CITY OF PORTLAND

BUILDING PERMIT

This is to certify that
SIMPLEXGRINNELL
20 THOMAS DR
WESTBROOK, ME 04092

For installation at
250 COMMERCIAL ST

Job ID: **2012-05-3993-CH OF USE**

CBL: **031- L-034-001**

has permission to install new fire alarm system (see plan of action)
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of
the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of
the buildings and structures, and of the application on file in the department.

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

_____ (58)
Fire Prevention Officer

_____
Code Enforcement Officer / Plan Reviewer

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

City of Portland, Maine - Building or Use Permit Application

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

Job No: **2012-05-3993-CH OF USE** **2012-49031-FIRE ALARM**	Date Applied: **10/5/2012**	CBL: **031- L-034-001**	
Location of Construction: **250 COMMERCIAL ST (1st floor)**	Owner Name: **CM WATERFRONT PROPERTIES, LLC**	Owner Address: **P.O. BOX 7467** **PORTLAND, ME 04112**	Phone:
Business Name:	Contractor Name: **Simplex Grinnell – Ken Plourde**	Contractor Address: **20 Thomas Drive, Westbrook, ME 04092**	Phone: **207-749-6726**
Lessee/Buyer's Name:	Phone:	Permit Type: **BLDG - Building**	Zone: **WCZ**
Past Use: Restaurant – Brew pub	Proposed Use: Same – restaurant – Brew Pub – install fire alarm (1st floor)	Cost of Work: **250000.00**	CEO District:
		Fire Dept: 10/16/12 ✓ Approved w/ conditions ___ Denied ___ N/A Signature: Bjanbeef. (58)	Inspection: Use Group: Type: Signature:
Proposed Project Description: **install fire alarm (1st floor)**		Pedestrian Activities District (P.A.D.)	

Permit Taken By: **Lannie**	Zoning Approval

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

Special Zone or Reviews

___ Shoreland

___ Wetlands

___ Flood Zone

___ Subdivision

___ Site Plan

___ Maj ___ Min ___ MM

Date: approved 10/5/12
ABU

Zoning Appeal

___ Variance

___ Miscellaneous

___ Conditional Use

___ Interpretation

___ Approved

___ Denied

Date:

Historic Preservation

✓ Not in Dist or Landmark

___ Does not Require Review

___ Requires Review

___ Approved

___ Approved w/Conditions

___ Denied

Date: ABU

CERTIFICATION

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

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 or 874-8693 (ONLY)
or email: buildinginspections@portlandmaine.gov

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

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**

- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**

- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

Final Fire

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

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

Job ID: 2012-05-3993-CH OF USE
install new fire alarm system
(see plan of action)

For installation at:
250 COMMERCIAL ST

CBL: 031- L-034-001

Conditions of Approval:

Fire

The fire alarm system shall be installed within the time frame as approved in the owner's plan of action.

The installation shall comply with the following:

> City of Portland Chapter 10, Fire Prevention and Protection;

> NFPA 1, *Fire Code* (2009 edition), as amended by City Code;

> NFPA 101, *Life Safety Code* (2009 edition), as amended by City Code;

> City of Portland Fire Department Rules and Regulations;

> NFPA 72, *National Fire Alarm and Signaling Code* (2010 edition), as amended by Fire Department Rules and Regulations; and

> NFPA 70, *National Electrical Code* (2011 edition) as amended by the State of Maine.

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

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

All smoke detectors and smoke alarms shall be photoelectric.

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

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

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

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

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.
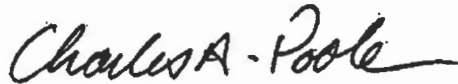
A master box connection is not authorized for this building.

To summarize: It is our intent to replace the entire fire alarm system over a three year period whereby at the end of three years the fire alarm system will be updated to the most recent code requirements. All necessary shop drawings as required for permitting purposes to be provided at each phase.

It is our hope that this action plan as described above meets with the City of Portland Fire Department's approval. Please know we are presently under contract for Phase I with SimplexGrinnell. Furthermore, please know we are anxious to implement Phase I as the Distillery/Brewery is being constructed. Please provide formal approval of said action plan and upon receipt SimplexGrinnell will implement the first phase as described above.

If you have any questions as it relates to this matter please don't hesitate to contact me or Sam Martin of SimplexGrinnell directly. Thank you and I look forward to your reply.

Sincerely,

Charles A. Poole

Charles A. Poole
Partner
CM Waterfront Properties, LLC
cpoole@customfloat.com
(207) 772-8160
(207) 939-1431- mobile

Child – 2012-♦4 9031
2012-4-5887

Fire Alarm Permit

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

Installation address: __250 Commercial St.__ CBL: __31-L-34__

Exact location: (within structure) __1st floor in rear corridor where existing panel is located__

Type of occupancy(s) (NFPA & ICC): __Restaurant/Pub__

Building owner: __CM Waterfront Properties LLC__

System Designer (point of contact): Must be __Ken Plourde__

Designer phone: __(207) 749-6726__   E-mail: __kplourde@simplexgrinnell.com__

Installing contractor: __Simplex/ Folsom Electric__   Certificate of Fitness No: __1019__

Contractor phone: __John Hale (207) 239-5100__   E-mail: __johale@simplexgrinnell.com__

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

Amendment to an existing permit: YES ◯   NO ⦿   Permit no: _____

The following documents shall be provided with this application:

☐ Floor plans   ☐ Scope of Work

☐ Wiring diagram   ☐ 11 ½ x 17s

☐ Annunciator details   ☐ pdf copy (may be e-mailed)

☐ Input/ Output Matrix   ☐ Designer qualifications

☐ Equipment data sheets   ☐ Battery/ voltage drop calcs

☐ Electrical Permit Pulled (check alarm/com)

COST OF WORK: __$8500.00__

PERMIT FEE: __$110.00__
($10 PER $1,000 + $30 FOR THE FIRST $1,000)

RECEIVED
OCT 05 2012
Dept. of Building Inspections
City of Portland Maine

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

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

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

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

Applicant signature: __John Hale__   Date: __10-4-12__

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20 Thomas Dr
WESTBROOK, ME 04092-3824
(207) 842 6440
FAX: (207) 842 6439
www.simplexgrinnell.com

SimplexGrinnell Material List (THIS IS NOT A PRICE QUOTATION)

TO:
CM Waterfront Properties LLC
250 COMMERCIAL ST
PORTLAND, ME 04101
Attn: Charlie Poole
(207) 772-8160 EXT(____) Fax:

Project: 250 Commercial Street
Customer Reference: Fire Alarm Upgrade Phase I
SimplexGrinnell Reference: 147421626
Date: 09/24/2012
Page 1 of 2

QUANTITY	MODEL NUMBER	DESCRIPTION
	Fire Alarm - Charlie Poole	
	Fire Alarm - Charlie Poole	
	Fire Alarm Control Panel	
1	4010-9401	4010ES FACP 120V RED
1	4010-9920	8 ZONE IDC MODULE CLASS B
1	4010-9912	SERIAL DACT
1	ETHEDROP	ETHERNET-NETWORK COMPATIBLE
2	2081-9274	BATTERY 10AH
1	DPSVC	DP SVCS (PERMITS/FEES/BONDS)
	Sprinkler Monitoring	
3	4090-9001	SUPERVISED IAM
3	4090-9810	BRACKET, IAM
3	4090-9806	COVER-ADDRESS MODULE FLUSH
	Professional Services - Fire Alarm - Charlie Poole	
4	DSGN LAB	DESIGN LABOR
2	PM LAB	PROJECT/CONSTRUCTION MGMT
	Technical Services - Fire Alarm - Charlie Poole	
8	TECH LAB	TECHNICAL SERVICE
16	COMM LAB	Commissioning Labor

Comments

Scope of Work:

SimplexGrinnell is pleased to provide this proposal to replace the existing Mircom Series 1000 Conventional Fire Alarm System with a new Addressable 4010ES Fire Alarm System at 250 Commercial Street, Portland, ME in an effort to meet the City of Portland requirements.

