

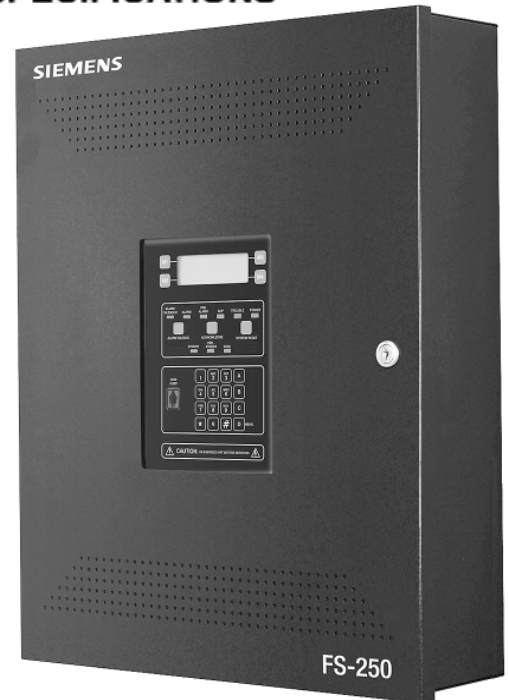
# FireSeeker Fire Alarm System

## Addressable Control Fire Panel with Optional Releasing Capability

### Models FS-250-REL-EKIT, FS-250-ENCL and FS-250-ENCL-R

#### ARCHITECT AND ENGINEER SPECIFICATIONS

- One (1) intelligent signaling line circuit (Style 4 or 6)
- Supports up to 252 addressable inputs and signal / relay outputs (504 total inputs / outputs)
- Auto program feature makes system commissioning more efficient
- Easily programmable from front keypad or Windows®-based PC configuration tool (not required)
- SureWire™ polarity insensitive loop wiring
- Utilizes H-Series detectors and devices
- Devices operate on standard wire (no twist or shield required)
- FirePrint™ application-specific fire detection
- Four (4) 'Class B' and two (2) 'Class A' Notification Appliance Circuits (NACs)
- Up to 6 Amps. — NAC Power
- Built-in strobe synchronization protocol
- Up to four (4) remote LCD displays with control capabilities
- 80-character backlit LCD display
- One-man walk test (Silent or Audible)
- Optional city-tie module
- Optional internal DACT capable of transmitting point or group information
- Three (3) on-board, programmable relays, plus one (1) non-programmable *Fail / Safe* relay for *Trouble* events



- Manual fan restart feature
- Maintenance and technician-level passwords for added security
- Made in the USA, ISO 9001 quality crafted
- **UL 864 9<sup>th</sup> Edition Listed;** FM, CSFM & NYMEA Approved

### Product Overview

The Model FS-250 Addressable Fire Alarm Control Panel is a low-cost, small panel suited for standalone operation in small-to-medium-sized facilities. Model FS-250 features a single, addressable input-device circuit; four (4) notification-appliance circuits, and the capability for optional releasing of Sinorix™ Engineered Fire Suppression Systems. The Model FS-250 system is available in either a black or red enclosure, with operating controls and indicators behind a locked door. Model FS-250 is **UL 864 9<sup>th</sup> Edition Listed** by Underwriters Laboratories.

The Model FS-250 control panel indicates *Alarm*, *Supervisory* and *Trouble* conditions with an 80-character, backlit LCD display and integral system-status LEDs.

*Acknowledge*; *Alarm Silence* and *System Reset* commands are accomplished with built-in membrane control buttons. Basic user and maintenance-level functions, such as *Viewing History* or *System Enable / Disable*, are also accomplished through the membrane-control buttons. Maintenance-level functions are password protected.

The main system for Model FS-250 can support up to 38 AH battery sets — up to 12 AH will fit inside the enclosure.

