## Features

**Basic System includes:**

- Capacity for up to 998 addressable IDNet points, up to 127 VESDA Air Aspiration 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 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 A100-0650 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
- IDNet addressable device 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

**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
- Modem or TCP/IP Physical Bridge Network Modules, Class B or Class X
- Additional IDNet addressable channels
- 8-point zone/relay module, each point is selectable as an IDC input or relay output. Class A IDCs require 2 points (one out and one return). Relays rated for 2 A @ 30 VDC (resistive). Configurable as normally open or closed.



**Figure 1: 2-Bay 4010ES Fire Control Panel**

**4010ES Agency Listing:**

- UL 864 - Control Units, System (UOJZ); Control Unit Accessories, System, Fire Alarm (UOXX); Control Units, Releasing Device Service (SYZV); Smoke Control System Equipment (UUKL)
- UL 1076 - Proprietary Alarm Units (APOU)
- UL 1730 - Smoke Detector Monitors and Accessories (UULH)
- UL 2017 - Emergency Alarm System Control Units, CO detection (FSZI); Process Equipment Management (QVAX)
- ULC-S527 - Control Units, System, Fire Alarm (UOJZC); Control Unit Accessories, System, Fire Alarm (UOXXC); Control Units, Releasing Device Service (SYZVC); Smoke Control System Equipment (UUKLC)
- ULC-S559 - Central Station Fire Alarm System Units (DAYRC)
- ULC/ORD-C1076 - Proprietary Burglar Alarm System Units (APOUC)
- ULC/ORD-C100 - Smoke Control System Equipment, UUKLC

## Introduction

**4010ES Series Fire Detection and Control Units** provide leading edge installation, operator, and service features for customer applications in the mid-range addressable fire alarm systems market. An on-

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\* Additional listings may be applicable; contact your local product supplier for the latest status.

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 control units to be configured for either Stand-Alone or Networked fire control operation.

**Compatible with Autocall remotely located:**
- A4098-9757 QuickConnect2
- 4009 IDNet NAC Extenders (4009A)
- A4081 Series, 110 Ah Battery Chargers
- A190 Series PC Annunciator
- A190 Series Fiber Modems and Physical Bridges
- A4606-9102 Remote LCD Annunciatorand A602 Series Status Command Units (SCU) and Remote Command Units (RCU) Annunciators
- IP communicator compatibility

## 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 control unit 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 *AC2081-0019*

## Control unit hardware
### The Master Controller and Main System Supply
The Master Controller and Main System Supply are mounted in the upper section of the 4010ES cabinet. Refer to bay loading reference diagrams for more information.

### 4010ES Block Space Option Cards
4010ES Block Space Option Cards mount to the left of the 4010ES Main System Supply. In 2-bay cabinets, block space option cards also mount below the 4010ES ESS.

### 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 backside of the 4010ES User Interface Panel

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

## 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 control unit 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

## 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
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 control unit .

### IDNet Addressable Channel Capacity
The Main System Supply supports up to 248 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+2 Module SLCs are isolated from other system reference voltages to reduce common mode noise interaction with adjacent system wiring.

**Table 1: IDNet 2 and IDNet 2+2 SLC Wiring Specifications**

| Specification | | Rating |
|---|---|---|
| Maximum Distance from control unit per device load | 0 to 125 | 4000 ft (1219 m); 50 ohms |
| | 126-250 | 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); 0.60 μF |
| Maximum capacitance between IDNet channels | | 1 μF |

**Table 1: IDNet 2 and IDNet 2+2 SLC Wiring Specifications**

| Specification | Rating |
|---|---|
| Loading per device | 0.8 mA supv., 1 mA alarm; 2 mA per activated device LED |
| Wire type and connections | Shielded or unshielded, twisted or untwisted wire* |
| Connections | Terminal blocks for 18 to 12 AWG |

**Note:** Compatibility includes: IDNet communicating devices and TrueAlarm sensors including QuickConnect and QuickConnect2 sensors.

**Note:** * Some applications may require shielded wiring. Review your system with your local Autocall 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

The programmable sensitivity of each sensor can be selected at the control unit 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

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 *AC4098-0052* for details.

