

Addressable Fire Alarm Control Panel

FW2105



Overview

The FW2105 is a modular addressable fire alarm control panel designed to meet the requirements of a wide range of small to medium size fire alarm systems and fits standalone application and multi-panel networks.

It features a digital signal processor-based design, fully configurable from the front panel with password protection.

The standard FW2105 control panel supports one Signaling Line Circuit (SLC) and 4 Notification Appliance Circuits (NACs). It is equipped with 4 form C dry relay contacts dedicated to Fire Department connections and has 10 amps of power.

It supports up to 9 Addressable Signaling Line Circuits (SLCs), accommodating up to 252 addressable devices or points per SLC. Can support up to 12 Notification Appliance Circuits (NACs). 4 onboard Form C dry contact relays.

The FW2105 is compatible with the Series 2 Maple Armor devices, and it meets the requirements of UL 864, and CAN/ULC-S527.

Features

- 8-line colored 7" LCD with 800 X 480 resolution
- 12 LED indicators, making it a highly intuitive fire alarm interface with 6 auxiliary function keys
- Up to 9 signaling line circuits (SLC), Class A or Class B. each supports 252 intelligent devices
- Supports FW Series intelligent detectors, manual stations, and modules
- Up to 12 notification appliance circuits (NAC), Class A or Class B
- Automatic addressing function allowing the panel to sequentially assign addresses
- 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.
- Supports remote annunciators' network for wide system configurations and applications.
- 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 enable the installer to determine which functions are accessible at each password level
- Two separate event history logs. Includes a 1000 alarm event Log and 5000 non alarm event log.

SYSTEM CONFIGURATION

The standard FW2105 control panel comes equipped with AMI, PSU, and MFU modules.

Model	Description	Configurable	Qty	Standby	Alarm
FW2201	AMI (Advanced Machine Interface)	Fixed	1	0.1651	0.2379
FW2301	MFU (Multi-functional Unit)	Fixed	1	0.1100	0.1100
FW2390	PSU (Power Supply Unit)	Fixed	1		
FW2191	CPE (Control Panel Enclosure)	Fixed	1	0	0
FW2371-4	Connector board	Configurable	1 - 2	0	0

**All currents are in Ampere*

Optional Units

The FW2105 control panel supports a complete line of configurable units that mount directly into the control panel on the main board unit using mounting brackets. It supports up to four configurable units that allow the expansion of the control panel capabilities and enhance performance.

Model	Description	Configurable	Qty	Standby	Alarm
FW2852	ISU (Isolator Unit)	Configurable	0 - 4	0.0046	0.0046
FW2312	Conventional Zone Unit	Configurable	0 - 4		
FW2321	ALU (Addressable Loop Unit)	Configurable	0 - 4	0.0390	0.0390
FW2321-1	Sub ALU (Sub Addressable Loop Unit)	Configurable	0 - 4	0.0100	0.0100
FW2331	NOU (Notification Output Unit)	Configurable	0 - 4	0.0300	0.0300
FW2361	ANU (Annunciator Network Unit)	Configurable	0 - 4	0.0166	0.0166
FW2365	DACT Module	Configurable	0 - 1		
FW2371-4	Connector board	Configurable	1 - 2	0	0

**All currents are in Ampere*

MFU (Multi-functional Unit)

It is the main unit that comes fixed in the panel and provides 1 SLC, 4 NACs, 4 relay outputs, and 2 network circuits.

ALU (Addressable Loop Unit)

It is an optional unit that provides an additional Signaling Line Circuit (SLC) to the panel, and it takes one of the 4 available slots, it also comes with the provision to install a sub ALU unit to add another circuit. Each circuit supports class A/DCLA or class B/DCLB wiring topology.

NOU (Notification Output Unit)

It is an optional unit that provides two additional notification appliance circuits (NAC) to the panel, and it occupies one of the 4 available slots. Each circuit supports class A/DCLA or class B/DCLB wiring topology.

