⚡ Simplex

LifeAlarm® Fire Alarm Control Panels

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

4005 Series Fire Alarm Control Panels
Providing 8 to 36 IDCs and 4 NACs

Features

Standard features:

- 80 Character, alphanumeric LCD readout with wide viewing angle
- Eight, Class B Initiating Device Circuits (IDCs)
- Four, Class B Notification Appliance Circuits (NACs)
- 4 A power supply/battery charger
- Power-limited design
- Pluggable terminal blocks
- Internal DACT is included on UL listed models; available separately as required for ULC listed models

Simplex® system accessory compatibility:

- 4602 Series Remote Control Unit (RCU) and Status Command Unit (SCU), two-wire serial communications
- 4601 Series Annunciators
- 4003 Voice Control Panels
- 4009 NAC Power Extenders
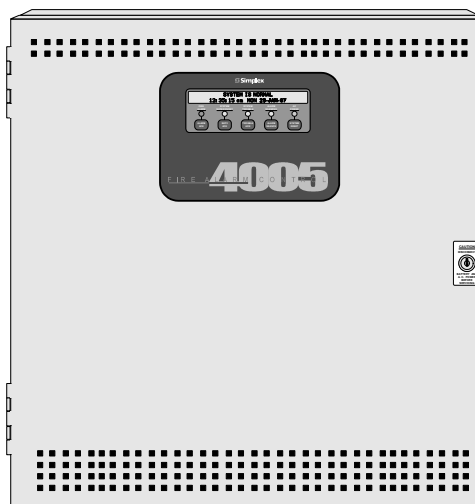
Software features:

- Menu-driven programming
- On-site programmable custom labels
- Four operator access levels
- Historical event logs
- Circuit selectable alarm verification
- WALKTEST™ one-person system testing**
- Selectable active status reminder

Optional expansion:

- Two circuit IDC, two circuit NAC/relay[†]
- Four circuit NAC/relay[†]
- Four circuit IDC (low current and high current versions)
- Four circuit Class A NAC or IDC zone conversion
- Eight circuit I/O module
- Remote station/city connection
- Additional 5 A power supply

UL Listed to Standard 864

Model 4005 Fire Alarm Control Panel

Introduction

For areas requiring eight to thirty-six IDC zones, Simplex 4005 series fire alarm control panels provide flexible initiating circuit monitoring, extensive programmable control capability, and LCD annunciated circuit-specific custom labels. Surface mount components, efficient microprocessor programming, and easy-to-use control panel operation combine to provide an extensive feature list in a compact, "installation friendly" package.

Panel status and circuit information is efficiently indicated by an alphanumeric LCD readout featuring two lines of 40 characters each. The panel control switches are clearly marked for intuitive operation. Programming of the selectable features is performed by using the display and the panel control switches while in the programming mode.

Applications

The 4005 series fire alarm control panel provides protection for a wide variety of mid-size facilities in the following fields: Educational, Health Care, Business, Storage, Hospitality, Residential, and General Assembly. Its modular design allows IDCs and NACs to be incremented in groups of two or four to satisfy circuit requirements without specifying excess capacity. If the system expands, then additional "snap-in-place" modules can be easily installed on-site.

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* Refer to page 6 for additional ULC listing information. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7165-0026:212 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEA35-93E. See page 7 for ULC designations. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

** WALKTEST performance testing is protected under US Patent No. 4,725,818.

† NACs may be individually configured for dry contact relay operation.

NOTE: Contact your local Simplex product supplier for fire alarm control panels suitable for Release Control applications.

S4005-0001-9 3/2009

4005 Module Features

The CPU board contains the main microprocessor and panel programming, evaluates the status of all I/O modules, processes the required responses, and provides a watchdog timer that resets the panel in the event of an abnormal operation. Additional details are below.

- Controls the LCD readout and switches that comprise the operator interface
- Controls the flash EPROM that contains the non-volatile site-specific programming information
- **4-Wire Smoke Detector Power** provides a 5 second reset; rated 500 mA @ 24 VDC, open collector output, and is power-limited and short circuit protected
- **Remote Unit Serial Interface (RUI)** output provides connections for up to 16, Class B supervised remote annunciators, Remote Control Unit (RCU) model 4602-9102,or Status Command Unit (SCU) model 4602-9101; (see additional description under Accessories on page 5)

Power Distribution Board Features:

- Provides connections for up to 5 plug-in module cards
- **Auxiliary power connections.** Two power-limited connections are provided, each rated for 2 A @ 24 VDC; connections are isolated from NAC power