### TrueAlarm heat sensors

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 A4098-9754 provides photoelectric and heat sensor data using a single 4010ES IDNet address. The control unit evaluates smoke activity, heat activity, and their combination, to provide TrueSense early detection. For more details on this operation, refer to data sheet *AC4098-0024*.

## Diagnostics and Default Device Type

### Sensor Status

TrueAlarm operation allows the control unit 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

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 unit. The control unit 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
- 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 unit 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 Control Unit Description

4010ES control units include:

An Operator Interface, Master Controller with 2GB Compact Flash, IDNet addressable device SLC(s) with short circuit isolating loops configurable for Class B or Class A operation

- 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 A100-0650 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 for up to 20 internal and external card addresses. Other standard options may be provided depending on model (see basic control unit model selection below for additional details on specific models).

### 8-Point Zone/Relay Module Details

- Select as IDC or Relay; configure up to 8, Class B IDCs, or up to 4, Class A IDCs; or up to 8, Relay outputs rated 2 A resistive @ 30 VDC (N.O. or N.C.); or combinations of IDCs and Relays; each zone is separately configurable as an IDC or Relay output
- IDC Support: each IDC supports up to 30, two-wire devices. Zone relay modules may be powered directly from the control unit power supply or through the optional 25 VDC regulator module where required for 2- wire detector compatibility (refer to 2-Wire Detector Compatibility document 579-832 for additional details).
- IDC EOL resistor values are selectable as: 3.3 kΩ, 2 kΩ, 2.2 kΩ, 3.4 kΩ, 3.9 kΩ, 4.7 kΩ, 5.1 kΩ, 5.6 kΩ, 6.34/6.8 kΩ, and 3.6 kΩ + 1.1 kΩ; see instructions for more details

## Main System Supply

The main system supply provides the power source and the input/output connections for the basic 4010ES control unit. The main features are listed in the basic control unit description.
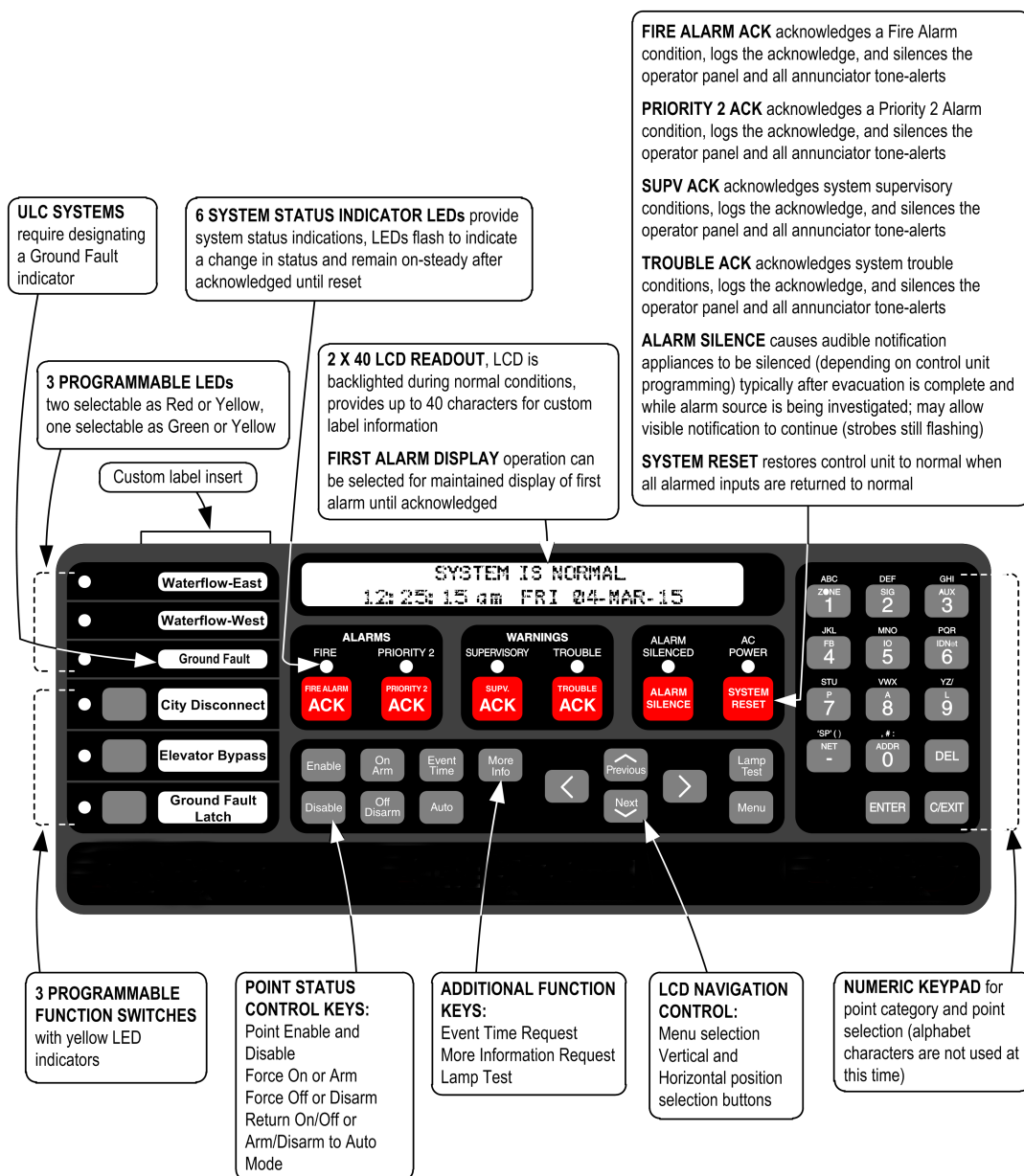
# Operator Interface Features

