



The 6500 Addressable Solution



Contents

4	True System Management
8	6500 Fire Alarm Control Panel
16	Products You Can Trust
18	Graphics System
22	Loop Repeater
24	6000PLUS Protocol
34	6000PLUS Sensor Range
42	Addressable Call Points
46	Addressable Interfaces
50	Local Control Module
54	Damper Control Module
60	6000 Sounder Range
64	Visual Alarm Devices
68	Power Supply

True System Management

The Protec 6500 Fire Alarm System is designed to provide a user-friendly and informative experience. Its touchscreen graphical display simplifies operation, while the network ensures high-speed data transfer and fault tolerance. With LED indicators for quick status updates and intuitive commissioning software, this system is tailored to meet specific needs and streamline the entire process.

The modular design and robust cause-and-effect programming of the 6500 system are some of its key strengths. This combination enables users to tailor the system precisely to their needs, regardless of the project's complexity. It's a versatile solution that adapts effortlessly to the unique requirements of each project.

Whether dealing with a small single-panel system or a vast multi-panel network, the 6500 system is highly scalable and can be customised to suit any application. Each panel provides one, two, or four high-capacity digital addressable data loops that accommodate up to 200 addresses each. This translates to a staggering 800 addressable devices per panel and an impressive network-wide total of 128,000 devices. This scalability makes it suitable for installations of any size, from small offices to sprawling industrial complexes.

With a wide array of options, the 6500 offers you unparalleled adaptability. Whether you need real-time reports with thermal printers, seamless integration with rack mount enclosures, or user-friendly Graphic User Interfaces for effortless operation, we've got you covered. Our tailored approach to fire detection and alarm ensures that the 6500 meets the needs of every life safety scenario.



6500 Fire Alarm System

The Algo-Tec™ 6500 is a state-of-the-art system with highly interactive detection loops powered by the 6000PLUS protocol. With the capability to connect up to 200 devices to each high-capacity loop via a single 2-core cable, the system can be further expanded to cover a maximum of 800 devices across four loops per panel. This ensures that the system can easily be tailored to your exact requirements.

The 6000PLUS protocol unifies a range of addressable devices into one comprehensive system, providing a cutting-edge solution to your detection needs. This includes an extensive array of advanced products such as loop-powered multi-criteria sensors, aspirating detectors, alarm sounders, Visual Alarm Devices (VADs), interfaces, and Manual Call Points (MCPs), all designed to provide maximum efficiency and safety.

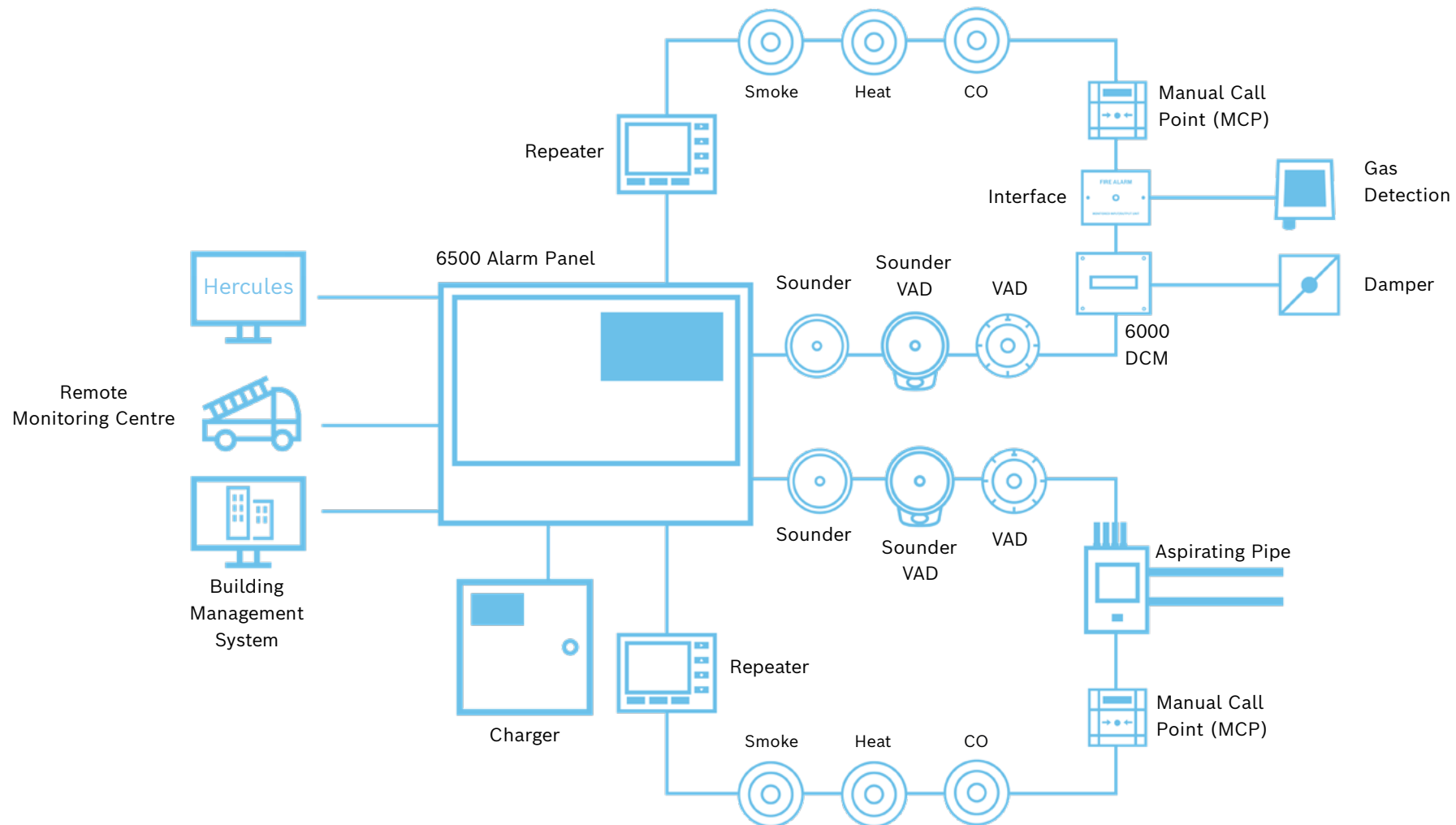


Did you know?

The 6500 system can provide up to 128,000 digital addresses

A Fully Integrated System

The Algo-Tec™ 6500 utilises advanced interactive detection loops powered by the 6000PLUS protocol. Each 6000PLUS loop, connected via a 2-core cable, can support up to 200 devices. A single 6500 panel can accommodate up to four of these high-capacity loops, providing exceptional flexibility to meet your specific needs. The 6500 seamlessly integrates with various peripheral devices in addition to its addressable loops, enhancing its capabilities and ensuring a fully compliant, innovative fire detection and alarm system.



What Makes a 6500 System?

The 6000PLUS protocol unifies a range of addressable and peripheral devices into one comprehensive system, providing a cutting-edge solution to your fire protection needs. This includes an extensive array of advanced products such as loop-powered multi-criteria sensors, aspirating detectors, alarm sounders, VADs, interfaces, and MCPs, all designed to provide maximum efficiency and safety.



6500 Control Panel

The Protec 6500 is an interactive digital addressable fire detection and alarm control panel with high specifications and economical features.



Interfaces/Control Modules

A wide range of fire alarm interfaces and control modules allows third-party system integration with a 6500 fire alarm system.



Sounders and VAD's

Raise the alarm to evacuate a building quickly and efficiently with the 6000 sounder and VAD range.



Loop Repeater

Integrate your fire alarm system remotely with the 6000 Loop Repeater and 6000PLUS Repeater.



Power Supply

Fully monitored EN 54-4 approved remote power supply units to be utilised with our life safety systems.



Graphics System

A front-end graphics system enables complete fire alarm system control and integration from a remote desktop PC.



Sensors

The 6000PLUS sensor range combines detection and alarm technologies into one addressable sensor head.



Manual Call Points

Sound the alarm and instigate an evacuation with the push of a button with our range of manual call points.

- Power ●
- Alarms Disabled ●
- Power Fault ●
- Outputs Delayed ●
- Alarm Routing Operated ●
- Alarm Routing Disabled ●
- Alarm Routing Fault ●
- Alarm Routing Confirmed ●
- System Fault ●
- Alarm Fault ●
- Aux Supply Fault ●
- Network Fault ●
- Fire Protection Operated ●
- Fire Protection Disabled ●
- Fire Protection Fault ●
- Fire Protection Confirmed ●



Algo-tec™ 6500
EN54 - 2 & 4



6500 Fire Alarm Control Panel

The 6500 system offers tailor-made engineered solutions for all applications, from single-panel systems to large multi-panel networks

You're in Safe Hands

The Protec Algo-Tec™ 6500 is a cutting-edge fire detection and alarm system that delivers state-of-the-art performance, adaptability, and scalability. Boasting a vast range of customisation possibilities, the innovative fire alarm system is crafted to meet the unique demands of building owners, making it the go-to solution for fire detection.

A vibrant full-colour 7" touchscreen graphical display ensures operation is a breeze. With its intuitive select and touch capabilities, engineers can effortlessly interrogate the system, while end-users can operate it with ease.

