


## FireSeeker Model FS-250

### Addressable Releasing Control Panel

#### ENGINEER AND ARCHITECT SPECIFICATIONS

- One intelligent signaling line circuit (Style 4 or 6)
- SureWire polarity insensitive loop wiring
- Utilizes H-Series detectors and devices
- Supports up to 252 addressable inputs AND signal/relay outputs
- Devices operate on standard wire, no twist or shield required
- FirePrint application specific fire detection
- 4 Class B/2 Class A NAC circuits
- Releasing Features
  - Supports one hazard
  - Abort (3 options)
  - Delay timer and discharge timers
  - Large numbered countdown timer
- Built in strobe synchronization protocol
- Optional internal DACT capable of transmitting point or group information
- Programmable from front keypad or Windows based PC configuration tool
- 2000 event history log
- 4 on board programmable relays
- Auto program feature makes system start-up faster
- Maintenance and technician level passwords
-  MEA and CSFM Listed



The FS-250 addressable fire alarm control panel is a small, low cost fire alarm panel suited for stand-alone operation in small to medium sized facilities. It features a single addressable input device circuit and four notification appliance circuits. The system is available with both a black or red enclosure, with operating controls and indicators behind a locked door. The FS-250 is Listed by Underwriters Laboratories.

#### Main System

The FS-250 indicates alarm, trouble and supervisory conditions with an 80 character backlit LCD display and integral system status LEDs. Acknowledge, alarm silence, and system reset 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. Password protection of maintenance level functions is present. The main system can support up to 38 AH battery sets, up to 12 AH will fit inside the enclosure.

The basic FS-250 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 associated with it. These auxiliary devices are completely controlled through logic, and are not required to activate simultaneously with the detector.

The system also has four class B or 2 class A Notification Appliance Circuits built into the main board. Each circuit has a capacity of 1.5 amps of 24VDC for powering horns, strobes, chimes, and other notification appliances. The total base system capacity for the four circuits is 3.0 amps and can be expanded to 6A. Each NAC is fully programmable, and supports standard and custom coded outputs of audible devices. Systems can be configured to sound different codes on the same NAC to indicate different conditions.

The FS-250 has four programmable Form C relays on the main board. Each relay is rated at 1 amp @ 28VDC. Auxiliary 24VDC power is also available on the main board, with a capacity of up to 0.5 amps.

## The Loop

The FS-250 utilizes the advanced P-2 protocol for the detection circuit. The P-2 loops features include SureWire™ technology providing, 252 addresses (inputs AND outputs), polarity insensitivity, response time under 3 seconds, retrofit installations using almost any type of wire (shielded, non-shielded, twisted, etc.)

You can install an FS-250 using any of the H-series P-2 devices including the HFP-11 FirePrint™ detector. But we also offer a new low-cost HFPO-11 detector that is a non-FirePrint photoelectric device for the less-demanding, more cost-competitive applications.

If you require two detector accessories, such as a relay or audible base AND a remote lamp, you can install the new ILED-HC or ILED-HW Intelligent Remote L.E.D. that can be programmed to mimic the detector L.E.D. or can respond to panel logic (see ILED installation or catalog sheet for details.)

## Optional Modules

### Remote LCD Annunciator

The FS-250 supports a remote LCD display called the FS-RD2. This remote display uses the same 80 character backlit LCD display found on the main system panel. The FS-RD2 has remote acknowledge, silence, and reset capability, secured with a keyswitch. User and maintenance level functions are also possible from this remote display. Maintenance level functions require the system maintenance password for activation. The FS-RD2 communicates with the main system board via an RS-485 communication network. Up to sixteen FS-RD2 remote displays can be supported on a single FS-250 system. The FS-RD2 mounts in a 2" deep 6 gang electrical box, and the plate on the display is suitable for flush mounting.