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

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

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

**TROUBLE ACK** acknowledges system 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 control unit programming) typically after evacuation is complete and while alarm source is being investigated; may allow visible notification to continue (strobes still flashing)

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

**ULC SYSTEMS** require designating a Ground Fault indicator

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

**3 PROGRAMMABLE LEDs** two selectable as Red or Yellow, one selectable as Green or Yellow

**2 X 40 LCD READOUT**, LCD is 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



**Figure 2: Operator Interface Features**

**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
Lamp Test

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

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

## Operator Interface Features

· 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.

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.

## Basic Control Unit Model Selection - 2 Bay Units

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. Actual IDNet current is not included, refer to Addressable Device Load Specifications for Battery Standby for details.

| SKU | Panel Color | Language & Voltage | Listings | Features | Available Option Blocks | Supv. Current | Alarm Current |
|---|---|---|---|---|---|---|---|
| A010-9421<br><br>A010-9421BA | Red | English 120 VAC | UL | Basic control unit with 2x40 Operator Interface, (1) Two-loop isolated IDNet + Communications Channel and (1) Four-loop<br><br>Isolated IDNet 2+2 Communications Channel Module, Class A or Class B operation, with support for up to 498 addressable IDNet points | 10<br><br>4"x5" blocks | 391 mA | 545 mA |
| A010-9422<br><br>A010-9422BA | Platinum | English 120 VAC | | | 10<br><br>4"x5" blocks | 391 mA | 545 mA |
| A010-9425<br><br>A010-9425BA | Red | English 120 VAC | UL | Basic control unit with InfoAlarm Operator Interface and (1) Two-loop Isolated IDNet+ Communications Channel, (1) Four-loop Isolated IDNet 2+2 Communications Channel Module, Class A or Class B operation, with support for up to 498 addressable IDNet points | 10<br><br>4"x5" blocks | 398 mA | 496 mA |
| A010-9426<br><br>A010-9426BA | Platinum | | | | 10<br><br>4"x5" blocks | | |
| **Note:** Model numbers ending in BA are assembled in the USA. | | | | | | | |

## Addressable Device Load Specifications for Battery Standby

**Table 2: Addressable Device Load Specifications for Battery Standby**

| Addressable Channel | Device Load | Supervisory Current | Alarm Current |
|---|---|---|---|
| IDNet+ and IDNet 2+2 Channel Device Currents (20 device LEDs in alarm are included with control unit and module currents)<br><br>Supervisory = 0.8 mA per device 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 |