Power Supply/Battery Charger features:

- Switch Selectable for 120 or 240 VAC
- **24 VDC Power**, regulated and power-limited, is available specifically for notification appliances and auxiliary output use via two taps of 2 A each; rated 4 A for Special Application Appliances and 2 A for Regulated 24 DC power
- **Internal System Operating Power** is supplied via separate power-limited connections.
- **Battery Charging** for up to 18 Ah batteries mounted within the 4005 cabinet and up to 33 Ah batteries when mounted in an external battery cabinet.
- **Function Monitoring.** Includes: missing, depleted, and low battery, Earth fault detection, AC power loss, AC power brownout (low input voltage), signal power overload, supply voltage monitoring, and charger failure.
- **Depleted Battery Trouble Indication** advises when standby operation has exceeded battery capacity.

Internal DACT Module features:

- Reports Alarm, Supervisory, Trouble, and AC Failure
- Dual line operation with automatic 24 hour test and programmable power fail report delay

Eight, Initiating Device Circuits (IDCs) features:

- Two, 4 circuit IDC plug-in modules are standard, providing 8, Class B IDCs
- Standard IDCs are low current and support up to 20 Simplex detectors per IDC at 2 mA maximum (for detectors with relay bases, use high current expansion modules, see chart on page 7)

4005 Module Features *(Continued)*

IDC operation is individually programmable with the following 28 operating mode choices (the abbreviated description is part of the IDC display information):

Point Type	Description	Point Type	Description
FIRE	Fire Monitor Zone	FPUMP	Fire Pump Monitor
WATER	WaterFlow Monitor	SFPUMP	Supervised Fire Pump
HEAT	Heat Detector	S2STAGE	2 Stage Monitor
DUCT	Duct Detector	SO	Sprinkler Normally Open
FLAME	Flame Detector	SC	Sprinkler Normally Closed
PULL	Manual Pull Station	WSO	Waterflow/ Sprinkler Open
SMOKE	Smoke Detector	WSC	Waterflow/ Sprinkler Closed
EMERG	Monitor-Fire Emergency	SUPV	Supervisory Monitor
SFIRE	Monitor-Smoke/Fire	UTIL	Utility Monitor
VFIRE	Monitor-Verified Smoke/Pull	TROUBLE	Trouble Monitor
SPULL	Monitor-Smoke/Pull	VSMOKE	Verified Smoke Detector
VSPULL	Verified Smoke/Pull	GVMON	Generic Verified Zone
GENMON	Generator Monitor	LATSUPV	Supervisory Latching
SGENMON	Supervisory Generator	STYLEC	Monitor-Style C Monitor

Notification Appliance Circuits (NACs)

One, 4 circuit NAC/Relay plug-in module is standard, providing 4, Class B NACs that can be individually reconfigured for dry contact relay operation.

NAC operation is individually programmable as Steady Signaling, Temporal Pattern, March Time @ 20 BPM, or March Time @ 120 BPM, and with the following 17 operating modes (the abbreviated description is part of the NAC display information):

Point Type	Description	Point Type	Description
SSIGNAL	Fire Signal (On until Silence)	RWATER	WaterFlow (On until Reset)
RSIGNAL	Fire Signal (On until Reset)	SUPV	Sprinkler Supervisory Signal
TSIGNAL	Trouble (On until Clear)	PRIMARY	Elevator Capture (primary
BSIGNAL	Trouble (On until ACK)	ALTERN	Elevator Capture (alternate)
SVISUAL	Visual (On until Silence)	AHUR	AHU Relay
RVISUAL	Visual (On until Reset)	AHUO	AHU On Relay
CODED	Coded Signal	AHUF	AHU Off Relay
SIGNAL	Signal Circuit	DHOLDER	Door Holder
SWATER	WaterFlow (On until Silence)		

NAC Relay Mode Operation

NAC/Relay Selection. Each NAC can be on-site selected for NAC operation or for unsupervised, dry contact, auxiliary relay operation. When operating in the relay mode, either the normally open or the normally closed contact can be connected to the output terminal block. Contacts are rated at 2 A @ 32 VDC, for transient suppressed loads.

Relay Operation is individually programmable with the following 17 operating mode choices (the abbreviated description is part of the relay display information).

