PERTRONIC INDUSTRIES LTD

FIREBITS

FIRE-NZ Edition - September 2008

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.

LAN-Based Colour Graphics At Victoria University

Victoria University sprawls over several campuses around Wellington, and a major fire alarm systems upgrade across these different sites is underway. Stage one is installing full Pertronic F120A analogue addressable systems into the Laby and Cotton buildings. Other buildings will initially have their fire panels upgraded with F120A panels, but interfaced to the conventional detection systems currently installed. These conventional systems will then be progressively upgraded to full analogue addressable systems.

University management want a fully interactive PC-based Colour Graphics System to monitor and manage their fire alarm systems citywide. It is impractical to hardwire all the different sites together, so Pertronic Industries are supplying **Network Gateway Cards**, which allow each Pertronic analogue addressable panel to communicate with a centralised Pertronic Fire Graphics System via the University's Ethernet LAN. The upgrade to analogue addressable systems in the Laby and Cotton buildings provides full interaction with each individual device in those installations through the Fire Graphics System. The initial upgrade in buildings with conventional systems also provides interaction with each of those systems, by displaying zone information rather than device-specific information.

New Isolate Timer Module Controls Detector Isolations

A frequently occurring issue is the one of how to prevent smoke detectors in live theatre productions from generating an alarm when theatrical smoke is used, without having an alarm technician on standby. A similar problem is how to prevent smoke detectors from generating an alarm in commercial or industrial premises during routine building work, again without having an alarm technician on standby.

The Isolate Timer Module (ITM) has been developed for these types of situations, and is designed to fit inside a single flush box. It is connected to the data loop of a Pertronic F100A or F120A analogue addressable panel and can be programmed to Isolate a group (zone) of smoke detectors for a specific time period. A count-down timer with a LCD display shows the Isolated time period remaining. Repeated pressing of the *Isolate/Set time* button selects an Isolate period up to a maximum of eight hours, and the *Isolated* LED turns on to indicate the Isolate function is active. When there is five minutes remaining on the timer the *Isolated* LED flashes and a buzzer operates to alert the user that the Isolate period is about to end. The Isolate period can also be canceled manually, by pressing the *De-Isolate/Clear* button.

If an Isolated smoke detector goes into an alarm state during the Isolate period, the fire panel blocks the alarm signal and switches on the ITM's *Alarm* LED as a warning that de-isolating detectors at that time would generate an alarm at the fire panel. As a precaution, when the Isolate function is cleared at the ITM (either manually or through the timer reaching zero) a *Reset* command is immediately sent to all Isolated detectors to reset them back to Normal before the Isolation is actually removed within the fire panel's software. It should be noted, however, that if a smoke detector is still active at this point, the system will go into Alarm. If there is any doubt about a detector's state, the Isolate period can always be extended before the timer reaches zero.

A terminal is provided for connecting the ITM to an externally powered strobe for additional indication of an active Isolation. An 'external access lock' terminal is also provided, to allow the ITM operation to be locked by an external key switch and prevent incorrect use of the module.

The ITM can be retrofitted to existing analogue addressable installations, although an upgrade of the F100A or F120A panel's software may be necessary. Earlier F100A panels may also require a hardware upgrade.

Having a controlled detector Isolation function available offers real benefits in the management of a building's fire alarm system through the prevention of false alarms and by guarding against extended, uncontrolled (and potentially dangerous) system isolations. Product ordering code is ITM.

Smoke Pens Available For Testing/Commissioning

Pertronic Industries now have Smoke Pens available. The Smoke Pen holds a 'Smoke Stick,' or wick, inside the pen's body in the same manner (and size) as a clutch pencil. Once the Smoke Stick is lit it gives off a steady stream of smoke - a convenient, no-mess means of testing air flows in ventilation systems and ducting, even checking for drafts or air leakage. The Smoke Pen also provides an alternative to 'canned smoke' for testing smoke detectors (Ionisation detectors are often difficult to operate with canned smoke).

Smoke Pens are supplied with six Smoke Sticks. Each Smoke Stick provides approximately 30 minutes of continuous smoke, or 60 smoke tests of 30 seconds each. Refill packs of six Smoke Sticks are also available. The smoke Sticks are environmentally friendly and do not contain any hazardous or corrosive substances.

Product codes - Smoke Pen with six Smoke Sticks - code SMOKEPEN
- Smoke Stick refill pack - code SMOKEPR

David Percy Receives Bayer Innovators Award

The National Business Review introduced the Innovators Awards in 2007 to recognise some of this country's top talent, with Bayer NZ as the principal sponsor. The 2008 Awards were held recently and, to quote from the NBR web site, "Bayer New Zealand and the National Business Review have worked together to identify 60 of the country's top achievers. Some are household names, others are little known outside their specialist fields. What they all have in common is the fact they're making a significant contribution to New Zealand and becoming sources of inspiration for national and international achievement."