## Additional Compatible Equipment and Reference

**Table 3: Additional Compatible Equipment and Reference**

| Subject | Data Sheet |
|---|---|
| Agent Release Accessories | AC2080-0010 |
| Serial DACT (SDACT) | AC2080-0009 |
| MX Loop Interface Module | AC4100-0059 |
| TCP/IP Physical Bridge | AC4100-0029 |
| Graphic I/O Modules | AC4100-0005 |
| 110 Ah Batteries & Cabinets | AC2081-0012 |
| 4009 IDNet NAC Extender | AC4009-0002 |
| BACpac Ethernet Module | AC4100-0051 |
| A602 Series SCU/RCU | AC4602-0001 |
| A4606-9102 Remote LCD Annunciator | AC4606-0002 |
| Remote Battery Charger | AC4081-0002 |
| Network Physical Bridge | AC4100-0057 |
| Interface to VESDA Air Aspiration Detection Systems | AC4100-0026 |
| 120 VAC Remote Printer | AC4190-0011 |
| PC Annunciator | AC4190-0013 |
| Multi-Signal Fiber Optics | AC4100-0049 |
| SafeLINC Internet Interface | AC4100-0062 |

## Miscellaneous Accessories

**Table 4: End User and Factory Programming Tools**

| SKU | Description |
|-----|-------------|
| A100-8802 | End User Programming Unit Software |
| 4010-8810 | Factory Programming (select) |

**Table 5: LED Kits (LEDs are pluggable, use to change color for local application requirements)**

| SKU | 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 |

## General Specifications

**Table 6: General Specifications**

| Specification | Rating | | |
|---------------|--------|---|---|
| **AC Input Current** | 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 | |
| | Battery | 9 A maximum @ 24VDC (during battery operation) | |
| **Power Supply Output Ratings (nominal 28 VDC on AC, 24 VDC on battery backup)** | Total Power Supply Output Rating | 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) | Output switches to battery backup during mains AC failure or brownout conditions |
| | Auxiliary Power Tap | 2 A maximum, rated 19.1 to 31.1 VDC | |
| **Special Application Appliances, maximum of 70 appliances per NAC** | Autocall 4901, 4903, 4904, and A4906 Series horns, strobes, and combination horn/strobes and speaker/strobes (contact your Autocall product representative for compatible appliances) | | |
| **Regulated 24 DC Appliances** | Power for other UL listed appliances; use associated external synchronization modules where required | | |
| **Battery Charger Rating (sealed lead acid batteries)** | Battery capacity range | Battery charging of 6.2 Ah up to 50 Ah or 110 Ah batteries. For 2 bay cabinets, battery capacity above 50 Ah requires a separate cabinet.<br><br>See data sheet AC2081-0012 for further details. | |
| | 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 | |
| **Environmental** | Operating Temperature | 32 °F to 120 °F (0 °C to 49 °C) | |
| | Operating Humidity | Up to 93% RH, non-condensing @ 90 °F (32 °C) maximum | |
| **Additional Technical Reference** | Installation Instructions | 579-989AC | |
| | Operating Instructions | 579-969AC | |

