F120A Features and Facilities

- **Loop Characteristics:** max Length 1km, (see Pertronic web site for loop length calculator).
- **Cable Size/Type:** 1mm^2 to 2.5mm^2, twisted-pair. **Loop Resistance:** (max) 38Ω.
- **Battery requirements:** 2 x 12V SLA batteries (see Pertronic web site for battery size calculator)
- **Serial RS-232 Port:** for panel configuration via PC. **Serial RS-485 Ports:** for ancillary equipment.
- **Mimic Connections:** up to 32 devices: LCD Mimics, LED Mimics, Amplifiers or Network Cards, may be connected to the RS485 port.
- **LCD Mimics:** supports up to 8 Full LCD or 29 Mini LCD Mimics with full polled controls, the balance being unpolled mimics without monitoring.
- **LED Mimics:** supports up to 8 monitored LED Mimics, each capable of driving 512 LEDs plus 'Silence Alarms' (BCO) and 'Evacuate' controls.
- **AUX Isolate switch:** isolates all Auxiliary panel and loop outputs.
- **Configurable 'Sprinkler' input:** monitored, non-latching. With Sprinkler operated LED.
- **General purpose Brigade interface:** 'Fire', 'Defect', 'Isolate', 'Test'. e.g. SGD
- **Key-switches:** front panel 'Silence Alarms' (BCO) and 'Evacuation'.
- **Walk Test:** one man walk test with automatic reset.
- **Door micro switch:** Door Interlock and External Defect loops.
- **Panel configurable outputs:** eight (8) x Open- Drain FET: - switch to 0v
- **System Test:** automatic 24-Hour test of all Detectors & Battery or individually tested on demand.
- **Fan Control Block:** software supports control of AS1668 Fan relays and Duct Detector over-ride.
- **Programmable Attributes:** detectors can be individually configured for: Bell 1, Bell 2, Brigade Calling, Latching, Brigade Latch, Auxiliary Relay, Door Holder Relay, Buzzer on Alarm, Alarm Verification Facility (AVF), Sensitivity selection and Zone assignment.
- **Configurable detectors and modules:** can be directly configured to any system output via 'Alarm', 'Pre-Alarm' or 'Defect'.
- **Configurable Software Groups:** 200 groups, each with 15 outputs which can be configured to any system output.
- **Configurable Zones:** 256 zones each with 8 outputs, which can activate any system output. Each Zone has Timer with outputs on 'Start' and 'Stop' period. Automatic Timer override on second detector activation.
- **System Events:** 32 events can be configured to control any system output: e.g. Common Fire, Defect, Pre-Alarm, etc.
- **Logic Block Functions:** 200 logic functions (OR, AND, ANY2) can be interconnected to perform complex logic functions.
- **Time of Day Logic Input:** allows an event to be configured on a daily basis with independent Start Time and Duration.
- **Configurable Timers:** 50 independent Timers, each with a 1 second to 12 hour configurable time period. 3 Timer types are available - 'One Shot', 'Continuous' and 'Latching.
- **Test Mode:** individual test function for detectors and modules.
- **Status Reporting:** available for individual detectors and modules.
- **Daylight saving:** automatic Clock adjustment for Daylight Saving.
- **Dual sensitivity:** each detector can be switched from one sensitivity to another automatically or manually (day / night mode).

Mechanical Specifications

Construction	1.2mm Mild Steel
Colour	Powder Coated Beige (other colours optional)
Dimensions	
Size2	900mm h x 450mm w x 130mm d
Size3	900mm h x 800mm w x 130mm d
Size4	1200mm h x 600mm w x 275mm d
Size5	1800mm h x 650mm w x 325mm d

Technical Specifications

Power Supply

Mains Supply	230V
Output Voltage	27.6V
Output Current	3A
Panel Quiescent Current	165mA (2 loop panel)
Battery Capacity	up to 17Ah

