100-5005	Eight zones, Class B	1 Slot	75 mA	195 mA
4100-5015	Eight zones, Class A	1 Slot	75 mA	195 mA

### Addressable Interface Modules

Model	Description	Size	Supv.	Alarm
4100-3101	IDNet Module, 250 point capacity	—	200 mA	250 mA
4100-3104	IDNet Module, 127 point capacity	—	102 mA	127 mA
4100-3105	IDNet Module, 64 point capacity	—	51 mA	64 mA

### IDNet Modules, Specifications for each capacity; Module size = 1 Block

Model	Description	Size	Supv.	Alarm
4100-3102	MAPNET II <sup>®</sup> Module, 127 point capacity, add devices separately; Module size = 2 Slots; Loading per MAPNET II device = 1.7 mA	—	255 mA	275 mA
4100-3103	Isolator Module for MAPNET II or IDNet communications; converts one SLC into four isolated Class A or Class B outputs; up to two Modules can be connected to one SLC; NOTE: Compatible with MAPNET II Remote Isolators only; for quad isolation with IDNet Remote Isolators, use 4100-3107 IDNet+ Module (refer to data sheet S4100-0046 for details)	1 Slot	50 mA	50 mA

### Relay Modules; Nonpower-Limited

Model	Description	Resistive Ratings	Inductive Ratings	Size	Supv.	Alarm
4100-3202	4 DPDT w/feedback	10 A, 250 VAC	10 A, 250 VAC	2 Slots	15 mA	175 mA
4100-3204	4 DPDT w/feedback	2 A, 30 VDC/VAC	1/2 A, 30 VDC/120 VAC	1 Block	15 mA	60 mA
4100-3206	8 SPDT	3 A, 30 VDC/120 VAC	1-1/2 A, 30 VDC/120 VAC	1 Block	15 mA	190 mA

### Current Calculation Notes:

- For total supervisory current, add panel module currents to base system value and add all external loads panel-powered loads.
- For total alarm current, add panel module currents to base system alarm current and add all panel NAC loads and all external loads powered from panel power supplies.

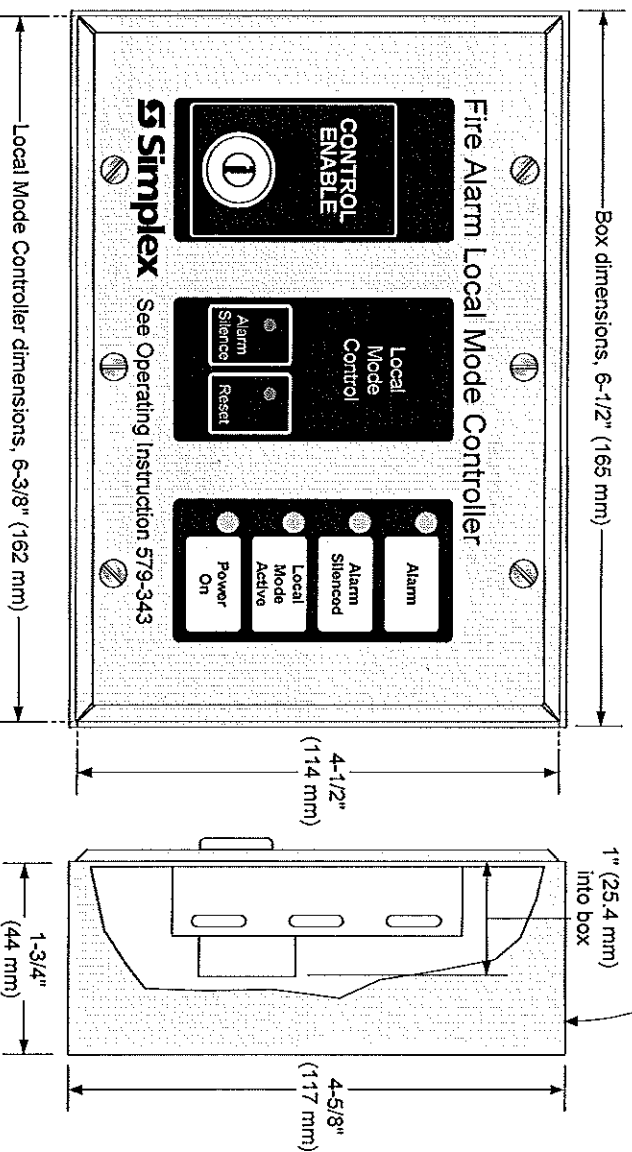
### General Specifications

Input Power (System (SPS); Expansion (XPS); Remote (RPS); TrueAlert Power Supplies (TPS); and 100 W amplifiers)	120 VAC Models 220-240 VAC Models	4 A maximum @ 102 to 132 VAC, 60 Hz 2 A maximum @ 204 to 264 VAC, 50/60 Hz; separate taps for 220/230/240 VAC
Power Supply Output Ratings for SPS, XPS, and RPS (nominal 28 VDC on AC; 24 VDC on battery backup)	Total Power Supply Output Rating Auxiliary Power Tap NACs Programmed for Auxiliary Power	Including module currents and auxiliary power outputs; 9 A total for "Special Application" appliances; 4 A total for "Regulated 24 DC" power 2 A maximum 2 A maximum per NAC; 5 A maximum total Rated 19.1 to 31.1 VDC
Battery Charger Ratings for SPS, RPS, and TPS (sealed lead-acid batteries)	Battery capacity range Charger characteristics and performance	UL listed for battery charging of 6.2 Ah up to 110 Ah (110 Ah batteries require a remote battery cabinet); ULC listed for charging up to 50 Ah batteries Temperature compensated, dual rate, recharges depleted batteries within 48 hours per UL Standard 864, to 70% capacity in 12 hours per ULC Standard S527
Environmental	Operating Temp. Range Operating Humidity Range	32° to 120°F (0° to 49° C) Up to 93% RH, non-condensing @ 90° F (32° C) maximum



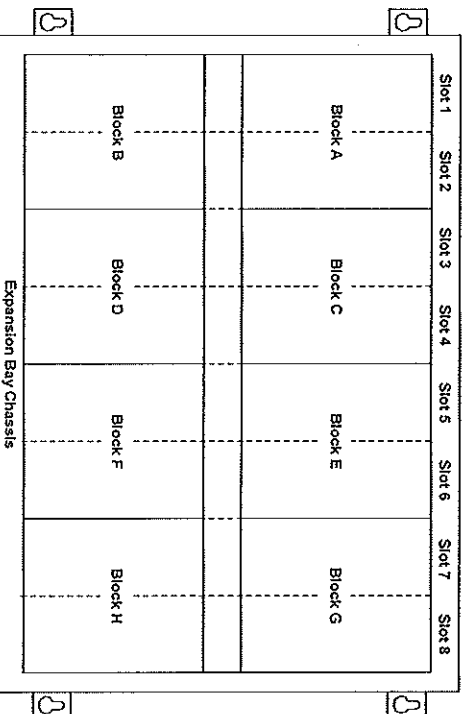
### Local Mode Controller Detail

Matching box is supplied with surface mount models  
 4601-9109 (red) and 4601-9111 (beige); for semi-flush models 4601-9108  
 (red) and 4601-9110 (beige), use a 1-1/2" (38 mm) minimum depth, 3-gang box



- Local Mode Controller to Transponder Wiring:**
1. Wire close-nipped to transponder, maximum distance = 20 ft (6.1 m).
  2. Nine wires required: 24 VDC (2), one per LED indicator (4), and one per switch (3).
  3. Wire size, 18 AWG (0.82 mm<sup>2</sup>).

### Expansion Bay Module Loading Reference

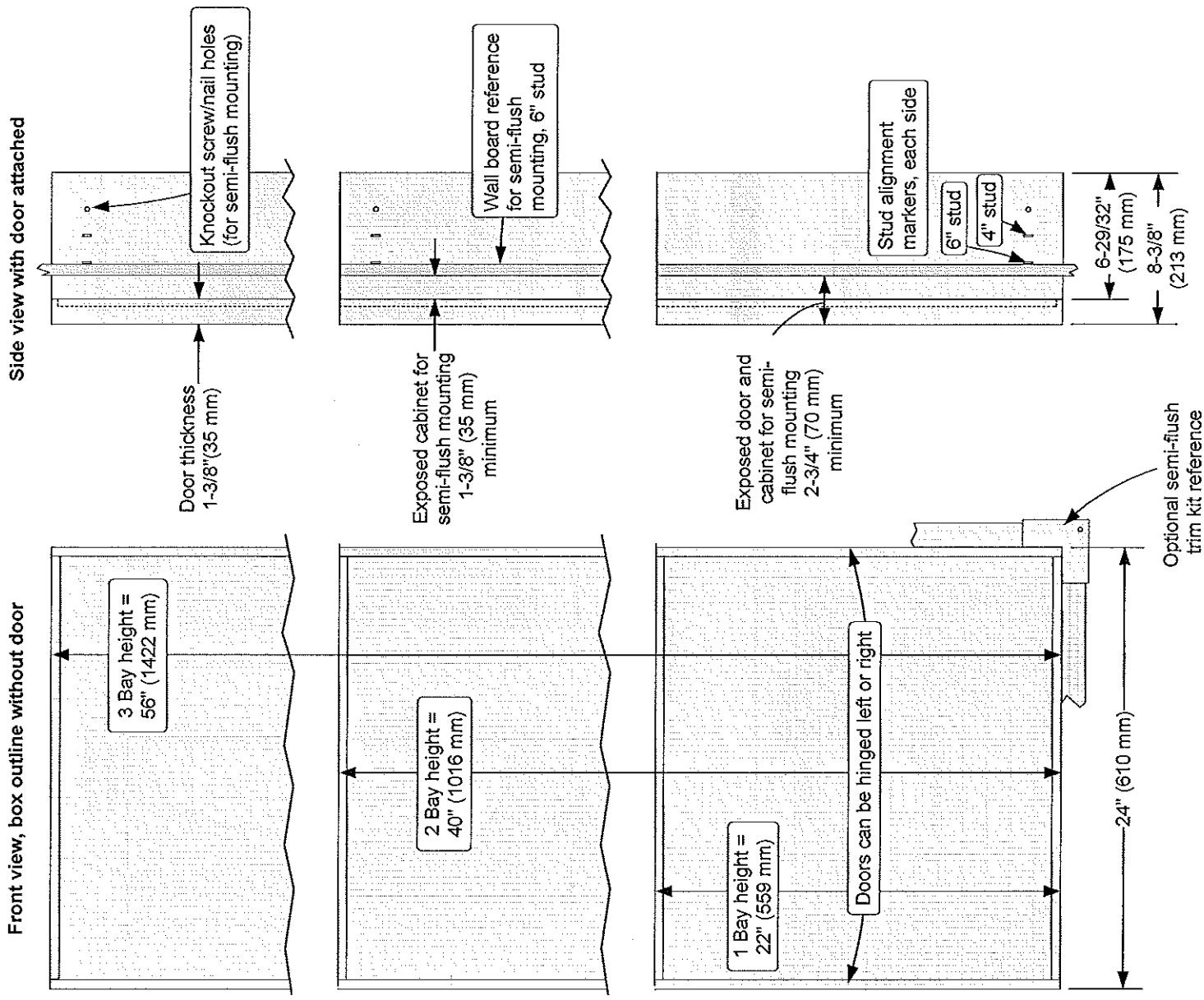


**Size Definitions:** Block = 4" W x 5" H (102 mm x 127 mm)  
 Slot = 2" W x 8" H (51 mm x 203 mm) motherboard with daughter card

Description	Mounting
Transponder Interface Modules	Block A
Audio Riser Modules	Block B
Terminal Block Module	1 Block
IDNet Modules	1 Block
4, 2 A Relays	1 Block
4, 10 A Relays	4" 2 Slots
8, 3 A Relays	1 Block
VESDA Interface	2" 1 Slot
Class B IDC	2" 1 Slot
Class A IDC	2" 1 Slot
MAPNET II Module	4" 2 Slots
MAPNET I/IDNet Isolator	2" 1 Slot
Decoder Module	6" 3 Slots
System, Remote, or TrueAlert	Blocks E, F, G & H ONLY
Power Supply	Blocks G & H ONLY
Expansion Power Supply	Blocks G & H ONLY
NAC Expansion Module	On XPS ONLY
Flex-35 Amplifiers, 2 max /bay*	Blocks E & F; C & D; or A & B
Flex-50 Amplifiers, 2 max/bay*	Blocks E & F or C & D
100 W Amplifiers, 1 max/bay	Blocks E, F, G & H
100 W Backup Amplifiers, 1 max per bay with primary amplifier	Blocks A, B, C & D
Telephone Expansion Module	1 Block
Expansion Signal Module	1 Block

\* NOTE: When mounting dual Flex amplifiers on an expansion bay, special mounting rules apply.

## Enclosure Installation Reference



**NOTE:** A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, Article 250, and NFPA 780.

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S4100-0035-9 3/2009

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# Simplex

UL, ULC, CSFM Listed; FM Approved;  
MEA (NYC) Acceptance\*

## 4100U Fire Control Panels

Cabinet Reference; Boxes, Doors,  
Retainers, Rack Mounting, and Accessories

### Features

#### 4100U Box and door options:

- Boxes are available sized for one, two, or three equipment bays, each with a battery bay located at the bottom
- Colors include beige or red
- Doors styles are glass with retainer or solid
- Models are available with box and door combined for single package shipping, or packaged separately
- Enclosures are NEMA 1 rated
- Refer to individual 4100U data sheets for product application listings (see list on page 2)

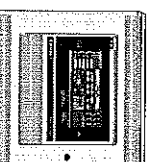
#### Door type selection is coordinated with cabinet function:

- Glass doors with retainers provide visibility of annunciation and interface modules for Control Panels, Network Display Units (NDU), and Remote Annunciators
- Solid doors are for MINIPLEX® Transponders and utility function cabinets where module visibility is not required

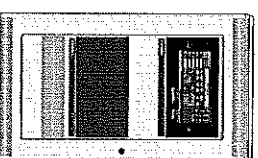
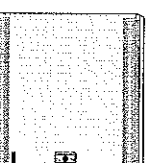
#### 4100U Enclosure details:

- Latching retainers (dress panels) easily lift off for internal access
  - Smooth box surfaces are provided for locally cutting conduit entrance holes exactly where required
  - Alignment markers are provided at the top and bottom of each box side for 6" (152 mm) or 4" (102 mm) wall studs
  - Knockout screw/nail holes are supplied for semi-flush mounting
- Upright cabinet rack packaging reference:**
- For use with Bud Industries Inc. special cabinet rack model number 45964
  - Refer to page 2 for cabinet rack listing
- 4009 TPS (TrueAlert® Addressable Power Supply) cabinet assemblies:**
- Cabinet assemblies are available for remote mounting of the TrueAlert addressable power supply (TPS)
  - Refer to page 2 for listings information

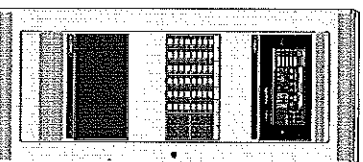
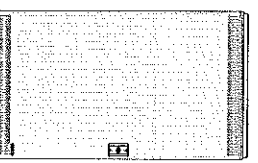
\* For 4100U one, two, and three bay cabinets with associated equipment Products are listed by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7165-0026251 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use - City of New York Department of Buildings - MEA35-93E. Additional listings may be applicable; contact your local Simplex® product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



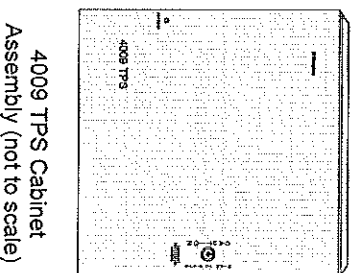
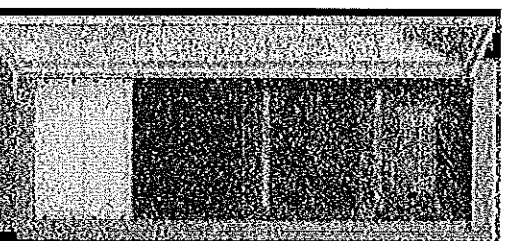
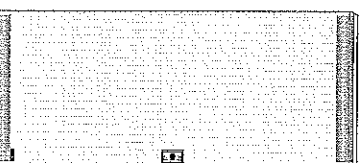
4100U One Bay Cabinets



4100U Two Bay Cabinets



4100U Three Bay Cabinets



Cabinet Rack Enclosure  
(shown with door open)

## Enclosure Selection Chart (refer to pages 3 and 4 for dimensions)

**Combined Box and Door Selection** (select if box and door are to be shipped together)

Description	Beige 1 Bay	Beige 2 Bay	Beige 3 Bay	Red 1 Bay	Red 2 Bay	Red 3 Bay	Listings
Box with Glass Door and Dress Panel	2975-9424	2975-9425	2975-9426	2975-9421	2975-9422	2975-9423	
Box with Solid Door	2975-9430	2975-9431	2975-9432	2975-9427	2975-9428	2975-9429	
Model	Color	Description	Details				Listings
2975-9230	Beige	4009 TPS Cabinet Assembly for remote TrueAlert Power Supply (TPS) mounting	Includes box with door and mounting plate, input terminal block, and wiring harnesses; Separately Order: 4100 Series TPS (4100-5120 for US, 4100-5121 for Canada, 4100-5122, 240 VAC for international use), 4009-9813 Interface Card, and batteries (12.7 Ah maximum for cabinet mounting); refer to page 3, to data sheets S4100-0031 and S4009-0003, and instructions 579-875 for additional details				ETL Listed to: UL 864 and ULC S527 (not CSFM listed or FM approved)
2975-9229	Red						

**Separate Box and Door Selection** (select if boxes and doors are required to be shipped separately)

Description	Beige 1 Bay	Beige 2 Bay	Beige 3 Bay	Red 1 Bay	Red 2 Bay	Red 3 Bay
Box	2975-9410	2975-9411	2975-9412	2975-9407	2975-9408	2975-9409
Glass Door and Dress Panel	4100-2101	4100-2102	4100-2103	4100-2121	4100-2122	4100-2123
Solid Door	4100-2111	4100-2112	4100-2113	4100-2131	4100-2132	4100-2133

**Cabinet Rack Mounting** (refer to page 4 for additional details)

Model	Description	#45964 Listings
#45964, from Bud Industries Inc.	Special upright cabinet rack for 4100U; 19" (483 mm) E.I.A.; gray texture; includes front polycarbonate door and rear louvered door, both keyed with Simplex "B" keys	UL and ULC listed only as of document revision date; cabinets are listed with the Simplex 4100U product line
4100-2140	Master Controller Rack Mount Kit, one required per master controller	Master Controller and Option Bays each require 9 Rack Units; 15.75" height (400 mm)
4100-2145	Option Bay Rack Mounting Kit, one required per expansion bay	
4100-2144	Power Distribution Module (PDM) Rack Mount Kit, order PDM separately per system voltage, one required per cabinet rack	

**Power Distribution Modules** (Not required for 4009 TPS Cabinets 2975-9229 and 2975-9230)

Model	Voltage	Description
4100-0634	120 VAC	Power Distribution Module (PDM); select per system voltage;
4100-0635	220/230/240 VAC	one required per 4100U box or cabinet rack

### Miscellaneous Accessories

Model	Description	Notes
4100-2210	Applicqué, Canadian French, 4100U Fire Control	
4100-9835	Termination and Address Label Kit, for module marking	<b>NOTE:</b> One kit is supplied for each cabinet; order this if required for additional field module installation
4100-9837	Green LED Power-on Indicator Kit, required for ULC listing of MINIPLEX transponder	Mounts using knockout provided in solid door
2975-9811	Beige semi-flush box trim	1-7/16" (37 mm) wide, four corners and trim pieces for top, bottom, and sides
2975-9812	Red semi-flush box trim	

### Battery Reference

Model	Capacity	Model	Capacity	Battery Notes
2081-9272	6.2 Ah	2081-9287	25 Ah	1. Sealed lead-acid batteries, 12 VDC each; two required per battery location.
2081-9274	10 Ah	2081-9276	33 Ah	2. Battery selection is required if batteries are internal.
2081-9288	12.7 Ah	2081-9296	50 Ah	3. Select one size per battery set
2081-9275	18 Ah			4. Refer to data sheet S2081-0006 for battery details.