ANU (Annunciator Network Unit)

It is an optional unit that adds remote annunciators network capabilities to the panel. It provides 1 annunciator network circuit in class A/DCLA or class B/DCLB wiring topology. It occupies one slot in the panel.

DACT (Digital Alarm Communicator Transmitter)

It is an optional unit for FW2105 panel, that contains two switched public telephone network circuits, One DACT supports transmitting the status of software zones, System Trouble, and Supervisory. Admecco Contact ID, SIA Format, And Stand-alone Radio/Cell Units.

(Conventional Zone Unit)

An optional unit that can be installed in the FW2015 panel, it features 8 Initiating Device Circuits (IDC) that connect conventional zones to the control panel. This card provides the perfect solution for conventional retrofit applications.

System Wiring

Addressable Device Loop

The FW2105 control panel supports up to 9 signaling line circuits (SLC), each with a capacity of 252 device addresses. Each loop is supervised for opens, shorts, and grounds.

Circuit Specification	
Loops	Class B or A loop, supporting 252 Series 2 addressable devices
Circuit Current	0.4 A max
Output Voltage Range	26 ~ 27 VDC
Standby Current	100 mA max
Alarm Current	300 mA max
Circuit Impedance	20Ω, 0.5 μF, max
Isolators	50 max

Notification Appliance Circuits

The FW2105 panel supports up to 12 notification appliance circuits (NAC) with a capacity of 252 device addresses on each. Each circuit is supervised.

Circuit Specification	
Circuits	Class B or Class A
Voltage	24VDC
Circuit Current	3.0 A max per NAC circuit or 1.0 A regulated per circuit
EOLR	10 KΩ
Max line loss	1.8 V
Synchronization	Built-in
Bell code	Steady ANSI Temporal 3 Temporal 4 March Time 20/60/120 bpm

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

Annunciators Network Circuit

The Annunciators Network Circuit connects up to 32 remote annunciator bays via ANU module. It supports 2-wire operation for power and communication.

Circuit Specification	
Network Circuit	DCLA or DCLB
Circuit Voltage	19.4 ~ 24.3 VDC
Circuit Current	320 mA max
EOLR	10 KΩ
Circuit Impedance	20Ω, 0.5 μF, max

Relay Outputs

The control panel provides three non-programmable relays to connect to remote monitoring stations in addition to one programmable relay for special applications.

Circuit Specification	
Relay 1	Alarm
Relay 2	Supervisory
Relay 3	Trouble
Relay 4	Special applications
Contact Rating	30 VDC at 2 A
Type	Form C contacts

Auxiliary Power Outputs

The Power Supply Unit (PSU) provides two auxiliary power outputs. they can be configured as resettable or non-resettable.

The resettable terminal interrupts the power for seconds after a reset condition. Each circuit is limited to 1.0 A maximum. 510 mA in Normal Standby and 1.0 A in Alarm permitted in total for two aux power

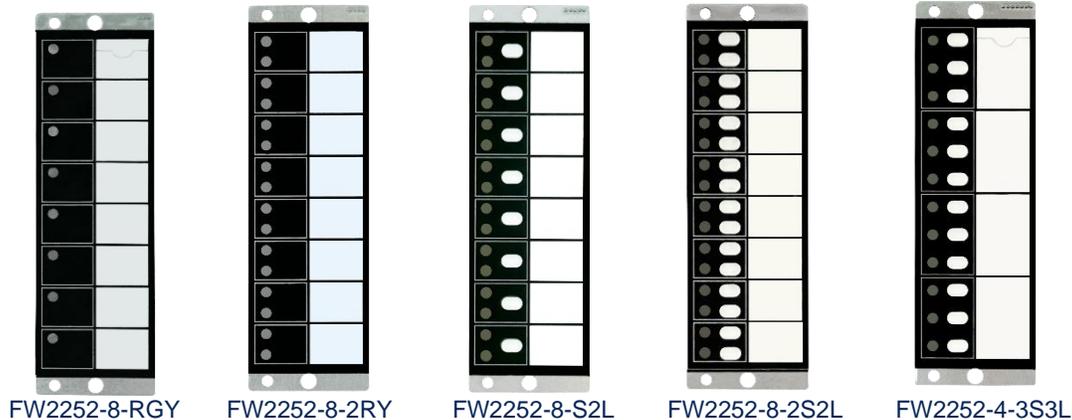
Circuit Specification	
Outputs	Two configurable
Circuit Voltage Range	27.2 – 27.6 VDC
Output Current	510 mA max Standby 1.0 A max Alarm on both