Outputs

Bell1 (monitored)	Voltage reversal 3A @ 24V d.c
Bell2 (monitored)	Voltage reversal 3A @ 24V d.c
Fire (Normally de-energised)	C/O 1.25A @ 24V d.c
Defect (Normally energised)	C/O 1.25A @ 24V d.c
Auxiliary Relay (monitored)	2A @ 30V d.c
Auxiliary Relay (non monitored)	C/O 2A @ 30V d.c
General Purpose Relay	2 x C/O's 2A @ 30V d.c
Door Holder Relay	C/O 5A @ 24V d.c
Auxiliary Outputs	eight open drain FET's switch to 0V

Indicators

Fire	Red
Defect	Yellow
Normal	Green
Silence Alarms	Yellow
Evacuate	Yellow
Door Holder Isolate	Yellow
Aux Isolate	Yellow
Walk Test	Yellow
Device Isolated	Yellow
Sprinkler	Red
PSU Defect	Yellow
ATS Isolate	Yellow
ATS Test	Yellow

F120A System Product Codes

Fire Control Panels

F120AF-3	F120A FS 2 Loop 900mm Panel 4A PSU :2003
F120AR-3	F120A RS 2 Loop 900mm Panel 4A PSU :2003
F120AFTNW-3	F120A FS 2 Loop 900mm c/w NCU + N/W card
F120ARDC-3	F120A RS 2 Loop Double Cab 4A PSU :2003
F120ARK1.2	F120 Panel 2 Loop in 1.2M Rack Cab
F120ARK1.8	F120 Panel 2 Loop in 1.8M Rack Cab

Expansion Board

F120P2LMB	F120 2 Loop Driver 2 Mini Board

Analogue Detectors

1251BPI	AA Ion Smoke Detector excl Base
2251BPI	AA Photo Smoke Detector excl Base
2251TMBPI	AA Acclimate Photo-Thermal Multi Sensor Det
2251TLE	AA Photo-Thermal-IR Multi Sensor excl Base
2251CTLE	AA CO-Photo-Thermal-IR Multi Sensor excl Base
5251BPI	AA 57C Heat Detector
5251RBPI	AA ROR Heat Detector excl Base
7251	AA Pinnacle Laser Smoke Detector
B501	AA B501 Base Analogue Addressable

Analogue Modules

AAMCP	AA Manual Call Point Snapglaze
F100LR-3	AA Loop Responder Board 8 I/P : 2003
F100LRU	AA Loop Relay Board 4 Relays
AM-3	Type 5 Apartment Module - Non Hush
AMH-3	Type 5 Apartment Module with Hush
AMRH	Remote Hush Button for AM-3 , AMH-3
ITM	Isolate Timer Modue
M500C	AA Relay Control Module
M500M	AA Monitor / Input Module
M501M	AA Mini Monitor / Input Module
M503ME	AA Micro Monitor / Input Module with LED output
ISO524-1	AA Short Circuit Isolator Unit ISO524-1
M500X	AA Zone Isolator Module
M201E-240	AA Euro 240Vac Relay Module with isolator
M220E	AA Euro Dual Input Module
M221E	AA Euro Dual Input + Relay Module

Networking

NETCARD	Network Card - F100/F120 Panels/LED Mimics
NETCD-NCU	Network Card for Network Control / Display Unit
NETCU	Network Control Unit LCD Display excl Net Card
NETDU	Network Display Unit LCD Display excl Net Card

Mimics

F120AM-3	F120A LCD Full Function Mimic :2003
F100AMM-3	LCD Mini Mimic :2003
F100AMMR-3	LCD Mini Mimic c/w Reset :2003
F100AMMRZ-3	LCD Mini Mimic Zone Select, Alarm Only :2003
F100PDB12	12 Way LED Display Board
F100PDB	8 way LED Display Extender Board