### Battery Accessories

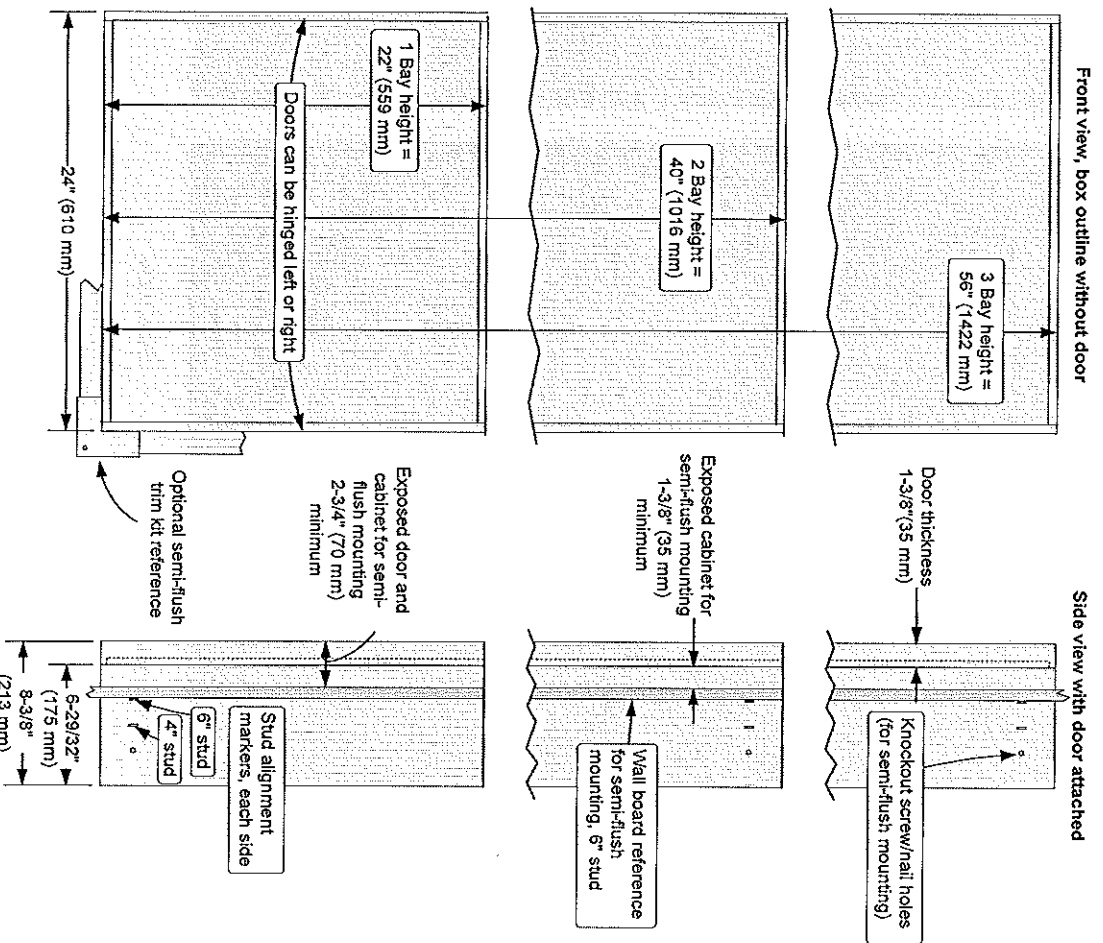
Model	Description	Notes
4100-0650	Battery Shelf, required for 50 Ah batteries	
4100-5128	Battery Distribution Terminal Block, mounts to side of box, required for all close-nipped cabinets unless cabinet receives all power from power supplies and batteries located in the adjacent cabinet	

## Additional Data Sheet Reference

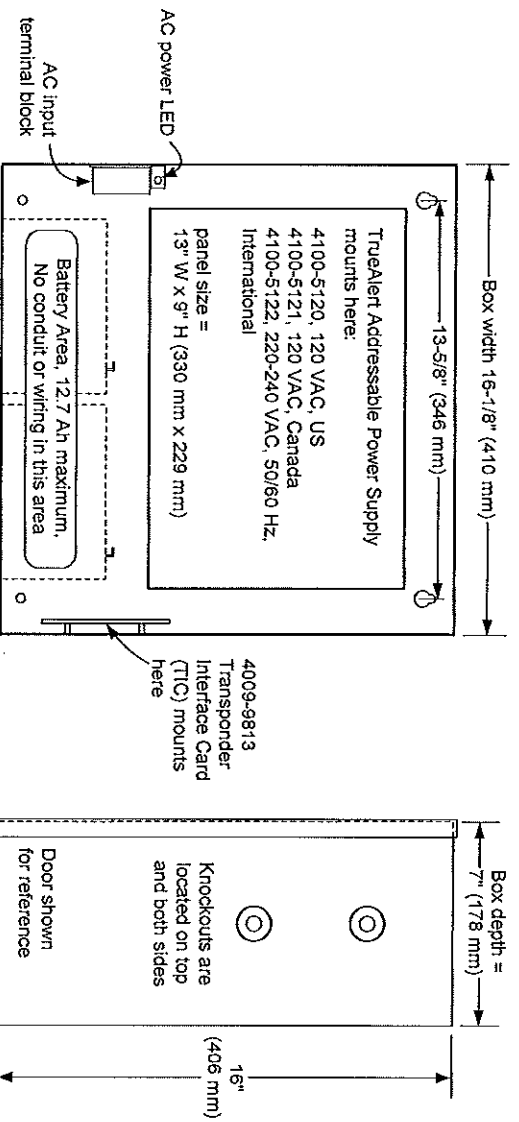
Subject	Data Sheet	Subject	Data Sheet
4100U Basic Panel Modules and Accessories	S4100-0031	Network Display Unit (NDU)	S4100-0036
LED/Switch Modules	S4100-0032	Remote Annunciators	S4100-0038
4100U Audio/Phone Modules	S4100-0034	InfoAlarm® Command Center	S4100-0045
MINIPLEX Transponders	S4100-0035	Remote Battery Charger	S4081-0002

### Wall Mounted Enclosure Installation Reference

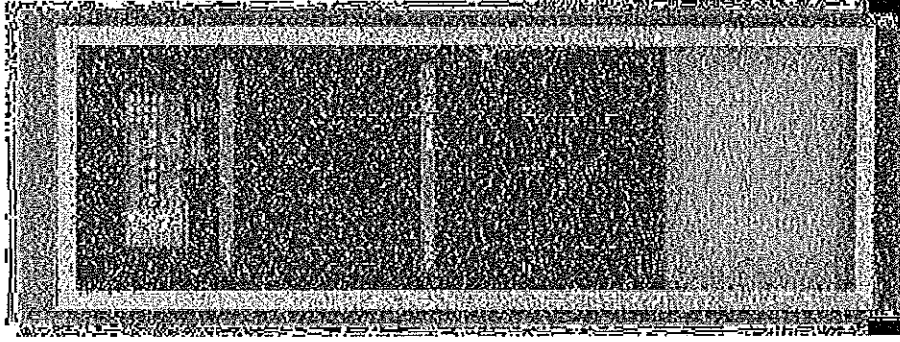
**NOTE:**  
A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, Article 250, and NFPA 780.



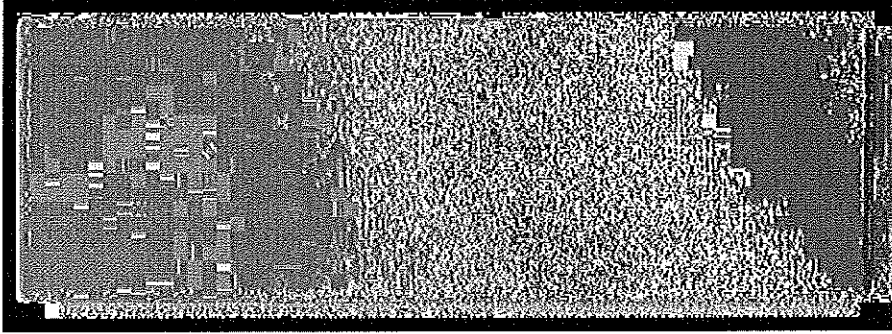
### 4009 TPS Cabinet Installation Reference



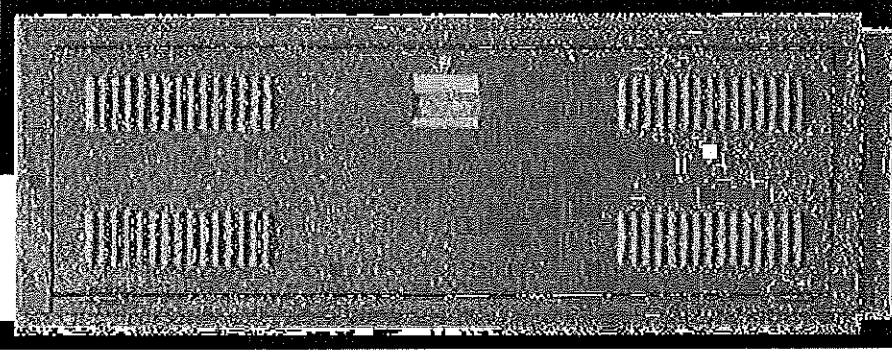
## Console Package Reference



Front View



Side View



Rear View

## Cabinet Rack Specifications

Type	Upright cabinet rack for exclusive use with Simplex 4100U Fire Alarm Products
Supplier	Order from Bud Industries Inc. ( <a href="http://www.budind.com">www.budind.com</a> )
Model Number	45964
Outside Dimensions	Height 69-7/8" (1775 mm)
	Width 24-1/16" (611 mm)
	Depth 22" (559 mm)
Color	Gray texture
Panel Space Width	19" E.I.A. (483 mm)
Front Door	Surface mount with 1/8" thick (3.18 mm) smoke gray polycarbonate, locked with Simplex "B" key, hinged on left of cabinet
Rear Door	Ventilated top and bottom, locked with Simplex "B" key
Sides	Side panels are removable from the inside for rack-to-rack mounting
Bottom	Pan attached for battery mounting
Levelers	Includes 4 stem levelers on bottom

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S4100-0037-7 12/2009

# Simplex

UL, ULC, CSFM Listed; FM Approved;  
MEA (NYC) Acceptance\*

## 4100U Fire Control Panels

Addressable Fire Detection and Control  
Basic Panel Modules and Accessories

### Features

#### Master Controller (top) bay:

- Master controller with color-coded operator interface including raised switches for high confidence feedback
- Dual configuration program CPU, convenient service port access, and capacity for up to 2000 addressable points\*\*
- CPU assembly includes dedicated archive memory for on-board system information storage
- System power supply (SPS) and charger (9 A total) with on-board: NACs, IDNet™ addressable device interface, programmable auxiliary output and alarm relay
- Module level ground fault search locates and isolates faults to assist installation and service
- Available with InfoAlarm™ Command Center expanded content user interface (see data sheet S4100-0045)
- Available with redundant CPU (requires two bays)
- Upgrade kits are available for existing control panels

#### Standard addressable interfaces include:

- IDNet addressable device interface with 250 points that support TrueAlarm® analog sensing and operate with *either shielded or unshielded* twisted pair wiring
- Remote annunciator module support via RUI (remote unit interface) communications port

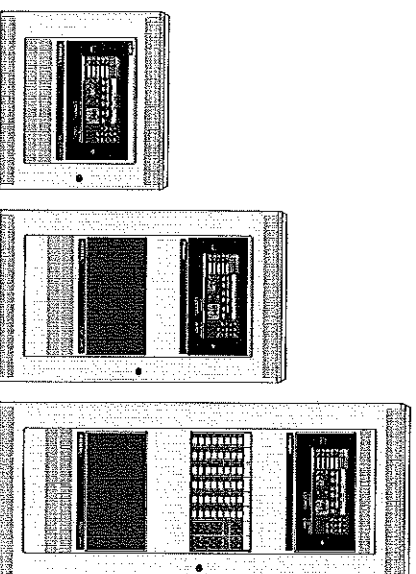
#### Optional modules include:

- MAPNET II® or additional IDNet output modules and IDNet/MAPNET II quad isolator modules
- IDNet+ output module with built-in quad isolator and enhanced operation for better retrofit to existing wiring (see data sheet S4100-0046)
- TrueAlert® addressable notification appliance power supplies with three, 3 A SLIC outputs on-board
- DACT, City Connect, Network Interfaces, and RS-232 output ports for printers or maintenance terminals
- Alarm relays, auxiliary relays, additional power supplies, IDC modules, and NAC expansion modules
- Service modems, VESDA® Air Aspiration Systems interface, and coded manual station interface
- LED/switch modules and panel mount printers
- Audio amplifiers, firefighter master phones, and control modules (see page 7 for additional data sheet reference)

#### Compatible with Simplex® remotely located:

- 4009 IDNet NAC Extenders
- TrueAlert Addressable Controllers
- 4100U and upgrade kits are UL Listed to:**
- UL Std. 864, Fire Detection and Control (UOLZ), and Smoke Control Service (UUKL)
- UL Std. 2017, Process Management Equipment (QVAX)
- UL Std. 1076, Proprietary Alarm Units-Burglar (APOU)
- UL Std. 1730, Smoke Detector Monitor (UULH)
- UL C Std. S527-99

\*\* Simplex fire alarm technology is protected by the following U.S. Patent Numbers:  
TrueAlarm analog detection: 5,155,488; 5,173,893 and 5,543,777; IDNet/MAPNET II  
addressable communications: 4,796,025; 5,966,002; and 6,034,601; TrueAlert addressable  
notification: 6,313,744; 6,426,697; and 6,693,532 B2; SmartSync control: 6,281,789.



4100U Cabinets are Available with  
One, Two or Three Bays

### Software Feature Summary

#### CPU provides two on-board configuration programs:

- Two programs allow for reduced service programming time with one active program and one reserve
- Downtime is reduced because the system stays running during download

#### PC based programmer features:

- Convenient front panel accessed Ethernet port for quick and easy *download* of site-specific programming
- Modifications can be *uploaded* as well as downloaded for greater service flexibility
- *AMD*, firmware enhancements are made via software downloads to the EPROM – service personnel are not required to exchange board level components

### Introduction

#### 4100U Series Fire Detection and Control Panels

provide extensive installation, operator, and service features with point and module capacities suitable for a wide range of system applications. An on-board Ethernet port provides fast external system communications to expedite installation and service activity. Dedicated archive memory allows on-board system information storage.

**Modular design.** System specific application requirements are determined by selecting from a wide variety of functional modules. Selections allow panels to be configured for either Stand-Alone or Networked fire control operation.

(Additional features not covered in this document are found in documents referenced on page 7.)

\* See pages 5 and 6 for product that is UL or UL C listed and additional listing information. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7166-0026/251 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York, Department of Buildings – MEA35-93E. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



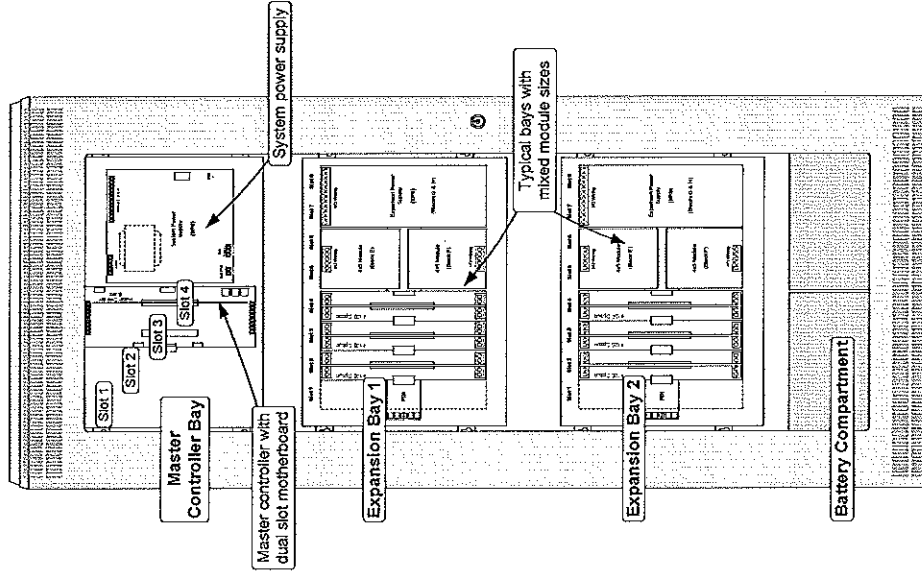
## Module Bay Description

The **Master Controller Bay** (top) includes a standard multi-featured system power supply, the master controller board, and operator interface equipment.