During an alarm or fault condition, the graphical touch screen becomes invaluable, showing critical information such as the device type, address, loop text, and zone number - all of which can be easily configured during commissioning to suit your specific needs.

For simple identification of real-time events, the panel comes equipped with zonal fire LED indicators, along with system LED indicators for mandatory requirements and essential information.

To streamline the commissioning process, we offer Windows-based text software. The program allows for device and location text to be prepared in advance and loaded onto the panel on the day of installation. This simple yet efficient process allows for any last-minute adjustments, saving valuable time on site.

The minimalist, storm grey contemporary appearance seamlessly blends into modern architecture. Combining a moulded polycarbonate hinged door with a lightweight metal enclosure to provide durability without compromising its elegant looks. Whether surface-mounted or recessed, the system fits perfectly into any building environment.

Did you know?

One 6500 panel can accommodate up to 800 devices across four detection loops

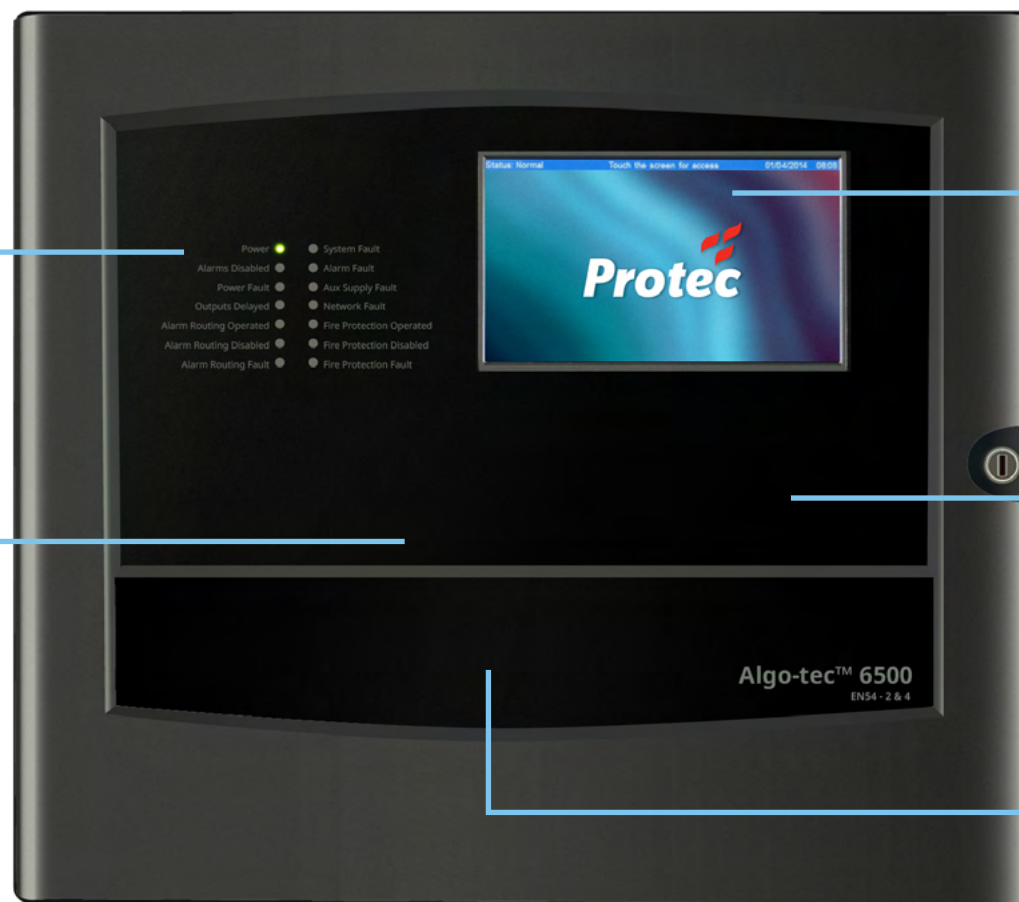
Key Features

LED Indicator Panel

Easy to identify system status LED's negating the need to interrogate the fire alarm control panel.

Multiple Variations

Available in one two and four loop variants with the possibility to expand to an eight-loop alternative when specified in a larger enclosure.



LCD Touch Screen

Accessing information using the large, versatile touch-screen interface with tamper proof security features is easy.

Communication Ports

For connection to a colour graphics system, pager system or BMS interfaces.

Optional Printer

The optional integral printer provides on-demand real time data of fire and fault conditions, including time and date of events, along with the device address number and location text.

Key Figures

200

max addresses per loop

1,000mA

loop load

4,000

input groups

255

output groups

128,000*

devices per network

160

panels per network

*Dependant on site complexity.

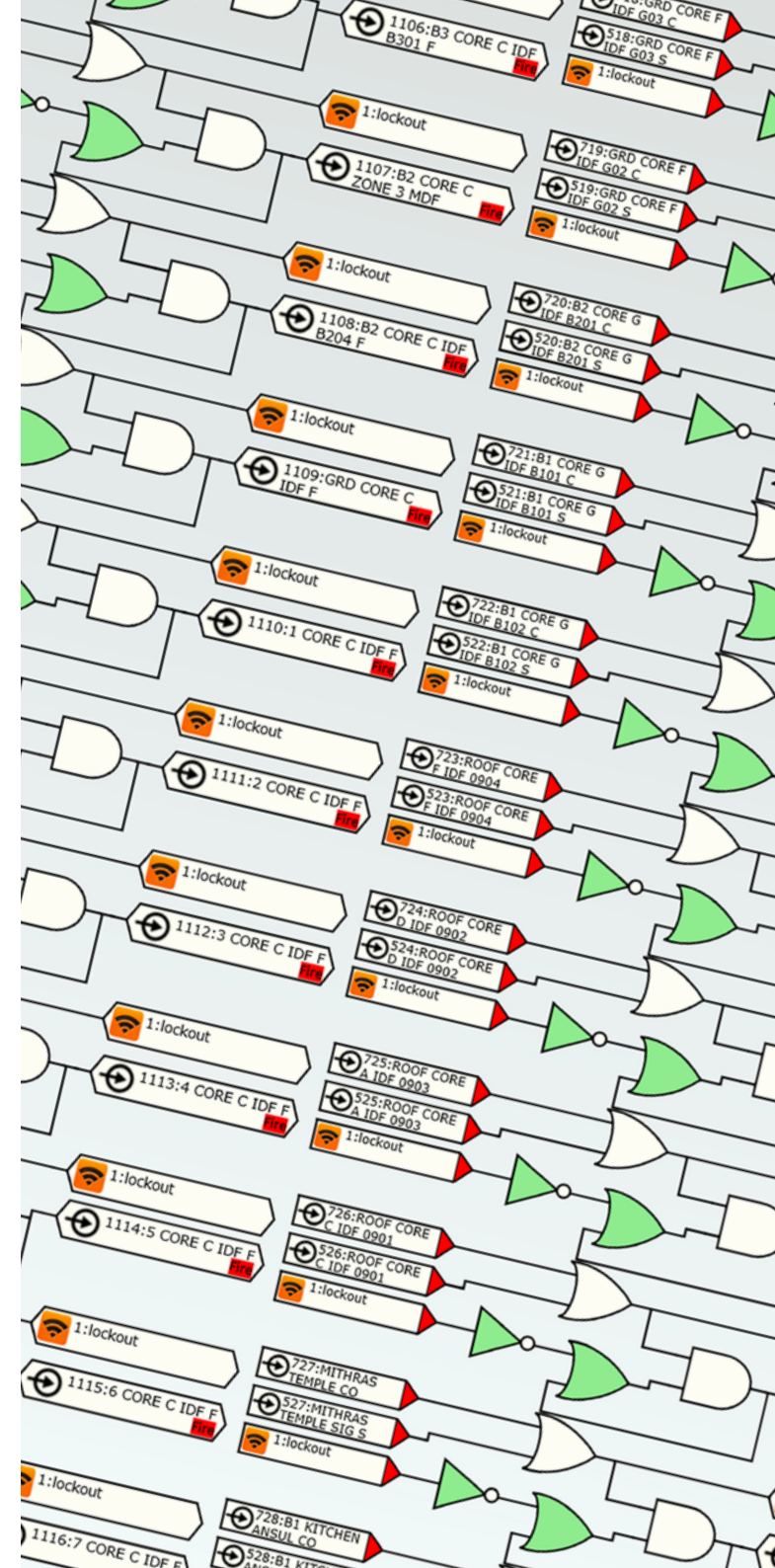
Boolean Logic

Boolean logic is how some computers and electronics think and make decisions based on true or false statements. Think of it like a light switch that can be either ON (True represented as a 1) or OFF (False represented as a 0).

Boolean logic, despite its technical-sounding name, is a straightforward method of determining the output of a situation. It involves using true-and-false statements combined with certain words (known as logic gates) such as AND, OR, and NOT.

When applied outside its usual context, such as fire alarm systems, Boolean logic transforms the 6500 panel into a powerhouse of control. This enhancement turns the panel into a programmable logic controller (PLC) capable of managing and integrating with various other systems, not limited to fire safety. By leveraging Boolean logic, the 6500 can handle complex control tasks, such as switching Automatic Opening Vents (AOV's) or controlling dampers making it a versatile tool in building management and industrial automation.

Programming these panels has been made incredibly user-friendly with our Windows-based software. This software utilises a drag-and-drop interface for logic programming, allowing users to easily place logic gates and define their inputs and outputs. This simplicity in programming means that even those without extensive technical expertise can configure the system to meet their specific needs.