QUALITY ASSURED COMPANY ISO 9001

International Standards
Certifications
QAC/R61/0051

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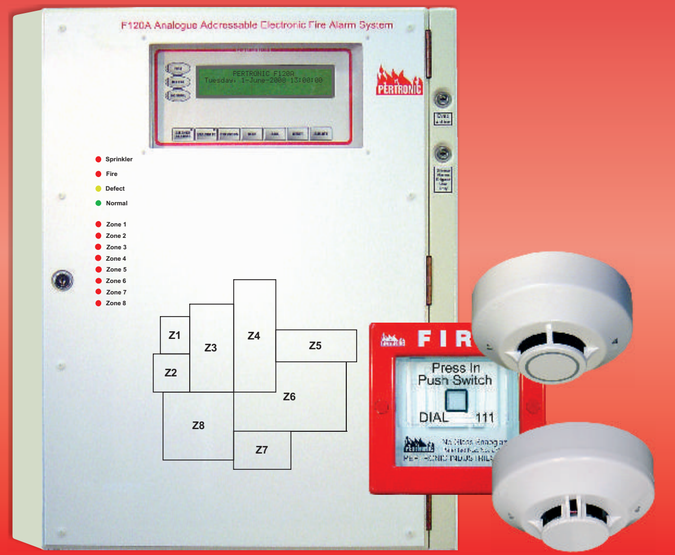
0040-F120A AA Control Panel Issue 1 200809

Pertronic Analogue Addressable Automatic Fire Systems



F120A Analogue Addressable Fire Alarm System NZS4512:2003

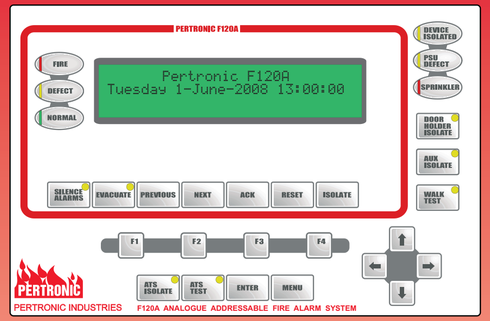
PERTRONIC

Advanced Fire Detection System

F120A Analogue Addressable Fire Panel

Product Overview

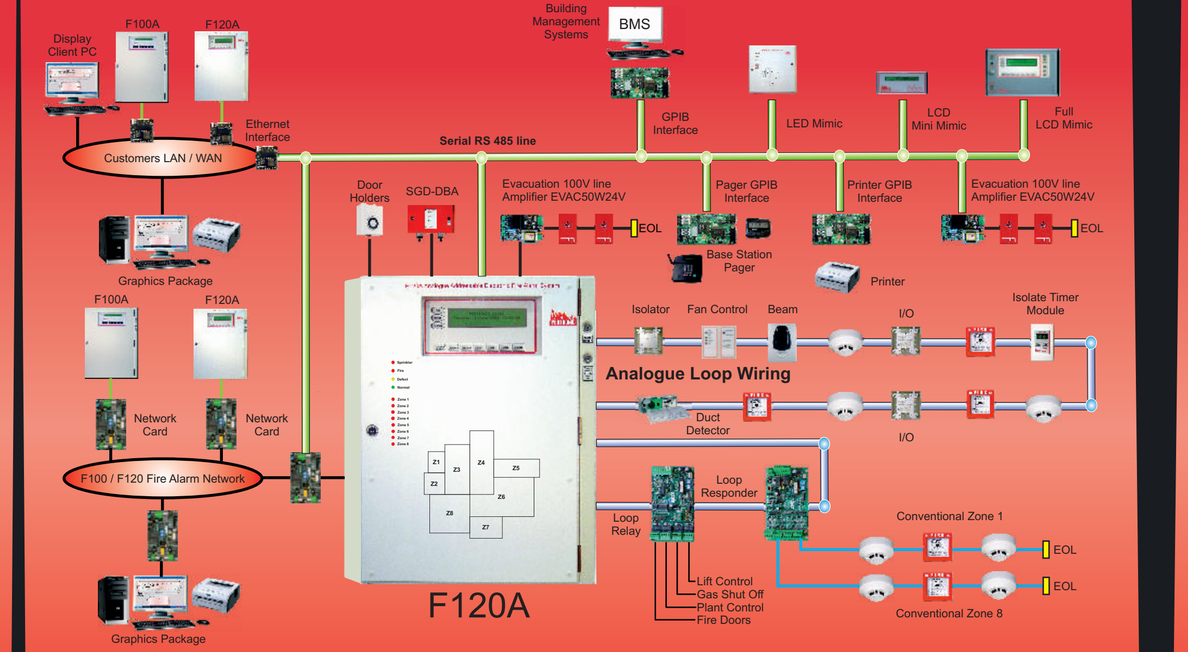
The F120A Analogue Addressable panel is a sophisticated and versatile Fire Alarm panel, designed for all installations that require flexible configuration and control functions.
The F120A complies with New Zealand Standard NZS4512:2003 and with the requirements of the New Zealand Building Code.



