



# Fire Alarm Control Panel FW106



## GENERAL

The FW106 is an advanced Addressable Fire Alarm Control Panel designed for small to medium-sized facilities. It is ideal for new installations and retrofitting in commercial, institutional, and industrial settings, offering state-of-the-art fire control that meets UL864 10th edition and ULC S527 standards.

It supports up to 4 Addressable Signaling Line Circuits (SLCs), each accommodating up to 252 addressable devices or points per loop. It can handle between 2 and 10 Notification Appliance Circuits (NACs) and is equipped with 4+1 form C dry relay contacts, with 4 dedicated to Fire Department connections.

The FW106 features a Digital signal processor-based design with a user-friendly interface display, enhancing the system's intuitiveness. Additionally, it can connect seamlessly to up to 109 remote panels or annunciators through an external network, forming an integrated fire detection and notification system.

The FW106 is available in a red or dark grey chassis and is suitable for surface and semi flush installation.

## FEATURES

- 8-line colored 7" LCD with 800 X 480 resolution
- 9 LED indicators, making it a highly intuitive fire alarm interface with 6 auxiliary function keys
- Up to 4 intelligent signaling line circuits (SLC), Class A or Class B. Supports 252 devices per loop.
- Supports FW Series intelligent detectors, manual stations, and modules
- Automatic addressing function allowing the panel to sequentially assign addresses
- Up to 10 notification appliances circuits (NAC), Class A or Class B
- Programmable via PC configuration software or Field programmable through front panel.
- Modular design for custom system configurations.
- Network support for up to 109 FW series remote panels and annunciators
- Form C dry relay contacts dedicated for Alarm, Trouble, Supervisory, and Monitor. One additional programmable relay
- Supports positive alarm sequence to avoid false alarms
- Configurable for Two Stage operation
- Supports RJ45 and RS232 interface for third-party monitoring software
- Four-levels of password protection with field-programmable definitions enables the installer to determine which functions are accessible at each password level
- Two separate event history logs, including a 1000 alarm only history Log and a 5000-events log for all other events



## GENERAL SPECIFICATIONS

Feature	Specification
Primary Supply	110 - 120 VAC 60Hz, 3.86 A max. 220 - 240 VAC 50Hz, 1.96 A max. Set the switch to the desired option
Backup battery	Voltage: 24 VDC, Two 12VDC in series Type: Sealed lead acid Charging capacity: 40AH Charging current: 3 A max Up to two 40 Ah batteries can fit in the control panel enclosure
Environmental	Operating temperature: 32 - 120°F (0 - 49°C) Relative humidity: 0 to 93% at 90°F (32°C) To be installed in normal dry indoor environment only
Addressable device loops	1 loop, expandable to 4 loops, Class A and/or Class B, each loop supporting up to 252 devices addresses
Notification appliance circuits	Up to 10 Class A and/or Class B circuits, 2.0 A each max per circuit, total 8 A max in the panel
External network circuit	Up to 109 FW series panels and/or annunciators in Class B Configuration Up to 32 FW series panels and/or annunciators in Class X Configuration
Relay Outputs	Four non-programmable status relays. Alarm, Supervisory, Trouble, Monitor One programmable relay for special applications Form C 30 VDC at 2 A
Connections	All terminals are rated for 18 to 12 AWG (0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> )

\*See *System Wiring* section below for more information.

## SYSTEM CONFIGURATION

The default FW106 panel is equipped with AMI, PTU, PCU, ALU, NOU, and ROU modules as a standard configuration. The modular design of the panel enables it to be configured as per the requirements, adding a network module, expanding the detection and alarm capabilities, or removing a configurable module if not required.

The panel is design with 8 slots for the configurable modules. All configurable modules are designed in the same dimensions and each module occupies one slot in the panel.

Model	Description	Configurable	Qty	Standby	Alarm
FW201	AMI – Advanced Machine Interface	x	1	143 mA	146 mA
FW391	PTU – Power-supply Transformer Unit	x	1	NA	NA
FW397	PCU – Power-supply and Charger Unit	x	1	65 mA	65 mA
FW327	ALU – Addressable Loop Unit	✓	1-4	27 mA	27 mA
FW337	NOU – Notification Output Unit	✓	1-5	36 mA	54 mA
FW347	ROU – Relay Output Unit	✓	0-1	35 mA	35 mA
FW357	XNU – External Network Unit – Class B	✓	0-1	27 mA	27 mA
FW357A	XNU – External Network Unit – Class X	✓	0-1	46 mA	46 mA

Each configurable module is assigned a physical address using a rotary switch on the module.



## SYSTEM WIRING

### Addressable Device Loop

The FW106 panel supports up to four ALU modules, each module provides one signaling line circuit (SLC) with a capacity of 252 devices addresses. The loop is supervised for opens, shorts, and grounds.

