CITY OF PORTLAND
BUILDING PERMIT

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

For installation at
1101 WESTBROOK ST
NORTHEAST AIRMOTIVE HANGER

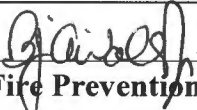**Job ID: 2012-07-4508-FAFS**

CBL: 207- B-001-002

has permission to install 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 Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

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

58

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

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

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

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

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

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

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

Final Fire

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

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

Director of Planning and Urban Development
Jeff Levine

Job ID: <u>2012-07-4508-FAFS</u>
<u>install master box fire alarm system</u>

For installation at:
<u>1101 WESTBROOK ST UNIT</u>
<u>NORTHEAST AIRMOTIVE HANGER</u>

CBL: <u>207- B-001-002</u>

Conditions of Approval:

Fire

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;
>
> NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment* (2009 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.

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 and drill switch is required. AES Zones shall be:

1. Water flow
2. City Disconnect: Water flow
3. Pull stations and detectors
4. City Disconnect: Pull stations and detectors
5. Not assigned
6. Not assigned
7. Not assigned
8. AES tamper switch

Master Box Approval

Applicant: Northeast Airmotive

App Phone #: 207-774-6318

Building Name: Northeast Airmotive Hanger

Building Address: 1101 Westbrook St

Occupancy: Jetport hanger and offices
Assembly OL>300, 20 unit apartment building, etc.

Emergency Contact: Mark Goodwin

Emergency phone #: 207-318-2369

Date of Application: 7/16/12

Billing Address: Northeast Airmotive
1101 Westbrook St
Portland, ME 04102

Comments:

Applicant completes red box and submits with Fire Alarm Permit

1

FIRE PREVENTION: ✔ Approved ☐ Denied

_7_ / _31_ / _12_
Date

BjaWelej.
Fire Prevention Officer

Zone 1: Sprinkler waterflow

Zone 3: Pulls and detectors

Zone 5: Unassigned

Zone 7: Unassigned

Zone 2: City disconnect – Sprinkler waterflow

Zone 4: City disconnect – Pulls and Detectors

Zone 6: Unassigned

Zone 8: AES Tamper switch

Modify City Box response to alarm sounding in CAD: ☐ YES ✔ NO

2

FIRE ALARM: Box #: _____

3

ELECTRICAL DIVISION: ☐ Approved ☐ Denied

Box Type: AES Radio Box / _____
New   Other

Test Date: _____/_____/_____ In Service Date: _____/_____/_____ _____
Fire Alarm Technician

AES / 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

City of Portland, Maine - Building or Use Permit Application

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

Job No: 2012-07-4508-FAFS	Date Applied: 7/23/2012	CBL: 207- B-001-002 Should be199-A-013	
Location of Construction: 1101 WESTBROOK ST UNIT 13	Owner Name: NORTHEAST AIR	Owner Address: 1011 WESTBROOK ST PORTLAND, ME 04102	Phone:
Business Name: Northeast Airmotive	Contractor Name: SIMPLEX GRINNELL	Contractor Address: 20 THOMAS DRIVE, WESTBROOK, ME 04092-3824	Phone: 239-5100
Lessee/Buyer's Name:	Phone:	Permit Type: FIRE ALARM	Zone: A-B

Past Use: Airplane hanger and office	Proposed Use: Same: Airplane hanger and office – to install fire alarm	Cost of Work: $6,000.00	CEO District:
		Fire Dept: 7/31/12 ☑ Approved w/ conditions ___ Denied ___ N/A Signature: *Bfankof.* (58)	Inspection: Use Group: Type: Signature:
Proposed Project Description:		Pedestrian Activities District (P.A.D.)	

Permit Taken By: Gayle/Brad

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: 7/25/12

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:

CERTIFICATION

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

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

_0012 07 4508 66_

should be under
_B9-A-001-93_

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: **1101 Westbrook St.** CBL: ~~201-B-001~~

Exact location: (within structure) _____

Type of occupancy(s) (NFPA & ICC): **Office, Airplane HAngar**

Building owner: **North East Airmotive**

System Designer (point of contact): Must be **IAn Gregory (SimplexGrinell)**

Designer phone: **603 (886-1100)** E-mail: **igregory@simplexGrinell.Com**

Installing contractor: **TRT Electrical / Simplex Grinell** Certificate of Fitness No: **1019**

Contractor phone: **207-239-5700** E-mail: **Johale@simplexGrinell.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: **$6000.00**

PERMIT FEE: **$80.00**
($10 PER $1,000 + $30 FOR THE FIRST $1,000)

RECEIVED

JUL 2 0 ___

Dept. of Building Inspections
City of Portland Maine

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

The designer shall be the responsible party for this application. Download a new copy of this application at

www.portlandmaine.gov/fire for every submittal. Submit all plans in electronic PDF in addition to readable 11 ½ x 17s to

the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire alarm system, a complete commissioning and acceptance test must be coordinated with all

fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with the *City of Portland Technical Standard for Signaling Systems for the Protection of*

Life and Property, available at www.portlandmaine.gov/fire .

Applicant signature: _____ Date: **7-16-12**

SimplexGrinnell
BE SAFE.

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:
TRT Electric
65 Washington Street
AUGUSTA, ME 04330
Attn: Josh Tibbetts
(207) 557-5087 EXT(____) Fax:

Project: NE Airmotive Pilatus Offices
Customer Reference: 4010ES Fire Alarm System
SimplexGrinnell Reference: 963905701
Date: 05/03/2012
Page 1 of 2

QUANTITY	MODEL NUMBER	DESCRIPTION
	4010ES Fire Alarm System	
	Fire Alarm Materials	
	Fire Alarm Control Panel	
1	ETHEDROP	ETHERNET-NETWORK COMPATIBLE
2	2081-9272	BATTERY 6.2 AH
	Knox Box	
1	4101	KNOX VAULT BLK SURFACE
	Document Cabinet	
1	SSU00685	CAB DOC STOR 12X13X2 2GB FLASH
	Pull Stations	
7	4099-9001	MANUAL STATION - SINGLE ACTION
	Smoke Sensors	
1	4098-9714	PHOTO SENSOR
1	4098-9792	SENSOR BASE
	Sprinkler Monitoring	
5	4090-9001	SUPERVISED IAM
5	4090-9810	BRACKET, IAM
5	4090-9806	COVER-ADDRESS MODULE FLUSH
	Notification Devices	
12	4906-9127	HORN/STROBE MC RED
4	4906-9101	STROBE MC RED
1	4010-9402	4010ES FACP 120V PLATINUM
1	4010-9908	4 POINT AUX RELAY MODULE
1	4010-9912	SERIAL DACT
5	4081-9004	EOL, 6.8K 1/2W
4	4081-9008	EOL, 10K 1/2W
	Professional Services - 4010ES Fire Alarm System	
	DSGN LAB	DESIGN LABOR
	Technical Services - 4010ES Fire Alarm System	
	TECH LAB	TECHNICAL SERVICE
	COMM LAB	Commissioning Labor
	AES Box ADDER	
	AES Box ADDER	
	AES Radio Master Box	
1	7788-F	8ZONES W/2.5DB RED
1	BD7-12	12V 7AH SEALED LEAD ACID
1	1640	UL TRNSFR FOR 7750-F SUBSCRIBE

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

SimplexGrinnell
BE SAFE.

Project: NE Airmotive Pilatus Offices
Customer Reference: 4010ES Fire Alarm System
SimplexGrinnell Reference: 963905701
Date: 05/03/2012
Page 2 of 2

SimplexGrinnell Material List (THIS IS NOT A PRICE QUOTATION)

QUANTITY	MODEL NUMBER	DESCRIPTION
	Technical Services - AES Box ADDER	
	COMM LAB	Commissioning Labor

Comments

Scope of Work:

SimplexGrinnell is pleased to provide this proposal for a new 4008 Fire Alarm System for the proposed Northeast Airmotive Pilatus Offices project. Proposal is Design Build per plans A2 & A11 dated 02/8/11.

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

4008 fire alarm system proposed includes the monitor modules for (5) sprinkler devices but does not include any monitoring of special hazard systems associated with the Hangar. If there are additional systems that need to be monitored there will be an additional cost associated with these monitor modules.

Proposal includes submittal documentation and shop drawings as required to pull the fire alarm permit with the City of Portland. The fire alarm permit (FBO) is not included but can be provided for an additional cost.

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: 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 panel & peripheral installation is the responsibility of the Electrical Contractor unless otherwise agreed upon in writing with SimplexGrinnell. SimplexGrinnell is responsible for panel terminations, system programming, test (with EC assistance) and overall system commission.

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.

Assessor's Office | 389 Congress Street | Portland, Maine 04101 | Room 115 | (207) 874-8486

City   Home   Departments   City Council   E-Services   Calendar   Jobs

This page contains a detailed description of the Parcel ID you selected. Press the **New Search** button at the bottom of the screen to submit a new query.

Current Owner Information:

Services

Applications

Doing Business

Maps

Tax Relief

Tax Roll

Q & A

_____

browse city
services a-z

_____

browse facts and
links a-z

CBL	199 A001013
Land Use Type	RETAIL & PERSONAL SERVICE
Property Location	1101 WESTBROOK ST
Owner Information	NORTHEAST AIR 1011 WESTBROOK ST PORTLAND ME 04102
Book and Page	15753/400
Legal Description	199-A-1 ETC # 13 WESTBROOK ST 1101 BUILDING ON LEASED LAND
Acres	

Current Assessed Valuation:

TAX ACCT NO.	51436	**OWNER OF RECORD AS OF APRIL 2012** NORTHEAST AIR
LAND VALUE	$0.00	1011 WESTBROOK ST
BUILDING VALUE	$486,800.00	PORTLAND ME 04102
NET TAXABLE - REAL ESTATE	$486,800.00	
TAX AMOUNT	$9,161.58	

Any information concerning tax payments should be directed to the Treasury office at 874-8490 or e-mailed.

Building Information:

_____

Best viewed at
800x600, with
Internet Explorer

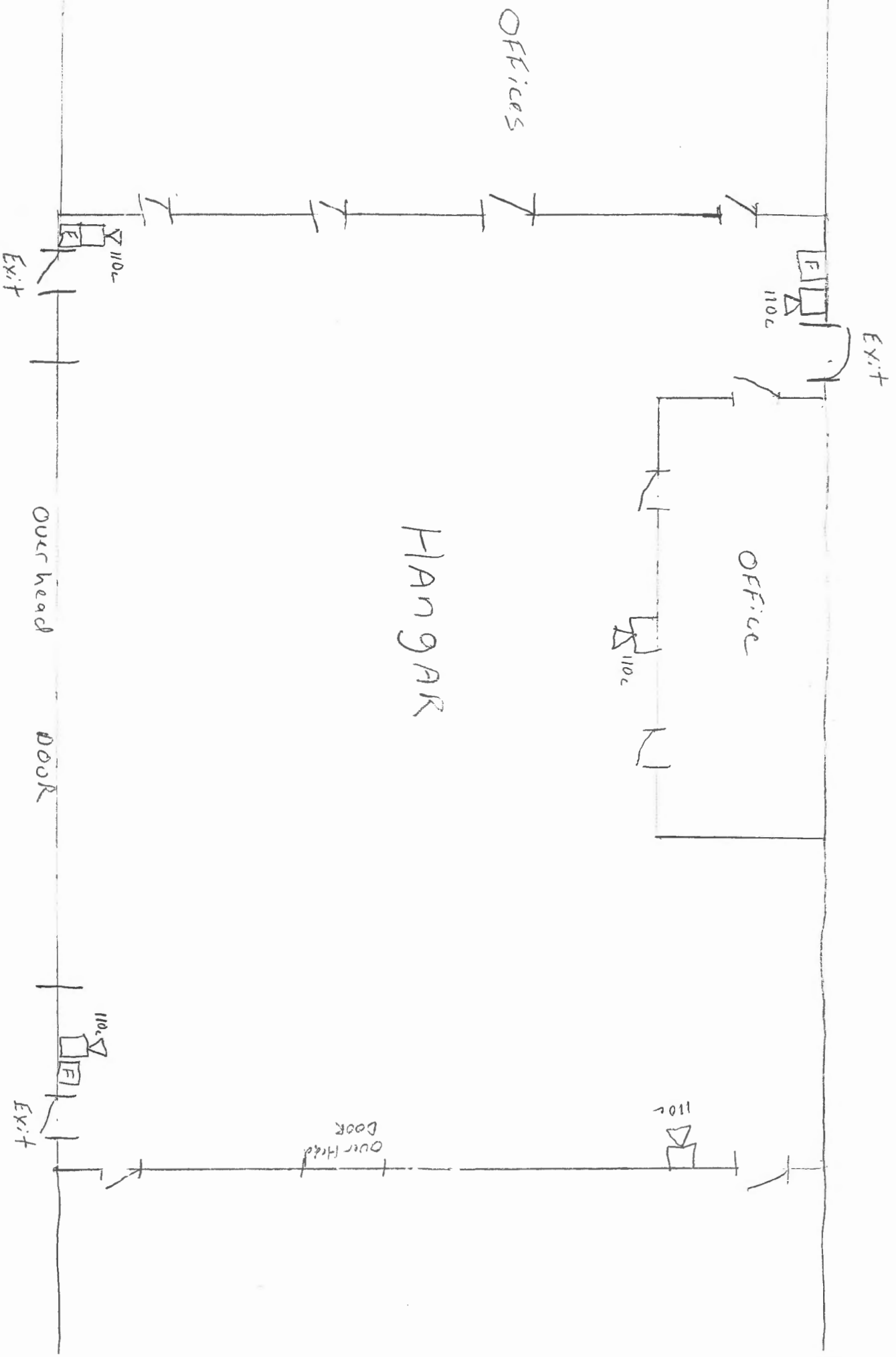|	**Building 1**
Year Built	1977
Style/Structure Type	HANGER
# Units	1
Building Num/Name	1 - MOONEY
Square Feet	11600

ADODB.Field error '800a0bcd'

View Sketch

Either BOF or EOF is True, or the current record has been deleted. Requested operation requires a current record.

/searchdetail.asp, line 426

Offices

Exit

110c

HANGAR

Overhead Door

Office

110c

Exit

110c

Exit

Over Head Door

110c

PROJECT

Northeast Airmotive Pilatus Offices
- Fire Alarm System -

CONTRACTOR

TRT Electric
65 Washington St.
Augusta, ME 04330

PRESENTED BY:

tyco

Fire &
Security

SimplexGrinnell

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

DATE: May 3, 2012

TO: TRT Electric

FROM: Sam Martin

PROJECT: <u>**Northeast Airmotive Pilatus Offices ~ Fire Alarm System**</u>

Thank you for your recent order with SimplexGrinnell. We appreciate the opportunity to provide the Simplex equipment for your project.