The **Expansion Bays** include a Power Distribution Interface (PDI) for new 4" x 5" flat design option modules and also accommodate 4100-style modules.

The **Battery Compartment** (bottom) accepts two batteries, up to 50 Ah, to be mounted within the cabinet without interfering with module space.

The following illustration identifies bay locations using a three bay cabinet for reference.



4100U Module Bay Reference

## Mechanical Description

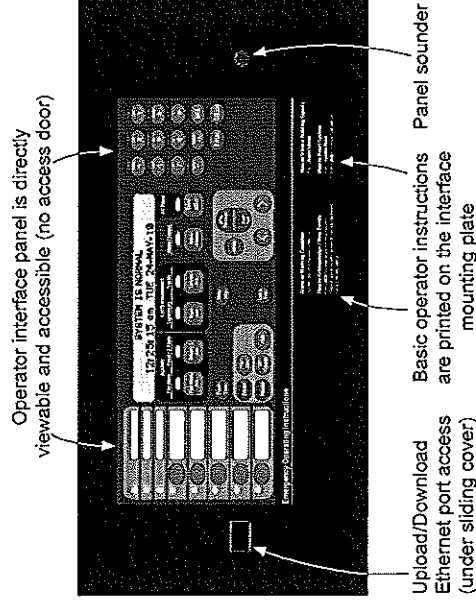
- Optional modules are easily and quickly installed and programmed
- New design modules are mechanically secured in place and then electrically plugged into the PDI module reducing the need for wiring harnesses
- Boxes can be close-nipped; each box provides convenient stud markers for drywall thickness and nail-hole knockouts for quicker mounting
- Smooth box surfaces are provided for locally cutting conduit entrance holes exactly where required

## Mechanical Description (Continued)

- The latching dress panel (retainer) assembly easily lifts off for internal access
- NACs are mounted directly on power supply assemblies providing minimized wiring loss, compact size, and readily accessible terminations
- Packaging supports traditional 4100-style motherboard with daughter cards
- Modules are power-limited (except as noted, such as relay modules)
- The NEMA 1 box is ordered separately and available for early installation
- Boxes, doors, and dress panels are available in beige or red (ordered separately)
- Doors are available with tempered glass inserts or solid, in beige or red
- Refer to data sheet S4100-0037 for enclosure details

## Operator Interface Detail Reference

The following illustration identifies the primary functions of the operator interface.



## Software Feature Summary

- TrueAlarm individual analog sensing with front panel information and selection access
- "Dirty" TrueAlarm sensor maintenance alerts, service and status reports including "almost dirty"
- TrueAlarm magnet test indication appears as distinct "test abnormal" message on display when in test mode
- TrueAlarm sensor peak value performance report
- Selectable service override allows authorized operators to clear alarm conditions during System Reset even if status has gone to trouble before reset occurred
- Module level ground fault searching assists installation and service by locating and isolating modules with grounded wiring
- WALKTEST™ silent or audible system test performs an automatic self-resetting test cycle (WALKTEST operation is protected under U.S. patent No. 4,725,818)
- **NOTE:** If new features require software revisions, updates will be performed on-site by the authorized Simplex product representative.



## Operator Interface

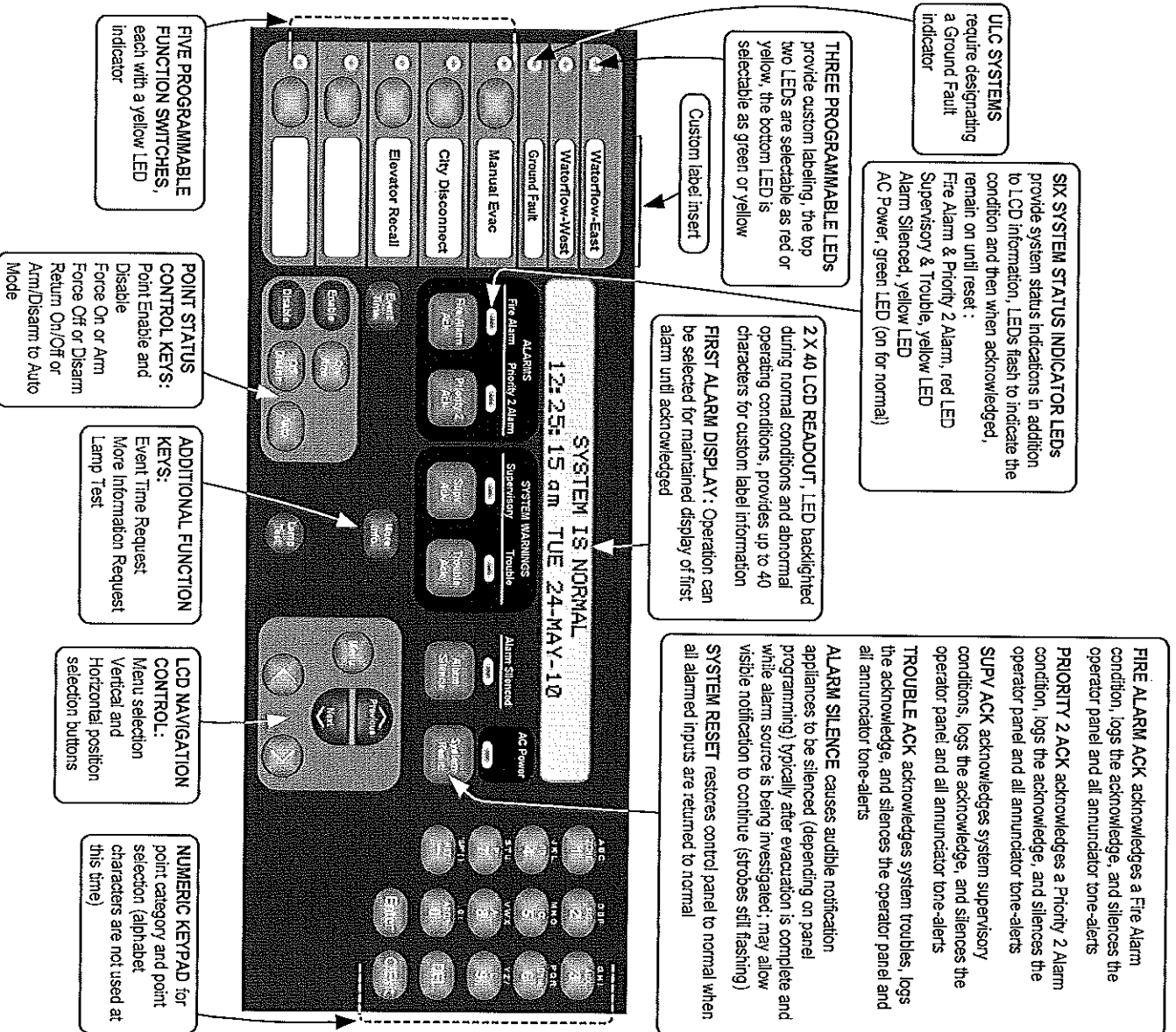
**Convenient Status Information.** With the locking door closed, the glass window allows viewing of the display, status LEDs, and available operator switches.

Features include a two-line by 40-character, wide viewing angle (super-twist) LCD with status LEDs and switches as shown in the illustration below.

LED indicators describe the general category of activity being displayed with the LCD providing more detail. For the authorized user, unlocking the door provides access to the control switches and allows further inquiry by scrolling the display for additional detail.

## Operator Interface Features

- Convenient and extensive operator information is provided using a logical, menu-driven display
- Multiple automatic and manual diagnostics for maintenance reduction
- Alarm and Trouble History Logs (up to 1300 total events) are available for viewing from the LCD, or capable of being printed to a connected printer, or downloaded to a service computer
- Convenient PC programmer label editing
- Password access control



## Compatible Peripheral Devices

The 4100U is compatible with an extensive list of remote peripheral devices including printers, CRT/keyboards (up to five total), and both conventional and addressable devices including TrueAlarm analog sensors.

## Addressable Device Control

**Overview.** The 4100U provides standard addressable device communications for IDNet compatible devices and accepts optional modules for communications with MAPNET II compatible devices. Using a two wire communications circuit, individual devices such as manual fire alarm stations, TrueAlarm sensors, conventional IDC zones, and sprinkler waterflow switches can be interfaced to the addressable controller to communicate their identity and status.

Addressability allows the location and condition of the connected device to be displayed on the operator interface LCD and on remote system annunciators. Additionally, control circuits (fans, dampers, etc.) may be individually controlled and monitored with addressable devices.

**Addressable Operation.** Each addressable device on the communication channel is continuously interrogated for status condition such as: normal, off-normal, alarm, supervisory, or trouble. Both Class B and Class A operation are available. Sophisticated poll and response communication techniques ensure supervision integrity and allow for "T-tapping" of the circuit for Class B operation. Devices with LEDs pulse the LED to indicate receipt of a communications poll and can be turned on steady from the panel.

**IDNet Channel Capacity.** The CPU bay system power supply (SPS) provides an IDNet signaling line circuit (SLC) that supports up to 250 addressable monitor and control points intermixed on the same pair of wires. Additional IDNet circuit modules are available for 64, 127, or 250 addressable devices.

**MAPNET II Channel Capacity.** A total of 127 addressable monitor and control points may be intermixed on the same pair of wires supporting a single MAPNET II signaling line circuit (SLC).

**Wiring Requirements for IDNet or MAPNET II Communications.** Refer to the specifications chart below. Distances are for shielded or unshielded wire. Shielded wire may provide protection from unexpected sources of interference.

### Wiring Specifications

Size	18 AWG (0.82 mm <sup>2</sup> )
Type	Preferred Acceptable*
Farthest Distance from Control Panel per Device load	Shielded twisted pair (STP) Unshielded twisted pair (UTP) Up to 2500 feet (762 m) Up to 125 Up to 4000 ft (1219 m)
Total Wire Length Allowed With "T" Traps for Class B Wiring	Up to 10,000 ft (3 km); 0.58 µF

\* Some applications may require shielded wiring. Review system with your local Simplex product supplier.

## TrueAlert Addressable Notification

The 4100U can be equipped with a TrueAlert Power Supply that provides three 3 A Signaling Line Circuits (SLCs) for both controlling and powering addressable notification appliances. With addressable appliances, Class B wiring can be "T-tapped" for both easier wiring and reduced wire run lengths. Extensive details concerning TrueAlert addressable notification are found on data sheet S4009-0003. Appliances are documented separately and include horns, strobes, and combination units.

## TrueAlarm System Operation

Addressable device communications include operation of TrueAlarm smoke and temperature sensors. Smoke sensors transmit an output value based on their smoke chamber condition and the CPU maintains a current value, peak value, and an average value for each sensor. Status is determined by comparing the current sensor value to its average value. Tracking this average value as a continuously shifting reference point filters out environmental factors that cause shifts in sensitivity.

**Programmable sensitivity** of each sensor can be field selected at the control panel for different levels of smoke obscuration (shown directly in percent) or for specific heat detection levels. In order to evaluate whether the sensitivity should be revised, the peak value is stored in memory and can be easily read and compared to the alarm threshold directly in percent.

**TrueAlarm heat sensors** can be selected for a fixed temperature detection, with or without rate-of-rise detection. Utility temperature sensing is also available, typically to provide freeze warnings or alert to HVAC system problems. The temperature readings can be programmed to be read in either Fahrenheit or Celsius.

**TrueSense® Early Fire Detection.** Multi-sensor 4098-9754 provides photoelectric and heat sensor data using a single 4100U IDNet address. The panel evaluates smoke activity, heat activity, and their combination, to provide TrueSense early detection. For more details on this patented operation, refer to data sheet S4098-0024.

## Diagnostics and Default Device Type

**Sensor Status.** TrueAlarm operation allows the control panel to automatically indicate when a sensor is almost dirty, dirty, and excessively dirty. The NFPA 72® (*National Fire Alarm Code*®) requirement for a test of the sensitivity range of the sensors is fulfilled by the ability of TrueAlarm operation to maintain the sensitivity level of each sensor.

**Modular TrueAlarm sensors** use the same base and different sensor types (smoke or heat sensor) and can be easily interchanged to meet specific location requirements. This allows intentional sensor substitution during building construction when conditions are temporarily dusty. Instead of covering smoke sensors (causing them to be disabled), heat sensors may be installed without reprogramming the control panel. The control panel will indicate an incorrect sensor type, but the heat sensor will operate at a default sensitivity to provide heat detection for building protection at that location.

### CPU Bay Module Details

#### Master Controller and Motherboard:

- Mounts in Slot 4 of a two slot motherboard (Slots 3 and 4 of the Master Controller Bay) and provides one Style 4 or Style 7, RUI communications channel, available at Slot 4
- RUI communications controls up to 31 devices per master controller (on one or multiple RUI channels); devices include: MINIPLEX® transponders, 4603-9101 LCD Annunciators, 4602-9101 Status Command Units (SCU), 4602-9102 Remote Command Units (RCU), 4602 Series LED Annunciator Panels, 4100 Series 24 I/O and LED/Switch modules, and remote mount 4009 TPS units
- Up to four RUI channels are supported; use up to three 4100-1291 RUI expansion modules as required
- Optional Service Modem 4100-6030 mounts onto the master controller board with its own on-board connections
- Slot 3 of the motherboard is primarily used for the 4100-6014 Network Interface Board with media modules, and secondarily can accommodate the 4100-6038 Dual RS-232 Board

#### System Power Supply: (see page 7 for more detail)

- Rating is 9 A total with "Special Application" appliances; 4 A total for "Regulated 24 DC" appliance power
- Outputs are power-limited, except for the battery charger
- Provides system power, battery charging, auxiliary power, auxiliary relay, earth detection, on-board IDNet communications channel for 250 points, three on-board NACs, and provisions for either an optional City Connect Module or an optional Alarm Relay Module
- IDNet SLC Output provides Class B or Class A communications for up to 250 addressable devices (as described on page 4)

#### System Power Supply (Continued):

- Three, 3 A On-Board NACs, conventional reverse polarity operation; rated 3 A for Special Application appliances and 2 A for Regulated 24 DC power, with electronic control and overcurrent protection; selectable as Class B or Class A, and for synchronized strobe or SmartSync™ horn/strobe operation over two wires
- NACs can be selected as auxiliary power outputs derated to 2 A for continuous duty; the total auxiliary power output per SPS is limited to 5 A
- Battery Charger is dual rate, temperature compensated, and charges up to 50 Ah sealed lead-acid batteries mounted in the battery compartment (33 Ah for single bay cabinets); also is UL listed for charging up to 110 Ah batteries mounted in an external cabinet (see data sheet S2081-0012 for details)
- Battery and Charger Monitoring includes battery charger status and low or depleted battery conditions; status information provided to the master controller includes analog values for: battery voltage, charger voltage and current, actual system voltage and current, and individual NAC currents
- 2 A Auxiliary Power Output is selectable for detector reset, door holder, or coded output operation
- Auxiliary Relay is selectable as N.O. or N.C., rated 2 A @ 32 VDC, and is programmable as a trouble relay, either normally energized or normally de-energized, or as an auxiliary control
- Optional City Connect Module (4100-6031, with disconnect switches, or 4100-6032, without disconnect switches) can be selected for conventional dual circuit city connections
- Optional Alarm Relay Module (4100-6033) provides three Form C relays that are used for Alarm, Trouble, and Supervisory, rated 2 A resistive @ 32 VDC

### Master Controller Selection Information

#### Master Controller and Expansion Bay Selection\* (Canadian models have low battery cutout)

Model	Model Typelisting	UL	Description	Supv.	Alarm
4100-9111	120 VAC Input	UL	4100U Master Controller Assembly with LCD and operator interface, 9 A system power supply/battery charger (SPS), 250 point IDNet interface, 3 NACs, auxiliary relay, and external RUI communications interface	373 mA	470 mA
4100-9112	English 120 VAC, Canadian	ULC			
4100-9113	French	ULC			
4100-9211	220-240 VAC Input	UL			
4100-9131	120 VAC Input	UL	4100U Master Controller Assembly, no display, no operator interface, 9 A system power supply/battery charger (SPS), 250 point IDNet interface, 3 NACs, auxiliary relay, and external RUI communications interface	363 mA	425 mA
4100-9132	English	ULC			
4100-9133	French	ULC			
4100-9230	220-240 VAC Input	UL			
4100-9121 (not ULC listed)	Redundant Master Controller, two bay assembly; top bay contains LCD and operator interface, CPU card assembly, and 4100U, 9 A system power supply/battery charger (SPS); second bay contains CPU card in Slot 2, and LCD and operator interface; 120 VAC, 60 Hz input; NOTE: RUI connections require use of 4100-1291 RUI expansion modules			718 mA	937 mA
4100-2300	Expansion Bay Assembly; order for each required expansion bay (not required for 4100-9121)				

#### Master Controller Upgrades for Existing 4100 Series Fire Alarm Control Panels\*

Model	Panel Type	Includes
4100-7150	1000 pt 4100 (4100+)	New Master Controller and 4100U user interface door assembly with Ethernet connection
4100-7152	512 pt 4100	Same as 4190-7150 plus includes a legacy (gold wing) power supply
4100-7158	1000 pt 4100 (4100+) or 4100U	New Master Controller with Ethernet Connection Upgrade Kit; for 4100+ systems without user interface; or for earlier 4100U systems using the existing 4100U user interface
4100-2301	Expansion Bay Upgrade Kit for mounting 4100U style (4" x 5" modules) in existing 4100 style panels	

#### Master Controller Upgrades for Existing 4020 Series Fire Alarm Control Panel

Model	Description
4100-9633	4020 Master Controller Upgrade with LCD & operator interface assembly; mounts as an adjunct panel; single bay size with locking glass door and retainer; cabinet dimensions are 24" W x 22" H x 8-3/8" D (610 mm x 559 mm x 213 mm)

\* For InfoAlarm Command Center expanded content display products, refer to dat a sheet S4100-0045.