The NBR Bayer Innovators Awards cover six categories: science; manufacturing; design and engineering; agriculture and environment; research and development; information technology and communications.

David Percy and Pertronic Industries were one of the ten finalists selected in the manufacturing category.

Then, at the Awards ceremony in August, David and Pertronic were announced as the winner of that category - a real honour for David and the company.

The Judges' notes referred to David's persistence and commitment to R&D, the development of an export arm to the business and the innovative software incorporated into many of the company's products.

David is pictured receiving his award from Dr. Diana Twigden (Smales Farm Technology Office Park and Awards ceremony MC), and Hans-Dieter Hausner (Bayer senior company representative, Australia-New Zealand-Oceania).

David said afterwards that "while this award really is great recognition for everyone in our company, it is an award I feel we can equally share with the entire fire protection community. It is through responding to the fire alarm design and product needs of this industry that our opportunities for innovative design and development are created."

Four Multi-Criteria Detectors In System Sensor Range

Multi-criteria detectors are globally recognised as offering improved performance in accurate fire detection and false alarm reduction. System Sensor continue to refine their multi-criteria detection technology and now offer four different models in their range - one conventional and three analogue addressable - with these three models having a range of programmable options on Pertronic F100A and F120A intelligent panels.

- **Series 300** model 2351TEM is a conventional photo-thermal detector which can be set to one of three sensitivity settings, or alarm thresholds, depending on the application and environment.
- **Acclimate** detectors have been System Sensor's main multi-criteria model for a number of years, using photo-thermal sensors and building up an impressive track record in false alarm reduction and accurate fire detection (refer to the article on page 4 for an example of the intelligent programming options).
- **COPTIR** was released in New Zealand in 2006 and offers the ultimate combination of fast, reliable detection and high false alarm immunity, using CO, Photoelectric, Thermal and Infra Red sensors.
- **PTIR** is the latest release from System Sensor, combining Photoelectric, Thermal and Infra Red sensors. Extensive testing proved that the combination of these three sensors accurately detect a broad range of fires while rejecting a large number of false alarm conditions - outperforming other multi-sensor detectors (except COPTIR). PTIR's ability to detect fast flaming fires also provides an alternative to Ionisation detectors. PTIR offers performance improvements over the well-proven Acclimate, at a lower price than COPTIR, owing to the absence of the relatively expensive CO sensor.

PERTRONIC INDUSTRIES LTD
17 Eastern Hutt Rd, Wingate, Wellington. PO Box 35-063, Nae Nae. Phone (04) 5673229, Fax (04) 5673644.
www.pertronic.co.nz email: sales@pertronic.co.nz
AUCKLAND OFFICE:
119 Lansford Crescent, Avondale. PO Box 15-867, New Lynn. Phone (09) 820 8228 , Fax (09) 820 8284

Nine Pertronic Panels Networked At Ilam Village

Ilam Village is the newest student accommodation complex for Canterbury University. There are nine individual buildings, each protected with a Pertronic F100A analogue addressable system. All nine F100A fire control panels are networked together, with a 'Network Control Unit,' or NCU, also connected to the network and located in the management office. The NCU allows management to directly interrogate or supervise each of the F100A panels via the network; to view alarm events, to isolate or reset devices, or to operate or silence the evacuation system in each block as necessary.

A Type 5 fire alarm system was specified for each building. A smoke detector activation in a bedroom generates a local alarm only in that room, while a heat detector or common area smoke detector activation generates a global evacuation for that building. Pertronic Apartment Modules were installed to supervise the evacuation system into each area. These modules (in conjunction with the software in Pertronic analogue addressable panels) provide the ability to broadcast either a local alarm tone or AS2220 evac tone (with voice message) into each area as needed, through one cost-effective common evacuation system. There is no need to install two separate evacuation systems (i.e. one for local alarm, the other for global evacuation).

System Sensor Acclimate multi-criteria smoke detectors were used throughout. Acclimate detectors support a photoelectric sensor and a thermal sensor, which work together and use on-board algorithms to more accurately detect real fire conditions and suppress nuisance alarms. The "virtual detector" software in Pertronic analogue addressable panels can monitor the thermal sensor on its own, separately from the multi-criteria smoke detector. This means that the one detector head can provide the 'local' smoke detector and 'global' heat detector components of a Type 5 system, with the different evacuation responses required for a local or global alarm programmed separately as if there were two physical detectors involved.