



# F100A Fire Alarm Control Panel

- ✓ Flexibility and programmability combined with user-friendly operation
- ✓ Economical, intuitive installation and configuration
- ✓ Designed for small to medium-sized projects

## Product Overview

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The **Pertronic F100A** is a modular, expandable, intelligent fire alarm control panel, capable of monitoring up to 792 addressable devices including 396 heat and smoke sensors. Intuitive, versatile programmable features, and a large selection of options, ensure that the F100A is readily tailored to individual project requirements.

Fire system events such as alarm signals from heat or smoke sensors and manual call points are uniquely identified on the user-friendly display. Configurable text descriptions allow users to determine the precise location of any active device.

The Pertronic range of peripheral devices for the F100A include a full range of alerting products such as sounders, strobe lights, beacons, audio-visual signs, amplifiers, speakers, audible warning and evacuation systems, and internet and SMS (text-messaging) connectivity.

The F100A facilitates building response features such as air handling, lift (elevator) control, sprinkler monitoring, door control and extinguishing agent release.

A range of LCD and LED mimic panels provide optional remote display, control and monitoring capabilities. The F100A is fully compatible with Pertronic FireMap PC Graphics and the Pertronic Network.

## Standard Features

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- ✓ Standard F100A control panel with LCD display, fire-fighter, and engineer controls
- ✓ Lockable front door
- ✓ Two analogue addressable loop circuits. (Expandable to four loops. Refer to pages 2 & 3 for details.)
- ✓ Two monitored sounder (**External Bell, Warning**) circuits
- ✓ Monitored Ancillary Control Function (ACF) output
- ✓ **Fire, Fault, and Battery Fail** relay outputs
- ✓ Door Holder relay output
- ✓ Programmable (**General Purpose**) relay output
- ✓ Isolate controls for: **Warning System, External Bell, ACF, Door Holder**
- ✓ Serial port for PC programming and interrogation via the user-friendly Pertronic utility application
- ✓ Serial communications bus (RS 485) for networking with other fire alarm control panels and for interfacing to LCD and LED mimic panels and ancillary peripheral units
- ✓ Standard cabinets, with window and manual call point on front door: 600mm, 10U, 16U, 28U Slim, 28U Deep, 40U Deep. (Note: Call point optional on 40U cabinet.)
- ✓ Weatherproof cabinets (window optional): 16U, 28U
- ✓ Document holder fitted as standard equipment on 600mm, 10U, and 16U cabinets. (Optional on other cabinets, except 16U weatherproof.)
- ✓ Other cabinet sizes and styles available for special orders
- ✓ Assembled according to customer order
- ✓ Pertronic factory engineering drawings are supplied with every F100A fire alarm control panel
- ✓ Fully compliant with Australian Standard 4428.1
- ✓ Air handling controls (if fitted) comply with AS 1668



*F100A Analogue Addressable  
Fire Alarm Control Panel*

## Optional Components

Pertronic Industries supply an extensive range of options for the F100A Fire Alarm Control Panel. The number and type of internal options required for a specific project will affect the choice of cabinet size, power supply current rating, and battery capacity\*.

The following list summarises popular internal options. The tables on page 3 indicate the typical number of standard-size internal options that are able to be installed in each cabinet. (Standard-size options are marked “†” in the list below.)

**Two-Loop Extender (F100P2LB)†**  
Provides an additional two analogue addressable loops.

**Addressable Loop Responder (AALRES-A)†**  
Provides eight conventional detection zone circuits or switch input circuits and one form C relay contact.

**Addressable Loop Relay (AALREL)†**  
Provides four programmable outputs: active loop or external powered and monitored or voltage-free relay contacts. Also one fault monitoring input.

**AA Isolator Board (8SAAIB)†**  
Provides eight isolated analogue addressable loop spurs. Allows conventional fire alarm zones to be converted to analogue addressable spurs using the existing cable, when upgrading from a conventional to an intelligent fire alarm control panel.

**Hand-Held Microphone** and cradle, mounted on front panel.

**Evacuation Amplifiers** Complete with evacuation tone generator and a single monitored 100 Volt Line output for speakers:

- 20 Watt (EVAC20W24V-T3)†,
- 50 Watt (EVAC50W24V-A)†,

**Evacuation Amplifiers\*\*** Require evacuation tone generator

- 120 Watt (EVAC120W24V).
- 250 Watt (EVAC250W24V).

**Evacuation Generator (EVACGEN-EA)‡**  
Provides inputs for local and remote microphones, evacuation tones, standard or custom evacuation messages, and monitoring for audio amplifiers.

