FireShield Plus [1]

Conventional Fire Alarm Control Panels

Overview [2]

The FireShield Plus fire alarm family consists of 5 and 10 zone conventional fire alarm control panels, an integrated DACT/Dialer, serial annunciator modules, and serial remote relay modules. All of these components are microprocessor-controlled. The FireShield Plus family is ideal for both new and retrofit installations alike. [3]

FireShield Plus incorporates features designed to simplify installation, operation and maintenance. These include front panel programming, one person walk testing, and selectable IDC and NAC types. In addition, when used with EDWARDS *CleanMe®*-compatible smoke detectors, FireShield Plus provides analog type features such as remote maintenance alert and automatic drift compensation that reduce false alarms and simplify maintenance calls. [4]

FSP502 and FSP1004 panels support Class A operation by combining pairs of on-board initiating curcuits (IDCs) or notification circuits (NACs) to provide the necessary Class A circuits. For example, the FSP1004 comes factory set to support 10 Class B IDCs and four NACs. But it can be field-configured to provide five Class A IDCs, no Class B IDCs, and two Class A NACs – or any other combination of circuits that fall within the circuit-pairing parameters. [5]

	FSP1004	FSP502	[6]
Class B IDCs	Up to 10	Up to 5	
Class A IDCs	Up to 5	Up to 2	
Class B NACs	Up to 4	Up to 2	
Class A NACs	Up to 2	1	
NAC Power	3.5 amps*	3.5 amps	
Auxiliary power	0.5 amps	0.5 amps	

Note: Class A operation will reduce the number of available Class B IDCs and/or NACs, depending on the panel configuration. See Specifications on page 5 for details. [7]

*Expandable to 7.0 amps

Standard Features [8]

- Available in 5 and 10 IDC models [9]
- IDC or NAC pairs convertible to single Class A circuits (10 and 5 IDC panels only)
- *CleanMe®* provides remote annunciation if a detector drifts out of UL/ULC limits reducing the chance of a false alarm
- Combination Waterflow and Supervisory IDCs reduces wire and zone counts
- NACs programmable by zone and individually selectable for Genesis, continuous, temporal outputs, or coded
- Front panel programmable simplifies installation and servicing
- Optional fully integrated DACT/Dialer for PC programming
- Genesis option allows precision synchronization and audible silence over two wires without additional modules
- On-board relays for Alarm, Supervisory and Trouble
- Optional serial bus relay modules are programmable for common or zone activation
- Optional serial bus remote annunciator family
- One person walk-test (audible or silent)
- Expandable power supply on 10 IDC panel reduces booster power costs
- Trim ring available for semi-flush mounting
- Supports 2M, "EC", 6200, 400, 500 and 700 series detectors

Application

FireShield Plus provides smoke and fire detection, occupant notification and off-premises signaling for small- to medium-sized buildings.

Each IDC can be configured for either Class B or Class A operation and one of eight operating modes:

- Alarm –with or without smoke detector verification including discrimination of contact devices
- Waterflow Alarm;
- Waterflow Alarm/Supervisory (Combination IDC);
- Supervisory (Latching/non-latching);
- Monitor (non alarm or supervisory)
- Signal Silence
- Drill
- Cross zoning

NACs may also be configured for either Class B or Class A operation. Additionally, NACs can be individually configured for one of six outputs. These are Genesis, Genesis (A/V silenceable), Continuous, Temporal, Coded, and City Tie. The Genesis selection allows independent horn control over two wires and provides precision synchronization for Genesis devices, all without the need for a Genesis Signal Master accessory.

When configured for Genesis notification appliances, FireShield Plus's Alarm Silence function will silence connected Genesis audible appliances but Genesis strobes will remain active until the panel is reset. When Genesis Mode is selected, both the horns and strobes on Genesis and Enhanced Integrity notification appliances will be synchronized across all NACs.

Note: zones may be selected for either latching or non-latching operation.

Detectors with intelligent features at a conventional price

When combined with ED-WARDS *CleanMe®* -compatible smoke detectors, FireShield Plus provides intelligent features at a conventional price. If a *CleanMe®* detector drifts out of the UL/ULC sensitivity range, EDWARDS's patented remote maintenance reporting sends an alert to the FireShield Plus control panel. This feature reduces the chance of a false alarm and simplifies service calls. In addition, *CleanMe®* -compatible smoke detectors have built-in drift compensation that extends the time between cleanings. If cleaning is ever necessary, it is literally a snap with EDWARDS's exclusive replaceable optical chamber.

