

F100 Fire Alarm Control Panel

NZS 4512:2021

PERTRONIC

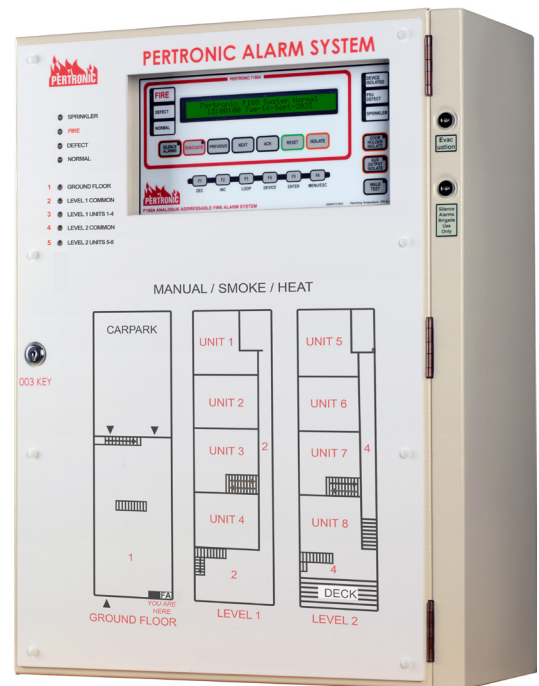
- Precise Fire Alarm Location** – **Simple, easily readable display**
- Power and Versatility** – **User-friendly operation**
- Flexible Configuration** – **Economical, intuitive installation**

Overview

The F100 analogue addressable panel is a fire alarm control panel for installations that require flexible configuration and control functions.

The F100 complies with New Zealand Standard NZS 4512:2021 and with the requirements of the New Zealand Building Code. FPANZ listing: PI/130 (pending).

Seismically Tested: Independent testing by an IANZ-accredited laboratory has verified that the Pertronic F100 meets the requirements of NZS 1170.5, the NZ standard for earthquake loading.



F100 Fire Alarm Control Panel

Features

- > Precise Identification of Fire Location with user-definable English language text description
- > Large 2 x 40 character back-lit LCD Display
- > 24-character configurable text message per Address, Zone, Logic Block, Timer and Network input
- > Automatic 24-Hour 'System Test' of all Detectors and Battery
- > 2 to 4 Loops provides a maximum 396 detectors plus 396 modules or manual call points (MCPs)
- > Loop input devices include detectors and modules including call-points, loop responders and loop relaysAddressable loop relays can be configured as Sounder relays, Auxiliary relays or Door Holder relays, etc
- > User Isolation of zones and individual detectors
- > 2560 Event Historical Log
- > Configuration data may be entered through the front panel controls or using PC Configuration Utility
- > Optional seismic battery bracket SBB-17AH
- > FPANZ listing: PI/130 (pending)
- > Independently tested and verified by an IANZ-accredited laboratory as compliant with NZS 1170.5, the NZ standard for earthquake loading

F100 Specifications

Power Supply

Internal SLA battery, 24 V capacity optional

230 Vac, 50 Hz

Battery Type

Charger

- Integral float charger
- Temperature compensated
- 27.4 Vdc, 5 A, 11 A or 22 A optional

Standby Current

- 2-loop 165 mA
- 4-loop 210 mA

Zone Indication

Up to 128 physical zones

Protocol

Intelligent System Sensor 'CLIP' Protocol

Panel Configuration (via PC)

Serial RS-232 Port

Ancillary Equipment Config.

Serial RS-485 Port

Historic Event Log

2560 events

LCD Display

2 line x 40 character alphanumeric back-lit display

Mimic Connections

- Up to 16 devices, 8 x LED and 8 x LCD
- LCD Mimics, LED mimics, and amplifiers may be connected to the RS485 port
- 16 full function, the remainder slaves

LCD Mimics

- Supports up to 8 remote monitored LCD mimics
- Either 'Full Function' or 'Mini Mimic' functionality

LED Mimics

- Supports up to 8 monitored LED mimics
- Each capable of driving 128 LEDs
- 'Silence Alarms' (BCO) and 'Evacuate' controls.