Relay Modes:

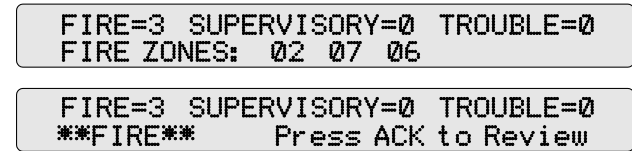| Point Type	Description	Point Type	Description
RELAY	Auxiliary Relay	BRELAY	Trouble Relay (On until Ack)
PRIMARY	Elevator Capture (Primary)	DHOLDER	Door Holder
ALTERN	Elevator Capture (Alternate)	SVISUAL	Visual (On until Silence)
AHUR	AHU Relay	RVISUAL	Visual (On until Reset)
AHUO	AHU On Relay	CODED	Coded Relay
AHUF	AHU Off Relay	SWATER	Waterflow Relay (On until Silence)
SRELAY	Fire Relay (On until Silence)	RWATER	Waterflow Relay (On until Reset)
RRELAY	Fire Relay (On until Ack)	SUPV	Supervisory Relay
TRELAY	Trouble Relay (On until Clear)		

4005 Basic Operator Functions

Display Indications. Upon receiving an abnormal condition of alarm, supervisory, or trouble, the 80 character backlit LCD will identify the quantity and type of abnormal indications. With the locked door closed, the display, status LEDs and primary operator switches are visible through the transparent door viewing panel as shown in Figure 1 below. This figure represents the LCD during normal conditions showing normal status, time, and date.
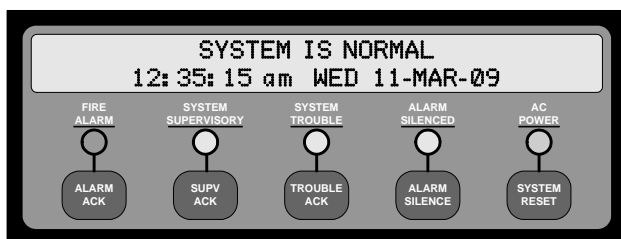
Figure 1. Basic Operator Function Keys with Normal Display of Status, Time, and Date

4005 Basic Operator Functions *(Continued)*

Typical Displays. Figure 2 (below) represents typical fire alarm display screens. For this example, the presence of three fire alarm conditions is shown in the top screen – fire zones 2, 7, and 6, displayed in chronological order of occurrence (up to 10 zones may be shown). The display will alternate with the one shown below it as the operator is prompted to assist with the next required action.

```
FIRE=3 SUPERVISORY=0  TROUBLE=0
FIRE ZONES:  02 07 06
```

```
FIRE=3 SUPERVISORY=0  TROUBLE=0
**FIRE**      Press ACK to Review
```

Figure 2. Typical 4005 Displays with Alarm Activity

Alarm, Supervisory, and Trouble ACK

Operator Actions. The ALARM ACK, SUPV ACK, or TROUBLE ACK key will silence the local tone-alert, corresponding to the type of abnormal condition. Subsequent entry of the appropriate ACK key will chronologically scroll through the specifics for each abnormal condition. Screen information includes custom labels for each zone that provides a detailed report of the location, device type description, device condition, and list count for the first point in the Alarm, Supervisory, or Trouble list.

Custom Label Display. Figure 3 represents a typical screen that would appear after using the ALARM ACK key to scroll to the first fire condition. It displays the zone location as "First Floor East Wing Room 12", the device type as "Smoke Detector" and the device condition of "Alarm". The 1/3 indicates that the displayed alarm is the first of three alarms present in the panel at this time. Site-specific labels can be upper or lower case and can provide discrete annunciation that can assist fire response with clearly defined zone locations and device types.

```
First Floor East Wing Room 12
Smoke Detector    ALARM        1/3
```
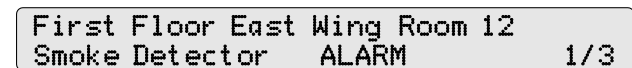
Figure 3. Typical 4005 Fire Alarm Information Custom Label Display

Alarm Silence. The ALARM SILENCE key will silence the notification appliances programmed for on-until-silence (typically audible notification appliances) and the ALARM SILENCED LED will remain illuminated until the panel is reset.