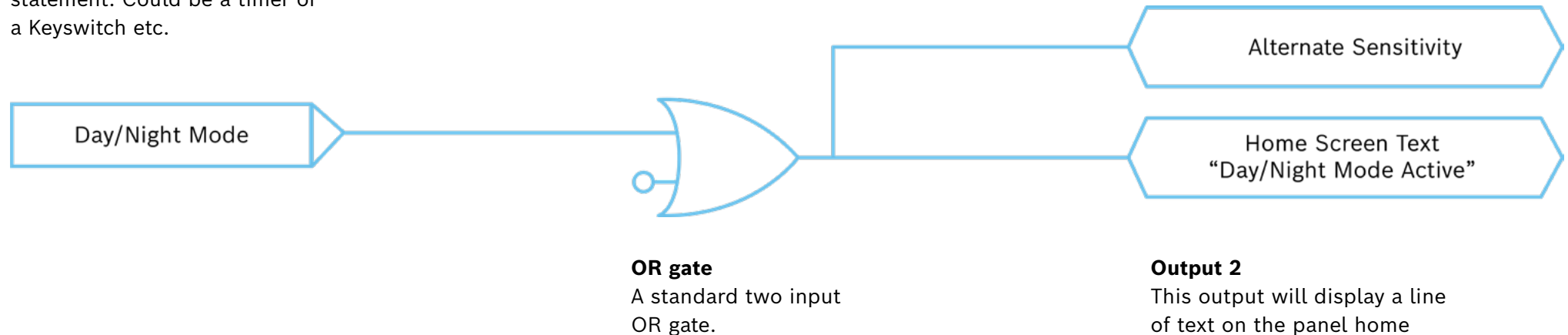
Logic Example

A common example of using logic would be to implement a day/night mode on a 6500 system. A day/night mode can be used to alter the sensitivity or cause and effects of the fire alarm.

In this example, we use a simple OR gate connected to an input and an output to control a sensitivity change in our 6000PLUS Optical Heat Sensors.

Input

This triggers the logic statement. Could be a timer or a Keyswitch etc.



OR gate

A standard two input OR gate.

Did you know?

The Logic System implemented in the 6500 Control panel allows for complete, granular programming of cause and effect

Output 1

This output activates an alternate sensitivity group. Changing the settings on devices in that group.

Output 2

This output will display a line of text on the panel home screen.

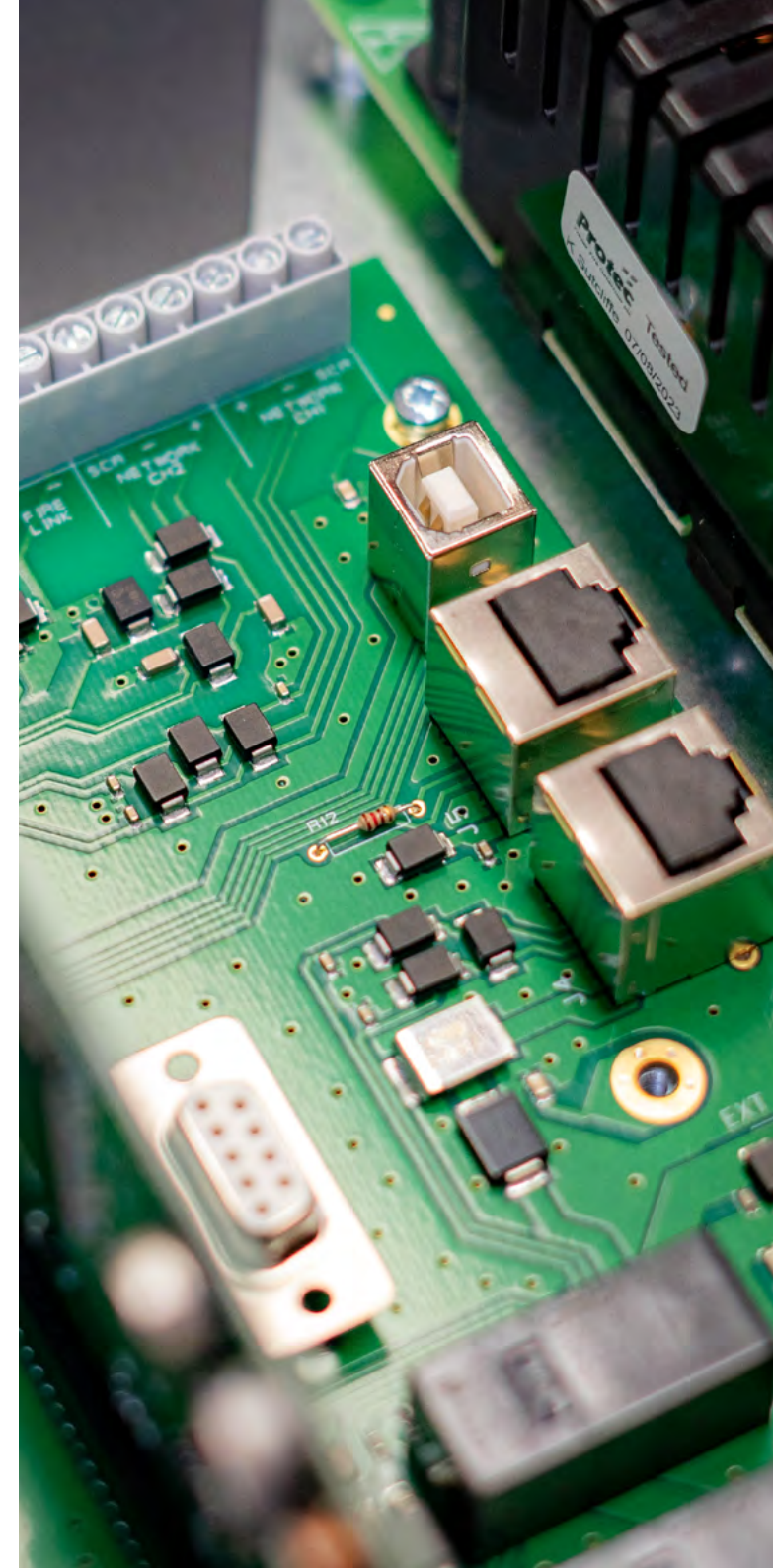
Network Capabilities

Our innovative networking ensures lightning-fast data transfer while maintaining the utmost reliability. The system offers a fault-tolerant communication channel, providing peace of mind even in critical situations.

You can connect up to 160 individual 6500 Fire Alarm Panels onto a single network, seamlessly functioning as one unified fire system. In the rare case of a network fault, the entire system won't be disabled, as each panel can continue to operate independently. The network can be wired using either copper or fibre-optic connections, giving you flexibility in implementation.

The potential to network so many panels together allows for up to 128,000* addressable devices across 640 digital addressable loops. This level of scalability ensures you can confidently expand the system to meet the demands of the largest and most complex installations.

*Dependant on site complexity.