**Audio Distribution Module (ADM-4) †**  
Provides multiple audio channels from a single 100 Volt line. Continuously monitors all channels for line faults. A line fault on any channel does not prevent operation on other channels. Multiple ADM-4 unit may be installed in an F100A.

**Warning System Control Switch (WARNSYSCON) †**  
Provides **Public Address (PA)**, **Manual Alert**, and **Manual Evacuation** functions, when used with an evacuation amplifier. Occupies one unit on the Fan Control Plate (see below).

**Building Occupant Warning System (BOWS)**  
Audible alert warning for small to medium systems.

**Emergency Warning and Information System (EWIS)§**  
Audible voice warning and emergency intercom system.

**Bell Monitor Board (ZMB24V) ‡**  
Provides additional monitored output circuits for warning devices such as strobes, sounders (bells), and audio-visual signs.

**Fan Control Plate**  
A 3U rack-mounted front plate that accepts any combination of control units and AFI displays. Each Fan Control Plate accepts 10 standard units or five AFI displays.

- **AS1668 Fan Control Unit**  
Occupies one space on the Fan Control Plate.
- **AFI Display**  
Alarm, fault, and isolate indicators for 8 zones. Occupies two spaces on the Fan Control Plate.
- Contact Pertronic Industries for more information.

**Network Control Unit**  
Fits in place of the F100A keyboard & screen, allowing control and interrogation of a Pertronic Network. Also available in a separate, standalone cabinet.

**Network Card (NETCARD) †**  
Interfaces the fire alarm panel with a Pertronic Network.

**Ethernet Gateway (NET2GATE) †**  
Interfaces the fire alarm panel with any Ethernet network including a virtual private network (VPN), or the Internet.

**General Purpose Interfaces †**  
BACNet, Modbus, Nurse Call Pager, Printer.

**Fibre Optic Interface ‡**  
RS-232, RS-485, or Ethernet.

**Brigade Transmitter Interface**  
Some brigade transmitters may need additional relay outputs. The 8WCOMR provides a suitable interface.

**Ancillary Peripherals ‡**

- 48-way Open Collector Board (48WOC-IF)
- 8 Way Relay Mimic (8RLYM)
- 8 Way Common Relay Board (8WCOMR)

**Aux Panel Relay (RLY24V) ‡**  
A single 2-pole 4 amp 24 Vdc form C contact.

**DC-DC Converter ‡**  
Isolated supply to increase noise immunity of one pair of analogue addressable loops.

**24 Vdc Door Holder Power Supply ‡**  
2 amp, 5 amp, 10 amp.

\* The fire alarm panel's maximum total current consumption, including any auxiliary power outputs, must not exceed the power supply's maximum capacity. Most optional components draw their maximum current when the system is in **Alarm** mode. The Pertronic website ([www.pertronic.com.au](http://www.pertronic.com.au)) provides a calculator for computing supply current and battery capacity.

† Standard size internal options.

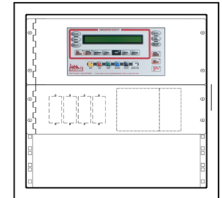
‡ Small internal options.

§ An F100A system with built-in EWIS may be assembled in a non-standard cabinet. Contact your nearest Pertronic Industries branch or representative office to confirm the cabinet dimensions.

\*\* The 120 Watt and 250 Watt Amplifiers are larger than other internal options. Refer to the Pertronic website ([www.pertronic.com.au](http://www.pertronic.com.au)) for details.

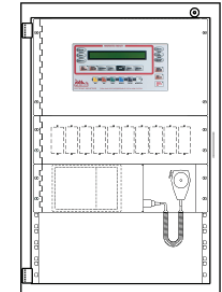
## F100A in 600mm or 10U Cabinet

Product Code <sup>1</sup>	Description <sup>2</sup>	Maximum Number of Standard Internal Options <sup>3</sup>
F100A-A0.6/4A	F100A 2 Loop, 600mm Cabinet, 4A Power Supply Unit	1
F100A-A10U/4A	F100A 2 Loop, 10U Cabinet, 4A Power Supply Unit	1
F100A-A10UEA50/4A <sup>4</sup>	F100A 2 Loop w. 50W Amp + Mic, 10U Cabinet, 4A PSU	0



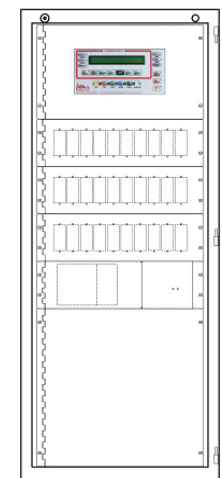
## F100A in 16U Cabinet

Product Code <sup>1</sup>	Description <sup>2</sup>	Maximum Number of Standard Internal Options <sup>3</sup>
F100A-A16U/4A	F100A Analogue Addressable 2 Loop, 4A PSU	5
F100A-A16UEA50/4A <sup>4</sup>	F100A 2 Loop with 50W Amp + Mic, 4A PSU	0
F100A-A16U/12A	F100A 2 Loop, 12A PSU	5
F100A-A16UEA50/12A <sup>4</sup>	F100A 2 Loop with 50W Amp + Mic, 12A PSU	4
F100A-A16UEA120/12A <sup>4</sup>	F100A 2 Loop with 120W Amp + Mic, 12A PSU	3



