



F16e

8-32 Zone Conventional Fire Alarm Panel (NZS 4512:2010)

Head Office

Wellington

PO Box 35-063
Naenae, 5011
Lower Hutt
17 Eastern Hutt Rd
Wingate
Lower Hutt 5019
Tel (04) 567-3229
Fax (04) 567-3644

www.pertronic.co.nz

sales@pertronic.co.nz
tech@pertronic.co.nz

Auckland Office

PO Box 15-867
New Lynn
Auckland 0640
359 Onehunga Mall
Onehunga
Auckland 1061
Tel (09) 633-0226
Fax (09) 633-0228

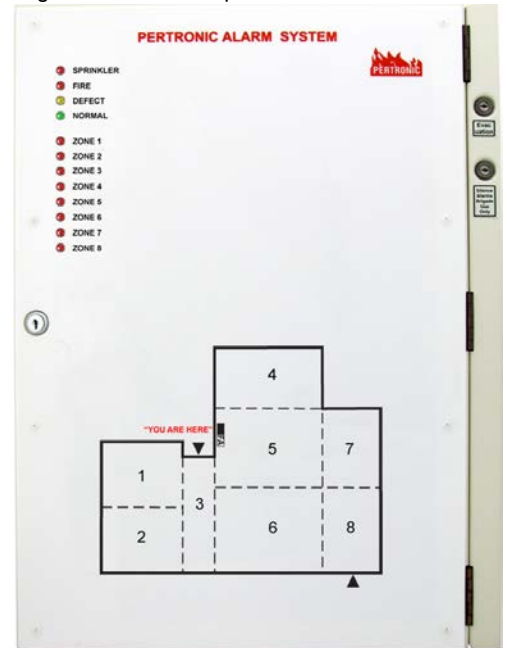
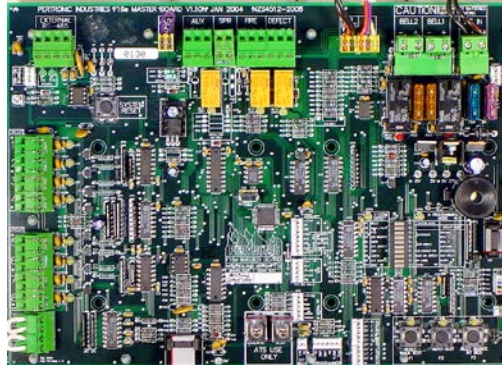
Product Overview:

The **Pertronic F16e** is a conventional automatic Fire Alarm system designed for small to medium applications. The base system has 8 circuits – expandable to 32 circuits by adding extra 8-circuit Expander Modules.

F16e Panels are available to comply with the requirements of the New Zealand Building Code and with New Zealand Standards NZS4512:2010 and/or NZS4512:1997.

The **F16e** supports Pertronic indicating Manual Call-Points, indicating Heat Detectors and Smoke Detectors with 2010 firmware and both indicating and non-indicating Manual Call-Points and Heat Detectors and Smoke Detectors with 1997 firmware.

An **F16e** may be configured with separate 2010 and 1997 Master and Extender boards to provide circuits to both standards