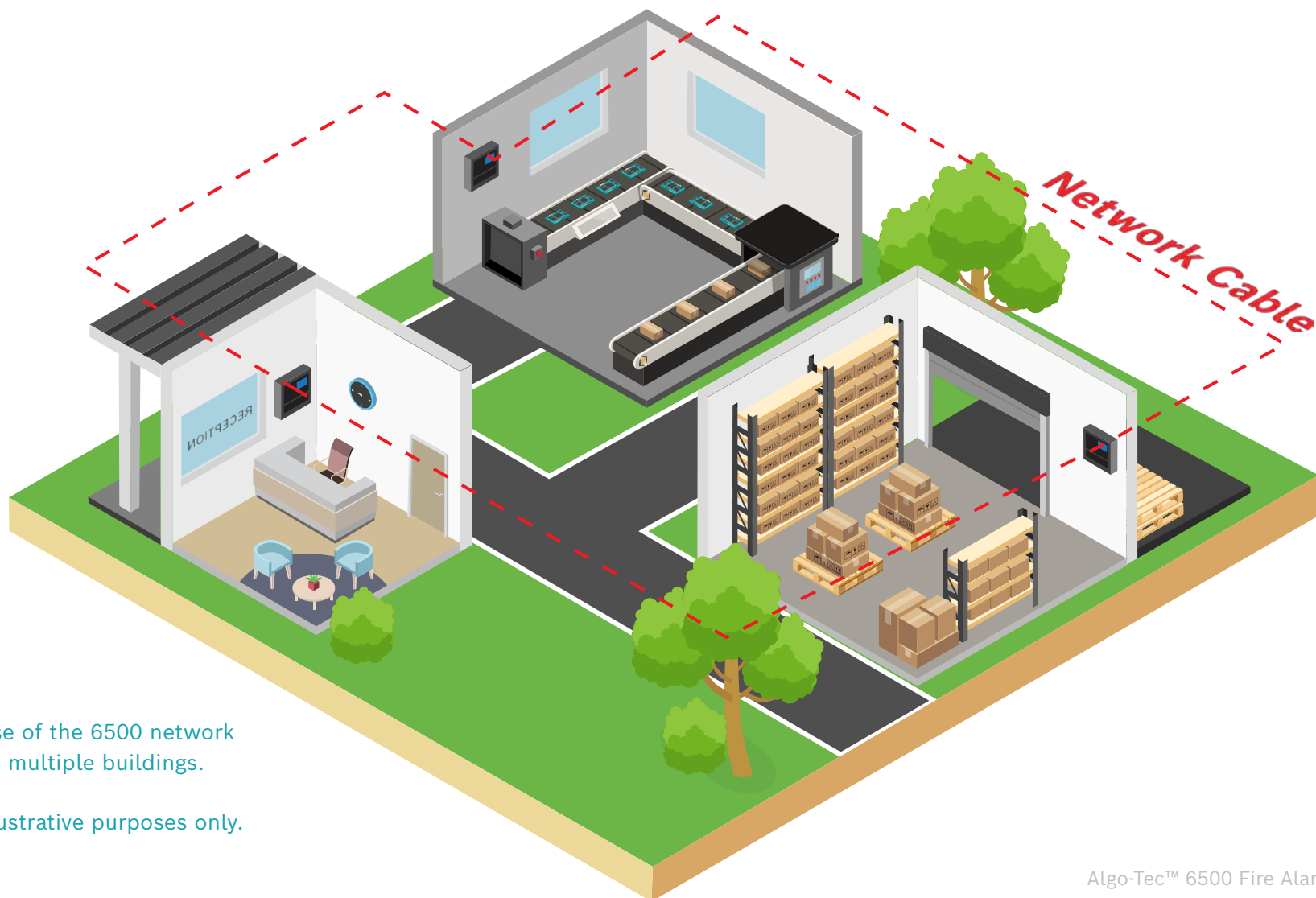


Network Example

The 6500 system allows you to easily create a powerful fire alarm system that covers multiple buildings across a site. This is achieved by connecting multiple 6500 fire alarm control panels using a 2-core network loop, accommodating up to 160 panels. With this setup, you can rest assured that your fire detection system is highly efficient, effective, and reliable.

Did you know?

The Protec 6500 range of panels can be networked using fibre optics using RS485 network fibre optic converters



The use of the 6500 network across multiple buildings.

For illustrative purposes only.



Products you can Trust

Have peace of mind with products that
always meet the relevant standards

A World Full of Approvals and Accreditations

Collaboration is critical today, where approvals and regulations matter more than ever. We work closely with various global industry bodies to ensure our products meet the highest standards and accreditations while adhering to industry regulations and best practices.

Our products are designed to meet current British Standards expanding to meet other global specific needs and requirements. We easily navigate the complex landscape of standards and regulations. Our tailored approach ensures that our products are precisely tuned to the market's demands while maintaining the highest levels of quality and compliance.

Commitment to excellence drives us to engage with industry bodies continuously. Through this ongoing collaboration, we provide products that meet and exceed industry expectations to build trust and confidence with our customers world-wide.





Graphics System

Take charge, stay informed, and elevate your fire safety measures, taking your fire safety experience to a whole new level

Powerful Alarm Management

Protec Hercules 6 software revolutionises alarm management with unmatched features and seamless integration across our range of fire detection, aspirating and damper control systems to ensure enhanced fire safety measures.



Cost-effective and Versatile

No matter the scale or complexity of your installation, Hercules 6 offers a cost-effective solution. This powerful software proves indispensable in managing diverse life safety systems, from single panel applications to expansive multi-site networks.



Control at your Fingertips

Hercules 6 provides a simplistic control of your fire alarm, aspirating, or damper control system from one or more locations. Each workstation offers real-time insights, allowing you to easily access current and historical event information and detect faults.



Ease of Navigation

Navigating through different screens is a breeze on our Hercules 6 touchscreen variations, thanks to our user-friendly selection system. During critical conditions like alarms or faults, flashing crosshatched sections highlight the exact location of active devices, ensuring swift response and resolution.



Robust Monitoring and Reliability

We understand the paramount importance of reliability in fire safety systems. Hercules PC ensures that any connection failures between the alarm panel and the PC are closely monitored, promptly notifying you of potential issues.



Powerful Reporting and Visualisation

Hercules 6 isn't just about real-time system monitoring. The software records system historical events and faults, enabling you to generate detailed reports quickly. Our graphics screens provide purpose-made visual maps of all your addressable devices, clearly indicating their statuses.

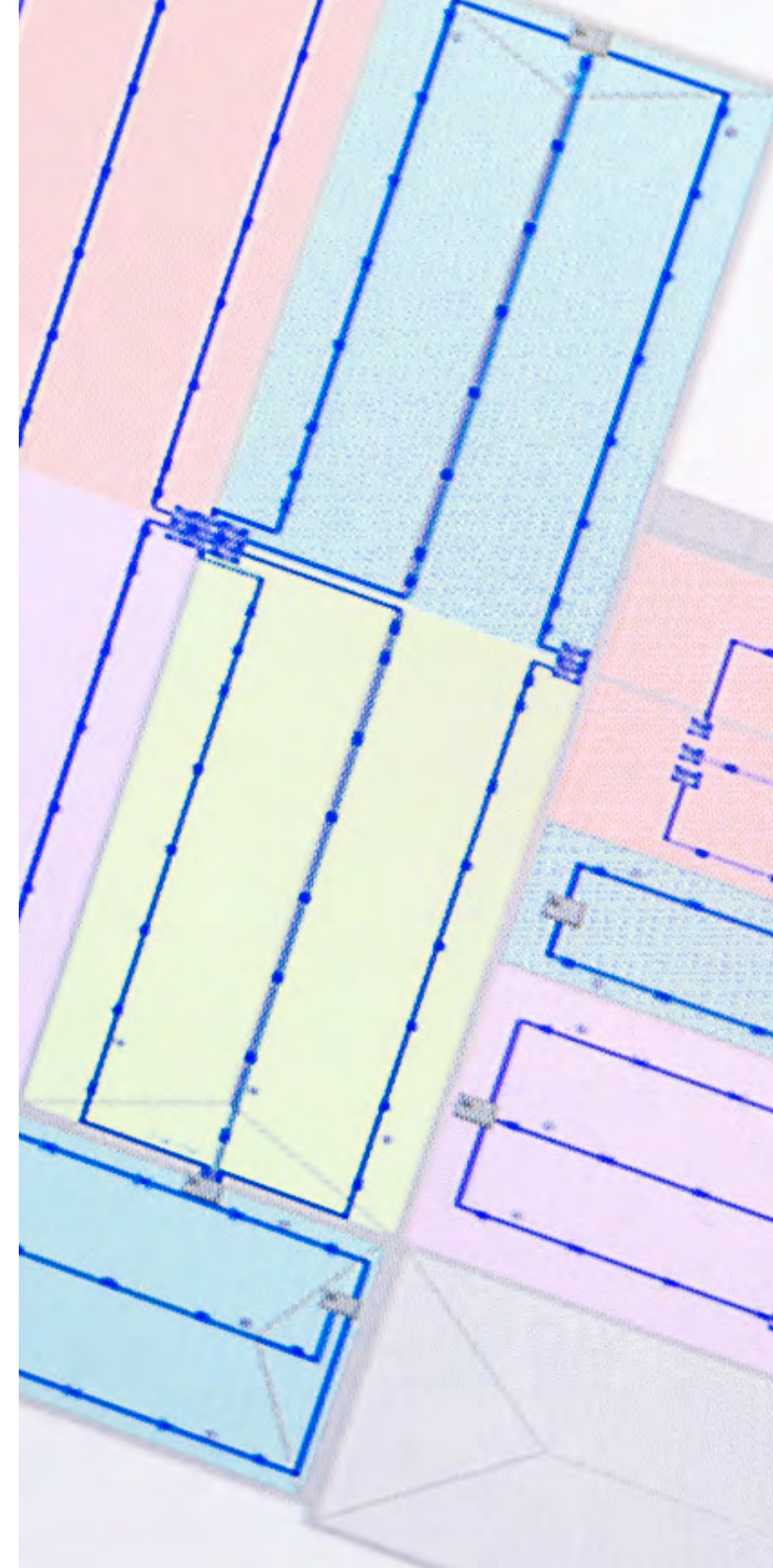
Life Safety Information

Hercules 6 software is a powerful alarm management tool and intuitive graphical user interface designed for seamless integration with Protec intelligent addressable fire systems, aspirating detectors, and damper control and monitoring systems. Whether you need a solution for a single panel or a multi-site setup, Hercules 6 offers an economical and efficient way to monitor your fire alarm, aspirating, or damper systems from one or more convenient locations.

With Hercules 6, you have the power to review your system from any Hercules 6 workstation, accessing current and historical event information with a simple click. This robust system ensures that alarms are swiftly detected and addressed. It continuously monitors for connection failures between the alarm panel and the PC, alerting you immediately if any faults are detected. Connections to aspirating systems are Ethernet-based, requiring only local network access, providing you with a secure and reliable monitoring solution.

In addition to real-time alarm information, Hercules 6 diligently records system events and faults, enabling you to generate detailed reports for analysis and compliance. The user-friendly interface features a series of graphic screens displaying the status and location of all addressable devices. Large areas are divided into sub-screens for easy navigation, with active devices highlighted for quick identification during alarms, faults, disablements, or tests, ensuring you are always well-informed and prepared.