**FireSeeker Fire Alarm Control Panel (FS-250 with Optional Releasing) 4311**

## Specifications

The basic Model FS-250 fire alarm control panel features a single, addressable signaling line circuit (Style 4 or 6); capable of supporting up to 252 addressable input devices — whether they are detectors, manual pull stations, or contact monitoring points. Each detector can also have an optional, audible detector base; relay-detector base, or remote lamp. These auxiliary devices are completely controlled through logic, and are not required to activate simultaneously with the detector.

The Model FS-250 system also has four (4) 'Class B' or two (2) 'Class A' Notification Appliance Circuits (NACs) built into the main board. Each circuit has a capacity of 1.5 amps of 24VDC for powering horns, strobes, chimes, and other compatible notification appliances. The total, base-system capacity for the four (4) circuits is 3.0 amps, and can be expanded to 6A max. Each NAC is fully programmable, and supports standard and custom-coded outputs of audible devices.

Model FS-250 control panel has three (3) programmable 'Form C' dry-contact relays. One (1) additional non-programmable 'Form C' dry-contact relay is provided that activates only on *Trouble* events — operating in *Fail / Safe* mode in order to activate if there is a system power failure. Each relay is rated at 1 amp @ 28VDC. Up to 0.5A auxiliary 24VDC power is also available on the Model FS-250 main board.

### Intelligent Addressable Device Loop

The Model FS-250 control panel utilizes the advanced P-2 protocol for the detection circuit. The features of the P-2 loops include *SureWire*<sup>™</sup> technology, which provides 252 addresses (inputs and outputs); polarity insensitivity; response time under 3 seconds, and retrofit installations that use almost any type of wire (such as: shielded, non-shielded, twisted, etc.)

Model FS-250 can be installed by using any of the H-series P-2 devices — including the Model HFP-11 *FirePrint*<sup>™</sup> detector. However, the low-cost Model HFPO-11 detector, which is a non-*FirePrint* photoelectric device, can be used for the less-demanding, more cost-competitive applications.

If a detector accessory (such as an audible base or a relay base) is required, the Model ILED-HC or Model ILED-HW Intelligent Remote LED can be installed, which can be programmed to mimic the detector LED or respond to panel logic.

(See the ILED installation guide or catalog sheet for details.)

## Abort Station

Model AW-1 Abort Station employs a momentary, normally closed contact 'Dead Man' type push-button switch, which — while held in — prevents discharge of the clean agent. Upon release of the push button, the Sinorix<sup>™</sup> Engineered Fire Suppression System will follow the sequence of events as programmed in the releasing panel, ultimately resulting in the release of the Sinorix agent.

## Releasing Module

Model FS-REL provides two (2) releasing circuits and four (4) open-collector outputs.

## Manual Release Station

The basic, standard model for the Manual Release Station is the double-action Model MH-501, which contains one normally open contact. Model MH-501 has a rating of 120VAC for connection to other systems. Model MH-501 is 'dual-action' type. Hence, it is necessary to operate the 'push-in' tab first to provide access to the 'pull-down' lever, which — when operated — locks in position after releasing a spring-loaded contact switch to effect actuation of the release circuit.

Model MH-501 is constructed of durable, molded polycarbonate material, matte-finished in red with raised lettering in white. Restoring the system to normal can only be accomplished by opening the cover of the hinged housing with a special tool, and then closing and locking its cover.

Model MH-501 is constructed with a molded housing, fitted with a 'pull-down' lever and a 'push-in' tab. The body of Model MH-501 is hinged to a back-plate assembly, which is locked with a socket-head screw.

## Minimum Control Unit Configuration

### Intelligent Signaling Line Circuit (SLC)

The main termination board for Model FS-250 has addressable-loop interface circuitry supporting one (1) SLC loop. Devices are polarity insensitive, and can operate on untwisted, unshielded wire.

