



# Firebits

## F220 Enters Full-Scale Production

Following its successful launch at the Fire Australia trade show, our F220 Fire Indicating Panel is now in full production.

The F220 sets a new benchmark for automatic fire detection systems. It complies with Australian Standard AS 7240.2 and is ActivFire listed (afp – 3054).



The large-text colour display automatically identifies the exact location of an alarm.

But there is a lot more to our new panel than mere compliance. The F220 automatically displays the source of an alarm in large, easily readable text on its 7-inch (180 mm) 800 x 480 pixel colour display, in addition to the zone information required for AS 7240.2 compliance. Plain-English text descriptors make it easy to identify fire alarm device locations. Red status bars highlight the alarm condition. The large display and big keyboard make it easy to find and read detailed information such as complete lists of fire alarm system events.

The F220 provides comprehensive easy-to-use information for all users including fire brigade personnel, building managers, and service technicians. Unique coloured display screens identify specific items such as faults, device

disablements, pre-alarm conditions, walk test, supervisory and system information. There are nine separate event logs to ensure that critical information is retained even after large numbers of minor events.

Powerful new configuration tools simplify installation and support. Configuration files can be transferred in less than 30 seconds between a USB memory stick and the F220. Our user-friendly Pertronic FireUtils™ application (p. 2) makes it easy to create or modify configuration files on a PC or laptop.

The F220 is available in sizes from 800mm high to 1865 mm high, with up to 20 analogue addressable loop circuits capable of monitoring and controlling up to 3,180 sensors and 1,980 input / output modules or manual call points.



Inside an F220 showing fan controls (left) and loop driver boards.



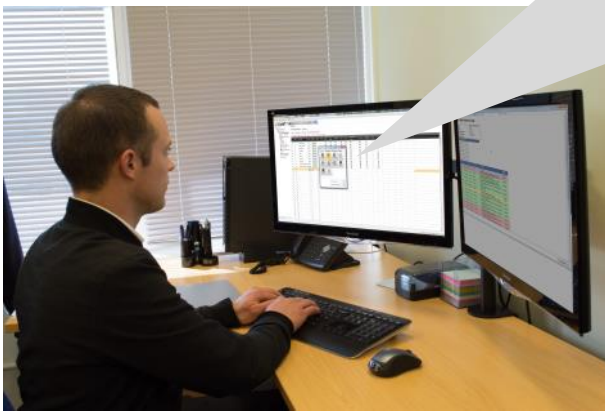
A 40U 14-loop F220 Fire Indicating Panel for a Queensland project. Below the keyboard & display, this large F220 features 24 fan control modules and a document tray. Pertronic fire alarm panels are available with white or grey front plates.

## Pertronic FireUtils™ Slashes Installation Time and Improves Quality

Pertronic FireUtils™ is a powerful new tool that makes it easy to get the best out of Pertronic analogue addressable fire indicating panels.

FireUtils™ speeds up the process of configuring a new fire indicating panel. And because FireUtils™ simplifies “getting it right first time”, and checking the job once it’s done, it is quicker to commission a panel that has been configured with FireUtils™.

To configure an analogue addressable loop, the user needs to identify each detector and input/output module on the loop. FireUtils™ allows users to add multiple devices in one quick operation. After that, to unleash the full potential of analogue addressable technology, you need to type in a sensible plain-text descriptor for each device. FireUtils™ makes this easier than sending a text-message.



Once the loops are configured, the intuitive user interface makes short work of setting up and checking zones, timers, groups, AAF facilities, fan controls, and cause-and-effect logic.

FireUtils™ is designed for laptops, personal computers and other devices running Windows 7 and above. The software is fully compatible with the F220. It also works with Pertronic F120A panels with firmware version 3.04 and above.

Pertronic FireUtils™ can be downloaded from the Pertronic Industries website. Contact your nearest branch office (details on p. 4) for free access to Pertronic FireUtils™.

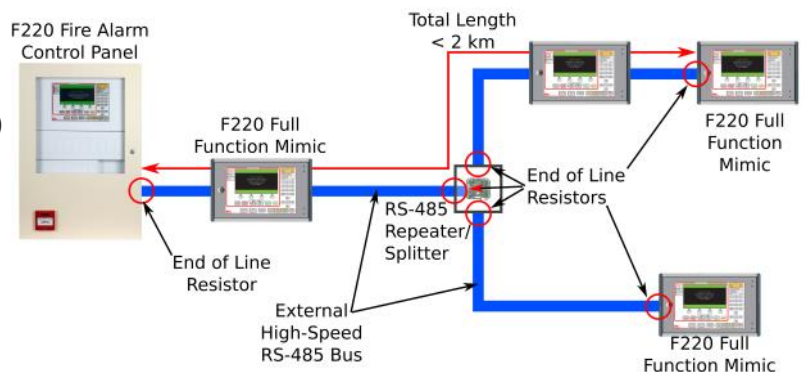
## How to Build a Trouble-Free RS-485 Bus for Pertronic Fire Alarm Systems

The F220 has been designed to support the trend toward larger, more complex fire alarm systems. These systems collect and process a lot of information, which is why the **F220** has a 115.2 kb/s **External High-Speed RS-485 Bus**, in addition to the 9600 bit per second **Low-Speed RS-485 Bus**.