The SimplexGrinnell Technical Installer Support (TIS) program requires a pre-installation visit and a final inspection by our Technical Representative. It is strongly suggested that you make use of the pre-installation visit to help prevent wiring and/or device errors. Please call our dispatch department Monday through Friday from 8:00 a.m. - 5:00 p.m. to request this service. For scheduling purposes, Simplex requires two weeks notice prior to the date you require the on-site visit.

During a pre-installation visit, SimplexGrinnell will perform the following, where appropriate:

    A. Review riser diagram prints or plan drawings.
    B. Review specifications.
    C. Supply information on specialty device wiring.
    D. Supply end line of resistors.
    E. Request nomenclature for annuciator and control panel labeling.
    F. Set up an appointment for a future visit or final inspection.

In addition, SimplexGrinnell will execute one complete functional test of the system as follows:

    A. Electrically check system wiring.
    B. Test Simplex supplied peripheral devices for alarm, supervision, and operation.
    C. Check out complete operation of control panel(s).
    D. Field certify the operation of the system(s).
    E. Provide warranty information.
    F. Instruct personnel on the operation of Simplex equipment.

Please be aware that SimplexGrinnell service representatives are not electricians; therefore, they are not permitted to field wire or terminate. *All wire termination must be completed, and ALL circuits must be free of shorts and grounds prior to our arrival for the complete functional test of the system.*

Thank you, once again for allowing SimplexGrinnell to satisfy your project needs.

TECHNICAL INSTALLER SUPPORT (TIS)

Introduction

Technical Installer Support (TIS) is provided as part of the cost of the equipment and is designed to provide the expertise of a Simplex Technician to be available at key scheduled times during the project. This service is available during normal Simplex working hours, if scheduled five working days in advance.

TIS Activities

TIS includes the following activities by a Simplex factory-trained technician, when determined by Simplex to be appropriate:

- pre-construction review of submittals and drawings with the installer
- technical advice during initial start-up of control panels before installer wiring is connected
- review of panel wiring, and preparation of a list of any items to be corrected by the installer
- check-out of Factory Program
- program editing to correct minor errors and omissions
- system check in preparation for functional test
- assistance with one complete, functional test of the system
- one training session for the owner's representative (2-4 hrs. per control panel)

Additional support may be purchased. See other side for more information.

Installer's Responsibility

TIS contributes significantly to the installation of Simplex equipment but does not alleviate the installer's responsibility to:

- provide skilled labor and supervision to complete the project
- review and understand Simplex instructions for installing and testing Simplex equipment
- ensure that all wiring provided and installed meets equipment specification requirements, UL, code compliance and is free of grounds and faults

How to Avoid Potential Problems

Potential problems can be avoided by following these recommendations:

- Do not initially power-up the system, except in the presence of a Simplex Technician. Simplex assumes no liability for damaged equipment, and warranty may be voided if this procedure is not followed.
- Do not install smoke detectors (unless protected by plastic bags) until final construction clean-up has occurred. This prevents damage caused by dust, dirt and paint. Detectors installed prior to clean-up may require disassembly, cleaning or replacement, which is not covered by warranty.
- Care must be taken to protect equipment during the installation and warranty period. Failures due to external causes (power surges, construction dust, water damage, etc.) will be repaired by Simplex only upon receipt of a valid written Purchase Order.

- TIS includes one complete system test, which is coordinated by the installer. To avoid additional charges, the installer should schedule this test so that all appropriate parties such as the owner's representative and any local Authority Having Jurisdiction (AHJ) are present.

Technical Labor Product (TLP)

Technical Labor Product is designed to make available the expertise of a Simplex Technician for any support requirements outside of the services provided by TIS. This service is available from Simplex at an extra cost.

TLP includes, but is not limited to, the following activities that are performed by a Simplex factory-trained technician when determined by Simplex to be appropriate. Technical Labor Product is identified when a Simplex Technician:

- performs or assists in additional system tests beyond the one complete test provided by TIS, including tests done with AHJ

- performs or assists in the system test provided by TIS after Simplex normal working hours

- assists in troubleshooting or repairing installer wiring problems such as grounds, shorts, opens, etc.

- participates in the electrical installation or connects wiring to control panels, transponders or peripheral devices

- interconnects an existing system with new Simplex control panels and/or transponders by installing wiring harness modules, programming, etc.

- completes the interface between the Simplex system and another supplier's equipment or panel

- provides customer training, as required by specification or customer, that goes beyond the training provided under TIS

- works on or interfaces to any existing network communication system

- changes or adds to an existing program and, when appropriate, performs a field reburn

- performs an audit/survey of a new or existing system and reports the results in accordance with a customer's request or specifications

- performs work on a system that is determined by Simplex to be outside the definition of TIS

All TLP labor that is required with the project shall be priced and offered as additional installation support.

BUILDING SYSTEMS GENERAL TERMS AND CONDITIONS OF SALE

For good and valuable consideration, the parties agree that the terms and conditions contained herein are the sole terms and conditions of sale and/or for service and represent the sole and complete Agreement between the parties and supersede all prior oral and/or written representations, understandings, proposals, agreements, and communications regarding the subject matter hereof. The parties agree that no additional terms will be binding upon Simplex even if they appear on Purchaser's formal purchase order, acceptance form, or any other of Purchaser's documents unless signed by an authorized representative of Simplex at its headquarters in Westminster, Massachusetts.

1. VALIDITY PERIOD: The price quotes provided are valid for 30 days unless otherwise specified in writing by Simplex.

2. PAYMENT TERMS:

   A. GENERAL PAYMENT TERMS are net thirty (30) days from date of invoice where satisfactory open account credit is established and maintained. Simplex reserves the right to revoke or modify Purchaser's credit at its sole discretion. A mobilization payment up to fifty percent (50%) will be invoiced upon acceptance of customer's order. Progress payments to one hundred percent (100%) of order value will be invoiced monthly based upon equipment delivered or stored and work performed. At Simplex's sole option, Purchaser shall pay cash in advance, or upon delivery, or as otherwise specified by Simplex. In the event that Purchaser defaults on its obligation to pay each invoice when due, then, in addition to all other rights and remedies available to it, Simplex shall have the option to withhold any further shipments of materials and/or the provision of services, if any, until Purchaser's account is fully paid. Further, in the event payment is not received according to Terms, Simplex may, at its discretion, assess interest at the maximum rate allowed by law or at the rate of 1.5% per month, whichever is less. Purchaser also agrees to pay all costs incurred by Simplex in pursuit of payment which is past due including, but not limited to, collection agency commissions and attorneys fees.

   B. CUSTOM SOFTWARE PAYMENT TERMS are as provided in section A. above with the following exceptions. A non-refundable twenty percent (20%) initial payment will be invoiced upon acceptance of Purchaser's order. A non-refundable progress payment of forty percent (40%) of order value will be invoiced upon Purchaser's approval of a Custom Software Development Specification. The final forty percent (40%) payment will be invoiced upon delivery by Simplex of Custom Software.

   C. SECURITY SYSTEM / ACCESS CONTROL SYSTEM PAYMENT TERMS are as provided in Section A. above with the following exceptions. A non-refundable 20% down payment is required with Purchaser's order. Progress Payments will be invoiced based upon shipments to Purchaser.

   D. CANCELLATION: Any cancellation must be made in writing. Recognizing that Simplex's damages arising from cancellation will be difficult to estimate or determine, the following charges shall be construed as liquidated damages representing an approximation of the administrative, engineering, and other costs Simplex will actually incur in reliance upon this Agreement, and not as a penalty: If, prior to shipment, Purchaser cancels this Agreement or any portion thereof, for any reason not attributable to Simplex, Purchaser agrees to pay Simplex an amount equal to 20% of the price of the products canceled if the cancellation occurs more than 21 days after Simplex receives Purchaser's order or Purchaser accepts this Agreement. If Purchaser cancels after shipment, Purchaser agrees to pay the above 20% of the price of the products canceled, return the products already shipped, and to pay Simplex an additional amount equal to 20% of the value of the returned products to cover the estimated costs of transportation and restocking.

3. SIMPLEX SERVICES: Purchaser further agrees that Simplex offers various levels of services and that the Purchaser, after reviewing the same, has contracted with Simplex to perform only the services described in writing in this Agreement. Simplex denies liability for materials, supplies or work provided by other persons. Unless specifically contracted for, Simplex denies any supervisory role and this Agreement shall not commit Simplex to any supervisory role, including, but not limited to, the placement or routing of any wires or other Product.

   If this Agreement includes a quote for Monitoring Services to be supplied by Simplex, Purchaser agrees for himself, and any assignees to this Agreement, that Simplex shall have no duty to perform such Monitoring Services until and unless the Purchaser, and any assignee including but not limited to the end-user, agree to and sign a Simplex Monitoring Agreement approved and signed by an authorized representative of Simplex.

   If this Agreement includes a quote for Maintenance Services to be supplied by Simplex, Purchaser agrees for himself, and any assignees to this Agreement, that Simplex shall have no duty to perform such Maintenance Services until and unless the Purchaser and any assignee, including but not limited to the end-user, agree to and sign a Simplex Maintenance Service Agreement approved and signed by an authorized representative of Simplex.

4. SHIPMENT: All Equipment is shipped F.O.B. shipping point.

5. SECURITY INTEREST: The Purchaser grants to Simplex, and Simplex retains, a security interest in all Product, Software, and proceeds thereof shipped pursuant to this Agreement until the Purchaser shall have made full payment for the Product. Such interest is intended to be effective as a purchase money security interest. Purchaser agrees that Simplex may file this Agreement as a financing statement. In the event of failure to make payment on the due date in accordance with terms designated, the entire balance shall become due and payable at once. In case of default of payment, and to the extent permitted by law, Simplex shall have the right to take possession of the Product or Software immediately, wherever it may be found, and remove it with or without process of law and may retain all money paid hereunder as liquidated damages and rental for said Product or Software. For the purpose of assisting Simplex in perfecting its security interests in any Simplex Product or Software delivered to the Purchaser, Purchaser agrees to inform Simplex immediately if any other entity has or may have any security interest, perfected or otherwise, in the Simplex Product or Software described on the face of this Agreement and shipped to Purchaser. The Purchaser agrees to pay Simplex's costs of collection, including without limitation reasonable attorneys fees and legal expenses, and that the same are secured by the security interest granted herein. The Purchaser shall not sell, prior to payment, (except in the ordinary course of business), mortgage, pledge, or lease said Product or Software without prior written permission of Simplex.

6. LIMITATION OF WARRANTY: Purchaser understands that Simplex is not an Insurer. Subject to the limitations below, Simplex warrants that the Product (as distinguished from Software) be free from defects in material and workmanship under normal use for a period of one year from the date of first beneficial use of all or any part of the Product or 18 months after Product shipment whichever is earlier, provided, however, that Simplex's sole liability, and purchaser's sole remedy, under said warranty, shall be limited to the repair or replacement of any Product, or part thereof, which Simplex determines to be defective, at Simplex's sole option and subject to the availability of service personnel and parts, as determined by Simplex. Simplex warrants expendable items including, but not limited to, video and print heads, television camera tubes, video monitor display tubes, batteries and certain other products in accordance with the applicable manufacturer's warranty. Simplex does not warrant devices designed to fail in protecting a system such as, but not limited to, fuses and circuit breakers.
   Simplex warrants that any Simplex Software described in this Agreement, as well as that Software contained in or sold as part of any Product described in this Agreement, will reasonably conform to its published specifications in effect at the time of delivery and for ninety (90) days after delivery. However, Purchaser agrees and acknowledges that the Software may have inherent defects because of its complexity. Simplex's sole obligation with respect to Software, and purchaser's sole remedy, shall be to make available published modifications, designed to correct inherent defects, which become available during the warranty period.

   THIS WARRANTY DOES NOT APPLY TO ANY PRODUCT OR SOFTWARE WHICH HAS BEEN SUBJECTED TO ABUSE, MISHANDLING, OR IMPROPER USE AS DETERMINED BY SIMPLEX AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

   Warranty service will be performed at no charge between the hours of 8:00 am to 5:00 PM local time, Monday through Friday exclusive of Simplex's holidays. Warranty service requested to be performed at other than during Simplex's normal work hours shall be chargeable at Simplex's standard overtime rates. All repairs or adjustments that are or may become necessary under the warranty provisions of this Agreement shall be performed only by an authorized representative of Simplex. Any repairs, adjustments, or interconnections performed by the Purchaser or anyone other than an authorized Simplex representative shall void all warranties.

7. LIMITATION OF LIABILITY: SIMPLEX SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, ECONOMIC, OR CONSEQUENTIAL LOSS OR DAMAGE TO THE PURCHASER OR USER OF THIS PRODUCT AND/OR SOFTWARE ARISING OUT OF, AMONG OTHER THINGS, THE OPERATION OR FAILURE OF THE PRODUCT AND/OR SOFTWARE TO OPERATE, THIS AGREEMENT, THE INSTALLATION, USE, DESIGN OR FUNCTION OF ANY SIMPLEX PRODUCT AND/OR SOFTWARE.

8. LIMITATION OF REMEDY: It is understood and agreed that since it is impractical and extremely difficult to fix actual damages, if any, or ascertain what, if any, portion of any loss or injury would be proximately caused by the failure of Simplex's Product and/or Software to operate, or to operate properly, or Simplex to perform any of its obligations or services described herein, UNDER NO CIRCUMSTANCES WILL SIMPLEX'S LIABILITY FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO THOSE ARISING IN ANY WAY OUT OF THE INSTALLATION, USE, DESIGN OR FUNCTION OR FAILURE TO FUNCTION OF ANY PRODUCT AND SOFTWARE SOLD BY SIMPLEX, BE IN EXCESS OF THE PURCHASE PRICE PAID FOR THE PRODUCT, SOFTWARE AND/OR SERVICES. THIS SUM SHALL BE THE PURCHASER'S SOLE, COMPLETE AND EXCLUSIVE REMEDY AND SHALL BE PAID AND RECEIVED AS LIQUIDATED DAMAGES OR A LIMITATION OF LIABILITY AMOUNT AGREED ON BY THE PARTIES AND NOT AS A PENALTY. IN NO CIRCUMSTANCES WILL SIMPLEX BE HELD LIABLE FOR ANY CLAIMS, LOSSES, DAMAGES OR INJURIES ARISING FROM OR CAUSED BY, THE PURCHASER'S OR ANY OTHER PARTY'S MATERIAL, EQUIPMENT, ACTIONS, OR OMISSIONS. If Purchaser wishes Simplex to increase the amount of the above limitation of liability or liquidated damages amount stated in this Agreement, Purchaser may inquire about obtaining an increase to this amount in exchange for an increased purchase or contract price. Under no circumstances will an increase in the purchase or contract price be construed to mean that Simplex is an insurer or that the obligations of obtaining and maintaining insurance are not with the Purchaser.