Replaceable optical chamber!

Panel LED Display

The following system LEDs display the panel's status:

- *Alarm* – panel is in the alarm state;
- *Trouble* – panel is in the trouble state;
- *Supervisory* – panel is in the supervisory state;
- *Power* – indicates the status of the AC power source;
- *Disable* – indicates when any IDC, NAC, relay or the DACT is disabled;
- *Annunciator Trouble* – indicates trouble on the remote annunciator bus;
- *Battery Trouble* – indicates battery or charging problems;
- *Ground Fault* – indicates a short between any panel circuit and ground;
- *Walk Test* – indicates that one or more IDCs are in the walk test mode;
- *Alarms Silenced* – indicates that the panel is in the alarm state with one or more NACs silenced.
- *Waterflow* – indicates that one or more circuits have detected an active waterflow switch.
- *Service Detector* – indicates the presence of a dirty detector.
- *Remote Disconnect* – indicates off site communication has been disabled.

Each IDC has a disable switch and three LEDs:
- Alarm – *red* – indicates that the IDC is in the alarm state;
- Trouble – *yellow* – indicates that the IDC is in the trouble state or is disabled (when flashing);
- Supervisory/Monitor – *yellow* – indicates that the IDC is in the supervisory state or the monitor state (when flashing).

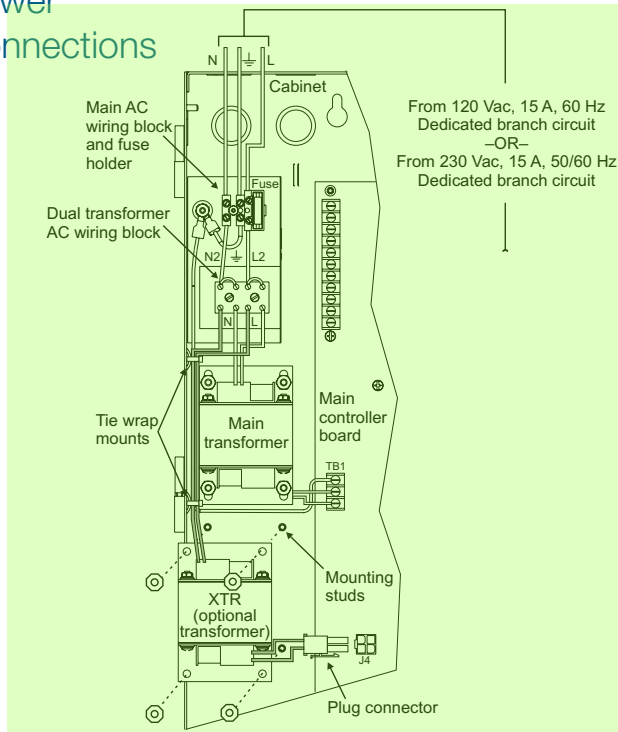Each NAC also has a disable switch and a trouble/disable LED.

Status indication with the DACT/Dialer installed

The dialer's LCD display provides two lines x 16 characters of text. For programming, the top line displays the programming step and the lower line displays the selected option. All system events are displayed on the LCD with custom zone messages. During normal operation, the LCD will display any off-normal condition present in the panel.

IP and Cellular Communications

Several popular third-party IP/Cellular communicators have been tested with the FSP conventional control panels and are compatibility listed to UL864. The IP/Cellular communicators meet NFPA72 2013 edition requirements for sole or secondary transmission paths. Using IP/Cellular communicators can reduce the cost of ownership by eliminating POTS lines. Please see the FSP conventional control panel compatibility documentation part number 3101019-EN for a full list of compatible communicators.