Proposal is per Action Plan as presented and approved by the City of Portland Fire Dept on 08/22/12. Proposal includes Phase I of the Action Plan only. Phases II & III to be formally proposed in spring of 2013 and spring of 2014. Work to be implemented in summer of 2013 and summer of 2014 respectively.

Proposal is based on counts and material proposed. Any variation to the proposed bill of materials is subject to cost increase or decrease depending on changes.

This quotation is provided in conjunction with separate proposal direct to In-finiti Fermentation & Distillery for the proposed fire alarm work in their tenant space within 250 Commercial Street,

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SimplexGrinnell Material List (THIS IS NOT A PRICE QUOTATION)

Comments (continued)

Portland, ME.

Proposal includes furnishing and installing the new 4010ES fire alarm control panel & furnishing the sprinkler monitoring peripheral equipment as proposed. The sprinkler monitoring devices to be installed by Folsom Electric under separate In-finiti Fermentation agreement.

Please note that any additional equipment that may be required per the City of Portland Fire Dept. will need to be treated separately.

SimplexGrinnell is responsible for panel terminations, system programming, test and overall system commission. All fire permit requirements are also included in this proposal.

Proposal includes 1 hour customer training at time of system commission for the end user.

Technical Labor & Testing is based on being performed between 8AM and 5PM, Monday-Friday excluding holidays.

Any pre-existing conditions not known at time of proposal or seen at time of site survey that might inhibit the installation of system proposed would need to be treated separately.

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20 Thomas Dr
WESTBROOK, ME 04092-3824
(207) 842 6440
FAX: (207) 842 6439
www.simplexgrinnell.com

SimplexGrinnell Material List (THIS IS NOT A PRICE QUOTATION)

TO:
In-finiti Fermentation & Disti
250 Commercial Street
PORTLAND, ME 04101
Attn: Eric Michaud
(207) 756-4454 EXT(____) Fax:

Project: In-finiti Fermentation & Dist.
Customer Reference: Fire Alarm & Intrusion Security
SimplexGrinnell Reference: 966674301
Date: 09/24/2012
Page 1 of 3

QUANTITY	MODEL NUMBER	DESCRIPTION
	Fire Alarm	
	Fire Alarm - Eric Michaud	
	Pull Stations	
5	4099-9001	MANUAL STATION - SINGLE ACTION
	Ansul System Monitoring	
1	4090-9001	SUPERVISED IAM
1	4090-9810	BRACKET, IAM
1	4090-9806	COVER-ADDRESS MODULE FLUSH
	Notification Devices	
8	4906-9127	HORN/STROBE MC RED
1	4906-9131	WP MC AV NON-ADDR WALL MT RED
1	4905-9828	WP AV/VO 1.5IN BACK BOX RED
4	4906-9101	STROBE MC RED
	Duct Smoke Sensors	
2	4098-9756	DUCT SENSOR HOUSING-4-WIRE
2	2098-9806	REMOTE TEST STATION
2	2098-9798	SAMPLING TUBE 73 IN
	Professional Services - Fire Alarm	
	DSGN LAB	DESIGN LABOR
	PM LAB	PROJECT/CONSTRUCTION MGMT
	Technical Services - Fire Alarm	
	TECH LAB	TECHNICAL SERVICE
	COMM LAB	Commissioning Labor
	Intrusion Detection	
	Intrusion Detection	
	DSC Intrusion Equipment	
	Security Intrusion Panel	
1	PC4020NK SIMPLEX	MAXSYS CTL PNL 128 ZONES
1	PC4401	MAX SERIAL OUTPUT & PC-LINK
1	PCLINK-SCW	LONG CABLE FOR DLS PROGRAMMER
1	TP1640	16VAC/40VA-W/AL624,AL200UL,SMP
1	BD7-12	12V 7AH SEALED LEAD ACID
1	3009-9807	ALLEN-TEL AT635C1 RJ31X
1	D166	RJ31X PHONE JACK
	Keypads	
2	LCD-4501	MAX LCD KEYPAD, ENGLISH
	Door Contacts	

Fire, Security, Communications, Sales & Service
Offices & Representatives in Principal Cities throughout North America

SimplexGrinnell
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Project: In-finiti Fermentation & Dist.
Customer Reference: Fire Alarm & Intrusion Security
SimplexGrinnell Reference: 966674301
Date: 09/24/2012
Page 2 of 3

SimplexGrinnell Material List (THIS IS NOT A PRICE QUOTATION)

QUANTITY	MODEL NUMBER	DESCRIPTION
8	AMP-701	EXTERNAL CONTACT INPUT MODULE
8	1078-G-SS	REC STEEL DOOR CONT W/WIRE LEA
	Motion Sensors	
6	AMB-300	ADDR PIR MOTION DET W/TAMP
6	BV-L2	LONG RANGE PIR LENS
	Professional Services - Intrusion Detection	
	DSGN LAB	DESIGN LABOR
	PM LAB	PROJECT/CONSTRUCTION MGMT
	Technical Services - Intrusion Detection	
	TECH LAB	TECHNICAL SERVICE
	COMM LAB	COMMISSIONING LABOR

Comments

Scope of Work:

SimplexGrinnell is pleased to provide this proposal in conjunction with the replacement of the existing Mircom Series 1000 Conventional Fire Alarm System at 250 Commercial Street, Portland, ME in an effort to meet the City of Portland requirements.

Proposal is Design Build per plans provided by E. Michaud for new Brewery/Distillery and C. Poole (A1 & D1 05/26/10) and is only applicable with the supplemental proposal as provided to Charlie Poole for FACP replacement. Proposal is for the In-finiti Fermentation and Distillery proposed construction area.
Design does not include any fire alarm work for freight elevator. Design is based on fully sprinklered system in place throughout the tenant space.

Proposal also includes a separate Intrusion Security System by DSC.