Fire, Security, Communications, Workforce Solutions, Sales & Service
Offices & Representatives in Principal Cities throughout the World

9. INSURANCE OBLIGATIONS: It is understood and agreed by the Purchaser that Simplex is not an insurer and that it is the Purchaser's obligation to obtain and maintain any insurance covering any losses to property or personal injury or any other damage which may occur at the premises where the Simplex Product, Software or Services, which form the basis of this Agreement, are delivered, assembled, installed, used, or performed. The Purchaser agrees to list Simplex as an additional insured on all such policies and to provide Simplex a copy of the Certificate of Insurance upon request. Purchaser further agrees that the Certificate of Insurance shall contain a provision that coverage afforded under the policies will not be canceled or materially altered until at least thirty (30) days after written notice is given to Simplex.

10. WAIVER OF SUBROGATION: Purchaser does hereby for itself and all other parties claiming under it release and discharge Simplex from and against all hazards covered by Purchaser's insurance, it being expressly agreed and understood that no insurance company, insurer, or any other third party will have any right of subrogation against Simplex.

11. LIMITATION ON ACTIONS: The Purchaser hereby agrees that no claim, suit or action of any kind shall be brought against Simplex, its agents, employees, and/or officers more than one year after the claim arises, whether known or unknown when the claim arises, provided however, that if there is a claim, suit, or cause of action arising under the Warranty, it must be brought, if at all, within six months of expiration of the Warranty period stated above. This clause is in no way to be interpreted as an extension of the Express Warranty stated in paragraph 4 above.

12. DRAWINGS: All drawings and wire diagrams provided by Simplex in connection with this Agreement are protected under United States Copyright Laws and intended solely for the use of the installing contractor as a general guide for the installation of the System. These drawings and wire diagrams are prepared in accordance with the project plans and specifications available to Simplex at the time of the bid and are NOT intended to be System design or approval documents. Simplex is not a design professional. Under no circumstances is any clause in this Agreement or any actions taken by Simplex to be construed in such a way as to impose upon Simplex the duties or liabilities of a design professional.

13. CHANGE ORDERS: This Agreement can be modified, amended or altered only by an Agreement in writing, signed by both parties or their duly authorized representatives.

14. SOFTWARE LICENSE AND USE: Software Products provided by Simplex are licensed, not sold, to the Customer. Customer has only a non-exclusive, non-transferable license to use the Software ("License"). Simplex retains all right, title and interest to the Software. In some cases, Simplex may have a right to relicense the Software. "Software" shall mean any part of Software provided by Simplex in machine readable form indicated on this Agreement or contained in any Simplex Product indicated on this Agreement or ordered subsequently, any modified versions and all related documentation. Customer shall use the Software only on the Product and at the Product Site listed herein. Any Software received by Customer at any time is subject to this Agreement. The License term begins upon delivery of the Software and continues until the last use of the Software with the Product, unless terminated. Simplex may terminate this License if Customer: (1) fails to perform any obligation under the Agreement; (2) ceases to do business as a going concern; or (3) has its assets assigned or attached by law. Within five (5) days after the License terminates, Customer shall, at its expense, return the Software to Simplex and destroy all copies of the Software, including memory or storage copies.

15. PROTECTION AND NON-DISCLOSURE: Customer shall maintain the Software in strict confidence and shall disclose it only to its employees requiring access. Customer shall implement adequate procedures controlling access to and use of the Software consistent with the protection of Simplex's rights. Customer may duplicate Software only for internal use on the Product according to Simplex instructions. The Simplex legend restricting Software use must appear on any copies of the Software. Customer shall not reverse compile the Software.

16. TITLE: The Software and any relevant Product as described in this Agreement shall remain the personal property of Simplex, even if attached to realty or other property. Customer shall not sell, assign, encumber or remove the Product or Software without the prior written consent of Simplex. Customer shall perform all necessary acts to preserve and protect the right, title and interest of Simplex in the Product and Software including but not limited to signing any financing statements or other documents requested by Simplex or its agents. Simplex may inspect the Product and Software during normal business hours and may affix labels or notices of ownership on the Product and Software.

17. FORCE MAJEURE: Simplex shall not be liable for any loss or damage of any kind resulting from delay , inability to deliver, or install, or to perform any other work under this Agreement on account of fire, flood, labor problems, access to premises, accidents, acts of civil or military authorities, acts of God, or from any other causes beyond Simplex's control.

18. TAXES, LICENSES AND PERMITS: The Purchaser is responsible for obtaining all licenses, and permits and for paying all applicable taxes and fees unless otherwise agreed to in writing.

19. INSTALLATION: The installation of any Product is NOT INCLUDED unless specifically provided for in this Agreement.

20. DRUG FREE WORKPLACE POLICY: Simplex has a written drug free workplace policy available for review by written request.

21. EXPORT COMPLIANCE: All sales hereunder shall at all times be subject to the export control laws and regulations of the Government of the United States. Purchaser agrees that it shall not make any disposition, by way of trans-shipment, re-export, diversion, or otherwise, except as said laws and regulations may expressly provide. Purchaser expressly agrees, to the fullest extent permitted by law, to indemnify Simplex for any and all damage arising from the violation of any export law or regulation with respect to any goods delivered to Purchaser or at Purchaser's direction. Said damages include, but are not limited to, legal fees, court costs, expert fees, and any and all other resulting costs and expenses.

22. EVENTS OF DEFAULT: Purchaser shall be in default of this Agreement upon the occurrence of, but not limited to, any of the following:

A. The Purchaser's failure to make due and punctual payment of any payment due pursuant to this Agreement;

B. The Purchaser's failure to perform any obligation under this Agreement;

C. An order, judgment or decree entered, with the approval or consent of Simplex, by any court of competent jurisdiction, approving a petition seeking reorganization of the Purchaser or appointing a receiver, trustee, or liquidator (or other officer having power, under applicable law, similar to those of a receiver, trustee, or liquidator) of the Purchaser or of all or a major portion of its assets, and such order, judgment, or decree shall continue unstayed and in effect for any period of sixty (60) consecutive days;

D. The Purchaser fails to provide Simplex with adequate assurances of due performance under the Agreement, after receiving a written request for same from Simplex;

E. The Purchaser's financial position materially deteriorates; or

F. The Purchaser shall cease to do business as a going concern.

23. GENERAL: Any provision of this Agreement which is prohibited by the law of any state shall, as to such state, be ineffective to the extent of such provision without invalidating the remaining provisions of the Agreement. This Agreement shall be construed under the laws of the Commonwealth of Massachusetts.

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*Fire &
Security*

Northeast Airmotive Pilatus Offices
- Fire Alarm System -

SimplexGrinnell

| Item #	Product ID	Description	Page #
1	4010-9402	4010ES FACP 120V PLATINUM	1-10
2	4010-9908	4 POINT AUX RELAY MODULE	1-10
3	4010-9912	SERIAL DACT	1-10
4	2081-9272	BATTERY 6.2 AH	11-14
5	7788-F	AES 8 ZONE RADIO BOX	15+16
6	1640	UL TRNSFR FOR 7750-F SUBSCRIBE	15+16
7	BD7-12	12V 7AH SEALED LEAD ACID	17+18
8	4101	KNOX VAULT BLK SURFACE MOUNT	19+20
9	SSU00685	CAB DOC STOR 12X13X2 2GB FLASH	21+22
10	4099-9001	MANUAL STATION - SINGLE ACTION	23-28
11	4098-9714	PHOTO SENSOR	29-34
12	4098-9792	SENSOR BASE	29-34
13	4090-9001	SUPERVISED IAM	35-40
14	4090-9810	BRACKET, IAM	35-40
15	4090-9806	COVER-ADDRESS MODULE FLUSH	35-40
16	4906-9127	HORN/STROBE MC RED	41-46
17	4906-9101	STROBE MC RED	47-52
18	4081-9004	EOL, 6.8K 1/2W	53+54
19	4081-9008	EOL, 10K 1/2W	53+54

Features

Basic System includes:

- Capacity for up to 248 addressable devices, up to 127 VESDA SLI points, up to 2000 points of Annunciation and up to 20 internal and external card addresses
- Color-coded operator interface with membrane keypad includes 2 x 40 Super-twist LCD display, 3 programmable control keys and 6 programmable LEDs
- CPU assembly includes dedicated compact flash memory for on-site system information storage and convenient Ethernet service port access
- 8 Amp power supply with up to 2 Amps of Auxiliary power and battery charger capacity for up to 110 Ah batteries (UL) or up to 50 Ah batteries (ULC) (33 Ah max in control panel cabinet)
- 4 on-board Class A or B 3 Amp NACs and one programmable auxiliary relay output rated for 2 Amps @ 32 VDC
- Class A or B Two-loop Isolated IDNet™ Communications (IDNet+) supports up to 248 addressable and analog sensing devices on non-twisted, non-shielded wiring
- Remote annunciator module support via RUI (remote unit interface) communications port, supports either Class B (Style 4) or X (Style 7) Pathway operation
- 48 LED panel mount annunciation provides 40 Red and 8 Yellow pluggable LEDs (select models, meets ULC requirements), optional LED kits are available for custom LED configurations

Optional MSS and Door Mount Modules include:

- City Connect (with or without disconnect switches), Alarm Relay Module, TrueInsight Remote Gateway

Optional Block Space Modules include:

- Fire Alarm Network Interface Card for 4120/4100 Peer-to-Peer network communications, supports either Class B or X (Style 7) Pathway operation
- Ethernet connectivity options include Building Network Interface Module (BNIC) and SafeLINC Internet Interface
- Dual RS-232 Module (for printer, PC annunciator or third party interface)
- VESDA® Air Aspiration High Level Interface
- Serial DACT
- 8 Zone IDC Modules Class A or B
- 4 Point Auxiliary Relay Module
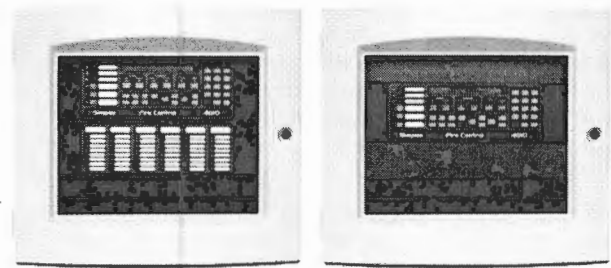
4010ES Fire Alarm Control Panel
with or without LED Annunciation

Compatible with Simplex® remotely located:

- 4003EC Small Voice Panels
- 4009 IDNet NAC Extenders
- 4009 TrueAlert Addressable Controllers and TrueAlert Power Supplies (TPS)
- 4081 110Ah Battery Chargers
- 4100-7400 Series Graphic Annunciators
- 4190 PC Annunciator
- 4190 Fiber Modems and Physical Bridges
- 4606-9102 Remote LCD Annunciator and 4100-9400 Series Remote InfoAlarm Command Centers
- IP communicator compatibility

4010ES Agency Listing:

- UL Std. 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL), and Releasing Service (SYZV)
- 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, Fire Detection and Control (UOJZC)
- ULC Std. S559-04, Supervising Station (DAYRC)
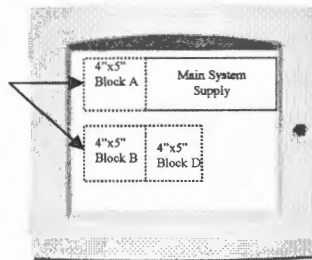
S4010-0004-3

Introduction

4010ES Series Fire Detection and Control Panels provide leading edge installation, operator, and service features for customer applications in the mid-range addressable fire alarm systems market. 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 and Signaling Code*®) requirements.

Modular design. A 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.

Panel Hardware

The Master Controller and Main System Supply are mounted in the upper section of the 4100ES cabinet.

3 available 4"x5" block spaces for additional option cards

Mechanical Description

- Mounting 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
- The hinged User Interface panel easily opens for internal access
- Modules are power-limited (except as noted, such as relay modules)
- Doors include tempered glass inserts, boxes and doors are available in platinum or red
- Box and door/retainer assemblies are included with Basic Panel assemblies

Panel Hardware (continued)

4010ES Block Space Option Cards mount to the left of the 4010ES Main System Supply. There are 3 available 4" x 5" blocks for mounting 4010ES hardware options.

Other 4010ES Options: The 4010ES City Connect module or the optional Alarm Relay module mount directly to the Main System Supply. These options are mutually exclusive.

Network Media modules mount directly to the 4010ES Network Interface Card.

The TrueInsight Remote Gateway mounts on the back side of the 4010ES User Interface Panel.

The Battery Compartment located in the bottom of the 4010ES cabinet accepts two batteries, up to 33 Ah, without interfering with expansion module space.

The illustrations below identify mounting locations optional 4010ES modules.
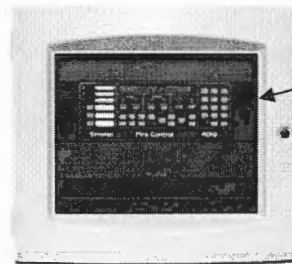
TrueInsight Remote Gateway mounts on the back of the 4010ES User Interface Panel