System Reset. When the source of the abnormal condition is corrected, the SYSTEM RESET key will reset the panel and return the status to normal.
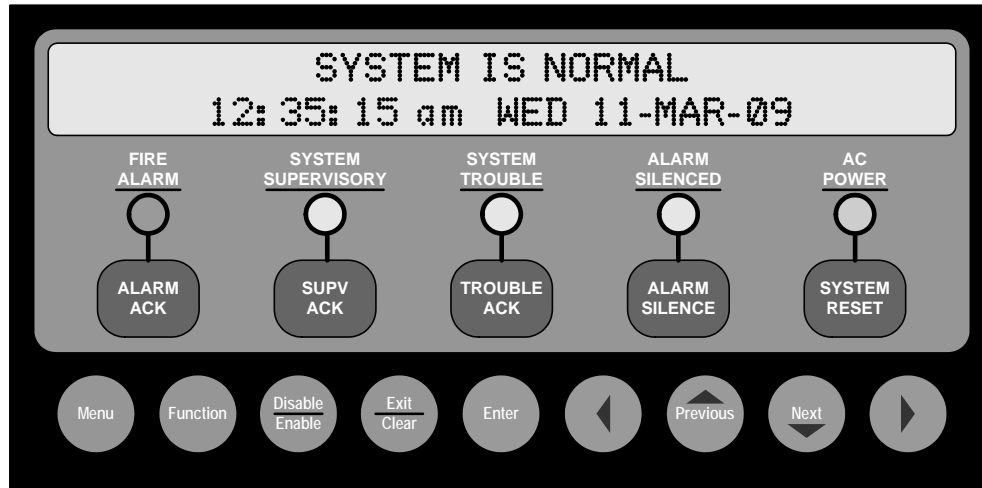
S4005-0001-9 3/2009

```
         SYSTEM IS NORMAL
    12:35:15 am  WED 11-MAR-09
```

FIRE ALARM   SYSTEM SUPERVISORY   SYSTEM TROUBLE   ALARM SILENCED   AC POWER

ALARM ACK   SUPV ACK   TROUBLE ACK   ALARM SILENCE   SYSTEM RESET

Menu   Function   Disable Enable   Exit Clear   Enter   ◀   Previous ▲   Next ▼   ▶

Figure 4. The Complete 4005 Operator Interface

Passcode Access, Four Levels

Level 1 is basic access and is available by unlocking the door. Access includes the standard operator functions and historical log information.

Levels 2 and 3 are on-site programmable to control functions required by local needs such as clock set, enable/disable, WALKTEST system test, and custom label changes.

Level 4 access provides passcode programming of critical life safety functions, access level programming, and service level diagnostics and programming.

Expanded Operator Functions

Unlocking the door provides access to the operator control panel and reveals nine additional keys used for expanded operator functions and for circuit type and programming selections (refer to Figure 4 above).

The following expanded operator functions are available:

Circuit Disable/Enable, available for each individual IDC, NAC, or relay circuit.

WALKTEST Performance Testing allows a single fire alarm system tester to manually initiate remote alarms and troubles and obtain a verification output from the NACs with an automatic Reset. Alarms are initiated to produce a pulse count that identifies the zone. With the zone number confirmed, troubles can be then initiated with a common pulse output for a complete functional test of each zone.

Indicator Test confirms that all panel LED and LCD indicators are properly functioning.

History Logs provide up to 50 fire alarm logs and up to 100 trouble logs. They are available for chronological review as fire, trouble, or fire and trouble combined.

Programming Operations

NOTE: During programming, monitoring remains active and the 4005 will perform enabled responses.

Programmable operations include:
- Abort Enable; 30 second delay allows zone status confirmation before enabling
- Alarm Cutout time delay
- Active Status Reminder (Alarm/Supervisory/Trouble Resound every 8 hours)
- Alarm Silence Inhibit Timer
- Assignment and selection of passcodes and access levels
- Custom control equations
- Custom label generation and revision
- Doorholder time delay (drop upon Alarm, drop upon AC power loss)
- IDC circuit type (reference list on page 2)
- Module allocation and identification
- NAC or Relay circuit type (reference lists on pages 2 and 3)
- NAC/Relay output coding of: Steady Signaling, Temporal Pattern, March Time @ 20 BPM, or March Time @ 120 BPM
- Setting of time and date, and selection of 12 or 24 hour format

Menu Selection and Response Keys

The 4005 LCD provides menu driven prompts for performing functions. Navigating through the menu is easily performed by using the operator keys at the bottom of the interface panel (see Figure 4 above).

Menu always produces the main menu.

Function provides a list of the available actions that can be performed depending on which programming or functional area is being displayed.

Disable/Enable toggles status of the displayed circuit.

Exit/Clear provides a path out of the chosen menu and allows manual entries to be cleared.

Enter confirms the selection made and enters program changes into memory.

Left, Previous, Next, and Right arrow keys move the display cursor or select screens or specific choices, depending on the displayed functional area.