Circuit Specification	FW327
Loops	One Class B or A loop, supporting 252 FW series addressable devices
Circuit Current	0.4 A max
Output Voltage Range	20.2 V ~ 26.2 V
Standby Current	100 mA max
Alarm Current	220 mA max
Circuit Impedance	10 $\Omega$ , 0.1 $\mu$ F, max
Isolators	50 max

### Notification Appliance Circuits

The FW106 panel supports up to Five NOU modules, each module provides two notification appliance circuits (NAC). Each circuit is supervised.

Circuit Specification	FW337
Circuits	2 Class B or 2 Class A
Alarm Voltage	24VDC nominal
Circuit Current	2.0 A max per circuit
EOLR	10 K $\Omega$
Bell Code	ANSI Temporal

\*Voltage drop calculations are required to determine the number of notification appliances per circuit.



### External Network Circuit

The panel can connect to up to 109 panels and/or remote annunciators via XNU module.

Circuit Specification	FW357/FW357A
Circuit	Class B or Class X
Communication Protocol	CAN
Circuit Impedance	25 $\Omega$ , 0.05 $\mu$ F, max

\*The number of remote annunciators powered by a single panel is limited by the auxiliary power output current rating.

### Auxiliary Power Output

The FW106 panel provides one auxiliary power output from the PCU module that can be used for powering remote annunciators and I/O modules.

Circuit Specifications	
Circuit Voltage	24VDC
Standby Current	500 mA max
Alarm Current	1200 mA max
Power Factor	0.35
Configuration	Non-Resettable/Resettable

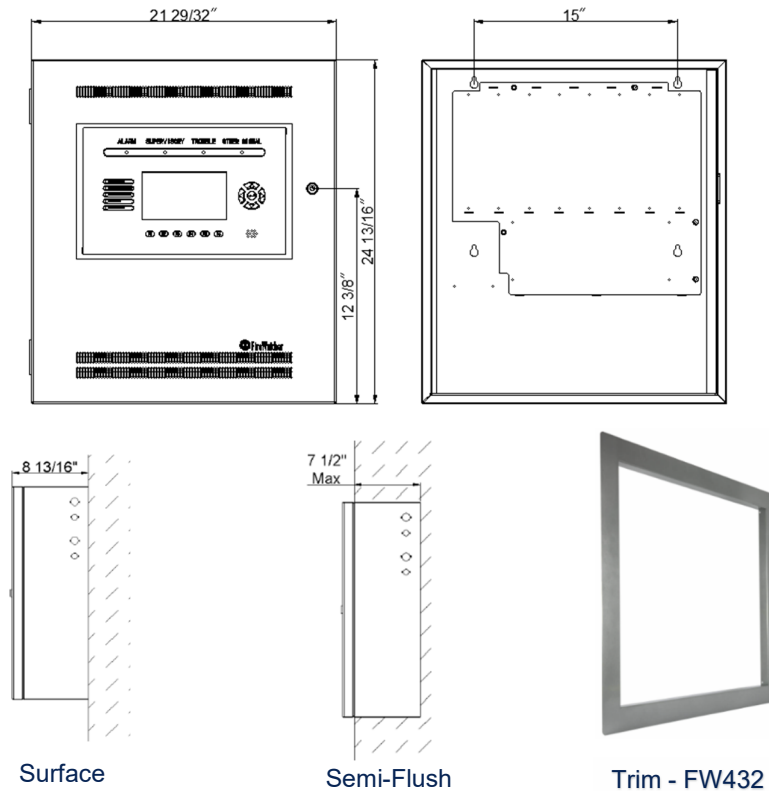
### Relay Outputs

The FW106 provides four non-programmable relays to connect to remote monitoring panel in addition to one programmable relay for special applications.

Relay Specification	FW347
Relay 1	Alarm
Relay 2	Supervisory
Relay 3	Trouble
Relay 4	Monitor
Relay 5	Special Application
Contact Rating	30 VDC at 2 A
Type	Form C contact

## DIMENSIONS AND MOUNTING

The FW106 panel is suitable for surface mounting and semi-flush mounting installations, special simple finish trims are available for semi-flush mounting installations. Please refer to the installation manual for detailed installation instructions.



## CATALOG NUMBERS TO ORDER

Model	Description	Color
FW106(R)	Expandable Addressable Panel (AMI, PTU, PCU, ALU, NOU, and ROU, Enclosure, Internal & External door with English silkscreen)	Red
FW106(DG)	Expandable Addressable Panel (AMI, PTU, PCU, ALU, NOU, and ROU, Enclosure, Internal & External door with English silkscreen)	Dark Gray
FW201	AMI – Advanced Machine Interface	-
FW327	ALU – Addressable Loop Unit	-
FW337	NOU – Notification Output Unit	-
FW347	ROU – Relay Output Unit	-
FW357	XNU – External Network Unit – Class B	-
FW357A	XNU – External Network Unit – Class X & Class B	-
FW391	PTU – Power-supply Transformer Unit	-
FW397	PCU – Power-supply and Charger Unit	-
FW432(R)	Semi-Flush Mount Trim	Red
FW432(DG)	Semi-Flush Mount Trim	Dark Gray
FWPK	Panel Key	-