Proposal is based on counts and material proposed. Any variation to the proposed bill of materials by the City of Portland FD (AHJ) is subject to cost increase or decrease depending on changes.
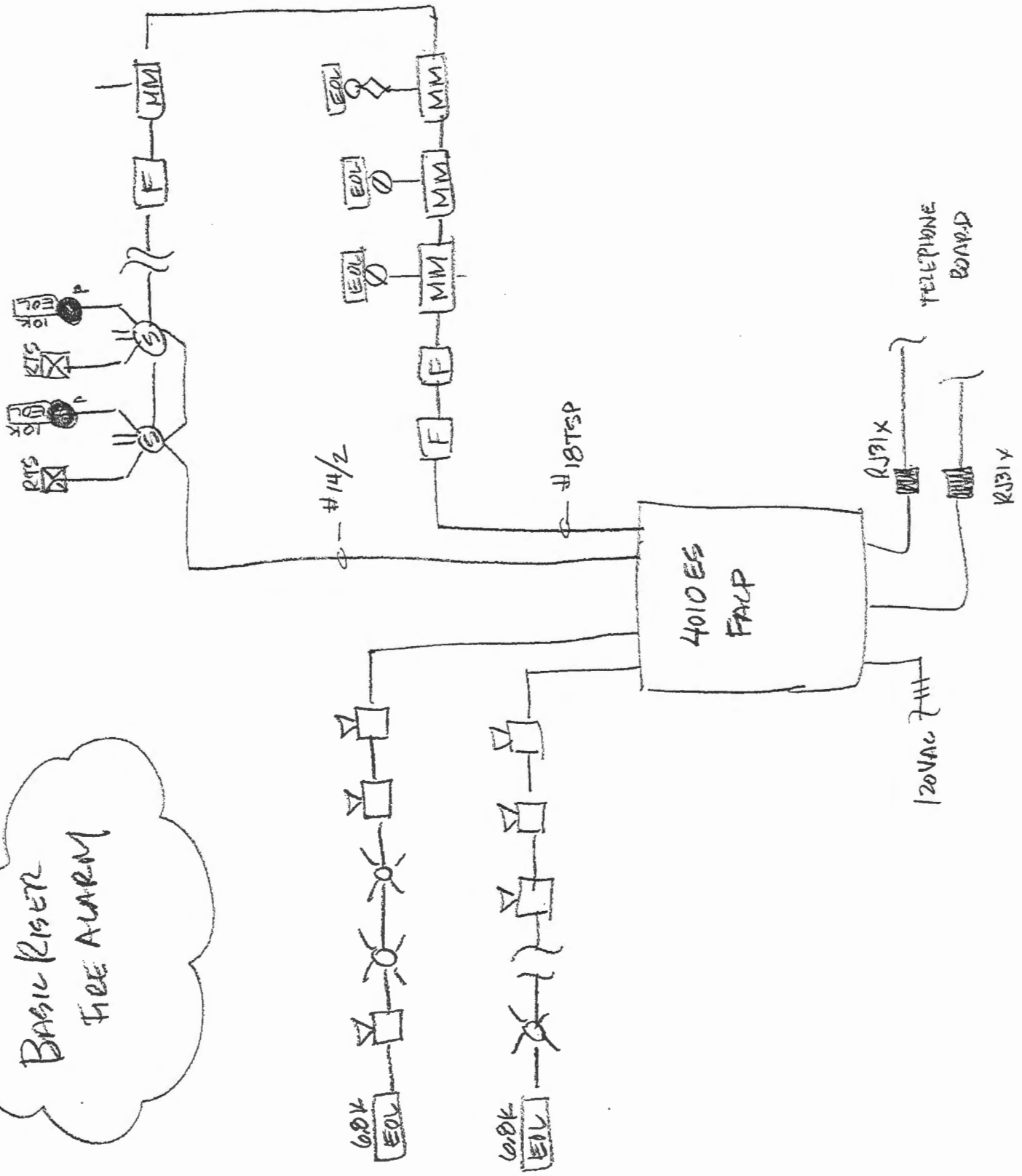
This quotation is based on the acceptance of delivery of all equipment within one year.

This quotation does not include back boxes or adapter plates for surface mount devices unless so listed.

Wire /Cable: New fire alarm cable to be furnished by Don Michaud subcontractor Folsom Electric. Upon written request, Simplex will provide written instruction regarding the appropriate wire/cable for installation of the equipment/system(s) identified in this quotation. Simplex shall not be responsible for problems or damages resulting from the use of any wire/cable other than that which has been identified in writing by Simplex for a specific application.

All fire alarm & security peripheral installation and cabling requirements are the responsibility of Folsom Electric unless otherwise agreed upon in writing with SimplexGrinnell. SimplexGrinnell is responsible for system programming, test (with Folsom Electric assistance) and overall system commission.

BASIC RISER
FIRE ALARM

4010 ES
FACP

MM   F   ~

MM   MM   MM   F   F

EOL   EOL   EOL

S   S

#14/2

#18TSP

RJ31x

RJ31x

TELEPHONE BOARD

120VAC

EOL 68K

EOL 68K

SimplexGrinnell
BE SAFE.

SimplexGrinnell Material List (THIS IS NOT A PRICE QUOTATION)

Comments (continued)

Fire alarm permit included in this proposal. Electrical permit to be furnished by Folsom Electric.

Technical Labor & Testing is based on being performed between 8AM and 5PM, Monday-Friday excluding holidays.

Any pre-existing conditions not known at time of proposal or seen at time of site survey that might inhibit the installation of system proposed would need to be treated separately.

$\boldsymbol{\mathsf{S}}$.Simplex

4100 ⓔ 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 compact flash memory for on-site 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
- Available with InfoAlarm™ Command Center expanded content user interface (see data sheet S4100-0045)
- 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:
- Building Network Interface Module (BNIC) for Ethernet connectivity options (see data sheet S4100-0061)
- TrueAlert® addressable notification appliance power supplies with three, 3 A SLC outputs
- Additional IDNet and MAPNET II® addressable device 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)
- Fire Alarm Network Interfaces, DACTs, city connections, and up to five (5) RS-232 ports for printers and terminals
- IP communicator compatibility
- Alarm relays, auxiliary relays, additional power supplies, IDC modules, NAC expansion modules
- Service modems, VESDA® Air Aspiration Systems interface, ASHRAE® BACnet® Interface, TCP/IP Bridges
- LED/switch modules and panel mount printers
- Emergency communications systems (ECS) equipment; 8 channel digital audio or 2 channel analog audio
- Battery brackets for seismic area protection (see page 2)

Compatible with Simplex® remotely located:
- 4009 IDNet NAC Extenders, up to ten per IDNet SLC
- TrueAlert Addressable Controllers

4100ES and upgrade kits are UL 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
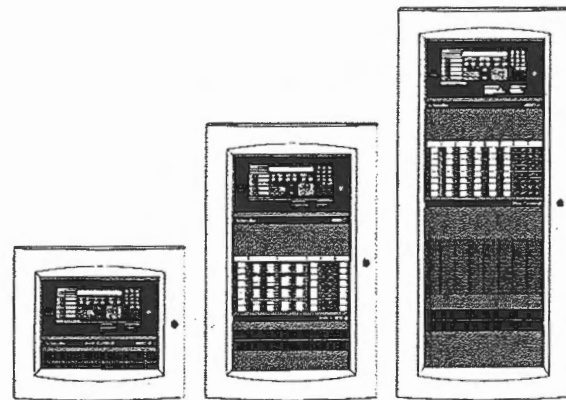
4100ES Cabinets are Available with
One, Two or Three Bays

Software Feature Summary

CPU provides dual configuration programs:
- Two programs allow for optimal system protection and commissioning efficiency 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
- *AND*, firmware enhancements are made via software downloads to the on-board flash memory

Introduction

4100ES 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 compact flash memory archiving provides secure on-site system information storage of electronic job configuration files to meet NFPA 72® (*National Fire Alarm Code*®) requirements.