Building a reliable RS-485 system requires good installation practice. The data circuit must be laid out as a point-to-point transmission line. If branches or spurs are needed, it is vital to use the **Pertronic RS-485 Repeater/Splitter**, which can create up to five spurs. Using the splitter eliminates communication errors on RS-485 systems with multiple spurs. The **RS-485 Repeater/Splitter** works equally well on low-speed and high-speed RS-485 buses.

Each RS-485 bus segment must be no more than one kilometre in length. Every bus segment must be terminated at each end with an end-of-line resistor: 90 to 100 ohms for typical fire-rated twisted-pair cable. These resistors prevent signal reflections that would cause communication errors. Only one **RS-485 Repeater/Splitter** can be used; the total cable length must not exceed 2 km from the panel to the far end.

When using the RS-485 power circuit to supply power to peripherals such as mimics, it is vital to allow for voltage drop. For example, the **F220 Full Function Mimic** needs at least 15 Volts. If the mimic is to operate normally when the panel battery falls below 19 Volts, the power circuit voltage drop should be no more than 3.5 Volts. Mimics on some systems may need auxiliary power supplies.





## New Pertronic Power Supplies Comply with AS 7240.4

**Pertronic** mains-operated 24 VDC (nominal) **AS 7240 Power Supplies** feature automatic battery backup, with the ability to change the batteries without interrupting power supply to the load.

The battery connection is protected against damage from short or open circuits. Shorting the battery cables while they are disconnected from the batteries will not damage the power supply or interrupt its operation.

Each supply has a **Timed Power Relay** that can be wired to connect or disconnect specific loads during an extended mains outage. This relay is activated thirty seconds after mains power is lost, and deactivated after mains power is restored. For example, the **Timed Power Relay** contacts can be wired in series with a door holder circuit, so that the door holders are released during an extended power outage. This would reduce the system's power demand and extend its operating time on battery power.

Automatic fault monitoring includes a battery capacity check, a battery presence test, and real-time monitoring for a range of fault conditions. The **Fault** LED lights up if the system has a fault. A normally energised fault relay provides a voltage-free changeover contact for signalling a fault condition to external equipment.

The fault monitoring and charging systems comply with AS 7240.4.



AS 7240 Power Supplies: Maximum Current Ratings			
Product Codey	Load	Charger	Total
AUX24/5PSU-7240	3 A	2.1 A	5.1 A
AUX24/11PSU-7240	9 A	2.1 A	11.1 A

## Fire Door Holders

We have introduced a new range of door holders and accessories. These economical, solidly-built electromagnets run off a 24 Volt (nominal) DC supply and exert 40 kilogrammes of holding force. Interfaced with a Pertronic fire alarm system, door holders can be programmed to automatically release fire doors when the fire alarm activates. Each door holder has a manual local release switch.

The range includes two wall-mount holders, and two convertible wall- or floor-mount door-holders.

For situations where the door-holder may be subject to hard knocks, we recommend the Slim Wall Mount unit with a Floor Mounting Bracket FDHFLBKT .



The door-holder range (clockwise from top): FDHW/F175-24V, FDHWM38-24V, FDHWM65- 24V, FDHFLBKT.

The FDHW/F325-24V is similar to the FDHW/F175-24V, but has a longer spacing tube.

Product	Description
FDHWM38-24V	Fire Door Holder, Wall Mount, Slim 38mm, 24VDC, 66mA, 40kgf
FDHWM65- 24V	Fire Door Holder, Wall Mount, Extended 65mm, 24VDC, 66mA, 40kgf
FDHW/F175-24V	Fire Door Holder, Wall/Floor mount, 150/175mm, 24VDC, 66mA, 40kgf
FDHW/F325-24V	Fire Door Holder, Wall/Floor mount, 300/325mm, 24VDC, 66mA, 40kgf
FDHFLBKT	Floor Mounting Bracket for FDHWM38-24V
FDHBB	Back Box wall mounting block for FDHWM38-24V

## A Pertronic Fire System Protects Sydney's Award-Winning Village Quays Development

Village Quays is a high density residential development in the Sydney suburb of Rhodes. Located just over a hundred metres from the Parramatta River waterfront, the complex contains a total of 750 apartments in five buildings clustered around an exclusive landscaped park. The buildings and park are built on top of a shared two-level car-park.

This exclusive urban community is protected by a network of five Pertronic F120A analogue addressable fire indicating panels monitoring sensors throughout the complex. During an alarm incident, the system accurately identifies exactly which of the 900 smoke sensors and 200 heat sensors are detecting alarm conditions, because all sensors are analogue addressable types.

In the event of a fire alarm incident the fire alarm system triggers an evacuation system which is programmed to automatically direct occupants to the most appropriate evacuation routes, based on the source of the alarm. The fire alarm system also drives thirty smoke management fan controls which maintain air quality along key evacuation routes.

Village Quays was developed by Sydney-based Billbergia Pty Limited. With a total footprint of 15,000 square metres, it is a large complex with a big, complicated fire alarm and evacuation system. "It was installed by some very smart electricians," said Chris Kelly, Construction Manager at Billbergia. "It was commissioned in stages. They made it seem easy. We had no problems."

Village Quays won the Residential & Mixed-Use (\$100 m - \$150 m) category at the 2015 Master Builders Association NSW Excellence in Construction Awards.



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