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Certificate No:  
205487-2016-  
AQ-AUS-JAS-ANZ

### Product Overview:

The Pertronic Industries **F1-3** is a low cost, single zone electronic Fire Alarm Control Panel for applications where brigade connection is not a requirement.

The **F1-3** complies with the New Zealand Fire Alarm Standard (NZS 4512:2010 / NZS 4512:2003) for single zone Fire Alarm system.

The **F1-3** supports smoke detectors, indicating manual call-points (MCP) and indicating heat detectors with the facility to internally mount one 20 Watt evacuation amplifier.

### Features:

- ▶ 'Normal', 'Defect' and 'Fire' indication on front panel
- ▶ 'Internal Bell Cut-Off' and 'External Bell Cut-Off' (BCO)
- ▶ Alarm reset available from a front panel key-switch
- ▶ Trial evacuation key-switch
- ▶ Automatic Alarm Verification Facility (AVF) provides substantial protection against transient false alarms
- ▶ Supervised bell circuit with 10 kΩ EOL resistor
- ▶ Optional 100 Vrms line amplifier with voice evacuation message
- ▶ 'Battery Absent' detection circuitry
- ▶ Supervising earth leakage
- ▶ Integrated piezo Alarm and Defect sounder warning
- ▶ On-board system 'Defect' LED indicates source of fault
- ▶ Door Interlock
- ▶ Fire and Defect clean contact relays (C/O)



### Detector Circuit

- ▶ One supervised zone, terminated with a 10 kΩ EOL resistor
- ▶ Accepts a mix of System Sensor detectors, Pertronic indicating heat detectors and indicating MCPs
- ▶ The **Zone Circuit** may have:
  - ▶ Up to 25 System Sensor smoke or heat detectors
  - ▶ A total of 100 x Pertronic indicating MCPs, or indicating heat detectors (see **important note** on page 2)
- ▶ Smoke detectors alarm signals are checked. The panel responds to confirmed smoke detector alarms within one second
- ▶ Indicating heat detectors and indicating MCPs give instantaneous (less than 0.5 sec) response
- ▶ Zone circuit self-test on start-up and every 24 hours

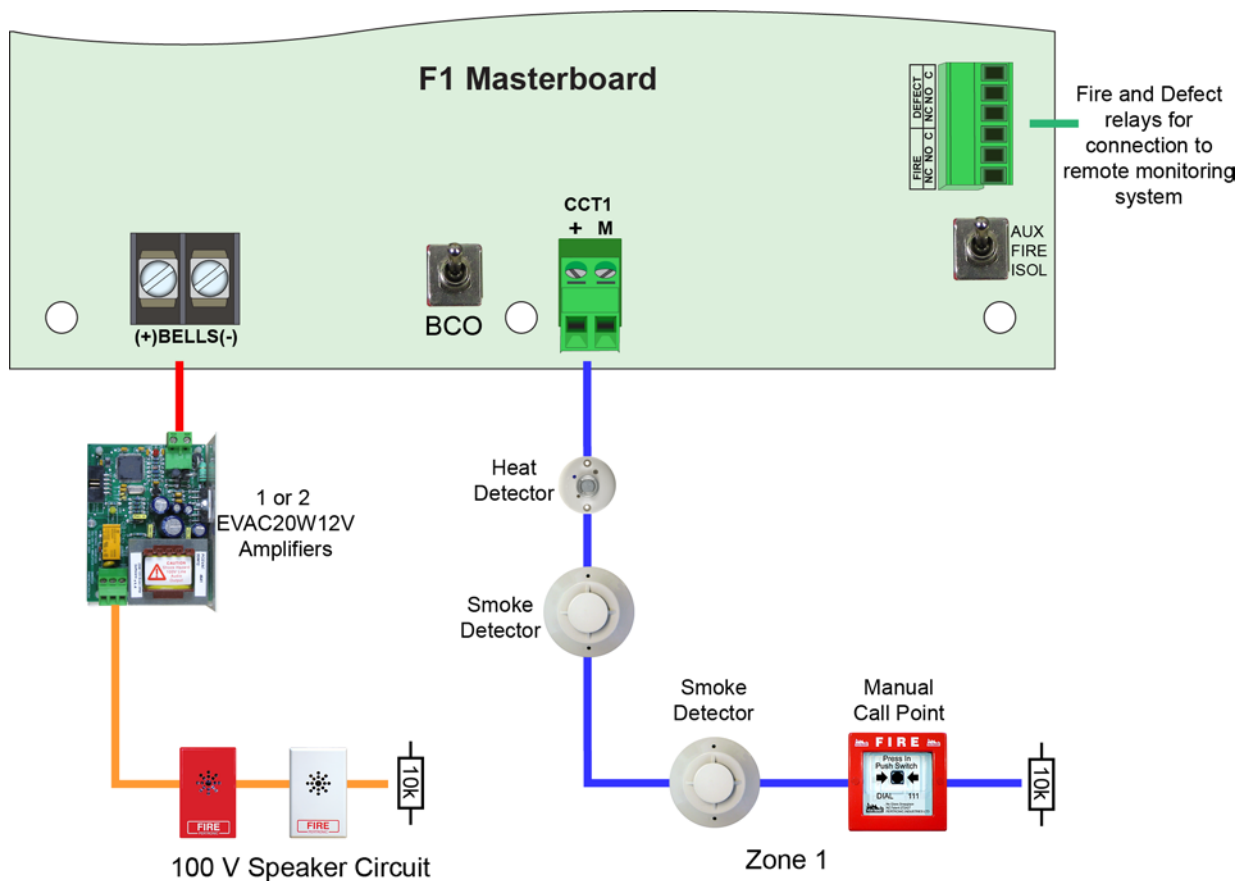
### Optional Evacuation Amplifier and Speakers

