

### Features

#### Basic System includes:

- Capacity for up to 1000 addressable IDNet points, and up to 127 VESDA SLI points, with up to 2000 points of Annunciation and up to 20 internal and external card addresses
- Color-coded operator interface with 2 x 40 Super-twist LCD display and programmable control keys and LEDs
- CPU assembly includes dedicated compact flash memory for on-site system information storage and convenient Ethernet service port access
- 8 A power supply with up to 2 A 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 single bay control cabinet, 50 Ah max with 4100-0650 battery shelf in two bay control cabinet)
- 4 on-board Class A or B, 3 A NACs and one programmable auxiliary relay output rated for 2 A @ 32 VDC
- 250 point addressable IDNet 2 dual loop communications that support TrueAlarm analog sensors and IDNet communications monitoring and control devices with an **electrically isolated output channel** allowing use with either shielded or unshielded, twisted or untwisted single pair wiring; **and providing dual short circuit isolating output loops**
- Remote annunciator module support via RUI (Remote Unit Interface) communications port, either Class B or Class A operation
- 48 LED panel mount annunciation provides 40 Red and 8 Yellow pluggable LEDs (select models), optional LED kits are available for custom LED configurations
- Available with InfoAlarm Command Center expanded content user interface (two bay cabinet required)

#### Optional Main System Supply and door mounted modules, and other options include:

- City Connect (with or without disconnect switches)
- Alarm Relay Module
- Battery brackets for seismic area protection (see page 2)

#### Optional block space modules include:

- Fire Alarm Network Interface Card for 4120/4100 Peer-to-Peer network communications, supports either Class B or Class X operation
- Ethernet connectivity options include Building Network Interface Module (BNIC), SafeLINC Internet Interface, and BACpac Ethernet Portal
- 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
- Physical Bridge Network Modules
- Additional IDNet and MX Loop addressable device modules



1-Bay Cabinet



1-Bay Cabinet with LED Annunciation



2-Bay Cabinet

4010ES Panel Type Reference

#### Compatible with Simplex® remotely located:

- 4098-9757 QuickConnect2 and legacy 4098-9710 QuickConnect TrueAlarm smoke sensors
- 4003EC Small Voice Panels
- 4009 IDNet NAC Extenders (4009A)
- 4081 Series, 110 Ah Battery Chargers
- 4100-7400 Series Graphic Annunciators
- 4190 Series PC Annunciator
- 4190 Series Fiber Modems and Physical Bridges
- 4606-9102 Remote LCD Annunciator and 4100-9400 Series Remote InfoAlarm Command Centers, and 4602 Series Status Command Units (SCU) and Remote Command Units (RCU) Annunciators
- IP communicator compatibility

#### 4010ES Agency Listing:

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

\* See pages 5 and 6 for additional listing information. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

## 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. InfoAlarm Command Center options provide convenient expanded display content (detailed on data sheet S4010-0009).

## Panel Hardware

**The Master Controller and Main System Supply** are mounted in the upper section of the 4010ES cabinet.

**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.

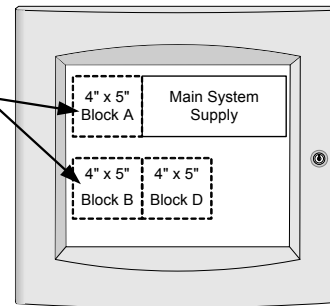
**Other 4010ES Options:** The 4010ES City Connect module or the optional Alarm Relay module mount directly to the Main System Supply. These options are mutually exclusive.

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

**The Battery Compartment** located in the bottom of the 4010ES cabinet accepts two batteries without interfering with expansion module space.

The illustrations below identify mounting locations optional 4010ES modules.

3 available 4"x5" block spaces for option cards  
2<sup>nd</sup> bay of two-bay cabinet has 8 additional  
4" x 5" block spaces for option cards  
(2 horizontal rows of 4 block spaces)  
Note: Some block spaces may be used by basic panel  
features (see pages 5 and 6 for available space)



Mounting Locations for Optional Modules, One-Bay Cabinet

## 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
- NACs are mounted directly on power supply assemblies providing minimized wiring loss, compact size, and readily accessible terminations
- 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
- Cabinet assembly is rated NEMA 1 and IP 30
- Cabinet assembly design has been seismic tested and is certified to IBC and CBC standards as well as to ASCE 7 categories A through F, requires battery brackets as detailed on data sheet S2081-0019