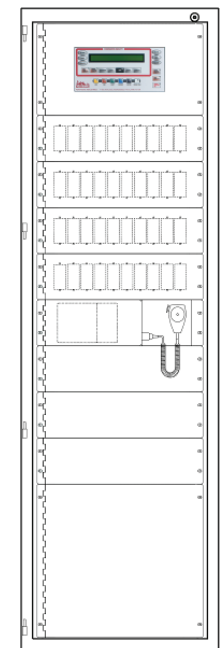
## F100A in 28U Slim and 28U Standard Cabinet

Product Code <sup>1</sup>	Description <sup>2</sup>	Maximum Number of Standard Internal Options <sup>3</sup>
F100A-A28US/4A	F100A Slim 2 Loop, 4A PSU	16
F100A-A28USEA50/4A <sup>4</sup>	F100A Slim 2 Loop with 50W Amp + Mic, 4A PSU	0
F100A-A28US/12A <sup>5</sup>	F100A Slim 2 Loop, 12A PSU	16
F100A-A28USEA50/12A <sup>5</sup>	F100A Slim 2 Loop with 50W Amp + Mic, 12A PSU	15
F100A-A28USEA120/12A <sup>5</sup>	F100A Slim 2 Loop with 120W Amp + Mic, 12A PSU	14
F100A-A28U/4A	F100A 2 Loop, 4A PSU	16
F100A-A28UEA50/4A <sup>4</sup>	F100A 2 Loop with 50W Amp, 4A PSU	0
F100A-A28U/12A <sup>5</sup>	F100A 2 Loop, 12A PSU	16
F100A-A28UEA50/12A <sup>5</sup>	F100A 2 Loop with 50W Amp + Mic, 12A PSU	15
F100A-A28UEA120/12A <sup>5</sup>	F100A 2 Loop with 120W Amp + Mic, 12A PSU	14



## F100A in 40U Cabinet

Product Code <sup>1</sup>	Description <sup>2</sup>	Maximum Number of Standard Internal Options <sup>3</sup>
F100A-A40U/4A	F100A 2 Loop, 4A PSU	24
F100A-A40UEA50/4A <sup>4</sup>	F100A 2 Loop, 50W Amp + Mic, 4A PSU	0
F100A-A40U/12A <sup>5</sup>	F100A 2 Loop, 12A PSU	24
F100A-A40UEA50/12A <sup>5</sup>	F100A 2 Loop, 50W Amp + Mic, 12A PSU	23
F100A-A40UEA120/12A <sup>5</sup>	F100A 2 Loop, 120W Amp + Mic, 12A PSU	22

