PERTRONIC INDUSTRIES LTD

FIREBITS

December 2006

Extensive Pertronic Network in Queensgate Mall

A major expansion has occurred at Lower Hutt's Queensgate Mall, with the additional retail space and cinema complex enlarging the mall to at least eight times its original size. Seven Pertronic F120 analogue addressable fire alarm control panels are networked throughout the mall, with one of these panels dedicated to the cinemas and supervising a progressive evacuation system. The fire alarm network also supports one Network Control Unit (allowing individual control of panels from one location), two Network Display Units (which display all messages from all panels on the network for mall management), a pager interface (for security staff), plus LED mimics at two separate Fire Service attendance points. Seven sets of flashing "traffic" lights at car park entrances are also controlled by the fire alarm network as part of the evacuation system.

The smoke detectors operate site wide on a "double knock" system. A single smoke detector activating starts a three minute timer to allow staff time to investigate the cause of the alarm before the evacuation system operates. However, a second smoke detector activating anywhere on the seven panel fire alarm network within that three minute period will immediately put the system into evacuation and call the Fire Service. Acclimate multi-criteria smoke detectors have been installed above all café and kiosk locations, and are successfully suppressing nuisance alarms.

PERTRONIC   SYSTEM SENSOR®   VESDA   FIRETRONIX

Seasons Greetings !

Once again it seems like the year has gone by in a flash, as we have continued to benefit from a construction industry still strong throughout the country in spite of mixed signals on the economic front. From all of us at Pertronic Industries, thank you for your ongoing support during the year. It has again been a pleasure to work with the people, the companies and the organisations that make up the fire protection industry, and we look forward to furthering these relationships in 2007. Please accept our warmest wishes for you and your families to have an enjoyable and safe Christmas and New Year.

Christmas - New Year Business Hours

Pertronic Industries will close for the Christmas break on Friday 22nd December and reopen on Monday 8th January 2007, although some warehouse operations will resume with reduced staffing on Wednesday 3rd January. A limited emergency supply service will also be available between 22nd December and 3rd January, although fire alarm servicing companies are encouraged to order stocks of spare parts in advance.

NZS4512:2003 - Installation Reminders

Sprinkler DBA's

When retrofitting a 2003 compliant fire control panel into any installation completed under an earlier Standard - and connected to a sprinkler system - it is important to modify the interface from the sprinkler DBA to the 2003 compliant fire panel. Under the older Standard, the DBA interface to the fire panel was a simple switch-type open circuit output. This type of output will only generate a defect on any 2003 compliant panel, and not operate any programmed outputs (eg the evacuation system). A "DBA Interface Module" needs to be fitted into the older DBA's to correctly put a 2003 compliant panel into an alarm state and operate the required outputs. The Pertronic SGDDBA Interface Module (code SGDAIF) was designed for this purpose and is compatible with all makes of sprinkler DBA's installed prior to the 2003 Standard. Additionally, NZS4512:2003 compliant sprinkler DBA's supplied by Pertronic Industries already have this changed circuitry in place and require no modification at installation time. Other makes of new DBA's may not have been modified prior to supply, and a DBA Interface Module will be needed at installation time.

Conventional Heat Detectors

Under NZS4512:1997, the most commonly used conventional heat detectors were simple switch-type units, with no electronic components. They were often installed in areas where moisture may occasionally be present (eg under balconies), and were reasonably reliable, until the effects of corrosion set in. The conventional indicating heat detectors required under NZS4512:2003 contain an electronic circuit board which is affected by moisture, as any electronic devices are. The presence of moisture around the circuitry may cause the detector to go into defect or - worse still - into alarm. When installing conventional indicating heat detectors into areas where moisture may form (eg balconies, bathrooms), it is important to use a fully encapsulated unit.

Remote Indication for Concealed Detectors

Section 405.4 of NZS4512:2003 requires that detectors in concealed spaces must have remote indication of their operation if those detectors form part of a zone with other (visible) devices. The Pertronic Remote LED Indicator was developed for this purpose (refer FIREBITS May 2005), and work with System Sensor analogue addressable and conventional devices, as well as with Pertronic conventional indicating heat detectors. However, a special version of the indicating heat detector with a remote output terminal (as pictured), must be used.
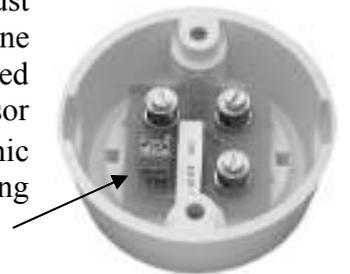
Product codes - IHDBR - Ind. heat detector blue c/w remote o/p
            - IHDYR - Ind. heat detector yellow c/w remote o/p

Model 6500 Beam Detector From System Sensor

Beam detectors are becoming a more commonly chosen means of smoke detection, particularly in larger warehouses and mega stores, where gaining access to point-type detectors for servicing and maintenance purposes can be difficult. The latest beam detector from System Sensor is the 6500 model, available in both analogue addressable and conventional versions. The 6500 Beam is a combined transmitter/receiver unit coupled with a high efficiency reflector, with an operating range of 5 to 100 metres.