Fire Relay

- 1 changeover contact
- Contact rated at 24 Vdc, 2 A, normally de-energised

Defect Relay

- 1 changeover contact
- Contact rated at 24 Vdc, 2 A, normally energised

Sounder

- 2 circuits (BELL1 and BELL2)
- Fused at 5 A each, monitored and configurable

General Purpose (GP) Relay

- 2 sets of change-over contacts
- Contacts rated at 24 Vdc, 2 A, not monitored; configurable

Door Holder Relay

- 1 single changeover contact
- Contact rated at 24 Vdc, 5 A, not monitored; configurable

Door Holder 'Isolate' Switch

AUX 'Isolate' Switch isolates all AUX outputs

AUXM Relay

- 1 voltage-reversal output
- Rated at 24 Vdc, 100 mA, monitored, configurable

AUX Relay

- 1 change-over contact
- Rated at 24 Vdc, 2 A resistive, not monitored, configurable

Open Collector Outputs

- 8 programmable outputs: switched to 0 V
- Current (Peak) 500 mA
- (Continuous) 150 mA
- Voltage (Maximum) 50 V

Analogue Addressable (AA) Loop Circuits

- Number of Loops 2 to 4, in 2-loop increments
- Detectors Up to 99 per loop
- Input/output modules, addressable sounder devices, or MCPs Up to 99 per loop
- Maximum detectors and modules 396
- Loop Resistance Maximum 50 Ω
- Cable 1 mm² to 2.5 mm², twisted-pair
- Length Up to 1000 metres end to end