## 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

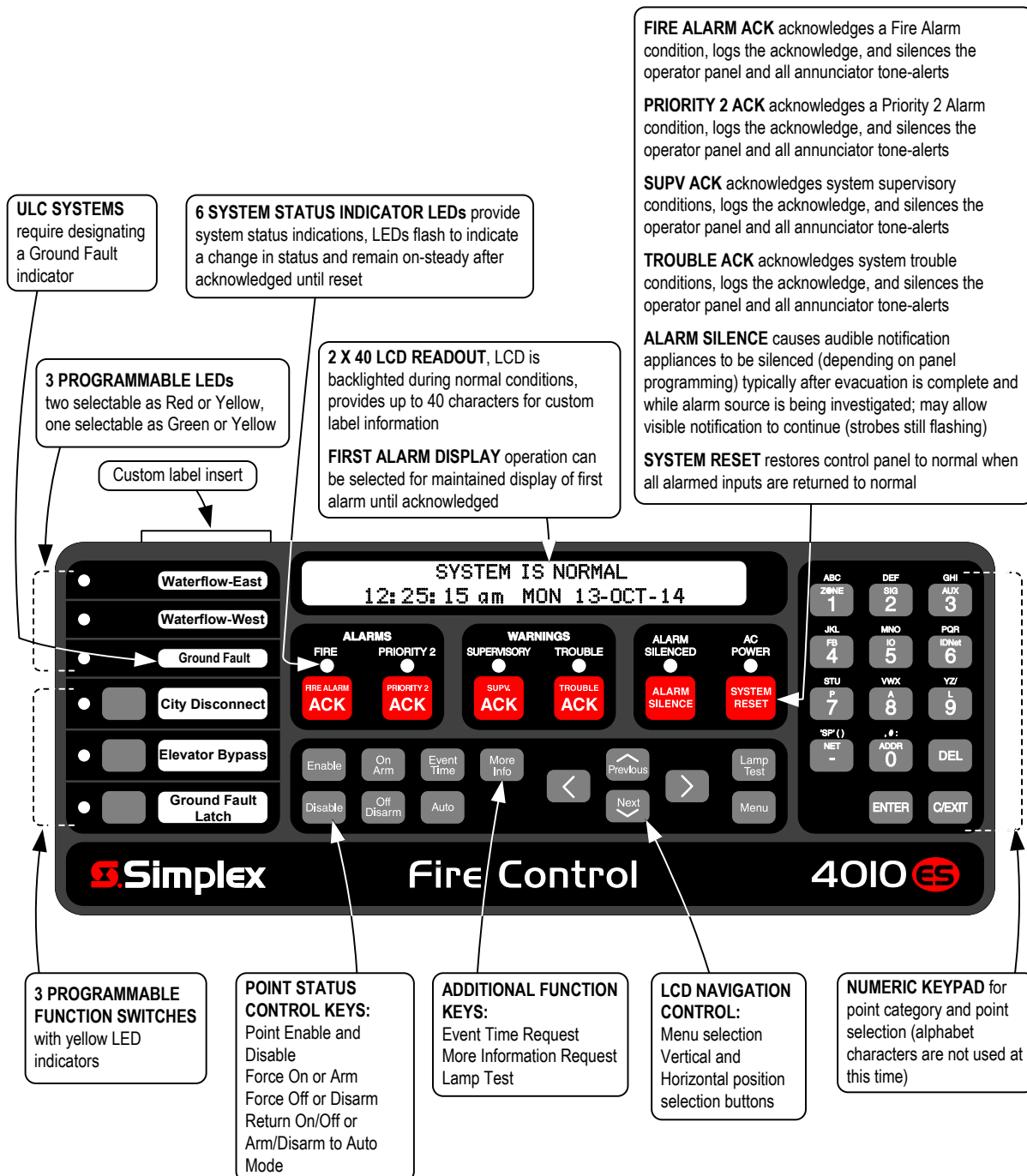
## Operator Interface Features

- Convenient an 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.



## 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 Addressable Channel Capacity.** The Main System Supply provides an electrically isolated IDNet 2 signaling line circuit (SLC) that supports up to 250 addressable monitor and control points intermixed on the same pair of wires. Additional 250 address IDNet 2+2 Modules with **four** short circuit isolating output loops are available. IDNet 2 and IDNet 2+2 Module SLCs are isolated from other system reference voltages to reduce common mode noise interaction with adjacent system wiring.