Panel Mounted Annunciation Modules

The FW2105 fire alarm control panel offers versatile panel-mounted annunciation options, featuring button inputs and LED status indicators to improve the operator interface. The annunciation modules are designed for convenience and efficiently utilize the front panel space.

The annunciation modules support a range of selectable functions. The color of the multi-color LED and the function of the buttons can be programmed when the control panel is configured for site-specific requirements. Installers print module custom labels to indicate the exact zone/function of the buttons and LEDs.

The FW2105 control panel supports up to five annunciation modules (see module options below). LED colors are designed to meet the International Building Code (IBC) requirements.

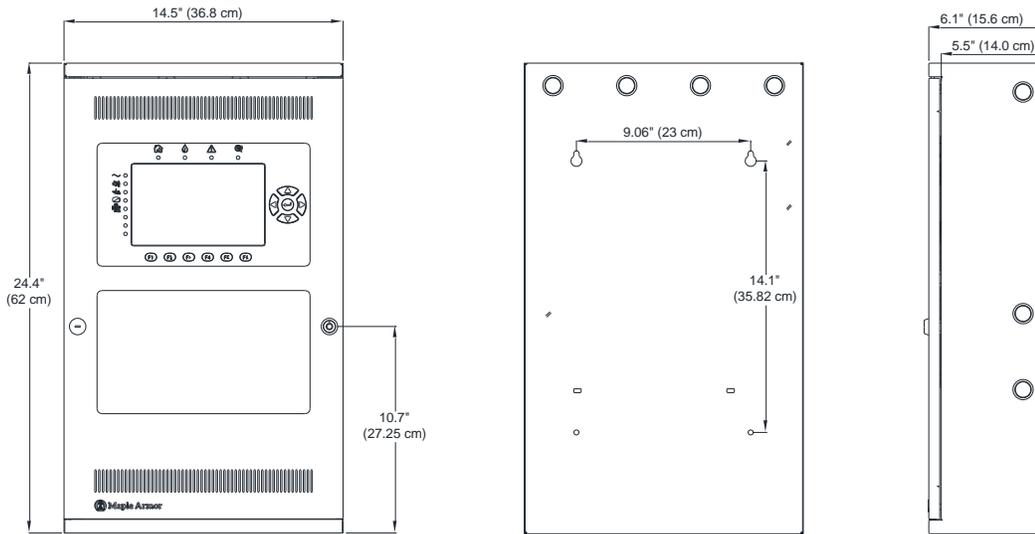


Annunciation Models and Accessories Options

Model	Description	LED Colors	LED Quantity	Button Quantity
FW2261	LAU (LED Annunciator Unit), provides 5 slots for configurable annunciation modules c/w with the LED/Button controller FW2552-CORE			
FW2252-CORE	Core processing unit, mounts behind the LED/Button modules and provides communication with the AMI			
LED only and LED/Button Modules				
FW2252-8-RGY	Eight (8) LED Module with Multi-Color configurable LEDs; custom label area per LED/Zone	Red/Green/Yellow	8	-
FW2252-8-2RY	Sixteen (16) LED Module with Multi-Color configurable LEDs; custom label area per LED/Zone pair	Red/Yellow	16	-
FW2252-8-S2L	Sixteen (16) LED Module/ Eight (8) button with multi-color configurable LEDs on top; custom label area per LED/Zone	Red/Green on top Yellow on bottom	16	8
FW2252-8-2S2L	Sixteen (16) LED Module/button with Red LED; custom label area per LED/Zone pair	Red	16	16
FW2252-4-3S3L	Four Function HOA (Hand-Off-Auto), with LEDs; custom label area per LED/button set	Green on top/bottom Red/Yellow on middle	12	12
FW2252-DMMY	Single Blank Display Cover			

Dimensions

The FW2105 features a compact design and suitable for surface and semi-flush installations.