## Cabinet One and Two Bay Loading Reference

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

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)
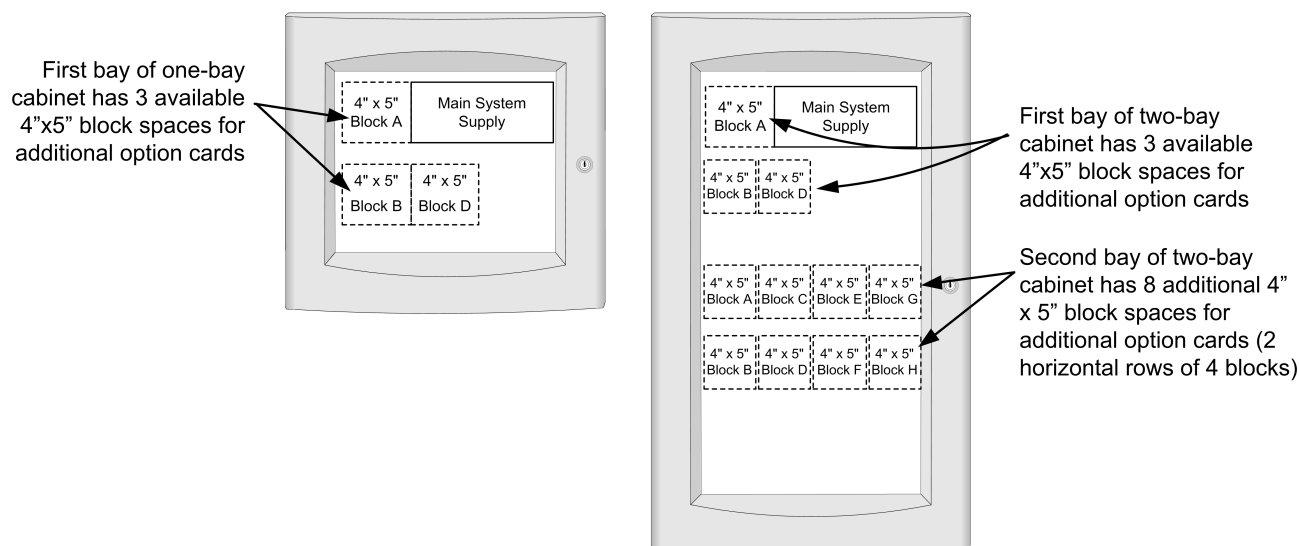
**Figure 3: Loading Reference**

**Note:** Some spaces may be used by basic control unit features.

## Block Space Option Card Selection

**Note:** Refer to block space diagrams for option module availability. Supervisory and alarm current specifications consider no load on addressable channels except as noted (see Addressable Device Load Specifications for Battery Standby).

**Table 7: Single Block Option Modules**

| SKU | Features | | Supervisory Current | Alarm Current | Option Block Usage |
|---|---|---|---|---|---|
| A010-9912 | Serial DACT; Note: Must mount in Block D under Main System Supply | | 30 mA | 40 mA | 1 Block (must mount in top bay, block D) |
| A010-9908 | 4 Point Aux Relay Module | | 15 mA | 60 mA | 1 Block (3 maximum) |
| A010-9916 | 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 (1 maximum) |
| A010-9918 | Dual RS-232 Module | | 60 mA | 60 mA | 1 Block (3 maximum) |
| A010-9935 | 8 point zone/relay 4x5" flat module. Mounts in any open block in a master controller or expansion bay. Alarm current shown is for 8 Class B IDCs using 3.3K end-of-line-resistors with 4 IDCs in alarm and 4 IDCs in standby. Standby current shown is for all 8 IDCs in standby. Detector current is added separately. Refer to *579-1236AC Zone/Relay Module Installation Instructions* for more information. | | 83 mA | 351 mA | 1 block (1 maximum) |
| A010-6305 | 25V regulator harness for 8 point zone/relay module. One required for each 8 point zone/relay module to be powered by the 4010-9916 25V regulator module. A maximum quantity of (5) 8 point zone/relay modules can be powered from the A010-9916 25V regulator module | | N/A | N/A | N/A |
| A010-9929 | IDNet 2+2 Module, 250 point capacity; electrically isolated output with four 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 (3 maximum) |
| | | 50 devices | 90 mA | 150 mA | |
| | | 125 devices | 150 mA | 225 mA | |
| | | 250 devices | 250 mA | 350 mA | |