Power Connections

N L
Cabinet

Main AC wiring block and fuse holder

From 120 Vac, 15 A, 60 Hz Dedicated branch circuit
–OR–
From 230 Vac, 15 A, 50/60 Hz Dedicated branch circuit

Dual transformer AC wiring block

Fuse

N2 L2

N

Tie wrap mounts

Main transformer

Main controller board

TB1

XTR (optional transformer)

Mounting studs

J4

Plug connector

Options

Off-premise communication

A fully integrated FireShield Plus DACT/dialer is available for reporting events to a monitoring facility. The DACT also supports uploading or downloading of system configuration, status and event history. The DACT is programmable for either single or dual line operation. It also supports split and dual reporting for two digital alarm receivers.
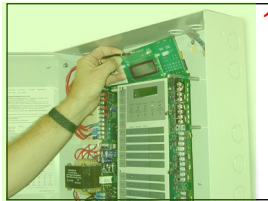
The DACT brings additional features to the panel including a 32-character alphanumeric LCD display, local or remote PC programming and an event history log.
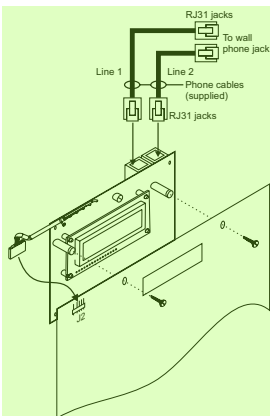
Remote Annunciators and Relays

The serial bus standard on all FireShield Plus models is another installation time-saver. This circuit allows the connection of Remote System Indicators (FSRSI), Remote Zone Indicators (FSRZI-A, FSRZI-SA) and Remote Relay Modules (FSRRM24) over a four-wire (data and power) circuit. Annunciator and relay modules can be installed up to 1,000 feet from the panel on 18-gauge wire.

Modules are also available for City Tie (CTM) and Reverse Polarity (RPM) connections.

DACT/Dialer
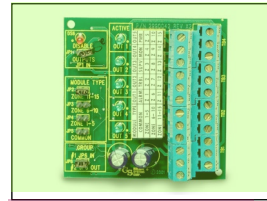

The DACT/Dialer installs behind the front panel display.

RJ31 jacks
To wall phone jack
Line 1
Line 2
Phone cables (supplied)
RJ31 jacks

J2

The optional DACT/Dialer is a multifunction module that provides communications, modem capability, and LCD display functions. Its primary function is as a Digital Alarm Communicator Transmitter (DACT). As a DACT, it transmits event messages to a Digital Alarm Communicator Receiver (DACR) at a monitoring facility. The monitoring facility then notifies the fire department and other responsible parties of the event. Programmable options include single or dual line operation, and split or dual reporting to two DACRs.
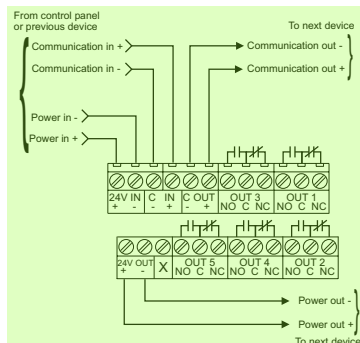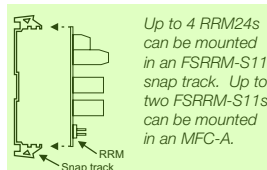
The DACT module can also be used as a modem to connect the panel to both local and remote computers for uploading and downloading of configuration data (programming), panel status and event history. For security, the modem can be configured to accept programming on incoming calls or it can be required to call a preprogrammed number before accepting downloads and sending uploads.

The DACT module can be configured to work as all of the above, or as only an LCD display or LCD display and modem.

Note: All panel versions are available with factory installed DACT. See order table for ordering information.

Remote Relay Module

The Remote Relay Module mounts on a plastic track inside an MFC-A cabinet.

Up to 4 RRM24s can be mounted in an FSRRM-S11 snap track. Up to two FSRRM-S11s can be mounted in an MFC-A.

RRM Snap track

From control panel or previous device
To next device
Communication in +
Communication out -
Communication in -
Communication out +
Power in -
Power in +
24V IN
C IN
C OUT
OUT 3
OUT 1
+ -
- +
- +
NO C NC
NO C NC
24V OUT
X
OUT 5
OUT 4
OUT 2
+
NO C NC
NO C NC
NO C NC
Power out -
Power out +
To next device

The Remote Relay Module (FSRRM24) is one component of the system that sets FireShield Plus apart from other panels in its class. This module has five Form C relays rated at 1 amp each. It can be configured to function in either a zone relay mode or a common system mode.