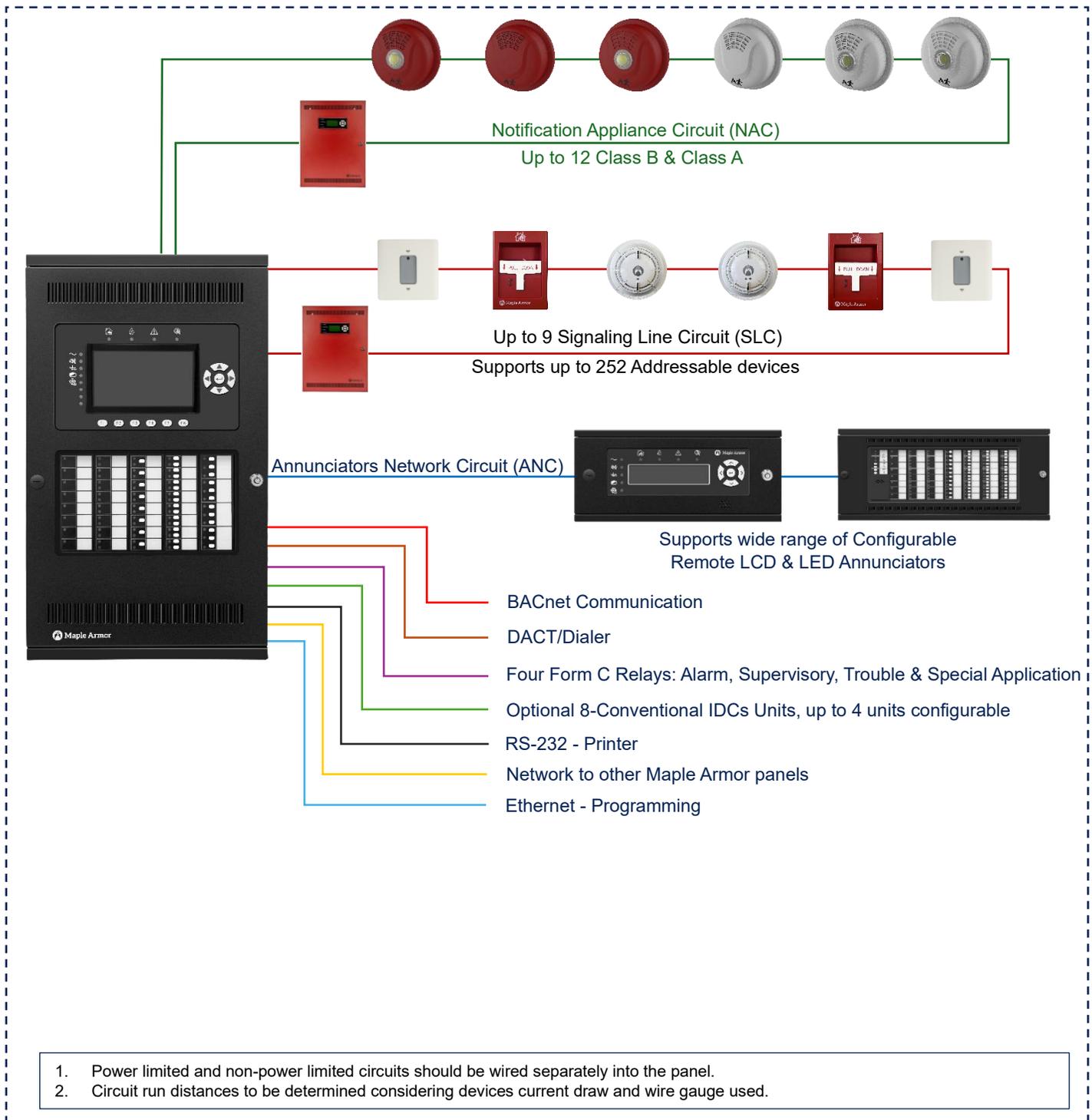


General Specifications

Features	Specification
Primary Supply	110 - 120 VAC 60Hz, 5.5 A max. 220 - 240 VAC 50Hz, 3.1 A max. <i>*Set the switch to the desired option</i>
Secondary Supply Backup battery	Voltage: 24 VDC, Two 12VDC in series Type: Sealed lead acid Charging capacity: 55AH Charging current: 2.8 A max Up to two 18 Ah batteries can fit in the control panel enclosure
Auxiliary power Source	Two Power Limited Outputs Output range: 20.4 ~27.4 VDC Output current: 510mA in total (normal standby), 1.0A in total (alarm) Non-Resettable/Resettable Power Output (configurable) Special application: Compatible devices are I/O Module model FW2821
Environmental	Operating temperature: 14 - 131°F (-10 - 55°C) Relative humidity: 0 to 95% at 90°F (32°C), non-condensing To be installed in normal dry indoor environment only
Signaling Line Circuit	1 loop, expandable to 9 loops, Class A and Class B, each loop supporting up to 252 addressable devices Maximum normal standby current per MFU/ALU: 100mA Maximum alarm current per MFU/ALU: 300mA
Notification Appliance Circuits	Up to 12 Class A/DCLA and Class B/DCLB circuits, 3.0 A each max per circuit, total 10 A max in the panel 1.0 A max regulated 24VDC output
Annunciator Network Circuits	Up to 4 ANC Class A/DCLA and Class B/DCLB circuits 2 Wire Operation for both power and communication Output voltage range: 19.4 - 24.3 VDC Maximum load current: 320 mA
Relays Output	Four form C relays: Alarm, Supervisory, Trouble, and one programmable Contact Rating: 2A @30VDC
Recommended Testing impedence	6.6 k Ω for ground fault 10M Ω for open 0.1 Ω for short

System Layout