### Digital Alarm Communicator Transmitter (DACT)

Communication between the FS-250 and a monitoring station is accomplished with the Model FS-DACT Digital Alarm Communication Transmitter. The FS-DACT supports two lines and two 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, 3/1 1400 Hz,

3/1 2300 Hz, 4/2 1400 Hz and 4/2 2300 Hz. The FS-DACT mounts within the FS-250 enclosure on an 8-pin connection point on the main board. No external enclosure is required, and no wires are required between the panel and the dialer. Programming of account and dialing information is done as part of the system configuration. No external programmer for the dialer is required.

### Municipal Tie/Leased Line

For installations that require connection to a municipal call box or a leased line, the Model FS-MT municipal tie module is used. The FS-MT provides a local energy output for municipal call box connection and a reverse polarity output for lease line connection. The unit mounts within the FS-250 enclosure on an 8-pin connection point on the main board. Configuration of the FS-MT parameters is done as part of the system configuration.

### Programmable Relays

Programmable relays are available on the FS-250. A remote processor board communicates with the main system board via an RS-485 communication network. This processor board controls a relay board mounted adjacent to it. The relay board has eight Form C relay contacts, rated at 1 amp @ 28VDC maximum. Model FS-RU relay unit contains one processor board and one relay board to add eight relays to an FS-250 system. Each processor board can support up to three relay boards simultaneously, for a total of 24 programmable relays per processor board. Additional relay extender boards are available as Model FS-RE8. A total of eight processor boards (including serial annunciator processor boards) can be supported simultaneously by the FS-250. All programmable relay processors and modules can be mounted in a Model FS-AE accessory enclosure.

### Programmable Serial Annunciator Drivers

Programmable serial annunciator drivers are available on the FS-250. A remote processor board communicates with the main system board via an RS-485 communication network. This processor board controls a serial annunciator driver board mounted adjacent to it. The driver board has sixteen outputs for LEDs. All serial annunciator outputs are supervised. Model FS-SAU-2 serial annunciator unit contains one processor board and one serial annunciator driver board to add 16 LED drivers to an FS-250 system. Each processor board can support up to four additional driver boards simultaneously, for a total of 64 programmable serial annunciator drivers per processor board. Additional serial annunciator extender boards are available as Model FS-SAE16. A total of eight processor boards (including relay processor boards) can be supported simultaneously by the FS-250. All programmable serial annunciator processors and modules can be mounted in a Model FS-AE accessory enclosure.

### Programming/Configuration Options

Configuration of the FS-250 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, right 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 and a 9-pin serial connection, and the FS-CT2 software. Use of the FS-CT2 software requires a computer running Windows 98, Windows 2000, or Windows XP. The FS-CT2 tool can be used to generate configuration reports and download and print history.

If an alarm or other system event occurs during system configuration, the event will cause the panel to annunciate the alarm and operate the appropriate outputs.

Custom messages for system addresses consist of two lines of twenty characters each. The characters include both upper and lower case letters as well as numbers, punctuation marks, and control characters. This forty character custom message will be displayed for all events at that address.

## Releasing Service

The FS-250 can be used for releasing both pre-action/deluge sprinkler and clean agent systems. This requires a system enclosure (like the FS-250-ENCL), the FS-250-CON2 electronics package, two FS-NPE system transformers, one FS-RPT releasing transformer, and a FS-REL releasing module. The FS-REL provides two independent releasing circuits, both rated at 1.5A. The FS-250 also provides four 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-RD2 remote display.

## General Specifications

### Environmental

Operating temperature: 32-120°F (0-49°C) Relative Humidity - 85% @ 86°F

### Primary Supply

Primary input voltage -  
120 Vac (50/60 Hz.), 240 Vac (50/60 Hz.)  
Maximum primary input current -  
1.3 amp @ 120Vac

### Secondary and Trouble Power Supply

24 volt lead-acid battery with 7 AH-38 AH capacity

### Auxiliary Power Outputs

Current - 0.5 amp resettable/non-resettable power outputs

### Status System Relays

4 relays rated @ 1 amp, 28Vdc resistive

### NAC Circuits

Rating per NAC circuit, 1.5A ea., 6 max.