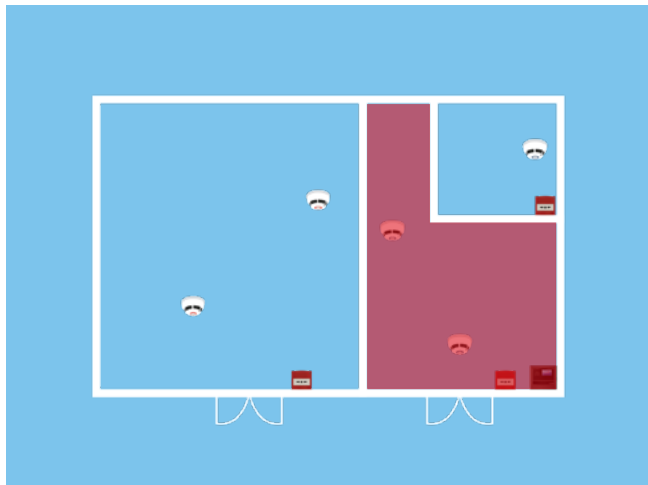
Experience the simplicity and power of Hercules 6 software. Manage your safety systems efficiently, ensuring quick detection and response to any issues.



Efficient System Management

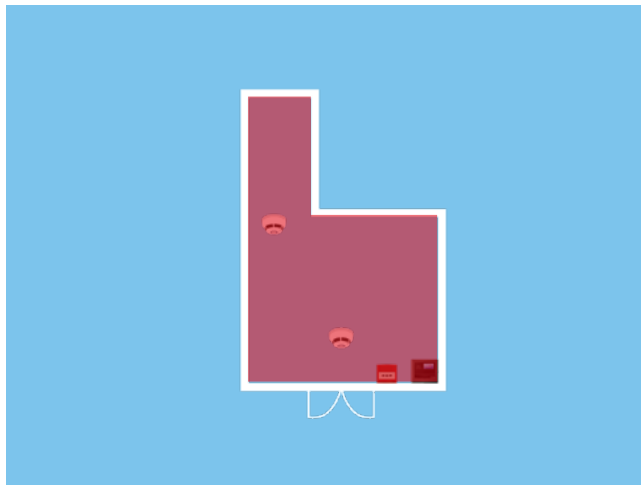
One of the stand out benefits of the Hercules software is its compatibility with both desktop and touch screen computers. Designed with touch screens as a priority, the system features an intuitive layout that lets you navigate from full site layouts to single room with just a few taps. The large, easy to use format is perfect for facilities managers to negotiate around a site to control and review various life safety systems.

Forget about tedious complicated menus or cumbersome controls. Hercules 6 makes accessing the information you need straightforward and hassle-free. Whether you're pinpointing a device or zooming in on a specific room, Hercules ensures you can do it quickly and efficiently, saving you time and reducing frustration.



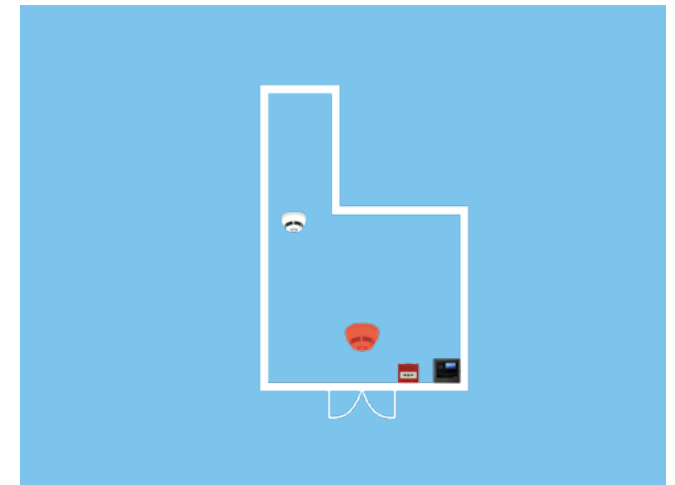
Full Scale View

Overview of the whole site showing every device.



Single Room View

Shows all devices per room.



Single Device View

Shows each individual device in fire.



Loop Repeater

Harness the potential of our digital addressable loops and stay informed on the status of your fire alarm system

6000PLUS Loop Powered Repeater

Our 6000/PLUS/REPEATER is the perfect solution for remotely monitoring the status of a fire alarm system. These devices can be directly connected to the local Protec fire alarm loop and only require one system address.

Providing essential control functions such as accepting faults and silencing alarms. The repeater's large LCD replicates events from the primary panel, clearly indicating the status of all loop-connected devices on site. With low power consumption, these devices can be installed in large numbers, significantly increasing system visibility.

With our advanced technology, you can always be confident in your Protec fire alarm system.

Key Features



No External Power

The Loop Repeater range is loop-powered, meaning no additional power supplies are required.



Event Management

With Event Priority Management, loop repeaters will automatically display the information you need, when you need it most.



Tooltips

The device features a help menu with status-specific tooltips to guide users through various tasks.



Function Control

The device can control essential fire alarm functions such as accepting, silencing, sounding, and resetting the system.



Multiple Language Support

The device's graphical user interface accommodates several Western European languages and Arabic scripts.



Easy Programming

Using a fast USB configuration tool, the device can be easily programmed with site-specific data.



Protec

D5E69229

CE 0905 15

D5E69229

6000P/OPHTCO/SVAD

Optical Heat CO Sensor
With Sounder VAD

IP21C Type A 18-27Vdc 320mW 13.5mA

EN54-5:2000 Class A2, EN54-7:2000

EN54-3:2001, EN54-17:2005

MADE IN UK: 27/04/2021 247918

EN54-23:2010 MAX C-3-7.5

PFD-CPR-0091

Refer to DEL2130

RDL0253/3

NELSON, UK - BB9 6RT

Independently tested

Intertek

6000PLUS Protocol

The digital language of intelligence,
accessibility, and simplicity

Open or Closed Protocols?

When choosing a fire alarm system, clients must decide between an Open or Closed Protocol, which significantly influences the options for service and maintenance.

Open Protocol

In fire alarm systems, Open Protocol refers to the system's accessibility; the software and access codes are publicly available, allowing any competent fire alarm engineer to service and maintain the system.

This flexibility offers clients freedom but can also introduce security vulnerabilities due to software and engineers codes being easily accessible online. Therefore, it is crucial to ensure that a competent, well-trained company is responsible for maintaining the system to guarantee its proper functioning, safety, and security.

Closed Protocol

On the other hand, Closed Protocol systems provide enhanced security. Access to these systems are restricted to the designated fire alarm companies who control all software and commissioning capabilities. This ensures the system is consistently updated and fully operational, minimising risks for the building owner. Closed Protocol systems are ideal for high-security environments such as airports, prisons, and hospitals, where false alarms or unauthorised evacuations could have severe consequences.

With decades of experience in the fire alarm industry, Protec is committed to collaborating closely with clients to deliver bespoke, high-quality fire alarm systems tailored to specific requirements.



Did you know?

Protec is not just a Closed Protocol manufacturer

Protocol Explained

The 6000PLUS Protocol is open to anyone, allowing any competent fire alarm company to service and maintain a Protec 6000PLUS system.



Myth

“Protec isn’t Open Protocol”

“You can mix detector manufacturers on an Open Protocol system.”

“Open Protocol system can only be installed by the manufacturer of the system.”



Fact

Protec can be Open Protocol

Fire alarm systems must use the same manufacturer detectors across a detection loop.

Both Open and Closed Protocol systems can be bought off the shelf and installed by any competent fire alarm company.

What Makes us Open Protocol?



Open from Factory

All our fire alarm panels leave the factory unlocked ready for the level of access to be determined by the end user, or their fire system provider.



Easy Access to Software and Information

The software and updates for our fire alarm panels can be accessed by any competent fire system provider through our client support portal.



Open to Anyone

Any trained competent fire system company can service and maintain our current generation fire alarm systems.



No Subscription Assistance

Documentation and videos are available without the need of a subscription through our client support portal and technical training videos*.

*Further complex training and personal assistance available upon request.

Free From Interference

The 6000PLUS protocol operates on a low-voltage data transfer, which is crucial for its effective performance. This data transfer is of utmost importance, and it must be done instantly without any interference from external factors. That is why our products that use the 6000PLUS protocol undergo rigorous testing to ensure their safety from a variety of potential scenarios.

In accordance with the EN standards, the 6000PLUS Product range is safe from:



Radio Frequencies

Safe from RF interference (radio frequencies) affecting the fire alarm devices.



Mobile Phones

Immune to interference created by mobile phones and Wi-Fi.



Conducted Immunity

Safe from electrical disturbances from nearby devices powered by the same power network.



Energy Surges

Immune from large instantaneous voltages such as lightning strikes on devices integrated with the system.



Fast Transients

Safe from high-frequency pulses caused by sparks when ac/dc connections are made to the system.