4005 System Optional Modules

Class A, 4 Circuit Adaptor Module for either IDCs or NACs (4005-9806):

- Individually isolated circuit design adapts either IDCs or NACs for Class A operation allowing a combination of circuit types
- Mounts on top of the module, maintaining full module capacity

Power Distribution Module (4005-9807):

- Extends 4005 capacity to ten plug-in modules
- Mounts on left side of 4005 chassis
- Required when plug-in module requirements extend beyond five and/or for connection of expansion power supply 4005-9813

City Circuit Module (4005-9809):

- Single circuit, selectable as local energy, reverse polarity, or form "C" contact
- Reverse polarity is selectable for Alarm/Trouble, Alarm, Supervisory, or Trouble only reporting
- Up to two modules mount directly to 4005 chassis below the CPU assembly

Expansion Power Supply (4005-9813):

- Provides power-limited and regulated 24 VDC to Expansion Module 4005-9807; rated 5 A for Special Application Appliances and 2 A for Regulated 24 DC power
- Installs on the left side of the 4005 chassis and fits behind expansion modules, allowing full module capacity
- Switch selectable for 120 VAC or 240 VAC
- Provides additional power for notification appliances, 4-wire detectors, annunciator power, or other fire alarm auxiliary functions

4005 System Capacity Expansion Modules

Optional and expansion modules can be easily installed and programmed on-site. Their "snap-in-place" design installs without tools or hardware, allowing configuration for the initial system capacity or for later system expansion.

2 Circuit IDC with 2 Circuit NAC/Relay (4005-9803):

- Two, standard low current IDCs, for up to 20 detectors per IDC, 2 mA maximum

- Two circuits, individually on-site selectable as either Class B NAC, or N.O. or N.C. relay circuits
- Combined on one plug-in module
- Operation and programming is the same as the standard control panel IDCs and NAC/Relay circuits

4 Circuit IDC Module (4005-9804):

- Four, standard low current IDCs on one plug-in module, for up to 20 detectors per IDC, 2 mA maximum
- Operation and programming is the same as the standard control panel IDCs

4 Circuit NAC/Relay Module (4005-9805):

- Four, NAC/Relay Circuits on one plug-in module
- Operation and programming is the same as the standard control panel NAC/Relay circuits

8 Circuit I/O Module (4005-9808):

- Select each circuit as either an input or output
- Input mode supervises hard wired connections to 4601 Series annunciator switches or utility switch inputs
- Output mode is rated 24 VDC, 150 mA open collector driver, short circuit protected, UL listed for pilot duty
- Output mode provides supervised auxiliary control of a compatible annunciator or remote relay for emergency control in accordance with NFPA 72 and NFPA 101

4 Circuit IDC, High Current, Required for Detectors with Relay Bases (4005-9824):

- Four, high current IDCs on one plug-in module
- High current operation for up to 30 detectors per IDC, 3 mA maximum detector power (required for detectors with relay bases)
- Operation and programming is the same as the standard control panel IDCs

Accessories

4602 Series Annunciators:

- Supervised serial communications using twisted, shielded pair
- SCU has 16 LED zone status indicators
- RCU has 8 LED zone status indicators, Power-On LED and Trouble LED, Local tone-alert, and keyswitch enabling of Trouble and Alarm Silence, System Reset, and Manual Evacuation

4601 Series Annunciators:

- Provides LED status indications and switches for acknowledge, silence, and reset
- Modular design allows sizing as needed

4005-9150 and 4002 Adapter Kits for Retrofit:

- Replace existing 4002 Fire Alarm Control Panels with the 4005 panel features, supplied with high current IDC modules for convenient retrofit
- Cabinet, door, and electronics may be ordered separately to satisfy early cabinet (backbox) installation requirements

4005 Product Selection (refer to page 7 for specifications details)

Category	Model	Description	
Panel with Cabinet	4005-9101*	Beige cabinet	4005 Fire Alarm Control Panel; includes 8 standard IDCs, 4 NAC/Relay circuits, 4 A power supply/battery charger, cabinet and door, and internal Dual Line DACT with two RJ45 plug DACT Cables, 14 ft long (4.3 m)
	4005-9102	Red cabinet	

* 4005-9101<u>C</u> is the ULC English version; 4005-9101<u>CF</u> is the ULC French version; both 4005-9101C and 4005-9101CF models delete the Dual Line DACT and include low battery cutout operation.