## Module Selection Information

### Communication Modules

Model	Description	Size	Supv.	Alarm
4100-6014	For Master Controller; mounts in Slot 3	1 Slot	46 mA	46 mA
4100-6061	For Redundant Master Controller	1 Slot	46 mA	46 mA
4100-6056	Wired Media Module	N.A.	55 mA	55 mA
4100-6057	Fiber Optic Media Module	N.A.	25 mA	25 mA
4100-6055	Network Access Dial-in Service Modem, mounts to 4100-6014 or 4100-6061 Network Interface Card, requires telephone line connection	N.A.	60 mA	60 mA
4100-1291	Remote Unit Interface Module (RUI); up to three maximum per control panel	1 Slot	85 mA	85 mA
4100-6030	Service Port Modem, local panel access only, mounts to Master Controller Module, requires telephone line connection, accesses same information as front panel port	N.A.	70 mA	70 mA
4100-6031	Select one per SPS (fits on SPS)	City Circuit, with disconnect switches	20 mA	36 mA
4100-6032		City Circuit, w/o disconnect switches	20 mA	36 mA
4100-6033		Alarm Relay, 3 Form C relays, 2 A @ 32 VDC; for SPS or RPS	15 mA	37 mA
4100-6036	Physical Bridge, Class B, includes 1 modem module and 2 wired modules	1 Slot	210 mA	210 mA
4100-6037	Physical Bridge, Class A, includes 2 modem and 2 wired modules	2 Slots	300 mA	300 mA
4100-6038	Dual Port RS-232 Interface, mounts in Slot 3 or Slot 2; 3 max. RS-232 type per panel	1 Slot	132 mA	132 mA
4100-6045	Decoder Module	3 Slots	85 mA	163 mA
4100-6048	VESDA Aspiration System Interface	1 Slot	132 mA	132 mA
4100-6052	DACT, Point or Event Reporting; 1 shipped unless 4100-7908 is selected; 2 max. per system; includes 2, 2080-9047 cables, 14 ft (4.3 m) long, RJ45 plug and spade lugs	1 Slot	30 mA	40 mA

### Expansion, System, Remote, and TrueAlert Power Supplies and Accessories

(Canadian models have low battery cutoff; XPS and RPS NACs operate like SPS, see page 5 for details)

Model	Description/Listing	Size	Supv.	Alarm
4100-5101	120 VAC	UL		
4100-5103	120 VAC, Canadian	ULC		
4100-5102	220-240 VAC	UL		
4100-5115	NAC Expansion Module, 3 NACs, Class A/B, mounts on XPS only	N.A.	25 mA	25 mA
4100-5111	120 VAC	UL		
4100-5112	120 VAC, Canadian	ULC		
4100-5113	220-240 VAC	UL		
4100-5125	120 VAC	UL		
4100-5126	120 VAC, Canadian	ULC		
4100-5127	220-240 VAC	UL		
4100-5120	120 VAC	UL		
4100-5121	120 VAC, Canadian	ULC		
4100-5122	220-240 VAC	UL		
4100-5124	TrueAlert SLC Class A Adapter for all 3 SLCs, mounts on TPS only	N.A.	10 mA	10 mA
4100-5152	12 VDC Power Option, 2 A maximum	1 Block	1.5 A maximum	
4100-0156	8 VDC Converter, required for multiple Physical Bridge Modules, 3 A maximum	1 Block	included w/loads	
4009-9813	4009 TPS Transponder Interface Card (TIC), mounts in a remote cabinet with TPS; order card, TPS, and batteries separately, and select a 2975-9229 (red) or 2975-9230 (beige) cabinet (field installed); refer to data sheet S4100-0037 for cabinet detail; Supervisory and Alarm current = 87 mA	4 Blocks	88 mA	100 mA
4100-0636	Box Interconnection Harness Kit (non-audio); order one for each close-nipped cabinet			
4100-0638	4100 Slot Module Additional 24 VDC Harness; need when 4100 Slot module requirements exceed 2 A from SPS			

### 8 Zone Initiating Device Circuits\*

Model	Type	Supv.	Alarm	Expansion Signal Module and Options (1.5 A Class B except as noted)	Supv.	Alarm
4100-5005	Class B	75 mA	195 mA	4100-5116	18 mA	80 mA
4100-5015	Class A	75 mA	195 mA	4100-1266	0.6 mA	60 mA
* IDC Modules are 1 Slot size				4100-1267	0.6 mA	30 mA

### Miscellaneous Accessories

Model	Description
4100-1279	Single blank 2" display cover, order as required (8 are required to fill a bay front)
4100-2210	Appiqué, Canadian French, 4100U Fire Control
4100-9835	Termination and Address Label Kit (for module marking); provides additional labels for field installed modules
4100-6029	Smoke Management Application Guide; required for UJKL listing
4100-6034	Tamper Switch, one per cabinet assembly if required; monitors solid door for panels with solid door; monitors the internal retainer panel for panels with glass door (not the glass door); has a built-in addressable IDNet IAIM
2081-9031	Series resistor for WSO, IDCs (N.O. water flow and tamper on same circuit, wires after water flow and before tamper) 470 Ω, 1 W, encapsulated, two 18 AWG leads (0.82 mm <sup>2</sup> ), 2-1/2" L x 1-3/8" W x 1" H (64 mm x 35 mm x 25 mm)

Continued on next page

### Module Selection Information (Continued)

Addressable Interface Modules (refer to location reference on page 8)

Model	Description	Supv.	Alarm
4100-3101	IDNet Module, 250 point capacity	200 mA	250 mA
4100-3104	IDNet Module, 127 point capacity	102 mA	127 mA
4100-3105	IDNet Module, 64 point capacity	51 mA	64 mA
IDNet Modules, Specifications for each capacity; Module size = 1 Block		Module without devices Loading per IDNet device	75 mA 115 mA 0.8 mA 1 mA
Model	Description	Supv.	Alarm
4100-3102	MAPNET II Module, 127 point capacity, add devices separately. Module size = 2 Slots; Loading per MAPNET II device = 1.7 mA	Module without devices Fully loaded module, total	255 mA 471 mA 275 mA 491 mA
4100-3103	Isolator Module for MAPNET II or IDNet; converts a single connected SLC into four isolated outputs selectable as Class A or Class B; up to two Isolator Modules can be connected to one SLC; Module size = 1 Slot; NOTE: Compatible with MAPNET II Remote Isolators only; for quad isolation with IDNet Remote Isolators, use 4100-3107 IDNet+ Module (see data sheet S4100-0046 for details)	50 mA	50 mA

Relay Modules; Nonpower-limited (for mounting in expansion bay only, refer to location reference on page 8)

Model	Description	Resistive Ratings	Inductive Ratings	Size	Supv.	Alarm
4100-3202	4 DPDT w/feedback	10 A 250 VAC	10 A 250 VAC	2 Slots	15 mA	175 mA
4100-3204	4 DPDT w/feedback	2 A 30 VDC/VAC	1/2 A 30 VDC/120 VAC	1 Block	15 mA	60 mA
4100-3206	8 SPDT	3 A 30 VDC/120 VAC	1-1/2 A 30 VDC/120 VAC	1 Block	15 mA	190 mA

Current Calculation Notes:

- To determine total supervisory current, add currents of modules in panel to base system value and all external loads powered by panel power supplies.
- To determine total alarm current, add currents of modules in panel to base system alarm current and add all panel NAC loads and all external loads powered from panel power supplies.

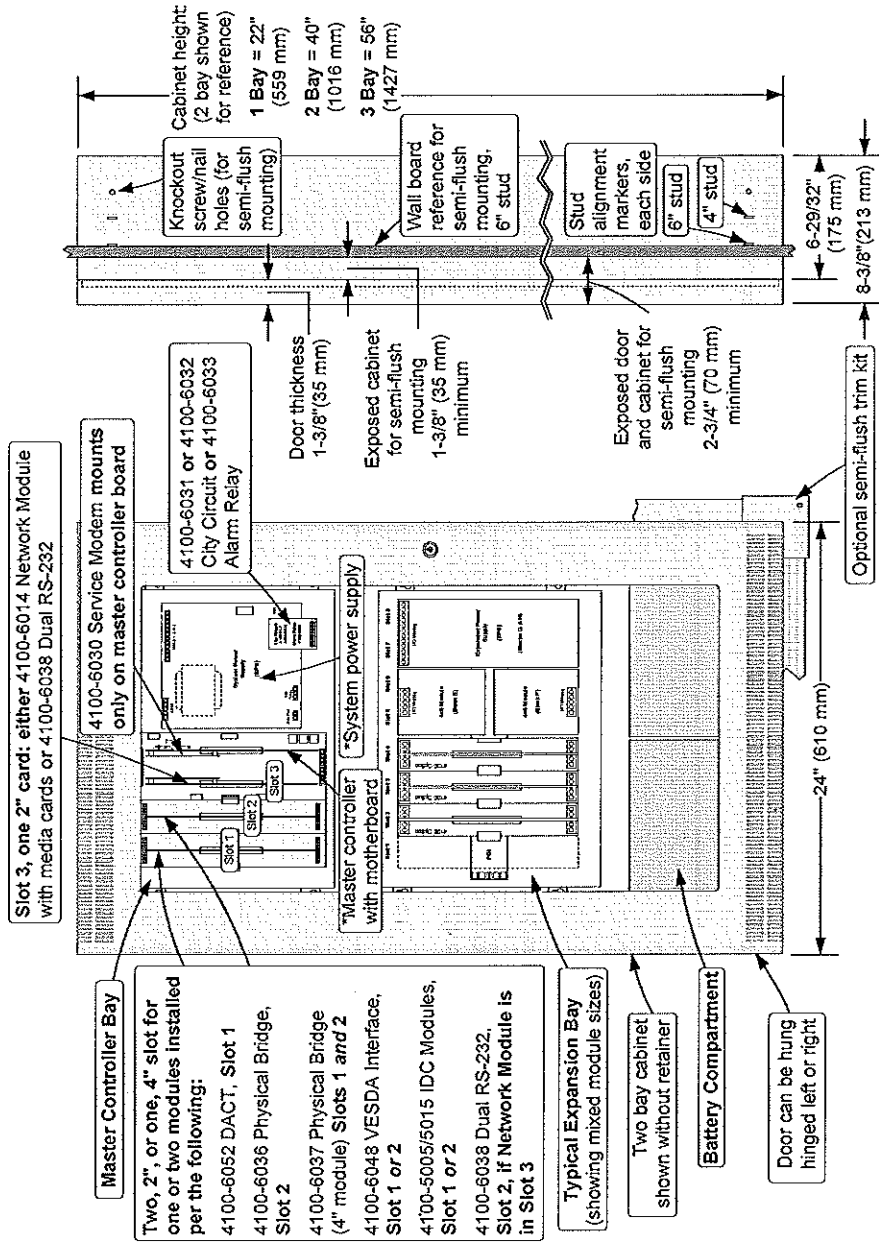
### General Specifications

Input Power	System Power Supplies (SPS) Expansion Power Supplies (XPS) Remote Power Supplies (RPS) TrueAlert Power Supplies (TPS)	120 VAC Models 220-240 VAC Models	4 A maximum @ 102 to 132 VAC, 60 Hz 2 A maximum @ 204 to 264 VAC, 50/60 Hz; separate taps for 220/230/240 VAC	
Power Supply Output Ratings for SPS, XPS, and RPS (nominal 28 VDC on AC; 24 VDC on battery backup)	Total Power Supply Output Rating	Including module currents and auxiliary power outputs; 9 A total for "Special Application" appliances; 4 A total for "Regulated 24 DC" power (see below for details)		Output switches to battery backup during mains AC failure or brownout conditions
Special Application Appliances	Auxiliary Power Tap NACs Programmed for Auxiliary Power	2 A maximum 2 A maximum per NAC; 5 A maximum total	Rated 19.1 to 31.1 VDC	
Regulated 24 DC Appliances	Power for other UL listed appliances; use associated external synchronization modules where required			
Battery Charger Ratings for SPS, RPS and TPS (sealed lead-acid batteries)	Battery capacity range Charger characteristics and performance	UL listed for battery charging of 6.2 Ah up to 110 Ah (110 Ah batteries require a remote battery cabinet); ULC listed for charging up to 50 Ah batteries Temperature compensated, dual rate, recharges depleted batteries within 48 hours per UL Standard 864; to 70% capacity in 12 hours per ULC Standard S527		
Environmental	Operating Temperature Operating Humidity	32° to 120°F (0° to 49° C) Up to 93% RH, non-condensing @ 90° F (32° C) maximum		

### Additional 4100U Data Sheet Reference

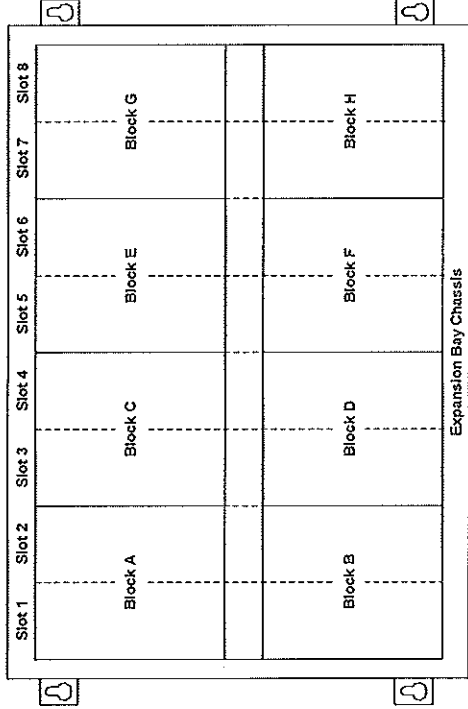
Subject	Data Sheet	Subject	Data Sheet	Subject	Data Sheet
Enclosures	S4100-0037	MINIPLEx Transponders	S4100-0035	InfoAlarm Comm. Center	S4100-0045
LED/Switch Modules & Panel Mount Printer	S4100-0032	IDNet+ Module w/Quad Isolator	S4100-0046	Graphic I/O Modules 2120 BMLUX Module	S4100-0005 S4100-0048
4100U Audio/Phone Modules	S4100-0034	Remote Annunciators	S4100-0038	SafeLINC Internet Interface	S4100-0028
TFX Interface Module	S4100-0042	Network Display Unit (NDU)	S4100-0036	Master Clock Interface	S4100-0033
TrueAlert Addressable Products	S4009-0003	Remote Battery Charger	S4081-0002	Addr. Device Compatibility	S4090-0011
Fire Alarm Network Overview	S4100-0055	Network Communications	S4100-0056	Agent Release Applications	S4100-0040

**Mounting and CPU Bay Module Reference (\* indicates supplied modules)**



**NOTE:** A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, Article 250, and NFPA 780.

**Expansion Bay Module Loading Reference**



**Size Definitions:** Block = 4" W x 5" H (102 mm x 127 mm) card area  
Slot = 2" W x 8" H (51 mm x 203 mm) motherboard with daughter card

IDNet Modules	Description	Mounting
4, 2 A Relays	NON Power-limited	1 Block
4, 10 A Relays		1 block
8, 3 A Relays		4", 2 slots
VESDA Interface		1 block
Class B IDC		2", 1 Slot
Class A IDC		2", 1 Slot
MAPNET II Module		2", 1 Slot
MAPNET II/IDNet Isolator		4", 2 Slots
Class B Physical Bridge		2", 1 Slot
Class A Physical Bridge		2", 1 Slot
Decoder Module		4", 2 Slots
System, Remote, or TrueAlert Power Supply		6", 3 Slots
Expansion Power Supply		Blocks E, F, G & H ONLY
NAC Expansion Module		Blocks G & H ONLY
		On XPS ONLY

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# Simplex®

## Fire Alarm Control Panel Accessories

### Listings\*

System Batteries, Sealed Lead-Acid; with Applications Reference for Battery Cabinets, and Battery Cabinets with Charger

### Features

#### Rechargeable, sealed lead-acid batteries:

- Lead-calcium grid structure with immobilized electrolyte in absorbent separator
- Low maintenance with no need to add water
- Low self-discharge characteristics
- One-piece, high impact polystyrene cell cover with high reliability dual seal construction
- UL 924 recognized pressure relief valves

#### Available in a variety of capacities:

- Batteries for internal mounting range from 6.2 Ah up to 50 Ah, depending on control panel cabinet size
- Larger batteries, up to 110 Ah, mount in external battery cabinets that are available with internal chargers
- Includes battery chargers with communications compatibility for use with 4010 Series fire alarm control panels and with 4100U Series fire alarm control panels

### Description

Simplex® rechargeable sealed-lead acid batteries provide reliable and repeatable discharge and recharge characteristics for use in fire alarm and other systems applications. They are designed with immobilized electrolyte in an absorbent separator, allowing them to provide rated capacity on the first cycle.

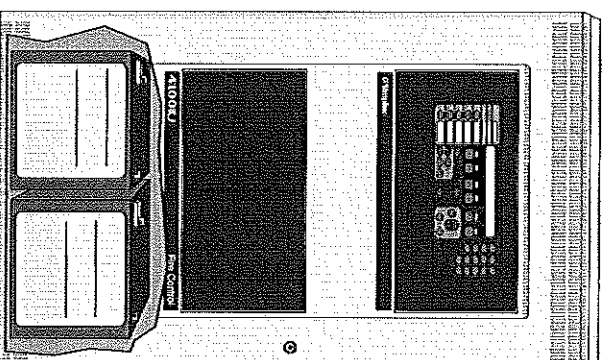
Because of their sealed construction, packaging is allowed within the system electronics enclosure (see illustration on page 2). When this is applicable, the quantity of system cabinets and the battery wiring distances are both minimized. Where required, external battery cabinets can be close-tipped to the control panel to house larger batteries with battery chargers available in some battery cabinet sizes.

