

PERTRONIC INDUSTRIES LTD

FIREBITS

FIRE-NZ Edition - September 2009

Welcome to the **FIRE-NZ** Conference edition of **FIREBITS**, Pertronic Industries' quarterly newsletter. Our company is proud to be a regular supporter of this important annual event for our industry.



Colour Graphics Installed in Otahuhu Power Station Upgrade

Otahuhu B Power Station is a 380MW combined cycle gas turbine generator located in south Auckland and was originally commissioned in January 2000. An earlier Pertronic fire control panel, the F40, plus two small conventional panels initially supported the fire detection and suppression systems site wide. As part of future proofing the site - and to take advantage of recent technology improvements - the complex has undergone a major upgrade of its fire protection systems. In the main turbine hall complex, two Pertronic F120 analogue addressable control panels now support the gas flood and detection systems (flame detection, analogue addressable point detection and Vesda aspirating detection). A third F120 panel protects the administration building, with two additional F120 panels being added to cover remote parts of the site. All panels are networked together through fibre optic cable, and a pc-based Pertronic Colour Graphics system, also connected to the fibre optic fire network, is sited in the control room. Operators now have full communication and interaction with every device on the extended fire alarm system from one central location, with clear and detailed graphic displays, event logs and system summaries available at all times.



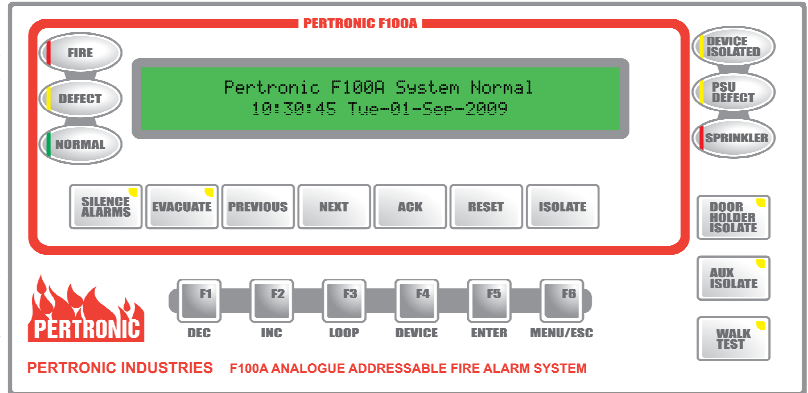
VESDA



F100A Panels Get a Facelift

The original Pertronic F100A fire control panel was developed 12 years ago and has become the most widely used analogue addressable fire panel within New Zealand. While the functions and features of the panel have been continuously enhanced over that time, the physical look of the panel has remained the same - until now.

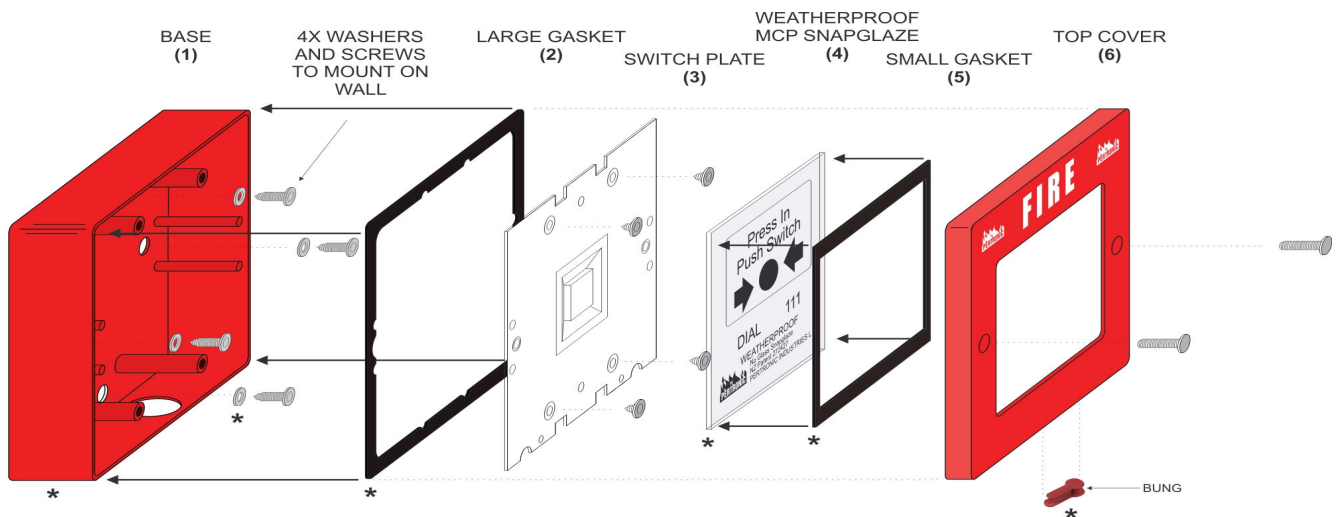
The white metal LCD display faceplate and keypad is being replaced with a mylar membrane, as introduced to the F120A fire control panel last year. The full function F100A remote LCD mimic will also change to the new mylar membrane display. This changeover in production will be phased in during the next month as existing LCD display stocks reduce, although some display boards will be kept for service replacements.



Weatherproof Manual Call Points

A weatherproof version of Pertronic manual call points will become available in the next few months, in both the analogue addressable and conventional indicating 'test key' versions. A weatherproof gasket kit has been developed for these surface-mount MCP's to achieve the IP54 rating specified in NZS4512 (clause E7) for exposed devices. The gasket kit will be factory fitted when weatherproof MCP's are ordered, and will also be available as a separate kit for installation on site, although care is needed when installing the kit to ensure the correct level of protection is achieved.