### Notification Appliance Circuits (NAC)

The Model FS-250 base panel has four (4) independent NACs. Each circuit can be configured to give continuous output, or one (1) of five (5) sounding patterns. NACs can be configured as: two (2) 'Class A — Style Z' or four (4) 'Class B — Style Y.'

### Dry Contacts

Three (3) programmable 'Form C' dry-contact relays are provided on the Model FS-250 fire alarm control panel. One (1) additional 'Form C' dry-contact relay is provided that activates only on *Trouble* events. This relay operates in *Fail / Safe* mode, in order to activate if there is a power failure of the Model FS-250 system.

### Power Supply

This component provides all operating power to the Model FS-250 panel for *Standby* and *Alarm* conditions.

## Optional Control Unit Configuration

### Digital Alarm Communicator Transmitter (FS-DACT)

Communication between the FS-250 fire-alarm control panel and a monitoring station is accomplished with the Digital Alarm Communication Transmitter, (Model: FS-DACT). Model FS-DACT supports two (2) lines and two (2) accounts, and can transmit serial information by point to the central or remote station.

Communication protocols available include:

- SIA DCS 8
- SIA DCS 20
- Ademco Contact ID
- 4/2 1400 Hz
- 4/2 2300 Hz
- 3/1 1400 Hz
- 3/1 2300 Hz

Model FS-DACT mounts within the FS-250 control panel. Neither an external enclosure nor wires are required between the panel and the dialer. Programming of account and dialing information is done as part of the system configuration, and no external programmer for the dialer is required.

### Municipal Tie / Leased Line (FS-MT)

For installations that require connection to a municipal call box or a leased line, the Model FS-MT municipal tie module is used. Model FS-MT provides a local-energy output for municipal call-box connection, and gives a reverse-polarity output for lease line connection. The Model FS-MT unit mounts within the FS-250 enclosure. Model FS-MT parameters are programmed at the time of system configuration.

## Auxiliary Devices

Model FS-250 panel supports up to four (4) remote LCD displays and eight (8) serial annunciators or serial relay units.

### Remote LCD Annunciator (FS-RD3)

Model FS-250 supports a remote LCD display — Model FS-RD3, which uses the same 80-character, backlit LCD display found on the main FS-250 fire alarm control panel.

Model FS-RD3 has remote *Acknowledge*, *Alarm Silence*, and *System Reset* capability that is secured with a keyswitch. User-level functions are accessible from Model FS-RD3.

Model FS-RD3 communicates with the main FS-250 system board, via a RS-485 communication network. Up to four (4) Model FS-RD3 remote displays can be supported on a single FS-250 control panel. Model FS-RD3 mounts in a 2"-deep, 6-gang electrical box, and the plate on the display is suitable for flush mounting.

### Programmable Remote Relays (FS-RU2)

Programmable relays are available on the FS-250 control panel. A remote processor board (Model FS-RU2) communicates with the main-system board, via a RS-485 communication network. This processor board controls a relay board mounted adjacent to it. The relay board has eight (8) 'Form C' relay contacts — rated at 1 amp at 28VDC maximum. Model FS-RU2 relay unit contains one (1) processor board and one (1) relay board to add the eight (8) relays to a FS-250 control panel.

The relay board has eight (8) Form C relay contacts — rated at 1 amp at 28VDC maximum. Model FS-RU2 relay unit contains one (1) processor board and one (1) relay board, totaling eight (8) relays to a Model FS-250 control panel.

Each processor board can support up to three (3) relay boards simultaneously, totaling 24 programmable relays per processor board. Additional relay extender boards are available, Model FS-RE8. A total of eight (8) processor boards can be supported simultaneously by each FS-250 control panel.

### Programmable Serial Annunciator Drivers (FS-SAU2)

Programmable serial annunciator drivers are available on the Model FS-250 control panel. A remote processor board communicates with the main system board, via a RS-485 communication network. This processor board controls a serial-annunciator driver board mounted adjacent to the remote processor board. The driver board has 16 outputs for LEDs. All serial-annunciator outputs are supervised.