**Table 8: Dual Vertical Block (Flat) Modules**

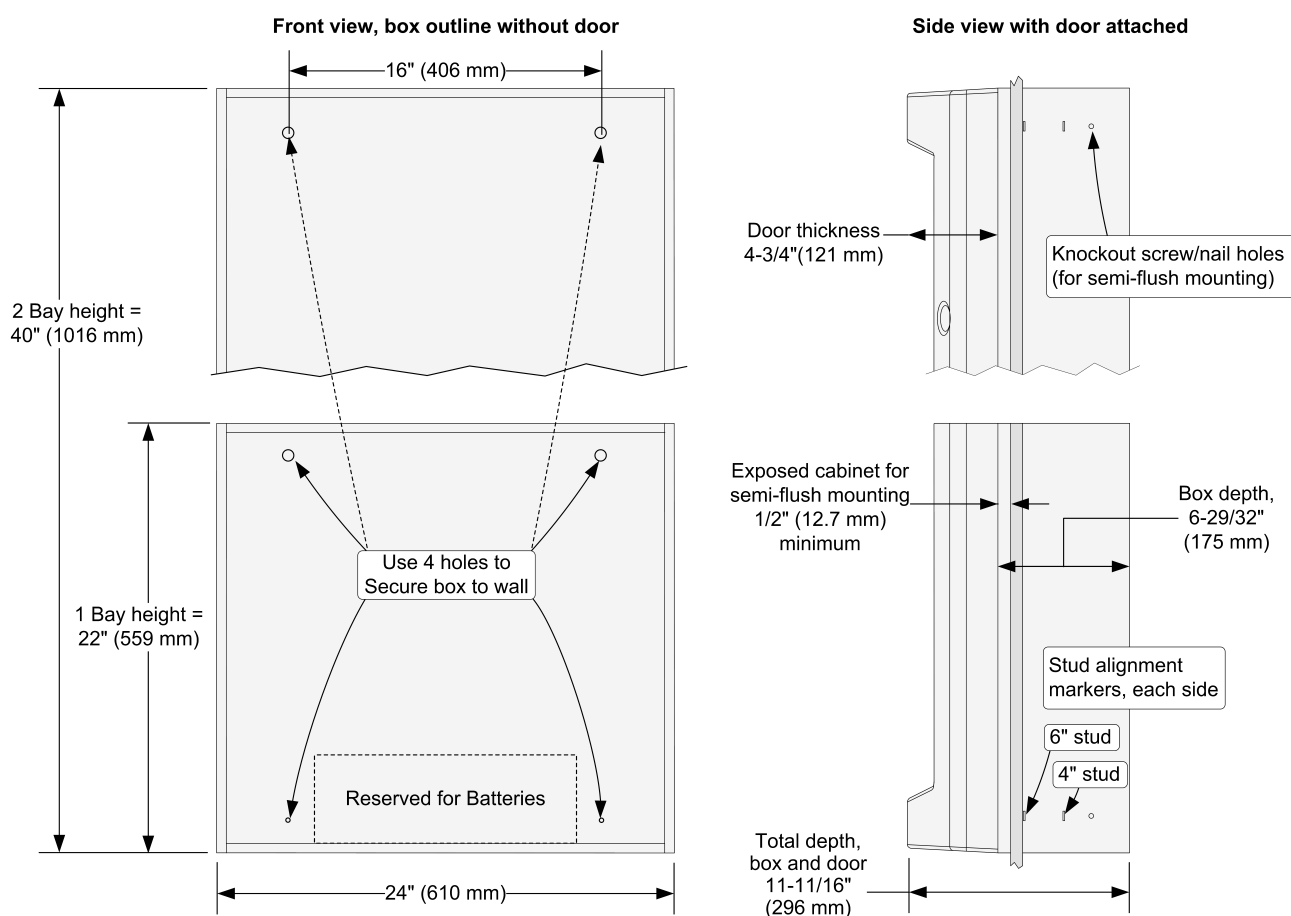| SKU | Features | Option Block Usage | Supervisory Current | Alarm Current |
|---|---|---|---|---|
| A010-9928 | For 1-Bay Control Units Only: Dual Vertical Block Card Mounting Kit, allows selecting two, dual Vertical Block (flat) modules from the list below; mounts at right angle to chassis (note block usage details) | 2 Vertical Blocks (mounts in top bay, block space A & B only) | NA | NA |
| A010-9922 | Modular Network Interface Card (requires two media cards from below) | 2 Vertical Blocks | 30 mA | 30 mA |
| A010-9818 | Wired Network Media Card | N/A (mounts to network interface or physical bridge cards) | 55 mA | 55 mA |
| A010-6301 | Left port, single-mode 4120 duplex fiber media card | N/A (mounts to network interface or physical bridge cards) | 25 mA | 25 mA |
| A010-6302 | Right port, single-mode 4120 duplex fiber media card | N/A (mounts to network interface or physical bridge cards) | 25 mA | 25 mA |
| A010-6303 | Left port, multi-mode 4120 duplex fiber media card | N/A (mounts to network interface or physical bridge cards) | 25 mA | 25 mA |
| A010-6304 | Right port, multi-mode 4120 duplex fiber media card | N/A (mounts to network interface or physical bridge cards) | 25 mA | 25 mA |
| A010-9926** | TCP/IP Physical Bridge Class B | 3 Block "L" Shape, requires 2 Vertical Blocks, plus adjacent right side lower Block (D, F, or H) | 196 mA | 196 mA |