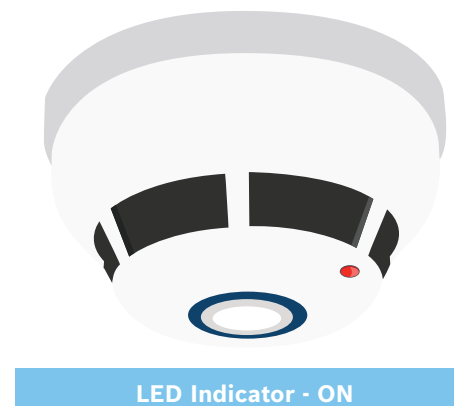
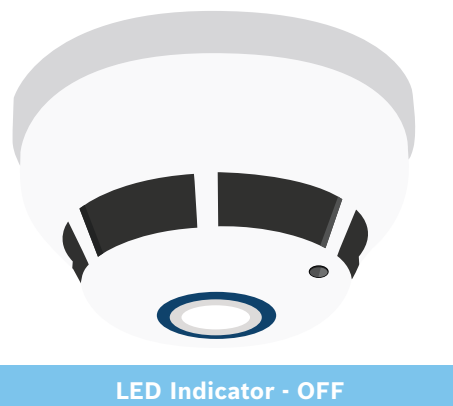


Electrostatic Discharge

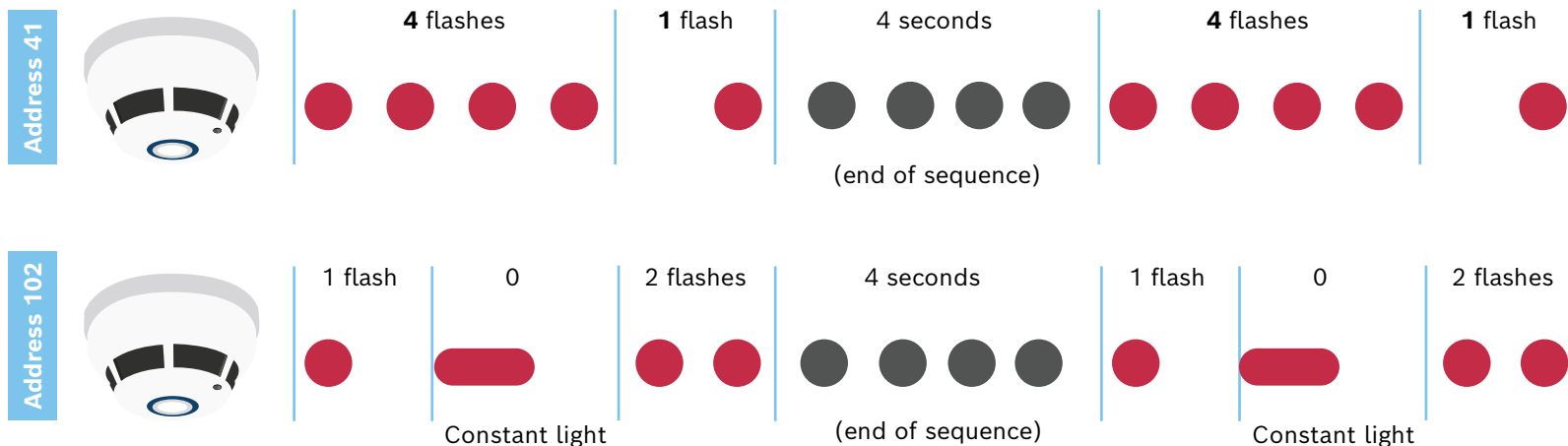
It is protected against damage to system components from static electricity.

RVAV™

'Remote Visual Address Verification' is a feature that makes it easier for engineers to identify a device address. Engineers can determine a device's unique loop address by simply looking at the LED on a detector, manual call point or interface. When activated, the LED's on each device flash in a Morse code-like state. You can quickly determine the device's unique loop address by counting the time between flashes.



Identification sequence examples



FAST™ Addressing

FAST™ (Firmware Addressed Secure Technology) uses a simple barcode scanning procedure to commission the sensor, removing the time-consuming task setting of address cards, DIL switches or specialist programming tools.

FAST™ addressing in three simple steps



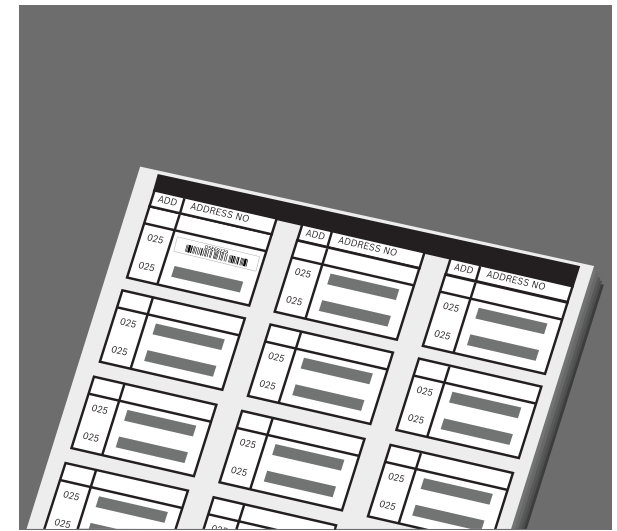
1

Locate the barcode on the inside of the sensor



2

Peel the sticker from the sensor. Place the sticker in the commissioning booklet at the desired address, with a note on location in the text box.



3

Hand the booklet over to the commissioning engineer to scan the barcodes into the site file on the PC application or Android Commissioning app.

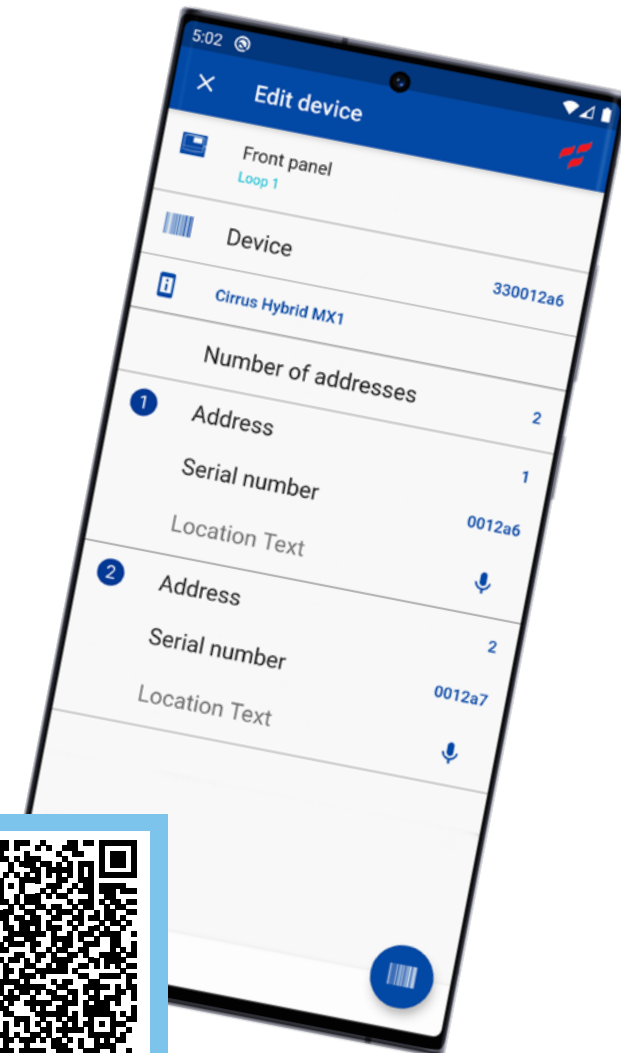
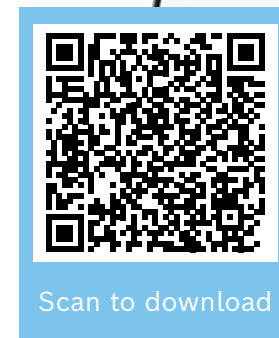
Streamline Commissioning

The Protec Loop Commissioning App is a valuable tool that allows engineers to commission fire alarm systems using their mobile devices. With the app, an engineer can quickly scan the FAST™ barcode of each device while walking around the site, making it easier to add them to the system. Once all devices are scanned, the engineer can send the site file to their computer via email, WhatsApp, Bluetooth, or Wi-Fi, saving them valuable time in the field.

One of the app's most powerful features is its ability to calculate the maximum loop capacity, which means it can provide a warning if the maximum current limit is exceeded. The app is available on Google Play, no purchase needed, and there are no subscription fees or locked features. So, anyone can use the Protec Loop Commissioning App without any limitations.

Please note: The Loop Commissioning App is only available on Android devices.

Download the app today!



Algo-Tec™

The Algo-Tec™ software empowers all 6000PLUS sensors to accurately differentiate between smoke, steam, dirt, and other contaminants. This advanced technology enhances the sensor's precision and reduces false alarms significantly, providing reliable and trustworthy results.