Modular design. A wide variety of functional modules are available to meet specific system requirements. Selections allow panels to be configured for either Stand-Alone or Networked fire control operation. InfoAlarm Command Center options provide convenient expanded display content (detailed on data sheet S4100-0045).
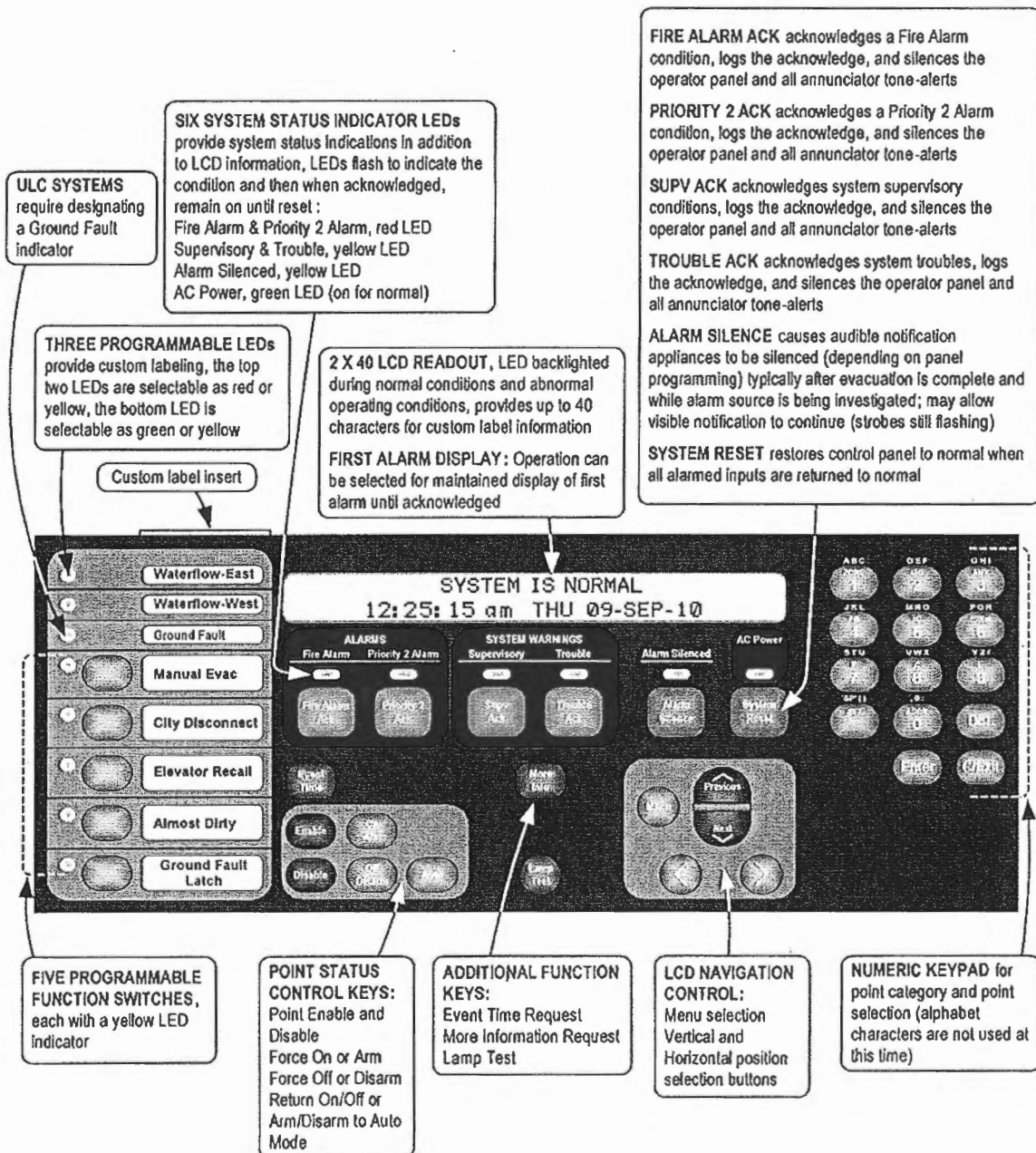
S4100-0031-17

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

FIRE ALARM ACK acknowledges a Fire Alarm condition, logs the acknowledge, and silences the operator panel and all annunciator tone-alerts

PRIORITY 2 ACK acknowledges a Priority 2 Alarm condition, logs the acknowledge, and silences the operator panel and all annunciator tone-alerts

SUPV ACK acknowledges system supervisory conditions, logs the acknowledge, and silences the operator panel and all annunciator tone-alerts

TROUBLE ACK acknowledges system troubles, logs the acknowledge, and silences the operator panel and all annunciator tone-alerts

ALARM SILENCE causes audible notification appliances to be silenced (depending on panel programming) typically after evacuation is complete and while alarm source is being investigated; may allow visible notification to continue (strobes still flashing)

SYSTEM RESET restores control panel to normal when all alarmed inputs are returned to normal

SIX SYSTEM STATUS INDICATOR LEDs provide system status indications in addition to LCD information, LEDs flash to indicate the condition and then when acknowledged, remain on until reset :
Fire Alarm & Priority 2 Alarm, red LED
Supervisory & Trouble, yellow LED
Alarm Silenced, yellow LED
AC Power, green LED (on for normal)

ULC SYSTEMS require designating a Ground Fault indicator

THREE PROGRAMMABLE LEDs provide custom labeling, the top two LEDs are selectable as red or yellow, the bottom LED is selectable as green or yellow

Custom label insert

2 X 40 LCD READOUT, LED backlighted during normal conditions and abnormal operating conditions, provides up to 40 characters for custom label information

FIRST ALARM DISPLAY: Operation can be selected for maintained display of first alarm until acknowledged

FIVE PROGRAMMABLE FUNCTION SWITCHES, each with a yellow LED indicator

POINT STATUS CONTROL KEYS:
Point Enable and Disable
Force On or Arm
Force Off or Disarm
Return On/Off or Arm/Disarm to Auto Mode

ADDITIONAL FUNCTION KEYS:
Event Time Request
More Information Request
Lamp Test

LCD NAVIGATION CONTROL:
Menu selection
Vertical and Horizontal position selection buttons

NUMERIC KEYPAD for point category and point selection (alphabet characters are not used at this time)

S4100-0031-17

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 for the 4100-6014 Network Interface Board with media modules, and secondarily for the 4100-6038 Dual RS-232 Board (4100-6038 is required for 2120 System connections)

System Power Supply: (see page 8 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 Type and Listing			Description	Supv.	Alarm
4100-9111	120 VAC Input		UL	4100ES 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					
4100-9211	220-240 VAC Input		UL			
4100-9131	120 VAC Input		UL	4100ES 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	120 VAC, Canadian	ULC			
4100-9133	French					
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 4100ES, 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)					
4100-2303	Legacy Module Stabilizer Bracket, used when expansion bays have legacy slot style modules					

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 4100ES user interface door assembly with Ethernet connection
4100-7152	512 pt 4100	Same as 4190-7150 plus includes a Universal Power Supply
4100-7158	1000 pt 4100 (4100+) or 4100ES	New Master Controller with Ethernet Connection Upgrade Kit; uses existing 4100ES user interface; for 4100+ without LCD
4100-2301	Expansion Bay Upgrade Kit for mounting 4100ES style (4" x 5" modules) in existing 4100 style panels	