When configured in the zone relay mode, relays energize when the associated IDC is active. The module can be configured for activation by IDCs 1 through 5 or IDCs 6 through 10. One relay is automatically associated with each IDC.

When configured in the common system mode, relays energize or deenergize when the panel changes state. One relay is available for each of the following functions: Alarm, Supervisory, Trouble, Power Loss, Monitor.
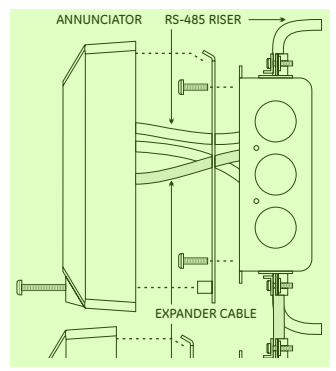
The FSRRM24 mounts on a plastic snap track and can be installed in an MFC-A or other listed fire alarm enclosure. The panel will support two RRMs of each configuration for a total of six on the 10-zone panel.
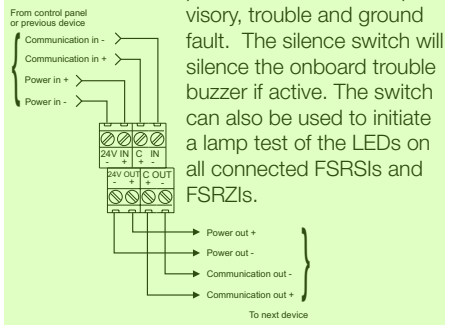
Remote Annunciators

The FireShield Plus family has several remote annunciation options. The serial remote annunciator bus can be run up to 1000 feet (305 m) on untwisted non-shielded 18-gauge cable. Serial annunciator models round out the family to provide a range of features and functions. As many as three annunciator modules may be mounted in a standard electrical box, sharing an attractive trim plate that blends with any decor.

The FSRSI can be installed alone or with one or more FSRZIs. The FSRSI and FSRZI-A require trim plates (ordered separately). These are available in one, two or three gang models. Each panel will support two FSRSIs.

ANNUNCIATOR   RS-485 RISER

EXPANDER CABLE

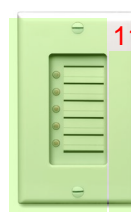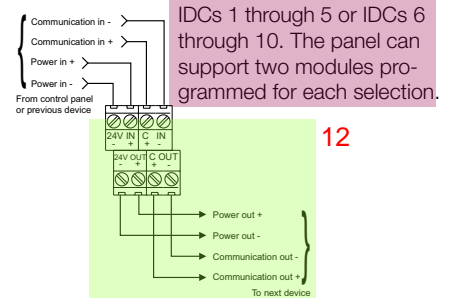## Remote System Indicator (FSRSI)

The FSRSI is ideal for common system annunciation. It includes five LEDs and a local silence/lamp test switch. The LEDs indicate power status, alarm, supervisory, trouble and ground fault. The silence switch will silence the onboard trouble buzzer if active. The switch can also be used to initiate a lamp test of the LEDs on all connected FSRSIs and FSRZIs.
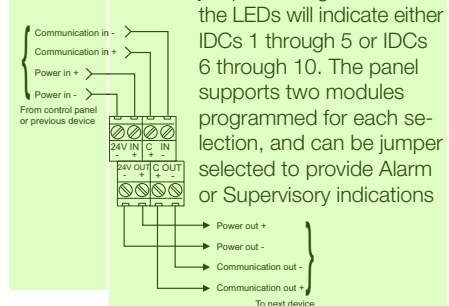

Remote Zone Indicator (FSRZI-A)

The FSRZI-A is used to indicate zones in the alarm state. It contains five red LEDs. Depending on the jumper setting selected, the LEDs will indicate either IDCs 1 through 5 or IDCs 6 through 10. The panel can support two modules programmed for each selection.