### Battery

Base cabinet will accommodate a 10 A battery set. Larger batteries will require separate enclosure

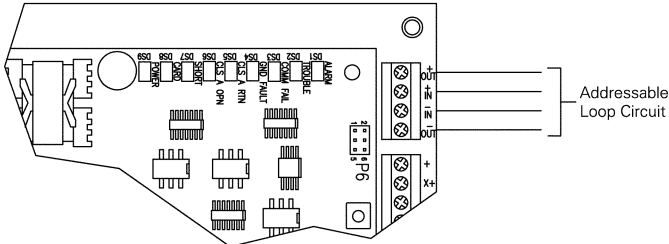
### FS-250 Dimensions

22" x 18" x 5 1/4" deep – enclosure only  
22 9/32" x 18 3/8" x 5 1/4" deep – enclosure with door

## Ordering Information

Model Number	Description	Part Number
FS-250-CON2	FS-250 Electronics Package for Releasing	500-649650
FS-250-ENCL	FS-250 Enclosure, Black	500-648952
FS-250-ENCL-R	FS-250 Enclosure, Red	500-648953
<b>Optional Accessories</b>		
FS-RD2	Remote Annunciator, Black	500-648980
FS-RU2	Relay Processor Card	500-649308
FS-RE8	8 Relay Extender	500-699467
FS-SAU2	Serial Annun. Processor Card	500-649307
FS-SAE16	16 Output Annunciator Extender	500-699469
FS-AE	Acc. Enclosure for Serial Drivers	500-699470
FS-DACT	Serial DACT	500-699464
FS-MT	Municiple Tie Module	500-699462
FS-CT2	Cable and Programming Software	500-649380
FS-SFT-R	Semi Flush Trim, Red	500-648955
FS-SFT	Semi Flush Trim, Black	500-648954
FS-NPE	Nac Power Expander Transformer	500-649120
HFPO-11	Photo Detector	500-034800
HFP-11	FirePrint Detector	500-033290
HFPT-11	Thermal Detector	500-033380
RL-HC	Remote Lamp-Ceiling	500-033230
RL-HW	Remote Lamp-Wall	500-033310
ILED-HC	Intel Lamp-Ceiling	500-048809
ILED-HW	Intel Lamp-Wall	500-048637
AD-HR	Air Duct Housing w/ Relay	500-033280
AD-11P	Air Duct Housing	500-095656
HMS-S	Manual Station-Single Action	500-033200
HMS-D	Manual Station-Dual Action	500-033400
HMS-M	Metal Manual Station	500-033450
HTRI-S	Single Input Monitor Module	500-033370
HTRI-D	Dual Input Monitor Module	500-033360
HTRI-R	Single Input w/ Relay Module	500-033390
HTRI-M	Mini Single Input Module	500-034000
HLIM	Line Isolator	500-033170
HZM	Convention Zone Module	500-034850
DPU	Device Programmer/Loop Tester	500-033260
DPU-PRT	Label Printer and Carrying Case	500-034020
DPU-C1	DPU Carrying Case	500-033990
FS-REL	Releasing Module	500-649570
FS-RPT	Releasing Power Transformer	500-649590