### IDNet 2 and IDNet 2+2 SLC Wiring Specifications

|  |                     |   |
|--|---------------------|---|
| Maximum Distance from Control Panel per Device Load        | 0 to 125<br>126-250 | 4000 ft (1219 m); 50 ohms<br>2500 feet (762 m); 35 ohms                       |
| Total Wire Length Allowed With "T" Taps for Class B Wiring |                     | Up to 12,500 ft (3.8 km);<br>0.60 µF  |
| Maximum Capacitance Between IDNet 2 Channels               |                     | 1 µF  |
| Wire Type and Connections                                  |                     | Shielded or unshielded,<br>twisted or untwisted wire*                         |
| Connections  |                     | Terminals for 18 to 12 AWG<br>(0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> ) |
| Installation Instructions                                  |                     | 579-989   |

Compatibility includes: IDNet communicating devices and TrueAlarm sensors *including* QuickConnect and QuickConnect2 sensors; see data sheet S4090-0011 for additional reference

\* Some applications 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 S4098-0052 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 10 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.

## 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
- Mass Storage allows job specific files to be stored 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 Class A operation for remote annunciation equipment

## Basic Panel Description

4010ES panels include:

- An Operator Interface, Master Controller with 2GB Compact Flash, IDNet 2 dual loop communications that provides Class B or Class A operation for up to 250 addressable IDNet points, with dual short circuit isolating loop outputs
- 8 A power supply with up to 2 A of auxiliary power, 110 Ah (UL)/50 Ah (ULC) battery charger (33 Ah max in 1 bay cabinet, 50 Ah max with 4100-0650 battery shelf in two bay control cabinet); 4 Class A or Class B NACs rated @ 3 A each for Special Application Appliances, selectable for synchronized strobe, or SmartSync horn/strobe operation over two wires; and 2 A for Regulated 24 DC operation; 1 programmable auxiliary relay rated for 2 A @ 32 VDC
- 1 RUI Class B or Class A communications port for remote annunciation devices, cabinet and door.

Support is for 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).

## 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 Model Selection - 1 Bay Panels

**Note:** Supervisory and Alarm current specifications are for determining battery standby requirements. Current specifications include an active RUI channel. Models with an IDNet channel include 20 IDNet device LEDs activated in alarm. Models with MX communications include module base current. Actual IDNet or MX channel device current is not included, refer to page 6 for details. For models with 48 LED Annunciation, alarm also includes 24 LEDs activated.

| Model*                   | Panel Color | Language & Voltage          | Listing     | Features   | Supv. Current | Alarm Current | Available Option Blocks |   |        |        |
|--------------------------|-------------|-----------------------------|-------------|--|---------------|---------------|-------------------------|---|--------|--------|
| 4010-9401<br>4010-9401BA | Red         | English<br>120 VAC          | UL, FM      | Basic panel with 2x40 LCD Operator Interface and (1) Two-loop Isolated IDNet 2 Communications Channel, Class A or Class B operation, with support for up to 250 addressable IDNet points | 316 mA        | 430 mA        | 3<br>4"x5"<br>blocks    |   |        |        |
| 4010-9402<br>4010-9402BA | Platinum    |                             |             |  |               |               |                         |   |        |        |
| 4010-9501<br>4010-9501BA | Red         | English<br>220 - 240<br>VAC | UL, FM      |  |               |               |                         |   |        |        |
| 4010-9502<br>4010-9502BA | Platinum    |                             |             |  |               |               |                         |   |        |        |
| 4010-9403                | Red         | English<br>120 VAC          | UL, ULC, FM |  |               |               |                         | Same features as above with 48 LED annunciation | 336 mA | 495 mA |
| 4010-9404                | Platinum    |                             |             |  |               |               |                         |   |        |        |
| 4010-9503BA              | Red         | English<br>220 - 240<br>VAC | UL          | Basic panel with 2x40 LCD Operator Interface and (1) MX Loop Channel Class A or B with support for up to 250 addressable MX Loop points  | 346 mA        | 415 mA        | 1<br>4"x5"<br>block     |   |        |        |

\* Products with suffix "BA" are assembled in the USA.