Remote Zone Indicator (FSRZI-SA)

The FSRZI-SA is used to indicate zones in the alarm or supervisory state. It contains five bi-color LEDs. Depending on the jumper setting selected, the LEDs will indicate either IDCs 1 through 5 or IDCs 6 through 10. The panel supports two modules programmed for each selection, and can be jumper selected to provide Alarm or Supervisory indications
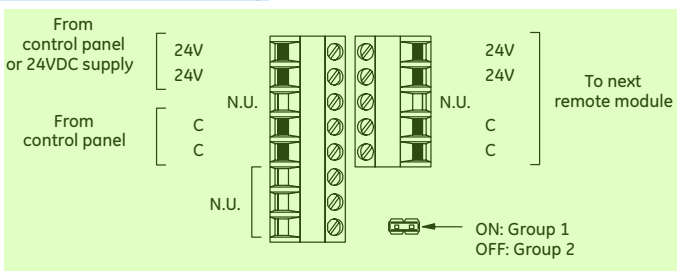
FSRA10, FSRA10C Remote LED annunciators

The FSRA10 is a remote annunciator with capacity for up to ten zones. It includes ten bi-color LEDs (red/yellow) for indicating active zones, and ten yellow LEDs for indicating zone troubles. The (C) option adds common control switches. Both versions mount to standard North American 4-inch square electrical boxes. A surface box is also available.
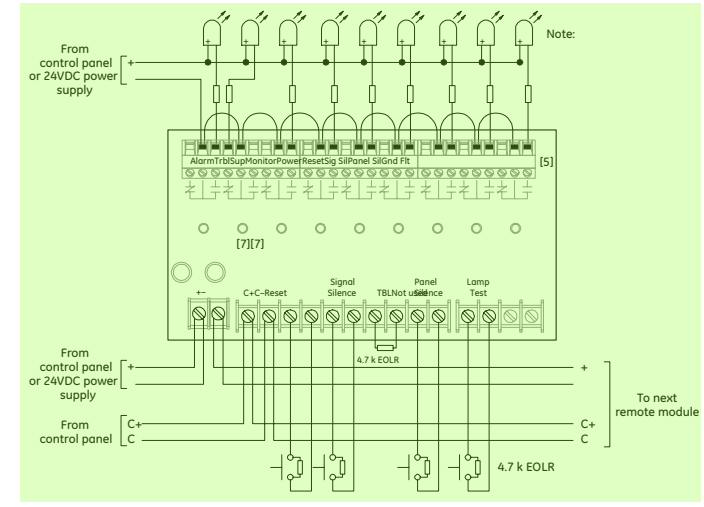

FSUIM Graphic Driver/Interface

The FSUIM is a universal interface module that can be used by FireShield to drive graphic annunciators. It also allows FireShield control panels to control, or be controlled by, other control panels. The FSUIM provides five supervised switch inputs and nine dry contact relay outputs. Nine LEDs provide visual confirmation when each relay is energized. The FSUIM is shipped with a plastic snap track for mounting in an MFC-A cabinet or other listed fire alarm enclosure.

FSRA10, FSRA10C Wiring

Remote Annunciator Specifications

General	
Agency Listings	UL864 (S3000), ULC-S527, CSFM, FDNY

Remote Annunciators	FSRSI Remote System Indicator	FSRZI-A/FSRZI-SA Remote Zone Indicator	
Maximum per System	All panels: 2	10 zone panel: 4	5 zone panel: 2
Current Requirements	Standby: 17 mA Alarm: 56 mA	Standby: 8 mA Alarm 76 mA	
Voltage Range	Minimum: 18.8 Vdc; Maximum: 27.3 Vdc		
Maximum Circuit Capacitance	0.03 μF		
Maximum Circuit Resistance	13 Ohms		
Wire Size	18 - 12 AWG (0.75 mm² - 2.5 mm²)		
Mounting	ANSI/NEMA OS1-1996 1-3 gang electrical box		
Operating Environment	Temperature: 32 - 120° F (0 - 49° C); Humidity: 93% RH, non-condensing		

Remote Relay Module – FSRRM24	Configured for Zone Mode	Configured for Common Mode
Maximum per system	10 zone panel: 4; 5 zone panel: 2	All panels: 2
Current Requirements	Standby: 10 mA; Alarm: 70 mA	Standby: 26 mA; Alarm: 70 mA
Voltage Range	Minimum: 18.8 Vdc; Maximum: 27.3 Vdc	
Contact Rating	1 A @ 30 Vdc	
Maximum Circuit Capacitance	0.03 μF	
Maximum Circuit Resistance	13 Ohms	
Wire Size	18 - 12 AWG (0.75 mm² - 2.5 mm²)	
Mounting	Single FSRRM24 mounts in plastic track (included) or up to four FSRRM24s in an FSRRM-S11 11" track ordered separately. FSRRM24s should be installed in an MFC-A or other listed fire alarm enclosure.	
Operating Environment	Temperature: 32 - 120° F (0 - 49° C); Humidity: 93% RH, non-condensing	
Dimensions	2-3/4" W x 3-3/8" H x 1-1/2" D (65.9 mm W x 85.7 mm H x 38.1 mm D)	