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
- *"Install Mode"* allows grouping of multiple troubles for uninstalled modules and devices into a single trouble condition (typical with future phased expansion); with future equipment and devices grouped into a single trouble, operators can more clearly identify events from the commissioned and occupied areas
- Module level ground fault searching assists installation and service by locating and isolating modules with grounded wiring
- *"Recurring Trouble Filtering"* allows the panel to recognize, process, and log recurring intermittent troubles (such as external wiring ground faults), but only sends a single outbound system trouble to avoid nuisance communications
- WALKTEST™ silent or audible system test performs an automatic self-resetting test cycle
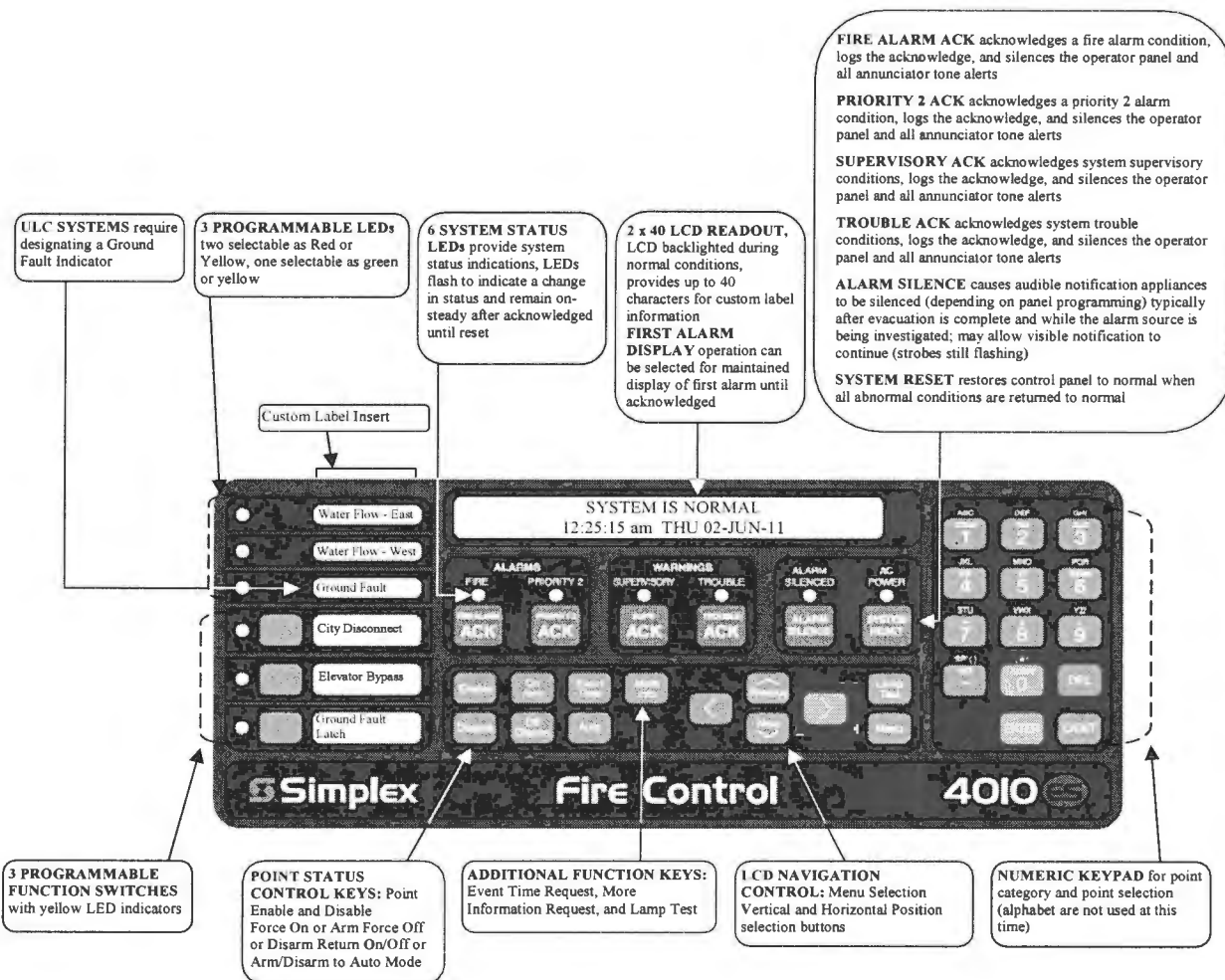
- Convenient and extensive operator information is provided using a logical, menu-driven display
- Multiple automatic and manual diagnostics for maintenance reduction
- Convenient PC programmer label editing
- Password access control
- Alarm and Trouble History Logs (up to 2000 total events) are available for viewing from the LCD, or capable of being printed to a connected printer, or downloaded to a service computer

Convenient 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.

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

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

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

TROUBLE ACK acknowledges system trouble conditions, 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 the alarm source is being investigated; may allow visible notification to continue (strobes still flashing)

SYSTEM RESET restores control panel to normal when all abnormal conditions are returned to normal

ULC SYSTEMS require designating a Ground Fault Indicator

3 PROGRAMMABLE LEDs two selectable as Red or Yellow, one selectable as green or yellow

6 SYSTEM STATUS LEDs provide system status indications, LEDs flash to indicate a change in status and remain on-steady after acknowledged until reset

2 x 40 LCD READOUT, LCD backlighted during normal 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

Custom Label Insert

3 PROGRAMMABLE FUNCTION SWITCHES with yellow LED indicators

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, and Lamp Test

LCD NAVIGATION CONTROL: Menu Selection Vertical and Horizontal Position selection buttons

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

Compatible Peripheral Devices

The 4010ES is compatible with an extensive list of remote peripheral devices including printers, PC Annunciators and both conventional and addressable devices including TrueAlarm analog sensors.

Addressable Device Control

Overview. The 4010ES provides standard addressable device communications for IDNet 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 pathway 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 Main System Supply provides an IDNet+ signaling line circuit (SLC) that supports up to 248 addressable monitor and control devices intermixed on the same pair of wires.

IDNet+ Communications wiring specifications. IDNet+ circuits may be run on NEC 760 untwisted pair, twisted pair, or shielded twisted pair conductors.

IDNet+ Wiring Specifications

Size		18 AWG (0.82 mm²)
Type		NEC 760 Wire (untwisted, twisted, or shielded twisted pair)
Farthest Distance from Control Panel per Device load	126-248	Up to 2500 feet (762 m)
	up to 125	Up to 4000 ft (1219 m)
Total Wire Length Allowed Class A or Class B, including "T-taps" for Class B wiring (total for both isolated circuits combined)		Up to 12,500 ft (3.8 km) Note: The sum of line-to-line capacitance plus the capacitance of either line-to-shield (if shield is present) = 0.6 µF maximum (total for both isolated circuits combined)

* Other circuits may require shielded wiring. Review your system with your local Simplex product supplier.

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 selected at the control panel for different levels of smoke obscuration (shown directly in percent) or for specific heat detection levels. 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.

CO sensor bases combine an electrolytic CO sensing module with a TrueAlarm analog sensor to provide a single multiple sensing assembly using one system address. The CO sensor can be enabled/disabled, used in LED/Switch modes and custom control, and can be made public for communication across a fire alarm Network. (refer to data sheet S4098-0041 for details)

TrueAlarm heat sensors can be selected for 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. Readings can be selected as either Fahrenheit or Celsius.

TrueSense® Early Fire Detection. Multi-sensor 4098-9754 provides photoelectric and heat sensor data using a single 4010ES IDNet address. The panel evaluates smoke activity, heat activity, *and their combination*, to provide TrueSense early detection. For more details on this 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 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. CO Sensors track their 5 year active life status providing indicators to assist with service planning. Indicators occur at: 1 year, 6 months, and when end of life is reached.

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.

S4010-0004-3

Master Controller (CPU)

- The 4010ES Master Controller includes dedicated 2GB compact flash Mass Storage memory for on-site system information storage and convenient Ethernet service port access
- Convenient front panel accessed Ethernet port for quick and easy *download* of site-specific programming
- *AND*, firmware enhancements are made via software downloads to the on-board flash memory
- Every downloaded job is automatically stored to Compact flash without overwriting earlier versions providing a means for recovering previous configurations
- Downtime is reduced because the system stays running during download
- Modifications can be *uploaded* as well as downloaded for greater service flexibility

Master Controller (CPU) continued

- Mass Storage allows job specific files to be store in the control panel such as test and inspection reports, record drawings, specifications, and more...
- Ethernet connectivity options include Building Network Interface Module (BNIC) and SafeLINC Internet Interface
- RUI (remote unit interface) communications port supports either Class B or X Pathway operation for remote annunciation equipment and for 4009 TrueAlert Controllers and TrueAlert Power Supplies

Main System Supply

- The Main System Supply provides the power source and the Input/Output connections for the basic 4010ES panel. The main features are listed in the Basic Panel description below.

Basic Panel Description

All 4010ES panels include an Operator Interface, Master Controller with 2GB Compact Flash, Class A or B Two-loop Isolated IDNet™ Communications (IDNet+) supports up to 248 addressable and analog sensing devices, 8 Amp power supply with up to 2 Amps of auxiliary power, 110 Ah (UL) / 50 Ah (ULC) battery charger (33 Ah max control panel cabinet), 4 Class A or B NACs rated @ 3 Amps each, 1 programmable auxiliary relay rated for 2 Amps @ 32 VDC, 1 RUI Class B or X communications port for remote annunciation devices, cabinet and door. Supports up to 20 internal and external card addresses. Other standard options may be provided depending on model (see basic panel model selection below for additional details on specific models).

Basic Panel Model Selection

Note: Supervisory and Alarm current specifications are for determining battery standby requirements. Current specifications consider no load on addressable channels (see addressable device load specifications for device load battery standby), RUI channel active, and 24 of 48 LEDs active (for 48 LED models)

Model	Features	Panel Color	Language and AC Voltage	Listing	Available Option Blocks	Supv.	Alarm
4010-9401	Basic panel with 2x40 LCD Operator Interface and (1) Two-loop Isolated IDNet+ Channel Class A or B with support for up to 248 addressable analog devices	Red	English 120 V	UL, FM		316 mA	390 mA
4010-9402		Platinum					
4010-9403	Same as above with 48 LED annunciation	Red	English 120 V	UL, ULC, FM	3 4"x5" blocks	336 mA	455 mA
4010-9404		Platinum					
4010-9405		Red	French 120 V	ULC, FM			
4010-9406		Platinum					

S4010-0004-3

Addressable Device Load Specifications for Battery Standby

Addressable Channel	Device Load	Supv.	Alarm
Main System Supply IDNet+	With 248 Devices Add	199 mA	288 mA
	With 125 Devices Add	100 mA	165 mA
	With 50 Devices Add	40 mA	90 mA

Block Space Option Card Selection

Note: Supervisory and Alarm current specifications consider no load on addressable channels (see addressable device load specifications for device load battery standby)

Model	Features	Option Block Usage	Supv.	Alarm
4010-9901	VESDA HLI	1 Block	60 mA	60 mA
4010-9902	Modular Network Interface Card (requires two media modules below)	2 Vertical Blocks	30 mA	30 mA
4010-9818	- Network Media Card Wired	N/A (mounts to 4010-9902)	55 mA	55 mA
4010-9819	- Network Media Card Fiber Optic		25 mA	25 mA
4010-9908	4 Point Aux Relay Module	1 Block	15 mA	60 mA
4010-9912	Serial DACT	1 Block (must mount in block D under main system supply)	30 mA	40 mA
4010-9913*	SafeLINC	2 Vertical Blocks	115 mA	115 mA
4010-9914	Building Network Interface Card	2 Vertical Blocks	236 mA	236 mA
4010-9918	Dual RS232 Module	1 Block	60 mA	60 mA
4010-9920	8 Zone Initiating Device Circuit - Class B	2 Vertical Blocks (must mount top bay, left most blocks A & B)	75 mA	195 mA
4010-9921	8 Zone Initiating Device Circuit - Class A			

* UL/ULC Listed only

Additional Panel Option Selection (block space not used)

Model	Features	Mounting Requirements	Supv.	Alarm
4010-9909	City Connect Module w/ disconnect switches	Mounts on MSS, Mutually exclusive with 4010-9910 and 4010-9911	20 mA	36 mA
4010-9910	City Connect Module	Mounts on MSS, Mutually exclusive with 4010-9909 and 4010-9911	20 mA	36 mA
4010-9911	Alarm Relay Module	Mounts on MSS, Mutually exclusive with 4010-9909 and 4010-9910	15 mA	37 mA
N/A*	TrueInsight Remote Gateway	N/A, Mounts on Front Door	62 mA	62 mA

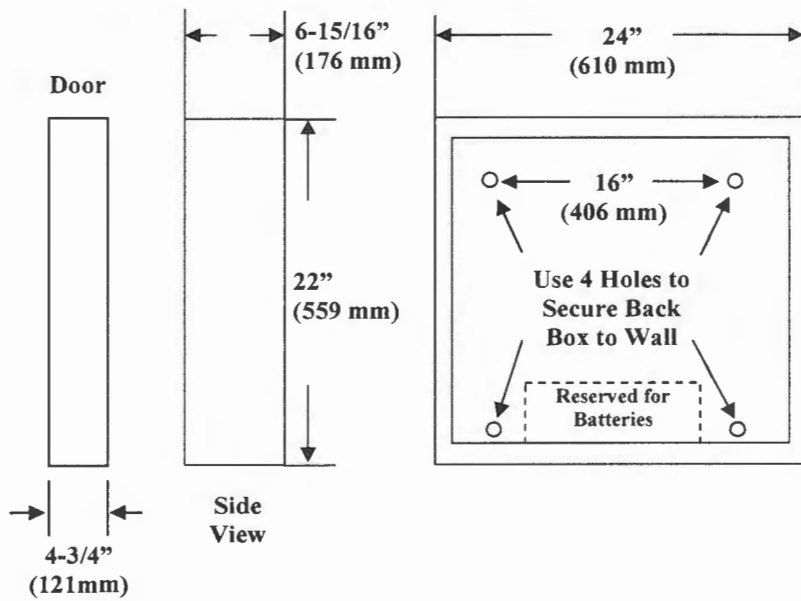* Contact your local SimplexGrinnell office for more details

S4010-0004-3

General Specifications

AC Input Specifications

120 VAC Fire Alarm Control Panels	4 A Maximum, 120 VAC @ 60 Hz nominal

Cabinet Specifications

Cabinet	Height	Width	Depth	Depth with Door
1 Bay Box	22 in. (559 mm)	24 in. (610 mm)	6-15/16 in. (176 mm)	11-11/16 in. (297 mm)

One-Bay Back Box and Door

Door

6-15/16"
(176 mm)

24"
(610 mm)

16"
(406 mm)

22"
(559 mm)

Use 4 Holes to
Secure Back
Box to Wall

Reserved for
Batteries

Side
View

4-3/4"
(121mm)

S4010-0004-3

Miscellaneous Accessories

PID	Description
4100-9843	8 Yellow LED Kit
4100-9844	8 Green LED Kit
4100-9845	8 Red LED Kit
4100-9855	8 Blue LED Kit

End user Programming Tools

PID	Description
4100-8802	End User Programming Unit Software
4100-0292	Custom Label Editing (USB Dongle)
4100-0295	Port Vectoring Setup and Control (USB Dongle)
4100-0296	User Group / Passcode Editing (USB Dongle)
4100-0298	WalkTest Configuration Setup and Control (USB Dongle)

4010ES Factory Programming

PID	Description
4010-8810	4010ES Factory Programming
4010-0831	Custom Label and Panel Programming

S4010-0004-3

4010ES Card Address Allocation

The 4010ES has a maximum Internal and External Card Address Limit of 20 Card Addresses. Use the Table below to calculate 4010ES card address allocation.

