

## FEATURES

- UL Listed, File #S405, Standard #864 (UOJZ)
- Operates on 120 VAC at 50/60 Hz or 240 VAC at 50/60 Hz
- (4) Class "B" / Style "B" Conventional IDC  
(2) Class "B" / Style "Y" Conventional NAC Circuits
- 2.25 Amps of Notification Appliance Power, 200 ma of Resettable and/or Non-resettable Power
- General Alarm Operation
- System Alarm & Trouble form "C" Relays
- Supervised for no or low Battery
- Push Button Switches for: Reset, Trouble Silence, Alarm Silence, General Alarm, Lamp Test, Circuit Disable and History Recall
- Dual IDC operation for Waterflow and Supervisory Devices
- Event History, Lamp Test, General Alarm, Alarm Silence, Zone and Signal Disable, Quick Test, A.V., History Recall, Silence Inhibit, Ground Fault Detection, Optional Alarm Relays, Selectable City Tie and Annunciator Outputs

- USA / IBEW Quality Crafted



## DESCRIPTION

The Faraday **FireWatch-400** is a conventional fire alarm panel. It's configuration is 4 Class "B" (Style "B") Initiating Device Circuits (IDCs), with 2 Class "B" (Style "Y") Notification Appliance Circuits (NACs).

All operator functions are located behind the locked cabinet door. There are push button switches for: system reset, trouble silence, alarm silence, general alarm, lamp test, circuit disable and history recall.

### Initiating Device Circuits:

The **FireWatch-400** control unit provides 4 IDCs for conventional initiating devices (smoke detectors, manual pull stations, waterflow switches and supervisory switches). IDCs are class B (Style B). Each IDC may be disabled from the keypad accessible to the skilled user. Disabling a circuit causes a trouble LED to flash in the associated circuit and prevents an alarm condition on that circuit.

### Alarm Verification:

Alarm verification is provided and is selectable by IDC. To disable alarm verification on all IDCs, set the no verify switch to the "On" position for each IDC (Alarm from any other zone during verification cycle causes an alarm). The detector reset time is 7 seconds with a restart time of 3 seconds. The alarm confirmation time is 120 seconds.

### Waterflow Alarm:

All zones are convertible to a sprinkler supervisory function, with unique indication. The supervisory switches are wired with a series resistor (P/N 10813) when configured as a supervisory zone. IDC 4 may also be programmed as non-silenceable.



### Ground Fault:

The **FireWatch-400** control unit provides ground fault detection, both positive (flashing) and negative (steady). There is one ground fault indication LED. A single ground fault activates the system buzzer and system trouble indicator.

### Quick Test:

The **FireWatch-400** provides a Quick Test feature to assist with testing the control unit. After placing the system in Quick Test mode, a zone alarm will cause the system to respond according to normal operation for several seconds and then automatically perform a system reset. Any notification circuits not enabled will not sound. Alarm verification is disabled during Quick Test and there is a one hour time out if Quick Test is not used.

### History Recall:

The last zone alarm and last zone trouble or supervisory received can be recalled to the display by operating a front control unit push button.

### Battery Circuit:

Battery charging capacity is up to 17.2 AH at 24 VDC. The Battery charging type is lead acid (gel-cell). The control unit is protected from reverse battery connection by means of a non-user replaceable PCB-mounted fuse. If the battery is connected in reverse, the fuse will blow and a trouble will be indicated. The battery is supervised for no and low battery. If this condition occurs, a trouble condition will be indicated on the system.

### Alarm Relay Board (optional):

The alarm relay board provides 1 system alarm, 1 system trouble and 4 zone alarm relays with dry form "C" contacts, rated for 2 amp at 30 VDC. The board mounts to the main board of the **FireWatch-400** System Control Unit.

### City Tie Board (optional):

The city tie board provides a supervised output for local energy municipal box transmitter and alarm and trouble reverse polarity circuits. There is a disable switch and trouble LED. The alarm reverse polarity output can be configured to open on trouble if no alarm exists.

### LED Annunciator Driver Board (optional):

The annunciator driver board supervises 1 remote annunciator unit. Annunciator wiring is supervised for open conditions.