Master Controller Upgrades for Existing 4020 Series Fire Alarm Control Panel

Model	Description
4100-9833	4020 Master Controller Upgrade with LCD & operator interface assembly; mounts as an adjunct panel; single bay cabinet with locking glass door and retainer

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

Module Selection Information *(Continued)*

Miscellaneous Accessories

Model	Description
4100-1279	Single blank 2" display cover; 4100-2302 provides a single plate for a full bay
4100-9856	4100ES Canadian French Appliqué Kit; Simplex, 4100ES, Controle Incendie
4100-9857	4100ES English Appliqué Kit, English; Simplex, 4100ES, Fire Control
4100-9858	4100ES InfoAlarm Remote Display English Appliqué Kit; Simplex, Operator Interface, 4100ES
4100-9859	4100ES InfoAlarm Remote Display Canadian French Appliqué Kit; Simplex, Interface de l'operateur, 4100ES
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 UUKL listing
4100-6034	Tamper Switch, one per cabinet assembly if required; m onitors 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 IAM
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^2), 2-1/2" L x 1-3/8" W x 1" H (64 mm x 35 mm x 25 mm)

Note: 4100ES Appliqués are included with 4100ES Upgrade and Retrofit Kit s for mounting 4100ES in 4100, 2120, 2001, and Autocall back boxes so that upgrades can be easily identified as 4100ES. 4100ES Appliqué Kits are available for applications such as to update Remote InfoAlarm Displays connected to a panel that was upgraded to 4100ES or for an existing 4100U when the New Master Controller is upgraded to 4100ES and only a software upgrade is required .

Addressable Interface Modules (refer to location reference on pages 9 and 10)

Model	Description		Supv.	Alarm
4100-3101	IDNet Module, 250 point capacity	With 250 IDNet devices, add	200 mA	250 mA
4100-3104	IDNet Module, 127 point capacity	With 127 IDNet devices, add	102 mA	127 mA
4100-3105	IDNet Module, 64 point capacity	With 64 IDNet devices, add	51 mA	64 mA
IDNet Modules, Specifications for each capacity;		Module without devices	75 mA	115 mA
Module size = 1 Block		Loading per IDNet device	0.8 mA	1 mA

Model	Description		Supv.	Alarm
4100-3102	MAPNET II Module, 127 point capacity, add device s separately; Module size = 2 Slots; Loading per MAPNET II device = 1.7 mA	Module without devices	255 mA	275 mA
		Fully loaded module, total	471 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

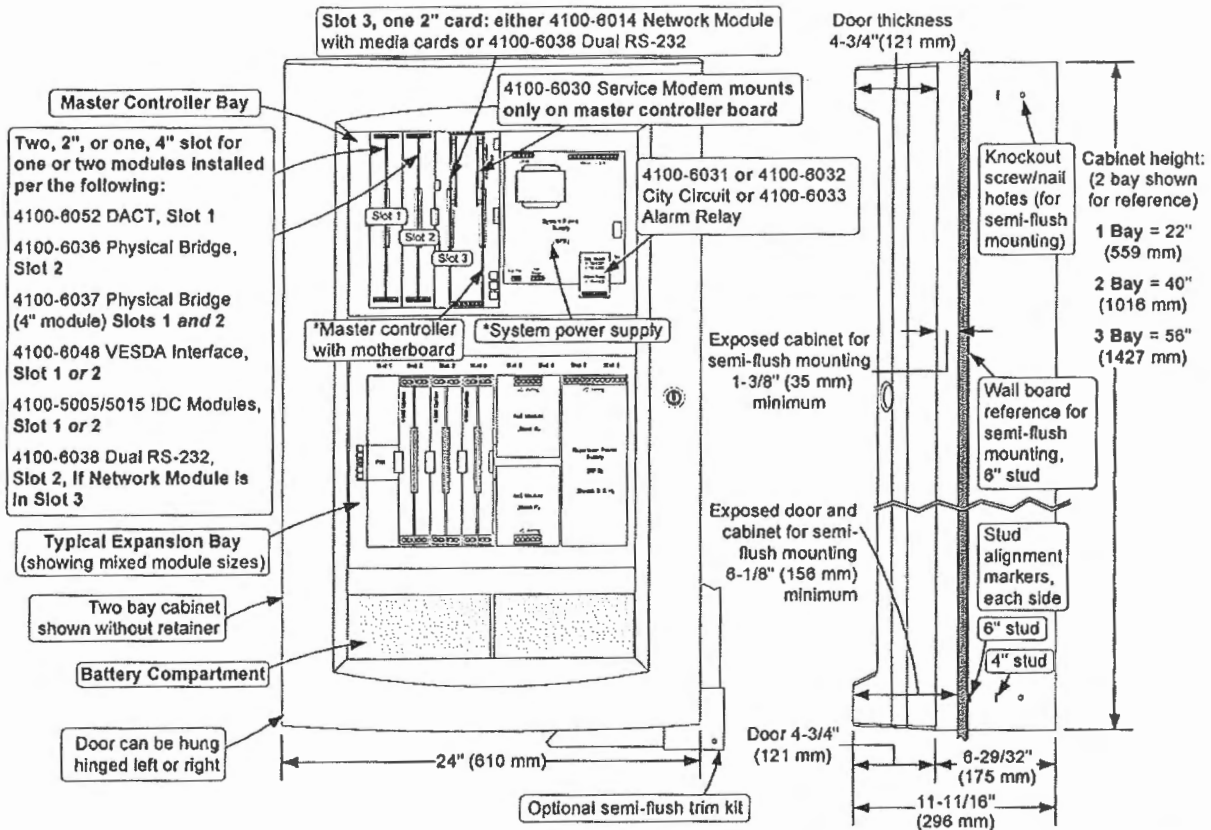### Relay Modules; Nonpower-limited (for mounting in expansion bay only, refer to location reference on page s 9 and 10)

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:
1. To determine total supervisory current, add currents of modules in panel to base system value and all external loads powered by panel power supplies.
2. 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.

S4100-0031-17

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

Slot 3, one 2" card: either 4100-6014 Network Module with media cards or 4100-6038 Dual RS-232

Master Controller Bay

4100-6030 Service Modem mounts only on master controller board

Two, 2", or one, 4" slot for one or two modules installed per the following:

4100-6052 DACT, Slot 1

4100-6036 Physical Bridge, Slot 2

4100-6037 Physical Bridge (4" module) Slots 1 and 2

4100-6048 VESDA Interface, Slot 1 or 2

4100-5005/5015 IDC Modules, Slot 1 or 2

4100-6038 Dual RS-232, Slot 2, If Network Module is In Slot 3

4100-6031 or 4100-6032 City Circuit or 4100-6033 Alarm Relay

*Master controller with motherboard

*System power supply

Typical Expansion Bay (showing mixed module sizes)

Two bay cabinet shown without retainer

Battery Compartment

Door can be hung hinged left or right

24" (610 mm)

Optional semi-flush trim kit

Door thickness 4-3/4"(121 mm)

Knockout screw/nail holes (for semi-flush mounting)

Exposed cabinet for semi-flush mounting 1-3/8" (35 mm) minimum

Wall board reference for semi-flush mounting, 6" stud

Exposed door and cabinet for semi-flush mounting 6-1/8" (156 mm) minimum

Stud alignment markers, each side

6" stud

4" stud

Door 4-3/4" (121 mm)

6-29/32" (175 mm)

11-11/16" (296 mm)

Cabinet height: (2 bay shown for reference)

1 Bay = 22" (559 mm)

2 Bay = 40" (1016 mm)

3 Bay = 56" (1427 mm)

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.