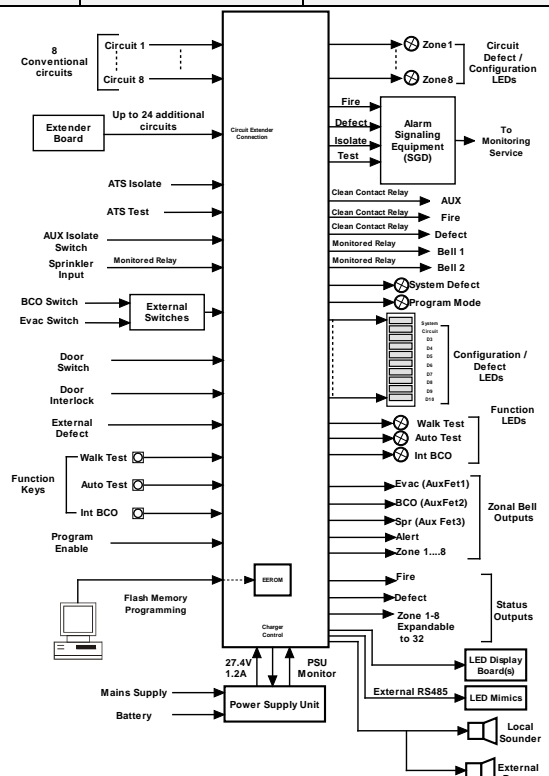
Specifications

Electrical:	Power Supply 110-250Vac, 50/60Hz, 60VA 13.7Vdc, 400mA.	Quiescent Current 70mA at 24Vdc F16e Panel only, 8 circuits +35mA for each additional 8-circuit module	Alarm Current 120mA at 24Vdc - Fire relays ON - plus Sounder load
Battery:	Battery Charger Integral Float Charger 27.4Vdc, 1.2A		Battery Type Sealed lead acid (gelcell) 2 x 12Vdc, 7 to 21Ahr - internally mounted
Environmental:	Operating Temperature Range 0 to +40 °C		Humidity 10 to 95% RH (non-condensing)
Mechanical: Cabinet: FS or RS - Mini Panel - Large Panel	Dimensions (H x W x D mm) 410 x 450 x 130 600 x 450 x 130	Weight - excluding battery 4 Kg 6 Kg	Material 1.2mm mild steel, powder coated
			Colour Beige - other colours optional

- ▶ Power Supply Timer: Automatic 24-Hour load test with automatic 'Battery Absent' detection circuitry
- ▶ 8 to 32 zones terminated with a 10kΩ End-of-Line (EOL) resistor.
- ▶ Alarm triggered by smoke detector operation with 1-second alarm verification or instant operation for indicating heat detector or indicating manual call-point
- ▶ Up to 40 System Sensor photo-electronic smoke detectors or 40 System Sensor ionisation smoke detectors may be connected to each zone circuit in addition to an unlimited number of **Pertronic** indicating Heat detectors and indicating Manual Call-Points.
- ▶ Two (2) Bell circuits, rated at 24Vdc, 5A, monitored with a 10kΩ, 1% EOL terminating resistor.
 - ▶ Recommended sounder:
 - ▶ EVAC50W24V or EVAC20W24V Amplifier and PSS1 or PSSB401 100V Line Speakers
 - ▶ PS1 and PS2 Sounders

Important Note:

A hard short-circuit or open-circuit produce a 'Defect' signal on panels to NZS4512:2013 so Non-indicating Heat Detectors and Manual Call-Points will NOT produce a 'Fire' signal when triggered and MUST NOT be used with the NZS4512:2010 standard **F16e** panel. They may however be used on F16e panels with circuits to NZS4512:1997



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

Standard Features:

Detector Circuit:

- ▶ 8 to 32 circuits in increments of 8 circuits
- ▶ Each circuit accepts up to 40 System Sensor Series 100 or Series 300 Smoke Detectors, and an unlimited number of Pertronic indicating Manual Call-Points and indicating Heat Detectors (NZS4512:2010 or 2003) or an unlimited number of Pertronic indicating or non-indicating Manual Call-Points and Heat Detectors (NZS4512:1997)
- ▶ A separate 20V regulator powers the detector circuits
- ▶ The circuits use a floating 'datum' to monitor the detectors – compensates for slow variations in environmental factors.
- ▶ All circuits must be terminated with 10kΩ, 1% EOL resistors
- ▶ Each circuit may be individually isolated
- ▶ Smoke detectors have 1-second alarm verification (AVF)
- ▶ Heat detectors and Manual Call-points give instantaneous (within 1 sec) response.
- ▶ Zone circuit self-test on start-up and every 24 hours

Inputs:

- ▶ 'Internal Bell Cut-Off' and 'Silence Alarms' or 'External Bell Cut-Off' (BCO) switches
- ▶ Trial Evacuation key-switch
- ▶ Monitored DBA/Sprinkler input
- ▶ Door Interlock input.
- ▶ External Defect input

Outputs:

- ▶ One (1) 'Fire' relay with changeover contacts rated at 24Vdc, 2.0A, normally de-energised
- ▶ One (1) 'Defect' relay with changeover contacts rated at 24Vdc, 2.0A, normally energised
- ▶ Two (2) monitored Sounder relays, 'Bell1' and 'Bell2', with voltage-reversal changeover contacts rated at 24Vdc, 5A. Mappable
- ▶ One (1) non-monitored Auxiliary Form 'C' relay, 'AUX', with 'Isolate' control. The normally de-energised contacts are rated at 24Vdc, 1.25A. Mappable.
- ▶ Six (6) Auxiliary FET current-sink drivers: Fire, Evacuation, Sprinkler, Silence Alarms, Alert and Defect.
 - ▶ These outputs may be used to control Ancillary devices.
 - ▶ The Alert output may be configured to operate for each circuit individually.
- ▶ An open-collector output is available for each circuit/zone to drive auxiliary equipment: active when circuits are in 'Alarm'.
- ▶ External Buzzer extension
- ▶ LED Display:
 - ▶ Four (4) global LEDs (Fire, Defect, Sprinkler, Normal) plus up to 32 zone LEDs.
 - ▶ Residential mode smoke indicators may use up to 32 additional display LEDs