INSTRUCTIONS: Below is a list of 4010ES equipment and the quantity of card addresses they consume

1) For the applicable control panel, write in the Card Address Consumption value in the Card Address Allocation column (note: only select 1 control panel)

2) For the option cards to be installed on the 4010ES, write in the Card Address Consumption value in the Card Address Allocation column

3) Total the Card Address Allocation column (total must not exceed 20)

PID	Description	Card Addresses Consumption	Card Address Allocation	Notes
Control Panels (Select One)				
4010-9401, -9402, -9501, or -9502	2x40 Display, Single IDNet Channel, Single Bay Box	2		
4010-9403, -9404, -9405, or -9406	2x40 Display, Single IDNet Channel, 48 Pluggable LED Module	3		4010-9405 & -9406 Canada only
Panel Option Cards (Select As Required)				
4010-9901	Flat Vesda HLI	1		
4010-9902	Flat Network Card	1		
4010-9908	4 Point Flat Aux Relay Module	1		
4010-9912	Serial DACT	1		
4010-9913	SafeLinc	1		
4010-9914	Building Network Interface Card	1		
4010-9918	Dual RS232 Module	1		
4010-9920	8 Zone Initiating Device Circuit - Class B	1		
4010-9921	8 Zone Initiating Device Circuit - Class A	1		
Remote Power / Notification (Select As Required)				
4009-9401	4009T TrueAlert Controller 120V	1		
4009-9402CA	4009T TrueAlert Controller 120V w/ Low Battery Cutout	1		Canada Only
4009-9813	Transponder Interface Card	1		
4100-5120	120V Domestic TrueAlert Power Supply	1		
4100-5121	120V Canadian TrueAlert Power Supply	1		Canada Only
Remote Annuncition (Select As Required)				
4100-9401	Remote Unit Interface Panel w/FUI – Red – Domestic & Canadian English	2		
4100-9403	Remote Unit Interface Panel w/FUI – Platinum – Domestic & Canadian English	2		
4100-9421	Remote Unit Interface Panel w/FUI – Red – Canadian French	2		
4100-9423	Remote Unit Interface Panel w/FUI – Platinum – Canadian French	2		Canada Only
4100-9441	Remote Unit Interface Panel w/FUI – Red – International	2		
4100-9443	Remote Unit Interface Panel w/FUI – Platinum – International	2		
4606-9102	4010ES RUI LCD Annunciator (English)	1		
4606-9102BA	4010ES RUI LCD Annunciator (English)	1		
4606-9102CF	4010ES RUI LCD Annunciator (French)	1		Canada Only
4100-7401	24 Point I/O Graphic Module (requires mounting cabinet)	1		
4100-7402	64 Switch and 64 LED Driver Module with 32 on-board LED drivers (requires mounting cabinet)	1		
	Total Card Addresses - Not to Exceed 20	TOTAL		

S4010-0004-3

Additional Data Sheet References for 4010ES Compatible Equipment

4010ES Releasing Panels and Accessories, 4606 LCD Annun, Remote InfoAlarm Displays, Remote Graphic Annunciators, 110Ah Batt Chargers and Cabinets, BNIC, SafeLINC, SDACT, IDNet+, NIC, Fiber Modem Expansion Cabinets, 4009 IDNet, 4009T and TPS, Printer, PC Annunciator, IDNet Sensors and Devices

Agent Release Applications	S4010-0005			4009 TrueAlert Controller & PS	S4009-0003
Building Network Interface	S4100-0061	Addr. Device Compatibility	S4090-0011	4009 IDNet NAC Extender	S4009-0002
SafeLINC Internet Interface	S4100-0028	Remote LCD Annunciator	S4606-0002	4003EC Voice Control Panel	S4003-0002
		Graphic I/O Modules	S4100-0005	Remote Battery Charger	S4081-0002
VESDA HLI	S4100-0026	Remote InfoAlarm Cmd Ctr	S4010-0008	Remote Printer	S4190-0011
SDACT	S2080-0009	Network Communications	S4100-0056	PC Annunciator	S4190-0013
Fire Alarm Network Overview	S4100-0055			Multi-Signal Fiber Optics	S4100-0049

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S4010-0004-3

⚡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

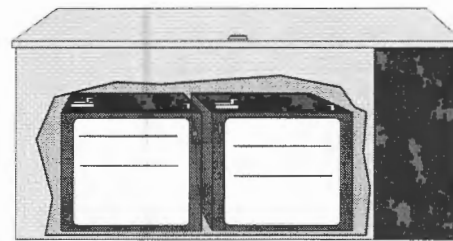### Available in a variety of capacities:

- 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 with models available with internal chargers

Battery cabinets with chargers:

- Battery cabinets with charger communicate with their connected fire alarm control panel and are available for 4100ES/4010ES/4100U Series and 4010 Series 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-nippled 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
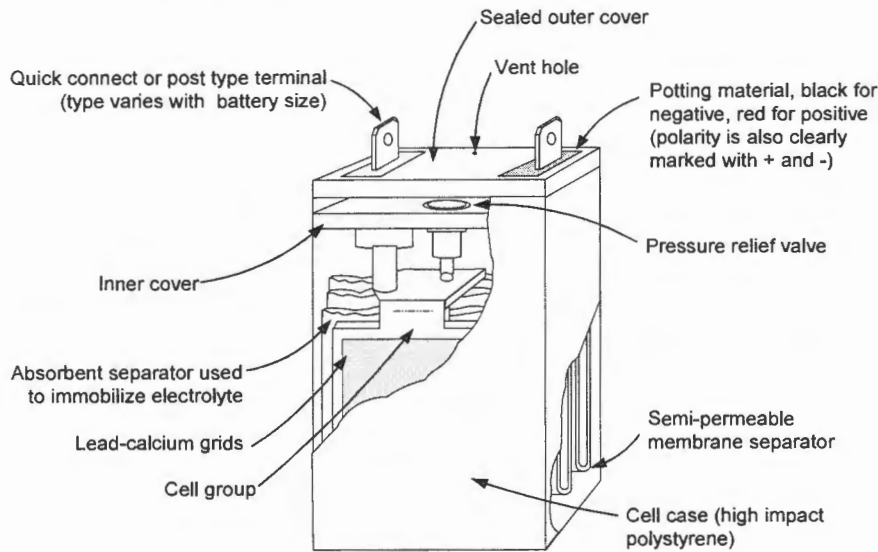
Battery Details *(Continued)*

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, ULC, 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 Fire Protection Products.

S2081-0006-20 1/2012

Battery Construction Reference

Actual appearance will vary with battery size.

Sealed outer cover

Vent hole

Quick connect or post type terminal
(type varies with battery size)

Potting material, black for
negative, red for positive
(polarity is also clearly
marked with + and -)

Inner cover

Pressure relief valve

Absorbent separator used
to immobilize electrolyte

Lead-calcium grids

Semi-permeable
membrane separator

Cell group

Cell case (high impact
polystyrene)

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" (229 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 for 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)

S2081-0006-20 1/2012

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)									
		4003EC	4004R	4005	4006 & 4008	4009 (all models)	4010	4010ES	4100ES/ 4100U	4100 & 4120 (2, 4 or 6-Unit)	4020 (2, 4 or 6-Unit)
2081-9272	6.2 Ah	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2081-9274	10 Ah	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2081-9288	12.7 Ah	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2081-9275	18 Ah	Ext	Note 3	✓	Ext	Ext	Note 2	✓	✓	✓	✓
2081-9287	25 Ah	Ext	Note 3	Ext	Ext	NA	✓	✓	✓	✓	Ext
2081-9271 rectangular	33 Ah	Ext	Note 3	Ext	NA	NA	Note 3	✓	✓	Ext	Note 4
2081-9276 "square"	33 Ah	Ext	Note 3	Ext	NA	NA	Note 3	✓	✓	✓	Ext
2081-9296	50 Ah	NA	Note 3	NA	NA	NA	Note 3	Note 6	2 or 3 bay	Ext	Ext
2081-9279	110 Ah	Requires external battery cabinet, compatible with 4100ES, 4010ES, 4100, and 4120 Series only									

✓ = 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:
1. 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.
2. 4010 Cabinets will accommodate 2081-9275, 18 Ah batteries, but will not allow bottom entry conduit.
3. Use 4081 series companion cabinet and charger, refer to page 4.
4. 4020 Cabinets will accommodate 2081-9271, 33 Ah batteries, but will not allow bottom entry conduit.
5. Some control panel models are listed for battery replacement reference only.
6. For 2 bay international applications only, 50 Ah batteries will fit in the cabinet.

External Battery Cabinet Compatibility Reference

Battery Cabinets without Chargers (connects to charger in panel)

Cabinet	Panel Compatibility	Battery					
		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
2081-9280	4100ES, 4010ES, 4100U, and 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	4100ES, 4010ES, and 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

S2081-0006-20 1/2012

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			
4003-9860	Beige	Multiple	Intended for use with 4003EC systems, for up to 33 Ah batteries (refer to 4003EC data sheet S4003-0002)	9-1/2" H x 24" W x 9" D (241 mm x 610 mm x 229 mm)
4009-9801*	Beige	UL and FM	For up to 25 Ah batteries*	External battery cabinet **without** charger, with locking solid door and battery harness; for close-nippled mounting to fire alarm control panel cabinet	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	For up to 33 Ah batteries		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.

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 x16-3/4" H x 8-3/8" D (572 mm x 425 mm x 213 mm)
4081-9302	Red		*Listings include: UL, ULC, FM, CSFM, and MEA (NYC), see data sheet for details*	

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 Listings include: UL and CSFM	Red	Battery cabinet for 2081-9279, 110 Ah batteries; includes 80 A battery fuse, terminals and battery connection cables; see data sheet for details	4010-9xxx Series	4010ES Main System Supply (MSS)	26-1/2" W x 12" H x 12" D (673 mm x 305 mm x 305 mm)
			4100-9xxx Series	4100ES/4100U System Power Supplies (SPS)	
			4100-5111 4100-5112 4100-5113	4100ES/4100U Additional SPS	
			4100-5125 4100-5126 4100-5127	4100ES/4100U Remote Power Supply (RPS)	
			4100-5120 4100-5121 4100-5122	4100ES/4100U TrueAlert Addressable Power Supply (TPS)	
			4100-0104 4100-0114 4100-0124	4100 Legacy power supplies	

4100ES/4010ES/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; **NOTE:** Required for ULC listed charging of 110 Ah batteries; *Listings include: UL, ULC, FM, CSFM, and MEA (NYC), see data sheet for details*	27-7/8" W x 13-1/2" H x 14-5/8" D (708 mm x 343 mm x 371 mm)
4081-9308	Red	220/230/240 VAC, multi-tapped		
4100-9837			Green LED Power-on Indicator Kit, **required for ULC listing,** mounts above access panel using knockout provided	

7788F/7744F Series

Wireless Fire Alarm Communicators for IntelliNet

Model 7788F

(UL) LISTED

### AES IntelliNet
CORPORATION | For Alarm Monitoring

Features – All models

- UL Listed commercial fire alarm applications.
- Meets NFPA 72 requirements
- Direct reporting to AES receiver across IntelliNet mesh radio network
- Each Subscriber acts as transmitter/receiver/repeater
- Simple and fast activation on network
- On board status LEDs for easy set up
- 8 programmable zone inputs – 7788F
- 4 programmable zone inputs and 4 reverse polarity inputs – 7744F
- Easy programming via AES handheld programmer or PC
- Rugged metal housing ideal for any commercial fire alarm application
- Narrowband compliant

Models 7788F/7744F-ULP with IntelliPro Fire also includes

- IntelliPro Fire transmits full alarm data from virtually any fire alarm panel digital communicator
- Alarm format support for Contact ID, Pulse, as well as Bosch Modem IIe and Modem IIIa
- Easy installation in AES subscriber
- Operates in applications with or without a phone line
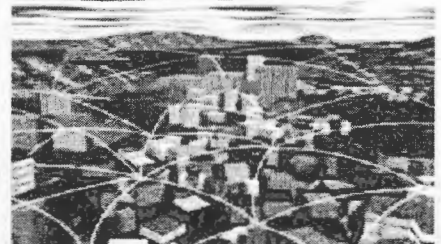
Wireless mesh networking is an innovative technology adopted by many industries with applications that need to communicate data over a large geographicv area with a high level of reliability at a low total cost of ownership.

The advanced design and 2-way communications capability provides easy installation, expansion, and management when compared to alternative communication methods, both wired and wireless.

Advanced Wireless Alarm Monitoring

As expensive dedicated landlines, required for UL864 compliance disappear, and the future of GSM for alarm transmission becomes increasingly uncertain, the AES IntelliNet mesh radio network continues to offer unmatched reliability and speed in delivering wireless alarm signals to a central station without any third-party fees or reliance on networks operated by companies outside the alarm industry. The 7788F/7744F Series Subscribers provide the wireless communications link between the fire alarm panel and the central station receiver. Ideal for most commercial fire alarm applications, each 7788F/7744F Series Subscriber is housed in a full-sized, red, locked steel cabinet and supports a range of alarm panel inputs, including EOL fire, EOL supervised, and direct voltage from the panel (non-fire applications).

Supervised Operation

AES Subscribers offer fully-supervised operation that includes monitoring of operating power (both primary AC and battery back-up) and the connection to the mesh radio network. Each subscriber "checks-in" with the AES central station receiver at least once every 24 hours. The supervision check-in time can be set to as often as needed for the application, as appropriate for the network. Because the central station operates the wireless network, there is no additional cost for air time to transmit supervisory signals.

Full Data Reporting from Alarm Panel Digital Dialer

Models 7788F-ULP and 7744F-ULP come equipped with an IntelliPro-Fire Full Data Module (AES-7794) which enables reporting of full alarm data captured from the alarm panel's digital communicator. IntelliPro-Fire supports most alarm communication formats including Contact ID, Pulse, as well as Bosch Modem IIe and Modem IIIa2 (when converted to Contact ID format).

15

7744F/7788F Series

≋AES | IntelliNet
CORPORATION | For Alarm Monitoring

Technical Specifications
7788F/7744F Series Subscriber

Dimensions
- 13.25"H x 8.5"W x 4.3"D
  (34cm H x 21.5cm W x 11cm D)

Weight
- Approx. 7 pounds (3.2 kilograms),
  excludes battery.

Radio Frequency
- Standard Frequency Range:
  450-470MHz
  (others available in 400-512MHz range)
- Output Power – 2 Watts

Antenna
- Included 2.5 db tamper resistant antenna
  mounts on enclosure
- Multiple remote antenna options available

Power Input
- 16.5VAC, 40VA transformer (not included)
  (AES 1640, ELK TRG1640, MG Electronics
  MGT1640 – UL Listed for use)

Backup Battery
- Will charge 12V battery up to 7.5 AH. Requires
  12VDC 7.5 AH battery for UL 864.

Alarm Signal Inputs (subscriber)
- 7788F – 8 individually programmable zones
- 7744F – 4 individually programmable zones
  and 4 reverse polarity inputs

UL Standards
- UL 864 Edition 9 – Standard for Control Units
  and Accessories for Fire Alarm Systems
- UL 365 – Standard for Police Station
  Connected Burglar Alarm Units and Systems
- UL 1681 – Standard for Central Station Burglar
  Alarm Units

**Antenna Cut / Communication
Trouble Output**
- Form C relay; fail secure;
  rated for 24 VDC 1A resistive

Reset Button
- Located on main circuit board.