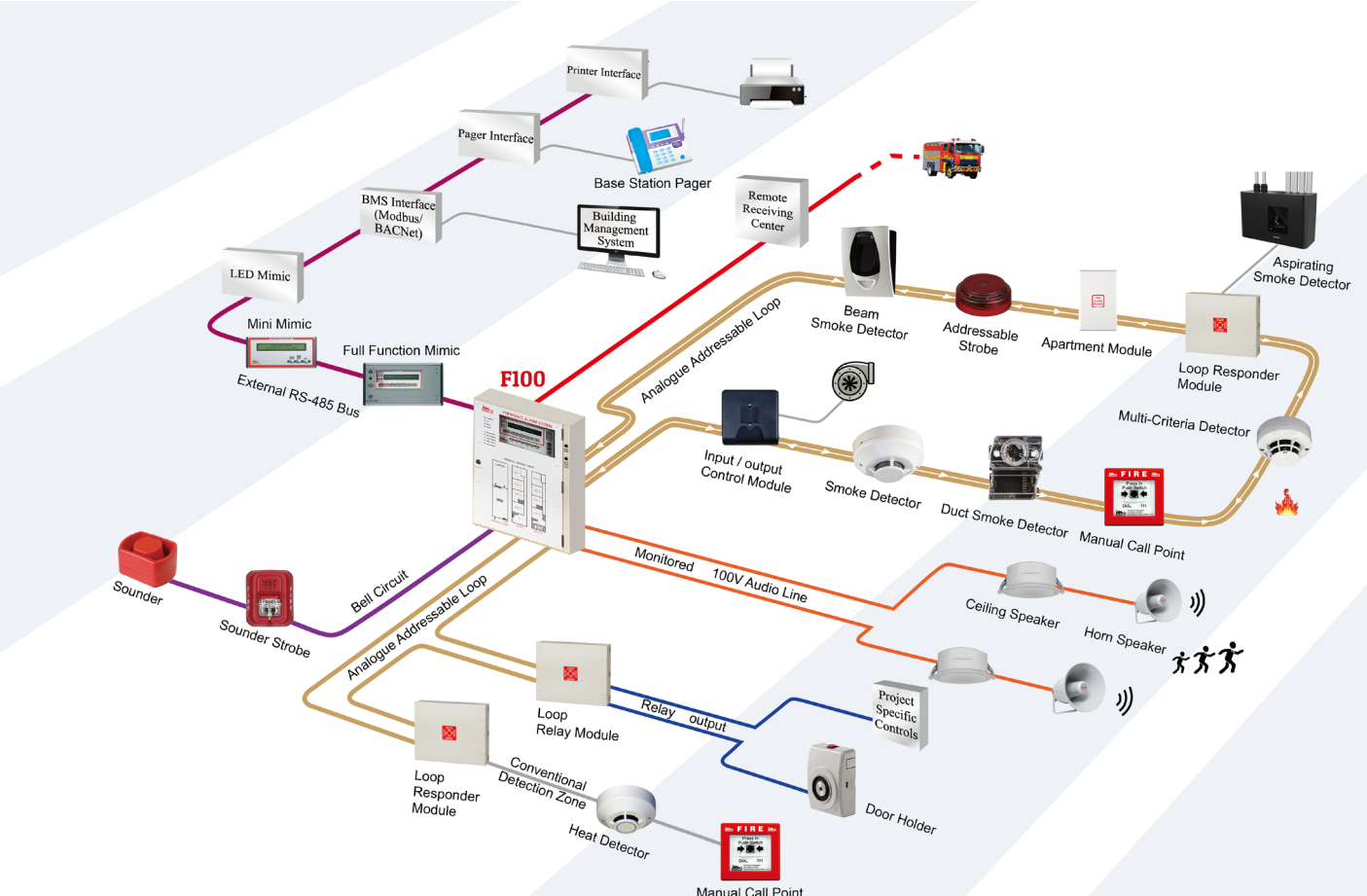
Operating Environment

- Temperature 0 °C to +45 °C
- Humidity Up to +40 °C, <95% RH, non-condensing
+40 °C to +45 °C, ≤75% RH, non-condensing

F100 Functions

- > Earth monitoring
 - > Configurable 'Sprinkler' input: monitored, non-latching
 - > Sprinkler operated LED
 - > Brigade interface: 'Fire', 'Defect', 'Isolate', 'Test'. eg SGD
 - > Front panel 'Silence Alarms' and 'Evacuation' key-switches
 - > Walk Test
 - > Door microswitch, Door interlock and external defect loops
 - > Automatic daily system test of all detectors and battery or can be individually tested on demand, via the menu
 - > All devices, detectors, modules, zones, groups, logic gates and timers may be individually isolated
 - > Supports 3x 'virtual' detector mode
 - > Supports control of fan relays
 - > Brigade-latching detectors latch if and when the 'Alarm' relay operates
 - > Day/Night Mode: supports variable sensitivity levels for different occupation modes
 - > Detectors can be individually configured for: Bell 1, Bell 2, Brigade Calling, Brigade-Latching, Auxiliary Relay, Door Holder Relay, Buzzer on Alarm, Alarm Verification Facility (AVF), Detector Sensitivity and Zone assignment
 - > Detectors and modules can be directly configured to any system output
 - > 64 groups, each with 32 outputs can be configured to any system output or other group
 - > 16 system events can be configured to control any system output: eg. Common Fire, Defect, Pre-Alarm, etc.
 - > 32 Logic Block functions (AND, NAND, NOT, ANY, OR) can be configured to be activated by any input on the system and can be interconnected to perform complex logic functions. Any Logic Block can turn on any system output
 - > 16 independent Timers; each configurable for a period of 1 to 65,536 seconds (18+ hours)
 - > Each Timer has configurable panel attributes
 - > 4 Timer modes are available ('Normal', 'Cycle', 'Double-Knock' and 'ReTrigger')
 - > Each Timer can directly turn on one output on Timer 'Run' and one output on Timer 'Time Out'
 - > Configurable 24-Hour Timers: 4 timers with independent start and end times include Week-Day and Week-End mode and 2 configurable outputs each
 - > On-site configurability from front panel menu controls or via the graphical configuration and monitoring PC software.
 - > Remote configuration and control via Modems require a copper connection, internet connection or suitable mobile phone is available
 - > Status reporting for individual detectors and modules
 - > Virtual Panel display provides remote control and graphical representation of the panel's LCD, front panel switches and indications
 - > Auto-Learn function for fast loop configuration
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System Diagram



