

Fire Alarm Control Panel FW105



GENERAL

The FW105 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 a single Addressable Signaling Line Circuit (SLC), accommodating up to 252 addressable devices or points. It can handle 4 Notification Appliance Circuits (NACs), expandable to 8 and is equipped with 4 form C dry relay contacts dedicated to Fire Department connections.

The FW105 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 FW105 is available in a black 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
- Single intelligent signaling line circuits (SLC), Class A or Class B. Supports 252 devices.
- Supports FW Series intelligent detectors, manual stations, and modules
- Automatic addressing function allowing the panel to sequentially assign addresses
- Up to 8 notification appliances circuits (NAC), Class A or Class B
- Built-in 30 zone switch/LED annunciator
- Programmable via PC configuration software or Field programmable through front panel.
- Modular design for custom system configurations.
- USB port on board for programming and firmware upgrade.
- Network support for up to 109 FW series remote panels and annunciators
- Form C dry relay contacts dedicated for Alarm, Trouble, Supervisory, and Monitor.
- 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, 5.3 A max. 220 - 240 VAC 50Hz, 2.6 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: 2.5 A max Up to two 18 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 Loop	1 loop, Class A and/or Class B, supporting up to 252 devices addresses
Notification Appliance Circuits	Up to 8 Class A and/or Class B circuits, 2.0 A each max per circuit, total 10 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 Form C 30 VDC at 2 A
Isolator Unit	Add 4 to 8 isolated class B loops on the existing SLC
Local LED/Switch Annunciator	30 zones (2 LEDs and 1 Switch per zone) for alarm/trouble events display & control
Connections	All terminals are rated for 18 to 12 AWG (0.82 mm ² to 3.31 mm ²)

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

SYSTEM CONFIGURATION

The default FW105 panel is equipped with AMI, PCU, MFU, and LDU modules as a standard configuration. Two optional units are available, NOU (Notification Output Unit) to expand the panel notification capabilities and an ISU (Isolator Unit) that adds 4 isolated class B loops to the existing SLC.

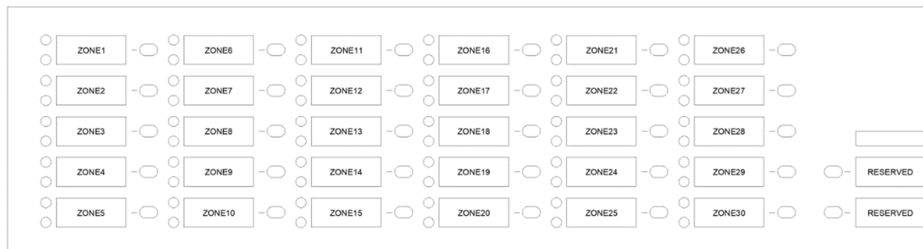
Both optional units are installed as mezzanine cards on the main multi-functional unit in the panel.

Model	Description	Configurable	Qty	Standby	Alarm
FW202	AMI – Advanced Machine Interface	x	1	152 mA	155 mA
FW390	PCU – Power-supply Transformer Unit	x	1	77 mA	77 mA
FW301	MFU – Multi-Function Unit	x	1	89 mA	119 mA
FW338	NOU – Notification Output Unit	✓	0-1	30 mA	30 mA
FW852	ISU – Isolator Unit	✓	0-2	35 mA	35 mA
FW261A	LDU – LED Display Unit	x	1	28 mA	105 mA

LED DISPLAY ANNUNCIATOR

The FW105 panel features a local LED display unit that provides 30 zones (2 LEDs and 1 Switch per zone) for alarm/supervisory/ trouble events display and control. Two additional zones on the right are reserved for future use.

Zones can be identified by sliding a zone label beside each LED.



SYSTEM WIRING

Addressable Device Loop

The FW105 panel supports one signaling line circuit (SLC) with a capacity of 252 device addresses. The loop is supervised for opens, shorts, and grounds.

Circuit Specification	
Loops	One Class B or A loop, supporting 252 FW series addressable devices
Circuit Current	0.4 A max
Output Voltage Range	19.4 V ~ 27.5 V
Standby Current	100 mA max
Alarm Current	220 mA max
Circuit Impedance	10 Ω , 0.1 μ F, max
Isolators	50 max

Notification Appliance Circuits

The FW105 panel provides up to 8 notification appliance circuits (NAC). Each circuit is supervised.