Category	Model	Description	
Electronics Only	4005-9150	4005 Fire Alarm Control Panel, 8 **high current** IDCs, 4 NAC/Relay Circuits, 4 A power supply, internal Dual Line DACT; requires 4002 Adapter Kit or separately ordered cabinet and door	
Optional Modules	4005-9806	Four Circuit Class A Adapter Module for IDC and/or NAC modules, standard or expansion; mounts on top of plug-in IDC/NAC module; circuits convert either NAC or IDC, or combination	
	4005-9807	Additional Five Slot Power Distribution Module, required when plug-in module count exceeds five, or for connection of Expansion Power Supply	Qty, 1 Max.
	4005-9809**	Single (1) Circuit City Module, chassis mounted, below CPU	Qty, 2 Max.**
	4005-9810**	Internal Dual Line DACT; aftermarket add-on; for connecting to RJ31X Telco jacks, includes two DACT Cables with RJ45 Plug, 14 ft long (4.3 m)	Qty, 1 Max.**
	4005-9813	Expansion Power Supply, 24 VDC, 5 A, regulated; chassis mounted beneath left side modules; requires 4005-9807 Power Distribution Module and provides power to 4005-9807 only	Qty, 1 Max.

** DACT module is standard equipment on 4005-9101 and 4005-9102. Operation allows for **either** a DACT module **or** one or two City Connection modules. The DACT is programmed using a terminal or a laptop computer in terminal emulation mode. Connection and programming details are provided with Installation Instructions 574-049.

Category	Model	Description	
Expansion Modules (capacity is 10 expansion slots, 3 expansion slots are used in base panel)	4005-9803	Standard Operation, 2 Circuit IDC with 2 NAC/Relay circuits	
	4005-9804	Standard Operation, 4 Circuit IDC Module	
	4005-9805	4 Circuit NAC/Relay Module	
	4005-9808	8 Circuit Programmable I/O Module	
	4005-9824	4 Circuit IDC Module, high current operation, Class B, for detectors with relay bases	
Cabinets	2975-9209	Beige 4005 Cabinet	Order cabinets if required for pre-installation. 4005-9150 Electronics only model requires a cabinet and door or a 4002 Adapter Kit.
	2975-9210	Red 4005 Cabinet	
Doors	4005-9857	Beige Door	
	4005-9858	Red Door	

Category	Model	Description	Model	Description
Batteries select one model number; two required for 24 VDC system power; see page 7 for currents	2081-9272	6.2 Ah Battery, 12 VDC	2081-9288	12.7 Ah Battery, 12 VDC
	2081-9274	10 Ah Battery, 12 VDC	2081-9275	18 Ah Battery, 12 VDC
	2081-9271	33 Ah Battery, 12 VDC; requires External Battery Cabinet 4009-9802		
	4009-9802	External Battery Cabinet, beige with solid door; includes battery harness; mounts close-nippled to 4005 cabinet; for up to 33 Ah batteries; cabinet size: 25-3/4" W x 20-3/4" H x 4-1/8" D (654 mm x 527 mm x 105 mm)		

Category	Model	Description	
4002 Adapter Kits (for mounting 4005-9150 electronics into a Simplex Model 4002 cabinet)	4005-9850	Two Unit — 4002 Cabinet size	Includes 4005 chassis adapter plate with **beige** retainer panel
	4005-9851	Four Unit — 4002 Cabinet size	
	4005-9852	Six Unit — 4002 Cabinet size	
	4005-9854	Four Unit 4002 Cabinet size, includes 4005 chassis adapter plate with **red** retainer panel	
4005 Accessory Selection Reference	4081-9004	6.8 kΩ, 1/2W, End-of-Line Resistor Harness for standard IDCs; (ref. 733-886)	
	4081-9002	3.3 kΩ, 1 W, End-of-Line Resistor Harness for high current IDCs; (ref. 733-893)	
	4081-9008	10 kΩ, 1/2 W, End-of-Line Resistor Harness for NACs; (ref. 733-894)	
	4081-9001	2.2 kΩ, 1/2 W, End-of-Line Resistor Harness for 8 Pt I/O input mode; (ref. 733-892)	
	4081-9007	1.2 kΩ, 1 W, End-of-Line Resistor Harness for N.O. tamper switch monitoring; (ref. 733-891)	
	4602-9101	Status Command Unit (SCU), 16 LED serial connection annunciator	
	4602-9102	Remote Command Unit (RCU), 8 LED serial connection annunciator with remote tone-alert and control panel status LEDs, and switch control for Trouble and Alarm Silence, System Reset, and Manual Evacuation (4602 Series Annunciators are available for multiple packaging applications, for further information, refer to data sheets S4602-0001 and S4602-0004)	
	4601 Series	LED/Switch Annunciators, modular design allows selection of required LEDs and control switches (refer to data sheet S4601-0002)	