## Basic Panel Model Selection - 2 Bay Panels

**Note:** Supervisory and Alarm current specifications are for determining battery standby requirements. Current specifications include an active RUI channel. Models with IDNet channels include 20 IDNet device LEDs activated in alarm per channel. Models with MX communications include unloaded module current only. Actual IDNet or MX channel device current is not included, refer to page 6 for details.

| Model*                   | Panel Color | Language & Voltage          | Listings          | Features   | Available Option Blocks | Supv. Current | Alarm Current |
|--------------------------|-------------|-----------------------------|-------------------|--|-------------------------|---------------|---------------|
| 4010-9421BA              | Red         | English<br>120 VAC          | UL, FM            | Basic panel with 2x40 Operator Interface, (1) Two-loop isolated IDNet 2 Communications Channel and (1) Four-loop Isolated IDNet 2+2 Communications Channel Module, Class A or Class B operation, with support for up to 500 addressable IDNet points | 9<br>4"x5" blocks       | 391 mA        | 545 mA        |
| 4010-9521<br>4010-9521BA | Red         | English<br>220 - 240<br>VAC | UL, FM            |  |                         |               |               |
| 4010-9522                | Platinum    |                             |                   |  |                         |               |               |
| 4010-9425BA              | Red         | English<br>120 VAC          | UL,<br>ULC,<br>FM | Basic panel with InfoAlarm Operator Interface and (1) Two-loop Isolated IDNet 2 Communications Channel Class A or B with support for up to 250 addressable IDNet points  | 11<br>4"x5" blocks      | 398 mA        | 496 mA        |
| 4010-9426BA              | Platinum    |                             |                   |  |                         |               |               |
| 4010-9526BA              | Platinum    | English<br>220 - 240<br>VAC |                   |  |                         |               |               |
| 4010-9523BA              | Red         | English<br>220 - 240<br>VAC | UL                | Basic panel with 2x40 Operator Interface and (2) MX Loop Channels Class A or B with support for up to 500 addressable MX Loop points   | 7<br>4"x5" blocks       | 446 mA        | 515 mA        |
| 4010-9527BA              | Red         | English<br>220 - 240<br>VAC | UL                | Basic panel with InfoAlarm Operator Interface and (1) MX Loop Channel Class A or B with support for up to 250 addressable MX Loop points   | 9<br>4"x5" blocks       | 428 mA        | 481 mA        |

\* Products with suffix "BA" are assembled in the USA.

## Addressable Device Load Specifications for Battery Standby

| Addressable Channel   | Device Load                           | Supervisory Current | Alarm Current |
|---|---------------------------------------|---------------------|---------------|
| IDNet 2 and IDNet 2+2 Channel Device Currents (20 device LEDs in alarm are included with panel and module currents)<br>Supervisory = 0.8 mA per device<br>Alarm = 1 mA per device | With 250 Devices Add                  | 200 mA              | 250 mA        |
|   | With 125 Devices Add                  | 100 mA              | 125 mA        |
|   | With 50 Devices Add                   | 40 mA               | 50 mA         |
| MX Loop Card  | With 250 devices Add                  | 1.135 A             | 1.135 A       |
| 25V Regulator for MX Loop   | 4 A output Alarm, 2.5 A Standby Add   | 4.68 A              | 3.0 A         |
|   | 3.5 A output Alarm, 2.0 A Standby Add | 4.2 A               | 2.4 A         |
|   | 3.0 A output Alarm, 1.5 A Standby Add | 3.6 A               | 1.8 A         |
|   | 2.5 A output Alarm, 1.0 A Standby Add | 2.87 A              | 1.2 A         |
|   | 2.0 A output Alarm, 0.5 A Standby Add | 2.4 A               | 630 mA        |

## Block Space Option Card Selection

Note: Refer to diagrams on pages 2 and 9 for Option Module availability. Supervisory and Alarm current specifications consider no load on addressable channels except as noted (see addressable device load specifications for device load battery standby)