Operating Temperature
- 0° to 50° C (32° to 122°F)

Storage Temperature
- –10° to 60° C (14° to 140°F)

Relative Humidity
- 0 to 85% RHC, Non Condensing

AES-7794 IntelliPro Fire
Packaged with 7744F-ULP and 7788F-ULP

Input / Output Connections
- RJ11 connection to AES subscriber for module
  data and power
- RJ11 connector for Handheld Programmer/PC
  programming
- RJ31X Telco connections - T and R both in
  and out via terminal strip and RJ45
- Alarm Panel digital communicator T and R
  both in and out via termina strip and RJ45
- Trouble output: Form C relay detects if
  Subscriber is off the network

Alarm Formats
- Support for Contact ID and Pulse formats as
  well as Modem IIe and Modem IIIa2 converted
  to CID

Size
- 2.8 x 5.0 inches (7.1cm x 12.7cm)

Power Requirements
- 12 VDC nominal - primary and backup power
  provided by the AES 7788F/7744F or other
  Subscriber

How to Order

Model	Description
7744F	4 Zone Fire Alarm Subscriber with 4 reverse polarity inputs
7744F-ULP	7744F Fire Alarm Subscriber with IntelliPro Fire full data module
7788F	8 Zone Fire Alarm Subscriber
7788F-ULP	7788F Fire Alarm Subscriber with IntelliPro Fire full data module

Optional Accessories

7041E	Subscriber Handheld Programmer
7794	IntelliPro Fire Full Data Module
1640	Plug-in Transformer: 16.5VAC, 40VA

*AES-IntelliNet™ is the industry leader in delivering high-quality mesh radio networks to the fire and
security industry in commercial, corporate, government, and educational applications with its broad line
of products and advanced network management tools. Users of AES-IntelliNet networks have gained
significant revenue, communications, and cost advantages while meeting the high standards of reliability
required for the fire and security industry. AES-IntelliNet alarm monitoring systems are deployed at
hundreds of thousands of locations in over 130 countries.*

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**For more information
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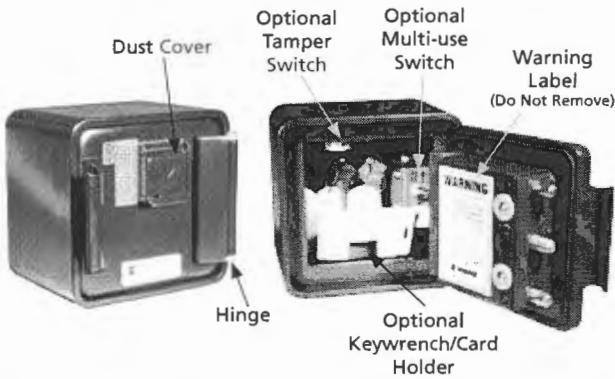Email info@aes-intellinet.com | Web www.aes-intellinet.com

Batteries

- Maintenance Free... no need to check specific gravity or add water
- Sealed Construction... ensures that no electrolyte leakage can occur from terminals or cases
- Long Cycle Life... over 1,000 discharge/recharge cycles
- Long Shelf Life... up to one year at an ambient temperature of 68°F (20° C)
- Heavy-Duty Grids... constructed of lead-calcium alloy to enhance performance and service life in both cyclic and floating applications - even in deep discharge conditions
- Operating Temperature Range... broad operating temperature range of 5° to 122°F (-15° to 50°C) permits flexible system designs and battery locations
- Position Flexibility & Leakage Free... sealed construction and use of absorptive mat separators permits battery operation in any position without loss of electrolyte or service life
- Long Float Life... 3 to 5 year float life under trickle charge
- High Recovery Capability... even after deep discharge
- Low Gas Generation... battery design effectively controls generation of gas and allows recombination within the battery of over 99% of gas generated during normal use
- Low Pressure Venting System... ensures that there is no excessive buildup of gas in the battery. Operating at 7-10psi (48-69kPa), the system automatically releases excess gas if pressure rises above normal. Resealing is automatic once pressure has returned to normal.

Model#	NOMINAL VOLTAGE (V)	RATED CAPACITY (AH)	MAXIMUM CHARGING CURRENT (A)	LENGTH	DIMENSIONS (inches/cm) WIDTH	TOTAL HEIGHT*	WEIGHT (lb/kg)
BD 1.2-6	6	1.2	0.36	3.82/9.7	0.95/2.4	2.32/5.9	0.66/0.3
BD 4-6 6	6	4.0	1.20	2.76/7.0	1.85/4.7	4.21/10.7	1.87/0.85
BD 7-6	6	7.0	2.10	5.95/15.1	1.34/3.4	3.98/10.1	2.95/1.34
BD 8.5-6	6	8.5	2.55	3.86/9.8	2.10/5.6	4.65/11.8	3.53/1.60
BD 12-6	6	12.0	3.60	5.95/15.1	1.97/5.0	3.98/10.1	4.63/2.10
BD 1.2-12	12	1.2	0.36	3.82/9.7	1.69/4.3	2.32/5.9	1.32/0.60
BD 2-12	12	2.0	0.60	7.01/17.8	1.38/3.5	2.64/6.7	2.12/0.96
BD 4-12	12	4.0	1.20	3.54/9.0	2.76/7.0	4.21/10.7	3.81/1.73
BD 7-12	12	7.0	2.10	5.95/15.1	2.56/6.5	3.98/10.1	5.86/2.66
BD 12-12	12	12.0	3.60	5.95/15.1	3.86/9.8	3.98/10.1	9.04/4.10
BD 17-12	12	17.0	5.10	7.13/18.1	2.99/7.6	6.58/16.7	13.36/6.06
BD 25-12	12	25.0	7.5	6.54/16.6	6.89/17.5	4.92/12.5	19.40/8.80

Knox-Vault® 4100 Series
SINGLE LOCK MODEL

High Security Commercial Key Vault

Optional Tamper Switch · Optional Multi-use Switch · Warning Label (Do Not Remove) · Dust Cover · Hinge · Optional Keywrench/Card Holder
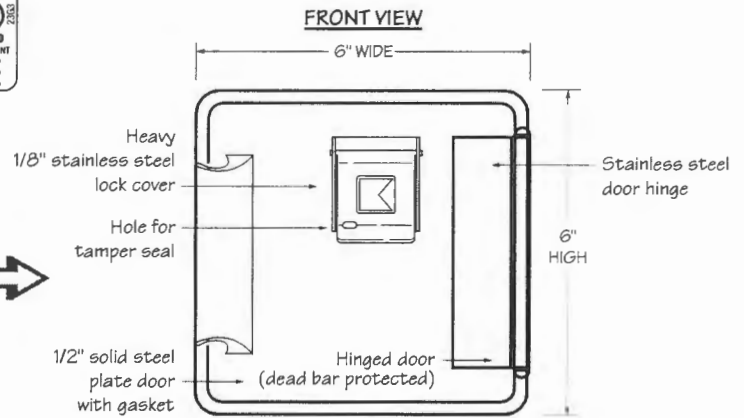
A new Knox-Box that's for those applications where a 3200 Series is too small yet the 4400 Series too large. The high security 4100 Series has a hinged-door allowing for the convenient single-handed operation. The 4100 Series Knox-Vault protects and stores building keys, access cards and the Knox FDC Keywrench allowing departments to keep a keywrench on site.
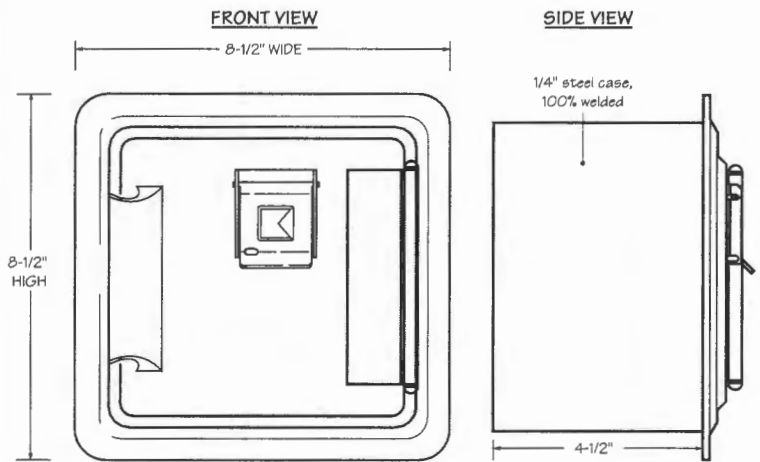
Features and Benefits

- Holds up to 24 keys in the large interior compartment
- Ensures high security with UL listed Medeco lock(s)
- Includes Knox-Coat® that is four times better than standard powder coat
- Resists moist conditions with a weather resistant silicone door gasket
- Colors: Black, Dark Bronze or Aluminum
- Weight: Surface mount - 17 lbs.
  Recessed mount - 19 lbs.

Options

- Alarm Tamper Switches (U/L listed)
- Recessed Mounting Kit (RMK) for recessed models only
- Dual lock configuration
- Access card holder
- Keywrench holder

4100 Surface Mount

FRONT VIEW — 6" WIDE — 6" HIGH
Heavy 1/8" stainless steel lock cover · Hole for tamper seal · 1/2" solid steel plate door with gasket · Stainless steel door hinge · Hinged door (dead bar protected)

4100 Recessed Mount

FRONT VIEW 8-1/2" WIDE, 8-1/2" HIGH · SIDE VIEW 1/4" steel case, 100% welded, 4-1/2"

Ordering Specifications

To ensure procurement and delivery of the 4100 Series Knox-Vault, it is suggested that the following specification paragraph be used:

KNOX-VAULT surface/recessed mount, with/without UL Listed tamper switches. 1/4" plate steel housing, 1/2" thick solid steel door with interior silicone gasket seal. Lock UL listed. Lock has 1/8" thick stainless steel dust cover with tamper seal mounting capability. Vault has anti-theft re-locking mechanism with drill resistant hard-plate lock protector.

Exterior Dimensions: Surface mount – 6"H x 6"W x 4 1/2"D
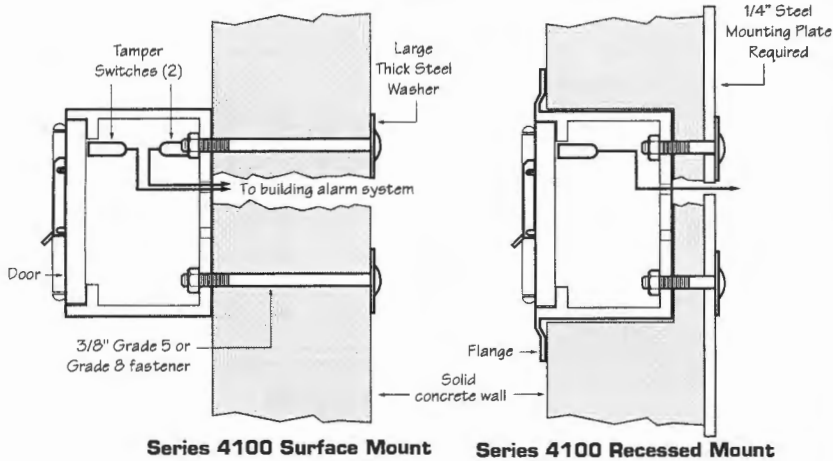Recessed mount – 8 1/2"H x 8 1/2"W x 4 1/2"D
Lock: UL Listed. Double-action rotating tumblers and hardened steel pins accessed by a proprietary coded biased cut key.
Finish: Knox-Coat® proprietary finishing process
Finish Color - Black, Dark Bronze or Aluminum
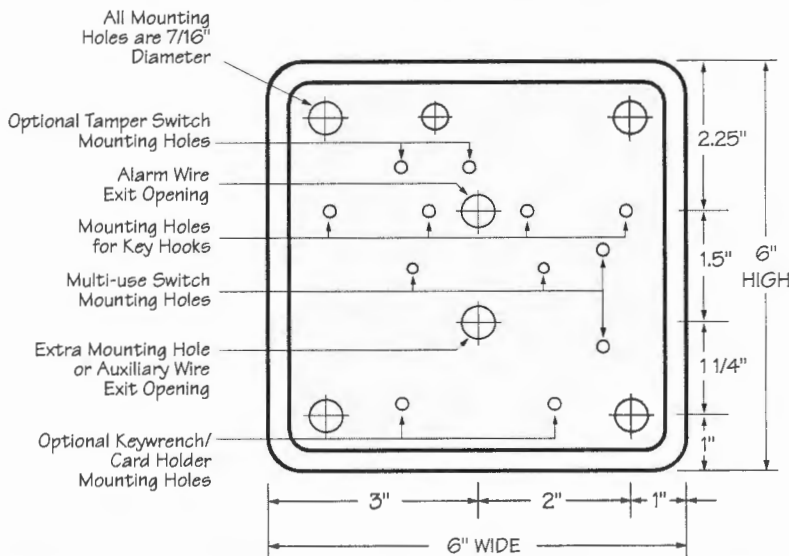P/N: 4100 Series Knox-Vault (mfr's cat. ID)
Mfr's Name: **KNOX COMPANY**

KNOX COMPANY · 1601 W. Deer Valley Road, Phoenix, AZ 85027 · (800) 552-5669 · (623) 687-2300 · Fax (623) 687-2299 · Web: www.knoxbox.com · E-mail: info@knoxbox.com

19

KNOX®
Serving Fire Departments Since 1975

Suggested minimum mounting height
6 feet above ground

Tamper Switches (2)

Large Thick Steel Washer

To building alarm system

Door

3/8" Grade 5 or Grade 8 fastener

1/4" Steel Mounting Plate Required

Flange

Solid concrete wall

Series 4100 Surface Mount   **Series 4100 Recessed Mount**

INSIDE VIEW

All Mounting Holes are 7/16" Diameter

Optional Tamper Switch Mounting Holes

Alarm Wire Exit Opening

Mounting Holes for Key Hooks

Multi-use Switch Mounting Holes

Extra Mounting Hole or Auxiliary Wire Exit Opening

Optional Keywrench/ Card Holder Mounting Holes

2.25"

1.5"   6" HIGH

1 1/4"

1"

3"   2"   1"

6" WIDE

Attention: KNOX-BOX® key box is a very strong device that MUST be mounted properly to ensure maximum security and resist physical attack.

Knox® Rapid Entry System
The Knox Company manufacturers a complete line of high security products including Knox-Box key boxes, key vaults, cabinets, key switches, padlocks, locking FDC caps, plugs and electronic master key security systems. For more information or technical assistance, please call Customer Service at 1-800-552-5669.

Recessed Mounting Kit

The 4100 Recessed Mounting Kit (RMK) is used for recessed models only. It contains a shell housing and mounting hardware to be cast-in-place in new concrete or masonry construction. After construction is completed, the Knox-Vault mounts inside the recessed shell housing. The RMK may only be used in new concrete or masonry construction.