F120A Features and Facilities

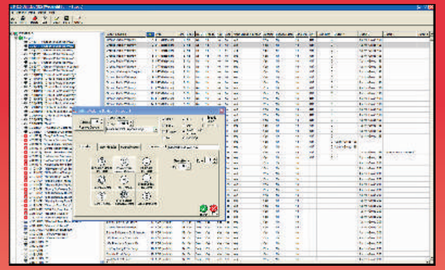
- **Display:** Large 4 x 40 character back-lit alphanumeric LCD Display. This gives a 31 character user-definable English language text descriptor for precise identification of the Fire location.
- **Zone Indication**: Up to 256 physical zones each with a user-definable text descriptor.
- **Protocol:** Supports the **System Sensor 159** intelligent clip protocol.
- **Loop Capacity:** 2 to 20 analogue addressable loops support 159 Detectors and 99 Modules per loop. Provides a maximum 3180 Detectors and 1980 Modules.
- **Loop input devices:** Detectors, Call-Points, Loop Responders, Relay Responders and Modules.
- **Loop outputs devices:** Sounder relays, Auxiliary relays or Door Holder relays, etc
- **Networking:** The Pertronic network supports 99 nodes with up to 64 outputs to the network and 128 inputs from the network. Each Network Card is connected to an F120A or F100A panel via the serial RS485 port.
- **Pre-Alarm:** Automatic 'Pre-Alarm' warnings. Pre-Alarm level is set at 80% of the Fire threshold.
- **24 Hour test:** Automatic 24-Hour 'System Test' of all Detectors and Battery.
- **Isolation:** User Isolation of Detectors, Call-Points, Modules, Zones, Groups, Logic Gates and Timers is available via user friendly panel menus and controls..
- **Historic Log:** This provides a downloadable and searchable 999 event historical Log.
- **Configuration & Control:** Configuration data may be entered through the front panel menu controls or via the sophisticated graphical configuration and monitoring PC Utility.
- **Virtual Panel Display:** Provides complete control and graphical representation of the panel's LCD, front panel switches and indications locally or at a remote location.
- **Remote Monitoring:** Pertronic configuration utility can be used via Internet or modem.

F120A System Diagram



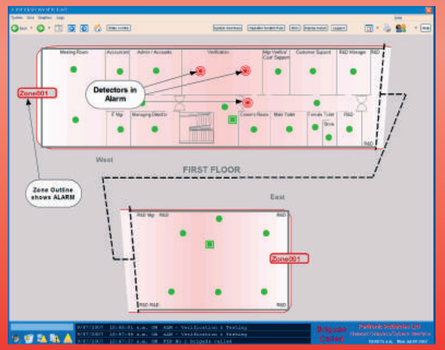
Advanced Systems - Advanced Solutions
Pertronic Industries Ltd

F120A PC Utilities



User friendly Panel Configuration Utility for programming and retrieving panel status and configuration

Graphic System



Easy to use control and graphical representation of building Fire Alarm System

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