Ordering Information

Product Code	Description	NZFPA Listing
600mm Cabinet	(HxWxD = 600mm x 450mm x 195mm)	
F100-600F/5A/CR	F100, 600mm, Front Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-600R/5A/CR	F100, 600mm, Rear Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-600F/11A/CR	F100, 600mm, Front Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
F100-600R/11A/CR	F100, 600mm, Rear Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
900mm Cabinet	(HxWxD = 900mm x 450mm x 195mm)	
F100-900F/5A/CR	F100, 900mm, Front Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-900R/5A/CR	F100, 900mm, Rear Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-900F/11A/CR	F100, 900mm, Front Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
F100-900R/11A/CR	F100, 900mm, Rear Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
F100-900F/22A/CR	F100, 900mm, Front Service, 2 Loop, 22 Amp PSU, Cream	PI/130 (Pending)
F100-900R/22A/CR	F100, 900mm, Rear Service, 2 Loop, 22 Amp PSU, Cream	PI/130 (Pending)
22U Cabinet	(HxWxD = 1065mm x 575mm x 290mm)	
F100-22UF/5A/CR	F100, 22U, Front Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-22UF/11A/CR	F100, 22U, Front Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
F100-22UF/22A/CR	F100, 22U, Front Service, 2 Loop, 22 Amp PSU, Cream	PI/130 (Pending)
28U Cabinet	(HxWxD = 1330mm x 575mm x 290mm)	
F100-28UF/5A/CR	F100, 28U, Front Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-28UF/11A/CR	F100, 28U, Front Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
F100-28UF/22A/CR	F100, 28U, Front Service, 2 Loop, 22 Amp PSU, Cream	PI/130 (Pending)
40U Cabinet	(HxWxD = 1865mm x 575mm x 340mm)	
F100-40UF/5A/CR	F100, 40U, Front Service, 2 Loop, 5 Amp PSU, Cream	PI/130 (Pending)
F100-40UF/11A/CR	F100, 40U, Front Service, 2 Loop, 11 Amp PSU, Cream	PI/130 (Pending)
F100-40UF/22A/CR	F100, 40U, Front Service, 2 Loop, 22 Amp PSU, Cream	PI/130 (Pending)
Double Cabinet	(HxWxD = 900mm x 800mm x 130mm)	
F100-DC/5A/CR	F100, Double Cabinet, Without Indexes, 5 Amp PSU, Cream	PI/130 (Pending)
F100-DC/11A/CR	F100, Double Cabinet, Without Indexes, 11 Amp PSU, Cream	PI/130 (Pending)
F100-DC/22A/CR	F100, Double Cabinet, Without Indexes, 22 Amp PSU, Cream	PI/130 (Pending)
F100-DCF/5A/CR	F100, Double Cabinet, Front Service, 5 Amp PSU, Cream	PI/130 (Pending)
F100-DCF/11A/CR	F100, Double Cabinet, Front Service, 11 Amp PSU, Cream	PI/130 (Pending)
F100-DCF/22A/CR	F100, Double Cabinet, Front Service, 22 Amp PSU, Cream	PI/130 (Pending)
F100-DCR/5A/CR	F100, Double Cabinet, Rear Service, 5 Amp PSU, Cream	PI/130 (Pending)
F100-DCR/11A/CR	F100, Double Cabinet, Rear Service, 11 Amp PSU, Cream	PI/130 (Pending)
F100-DCR/22A/CR	F100, Double Cabinet, Rear Service, 22 Amp PSU, Cream	PI/130 (Pending)

The information in this document must not be treated as partial or complete instructions for the design, construction, installation, commissioning, or maintenance of fire detection, fire alarm, or building evacuation systems. Fire and evacuation systems must be designed and installed by properly qualified persons, in accordance with all regulatory requirements.

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