Installation In Cast Concrete
The optional Recessed Mounting Kit is for use in new concrete or masonry construction only. The kit includes a shell housing and mounting hardware to be cast-in-place. The KNOX-VAULT is mounted into the shell housing after construction is completed.
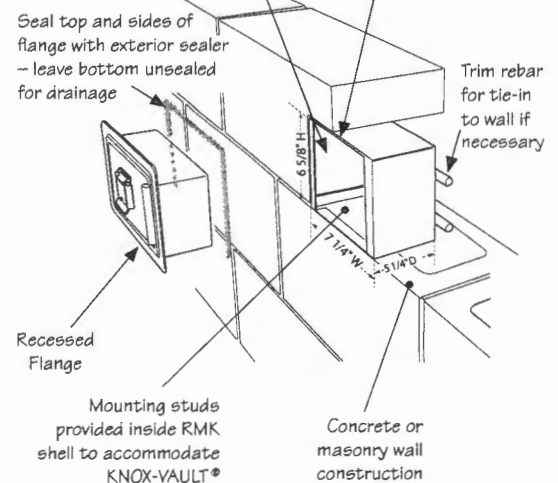
RMK Exterior Dimensions
6 5/8" H x 7 1/4" W x 5 1/4" D

IMPORTANT: Care should be taken to insure that the front of the RMK shell housing, including the cover plate and screw heads, is flush with the finish wall. The RMK must be plumbed to insure vertical alignment of the vault.

Recessed Mounting Using Recessed Mounting Kit (RMK)

RMK shell is mounted in wall during new construction

KNOX-VAULT® mounts inside RMK shell after completion of construction

Seal top and sides of flange with exterior sealer – leave bottom unsealed for drainage

Trim rebar for tie-in to wall if necessary

Recessed Flange

Mounting studs provided inside RMK shell to accommodate KNOX-VAULT®

Concrete or masonry wall construction

KNOX COMPANY • 1601 W. Deer Valley Road, Phoenix, AZ 85027 • (800) 552-5669 • (623) 687-2300 • Fax (623) 687-2299 • Web: www.knoxbox.com • E-mail: info@knoxbox.com

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MKT-KBSPEC-0143-B

20

FAD

Fire Alarm Documents

FIRE ALARM DOCUMENTS
Records / Programs / Software

The FAD is the perfect fit to meet the demanding code requirements today. NFPA 72 10.18.2.2.1.8 states that a cabinet must be "prominently labeled 'FIRE ALARM DOCUMENTS'."

This durable 16 gauge steel enclosure with a solid piano hinge and key lock will keep all of your code required documents in one safe place. With a 2GB USB flash drive it stores your fire alarm software safely and securely eliminating the occurrences of the software not being on site when technicians arrive to service the system. Along with your fire alarm software you can store your test & inspection documents, service records, manuals & as built drawings for the system. Using a standard USB B connector it allows you to plug in with any standard USB printer cable to upload or download information.

The FAD is designed to hold critical manuals and documents with a durable steel sleeve. It has designated hooks to organize key rings and hold important business cards for easy access and reference. Inside the cover it has a organized note table that allows for documentation for passwords and other critical system information. The steel sleeve can be easily removed to hold a 1.5" three ring binder.

The innovation of a single gang cutout inside the box to implement the Infinity line products with conduit knockout access enables you to provide other system functions for test and inspection. See the complete Infinity product line from Space Age Electronics for single gang electrical product solutions.

Standard Features:

- Installed with a 2 gig digital flash drive with USB B connector
- 2 Key ring hooks to hold system keys
- Business card holder for key contacts
- Overall Dimensions are 12" x 13" tall and 2 ¼ deep
- 16 gauge steel box and cover for security
- Durable powercoat baked on finish other colors available
- Standard ¾"cat 30 key lock other lock assemblies available
- Solid stainless steel piano hinge
- Permanently screened white ink 1" high "Fire Alarm Documents"
- Legend sheet for passwords and system information

ISO 9001
REGISTERED
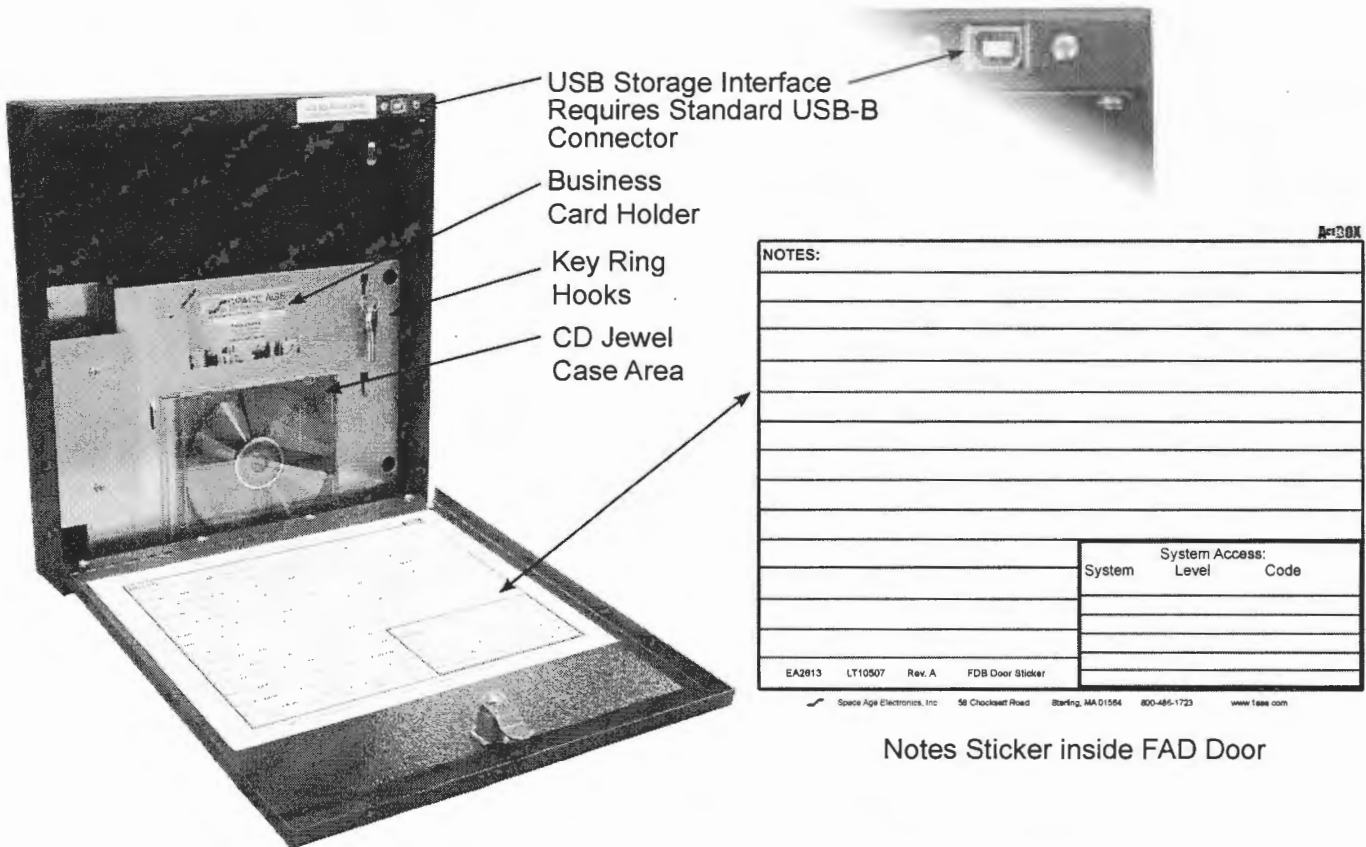COMPANY

ADA

NFPA

Made In U.S.A.

Space Age Electronics, Inc.   2009
ED0549   LT10559   Rev.C   1/2

No Excuses, Just Solutions!

Specifications:

The Fire Alarm Document Box (FAD) shall be constructed of 16 gauge cold rolled steel, it shall have a red powder coat epoxy finish. The cover shall be permanently screened with 1" high lettering "FIRE ALARM DOCUMENTS" with indelible ink. The access door shall be locked with a ¾" barrel lock and the hinge shall be a solid width 12" stainless steel piano hinge. The FAD enclosure will supply 4 wall mounting holes inside. Inside the enclosure a removable steel sleeve that will accommodate standard 8 ½ x 11 manuals and loose document records that will be protected within the enclosure. A legend sheet permanently attached to the door for system passwords and critical information and inspection notes. The FAD will have permanently and securely mounted inside a minimum of 2GB's digital flash memory drive with a standard USB B connector for uploading and downloading information. The drive shall not be accessible without tools to any person whom gains access to the records. The enclosure shall also provide 2 key ring holders with a location to mount standard business type cards for key contact personell.

USB Storage Interface
Requires Standard USB-B
Connector

Business
Card Holder

Key Ring
Hooks

CD Jewel
Case Area

NOTES:

System Access:
System   Level   Code

EA2613   LT10507   Rev. A   FDB Door Sticker

Space Age Electronics, Inc.   56 Chocksett Road   Sterling, MA 01564   800-486-1723   www.1sae.com

Notes Sticker inside FAD Door

Ordering Information:
Part #   Description

➡ **SSU00685 Fire Alarm Storage Cabinet RED**

SSU00686 Custom screening with your Logo

Check out our Infinity line eFAD single gang 2 Gig digital storage solutions (IAMEFAD)

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

No Excuses, Just Solutions!

Multi-Application Peripherals

IDNet or MAPNET II Communicating Devices
Addressable Manual Stations

Features

Individually addressable manual fire alarm stations with:

- Power and data supplied via IDNet or MAPNET II addressable communications using a single wire pair
- Operation that complies with ADA requirements
- The NO GRIP Single Action Station and Retrofit Kit are available with a more easily operated pull lever for applications where anticipated users may find the standard station lever difficult to activate
- Pull lever that protrudes when alarmed
- Break-rod supplied (use is optional)
- Models are available with single or double action (breakglass or push) operation
- UL listed to Standard 38

Compatible with the following Simplex® control panels:

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

Compact construction:

- Electronics module enclosure minimizes dust infiltration
- Allows mounting in standard electrical boxes
- Screw terminals for wiring connections

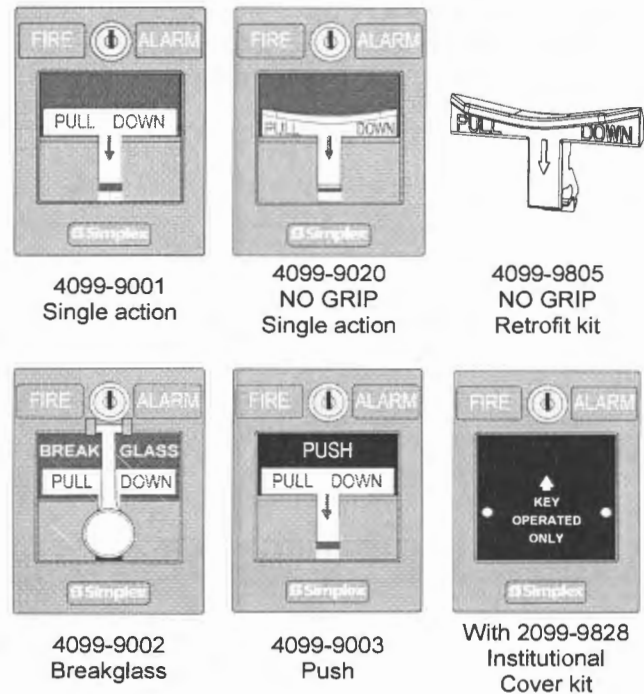**Tamper resistant reset key lock** (keyed same as Simplex fire alarm cabinets)

Multiple mounting options:

- Surface or semi-flush with standard boxes or matching Simplex boxes
- Flush mount adapter kit
- Adapters are available for retrofitting to commonly available existing boxes

Description

The Simplex addressable manual station combines the familiar Simplex manual station housing with a compact communication module that is easily installed to satisfy demanding applications. Its integral individual addressable module (IAM) constantly monitors status and communicates changes to the connected control panel via IDNet or MAPNET II communications wiring.

4099-9001
Single action

4099-9020
NO GRIP
Single action

4099-9805
NO GRIP
Retrofit kit

4099-9002
Breakglass

4099-9003
Push

With 2099-9828
Institutional
Cover kit

Operation

Activation of the 4099-9001 single action manual station requires a firm downward pull to activate the alarm switch. Completing the action breaks an internal plastic break-rod (visible below the pull lever, use is optional). The use of a break-rod can be a deterrent to vandalism without interfering with the minimum pull requirements needed for easy activation. The pull lever latches into the alarm position and remains extended out of the housing to provide a visible indication.

Single Action NO GRIP Station 4099-9020. For applications such as California Building Code, Title 24, which requires "Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist" the model 4099-9020 station provides a more easily operated pull lever compared to standard stations. Retrofit of existing stations is available using the 4099-9805 Retrofit kit.

Double Action Stations (Breakglass) require the operator to strike the front mounted hammer to break the glass and expose the recessed pull lever. The pull lever then operates as a single action station.

Double Action Stations (Push Type) require that a spring loaded interference plate (marked PUSH) be pushed back to access the pull lever of the single action station.

Station reset requires the use of a key to reset the manual station lever and deactivate the alarm switch. (If the break-rod is used, it must be replaced.)

Station testing is performed by physical activation of the pull lever. Electrical testing can be also performed by unlocking the station housing to activate the alarm switch.