### Single Block Option Modules

| Model     | Features   | Supervisory Current         | Alarm Current               | Option Block Usage |         |
|-----------|--|-----------------------------|-----------------------------|--------------------|---------|
| 4010-9912 | Serial DACT; Note: Must mount in Block D under Main System Supply  | 30 mA                       | 40 mA                       | 1 Block (see note) |         |
| 4010-9908 | 4 Point Aux Relay Module   | 15 mA                       | 60 mA                       | 1 Block            |         |
| 4010-9916 | Voltage Regulator Module, 22.8 to 26.4 VDC (25 VDC nominal); isolated and resettable output; includes earth detection circuit and trouble relay for status monitoring  | 3 A maximum with 2.5 A load | 4.9 A maximum with 4 A load | 1 Block            |         |
| 4010-9918 | Dual RS-232 Module   | 60 mA                       | 60 mA                       | 1 Block            |         |
| 4010-9915 | BACpac Ethernet Portal Module; requires 4010-9918 RS-232 Module (no address required)  | 123 mA                      | 123 mA                      | 1 Block            |         |
| 4010-9901 | VESDA HLI  | 60 mA                       | 60 mA                       | 1 Block            |         |
| 4010-9929 | IDNet 2+2 Module, 250 point capacity; electrically isolated output with <b>four</b> short circuit isolating Class B or Class A output loops; alarm currents for 50 and above devices includes 20 device LEDs in alarm; see page 6 for individual device currents | No device                   | 50 mA                       | 60 mA              | 1 Block |
|           |  | 50 devices                  | 90 mA                       | 150 mA             |         |
|           |  | 125 devices                 | 150 mA                      | 225 mA             |         |
|           |  | 250 devices                 | 250 mA                      | 350 mA             |         |

### Dual Vertical Block (Flat) Modules

| Model       | Features   | Option Block Usage  | Supervisory Current | Alarm  |
|-------------|--|---|---------------------|--------|
| 4010-9928   | <b>For 1-Bay Panels Only:</b> Dual Vertical Block Card Mounting Kit, allows selecting two, dual Vertical Block (flat) modules from the list below; mounts at right angle to chassis (note block usage details) | 2 Vertical Blocks (mounts in top bay, block space A & B only)   | NA                  | NA     |
| 4010-9922   | Modular Network Interface Card (requires two media cards from below)   | 2 Vertical Blocks   | 30 mA               | 30 mA  |
| 4010-9818   | Network Media Card Wired   | N/A (mounts to 4010-9922)   | 55 mA               | 55 mA  |
| 4010-9819   | Network Media Card Fiber Optic   |   | 25 mA               | 25 mA  |
| 4010-9914   | Building Network Interface Card  | 2 Vertical Blocks   | 236 mA              | 236 mA |
| 4010-9923*  | SafeLINC Internet Interface  | 2 Vertical Blocks   | 115 mA              | 115 mA |
| 4010-9924*  | Modem Physical Bridge Class B  | 2 Vertical Blocks   | 193 mA              | 193 mA |
| 4010-9925*  | Modem Physical Bridge Class X  | 2 Vertical Blocks   | 246 mA              | 246 mA |
| 4010-9926** | TCP/IP Physical Bridge Class B   | 3 Block "L" Shape, requires 2 Vertical Blocks, <b>plus</b> adjacent right side lower Block (D, F, or H) | 196 mA              | 196 mA |
| 4010-9927** | TCP/IP Physical Bridge Class X   |   | 236 mA              | 236 mA |

### Additional Option Modules with Special Option Block Usage

| Model     | Features                                   | Option Block Usage   | Supervisory Current | Alarm               |
|-----------|--|--|---------------------|---------------------|
| 4010-9920 | 8 Zone Initiating Device Circuit - Class B | 2 Vertical Blocks (mother/daughter card, must mount top bay, left most blocks A & B) | 75 mA               | 195 mA              |
| 4010-9921 | 8 Zone Initiating Device Circuit - Class A |  |                     |                     |
| 4010-9917 | MX Loop Card supports up to 250 points     | 2 Vertical Blocks (not compatible with 4010-9928)                                    | 100 mA (no devices) | 100 mA (no devices) |

\* UL, ULC, and CSFM Listed. \*\* FM Approved only.

### Additional Panel Option Selection (block space is not used)

| Model     | Features  | Supervisory Current | Alarm Current | Mounting Requirements                                      |
|-----------|---|---------------------|---------------|--|
| 4010-9909 | City Connect Module w/ disconnect switches  | 20 mA               | 36 mA         | Select one maximum, mounts on Main System Supply, only one |
| 4010-9910 | City Connect Module   | 20 mA               | 36 mA         |  |
| 4010-9911 | Alarm Relay Module  | 15 mA               | 37 mA         |  |
| 4100-5128 | Battery Distribution Terminal Block, mounts to side of box, required when battery connection leaves the 4010ES box (also used in the 4100ES fire alarm control panel) |                     |               |  |

## Miscellaneous Accessories

### LED Kits

| Model     | 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  |
| 4100-0650 | Battery Shelf, required for 50 Ah batteries (2 Bay cabinets only) |