F-Series Remote Annunciators	FSRA10	FSRA10C
Compatibility	10-Zone Panels only	
Common Controls	No	Yes
Dimensions	5-5/8" x 8½" x 1 ½" in (14.3 cm x 21.4 cm x 3.8 cm)	
Mounting	North American 4-inch square electrical box or listed enclosure	
Power Wiring	18 to 12 AWG (0.75 to 2.50 sq mm)	
Data Wiring	18 to 12 AWG (0.75 to 2.50 sq mm) twisted pair (6 twists per foot minimum)	
Operating voltage	18.8 to 27.3 Vdc Supply must be UL/ULC listed for fire protective signaling systems. Do not use FACP accessory power outputs that are interrupted when the panel is reset.	
Standby current	17 mA	
Alarm current	98 mA	
Operating environment	Temperature: 32 to 120 °F (0 to 49 °C); Humidity: 0 to 93% RH, noncondensing at 90 °F (32 °C)	

FSUIM Universal Input Module	
Mounting	MFC-A cabinet or listed fire alarm enclosure
Wire size	12 to 18 AWG (0.75 to 2.5 sq mm)
Operating voltage	21.2 to 27.3 Vdc
Circuit capacitance	0.03 μF, max.
Circuit resistance	13 ohms, max.
Switch inputs	Quantity: 5 End-of-line resistor: 4.7 k ohms ½ W
Relay outputs	Quantity: 9 Type: Common Style: Form C
Contact rating	30 Vdc at 1 A (resistive load)
Standby Curent	53 mA
Alarm Current	114 mA
Operating environment	Temperature: 0 to 49 °C (32 to 120 °F); Humidity: 0 to 93% RH, noncondensing at 32 °C (90 °F)

Control Panel Specifications

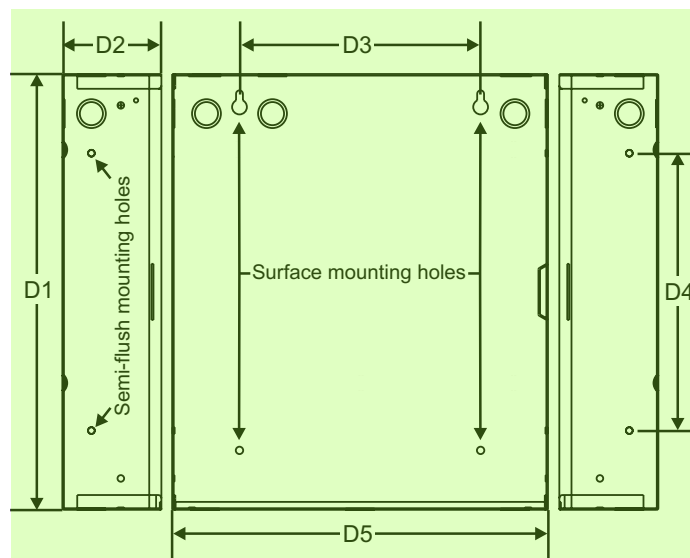| Control Panels		FSP1004						FSP502		
Initiating Device Circuits – IDCs	Class B	10	8	6	4	2	0	5	3	1
(Available combinations shown at right)	Class A	0	1	2	3	4	5	0	1	2
Notification Appliance Circuits – NACs	Class B	4	2	2		0		2	0	
(Available combinations shown at right)	Class A	0	1	1		2		0	1	
Power Supply		4.25 amps expandable to 7.5 amps						4.25 amps total		
NAC Voltage Rating		24 Vfwr								
Maximum NAC current		2.0 amps each, 3.5 amps total 7.0 amps w/ optional transformer						2.0 amps each 3.5 amps total		
AC Input 120 Vac 60 Hz... 230 Vac 50/60Hz...		2.2 amps w/ optional transformer 1.1 amps w/ optional transformer						1.25 amps 0.6 amps		
Base Panel Current Draw Standby... Alarm...		128 mA 242 mA						104 mA 224 mA		
Panel Battery Charge Capacity (sealed lead acid only)		Up to two 24 Ah batteries, 18 Ah in cabinet						Up to 24 Ah, 10 Ah max in cabinet *		
Auxiliary Current		0.5 amps max. May be programmed as resettable.								
Auxiliary Output		24 Vdc regulated								
IDC Alarm Current		3.0 mA (Consult detector compatibility list p/n 3101019-EN for maximum detectors per circuit)								
IDC Circuit		Maximum loop resistance: 13 Ohms; Maximum loop capacitance: 0.03 µF								
IDC Operating Voltage		16.9 to 29 Vdc								
UL Detector ID		100								
Alarm Contact (normally open Form C)		30 Vdc @ 1 A (resistive load)								
Trouble Contact (Form C)		30 Vdc @ 1 A (resistive load)								
Supervisory Contact (normally open Form C)		30 Vdc @ 1 A (resistive load)								
Operating Environment		Temperature: 32 - 120° F (0 - 49° C); Humidity: 5 - 93% RH, non-condensing								
Terminals (wire gauge)		18 - 12 AWG (0.75 mm² - 2.5 mm²)								
Asynchronous Serial Communications		Maximum resistance: 13 Ohms; Maximum capacitance: 0.03 µF								
Agency Listings		UL864 (S3000), ULC-S527, CSFM								