### Battery Details

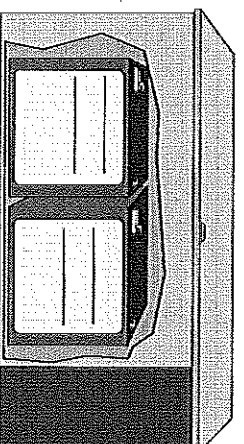
**Charging.** These batteries are intended to be used with compatible Simplex battery chargers.

**Series Connections.** These batteries are required to be connected in series to produce 24 V system voltage. Battery sets must be of identical voltage, model number, appearance, and approximately the same date of manufacture for proper operation.

**Testing.** Battery capacity testing is recommended to be performed by using a sealed lead-acid battery tester designed to withdraw a minimum of battery charge. The preferred tester applies a variety of amplitude and duration controlled test pulses that compares terminal voltage against those predicted for the specific battery size. (Testing is available through your local Simplex product supplier.)



Compatible Sealed Lead-Acid Batteries can be Installed Inside Fire Alarm Control Panel Cabinets



Remote Battery Cabinets are Available for Larger Battery Requirements

### Battery Details (Continued)

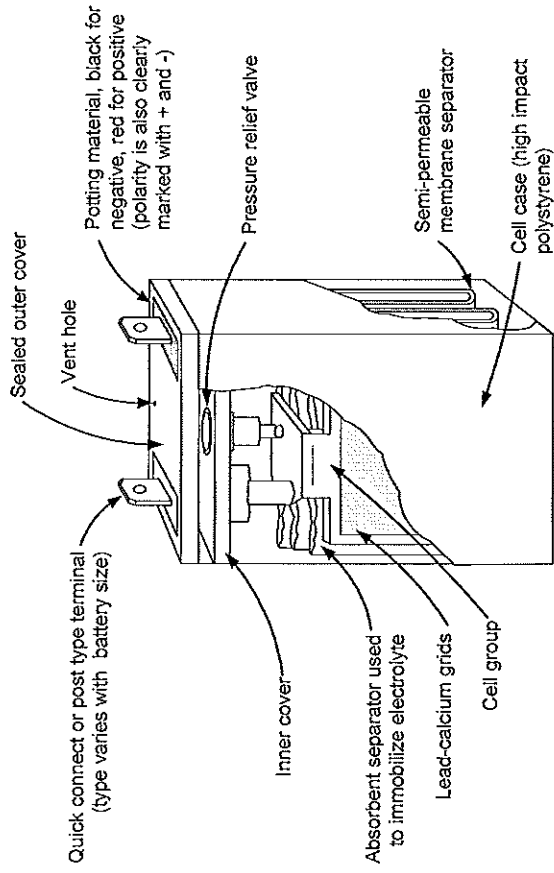
**Shipping.** Sealed lead-acid batteries are shipped via ground or sea transportation only. They are not shipped via air.

**Disposal.** Battery chemicals and materials can be recycled. Refer to information shipped with the battery or on its case. Return to the battery manufacturer or to a similarly qualified battery processing facility for proper disposal.

\* Refer to details on page 4 and to the referenced individual product data sheets for agency listing status of battery cabinets and chargers. The batteries detailed in this document meet the requirements of UL, UL C, and Factory Mutual for use with respective equipment battery chargers as listed on page 3. Contact your local Simplex product supplier for proper battery selection per system requirements. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

## Battery Construction Reference

Actual appearance will vary with battery size.



## Battery Size Specifications

Battery Model	Capacity @ 20 Hour Discharge Rate	Width*	Depth*	Height with Terminals	Approximate Weight*
2081-9272	6.2 Ah	6-1/8" (156 mm)	2-5/8" (67 mm)	4" (102 mm)	5.75 lbs (2.6 kg)
2081-9274	10 Ah	6" (153 mm)	4-1/16" (103 mm)	4" (102 mm)	9.2 lbs (4.2 kg)
2081-9288	12.7 Ah	6" (153 mm)	4" (102 mm)	4" (102 mm)	9 lbs (4.1 kg)
2081-9275	18 Ah	7-1/4" (184 mm)	3-3/8" (86 mm)	6-5/8" (168 mm)	14.3 lbs (6.5 kg)
2081-9287	25 Ah	6-5/8" (168 mm)	5" (127 mm)	7" (178 mm)	19.4 lbs (8.8 kg)
2081-9271 (rectangular case, typically for service)	33 Ah	12-1/2" (318 mm)	3-3/8" (86 mm)	7-1/16" (179 mm)	26.6 lbs (12.1 kg)
2081-9276 ("square" case, use for new)	33 Ah	7-3/4" (197 mm)	5-1/4" (133 mm)	6-3/4" (171 mm)	26.5 lbs (12 kg)
2081-9296	50 Ah	9-1/2" (241 mm)	5-1/2" (140 mm)	8-7/8" (225 mm)	41.8 lbs (19 kg)
2081-9279	110 Ah	11-3/16" (284 mm)	10-1/2" (267 mm)	9" (230 mm)	82 Lbs (37 kg)

\* Dimensions and weight are per battery and are for reference only. Exact size may vary. Refer to the tables on page 3 mounting compatibility. These batteries are 12 V each and series connected for 24 V system use.

**NOTE:** When wired in series for 24 V output, these batteries are to be of identical voltage, appearance, model number, and approximately the same date of manufacture.

## General Battery Specifications

Nominal Voltage Rating	12 Volts per battery
Discharge Rating	20 Hour Rate
Typical Charge/Discharge Cycles	100 to 150
Preferred Charge Temperature Range	60° F to 90° F (15.6°C to 32.2° C)



### Battery Compatibility for Fire Alarm Control Panel Mounting

NOTE: Refer to individual fire alarm control panel product data sheets for additional battery application information

Battery Model	Capacity	Simplex Control Panel Model Series (see legend and notes below)										
		4003	4004	4004R	4005	4006 & 4008	4009 (all models)	4010	4100U	4100 & 4120 (2, 4 or 6-Unit)	4020	
2081-9272	6.2 Ah	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2081-9274	10 Ah	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2081-9288	12.7 Ah	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓
2081-9275	18 Ah	✓	NA	Note 3	✓	Ext	Ext	Note 2	1, 2, or 3 bay	✓	✓	✓
2081-9287	25 Ah	NA	NA	Note 3	Ext	Ext	NA	✓	1, 2, or 3 bay	✓	Ext	Ext
2081-9271 (rectangular)	33 Ah	NA	NA	Note 3	Ext	NA	NA	Note 3	1, 2, or 3 bay	Ext	Ext	Note 4
2081-9276 ("square")	33 Ah	NA	NA	Note 3	Ext	NA	NA	Note 3	1, 2, or 3 bay	✓	✓	Ext
2081-9296	50 Ah	NA	NA	Note 3	NA	NA	NA	Note 3	2 or 3 bay	Ext	Ext	Ext
2081-9279	110 Ah	Requires external battery cabinet										

✓ = Can be placed in the respective equipment cabinet

Ext = External battery cabinet is required, refer to selection chart on page 4

NA = Not applicable/not compatible

#### NOTES:

- These batteries meet the requirements of UL, ULC, and Factory Mutual for use with respective equipment battery chargers listed above. Contact your local Simplex product supplier for proper battery selection per system requirements.
- 4010 Cabinets will accommodate 2081-9275, 18 Ah batteries, but will not allow bottom entry conduit.
- Use 4081 series companion cabinet and charger, refer to page 4.
- 4020 Cabinets will accommodate 2081-9271, 33 Ah batteries, but will not allow bottom entry conduit.
- Some control panel models are listed for battery replacement reference only.

### External Battery Cabinet Compatibility Reference

Battery Cabinets without Chargers (connects to charger in panel)

Cabinet	Panel Compatibility	2081-9275 18 Ah*	2081-9287 25 Ah	2081-9271 Rectangular 33 Ah	2081-9276 Square 33 Ah	2081-9296 50 Ah	2081-9279 110 Ah
2081-9270	multiple	✓	✓	✓	✓	✓	NA
2081-9280	4100U/4100+	NA	NA	NA	NA	NA	✓
2081-9281 2081-9282	multiple	✓	✓	✓	✓	✓	NA
4009-9801	multiple	✓	✓**	NA	NA	NA	NA
4009-9802	multiple	✓	NA	✓	NA	NA	NA

Battery Cabinets with Chargers

Cabinet	Panel Compatibility	2081-9275 18 Ah*	2081-9287 25 Ah	2081-9271 Rectangular 33 Ah	2081-9276 Square 33 Ah	2081-9296 50 Ah	2081-9279 110 Ah
4081-9301 4081-9302	4004R and 4010	✓	✓	✓	✓	✓	NA
4081-9306 4081-9308	4100U	NA	NA	NA	NA	✓	✓

\* Batteries smaller than those listed are normally mounted in the product cabinet

\*\* 25 Ah capacity was effective as of 7/2005.

✓ = Can be placed in the respective equipment cabinet

NA = Not applicable/not compatible

## External Battery Cabinet Specification Reference

### Battery Cabinets Without Chargers; Shallow Design with Front Door

Model	Color	Listings	Description	Dimensions
2081-9281	Beige	UL and FM	2-Unit, 4100 style cabinet without charger, with locking solid door and battery shelf, primarily for use with 50 Ah batteries	25-3/4" W x 20-3/4" H x 6-3/4" D (654 mm x 527 mm x 171 mm)
2081-9282	Red			
4009-9801*	Beige	UL and FM	For up to 25 Ah batteries*	16-1/4" W x 13-1/2" H x 5-3/4" D (413 mm x 343 mm x 146 mm)*
4009-9802	Beige	UL	External battery cabinet without charger, with locking solid door and battery harness; for close-nipped mounting to fire alarm control panel cabinet	25-3/4" W x 20-3/4" H x 4-1/8" D (654 mm x 527 mm x 105 mm)

\* Depth increased for 25 Ah batteries effective 7/2005.

### Battery Cabinet Without Charger; Deep Design with Hinged Lid

Model	Color	Listings	Description	Dimensions
2081-9270	Red	Not listed	Battery cabinet without charger, cabinet has vented front, and hinged lid with support rod and lock on top	26-1/2" W x 12" H x 12" D (673 mm x 305 mm x 305 mm)

### Chargers for use with 4010 Fire Alarm Control Panels and 4004R Suppression Release Systems (refer to data sheet S4081-0001)

Model	Color	Input Voltage	Description	Dimensions
4081-9301	Beige	120 VAC	Battery cabinet with charger for the 4010 and 4004R fire alarm control panel; for up to 50 Ah batteries; with front door	22-1/2" W x 16-3/4" H x 8-3/8" D (572 mm x 425 mm x 213 mm)
4081-9302	Red		<i>Listings include: UL, ULC, FM, CSFM, and MEA (NYC), see data sheet for details</i>	

### Battery Cabinet Without Charger for 110 Ah Batteries; for use with compatible panel mounted chargers (refer to data sheet S2081-0012)

Model & Listings	Color	Cabinet Description	Compatible Chargers	Charger Description	Dimensions
2081-9280 <i>Listings include: UL and CSFM</i>	Red	Battery cabinet for 2081-9279, 110 Ah batteries; includes 80 A battery fuse, terminals and battery connection cables; see data sheet for details	4100-9xxx Series	4100U System Power Supplies (SPS)	26-1/2" W x 12" H x 12" D (673 mm x 305 mm x 305 mm)
			4100-5111	4100U Additional SPS	
			4100-5112		
			4100-5113		
			4100-5125	4100U Remote Power Supply (RPS)	
			4100-5126		
			4100-5127		
			4100-5120	4100U TrueAlert Addressable Power Supply (TPS)	
			4100-5121		
			4100-5122		
			4100-0104	4100 Legacy power supplies	
			4100-0114		
			4100-0124		

### 4100U Compatible Battery Cabinet With Charger for 110 Ah Batteries ( for ULC listed systems and for other applications unable to use panel mounted power supply charger; refer to data sheet S4081-0002)

Model	Color	Input Voltage	Description	Dimensions
4081-9306	Red	120 VAC	Battery cabinet with charger for up to 110 Ah batteries;	
4081-9308	Red	220/230/240 VAC, multi-tapped	NOTE: Required for ULC listed charging of 110 Ah batteries. <i>Listings include: UL, ULC, FM, CSFM, and MEA (NYC), see data sheet for details</i>	27-7/8" W x 13-1/2" H x 14-5/8" D (708 mm x 343 mm x 371 mm)
4100-9837	Green	LED Power-on Indicator Kit, required for ULC listing, mounts above access panel using knockout provided		

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# Simplex

## Multi-Application Peripherals

UL, ULC, CSFM Listed; FM Approved; MEA (NYC) Acceptance\*

IDNet™ and MAPNET II® Communicating Devices, Individual Addressable Modules (IAMS)

### Features

IDNet or MAPNET II addressable communications supply both data and power over a single wire pair to provide\*\*:

- Supervised Class B monitoring of normally open, dry contacts
- Total wiring distance from IAM to supervision resistor(s) of up to 500 ft (152 m)
- Monitored connection is compatible with Simplex® 2081-9044 Overvoltage Protectors for outdoor wiring or electrically noisy applications
- For use in indoor locations up to 158° F (70° C) such as attic spaces or similar applications

### For use with following Simplex control panels:

- Model Series 4008, 4010, and 4100U fire alarm control panels for IDNet communications
- Model Series 4100/4100U, 4120, 4020, and 2120 Communicating Device Transponders (CDTs) equipped with MAPNET II communications

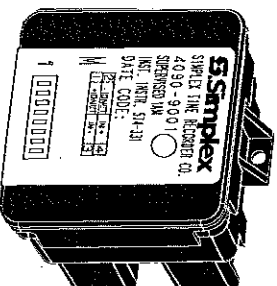
### Model 4090-9001:

- Enclosed design minimizes dust infiltration
- Mounts in standard single gang electrical box
- Screw terminals for wiring connections
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation (requires mounting bracket, ordered separately)

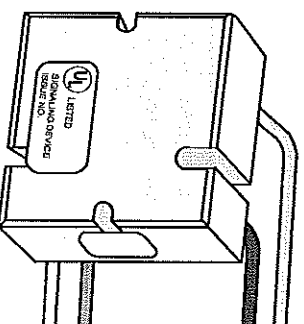
### Model 4090-9051:

- Encapsulated design for extended exposure to high humidity (LED is not present on this model)
  - Color coded 18 AWG leads for wiring
- IDNet communications provides current limited monitoring:**
- Provides monitoring of tamper switch (supervisory) and waterflow switch (alarm) on same circuit using one point
  - Available with IDNet communications only
- Multiple operation modes are available and are selectable at the control panel:**
- Contact closure status can be tracked
  - Momentary contact closure conditions can be selected at the panel to be latched or tracked (not available with the 2120 CDT)

### UL listed to Standard 864



4090-9001 Supervised IAM  
(shown approximately 3/4 size)



4090-9051 Supervised IAM  
(shown approximately 3/4 size)

### Description

Individual addressable modules (IAMS) receive both power and communications from a two-wire MAPNET II or IDNet circuit. They provide location specific addressability to a single initiating device (such as single station smoke detector alarm contacts or heat detector contacts) or multiple devices at the same location by monitoring normally open dry contacts and the wiring to an end-of-line resistor.

**Model 4090-9001** is packaged in a thermoplastic housing and provides screw terminal connections and a status indicating LED.

**Model 4090-9051** is an encapsulated package with wire leads. It does not provide a status indicating LED.

\* These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026-223 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEA35-53E. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

\*\* IDNet and MAPNET II addressable communications are protected under U.S. Patent Nos. 4,796,026; 5,966,002; and 6,034,601.

## Operation

**Contact Closure.** Closure of the monitored contact(s) initiates an alarm or other response as programmed at the fire alarm control panel. An open in the monitored circuit wiring will cause a trouble to be reported.

**Panel Selections.** Selections can be made at the control panel to maintain the alarm condition if the initiating device contacts are momentary, such as from a rate-of-rise heat detector, or to track the device contact status (not available with the 2120 CDT).