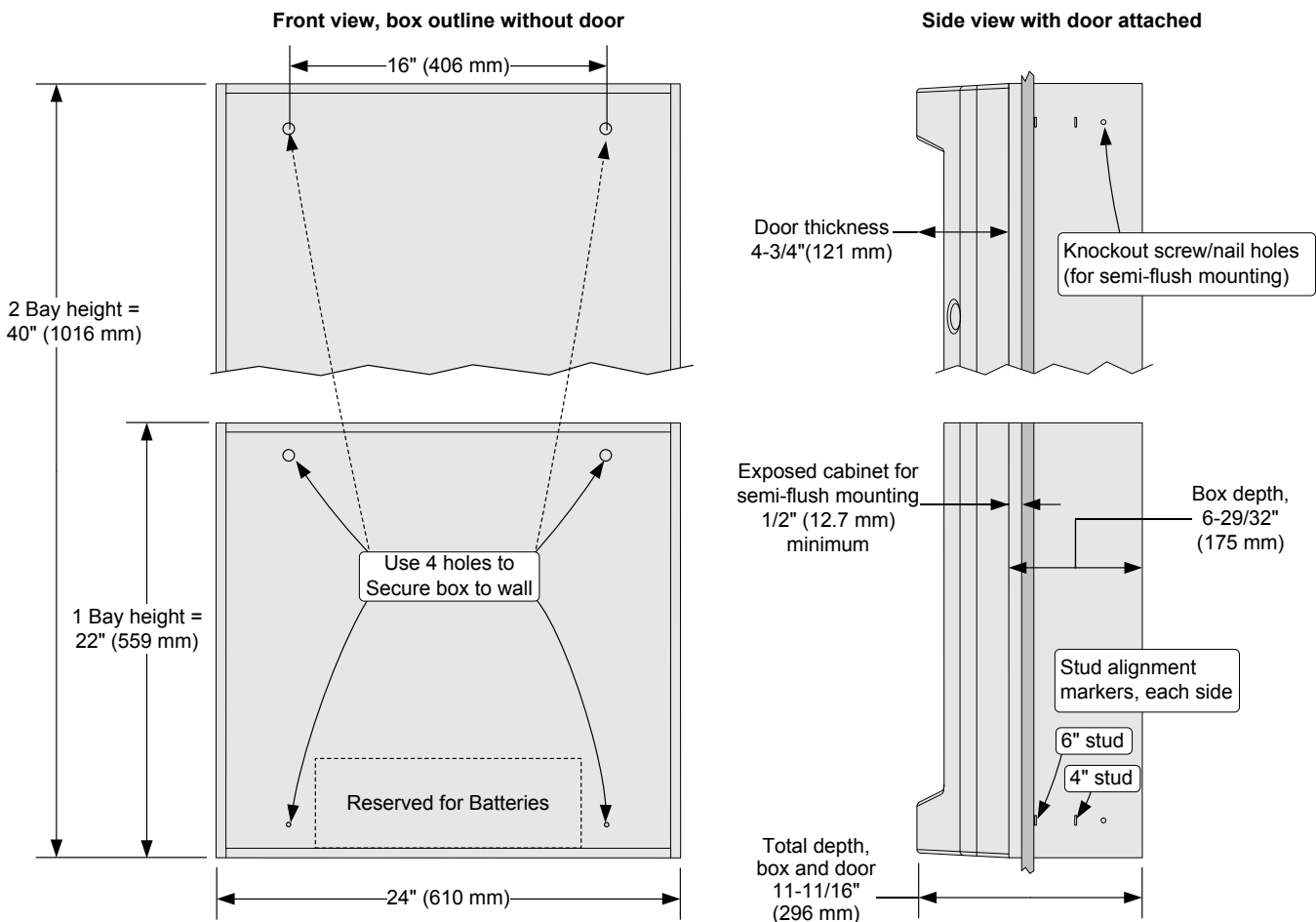
### End User Programming Tools

| Model     | 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 | Access Level/Passcode Editing (USB Dongle)            |
| 4100-0298 | WalkTest Configuration Setup and Control (USB Dongle) |

### Factory Programming Options

| Model     | Description  |
|-----------|--|
| 4010-8810 | Factory Programming (select)                             |
| 4010-0831 | Custom Labels and Panel Programming (requires 4010-8810) |