S4100-0031-17

✌.Simplex

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

4100 ⓔⓢ Fire Control Panels

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

Features

4100ES 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 platinum or red
- Doors are glass with modular or solid internal retainers
- Models are available with box and door combined for single package shipping, or packaged separately
- Enclosures are NEMA 1 rated
- Refer to individual 4100ES data sheets for product application listings (see list on page 2)

Door and retainer selection is coordinated with cabinet function:

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

4100ES Enclosure details:

- Latching retainers 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
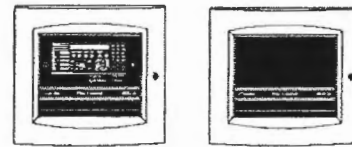- Knockout screw/nail holes are supplied for semi-flush mounting

Upright cabinet rack packaging reference:

- For use with Bud Industries Inc. special cabinet rack model number 45964
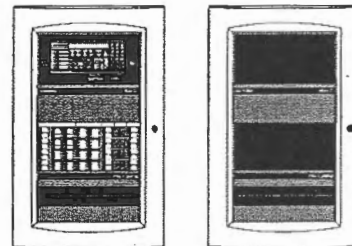- Refer to page 2 for cabinet rack listing

4009 TPS (TrueAlert® Addressable Power Supply) cabinet assemblies:

- Cabinet assemblies are available for remote mounting of the TrueAlert addressable power supply (TPS)
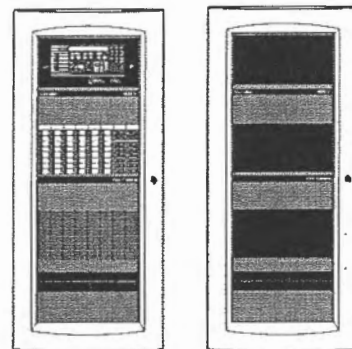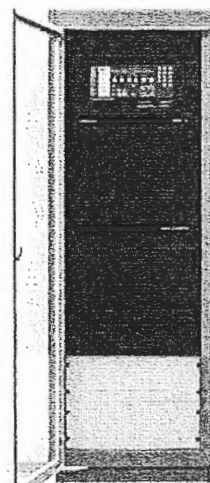- Refer to page 2 for listings information
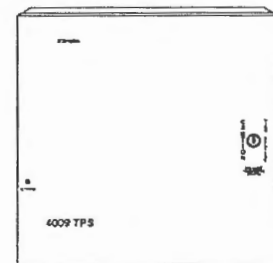

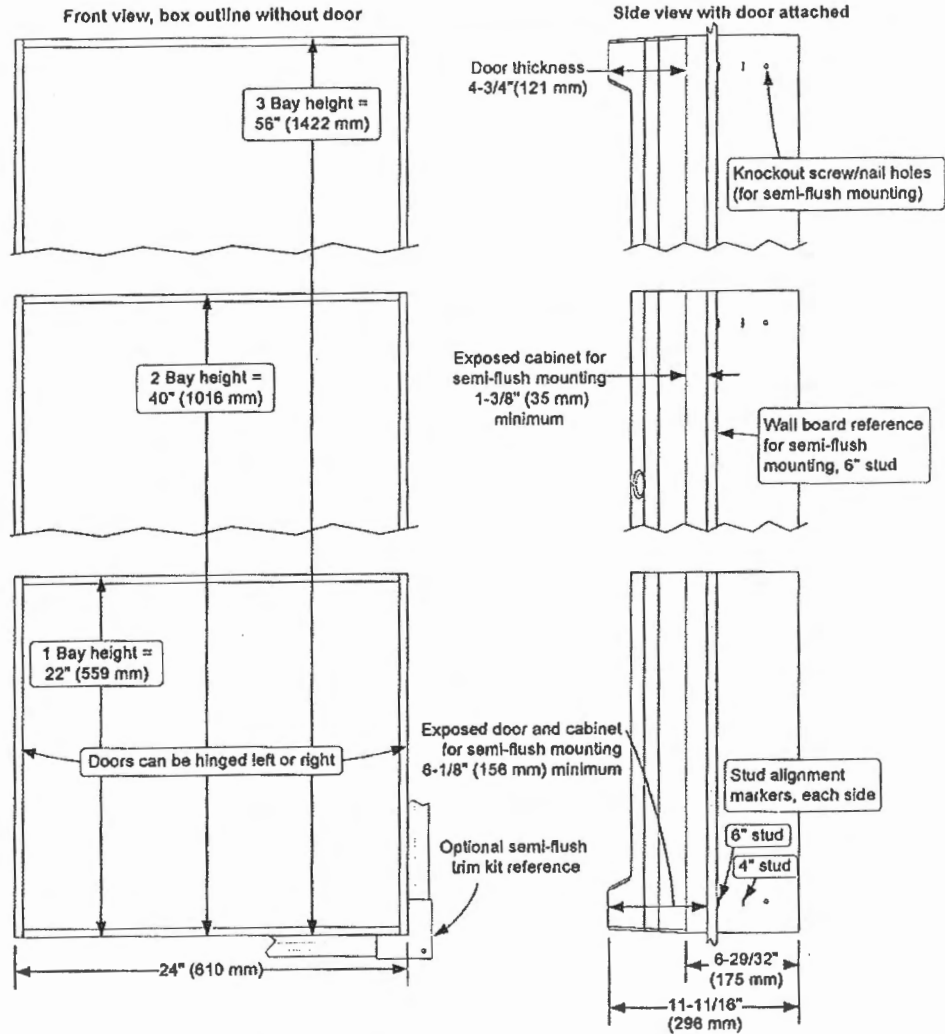4100ES One Bay Cabinets

4100ES Two Bay Cabinets

4100ES Three Bay Cabinets
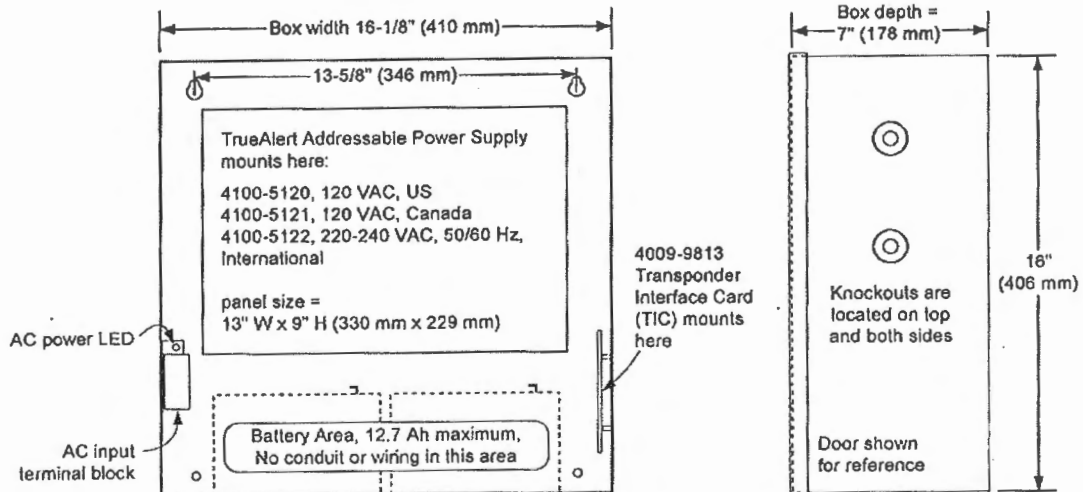
Cabinet Rack Enclosure
(shown with door open)

4009 TPS Cabinet
Assembly (not to scale)

Wall Mounted Enclosure Installation Reference

Front view, box outline without door

Side view with door attached

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.