## IAM Product Selection

Model	Description
4090-9001	Supervised IAM, mounted in thermoplastic housing with screw terminals; see applicable options below
4090-9051	Supervised IAM, encapsulated with wire leads

### Optional Trim Plates and Mounting Bracket for Model 4090-9001

Model	Description
4090-9806	For semi-flush mounted box Trim plate with LED viewing window, requires 4090-9810 mounting bracket.
4090-9807	For surface mounted box Includes mounting screws; galvanized steel
4090-9810	Mounting bracket, mounts IAM to electrical box and provides screw holes for trim plate, required for optional trim plates

### End-of-Line Resistor Harnesses (ordered separately as required)

Model	Reference No.	Description
4081-9004	733-886	6.8 k $\Omega$ , 1/2 W; Standard end-of-line resistor harness for N.O. contact supervision
4081-9003	733-886	4.7 k $\Omega$ , 1/2 W
4081-9005	733-984	1.8 k $\Omega$ , 1/2 W Use for current limited monitoring applications

## Specifications

### Electrical

Power and Communications	MAPNET II or IDNet, auto selected, 1 address per IAM
Input Requirements	Normally open, dry contacts
Wire Connections	4090-9001 Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 mm <sup>2</sup> to 2.08 mm <sup>2</sup> ) 4090-9051 Color coded wire leads, 18 AWG (0.82 mm <sup>2</sup> ), 8" long (203 mm)
Reference Documents	Installation Instructions 574-331 for 4090-9001; 579-572 for 4090-9151 Field Wiring Diagrams 842-073 for IDNet operation; 841-804 for MAPNET II operation

### Wiring Distances

Distance from IAM to Contacts	500 ft (152 m) maximum without protectors 400 ft (122 m) maximum with 2081-9044 Overvoltage Protectors
Wiring Distance Reference per channel, MAPNET II or IDNet Communications	2500 ft (762 m) maximum from fire alarm control panel 10,000 ft (3048 m) maximum total wiring distance (including T-Taps)

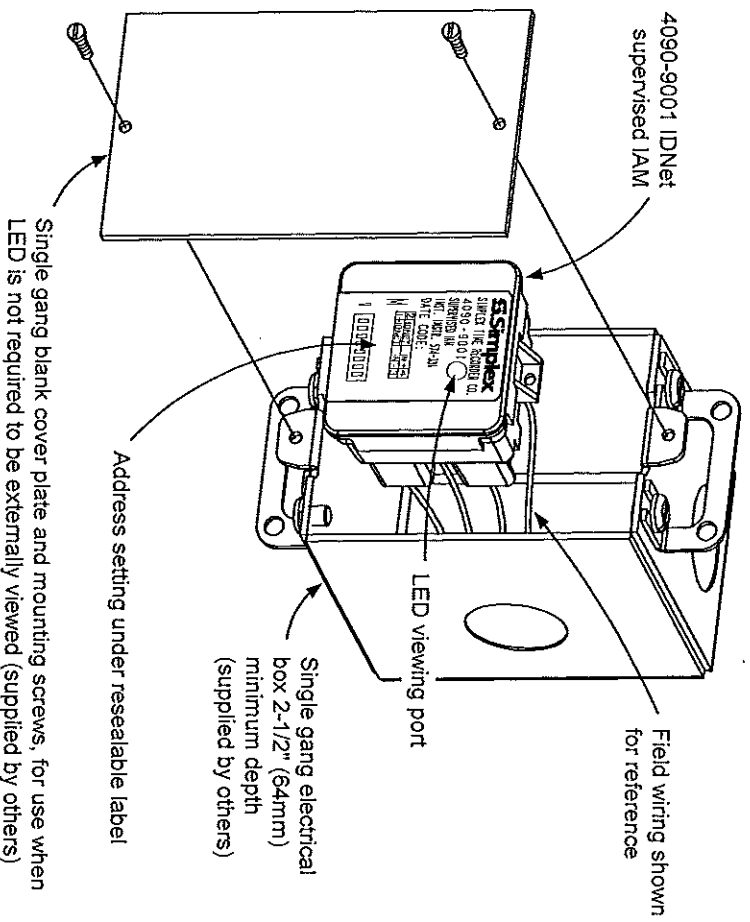
### Mechanical

Dimensions	4090-9001 1-9/16" W x 1-3/4" H x 1-1/4" D (40 mm x 44 mm x 32 mm) 4090-9051 1-9/16" W x 1-9/16" H x 9/16" D (40 mm x 40 mm x 14 mm)
Housing Material, 4090-9001	Black thermoplastic
Encapsulation Material, 4090-9051	Epoxy, beige
Temperature Range	32° to 158° F (0° to 70° C); intended for indoor operation
Humidity Range	Up to 93% RH at 100° F (38° C)

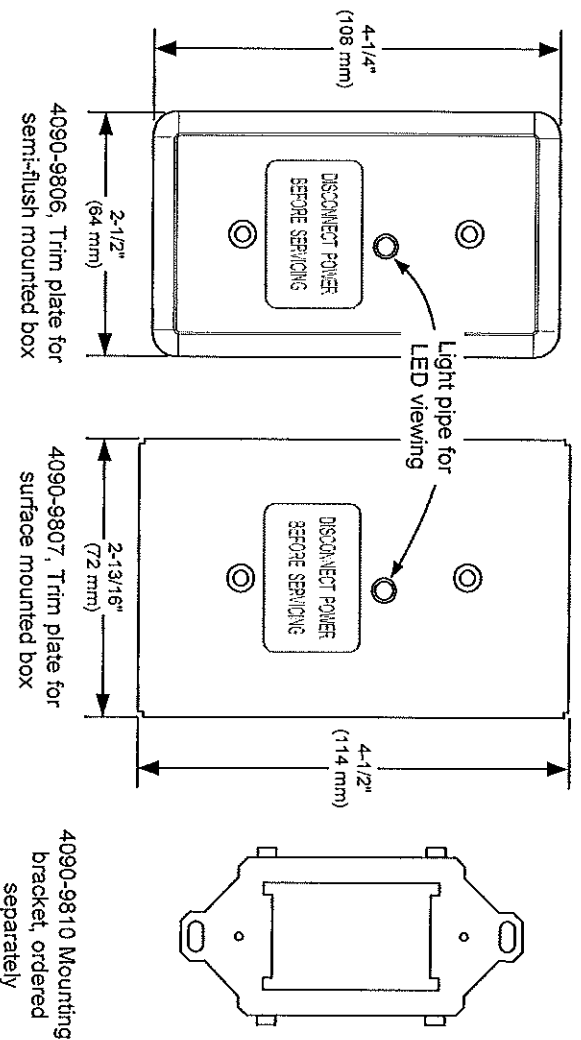
## Current Limited Operation Applications

For use with IDNet communications only, these IAMs can provide quad-state sensing of normal, open circuit, short circuit, and current limited conditions. (Program type is "T-sense.") With the proper end-of-line and current limiting resistors, dual functions such as tamper switch and waterflow switch monitoring can be determined and communicated by a single addressable point.

**Mounting Information**



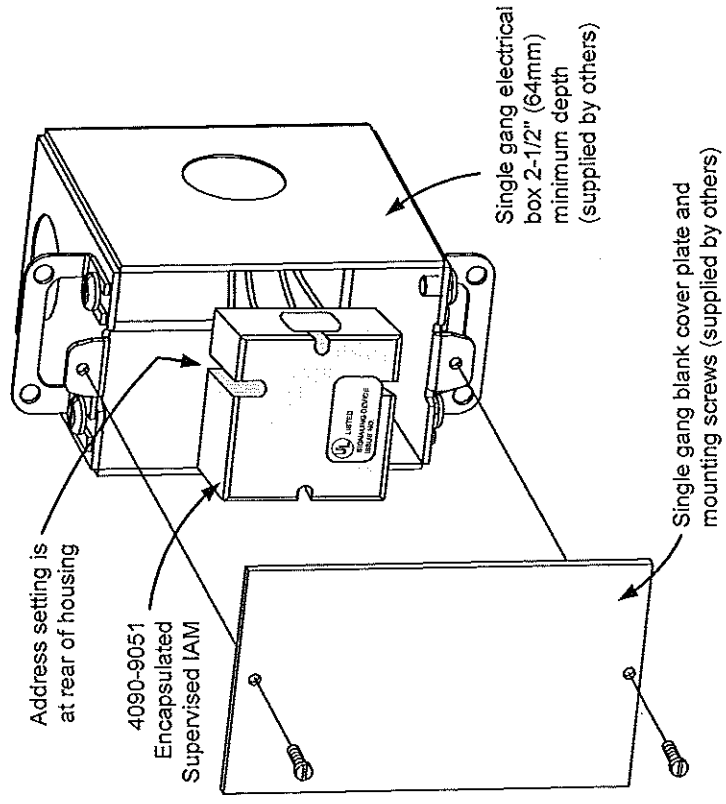
**Mounting Reference, Single Gang Blank Cover Plate**



NOTE: These mounting plates require mounting bracket 4090-9810.

**Optional Trim Plates and Mounting Bracket for Visible LED**

## 4090-9051 Mounting Information



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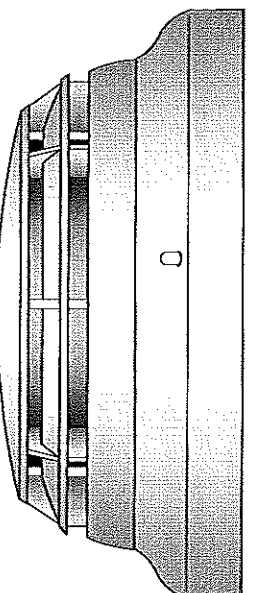
# Simplex

UL, ULC, CSFM Listed; FM Approved;  
MEA (NYC) Acceptance\*

Ionization, and Heat, Standard Bases and Accessories

## TrueAlarm® Analog Sensing

TrueAlarm Analog Sensors – Photoelectric,



4098-9714 TrueAlarm Photoelectric  
Sensor Mounted in Base

### Description

#### Digital Communication of Analog Sensing.

TrueAlarm analog sensors provide an analog measurement digitally communicated to the host control panel using Simplex addressable communications. At the control panel, the data is analyzed and an average value is determined and stored. An alarm or other abnormal condition is determined by comparing the sensor's present value against its average value and time.

**Intelligent Data Evaluation.** Monitoring each sensor's average value provides a continuously shifting reference point. This software filtering process compensates for environmental factors (dust, dirt, etc.) and component aging, providing an accurate reference for evaluating new activity. With this filtering, there is a significant reduction in the probability of false or nuisance alarms caused by shifts in sensitivity, either up or down.

**Control Panel Selection.** Peak activity per sensor is stored to assist in evaluating specific locations. The alarm set point for each TrueAlarm sensor is determined at the host control panel, selectable as more or less sensitive as the individual application requires.

**Timed/Multi-Stage Selection.** Sensor alarm set points can be programmed for timed automatic sensitivity selection (such as more sensitive at night, less sensitive during day). Control panel programming can also provide multi-stage operation per sensor. For example, a 0.2% level may cause a warning to prompt investigation while a 2.5% level may initiate an alarm.

**Sensor Alarm and Trouble LED Indication.** Each sensor base's LED pulses to indicate communications with the panel. If the control panel determines a sensor is in alarm, or is dirty or has some other type of trouble, the details are announced at the control panel and that sensor base's LED will be turned on steadily. During a system alarm, the control panel will control the LEDs such that an LED indicating a trouble will return to pulsing to help identify the alarmed sensors.

### Features

#### TrueAlarm® analog sensing provides:

- Digital transmission of analog sensor values via IDNet™ or MAPNET II® two-wire communications\*\*

#### For use with the following Simplex® products:

- 4010 and 4100U Series control panels; and 4008 Series control panels with reduced feature set (refer to data sheet S4008-0001 for details)
- 4020, 4100, and 4120 Series control panels, Universal Transponders and 2120 TrueAlarm CDTs equipped for MAPNET II operation

#### Fire alarm control panel provides:

- Peak value logging allowing accurate analysis of each sensor for individual sensitivity selection
- Sensitivity monitoring satisfying NFPA 72® sensitivity testing requirements; automatic individual sensor calibration check verifies sensor integrity
- Automatic environmental compensation, multi-stage alarm operation, and display of sensitivity directly in percent per foot
- Ability to display and print detailed sensor information in plain English language

#### Photoelectric smoke sensors provide:

- Seven levels of sensitivity from 0.2% to 3.7%

#### Heat sensors provide:

- Fixed temperature sensing
- Rate-of-rise temperature sensing
- Utility temperature sensing

#### Ionization smoke sensors provide:

- Three levels of sensitivity; 0.5%, 0.9%, and 1.3%

#### General features:

- U/L listed to Standard 268
- Louvered smoke sensor design enhances smoke capture by directing flow to chamber; entrance areas are minimally visible when ceiling mounted
- Designed for EMI compatibility
- Magnetic test feature is provided
- Optional accessories include remote LED alarm indicator and output relays

#### Additional base reference:

- For isolator bases, refer to data sheet S4098-0025
- For sounder bases, refer to data sheet S4098-0028
- For photo/heat sensors, refer to data sheet S4098-0024 (single address) and S4098-0033 (dual address)

\* These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listings 722-0026218, 721-0026231, 7270-0026216, and 7300-0026217 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEAS-39E. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Trade Recorder Co. are the property of Tyco Safety Products Westminster.

\*\* TrueAlarm analog sensors are protected by one or more of the following U.S. Patents: 5,155,488; 5,173,883; 5,400,014; 5,543,777; 5,710,541; D383,407; D388,392; D392,573. MAPNET II and IDNet addressable communication's designs are protected by U.S. Patent No. 4,796,025.

## TrueAlarm Sensor Bases and Accessories

### Sensor Base Features

#### Base mounted address selection:

- Address remains with its programmed location
- Accessible from front (DIP switch under sensor)

#### General features:

- Automatic identification provides default sensitivity when substituting sensor types
- Integral red LED for power-on (pulsing), or alarm or trouble (steady on)
- Locking anti-tamper design mounts on standard outlet box
- Magnetically operated functional test

### Sensor Bases

#### 4098-9792, Standard sensor base

4098-9789, Sensor base with wired connections for:  
• 2098-9808 Remote LED alarm indicator or 4098-9822 relay (unsupervised)

#### 4098-9791, Sensor base with supervised relay driver output (not compatible with 2120 CDT):

- Relay operation is programmable and can be manually operated from control panel
- Use with remote mount 2098-9737 relay
- Also includes wired connections for remote LED alarm indicator or 4098-9822 relay

### Sensor Base Options

#### 2098-9737, Remote or local mount supervised relay:

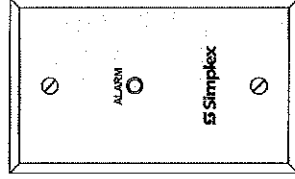
- DPDT contacts for resistive/suppressed loads, power limited rating of 3 A @ 28 VDC; non-power limited rating of 3 A @ 120 VAC (requires external 24 VDC coil power)

#### 4098-9822, LED Annunciation Relay:

- Activates when base LED is on steady, indicating local alarm or trouble
- DPDT contacts for resistive/suppressed loads, power limited rating of 2 A @ 28 VDC; non-power limited rating of 1/2 A @ 120 VAC, (requires external 24 VDC coil power)
- 4098-9832, Adapter plate:
  - Required for surface or semi-flush mounting to 4" square electrical box and for surface mounting to 4" octagonal box
  - Can be used for cosmetic retrofitting to existing 6-3/8" diameter base product

#### 2098-9808, Remote red LED Alarm Indicator:

- Mounts on single gang box (shown in illustration to right)



### Description

TrueAlarm sensor bases contain integral addressable electronics that constantly monitor the status of the detachable photoelectric, ionization, or heat sensors. Each sensor's output is digitized and transmitted to the system fire alarm control panel every four seconds.

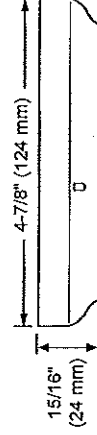
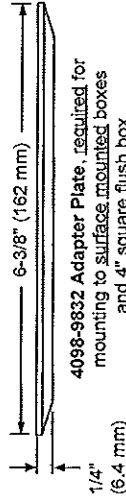
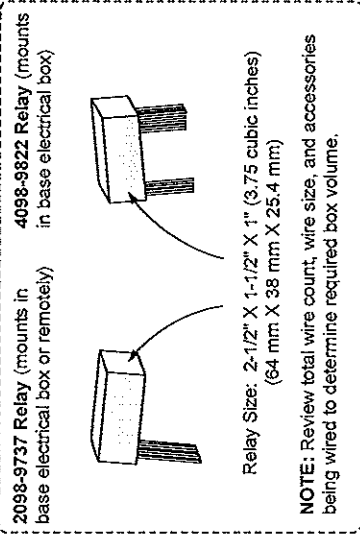
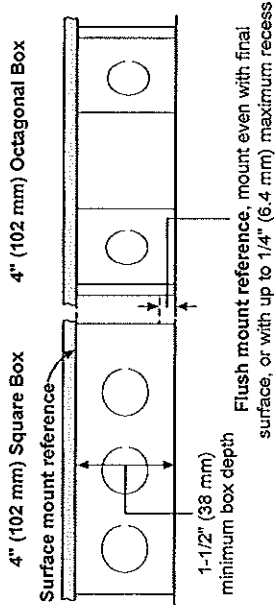
Since TrueAlarm sensors use the same base, different sensor types can be easily interchanged to meet specific location requirements. This feature also allows intentional sensor substitution during building construction. When conditions are temporarily dusty, instead of covering the smoke sensors (causing them to be disabled), heat sensors may be installed without reprogramming the control panel. Although the control panel will indicate an incorrect sensor type, the heat sensor will operate at a default sensitivity providing heat detection for building protection at that location.

### Mounting Reference

#### Electrical Box Requirements: (boxes are by others)

**Without relay:** 4" octagonal or 4" square, 1-1/2" deep, single gang, 2" deep

**With relay:** 4" octagonal or 4" square, 1-1/2" deep, with 1-1/2" extension ring



TrueAlarm Bases  
4098-9789, -9791, & -9792



## TrueAlarm Sensors

### Features

Sealed against rear air flow entry  
Interchangeable mounting  
EMI/RFI shielded electronics

### Heat sensors:

- Selectable rate compensated, fixed temperature sensing with or without rate-of-rise operation
- Rated spacing distance between sensors:

Fixed Temp. Setting	UL & ULC Spacing	FM Spacing, Either Fixed Temperature Setting
135° F (57.2° C)	60 ft x 60 ft (18.3 m)	20 ft x 20 ft (6.1 m) for fixed temperature only; RTI = Quick
155° F (68° C)	40 ft x 40 ft (12.2 m)	50 ft x 50 ft (15.2 m) for fixed temperature with either rate-of-rise selection; RTI = Ultra Fast

### Smoke Sensors:

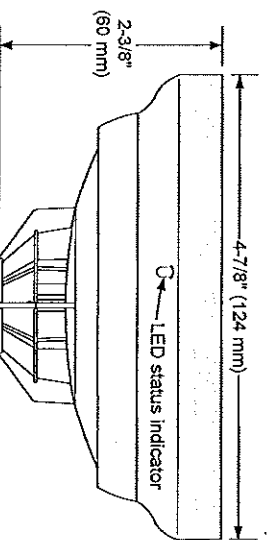
- Photoelectric or ionization technology sensing
- 360° smoke entry for optimum response
- Built-in insect screens

### 4098-9733 Heat Sensor

TrueAlarm heat sensors are self-restoring and provide rate compensated, fixed temperature sensing, selectable with or without rate-of-rise temperature sensing. Due to its small thermal mass, the sensor accurately and quickly measures the local temperature for analysis at the fire alarm control panel.

Rate-of-rise temperature detection is selectable at the control panel for either 15° F (8.3° C) or 20° F (11.1° C) per minute. Fixed temperature sensing is independent of rate-of-rise sensing and programmable to operate at 135° F (57.2° C) or 155° F (68° C). In a slow developing fire, the temperature may not increase rapidly enough to operate the rate-of-rise feature. However, an alarm will be initiated when the temperature reaches its rated fixed temperature setting.

TrueAlarm heat sensors can be programmed as a utility device to monitor for temperature extremes in the range from 32° F to 155° F (0° C to 68° C). This feature can provide freeze warnings or alert to HVAC system problems. Refer to specific panels for availability.