Specifications

Electrical

Standard Panel Input (Switch Selectable)	102–132 VAC, 60 Hz; 2 A maximum
	204–264 VAC, 50/60 Hz; 1 A maximum
Main Power Supply Output*	4 A for Special Application Notification Appliances
	2 A for Regulated 24 VDC Notification Appliances
Expansion Power Supply Input (Switch Selectable)	102–132 VAC, 60 Hz; 3 A maximum
	204–264 VAC, 50/60 Hz; 1.5 A maximum
Expansion Power Supply Output*	5 A for Special Application Notification Appliances
	2 A for Regulated 24 VDC Notification Appliances
NAC Operation, Per Circuit	2 A maximum
Special Application Appliances	Simplex 4901, 4903, 4904, and 4906 Series non-addressable horns, strobes, and combination horn/strobes and speaker/strobes (contact your Simplex product representative for compatible appliances)
Regulated 24 DC Appliances	Power for other applicable UL listed appliances; use associated external synchronization modules where required
8 Circuit I/O Module — Input Mode	Dry Contact, supervised with 2.2 kΩ end-of-line resistor 4081-9001
8 Circuit I/O Module — Output Mode	24 VDC, 150 mA, open collector
Relay Operation, N.O./N.C.	2 A @ 32 VDC
Resettable 4-Wire Smoke Detector Power	24 VDC, 500 mA, open collector
Auxiliary Power Connections (two taps)	2 A; maximum each tap, power-limited; 18.7 to 32 VDC
Wiring and Environmental — Wiring Terminal Blocks	Pluggable type, wire size is 18 to 12 AWG (0.82 mm^2 to 3.31 mm^2)
Wiring and Environmental — Operating Temperature	32° F to 120° F (0° C to 49° C)
Wiring and Environmental — Operating Humidity Range	Up to 93% RH, non-condensing @ 100°F (38° C)

*NOTE: Power supply output currents listed are entirely available for NAC appliances and auxiliary equipment. 4005 modules are powered from separate circuits. See Field Wiring Diagram 841-990 and Installation Instructions 574-068 for additional detail.

Battery Requirements

Module		Supv. (mA)	Quantity	Supv. Total	Alarm (mA)	Quantity	Alarm Total
4005-9101 & -9102 †	Includes 2, 4005-9804 & 1, 4005-9805	135	Select one		293	Select one	
4005-9101C & CF †	Includes 2, 4005-9804 & 1, 4005-9805	168			328		
4005-9150 †	Includes 2, 4005-9824 & 1, 4005-9805	141			330		
Separate Modules; Standard, Optional, and Expansion; see NOTES ( ) below							
4005-9806, Class A Adapter		1	x	=	33	x	=
4005-9807, Expansion Power Distribution Module		1	x	=	1	x	=
4005-9809, 1 Circuit Remote Station/City Connect		11	x	=	22	x	=
4005-9813, Expansion Power Supply		12	x	=	12	x	=
4005-9803, 2 IDC, Low Current, and 2 NAC/Relay (1, 2, 3, 4, 5)		10	x	=	34	x	=
4005-9804, 4 IDC, Low Current (1, 2, 3)		22	x	=	57	x	=
4005-9805, 4 NAC/Relay (5)		8	x	=	53	x	=
4005-9808, 8 Circuit I/O Module		1	x	=	1	x	=
4005-9824, 4 IDC, High Current (1, 2, 4)		28	x	=	94	x	=
Internal DACT (aftermarket PID 4005-9810) (6)		35	x	=	50	x	=

† Standard panels and 4005-9150 include IDC loop currents for both supervisory and alarm.	**Total, 4005 Modules**			
	Total, 4-Wire Detector Power	+		+
	Total, Other Auxiliary Power	+		+
	Total, Notification Appliance Power	+		+
	Total Supervisory Current		**Total Alarm Current**	

NOTES:
1. IDC supervisory currents include loop currents of 2 mA/circuit for "low" current IDCs and 3 mA/circuit for "high" current IDCs.
2. IDC Alarm currents, add as required. Low current IDCs = 13 mA/circuit; High current IDCs = 50 mA/circuit.
3. Add 8 mA supervisory current per SC, WSC point used.
4. Add 10 mA supervisory current per SC point used.
5. Add 8 mA supervisory current per circuit if used as auxiliary relay and programmed for normally on.
6. DACT Current is 50 mA when reporting.