Model FS-SAU2 serial-annunciator unit contains one (1) processor board and one (1) serial-annunciator driver board to add 16 LED drivers. Each processor board can support up to four (4) additional driver boards simultaneously, totaling 64 programmable serial-annunciator drivers per processor board.

Additional serial annunciator extender boards are available as Model FS-SAE16. A total of eight (8) processor boards can be supported simultaneously by each Model FS-250 control panel.

### Programming / Configuration Options

Configuration of the FS-250 control panel can be accomplished in two ways. The operator interface includes a 16-button keypad. This keypad can be used to configure all system parameters — including custom messages and logic — directly at the panel with no other configuration tools. Alternately, the Model FS-CT2 configuration tool can be used on a laptop computer to upload, download, and edit the system configuration.

The Model FS-CT2 configuration tool includes a connection cable for use between the FS-250 control panel, a 9-pin serial connection, and the FS-CT2 software. Use of the FS-CT2 software requires a computer that runs on a Windows®-based PC operating system. The model FS-CT2 tool can be used to generate configuration reports and download and print history.

## Programming / Configuration Options - (cont.'d)

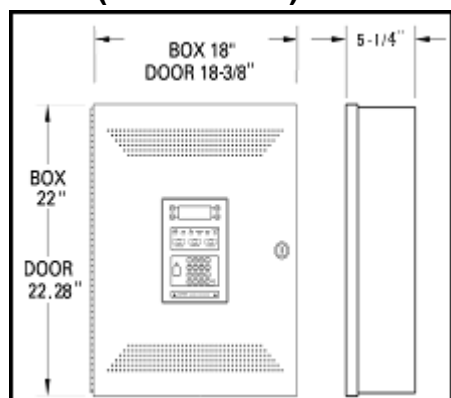
Custom messages for system addresses consist of two (2) lines; 20 characters per line. The characters include upper and lower case letters as well as numbers, punctuation marks, and control characters. This 40-character custom message will be displayed for all events at that address.

## Releasing Capability

The Model FS-250 fire alarm control panel can be used for optional release of pre-action / deluge sprinkler and clean-agent systems. The releasing panel requires a system enclosure (such as the Model FS-250-ENCL); the Model FS-250-CON2 electronics package; two (2) Model FS-NPE system transformers; one (1) Model FS-RPT releasing transformer, and one (1) Model FS-REL releasing module.

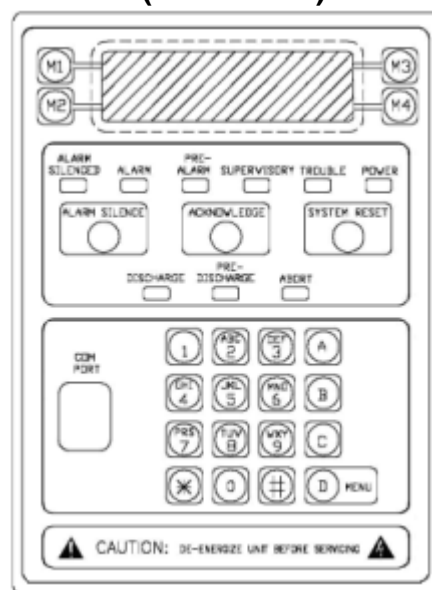
Model FS-REL provides two (2) independent releasing circuits – both rated at 1.5 Amp. The FS-250 panel also provides four (4) different abort options, as well as programmable delay and discharge timers. A countdown timer is available for display at the main panel and the optional FS-RD3 remote display.