Residential Mode

Bathroom Steam



SELECTIVE ALGORITHM



Aerosols



SELECTIVE ALGORITHM



Cooking Fire



ALARM



Office Mode (High Performance)

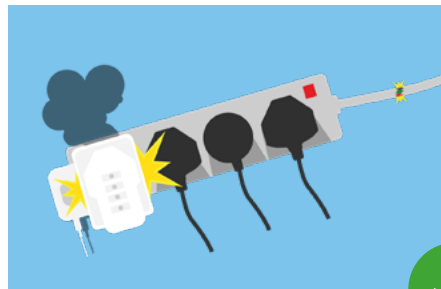
Kitchen Steam



SELECTIVE ALGORITHM



Electrical Faults



ALARM



Computer Fire

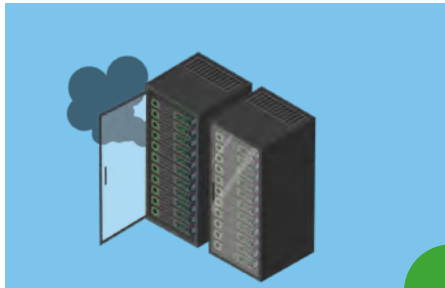


ALARM



Clean Mode (Extra High Performance)

Server Fire



ALARM



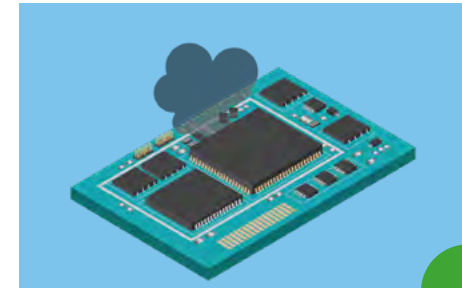
Chemical Fire



ALARM



Component Fire

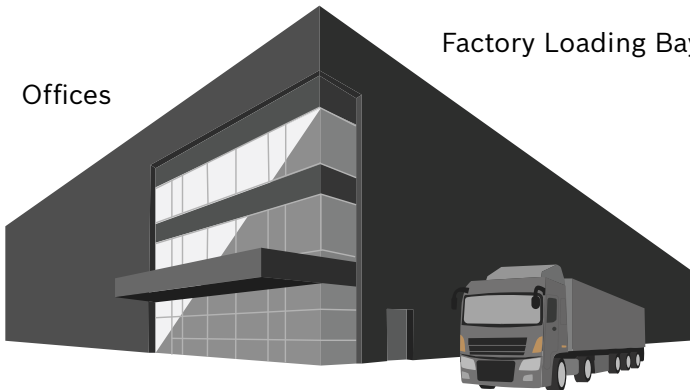


ALARM



Day Mode

Offices



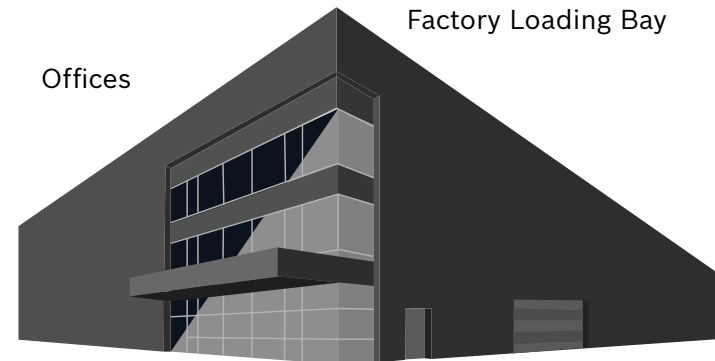
Factory Loading Bay

Office:
High Performance

Factory Loading Bay:
Heat Detection Only

Night Mode

Offices



Factory Loading Bay

Office:
Extra High Performance

Factory Loading Bay:
Smoke & Heat Detection

Note: The given illustrations demonstrate how a well-designed BS5839 system responds to occasional contaminants and fire. These examples show some of the system's decision-making algorithms, specifically for the 6000PLUS/OPHT model.

Benefits of Algo-Tec™

- Reduced false alarms
- Enhanced performance
- On-site flexibility
- Reduced maintenance costs
- Adjustable sensitivity
- Intelligent fire detection
- Time-controlled sensitivity
- Low failure rate
- Low current consumption



6000PLUS Sensor Range

The perfect fusion of technology,
innovation, and style

A Sense of Protection

The Protec 6000PLUS sensor range is a leader in digital addressable fire detection. Our cutting-edge sensors take fire safety to the next level by seamlessly integrating our state-of-the-art detection and alarm technologies into one sleek, compact sensor head.

The sensor range utilises our innovative 6000PLUS Protocol, bringing many innovations together. Engineers and end-users benefit from the FAST™ addressing and RVAV™ identification, making fieldwork a breeze. Thanks to our Algo-Tec™ software, false alarms are reduced, and maintenance events are tracked in real time, ensuring your devices always perform optimally.

The 6000PLUS sensor doesn't demand multiple addresses or additional supplies. Its loop-powered design is an all-in-one solution that saves space, time, and resources, making it the ultimate fire-detecting powerhouse.

Embrace the future of life safety with the all-in-one solution for detecting fires, minimising false alarms, and ensuring safe evacuations.



Key Features

Base

The universal Protec base allows the sensors to be mounted directly to any flat surface or Besa box.

Ident Rings

Ident rings make for easy recognition of the sensor features.

Ident ring identification
Page 28

Anti-Tamper

Anti-tamper locking ensures no sensors can be removed without a tool.

Advanced Sensing Technology

The Protec Algo-Tec™ 6000PLUS interactive programmable algorithms evaluate the intelligent sensor data. Sensors are available in many variants allowing for use in any application.

Suitable for any Application

Developed to incorporate advanced fire sensing technology, electronic sounders, high-intensity LED visual alarm devices (VAD) and speech-enhanced talking sounder capability.



The Identity of Versatility



Sensor

A solid band identifies a detection-only sensor head. The various colours symbolise the four types of detection used: Optical (Grey), Heat (Red), Optical Heat (Blue) and our Optical, Heat and CO (Black)



Sounder

A band with three perforations highlights our 'S' (Sounder) head, including a sensor with traditional audible tones. Each sounder head comes with multiple tones, which can be used for fire alarm evacuation cause and effects.



Visual Alarm Device (VAD)

A large lens mounted on top of sensor identifies the VAD incorporated into the head. Our VAD iterations provide a low power consumption, variable output flashing LED alarm with a wide angle of coverage.



Talking Sounder

A band with six perforations shows our 'TS' (Talking Sounder) variant, which delivers intelligible, pre-determined alert and evacuation messages. The vocal alarm proves indispensable for reducing confusion during emergency evacuations.

Did you know?

Protec manufactures 250,000 sensors on average every single year



6000PLUS Sensor Identification

The 6000PLUS range includes different types of sensors that cater to various fire detection methods. These sensors range from standard optical or heat formats to multi-detection offerings such as Optical/Heat and Optical/Heat/Carbon Monoxide. Our engineer-friendly approach for identifying the sensor type is straightforward due to the unique colour-coded ident ring. With this feature, there's no need to remove the sensor.

Did you know?

Protec started using 'Ident Rings' in the 1990s

Temperature Sensor



Heat Sensor



Heat Sensor,
Sounder



Heat Sensor,
Sounder, and VAD



Heat Sensor c/w
Talking Sounder
and VAD

Optical Sensor



Optical
Smoke Sensor



Optical Smoke
Sensor, Sounder

Optical/Heat



Optical Heat
Sensor



Optical Heat
Sensor, Sounder



Optical Heat
Sensor, VAD



Optical Heat
Sensor, Sounder,
and VAD



Optical Heat
Sensor, Talking
Sounder



Optical Heat
Sensor, Talking
Sounder and VAD

Optical/Heat/CO



Optical Heat
CO Sensor



Optical Heat CO
Sensor, Sounder



Optical Heat
CO Sensor,
VAD



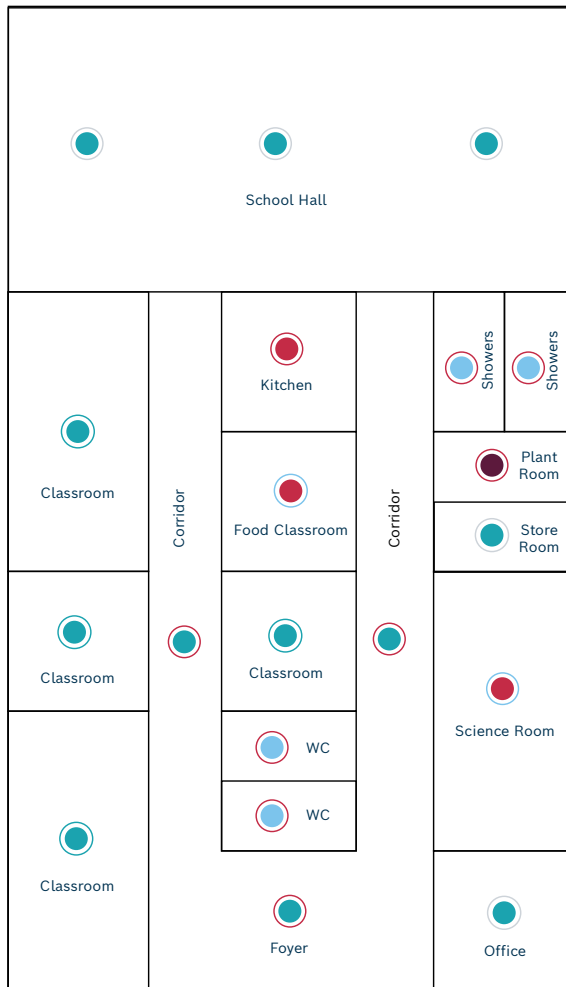
Optical Heat CO
Sensor, Sounder,
and VAD



Optical Heat CO
Sensor, Talking
Sounder and VAD

One Sensor, One Solution

The 6000PLUS sensor range offers multiple variations to choose from. These sensors use various technologies that work together to create a complete compliant system. With only 6000PLUS sensor heads, there is no need for additional wall sounders, visual alarm devices, or multiple base types.