# Wiring, Main Termination Board



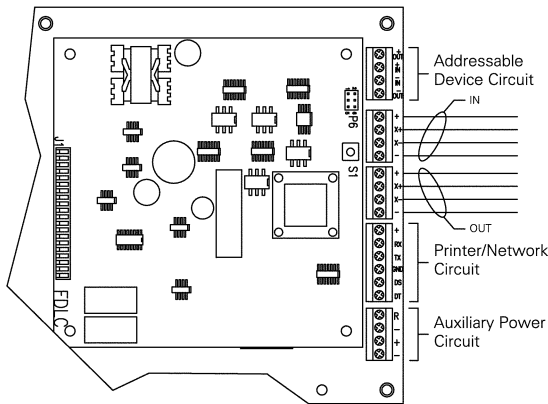
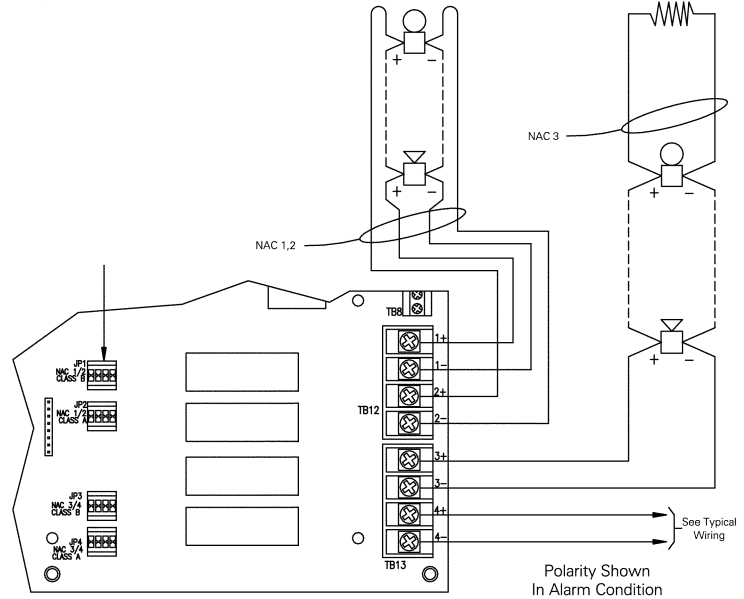
Addressable Device Circuit  
 Style 4 or 6 Operation  
 24VDC nominal  
 Wire Resistance-50 ohms max  
 (see Line Resistance Graph)  
 Supervised, Power Limited  
 See Owner's Manual for Compatible Devices

**NAC Rating:**  
 Alarm Voltage: 24V FW nominal  
 Max. Alarm Current: 1.5A/NAC circuit  
 Max. Ripple: 16VAC  
 Max. Wire Voltage Drop: 1.0VDC  
 Max. Standby Current: 1.0mA

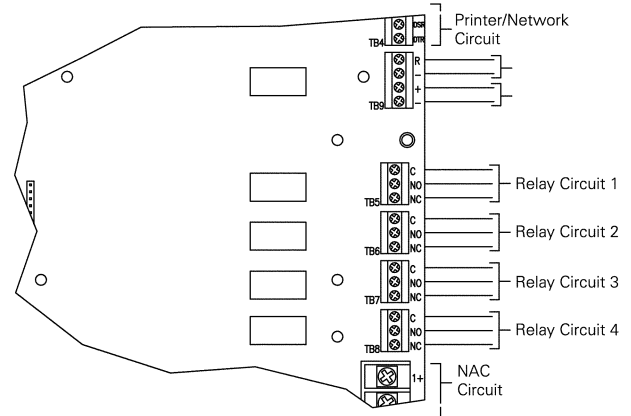
**NOTE:**  
 The maximum total current for the FS-250 NACs is 3.0A and 6.0A with the optional additional Transformer P/N FS-NPE

Typical Notification Appliance Circuit  
 Style Z, Class A  
 Supervised, Power Limited  
 See Owners Manual for Compatible Devices

Typical Notification Appliance Circuit  
 Style Y, Class B  
 Supervised, Power Limited  
 See Owners Manual for Compatible Devices



Serial Interface Circuit,  
 (+, -) 24VDC nominal, 0.4 max  
 (X+, X-) RS-485 levels  
 Wire Type-Twisted Pair For Data  
 Wire Resistance-11 ohms/line (4000' max)  
 Supervised, Power Limited,  
 See Owner's Manual for Compatible Devices.



Auxiliary Power Outputs  
 0.4A max. @24VDC nominal  
 Unsupervised, Power Limited  
 Maximum current of all auxiliary outputs  
 circuits, Serial Interface Circuit and  
 option boards is: 0.5A

Status Relay Contacts  
 (Shown in normal standby condition)  
 1A 28VDC max Resistive For Power  
 Limited Source, Unsupervised