- ▶ Pertronic 20 Watt evacuation amplifier **EVAC20W12V** with monitored 100 Vrms line output
- ▶ Recommended sounders
  - ▶ Pertronic PSSB401 Speaker Bases
  - ▶ Pertronic PSS1 100 Vrms Speakers
  - ▶ Pertronic PSS3 100 Vrms Speakers

### Specification:

<b>Electrical:</b>	<b>Power Supply</b> 230 Vac, 50 Hz, 4 W 13.7 Vdc, 275 mA	<b>Quiescent Current</b> 32 mA @ 12 Vdc	<b>Defect Current</b> 14 mA @ 12 Vdc	<b>Alarm Current</b> 140 mA at 12 Vdc with no load on external sounders	<b>Bell Output</b> 12 Vdc, 5 Amps
<b>Battery</b>	<b>Battery Charger</b> Integral Float Charger 13.7 Vdc, 250 mA		<b>Battery Type</b> Sealed lead acid (gelcell) 12 Vdc, 7 AHr - internally mounted		
<b>Environmental:</b>	<b>Operating Temperature Range</b> 0 to +40 °C		<b>Humidity</b> 10 to 95% RH (non-condensing)		
<b>Mechanical:</b>	<b>Overall Dimensions</b> (H x W x D mm) 350 x 245 x 87 (See note on page 2)	<b>Weight</b> 2.2 kg - excluding battery	<b>Cabinet Material</b> 1.2 mm mild steel, powder coated	<b>Colour</b> Beige - other colours optional	

**Block Diagram:**



Ordering Information:		
Product Code	Description	NZFPA Listing
F1-3	F1, 1cct Fire Panel NZS 4512:2010	PI/122
F1-3EA	F1, 1cct Panel with 20W Evacuation Amplifier NZS 4512:2010	PI/122
MI16F874A-I/L	PIC Microprocessor 16F874A-I/L, PLCC44	
EVAC20W12V	Evacuation Amplifier, 20W 12V	PI/638
PSSB401	Pertronic Speaker and B401 Conventional Base	PI/642
SMK400E	Surface Mount for B401 and B501 Base (Round 152 mm)	
PSS1-R	Pertronic Sounder Speaker 1W, 100V ; Red	PI/641
PSS1-W	Pertronic Sounder Speaker 1W, 100V ; White	PI/641
PSS3	Pertronic 100V 3W Ceiling Speaker	

**Important Notes:**

- ▶ Within the total allowance of 100 indicating devices per zone circuit, the circuit is limited to a maximum of Pertronic V-series 50 indicating heat detectors.
- ▶ Non-indicating heat detectors and MCPs will NOT produce a 'Fire' signal when triggered and MUST NOT be used with the NZS 4512:2010 standard **F1-3** panel.
- ▶ A hard short-circuit or open-circuit produces a 'Defect' signal.
- ▶ All dimensions are nominal. Actual dimensions may vary slightly due to production tolerances.

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