Defect Display:

- ▶ Individual 'Defect' LEDs for each circuit.
- ▶ Separate Bell, Battery 'Defect' and decoded System 'Defect' LEDs, using a 10-way bar-graph LED display

Configuration Keys:

- ▶ Three (3) buttons and 10-way bar-graph LED display for configuration set-up and circuit isolation
- ▶ Each circuit is configurable with six (6) options:
 - ▶ Brigade calling
 - ▶ Operation of Bell 1 and/or Bell 2 outputs
 - ▶ Zone: latching or non-latching
 - ▶ Residential / Apartment mode
 - ▶ Alert control output
 - ▶ Auxiliary Relay operation

Other Functions:

- ▶ AUX Isolate switch or connector for remote isolation.
- ▶ External RS485 connection for up to three (3) remote LED Mimic Displays.
- ▶ Earth Leakage monitoring
- ▶ System test functions include:
 - ▶ Battery Absent' monitoring
 - ▶ 1 hour load test of the batteries every 24 hours
 - ▶ Testing of each circuit for correct operation on 'start-up' and once every 24 hours.
- ▶ Integrated piezo alarm with selectable 'Piezo on Defect' warning.
- ▶ Network capability. (Future option)

Optional Features:

- ▶ Front or Rear Service cabinet

SGD:

- ▶ Electrically isolated interface to an alarm transmitter (SGD) providing 'Fire', 'Defect', 'Isolate' and 'Test' signals
- ▶ Clean relay contacts provide 'Fire' and 'Defect' outputs.
- ▶ Brigade 'Isolate' and 'Test' switches.
- ▶ For non-brigade connected systems, 'Buzzer on Defect' can be selected.

Hardware Configuration to NZS4512:2010/2003 and/or NZS4512:1997:

NZ Standard	Master	Extender	Comment
NZS4512:2010 NZS4512:2003	4512:2010	4512:2010	Must use Indicating devices
NZS4512:1997	4512:1997	4512:1997	May use indicating or non-indicating devices
NZS4512:2010/1997 NZS4512:2003/1997	4512:2010	4512:1997	Allows a new panel to incorporate existing connections
NZS4512:1997/2003 NZS4512:1997/2010	4512:1997	4512:2010	Allows an existing panel to be upgraded later

Product Codes

2010/2003 Code	1997 Code	Description
F16EMF	F16EMF-97	F16e 450mm Mini Front Service 8cct
F16EMR	F16EMR-97	F16e 450mm Mini Rear Service 8cct
F16ELF	F16ELF-97	F16e 600mm Cabinet Front Service 8cct
F16ELR	F16ELR-97	F16e 600mm Cabinet Rear Service 8cct
F16ETF	F16ETF-97	F16e 900mm Cabinet Front Service 8cct
F16ETR	F16ETR-97	F16e 900mm Cabinet Rear Service 8cct
F16EX	F16EX-97	F16e 8cct Extension Board
F16EZMB	F16EZMB-97	F16e Master Board
F16ED8	—	F16e 8 Way LED Display Printb'd, V1.06

NZS Code	Description
EVAC50W24V	50W, 24V Amplifier
EVAC20W24V	20W, 24V Amplifier
SGD7	SGD Board, Version 7
SGD8MD	SGD8 : 2-Wire Multidrop
PSS1	Pertronic Sounder Speaker 1W, 100V
PSSB401	Pertronic Speaker with B401 Base

PERTRONIC INDUSTRIES LTD

Head Office:

17 Eastern Hutt Rd, Wingate, Lower Hutt 5019
Telephone (04) 567-3229 Fax (04) 567-3644

www.pertronic.co.nz

sales@pertronic.co.nz

tech@pertronic.co.nz

Auckland Office:

59 Onehunga Mall, Onehunga, Auckland 1061
Telephone (09) 633-0226 Fax (09) 633-0228