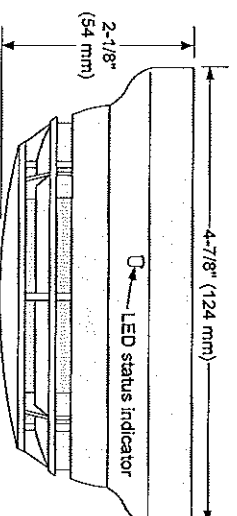
4098-9733 Heat Sensor with Base

**WARNING:** In most fires, hazardous levels of smoke and toxic gas can build up before a heat detection device would initiate an alarm. In cases where Life Safety is a factor, the use of smoke detection is highly recommended.

### 4098-9714 Photoelectric Sensor

TrueAlarm photoelectric sensors use a stable, pulsed infrared LED light source and a silicon photodiode receiver to provide consistent and accurate low power smoke sensing. Seven levels of sensitivity are available for each individual sensor, ranging from 0.2% to 3.7% per foot of smoke obscuration. Sensitivity is selected and monitored at the fire alarm control panel.

The sensor head design provides 360° smoke entry for optimum response to smoke from any direction. Due to its photoelectric operation, air velocity is not normally a factor, except for impact on area smoke flow.

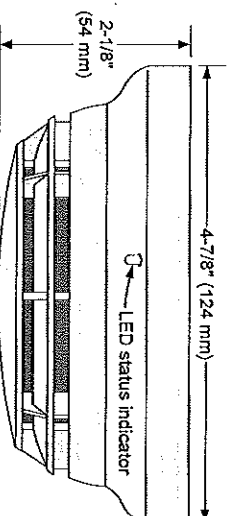


4098-9714 Photoelectric Sensor with Base

### 4098-9717 Ionization Sensor

TrueAlarm Ionization sensors use a single radioactive source with an outer sampling ionization chamber and an inner reference ionization chamber to provide stable operation under fluctuations in environmental conditions such as temperature and humidity. Smoke and invisible combustion gases can freely penetrate the outer chamber. With both chambers ionized by a small radioactive source [Am 241 (Americium)], a very small current flows in the circuit. The presence of particles of combustion will cause a change in the voltage ratio between chambers. This difference is measured by the electronics in the sensor base and digitally transmitted back to the control panel for processing.

Three levels of sensitivity are available for each ionization sensor: 0.5, 0.9, and 1.3% per foot of smoke obscuration.



4098-9717 Ionization Sensor with Base

### Application Reference

Sensor locations should be determined only after careful consideration of the physical layout and contents of the area to be protected. Refer to NFPA 72, the *National Fire Alarm Code*®. On smooth ceilings, smoke sensor spacing of 30 ft (9.1 m) may be used as a guide. For detailed application information, refer to *4098 Detectors, Sensors, and Bases Application Manual* (574-709).

## TrueAlarm Analog Sensing Product Selection Chart

### TrueAlarm Sensor Bases\*

Model	Description	Compatibility	Mounting Requirements
4098-9792	Standard Sensor Base, no options	Sensors 4098-9714, -9733, & -9717	4" octagonal or 4" square box, 1-1/2" min. depth; or single gang box, 2" min. depth
4098-9789	Sensor Base with connections for Remote LED Alarm Indicator or Unsupervised Relay	Sensors 4098-9714, -9733, & -9717 2098-9808 remote LED alarm indicator or 4098-9822 relay	4" octagonal or 4" square box <b>Note:</b> Box depth requirements depend on total wire count and wire size, refer to accessories list below for reference.
4098-9791	Sensor Base with connections for Supervised Remote Relay and connections for Remote Alarm Indicator or Unsupervised Relay	Sensors 4098-9714, -9733, & -9717 2098-9737 remote relay (supervised) 2098-9808 remote alarm indicator or 4098-9822 relay (unsupervised)	

### TrueAlarm Sensors

Model	Description	Compatibility	Mounting Requirements
4098-9714	Photoelectric Smoke Sensor	Bases 4098-9792, 4098-9789, and 4098-9791	Refer to base requirements
4098-9717	Ionization Smoke Sensor		
4098-9733	Heat Sensor		

### TrueAlarm Sensor/Base Accessories

Model	Description	Compatibility	Mounting Requirements
2098-9737	Supervised Relay, mounts remote or in base electrical box	For use with 4098-9791 base	Remote Mounting requires 4" octagonal or 4" square box, 1-1/2" minimum depth <b>Base Mounting</b> requires 4" octagonal box, 2-1/8" deep with 1-1/2" extension ring
2098-9808	Remote Red LED Alarm Indicator on single gang stainless steel plate	Bases 4098-9789 and 4098-9791	Single gang box, 1-1/2" minimum depth
4098-9822	Relay, tracks base LED status (unsupervised, mounts only in base electrical box)		4" octagonal box, 2-1/8" deep with 1-1/2" extension ring
4098-9832	Adapter Plate	Bases 4098-9792, -9789, & -9791	Required for surface or semi-flush mounted 4" square box and for surface mounted 4" octagonal box

\* Refer to installation Instructions 574-707 and Application Manual 574-709 for additional information.

## Specifications

### General Operating Specifications

Communications and Sensor Supervisory Power	MAPNET II or IDNet, auto-select, 24-40 VDC w/data, 400 $\mu$ A typical, 1 address per base
Communications Connections	Screw terminals for I/O wiring, 18 to 14 AWG (0.82 mm <sup>2</sup> to 2.08 mm <sup>2</sup> )
Remote LED Alarm Indicator Current	1 mA typical, no impact to alarm current
Remote LED Alarm Indicator and Relay Connections	Color coded wire leads, 18 AWG (0.82 mm <sup>2</sup> )
UL Listed Temperature Range	32° to 100° F (0° to 38° C)
Operating Temperature Range	32° to 122° F (0° to 50° C)
Humidity Range	15° to 122° F (-9° to 50° C) 10 to 95% RH
Smoke Sensor Ambient Ratings	4098-9714, Photoelectric Sensor 4098-9717, Ionization Sensor Air velocity = 0-2000 ft/min (0-610 m/min) Air velocity = 0-200 ft/min (0-61 m/min); Altitude is up to 8000 ft (2.4 km)
Housing Color	Frost White
4098-9791 Base With Supervised Remote Relay 2098-9737 Externally Supplied Relay Coil Voltage	18-32 VDC (nominal 24 VDC)
Supervisory Current	270 $\mu$ A, from 24 VDC supply
Alarm Current with 2098-9737 Relay	28 mA, from 24 VDC supply
4098-9822 Unsupervised Relay, Requirements for Bases 4098-9789 and 4098-9791 (see page 2 for contact ratings)	18-32 VDC (nominal 24 VDC)
Supervisory Current	Supplied from communications
Alarm Current	13 mA, from separate 24 VDC supply

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S4098-0019-12 8/2008

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# Simplex

UL, ULC Listed; FM, CSFM,  
and MEA (NYC) Approved\*

## System Accessories

LCD Annunciators  
Model 4603-9101

### Features

Remote LCD annunciator for use with Simplex®  
model:

- 4100U, 4100, 4120, and 4020 fire alarm control panels
- 4100/4120 Universal Transponders

#### Information display features:

- Wide viewing angle, super-twist LCD technology with green LED backlighting
- Two lines of 40 characters each
- LED status indicators
- During battery backup, backlighting is disabled until there is switch activity

#### Controls include:

- Switches for system acknowledge, alarm silence, and system reset
- Four programmable control switches
- Lamp/LCD test

#### Wiring information:

- RUI (Remote Unit Interface) communications require a single twisted, shielded wire pair
- Separate wiring is required for 24 VDC control panel power

#### Flush mount on standard electrical boxes

#### Options

- 2975-9206, Surface mount box
- 4603-9111, Brushed stainless steel trim

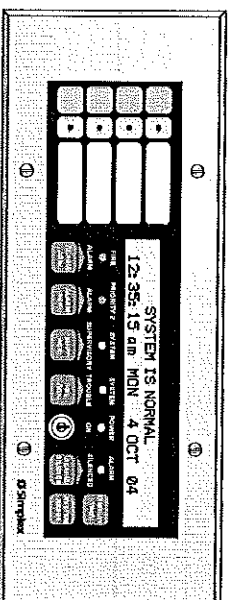
#### UL Listed to Standard 864

### Description

**Remote Control and Annunciation** is provided using an 80 character, back-lit, alphanumeric display. Information is presented in clear, descriptive English language and includes: **Point Status** (alarm, trouble, etc.); **Alarm Type** (smoke detector, manual station, etc.); **Number of System Alarms**; **Supervisory Conditions**; and **Trouble Conditions**; and a **Custom Location Label**.

**Wiring.** A single twisted, shielded wire pair provides serial RUI communications that also supports other Simplex serial annunciators on the same wire pair.

**Multiple Indications.** Alarm, Supervisory, and Trouble conditions are also indicated by dedicated LEDs and a tone-alert audible sounder. Each condition has a dedicated acknowledge push-button switch that silences the tone-alert but leaves the LED on until all conditions in that category are restored to normal. Switch operation is either globally or individually acknowledgeable, determined by the control panel operation.



4603-9101 LCD Annunciator

### Description (Continued)

Repeated operation of the appropriate acknowledge switch will scroll the LCD display showing activity in the sequence of occurrence. The tone-alert also pulses to indicate the operation of any of the push-button switches.

Consult local code requirements for guidance in determining applications and location of the 4603-9101 LCD annunciator.

### Operation

**System Controls.** Notification appliances can be deactivated by pressing the "ALARM SILENCE" switch. (Exact operation is determined by the host control panel such as visible appliances remaining on until system is reset.) Pressing the "SYSTEM RESET" switch restores the system to normal operation. When system activity is normal, the LCD displays the time, date, and "SYSTEM IS NORMAL."

**Control Switches.** Four programmable "CONTROL" switches and associated LEDs are included. Typical applications include manual evacuation, door holder release bypass, and elevator capture bypass.

**Keyswitch Enable.** All switches on the annunciator are controlled by the "ENABLE" keyswitch with a key that is removable only in the disabled position. A brief lamp/LCD test is performed whenever the keyswitch is changed from enabled to disabled.

**Battery Backup Operation.** During battery backup, the LED backlighting is disabled to conserve battery power. When an annunciator switch is activated, the backlighting is automatically enabled. After approximately 30 seconds of inactivity, the backlighting will again be disabled.

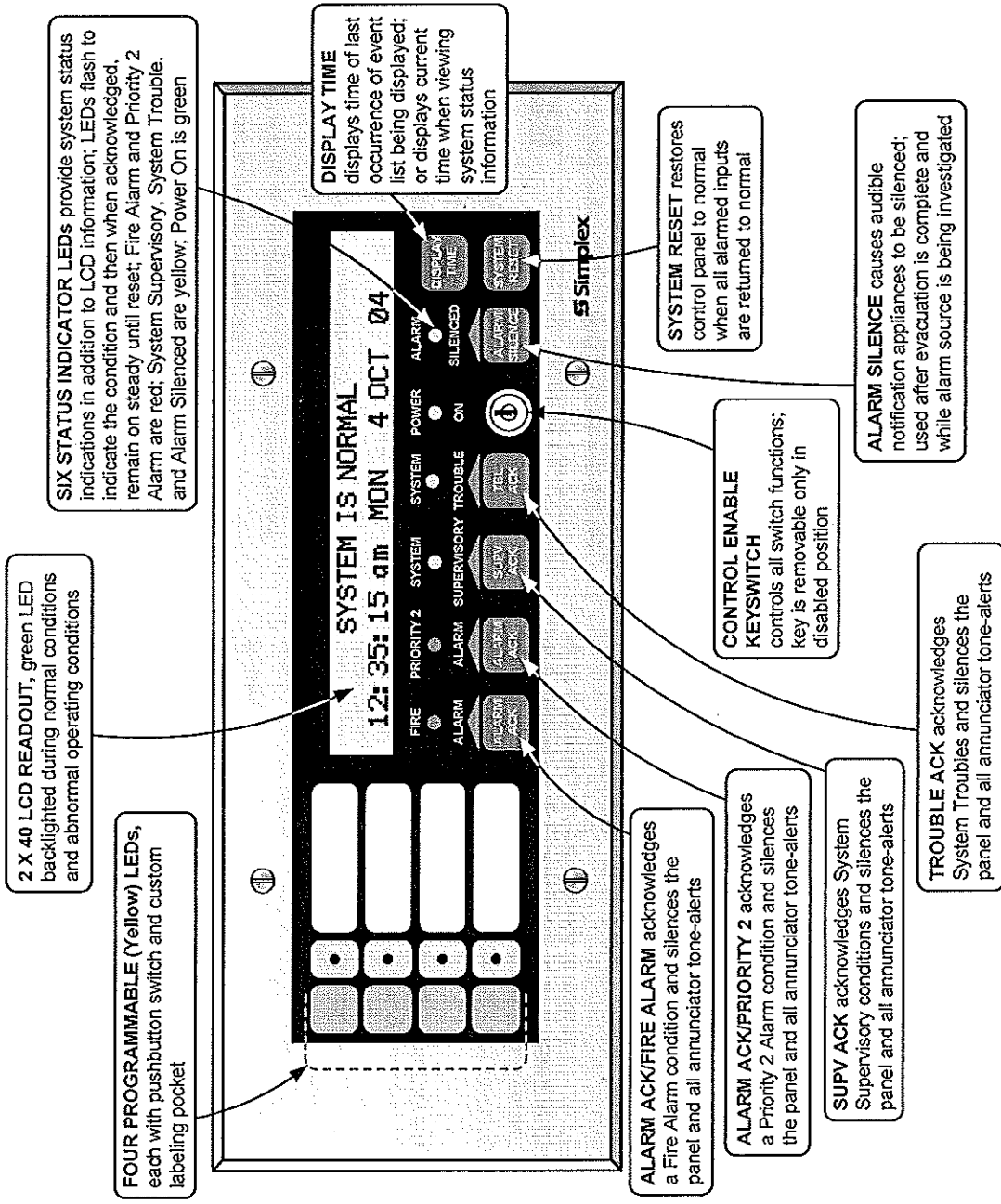
\* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7120-0028;79 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use - City of New York Department of Buildings - MEA35-93E. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

## Product Selection

Model	Description
4603-9101	Remote LCD Annunciator with beige trim
4603-9101C	Remote LCD Annunciator with beige trim, for Canada
4603-9111	Brushed stainless steel trim option
2975-9206	Matching surface mount box; ivory finish
2081-9044	Overvoltage protector; required where annunciator communications and power wiring exits and enters a building; refer to data sheet S2081-0016 for details

Refer to specifications on page 3 for additional details

## 4603-9101 Operator Information



**4603-9101 LCD Annunciator Specifications**

General Operating Specifications	
Voltage	20.4 to 32 VDC, system supplied
Normal Operating Current	170 mA, backlighting enabled
Battery Standby Current	30 mA, backlighting disabled
Operating Temperature Range	170 mA, backlighting enabled
Operating Humidity Range	32° to 120° F (0° to 49° C)
	10% to 90% from 32° F to 104° F (0° C to 40° C)

**Communications**

Type	Capacity
RUI (Remote Unit Interface) external annunciator communications line SLC (signaling line circuit)	Up to 31 remote annunciators/MINIPLEX® transponders per channel including the 4603-9101 LCD Annunciator, the 4602-9101 Status Command Unit (SCU), and 4602-9102 Remote Command Unit (RCU); refer to data sheet S4100-0031 for additional 4100U information
Data	Single twisted, shielded pair, 18 AWG (0.82 mm <sup>2</sup> )
Power	18 to 12 AWG (0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> ) wires for 24 VDC system power
Earth	A dedicated earth ground connection to the electrical box is required for proper ESD and EMI protection; wire in accordance with NFPA 70 ( <i>National Electrical Code</i> ) Article 250

**Wiring Requirements****Mounting Information**

<b>NOTE:</b> General Conduit Entrance Requirement	Conduit entrance must be located a minimum of 2-3/4" (70 mm) from the front of the box to clear assembly
Trim Dimensions	4-1/2" H x 11-13/16" W (114 mm x 300 mm)
Standard Trim Finish	Steel, painted beige
4603-9111, Optional Trim	Brushed stainless steel (ordered separately)
Trim Hardware	Supplied with both slotted and tamper resistant screws
Boxes for Flush Mounting (supplied by others)	6-Gang, 3-1/2" (89 mm) deep; RACO 965, 6-gang masonry box; RACO 590, gangable switch box, 6 required; or equal
<b>2975-9206, Surface Mount Box Option (ordered separately)</b>	
Dimensions	11-31/32" W x 4-5/8" H x 2-3/4" D (304 mm x 117 mm x 70 mm)
Finish	Painted steel, ivory finish

## Mounting Information

**NOTE:** Conduit entrance must be located a minimum of 2-3/4" (70 mm) from the front of the box to clear assembly. Review box choice with assembly layout before selecting conduit entrance location.