Conduit knockouts are provided on top and bottom

Reference, 24" stud centers

Box width = 22-1/2" (572 mm)

Knockouts are provided for nailing. Two on each side and one each on top and bottom.

Drywall markers indicate 1/2" (13 mm) depth, two on each side

Box includes an 0.048 " (1.2 mm) thick trim for semi-flush mounting. Height and width are same as door.

24"
(610 mm)

23"
(584 mm)

23-3/8" (594 mm)

1/2"
(13 mm)

3-7/8"
(98 mm)
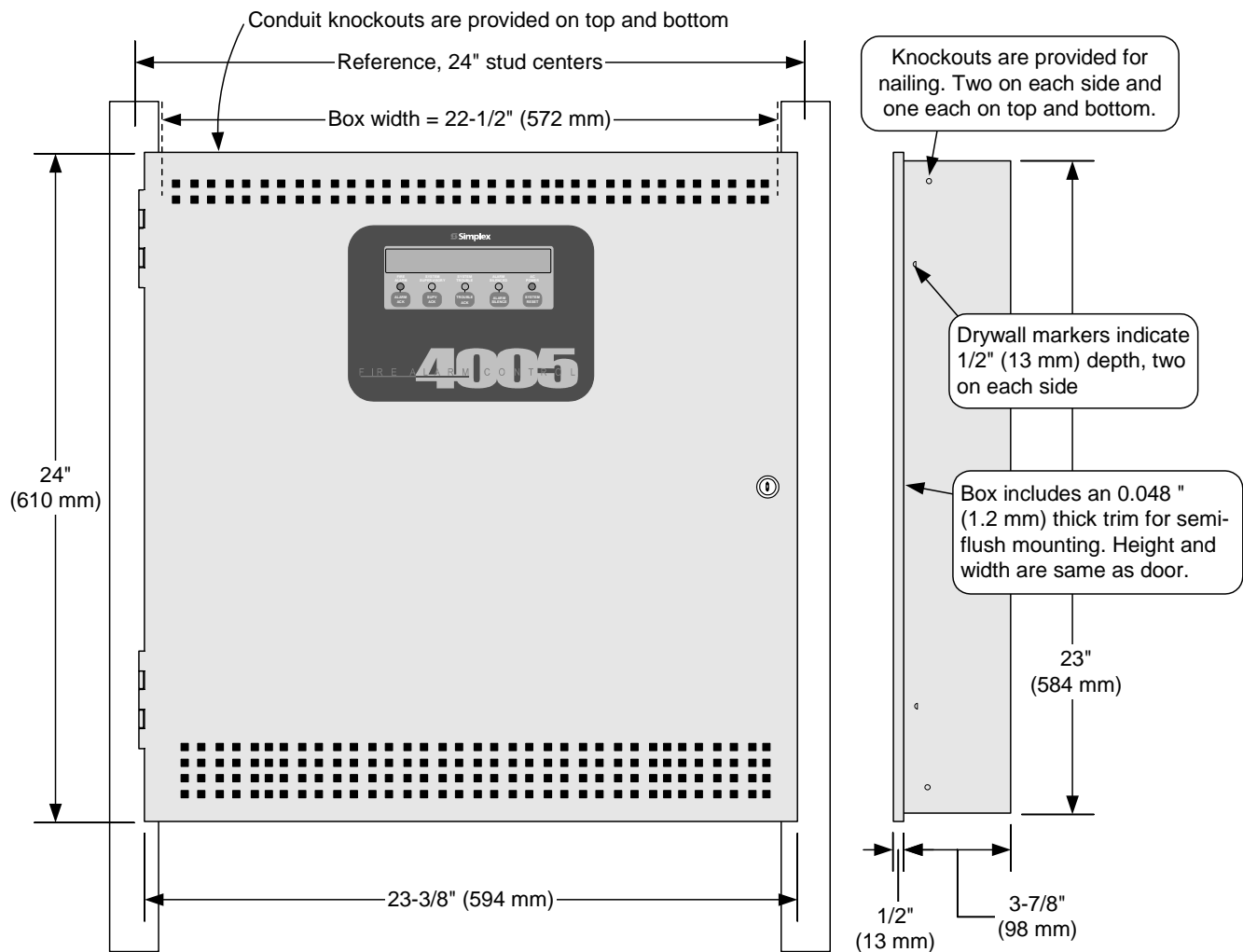
NOTE: A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, article 250, and NFPA 780.

Simplex