3 Bay height = 56" (1422 mm)

2 Bay height = 40" (1016 mm)

1 Bay height = 22" (559 mm)

Doors can be hinged left or right

24" (610 mm)

Door thickness 4-3/4"(121 mm)

Knockout screw/nail holes (for semi-flush mounting)

Exposed cabinet for semi-flush mounting 1-3/8" (35 mm) minimum

Wall board reference for semi-flush mounting, 6" stud

Exposed door and cabinet for semi-flush mounting 6-1/8" (156 mm) minimum

Optional semi-flush trim kit reference

Stud alignment markers, each side

6" stud

4" stud

6-29/32" (175 mm)

11-11/16" (296 mm)

4009 TPS Cabinet Installation Reference

Box width 16-1/8" (410 mm)

13-5/8" (346 mm)

Box depth = 7" (178 mm)

TrueAlert Addressable Power Supply mounts here:

4100-5120, 120 VAC, US
4100-5121, 120 VAC, Canada
4100-5122, 220-240 VAC, 50/60 Hz, International

panel size = 13" W x 9" H (330 mm x 229 mm)

4009-9813 Transponder Interface Card (TIC) mounts here

Knockouts are located on top and both sides

16" (406 mm)

AC power LED

AC input terminal block

Battery Area, 12.7 Ah maximum, No conduit or wiring in this area

Door shown for reference

S4100-0037-9

฿.Simplex

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

Panel Mounted LED/Switch and LED Modules,
LED/Switch Controllers, and Panel Mounted Printer

Features

Panel mounted annunciation modules for use with 4100U/4100ES Fire Alarm Control Panels, Remote Annunciators, and Network Display Units (NDU):

- Modules mount on front of panel bay providing convenient access and high visibility
- Panel monitors switches for user input and controls LED indicators to annunciate function status
- Compact 64 LED/64 switch controller modules mount on back of LED/switch modules

LED/Switch Modules:

- Raised momentary switches provide tactile feedback
- Alternate action operation provides on/off functions
- High intensity LEDs provide clear status annunciation
- Slide-in labels provide custom on-site labeling (label kit is ordered separately)

8 LED, 8 Switch Modules:

- One status LED per switch
- Available as all red LEDs or all yellow LEDs

16 LED, 8 Switch Modules:

- Two status LEDs per switch
- Available with two LEDs per switch as: red/yellow, yellow/yellow, red/green, or green/yellow

16 LED, 16 Switch Modules:

- One status LED per switch in 2" (51 mm) module
- Available as all red LEDs, or 8 red and 8 yellow
- Two configurations are available, one with pluggable LEDs, refer to illustrations on page 2 and product selection details on page 4

24 LED, 24 Switch Modules:

- Double slot module with one red status LED per switch

### HOA (Hand-Off-Auto) Switch Modules:

- Eight controls in a double slot module, each control has three switches for status selection and one LED per switch position
- Switch selection is On/Hand, Off, and Auto

Available with three HOA Module LED Options:

- On/Hand (green LED), Off (red LED) and Auto (green LED)
- On/Hand (green LED), Off (red LED) and Auto (white LED) to comply with International Building Code (IBC) requirements
- On/Hand (green LED), Off (yellow LED) and Auto (green LED) for applications requiring no red LEDs
- Available with or without switch buttons labels (On, Off, Auto)

LED Modules with 8 or 16 pluggable LEDs:

- 8 LED Module has red LEDs, 16 LED module has 8 red with 8 yellow
- Red, yellow, green, or blue LEDs are available in packages of eight (8) to change color on-site per application requirement (ordered separately)
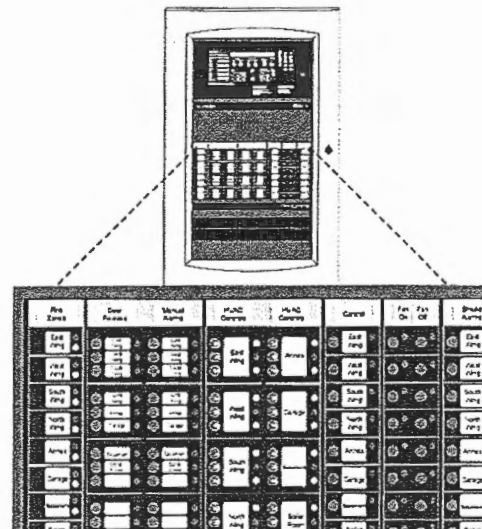
4100ES 2-Bay Fire Alarm Control Panel
with Sample of Available LED/Switch Modules

Features *(Continued)*

24 Point I/O Module for external connections:

- Each point is selectable as either a switch input (momentary or maintained) or lamp/relay driver output
- Multiple switch monitoring modes are available

Panel mounted printer (see pages 6 and 7 for details):

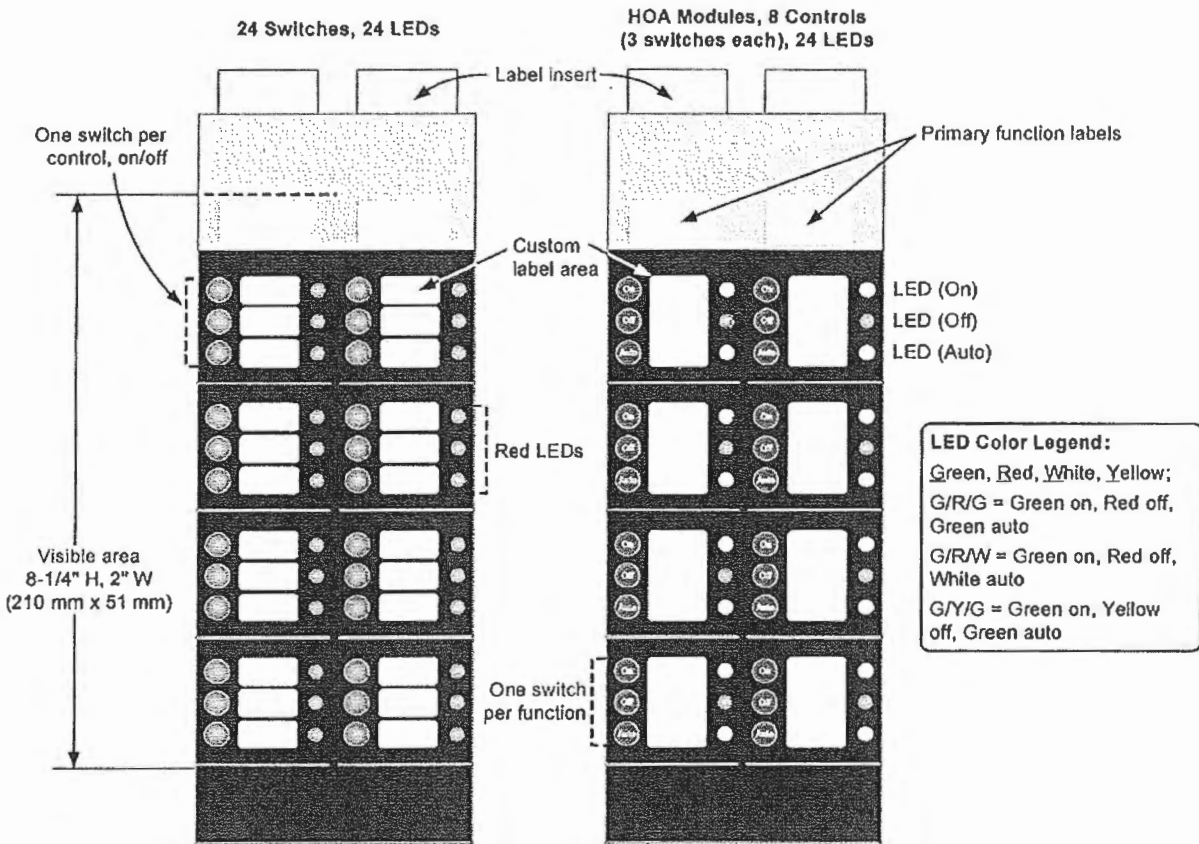- Records system events and provides 20 visible lines