## Cabinet Dimension Reference

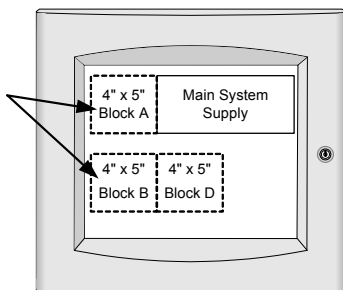




## Cabinet One and Two Bay Loading Reference

First bay of one-bay cabinet has 3 available 4"x5" block spaces for additional option cards

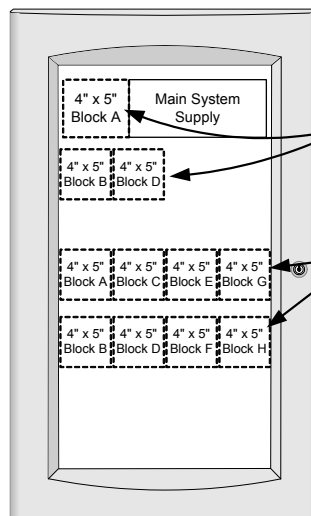
Note: Some spaces may be used by basic panel, see pages 5 and 6 for available space



First bay of two-bay cabinet has 3 available 4"x5" block spaces for additional option cards

Second bay of two-bay cabinet has 8 additional 4" x 5" block spaces for additional option cards (2 horizontal rows of 4 blocks)

Note: Some spaces may be used by basic panel, see pages 5 and 6 for available space



## Additional Compatible Equipment and Reference

| Subject                            | Data Sheet | Subject   | Data Sheet | Subject   | Data Sheet |
|------------------------------------|------------|---|------------|---|------------|
| 4010 ES Agent Release Applications | S4010-0007 | 4009 IDNet NAC Extender   | S4009-0002 | 4003EC Voice Control Panel                          | S4003-0002 |
| Agent Release Accessories          | S2080-0010 | BACpac Ethernet Module  | S4100-0051 | Remote Battery Charger                              | S4081-0002 |
| Remote InfoAlarm Command Center    | S4010-0009 | 4602 Series SCU/RCU   | S4602-0001 | Network Physical Bridge                             | S4100-0057 |
| Serial DACT (SDACT)                | S2080-0009 | Addressable Device Compatibility, IDNet Communication Sensors and Devices | S4090-0011 | Interface to VESDA Air Aspiration Detection Systems | S4100-0026 |
| Fire Alarm Network Overview        | S4100-0055 |   |            | 120 VAC Remote Printer                              | S4190-0011 |
| MX Loop Interface Module           | S4100-0059 | 4606-9102 Remote LCD Annunciator  | S4606-0002 | PC Annunciator                                      | S4190-0013 |
| TCP/IP Physical Bridge             | S4100-0029 | Building Network Interface  | S4100-0061 | Multi-Signal Fiber Optics                           | S4100-0049 |
| Graphic I/O Modules                | S4100-0005 |   |            | SafeLINC Internet Interface                         | S4100-0062 |
| 110 Ah Batteries & Cabinets        | S2081-0012 | Network Communications  | S4100-0056 |   |            |

## General Specifications

|   |  |   |  |
|---|--|---|--|
| <b>AC Input Current</b>   | 120 VAC Models   | 4 A maximum, 120 VAC @ 60 Hz nominal  |  |
|   | 220-240 VAC Models   | 2 A maximum, 220/230/240 VAC @ 50 or 60 Hz  |  |
| <b>Power Supply Output Ratings (nominal 28 VDC on AC, 24 VDC on battery backup)</b> | Total Power Supply Output Rating   | <b>Including module currents and auxiliary power outputs; 8 A total for "Special Application" appliances; 4 A total for "Regulated 24 DC" power (see below for details)</b> | Output switches to battery backup during mains AC failure or brownout conditions |
|   | Auxiliary Power Tap  |   |  |
| <b>Special Application Appliances, maximum of 70 appliances per NAC</b>             | Simplex 4901, 4903, 4904, and 4906 Series horns, strobes, and combination horn/strobes and speaker/strobes (contact your Simplex product representative for compatible appliances) |   |  |
| <b>Regulated 24 DC Appliances</b>   | Power for other UL listed appliances; use associated external synchronization modules where required   |   |  |
| <b>Battery Charger Rating (sealed lead acid batteries)</b>                          | Battery capacity range   | UL listed for battery charging of 6.2 Ah up to 110 Ah; ULC listed for charging up to 50 Ah batteries; batteries above 33 Ah require separate cabinet                        |  |
|   | Charger characteristics and performance  | Temperature compensated, dual rate, recharges depleted batteries within 48 hours per UL Standard 864; to 70% capacity in 12 hours per ULC Standard S527                     |  |
| <b>Environmental</b>  | Operating Temperature  | 32° to 120°F (0° to 49° C)  |  |
|   | Operating Humidity   | Up to 93% RH, non-condensing @ 90° F (32° C) maximum  |  |
| <b>Additional Technical Reference</b>   | Installation Instructions  | 579-989   |  |
|   | Operating Instructions   | 579-969   |  |