The gasket kit contains a different 'snapglaze' window from normal MCP's - it is an opaque colour with a special sealing process applied to the join between the window's push-in section and outer frame to meet the IP54 rating. If the MCP has been operated, replacing the Snapglaze push-in section inside its frame (as with a normal MCP) will not provide a weatherproof seal and the Snapglaze should be replaced with a new sealed window.



* PARTS INCLUDED IN WEATHERPROOF KIT

Product codes are: AAMCP-TWP
CPPIN-3TWP
MCPTWPKIT
CPPSGWTWP
CPKHBUNG

AA Manual Call Point - Testable Weatherproof
Conventional Ind. MCP - Testable Weatherproof
Weatherproof Kit for MCP with Test Key
Weatherproof Replacement Snapglaze Window
Spare Keyhole Bung

Date Codes on System Sensor Devices

Every System Sensor detector or module is supplied with a manufacturing date printed on its label in the form of a code, and System Sensor's product warranty is for three years from that date. Although the code is simple to decipher, there are two versions in use as a result of differences in coding practices between factories or changes in convention over time. The label also identifies the country of origin - USA, China or Europe (Trieste, Italy). The following information will help technicians correctly interpret date or batch codes on System Sensor devices.

If Y = Year, M = Month, W = Week

USA batch codes printed as	YMMW	Example - 4032 equals 2004, March, 2nd week
Europe batch codes printed as	YYWW	Example - 0432 equals 2004, 32nd week in year
China codes to August 2003	YMMW	Example - 4032 equals 2004, March, 2nd week
China codes from August 2003	YYWW	Example - 0432 equals 2004, 32nd week in year

Identifying Dirty Detectors

Our **FIREBITS** June 2009 newsletter highlighted using a Sensitivity Reader with the new System Sensor conventional photoelectric detectors (model 2151BPI) to check the detector's sensitivity, or contamination level. The Sensitivity Reader displays an obscuration percentage (e.g. 2.4 %/ft), then displays one of three words describing the detector's condition - GOOD, SERVICE, or REPLACE.

But there is another quick way of identifying whether or not 2151BPI detectors need cleaning - when a build up of dust or dirt changes the detection chamber's condition from the GOOD to the SERVICE level, the LED's stop blinking. A simple but effective use of modern technology.

So, on a conventional circuit of 2151BPI detectors, if the detector's LED's are blinking then that detector's chamber is in the GOOD category. If the LED's are not blinking (and assuming that the detector is connected to the circuit), that detector's chamber is in the SERVICE category and definitely needs cleaning.

When does a detector chamber change from GOOD to SERVICE? As a detector becomes more sensitive, or dirty, the sensitivity value (expressed as obscuration %/ft) becomes lower, not higher. A 2151BPI detector displaying a GOOD reading has an obscuration level between 1.0 %/ft to 3.18 %/ft, with a level of 1.0% being more sensitive (dirtier) than a level of 3.18%. If the obscuration level drops below 1.0 %/ft the detector has become very sensitive, the LED's stop blinking, and the Reader will display SERVICE. If the detector is not serviced it will progressively become more sensitive as the contamination increases until a nuisance alarm occurs.

A detector could become less sensitive and not work correctly (for example, as a result of a photo diode failure). In this case the obscuration level reading is greater than 3.18 %/ft, the LED's have also stopped blinking, and the message REPLACE is displayed on the Reader. The detector should be replaced immediately.

For more information on this innovative technology please contact the Pertronic technical support team.

Changing LED Cards Safely in Mimic Panels

Pertronic F100 and F120 analogue addressable panels use 12-way and 8-way LED boards connected to the RS485 comms bus from the panel for all LED mimic displays, mounted either in the panel or remotely. The same LED boards are used for remote LED mimic displays with F16E conventional panels. We have had 12-way LED boards returned to the factory with component damage which has occurred on site at the time of adding or replacing 8-way LED boards in the LED 'chain' while the RS485 connection is still live on the 12-way board. This 'hot' LED board change can damage components on the 12-way LED board. We strongly recommend removing the RS485 connection from the 12-way LED board, or depowering the fire control panel, whenever LED boards are added or replaced to remove the risk of component damage.

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Pertronic Industries Overseas

Pertronic Industries has grown steadily in Australia in recent years and supplied equipment to several prestigious projects - one of the more notable being the Brisbane City Square development. The largest commercial development Brisbane has seen in a decade and occupying a high profile river front site, the project drew a great deal of attention from the construction industry. The 40 storey tower features a three level low rise commercial and retail area, with three basement levels of parking and plant services.

Two Pertronic F120 analogue addressable fire control panels are networked together, with a combined total of 34 data loops supporting close to 3,000 devices - with spare capacity available for future expansion, if necessary. There are over 2,000 analogue addressable smoke detectors installed and 239 fire fans are supervised through a custom fire fan control panel - all AS1668 compliant. A Pertronic Network Control Unit in the building's security centre provides staff with full information on all system events throughout the entire complex, and allows them direct interaction with each of the fire control panels as needed to isolate or reset devices.



Pertronic Industries' China division, based in Shanghai, is also gaining momentum. One of the larger projects supplied with Pertronic equipment is the YueQing power station, about 320 km south of Shanghai, with travel between Shanghai and YueQing usually involving a 10 hour train, bus and taxi journey each way.

Stage one of the development comprises two 600MW coal powered generators. A special version of the Pertronic F120 panel is approved for use in China, and five of these panels are networked around the site through fibre optic cable - the panels are up to 2.5 km apart. Stage two is under way and adds two F120 panels and 1200 devices to the fire alarm network, with stages three and four due for completion over the next few years.