FARADAY FireWatch - 400 FIRE ALARM SYSTEM CONTROL UNIT

## SYSTEM SPECIFICATIONS

### Environmental

Operating temperature  
 Normal: 68 - 77°F (20-25°C)  
 Extreme: 32 - 120°F (0-49°C) up to 3 hours  
 Relative humidity  
 Extreme: 85% @ 86°F up to 24 hours

### Primary Input Voltage

Primary Input Voltage  
 13400-120 120 VAC (50/60 Hz)  
 13400-240 240 VAC (50/60 Hz)  
 Maximum primary input current  
 13400-120 1.0 A at 120 VAC  
 13400-240 0.5 A at 240 VAC

### Secondary and Trouble Power Supply

24 volt sealed lead-acid battery set  
 Maximum charge voltage: 28 VDC  
 Maximum charge current: 1.0 A  
 Maximum input current: 3.0 A  
 Battery capacity: 7-17.2 A.H.  
 (over 12 A.H. requires separate enclosure)

### Resettable Smoke Detector Power (R+, R-)

Power limited  
 Voltage: 24 VDC nominal  
 Ripple: 1 VAC maximum  
 \*Current: 0.20 amp maximum

### Non-Resettable Power Output (NR+, NR-)

Power limited  
 Voltage: 24 VDC nominal  
 Ripple: 1 VAC maximum  
 \*Current: 0.20 amp maximum  
 \*Total combined resettable & non-resettable current is 0.20 amp maximum

### Auxiliary Power Output (AUX+, AUX-)

Power limited  
 Voltage: 24 VDC nominal  
 Ripple: 15 VAC maximum  
 Current: 0.5 amp maximum (subtracted from NAC power)

### Remote Annunciator Circuit

Voltage: 24 VDC nominal power limited  
 Maximum current: see, "Auxiliary power outputs"  
 Maximum wire loop resistance: 100 ohms

### Initiating Device Circuits

Power Limited  
 Four Class B, Style B zones  
 Standby voltage range: 16-27 VDC  
 Maximum standby current: 10 mA  
 Maximum standby detector current: 3.0 mA @ 24 VDC  
 Maximum alarm current: 66 mA  
 Maximum ripple: 1 VAC  
 Maximum wire loop resistance: 100 ohms

### Notification Appliance Circuits

Power Limited  
 Maximum standby current: 1.0 mA  
 Alarm voltage: 24 VDC nominal  
 Maximum alarm current: 1.5 A  
 Maximum ripple: 1.5 VAC  
 Maximum loop drop voltage: 1.0 VDC

### Status Relays - Alarm & Trouble

Power Limited  
 Contact rating: 2 A, 30 VDC maximum, resistive  
 0.5 A, 30 VAC maximum, resistive

### Alarm Zone Relays

Power limited  
 Contact rating: 2 A, 30 VDC maximum, resistive  
 0.5 A, 30 VAC maximum, resistive

### City Ties

#### Reverse Polarity

Voltage: 24 VDC nominal power limited  
 Alarm Tie Current: .010 amp maximum  
 Trouble Tie Current: .010 amp maximum  
 Ripple: 1 VAC maximum

#### Local Energy

Voltage: 24 VDC nominal  
 Standby Current: .014 amp maximum  
 Alarm Current: 0.51 amp maximum  
 Ripple: 1 VAC maximum  
 Maximum wire loop resistance: 30 ohms  
 Trip Coil impedance: 14.5 ohms

### Cabinet Color

Red or sof-white

## ORDERING INFORMATION

Part #	Model #	Description	Part #	Model#	Description
13400*	FW-400	Base Unit in Surface Cabinet 4 IDCs Style B (Class B) 2 NACs Style Y (Class B) 14 3/8" x 14 3/8" x 5 1/4"	13406	ADB	Remote LED Annunciator Driver Board (optional) Used with 7700 series Annunciator
15216	SFT-4	Semi-Flush Trim (optional) 1-Piece trim kit for PA-400 17 1/2" x 17 1/2"	7704		Remote LED Annunciator 4 LED Annunciator with trouble unit
13402	ZRB	Alarm Relay Board (optional) 1 System Alarm, 1 System Trouble, 4 Zone Form "C" Alarm Relays all rated for 1 Amp @ 30 VDC	7704-01		Remote LED Annunciator 4 LED Annunciator with flashing trouble LED
13403	CTB	City Tie Board (optional) Local Energy & Reverse Polarity	15128	DC-100	Digital Comm. Sub-ass'y. Alarm / Trbl. / Supv. / Power trbl.
			14047		7.0 amp/hr. Battery Set Sealed lead-acid, 24 VDC
			14048		10.0 amp/hr. Battery Set Sealed lead-acid, 24 VDC

\* Order (- 120) for 120 VAC and (- 240) for 240 VAC version.

**WARNING** - The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information, are provided with the product and are available from the Manufacturer. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

FARADAY FireWatch - 400 FIRE ALARM SYSTEM CONTROL UNIT