If larger batteries are required, use an external battery cabinet.

DACT – F-DACT (mounts in panel)	
Receivers	Supports two receivers with two phone numbers each
Communications Protocol	Contact ID (SIA DC-05), 4/2 (SIA DC-02 P3)
Programming	Front panel controls or PC with appropriate software
Telephone line connection	Two RJ31X (plug-to-plug) cords supplied with DACT
Telephone lines	Two or one loop start lines on the public switched telephone network. Pulse or DTMF.
Telephone wall connector	RJ31X/CA31X equiv. or RJ38X/CA38X equiv.
Communications Compliance	Industry Canada CS-03; FCC/CFR 47 Parts 15 & 68; NFPA 72; UL 864; ULC S527
Operating Environment	Temperature: 32-120° F (0-49° C); Humidity: 93% RH, non-condensing
Current requirements	Standby: 65 mA; Alarm: 107 mA
Agency Listings	UL864 (S3000), ULC-S527, CSFM

Dimensions

Model	D1*	D2	D3	D4	D5*
Five-zone	19.5 in (49.5 cm)	3.75 in (9.5 cm)	9.13 in (23.2 cm)	10.5 in (26.67 cm)	14.23 in (36.14 cm)
Ten-zone	30 in (76.2 cm)	3.75 in (9.5 cm)	7.75 in (19.7 cm)	21.27 in (54.0 cm)	15.0 in (38.1 cm)

Add 1½ inches (3.81 cm) to D1 and D5 dimensions for trim kit.

Ordering Information

Part Number	Description	Ship Wt. lb. (kg.)

Control Panels

Part Number	Description	Ship Wt. lb. (kg.)
FSP1004*	Conventional Fire Alarm Control Panel – 10 Class B IDCs and 4 Class B NACs (Pairs of IDCs and NACs convertible to single Class A circuits), 120 Vac	30.5 (13.8)
FSP1004-2	Conventional Fire Alarm Control Panel – 10 Class B IDCs and 4 Class B NACs (Pairs of IDCs and NACs convertible to single Class A circuits), 230 Vac. Grey cabinet.	30.5 (13.8)
FSP502*	Conventional Fire Alarm Control Panel – 5 Class B IDCs and 2 Class B NACs (Pairs of IDCs and NACs convertible to single Class A circuits), 120 Vac	18.5 (8.4)
FSP502-2	Conventional Fire Alarm Control Panel – 5 Class B IDCs and 2 Class B NACs (Pairs of IDCs and NACs convertible to single Class A circuits), 230 Vac. Grey cabinet.	18.5 (8.4)
F-TRIM35*	Semi-flush trim ring for FSP302 and FSP502	1.7 (0.8)
F-TRIM10*	Semi-flush trim ring for FSP1004	2.2 (1.0)

* Insert "G" for Gray cabinet or "R" for Red cabinet. Insert "F" for French language (grey cabinets, not available on 220v versions).
Insert "GD" or "RD" for red and gray cabinets with dialer installed.