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

Description

Annunciation Options. 4100U/4100ES fire alarm panels support a variety of switch input and LED status indicators to complement the information and controls available at the operator interface. These modules provide a convenient interface efficiently packaged onto the front panel space of the cabinet bay. Additionally, the panel mounted printer can conveniently record system status without requiring a separately located printer.

* Refer to additional listing details on page 4. 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 7165-0026:251 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. 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

24 Switches, 24 LEDs

HOA Modules, 8 Controls (3 switches each), 24 LEDs

Label insert

One switch per control, on/off

Primary function labels

Custom label area

LED (On)
LED (Off)
LED (Auto)

LED Color Legend:

Green, Red, White, Yellow;

G/R/G = Green on, Red off, Green auto

G/R/W = Green on, Red off, White auto

G/Y/G = Green on, Yellow off, Green auto

Red LEDs

Visible area
8-1/4" H, 2" W
(210 mm x 51 mm)

One switch per function

4100-1287

HOA Modules, G/R/G LEDs:
4100-1286, with labeled switches as shown
4100-1295, with unlabeled switches (not shown)

HOA Modules for IBC Applications, G/R/W LEDs:
4100-1275, with labeled switches as shown
4100-1299, with unlabeled switches (not shown)

HOA Modules, G/Y/G LEDs:
4100-1302, with labeled switches as shown
4100-1301, with unlabeled switches (not shown)

S4100-0032-10

LED/Switch Controller Modules and Accessories

Model	Description	
4100-1288	64 LED/64 Switch Controller Module with mounting plate; controls up to 64 LEDs and interfaces to up to 64 switches; mounts behind the LED/switch modules and has provisions for one 4100-1289 Controller Module	**NOTE:** LED/switch controllers and their connected modules must be in the same bay.
4100-1289	64 LED/64 Switch Controller Module without mounting plate; mounts on extra space of 4100-1288; controls an additional 64 LEDs and 64 switches	
4100-0636	Harness Kit, Power and Communications	One of each is required per 4100-1288 that is located in the same bay as two Flex-35/50 amplifiers and an SPS
4100-0641	Harness Kit, 26 Position Flex Cable, 14-1/2" (368 mm) long	
4100-1290	24 Point I/O Module for external connections, select each point as either input or output; 2" (51 mm) wide, 1 Slot	
4100-1294	LED/Switch Module Slide-in Labels, required when LED/switch or LED only modules are present ; order one per cabinet	
4100-1279	Single blank 2" display cover; order as required (8 fill a bay front); two maximum in a row between LED/switch modules	

Panel Mounted Printer (refer to pages 6 and 7 for printer details)

Model	Description
4100-1293	Panel Mount Thermal Printhead Printer, supplied with one roll of paper
4190-9803	Replacement Paper for 4100-1293 Printer, one roll

LED/ Switch Modules and Controllers Specifications

(For additional LED/Switch Module information, refer to Installation Instructions 574-843)

64 LED/64 Switch Controller Modules (4100-1288 and 4100-1289)

Input Voltage	19 to 33 VDC, from control panel
Current, No LEDs On	20 mA @ 24 VDC
Current, All 64 LEDs On	210 mA @ 24 VDC (approx. 3 mA/LED)
Mounting Reference	Bracket of 4100-1288 attaches to the back of the LED/switch modules
Controllers per Bay	Maximum of two per bay; for control of LED/switch modules within that bay only
Bay Location Reference	Slots 1 & 2 or Slots 3 & 4; mounts onto the back of the LED/switch modules
Clearance Behind Controller Module	Space accepts low profile 4100U/4100ES modules only

24 Point I/O Module (4100-1290)

Module Current	Supervisory = 34 mA; Alarm = 75 mA (add output currents separately)
Switch Input Details	Momentary or maintained, 2 or 3 position; max. distance is 2500 ft (762 m) or 65 Ω
Output Current	150 mA @ 24 VDC per point; inrush current is limited for use with incandescent bulbs
Output Details	Diode suppress relay loads at the coil; max. distance is 600 ft (183 m) or 2 Ω

General Specifications

Operating Temperature Range	32° to 120°F (0° to 49° C)
Operating Humidity Range	Up to 93% RH, non-condensing @ 90° F (32° C) maximum

Additional Data Sheet Reference

Subject	Data Sheet	Subject	Data Sheet
4100ES Basic Panel Modules and Accessories	S4100-0031	Network Display Unit (NDU)	S4100-0036
4100ES Audio/Phone Modules	S4100-0034	Enclosure Reference	S4100-0037
MINIPLEX® Transponders	S4100-0035	Remote Annunciators	S4100-0038

Printer Specifications

(For additional printer information, refer to Installation Instructions 579-249)

Electrical & Communications

Input Voltage		19 to 33 VDC, from control panel
Current	Standby	125 mA @ 24 VDC
	Printing	800 mA @ 24 VDC
Communications		RS-232, 9600 baud, from control panel RS-232 module

Print Characteristics

Print Format	Fixed thermal printhead producing black characters
Characters	11 x 28 dot matrix; alarm information printed in bold
Paper Format	40 columns; 6 lines per inch; 20 lines visible; paper is wound onto top take-up reel, paper can be manually unwound from take-up reel and rewound using Feed switch
Paper Speed	1.33 in/sec maximum
Print Speed	312 cps
Sound Output	55 dB maximum, with cabinet door open

Paper (one roll included)

Type and Size	Thermal; 2.35" wide, 160 ft long (60 mm x 49 m)
Replacement Paper	4190-9803, 1 roll

Mounting Specifications

Bay Location Reference	Requires 3 expansion bay slots, can be located as required
Clearance Behind Printer	Space accepts low profile 4100U/4100ES modules only

Environmental Specifications

Operating Temperature Range	32° to 120°F (0° to 49° C)
Operating Humidity Range	Up to 93% RH, non-condensing @ 90° F (32° C) maximum