Circuit Specification	
Circuits	Class B or Class A
Alarm Voltage	24VDC nominal
Circuit Current	2.0 A max per circuit
EOLR	10 K Ω
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	
Circuit	Class B or Class X
Communication Protocol	CAN
Circuit Impedance	25 Ω , 0.05 μ 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 FW105 panel provides two auxiliary power outputs from the PCU module that can be used for powering remote annunciators and I/O modules.

Circuit Specification	
Circuit Voltage	24VDC
Standby Current	510 mA max total
Alarm Current	1.0 A max total
Power Factor	0.35
Configuration	Non-Resettable/Resettable

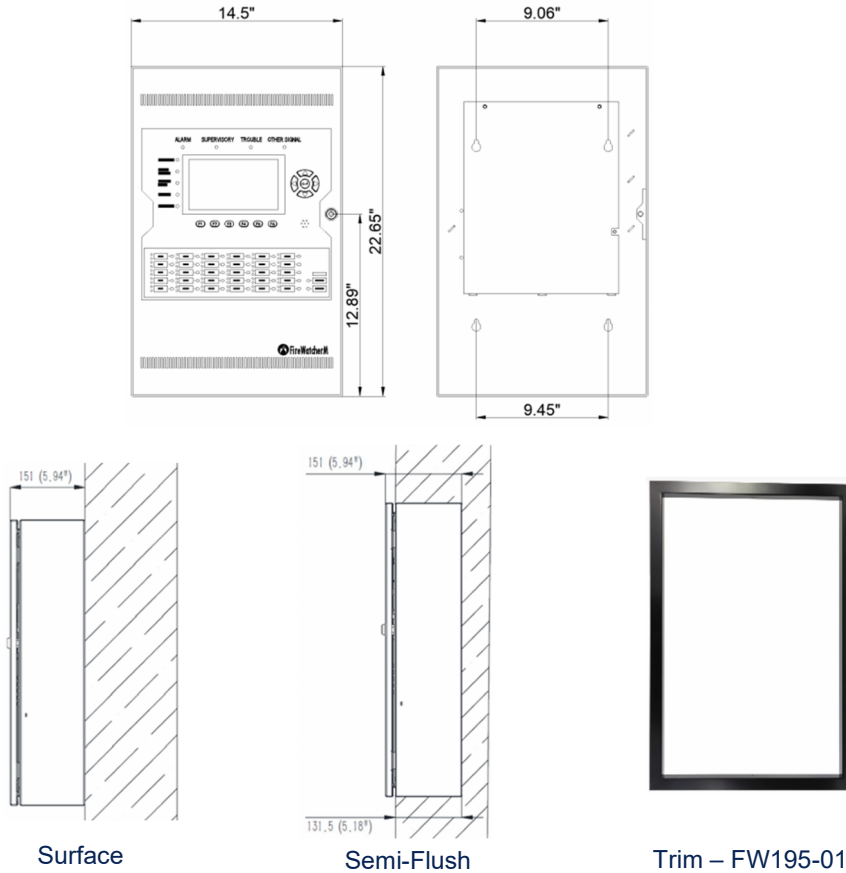
Relay Outputs

The FW105 provides four non-programmable relays to connect to remote monitoring panel.

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

DIMENSIONS AND MOUNTING

The FW105 panel is suitable for surface mounting and semi-flush mounting installations, special simple finish trim is available for semi-flush mounting installations. Please refer to the installation manual for detailed installation instructions.



CATALOG NUMBERS TO ORDER

Model	Description	Color
FW105(B)	Expandable Addressable Panel (AMI, MFU, PCU, LDU, Enclosure, Internal & External door with pictograms)	Black
FW202	AMI – Advanced Machine Interface	
FW261A	LDU – LED Display Unit	
FW301	MFU – Multi-Function Unit	
FW338	NOU – Notification Output Unit	
FW390	PCU – Power-supply and Charger Unit	
FW852	ISU – Isolator Unit	
FW195-01	Semi-Flush Mount Trim	Black
FWPK	Panel Key	