The FW2015 comes with expandable capabilities to serve different system configurations and applications.



Ordering Information

Model	Description
FW2105	Addressable Fire Alarm Control Panel, expandable One Signaling Line Circuit (SLC), Four Class A/B Notification Appliance Circuits (NAC)
Option Cards	
FW2852	ISU (Isolator Unit)
FW2312	Conventional Zone Unit
FW2321	ALU (Addressable Loop Unit), one 252-device loop
FW2321-1	Sub ALU (Sub Addressable Loop Unit), one 252-device loop
FW2331	NOU (Notification Output Unit), two notification circuits
FW2361	ANU (Annunciator Network Unit)
FW2365	DACT Module
FW2371-4	Connector board
Panel Mounted LED/Button Modules	
FW2261	LAU (LED Annunciator Unit)
FW2252-CORE	LED/Button controller
FW2252-8-RGY	Eight Multi-Color LED (R/G/Y) Module
FW2252-8-2RY	Sixteen Multi-Color LED (R/Y) Module
FW2252-8-S2L	Eight Button/ Sixteen Multi-Color LED Module
FW2252-8-2S2L	Sixteen Button/Red LED Module
FW2252-4-3S3L	Four Function HOA (Hand-Off-Auto), with G/(R/Y)/G LEDs
FW2252-DMMY	Single Blank Display Cover
Replacement Parts	
FW2201	AMI (Advanced Machine Interface)
FW2301	MFU (Multi-functional Unit)
FW2390	PSU (Power Supply Unit)
FW2191	CPE (Control Panel Enclosure)
FWPK	Panel Key

**Option cards and LED/Button Modules are ordered separately*



This document is for marketing and informational purposes only. It is not intended to be used for installation, operation, or maintenance of the device.

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For complete and accurate installation instructions, wiring details, and operational guidelines, refer to the official Device Installation Sheet provided with the product. The manufacturer reserves the right to make changes to product specifications without prior notice.