## Cabinet Dimension Reference



**Front view, box outline without door**

Side view with door attached

16" (406 mm)

2 Bay height = 40" (1016 mm)

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

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

Use 4 holes to Secure box to wall

Exposed cabinet for semi-flush mounting 1/2" (12.7 mm) minimum

Box depth, 6-29/32" (175 mm)

1 Bay height = 22" (559 mm)

Stud alignment markers, each side

6" stud

4" stud

Reserved for Batteries

24" (610 mm)

Total depth, box and door 11-11/16" (296 mm)

**Figure 4: Cabinet Dimension Reference**

## 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.**

1. For the applicable control unit, write in the Card Address Consumption value in the Card Address Allocation column. Select 1 control unit only.
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).

**Table 9: 4010ES Card Address Allocation**

| SKU | Description | | Card Address Consumption | Card Address Allocation |
|---|---|---|---|---|
| **Control Control Units (Select One)** | | | | |
| A010-9421<br><br>A010-9421BA<br><br>A010-9422<br><br>A010-9422BA | 2x40 Display, (1) IDNet+ Communications Channels and (1) IDNet 2+2 Communications Channel, 2-Bay Box | | 3 | |
| A010-9425<br><br>A010-9425BA<br><br>A010-9426<br><br>A010-9426BA | InfoAlarm Display, (1) IDNet+ Communications Channel and (1) IDNet 2+2 Communications Channel, 2-Bay Box | | 4 | |
| **Control Unit Option Cards (Select as Required)** | | | | |
| A010-9922 | Flat Network Card | | 1 | |
| A010-9908 | 4 Point Flat Aux Relay Module | | 1 | |
| A010-9912 | Serial DACT | | 1 | |
| A010-9918 | Dual RS-232 Module | | 1 | |
| A010-9935 | 8 point zone/relay 4x5" flat module | | 1 | |
| A010-9929 | IDNet 2+2 Communications Module | | 1 | |
| **Remote Annunciation (Select As Required)** | | | | |
| A100-9401 | Remote InfoAlarm Command Center | Red Cabinet, English | 2 | |
| A100-9403 | | Platinum Cabinet, English | 2 | |
| A100-9441 | | Red Cabinet, with blank inserts for key labels | 2 | |
| A100-9443 | | Platinum Cabinet, with blank inserts for key labels | 2 | |
| A4606-9102 | | 4010ES RUI LCD Annunciator, English | 1 | |
| A4606-9102BA | | 4010ES RUI LCD Annunciator, English | 1 | |
| A4606-9102CF | 4010ES RUI LCD Annunciator, French | | 1 | |
| A602-9101 | Status Command Unit (SCU) LED Annunciator | | 1 | |
| A602-9102 | Remote Command Unit (RCU) LED Annunciator w/control | | 1 | |
| A602-9150 | Graphic I/O RCU/SCU Assembly for custom annunciator | | 1 | |
| A602-7101 | Graphic I/O RCU/SCU Assembly for custom annunciator | | 1 | |
| A602-7001 | RCU for cabinet mount | | 1 | |
| A602-6001 | SCU for cabinet mount | | 1 | |
| A100-7401 | 24 Point I/O Graphic Module (requires mounting cabinet) | | 1 | |
| A100-7402 | 64/64 LED Switch Controller for custom annunciator | | 1 | |
| A100-7403 | 32 Point LED Driver Module for custom annunciator | | 1 | |
| A100-7404 | 32 Point Switch Input Module for custom annunciator | | 1 | |
| | **Total Card Addresses (Not to Exceed 20)** | | **TOTAL** | |

**Note:** Products ending with BA are assembled in the USA.