## 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).

| Model*   | Description   | Card Address Consumption                            | Card Address Allocation |
|--|---|---|-------------------------|
| <b>Control Panels (Select One)</b>   |   |   |                         |
| 4010-9401(BA)<br>4010-9402(BA)<br>4010-9501(BA)<br>4010-9502(BA)<br>4010-9503BA                                  | 2x40 Display, (1) IDNet 2 Communications Channel; or (1) MX Channel, 1-Bay Box  | 2   |                         |
| 4010-9403<br>4010-9404   | 2x40 Display, (1) IDNet 2 Communications Channel, 48 Pluggable LED Module   | 3   |                         |
| 4010-9421BA<br>4010-9521(BA)<br>4010-9522<br>4010-9523BA   | 2x40 Display, (1) IDNet 2 Communications Channels and (1) IDNet 2+2 Communications Channel; or 2 MX Communications Channels | 3   |                         |
| 4010-9425BA<br>4010-9426BA<br>4010-9526BA<br>4010-9527BA   | InfoAlarm Display, (1) IDNet 2 Communications Channel; or 1 MX Communications Channel                                       | 3   |                         |
| <b>*Note:</b> (BA) means available with or without BA suffix; products with suffix "BA" are assembled in the USA |   |   |                         |
| <b>Panel Option Cards (Select As Required)</b>   |   |   |                         |
| 4010-9901  | Flat VESDA HLI Card   | 1   |                         |
| 4010-9922  | Flat Network Card   | 1   |                         |
| 4010-9908  | 4 Point Flat Aux Relay Module   | 1   |                         |
| 4010-9912  | Serial DACT   | 1   |                         |
| 4010-9923  | SafeLINC Internet Interface Card  | 1   |                         |
| 4010-9914  | Building Network Interface Card   | 1   |                         |
| 4010-9917  | MX Loop Card  | 1   |                         |
| 4010-9918  | Dual RS-232 Module  | 1   |                         |
| 4010-9920  | 8 Zone Initiating Device Circuit - Class B  | 1   |                         |
| 4010-9921  | 8 Zone Initiating Device Circuit - Class A  | 1   |                         |
| 4010-9929  | IDNet 2+2 Communications Module   | 1   |                         |
| <b>Remote Annunciation (Select As Required)</b>  |   |   |                         |
| 4100-9401  | Remote InfoAlarm Command Center   | Red Cabinet, English                                | 2                       |
| 4100-9403  |   | Platinum Cabinet, English                           | 2                       |
| 4100-9421  |   | Red Cabinet, French                                 | 2                       |
| 4100-9423  |   | Platinum Cabinet, French                            | 2                       |
| 4100-9441  |   | Red Cabinet, with blank inserts for key labels      | 2                       |
| 4100-9443  |   | Platinum Cabinet, with blank inserts for key labels | 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                       |
| 4602-9101  | Status Command Unit (SCU) LED Annunciator   |   | 1                       |
| 4602-9102  | Remote Command Unit (RCU) LED Annunciator w/control   |   | 1                       |
| 4602-9150  | Graphic I/O RCU/SCU Assembly for custom annunciator panels  |   | 1                       |
| 4602-7101  | Graphic I/O RCU/SCU Assembly for custom annunciator panels  |   | 1                       |
| 4602-7001  | RCU for cabinet mount   |   | 1                       |
| 4602-6001  | SCU for cabinet mount   |   | 1                       |
| 4100-7401  | 24 Point I/O Graphic Module (requires mounting cabinet)   |   | 1                       |
| 4100-7402  | 64/64 LED Switch Controller for custom annunciator panels   |   | 1                       |
| 4100-7403  | 32 Point LED Driver Module for custom annunciator panels  |   | 1                       |
| 4100-7404  | 32 Point Switch Input Module for custom annunciator panels  |   | 1                       |
| <b>Total Card Addresses (Not to Exceed 20)</b>   |   | <b>TOTAL</b>  |                         |

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