S4099-0001-8 11/2011

Addressable Manual Stations, Red Housing with White Letters and White Pull Lever

Model	Description	Housing	Pull Lever	Listings
4099-9001	Single action, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM, MEA
4099-9001CB	Single action, Bilingual English and French	FEU FIRE	TIREZ PULL	ULC, FM
4099-9001CF	Single action, French	ALARME FEU	ABAISSEZ	
4099-9002	Double action, Breakglass operation, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM, MEA
4099-9003	Double action, Push operation, English			
4099-9020	Single action NO GRIP operation, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM

Accessories

Model	Description	
2975-9178	Surface mount steel box, red	Refer to page 3 for dimensions
2975-9022	Cast aluminum surface mount box, red	
2099-9813	Semi-flush trim plate for double gang switch box, red	Typically for retrofit, refer to page 4
2099-9814	Surface trim plate for Wiremold box V5744-2, red	
2099-9819	Flush mount adapter kit, black	Refer to page 4 for details
2099-9820	Flush mount adapter kit, beige	
2099-9803	Replacement breakglass	
2099-9804	Replacement break-rod	
2099-9828	Institutional cover kit for field installation on 4099-9001	
4099-9805	Retrofit Kit for field conversion of a single action station to a NO GRIP station; refer to Installation Instructions 579-1007 for details	

Specifications (refer to Installation Instructions 574-332 for additional information)

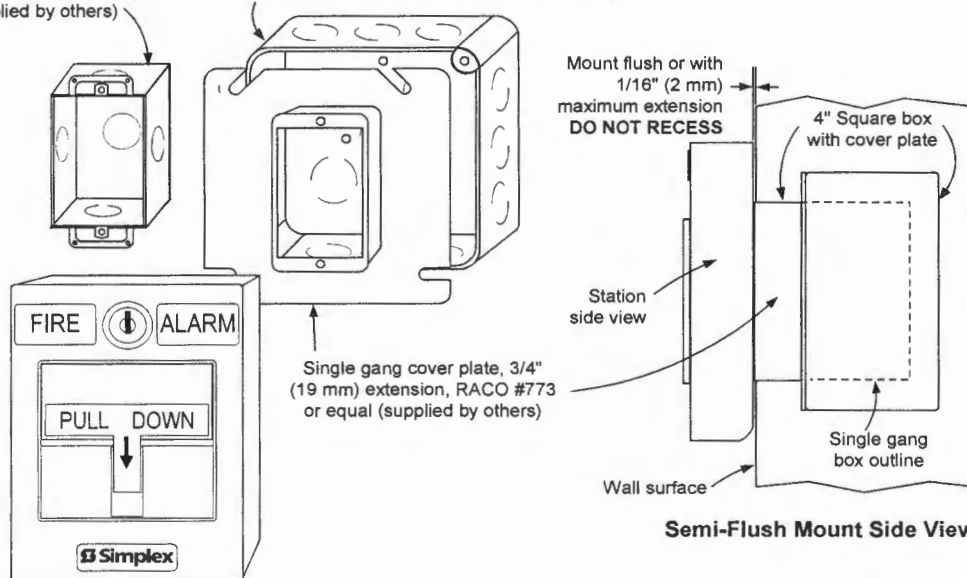|	
Power and Communications	IDNet or MAPNET II communications, 1 address per station
Address Means	DIP switch, 8 position
Wire Connections	Screw terminal for in/out wiring, for 18 to 14 AWG wire
UL Listed Temperature Range	32° to 120° F (0° to 49° C) intended for indoor operation
Humidity Range	Up to 93% RH at 100° F (38° F)
Housing Color	Red with white raised lettering
Material	Housing and pull lever are Lexan polycarbonate or equal
Pull Lever Color	White with red raised lettering
Housing Dimensions	5" H x 3-3/4" W x 1" D (127 mm x 95 mm x 25 mm)

Addressable Manual Station Semi-Flush Mounting

Single Gang Box Mount
Single gang box, 2-1/2" deep (64 mm), RACO #500 or equal (supplied by others)
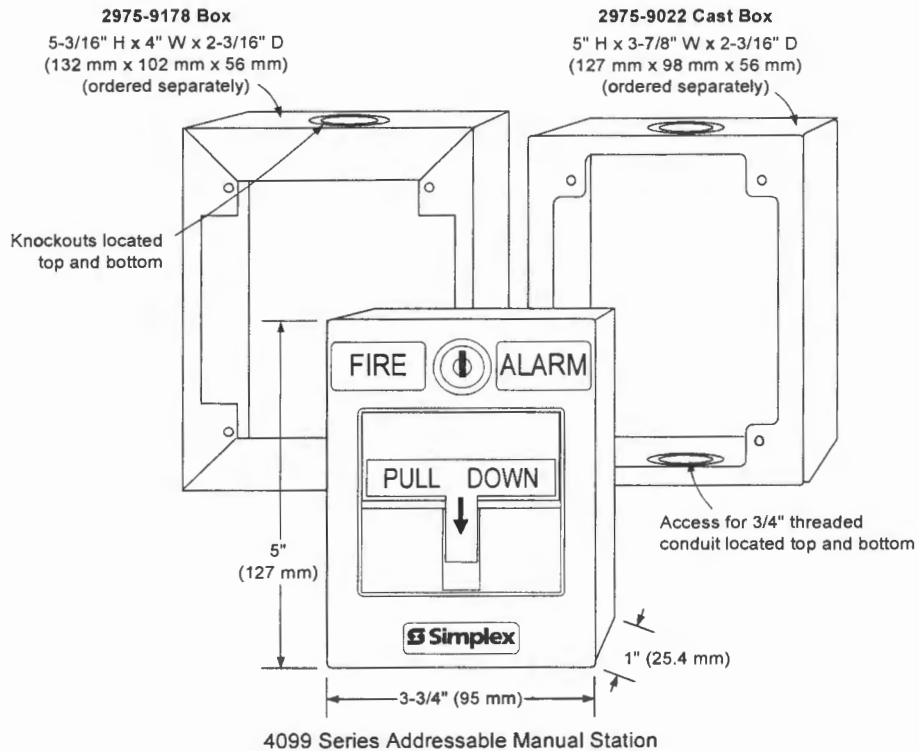
4" Square Box Mount
4" (102 mm) square box, 2-1/8" (54 mm) minimum depth, RACO #231 or equal (supplied by others)

Mount flush or with 1/16" (2 mm) maximum extension
DO NOT RECESS

4" Square box with cover plate

FIRE ALARM
PULL DOWN
Simplex

Single gang cover plate, 3/4" (19 mm) extension, RACO #773 or equal (supplied by others)

Station side view

Wall surface

Single gang box outline

Semi-Flush Mount Side View

Preferred Mounting. For surface mounting of these addressable manual stations, the preferred electrical boxes are shown in the illustration to the right.

Additional Mounting Reference. Refer to page 4 for Wiremold box mounting compatibility.

2975-9178 Box
5-3/16" H x 4" W x 2-3/16" D
(132 mm x 102 mm x 56 mm)
(ordered separately)

2975-9022 Cast Box
5" H x 3-7/8" W x 2-3/16" D
(127 mm x 98 mm x 56 mm)
(ordered separately)

Knockouts located top and bottom

FIRE (①) ALARM

PULL DOWN

S Simplex

5" (127 mm)

3-3/4" (95 mm)

1" (25.4 mm)

Access for 3/4" threaded conduit located top and bottom

4099 Series Addressable Manual Station

Surface Mount Side View with Internal Detail

Field wiring (shown for reference)

1-1/4" (32 mm)

Simplex 2975-9178 box (shown for reference)

Address setting under resealable label (accessible with cover open)

2-5/8" (67 mm)

Station cover hinges open for installation access
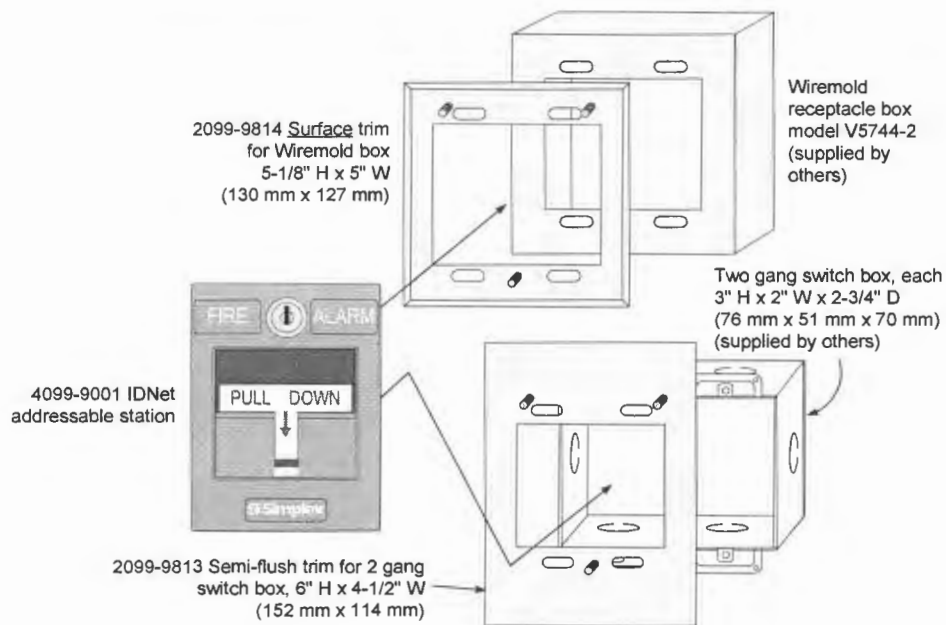
Switch wiring (prewired)
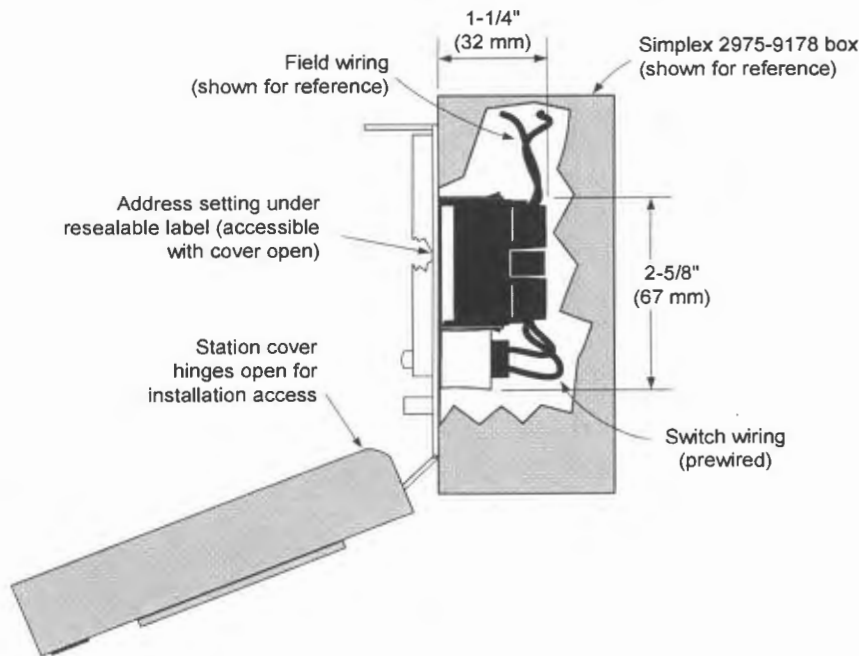
Application Reference

Refer to NFPA 72, the *National Fire Alarm and Signaling Code*, and all applicable local codes for complete requirements for manual stations. The following summarizes the basic requirements.
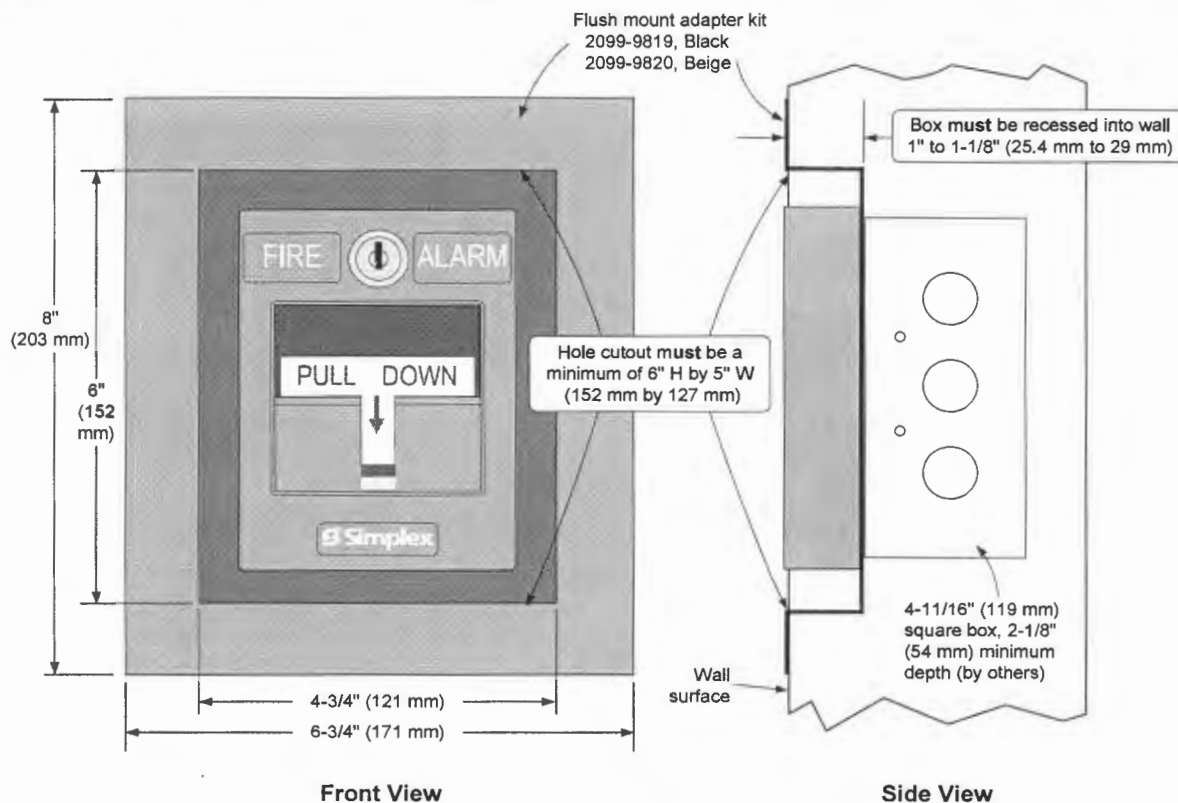
1. Stations shall be located in the normal path of exit and distributed in the protected area such that they are unobstructed and readily accessible.

2. Mounting shall be with the operable part not less than 3-1/2 ft (1.1 m) and not more than 4-1/2 ft (1.37 m) above floor level.

3. At least one station shall be provided on each floor. Additional stations shall be provided to obtain a travel distance not more than 200 ft (61 m) to the nearest station from any point in the building.

4. When manual station coverage appears limited in any way, additional stations should be installed.

3

Addressable Manual Station, Additional Mounting Information

For retrofit and new installations, additional compatible mounting boxes and the required adapter plates are shown in the illustration to the right.

2099-9814 Surface trim for Wiremold box 5-1/8" H x 5" W (130 mm x 127 mm)

Wiremold receptacle box model V5744-2 (supplied by others)

4099-9001 IDNet addressable station

FIRE (1) ALARM

PULL DOWN

Simplex

Two gang switch box, each 3" H x 2" W x 2-3/4" D (76 mm x 51 mm x 70 mm) (supplied by others)

2099-9813 Semi-flush trim for 2 gang switch box, 6" H x 4-1/2" W (152 mm x 114 mm)

Addressable Manual Station, Flush Mounting Information

Flush mount adapter kit 2099-9819, Black 2099-9820, Beige

Box must be recessed into wall 1" to 1-1/8" (25.4 mm to 29 mm)

FIRE (1) ALARM

PULL DOWN

Simplex

8" (203 mm)

6" (152 mm)

Hole cutout must be a minimum of 6" H by 5" W (152 mm by 127 mm)

4-11/16" (119 mm) square box, 2-1/8" (54 mm) minimum depth (by others)

Wall surface

4-3/4" (121 mm)

6-3/4" (171 mm)

Front View

Side View

S.Simplex