The reflector supplied with the beam detector covers distances from 5 to 70 metres, while an additional Long Range Reflector Kit is required for distances between 70 and 100 metres. Alignment of the detector is simplified with the aid of a "gunsight" targeting device. Fine tuning is then completed using a numerical signal strength indicator. The detector's sensitivity can be set to between 25% and 50% obscuration, providing application flexibility to suit the environment, and depending on the distance being covered by the beam.

There are four fixed value sensitivities - or alarm thresholds - plus two variable thresholds that automatically compensate for changes in the environment (which could otherwise result in nuisance alarms), while remaining within a known sensitivity range. The detector also incorporates automatic drift compensation, adjusting its detection thresholds in line with any long term signal reduction of the beam caused by a contaminated optical surface. The detector can be adjusted up to 10° vertically and horizontally for alignment, while a multi-mount accessory allows for even greater adjustment. A surface mount kit is available to give greater flexibility on cable entry to the unit, and a remote test switch can also be installed to provide remote test and reset functions - complete with alarm and defect LED's.

Product codes are:

	6500S	Analogue Add. Smoke Beam Detector with 5-70m Reflector
	BEAM6500RS	Conventional Smoke Beam Detector with 5-70m Reflector
	BEAMLRK	Beam Long Range Reflector Kit (70-100m)
	BEAMMMK	Beam Multi Mount Kit
	BEAMSMK	Beam Surface Mount Kit
	6500RTS-KEY	Remote Beam Test Station

Please refer to the Pertronic web site for full product details.

F4 & F1 Panels In New Cabinets

Pertronic F4 and F1 conventional fire alarm panels have been manufactured in their larger sized cabinets (350h x 245w) for some months now. The 20 watt 12 volt amplifier used in these larger cabinets has a different mounting bracket than earlier amplifiers. When ordering the 12 Volt amplifier on its own, customers are asked to clarify which size cabinet they are placing the amplifier in, to avoid confusion. Additionally, the auxiliary relay board in the larger F4 cabinet is also a different design from its predecessor (for easier installation), and clarification is also requested on the cabinet size when ordering these boards.

Amplifier Tones Available On Pertronic Web Site

A recent addition to the Pertronic web site is the full range of sounds - or tones - that can be selected on our 50 watt 24 volt amplifiers. These amplifiers can be programmed to provide three different sound outputs for any installation. The first sound output is defaulted to the AS2220 Evac tone with voice message; the second sound output is defaulted to the AS2220 Alert tone with voice message; the third sound output is used, for example, as a local alarm tone for apartments in a Type 5 installation. Each of these three sound outputs can be changed to any of the 42 tones held in the amplifier, to meet the differing requirements some sites have. The tone download feature on the Pertronic web site allows installers (or engineers) to sample which custom tone they require at each sound output level. Go to www.pertronic.co.nz - from the menu on the left, select "products/alerting devices/amplifiers" and the range of tones is listed, for opening or saving.

Pertronic F120 System In Riccarton Mall

Riccarton Mall in Christchurch is another Westfield complex protected by a Pertronic fire alarm system - in this case a F120 analogue addressable control panel, supporting six data loops, 16 evacuation amplifiers, and around 500 smoke detectors. The F120 panel was installed approximately two years ago when a cinema complex was added to the mall, and has been recently expanded to cover the entire complex. Seven LCD "mini mimic" displays installed throughout the mall provide management with full system information. Any smoke detector activation starts a five minute delay timer, allowing management time to respond to the event before the evacuation system is triggered. The cinema complex has a separate evacuation system controlled by the F120 panel, with a "double knock" system for smoke detectors used in that area. One smoke detector activation alerts both cinema and mall management, while a second detector activation starts a separate five minute delay timer which, if left to run, will evacuate the cinema of origin plus the foyer.

F16 Panel Put Through New Test

Along with the Electro-static tests, EMF tests and RF tests that Pertronic panels are put through, we can add another one to the list - the Airborne Vehicle Impact Test! The photos below were taken after a Mitsubishi EVO 7 (apparently a borrowed one!) was airborne when it hit the side of the building very early one morning recently. The concrete slab and reinforcing under the window disintegrated from the impact -

but the Pertronic F16 fire alarm system remained in a normal condition throughout. The service agent did not know about the damage until the builder rang later that morning to suggest they might like to move the panel…

(Our thanks to FFP Canterbury for the photos and information)