Related Items

Part Number	Description	Ship Wt. lb. (kg.)
F-XTR120	Expander Transformer, 120 Vac - For FSP1004* only	4.0 (1.8)
F-XTR230	Expander Transformer, 230 Vac - For FSP1004*-2 only	4.0 (1.8)
EOL3.6-1.1	Required UL listed End of Line Resistors – One 3.6K Ohm and one 1.1K Ohm. One required for each IDC configured as combination waterflow and supervisory.	0.1 (0.5)
EOL-P1	Required ULC listed End of Line Resistor Plate - includes one 1.1K, 3.6K and 4.7K Ohm resistor	1.0 (0.5)

Off Premises Communications

Part Number	Description	Ship Wt. lb. (kg.)
F-DACT	Digital Communicator/Modem/LCD module (Mounts in control panel)	1.0 (0.5)
F-DACT1	Digital Communicator/Modem/LCD module (Compatible with new v4.0 control panels)	
RPM	Reverse Polarity Module	3.0 (1.36)
CTM	City Tie Module (Requires 4" square or 2-gang North American electrical box)	1.0 (0.5)

Remote Annunciation

Part Number	Description	Ship Wt. lb. (kg.)
FSRSI	Remote System Indicator – Includes LEDs for display of Power, Alarm, Supervisory, Trouble and Ground Fault, trouble sounder and silence/lamp test switch. Single gang trim plate included, multi-gang plates ordered separately. Mounts in a single or multi-gang North American electrical box.	0.3 (0.1)
FSRZI-A	Remote Zone Indicator – Includes red LEDs for five IDCs. Single gang trim plate included, multi-gang plates ordered separately. Mounts in single or multi-gang North American electrical box.	0.3 (0.1)
FSRZI-SA	Remote Zone Indicator – Includes LEDs for five IDCs. Single gang trim plate included, multi-gang plates ordered separately. Mounts in single or multi-gang North American electrical box. Jumper selected Alarm (red) or Supervisory (amber) indications.	0.3 (0.1)
FSAT1	Annunciator Trim Plate, 1 gang	0.1 (0.05)
FSAT2	Annunciator Trim Plate, 2 gang	0.1 (0.05)
FSAT3	Annunciator Trim Plate, 3 gang	0.1 (0.05)
FSAT4	Annunciator Trim Plate, 4 gang	0.1 (0.05)
FSRA10	Single Unit 10 zone remote annunciator for FSP1004 – *Insert "F" after p/n for French language option*	
FSRA10C	Single Unit 10 zone remote annunciator for FSP1004 (with common controls) – *Insert "F" after p/n for French language option*	
FSUIM	Common Function Graphic Driver/Interface - 9 relays and 5 switch inputs for common system indicators and controls	

Remote Relay Module

Part Number	Description	Ship Wt. lb. (kg.)
FSRRM24	Remote Relay Module – Five Form C relays. Configurable for IDCs 1-5, or 6-10, or common system indications. Requires MFC-A or other listed fire alarm enclosure.	0.4 (0.2)
FSRRM-S11	11" Mounting track. Holds up to 4 FSRRM24s.	0.4 (0.2)

more...

Accessories 1

Part Number	Description	Ship Wt. lb. (kg.) 2
Cabinets		
MFC-A	Multi-function Cabinet (fire alarm accessory enclosure)	7.0 (3.2)

Batteries		3
12V4A	4.5 Ah Sealed Lead Acid Battery - 12 Vdc (2 required)	5 (2.27)
12V6A5	7.2 Ah Sealed Lead Acid Battery - 12 Vdc (2 required)	6 (2.72)
12V10A	11 Ah Sealed Lead Acid Battery - 12 Vdc (2 required)	10 (4.45)
12V17A	18 Ah Sealed Lead Acid Battery - 12 Vdc (2 required)	13 (5.90)
12V24A	26 Ah Sealed Lead Acid Battery - 12 Vdc (2 required)	20 (9.07)

Programming Tools 4		
FA-CU	Fire alarm configuration utility. This CU is available for download from the myEDDIE website only. Visit *https://myeddie.edwardsutcfs.com.*	5