**FS-250  
(Dimensions)**



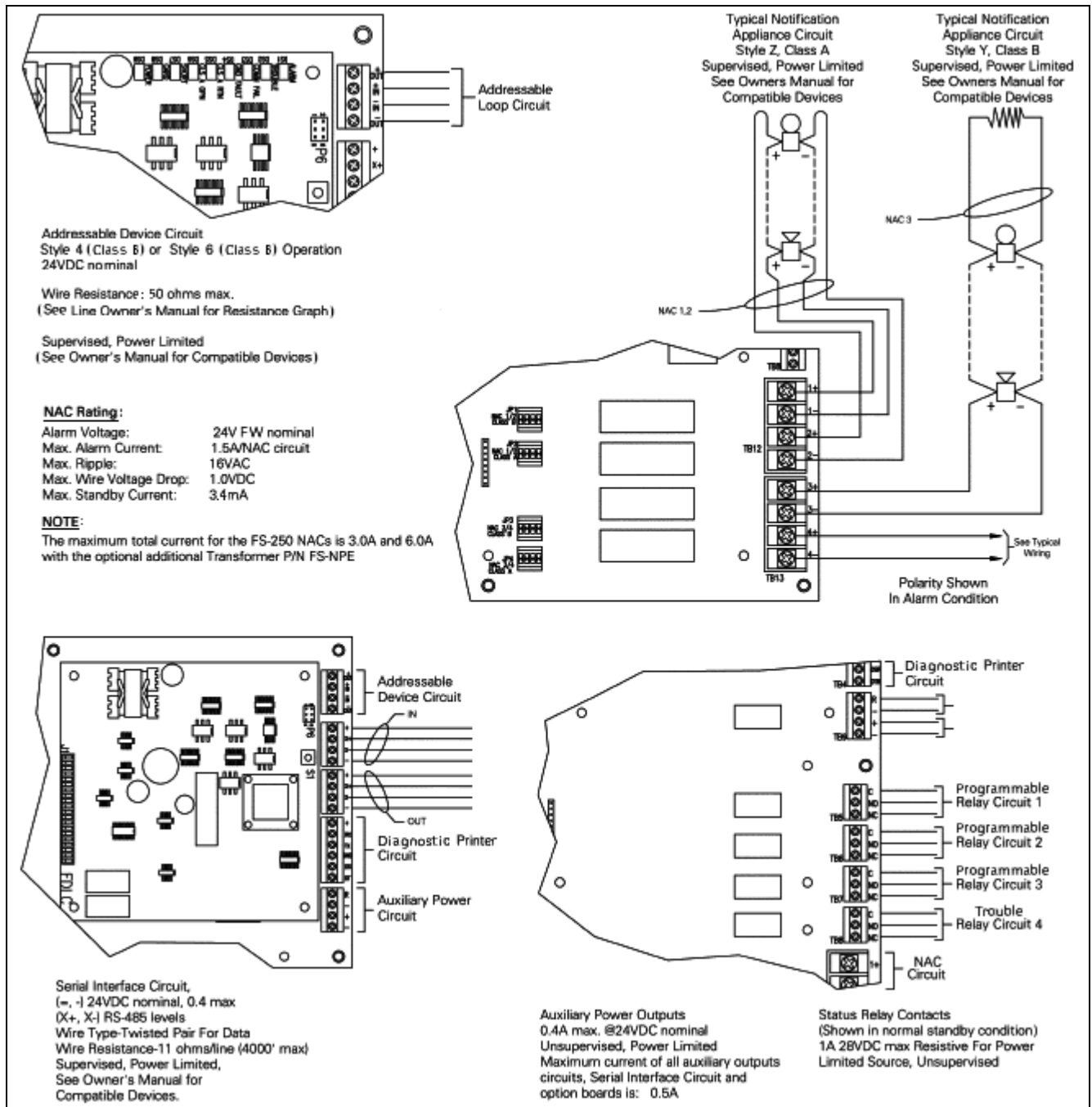
(Shown In Inches)