### Flush Mount Ganged Boxes:

Requires 6-gang box, 3-1/2" (89 mm) min. depth, use (6) RACO # 590 or equal (supplied by others)

### Flush Mount Masonry Box:

Use RACO # 965 or equal, 3-1/2" (89 mm) deep (supplied by others)

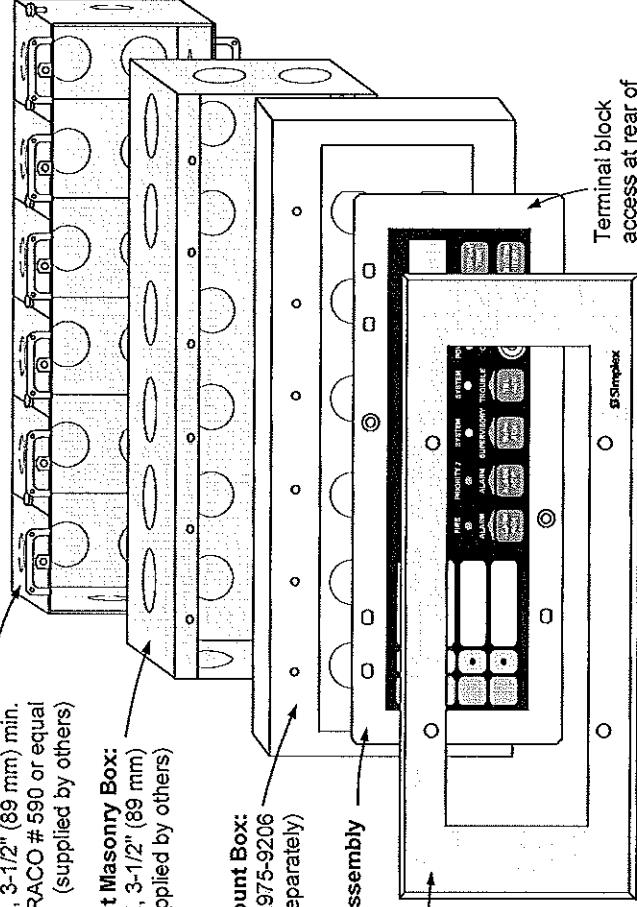
### Surface Mount Box:

Simplex model 2975-9206 (ordered separately)

### LCD Annunciator Assembly

Trim plate

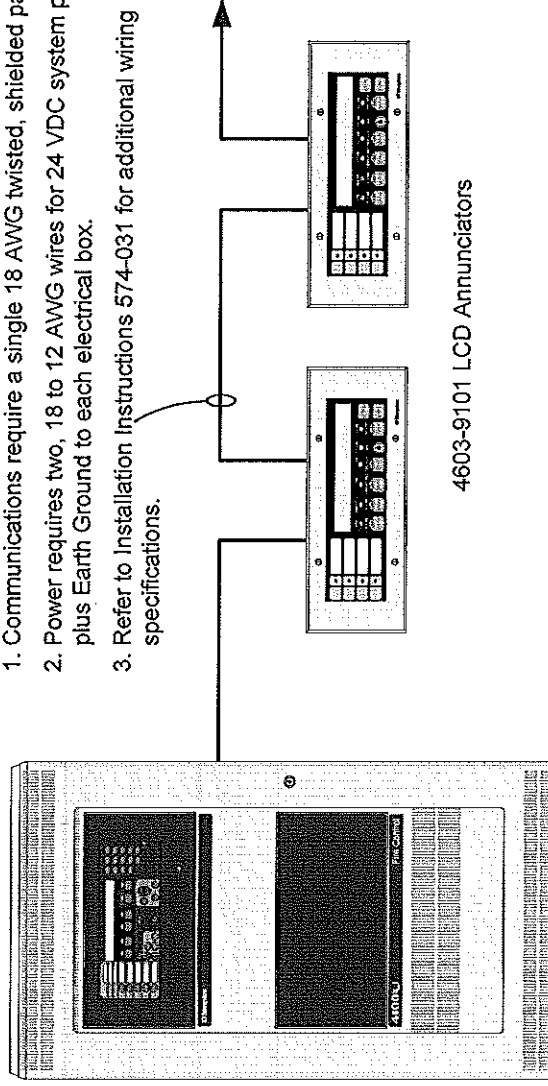
Terminal block access at rear of enclosure, this side



## Wiring Reference

### Wiring Notes:

1. Communications require a single 18 AWG twisted, shielded pair.
2. Power requires two, 18 to 12 AWG wires for 24 VDC system power, plus Earth Ground to each electrical box.
3. Refer to Installation Instructions 574-031 for additional wiring specifications.



4100U Fire Alarm Control Panel

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S4603-0001-10 10/2004

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Downtown Pavilion, Portland, ME		Description		Standby Current	Total Standby	Alarm Current	Total Alarm	Backup From Battery Set #1	Battery Set #2	Battery Set #3	Battery Set #4
Module	Qty							Qty	Qty	Qty	Qty
4100-0000	1	BASIC TRANSFORMER	0.00700	0.00700	0.00700	0.00700	0.00700	1			
4100-0004	1	POWER DISTRIBUTION MODULE 120V	0.00000	0.00000	0.00000	0.00000	0.00000	1			
4100-0111	1	SYSTEM POWER SUPPLY (25W) - 120VAC 60HZ	0.17500	0.17500	0.18500	0.18500	0.18500	1			
4100-0782	1	INDICATOR ONLY, 2 BAY SOLID DOOR	0.00000	0.00000	0.00000	0.00000	0.00000	1			
4100-782	1	LEGACY MSTR UPGRADE, V4 D9P1V	0.16000	0.16000	0.21000	0.21000	0.21000	1			
Total Panel Standby:				0.22600							
Total Panel Alarm:					0.482						
Peripheral Devices											
4090-0001	38	INLET SUPERVISED I/M	0.00000	0.00000	0.00000	0.00000	0.00000	38			
4090-0010	38	BACKSET I/M	0.00000	0.00000	0.00000	0.00000	0.00000	38			
4090-0018	38	COVER ADDRESS MODULE FLUSH	0.00000	0.00000	0.00000	0.00000	0.00000	38			
4090-0716	1	TRUCK AND PECO O/SWAP SENSOR	0.00000	0.00000	0.00000	0.00000	0.00000	1			
4090-0718	1	TRUCK AND PECO SENSOR DRIVE	0.00000	0.00000	0.00000	0.00000	0.00000	1			
4090-0701	1	SERIAL I/O 28VDC/5VDC I/O	0.00000	0.00000	0.00000	0.00000	0.00000	1			
Total Periph Standby:				0.00000		0.00000	0.00000				
Total Periph Alarm:					0.000	0.000	0.000				
Total Standby Alarm:					0.482		0.178				
Total Alarm Amps:					0.482		0.178				

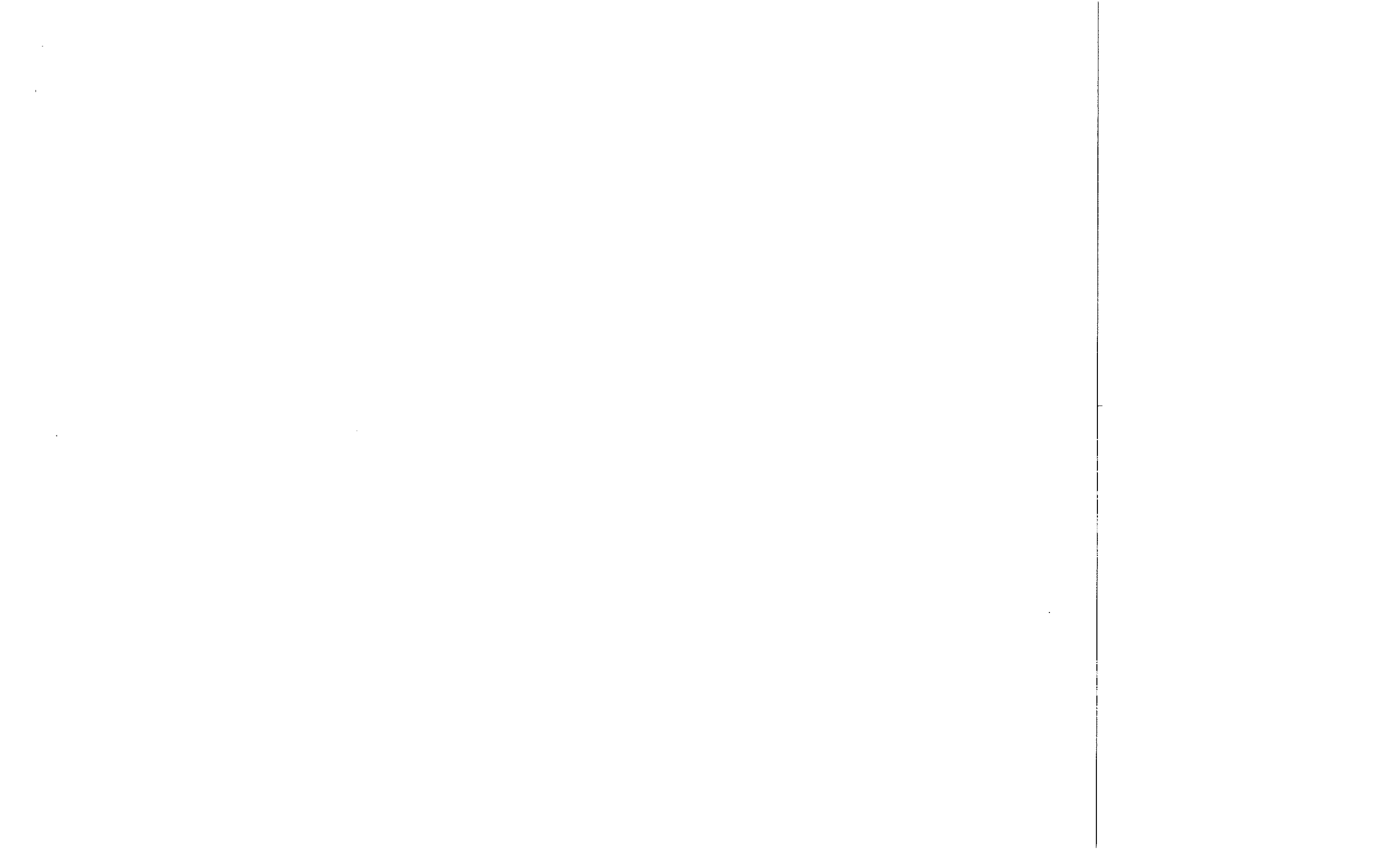
\* Additional Current Draw included With Device Addresss Used (See additional current draw)  
 † 2-wire detector alarm current is included in the alarm current of the initiating device circuit.

Battery Set #1 (Cabinet/Charger #1)		Standby Current	Alarm Current
Cabinet #1 Card Power			
Current Draw For 100 Watt Or 50 Watt Amplifiers	0	0.000	0.000
Current Draw For Fax's and 50 Watt Amplifiers	0	0.000	0.000
Power For External Peripheral Devices	0.00000	0.17000	0.17000
Additional Current Draw	0.482	0.000	0.000
MAPNET/INMTR Device Addresss Used (See additional current draw)	39	0.000	0.000
Spare addressable point capacity included for battery calc	0%	0.000	0.000
Additional Battery Capacity Required	0%	0.000	0.000
Standby Time = 24 Hrs		11.753	Standby Ah = 0.000
Alarm Time = 8 Mins		0.192	Alarm Ah = 0.000
Minimum Battery Required per NFPA 72-2010	2081-4272 8.2 AH	14.472	20% Safety Margin Included
Battery Supplied	2081-4272 8.2AH		

Battery Set #2 (Cabinet/Charger #2)		Standby Current	Alarm Current
Cabinet #2 Card Power			
MAPNET/INMTR Device Addresss Used (See additional current draw)	0.0	0.000	0.000
Spare addressable point capacity included for battery calc	0%	0.000	0.000
Remaining 100 Watt Or 50 Watt Amplifiers	0	0.000	0.000
Remaining Fax's and 50 Watt Amplifiers	0	0.000	0.000
Power For External Peripheral Devices	0.00000	0.00000	0.00000
Additional Battery Capacity Required	0%	0.000	0.000
Standby Time = 24 Hrs		0.000	Standby Ah = 0.000
Alarm Time = 5 Mins		0.000	Alarm Ah = 0.000
Minimum Battery Required per NFPA 72-2010	2081-4272 8.2 AH	0.000	20% Safety Margin Included
Battery Supplied	2081-4272 8.2 AH		

Battery Set #3 (Cabinet/Charger #3)		Standby Current	Alarm Current
Cabinet #3 Card Power			
MAPNET/INMTR Device Addresss Used (See additional current draw)	0.0	0.000	0.000
Spare addressable point capacity included for battery calc	0%	0.000	0.000
Remaining 100 Watt Or 50 Watt Amplifiers	0	0.000	0.000
Remaining Fax's and 50 Watt Amplifiers	0	0.000	0.000
Power For External Peripheral Devices	0.00000	0.00000	0.00000
Additional Battery Capacity Required	0%	0.000	0.000
Standby Time = 24 Hrs		0.000	Standby Ah = 0.000
Alarm Time = 5 Mins		0.000	Alarm Ah = 0.000
Minimum Battery Required per NFPA 72-2010	2081-4272 8.2 AH	0.000	20% Safety Margin Included
Battery Supplied	2081-4272 8.2 AH		

Battery Set #4 (Cabinet/Charger #4)		Standby Current	Alarm Current
Cabinet #4 Card Power			
MAPNET/INMTR Device Addresss Used (See additional current draw)	0.0	0.000	0.000
Spare addressable point capacity included for battery calc	0%	0.000	0.000
Remaining 100 Watt Or 50 Watt Amplifiers	0	0.000	0.000
Remaining Fax's and 50 Watt Amplifiers	0	0.000	0.000
Power For External Peripheral Devices	0.00000	0.00000	0.00000
Additional Battery Capacity Required	0%	0.000	0.000
Standby Time = 24 Hrs		0.000	Standby Ah = 0.000
Alarm Time = 5 Mins		0.000	Alarm Ah = 0.000
Minimum Battery Required per NFPA 72-2010	2081-4272 8.2 AH	0.000	20% Safety Margin Included
Battery Supplied	2081-4272 8.2 AH		





**PROJECT**

DEERING PAVILLION  
880 FOREST AVENUE  
PORTLAND, ME. 04103

**ELECTRICAL**

B.H. MILLIKEN  
175 ANDERSON STREET  
PORTLAND, ME 04101

***SimplexGrinnell BE SAFE.***

*A Tyco International Company*

20 THOMAS DR  
WESTBROOK, ME 04092

SALES: 207-842-6440  
SERVICE: 207-842-6440  
FAX: 207-842-6439

ISSUING INDEX	SHEET
FA-001	COVER SHEET
FA-201	RISER DIAGRAM / LEGEND

SHEET NUMBER		SHEET TITLE		PROJECT NUMBER	
FA-001		FIRE ALARM SYSTEM		FIRE ALARM SYSTEM ADD	
APPROVED BY:	DATE:	DESIGNED BY:	DATE:	CREAN BY:	DATE:
		M.L.	3/8/11		
DEERING PAVILLION					
880 FOREST AVENUE					
PORTLAND, MAINE					
FIRE ALARM SYSTEM ADD					
COVER SHEET					
DEERING PAVILLION					
880 FOREST AVENUE					
PORTLAND, MAINE					
FA-001.DWG					

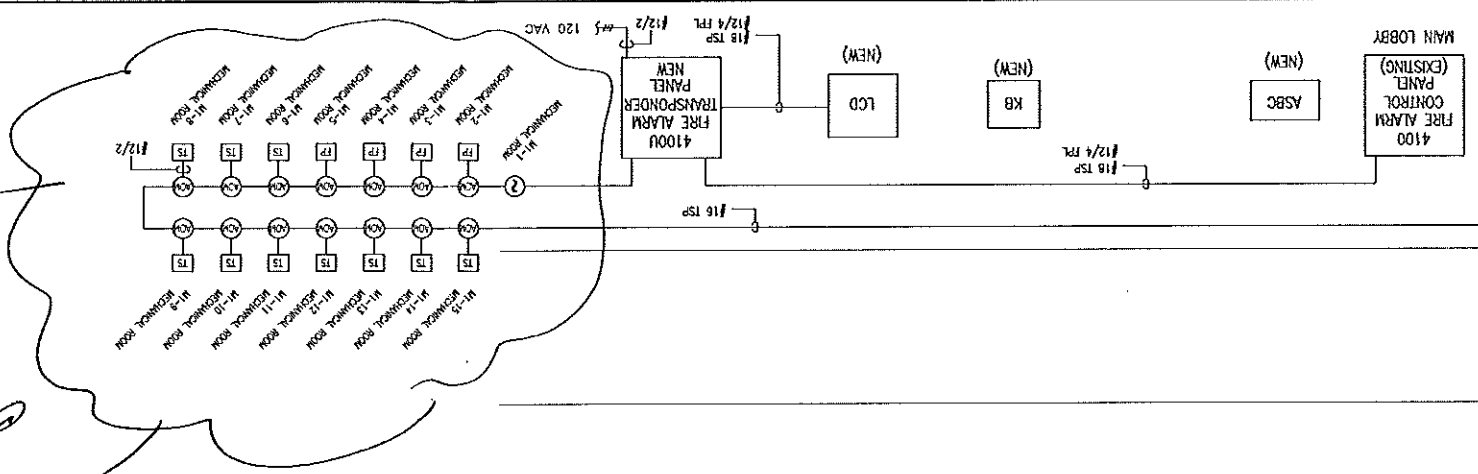
NO.	DATE	REVISION DESCRIPTION



FA-201.DWG	
FA-201	
SHEET NUMBER	
FIRE ALARM SYSTEM RISER DIAGRAM	
PROJECT NUMBER	
APPROVED BY:	DATE:
DESIGNED BY:	DATE:
DRAWN BY:	DATE:
MNL	3/9/11
DERING PAVILION	
880 FOREST AVENUE PORTLAND, MAINE	

*New*  
~~Existing~~  
Points if  
existing flows and taps  
are present.

T.B.O



NO.	DATE	REVISION DESCRIPTION
		SINGLE GANG BOX 2 1/2" DEEP
		PRESSURE SWITCH
		INSTALLED BY MECHANICAL CONTRACTOR
		FLOW SWITCH
		SUPPLIED BY OTHERS
		INSTALLED BY MECHANICAL CONTRACTOR
		TAPER SWITCH
		SUPPLIED BY OTHERS
		HEAT SENSOR/BASE
		SAMPLEX 4098-9733
		ADDRESSABLE OUTPUT MODULE
		SAMPLEX 4098-9002
		(RELAY BOX)
		ADDRESSABLE INPUT MODULE
		SAMPLEX 4090-9001
		4" SQUARE BOX 2 1/2" DEEP
		SAMPLEX 4090-9801
		ADDRESSABLE INPUT MODULE
		(RELAY BOX)
		SAMPLEX 4098-9801
		4" SQUARE BOX 2 1/8" DEEP
		SAMPLEX 4098-9801
		4" SQUARE BOX 2 1/2" DEEP
		SAMPLEX 4090-9801
		ADDRESSABLE INPUT MODULE
		(RELAY BOX)
		SAMPLEX 4090-9801
		CARBON MONOXIDE DETECTOR
		SYSTEMSENSE 1224T
		SINGLE GANG BOX 2 1/2" DEEP
		N/A
		KITCHEN HOOD
		N/A
		ANUL SYSTEM
		F.B.O
		FIRE PUMP CONTROLLER
		F.B.O
		N/A