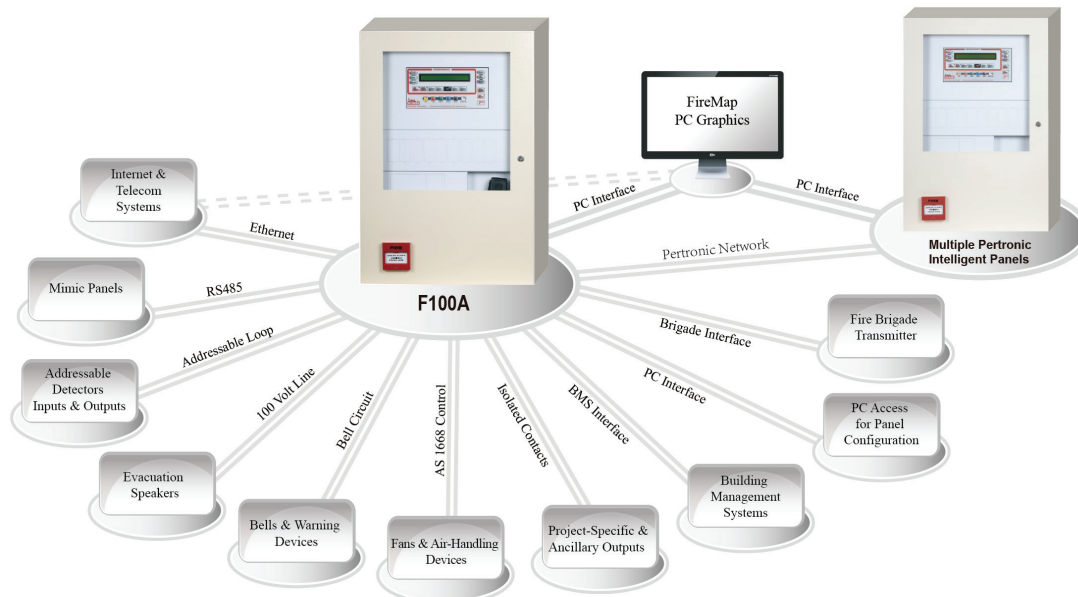


## F100A Cabinet Dimensions

	Height	Width	Depth	Protrusion
<b>600 mm Cabinet Mk2</b>	600 mm	450 mm	155 mm	30 (MCP)
<b>10U Cabinet</b>	530 mm	550 mm	185 mm	30 (MCP)
<b>16U Cabinet</b>	800 mm	550 mm	185 mm	30 (MCP)
<b>28U Slim Cabinet</b>	1330 mm	575 mm	290 mm	30 (MCP)
<b>28U Deep Cabinet</b>	1330 mm	575 mm	385 mm	30 (MCP)
<b>40U Deep Cabinet</b>	1865 mm	575 mm	385 mm	0
<b>16U Weatherproof Cabinet, IP 55, with window</b>	800 mm	600 mm	260 mm	30 (Handle)
<b>16U Weatherproof Cabinet, IP 65 (no window)</b>	800 mm	600 mm	260 mm	30 (Handle)
<b>28U Weatherproof Cabinet, IP X5, with window</b>	1330 mm	600 mm	260 mm	30 (Handle)
<b>28U Weatherproof Cabinet, IP X5 (no window)</b>	1330 mm	600 mm	260 mm	30 (Handle)

**Note:** The installation must provide adequate clearance for in-service requirements including room to swing the door open, and provision for access during maintenance. Actual dimensions may vary slightly.

1. These product codes specify white front plates. To specify grey front plates, add a suffix “-G” to the product code. For example: F100A-A28U/4A-G.
2. A standard F100A fire alarm panel has two analogue addressable loops. An F100A panel may be fitted with one two-loop extender board, providing two additional loops. The extender board takes the place of one standard-size internal option.
3. Maximum number of standard internal options: The number of additional standard size options that typically fit inside the cabinet, provided that the power supply is capable of supplying the system’s maximum current consumption. Popular options are described on page 2 (standard-size options are marked †). This information is for guidance only. Contact your nearest Pertronic Industries branch or representative to confirm your requirements.
4. The power supplies in these F100A panels are fully loaded. Any additional equipment installed in these cabinets must have its own power supply.
5. These F100A panels can be fitted with additional power supply units if necessary to satisfy project requirements.



*Simplified illustration of an F100A fire alarm system showing the available input & output circuits and communications & networking systems*

## Software Features

- User definable text descriptor per point and zone
- User isolation of zones and individual sensors
- Sensor **Pre-Alarm** and **Maintenance** warnings
- Multiple configurable action levels per sensor (with appropriate sensors types)
- Individual sensor dual sensitivity for configurable automatic **Day / Night** operation
- **Alarm Verification** option for reduced false alarms
- Automatic history log of system events
- **Auto-Learn** function for fast configuration
- Configurable from front panel or PC
- Control event grouping capability
- Automatic daily system test of charger, batteries and sensors
- **Memory lock** switch to write-protect configuration data
- Fire alarm control panel door interlock switch

## Listings and Approvals

- ActivFire: afp-1292

## Specifications

- Display 2 line x 40 character backlit LCD
- Addressable Loops 2 loops, expandable to 4
- Intelligent Sensors 99 per loop
- Intelligent Devices 99 input/output devices per loop
- Zones 128
- Groups 64
- History Log 2560 time-stamped events
- Relays
  - Fire, Fault, Batt. Fault, Gen. Purpose 2 A @ 30 Vdc
  - Door Holder 5 A @ 30 Vdc
- Monitored Outputs
  - Ancillary Control Function (ACF): 2 A @ 30 Vdc
  - Warning System, External Bell 5 A @ 30 Vdc
- Loop Length
  - With appropriate configuration the loop length can be up to 2,500 m. Loop configuration must be verified using the online loop calculator at [www.pertronic.com.au](http://www.pertronic.com.au)
- Loop Resistance Maximum 50 Ω
- Loop Current Maximum 350 mA
- Output Ports Serial RS-232; Serial RS-485
- Max. Battery Cap.
 

600mm	22 Amp-hour
10U	22 Amp-hour
16U	33 Amp-hour
28U Slim	40 Amp-hour
Other	To suit project