**FS-250  
(Front View)**



# Wiring Diagram

## Main Termination Board



## Technical Data

<b>Environmental:</b>	Operating Temperature: 32-120°F (0-49°C) Relative Humidity: up to 93% @ 90°F (32°C)
<b>Primary Power Supply:</b>	Primary Input Voltage: 120 VAC (60 Hz.) Maximum Primary Input Current: 2.4 Amps. @ 120 VAC
<b>Secondary Power Supply:</b>	24-volt, lead-acid battery with 7AH - 38AH capacity
<b>Auxiliary Power Outputs:</b>	Current - 0.5 Amp with resettable and non-resettable power outputs
<b>System Status Relays:</b>	Four (4) relays rated @ 1 Amp, 28 VDC resistive
<b>Notification Appliance Circuits:</b>	Rating per NAC circuit, 1.5A each, 6A max.
<b>Battery:</b>	Base cabinet accommodates a 12 AH battery set. Larger batteries require separate enclosures.
<b>Dimensions:</b>	<u>Enclosure only:</u> 22" (56cm.) x 18" (46cm.) x 5-1/4" (13.3cm.) deep <u>Enclosure with door:</u> 22-9/32" (56cm.) x 18-3/8" (46cm.) x 5-1/4" (13.3cm.) deep

## Details for Ordering

Model Number	Part Number	Description
FS-250-REL-EKIT	599-050588	FS-250 Electronics Package Includes: FS-250-CON2 (1 Qty.) FS-NPE (2 Qty.) FS-RPT (1 Qty.) FS-REL (1 Qty.)
FS-250-ENCL	500-648952	FS-250 Enclosure, Black
FS-250-ENCL-R	500-648953	FS-250 Enclosure, Red

### Optional Accessories

Model Number	Part Number	Description
FS-RD3-R	500-649910	Remote Annunciator, Red
FS-RD3	500-649700	Remote Annunciator, Black
FS-RU2	500-649308	Relay Processor Card
FS-RE8	500-699467	8-Relay Extender
FS-SAU2	500-649307	Serial Annunciator Processor Card
FS-SAE16	500-699469	16-Output Annunciator Extender
FS-DACT	500-699464	Serial Digital Alarm Comm. Transmitter (DACT)
FS-MT	500-699462	Municipal Tie Module
FS-CT2	500-649380	Cable & Programming Software
FS-SFT-R	500-648955	Semi-Flush Trim, Red
FS-SFT	500-648954	Semi-Flush Trim, Black
HFPO-11	500-034800	Photo-Only Detector
HFP-11	500-033290	FirePrint Detector
HFPT-11	500-033380	Thermal Detector
RL-HC	500-033230	Remote Lamp, Ceiling
RL-HW	500-033310	Remote Lamp, Wall
ILED-HC	500-048809	Intel Lamp, Ceiling
ILED-HW	500-048837	Intel Lamp, Wall
AD-HR	500-033280	Air-Duct Housing with Relay
AD-11P	500-095656	Air-Duct Housing
HMS-S	500-033200	Single-Action Manual Station
HMS-D	500-033400	Dual-Action Manual Station
HMS-M	500-033450	Metal Manual Station
HTRI-S	500-033370	Single-Input Monitor Module
HTRI-D	500-033360	Dual-Input Monitor Module
HTRI-R	500-033390	Single Input w/ Relay Module
HTRI-M	500-034000	Mini Single-Input Module
HLIM	500-033170	Line Isolator
HZM	500-034850	Conventional-Zone Module
DPU	500-033260	Device Programming / Loop Unit
DPU-PRT	500-034020	Label Printer with Carrying Case
DPU-C1	500-033990	DPU Carrying Case
AW-1	500-822500	Abort Station
CPY-MRS	500-697964BG	Main / Reserve Selector Switch
MH-501	500-622543	Agent Release: Dual-Action, Manual Pull Station

**Notice:** This marketing catalog sheet is not intended to be used for system design or installation purposes.  
For the most up-to-date information, refer to each product's installation instructions.