- **6000PLUS Optical** – Ideal for ceiling voids, lift shafts, risers, offices, server rooms.
- **6000PLUS Heat** – Best used in kitchen and plant rooms where smoke from cooking can cause false alarms.
- **6000PLUS Optical/Heat** – Our optical heat sensors prove the ideal solution for differentiating between smoke and steam when areas have high humidity, such as shower lobbies.
- **6000PLUS Optical/Heat/CO** - The combination of these technologies within one fire sensor head proves excellent in detecting free-burning chemical fires or deep-seated smouldering fires, which produce little heat and smoke but large amounts of CO.
- **6000PLUS Sounder** – Quick and efficient way of raising the alarm and starting an evacuation.
- **6000PLUS with Sounder VAD** – In areas with lots of noise or where the hearing impaired may be left alone, the sounder VAD shines, ensuring visual notification across a room.
- **6000PLUS with Talking Sounder** – Adding a talking sounder sensor means you have the traditional tones of the sounder variant for fire alarms, but you have the use of other tones, such as our ‘bell tone’, enabling the fire alarm system to be used for the class change.
- **6000PLUS with Talking Sounder VAD** – When a VAD is added to a sensor with a talking sounder, it offers a visual identification of a scenario as well as a vocal alert.

Drawing for illustration purposes only. Not to scale or BS 5839 compliant.

Accessories

In addition to the versatile nature of the 6000PLUS sensor range, we also provide several accessories to provide extra protection, safety, and accessibility.



Remote Indicators

When detectors are in those hard-to-see places, such as ceiling voids or risers, our remote indicators link to our detector bases to show the status of a sensor from a more accessible location.



Anti-Ligature Base

When settings call for extra safety, we have devised our magnetic anti-ligature base. When excessive stress is applied to the sensor head, the sensor removes from the base instantly.



Standard Base

Protec standard base is a universal base that works with our 6000 addressable range of automatic point detectors.



Duct Detector

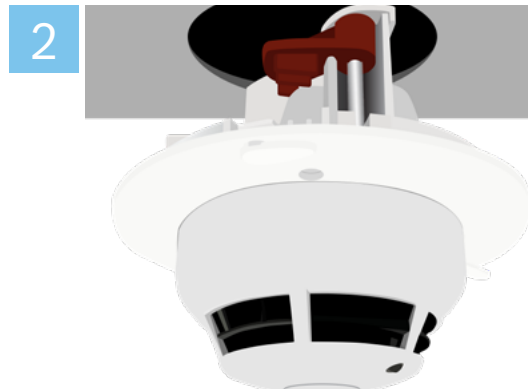
The duct smoke detector enclosure aids in detecting smoke and fire particles in HVAC ducts using a 6000PLUS/OP digital addressable head. Its unique 'one pipe system' employs the Venturi principle to enable maximum airflow through its chamber housing.

Fast Installation

Modern buildings are all about aesthetics, so our Protec sensors blend seamlessly with contemporary spaces. With our fast-fix base, installing becomes a breeze. Our detectors can be installed even before the ceilings are completed without the need for disconnecting the base to install onto the ceiling after, this can speed up the installation process and streamline commissioning on busy worksites. The fast-fix base also results in a lower profile, visually pleasing appearance.



1 Cut a hole in the suspended ceiling and pull through the detector.



2 Place the fast-fix trim onto the detector base.



3 Turn the trim clockwise to lock into position.



4 Push the detector back into the hole.



5 Tighten the three detector screws until firmly mounted in position.



6 Spin the screw covers into position.



Manual Call Points

The 6000 MCP ensures no uncertainty around safety

Immediate Action

The Protec addressable Manual Call Point (MCP) is a reliable and responsive fire alarm device that is easy to maintain. When the call point is pressed, it sends an immediate signal thanks to our fully monitored 6000PLUS Protocol. Made from high-impact ABS plastic, this MCP is strong and robust. It is ideal for use in most indoor applications. For outdoors or in moisture-rich environments, our 6000/MCP/WP comes in a complete weatherproof enclosure.

Commissioning the device is easy with our FAST™ addressing method, and the RVAV feature shows the device address when requested at the panel. Furthermore, the tamper-proof removal method ensures that the addressable MCP can only be removed using the specialist test key.

Our addressable MCP meets industry recommendations, including adding hinged covers to prevent accidental triggering. A bright LED on the front of the addressable MCP indicates the device's status and illuminates in solid state when the device is activated.

Trust the Protec addressable MCP to deliver a full-scale alarm or evacuation when you need it most.



Key Features

Engineer Friendly

FAST™ addressing allows for the quick commission of Protec fire alarm devices.

BS 5839-1:2017, EN 54-11 Compliant

Fully compliant with BS 5839-1:2017.

Integral Isolator

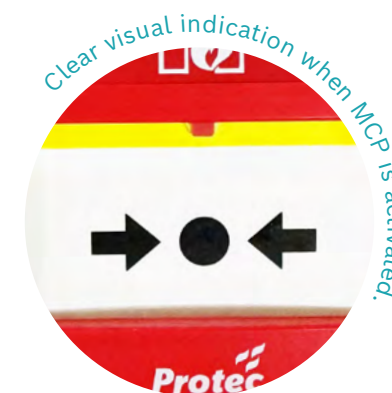
Integral circuit isolator protects the loop from short circuit faults.

LED Indication

LED shows device status and allows RVAV™ indication.

Third-Party Compatible

A host of third-party manual call point accessories, such as stoppers and alarm-hinged covers.



Embrace the Environment

The Protec addressable weatherproof Manual Call Point (MCP) is engineered with a focus on installation efficiency, adaptability, and full compliance with the latest industry standards.

Building on the advanced features of Protec's addressable MCP including FAST™ addressing, RVAV™ identification, and including an integral fire alarm isolator. The weather-proof MCP combines these capabilities within a rugged IP67-rated waterproof enclosure. This design ensures optimal performance in dusty and moisture-rich environments, making it suitable for a wide range of challenging project applications.

The IP67 sealing offers exceptional protection against water and dust, guaranteeing reliable operation even in harsh conditions. This enhanced environmental resistance makes it an ideal choice for settings where moisture, dirt, and debris are common.

To simplify installation, the weatherproof MCP uses an innovative terminal block that serves as a centralised connection point for initial wiring. Once connected, the terminal block securely attaches to the back of the weatherproof MCP, streamlining the process by eliminating the need for re-termination saving time out in the field.

The unit also comes equipped with three standard 20mm knock-outs, allowing for seamless integration with various surface wiring configurations, providing maximum installation flexibility.

With these combined features, the weatherproof MCP ensures robust performance and adaptability while meeting the highest standards of safety and durability.





Addressable Interfaces

Integrating systems to provide a safer
environment

Bringing Systems Together

Our advanced addressable fire alarm systems are equipped with a wide range of interfaces that can effortlessly and efficiently integrate third-party systems. Our cutting edge 6000PLUS protocol is used for comprehensive system monitoring, ensuring that in the event of an emergency, third-party systems such as gas, plant machinery, lifts, Automatic Opening Vents (AOV's), etc., are promptly activated or shut down to minimise damage and ensure the safety of the building and its occupants.

To make the commissioning process simple, we have incorporated our FAST™ commissioning method and equipped the interface range with an inbuilt loop short circuit isolator to enhance reliability and safety. Our fire alarm system continuously monitors our interfaces to ensure maximum protection for the building and its occupants.



Input/Output Interfaces

Our comprehensive range of input/output interfaces are designed to seamlessly integrate with our addressable systems ensuring reliable performance and compatibility with various applications. These interfaces cater to diverse operational needs, from single-channel solutions to multi-channel configurations, while maintaining a focus on efficiency and ease of integration.



Single Channel Interface - 6000/MICCO

Our single channel interface is a loop-powered fault-monitored input and a volt-free clean contact output interface. An on-board isolator protects against loop short circuits on incoming or outgoing loop connections.



Two-channel Input/Output Interface - 6000/2IO

Our dual input/output interface is a loop-powered input/output device providing two individually monitored inputs and two volt-free changeover contacts, best used to connect ancillary equipment to a Protec fire alarm system.



Four-channel Input/Output Interface - 6000/4IO

The quad input output interface is a auxiliary powered input/output device that provides two local zones of conventional detectors, two monitored inputs, two local monitored alarm outputs and two volt-free changeover contacts. The four-channel Input/Output Interface is best used to connect ancillary equipment to a Protec fire alarm system.



Addressable Beam Interface - 6000/BEAM/IF

The Protec addressable beam interface is designed to effortlessly integrate ancillary conventional devices like beam detectors and linear heat detection into Protec's state-of-the-art addressable fire alarm systems. This interface unit is loop-powered, removing the need for an additional external power supply.

Zone Alarm Interfaces

Our range of zone alarm interfaces bridges the gap between conventional detection systems and advanced addressable fire alarm systems. These interfaces are designed to seamlessly integrate conventional devices and sounders into Protec addressable loops, providing flexibility, reliability, and scalability for various fire safety applications.



Addressable Loop Powered Zone Alarm Interface - 6000/LPZA

The Protec loop powered zone alarm interface integrates simple conventional detectors with our addressable systems and supports up to ten conventional detectors. The on-board switches enable selectable zone end-of-line settings monitoring the circuit for open and short circuit faults with the ability to drive up to 50mAh sounder circuits without external power per LPZA.



Addressable Ancillary Powered Zone Alarm Interface - 6000/APZA

The Protec ancillary powered zone alarm interface connects a Protec digital addressable loop to a zone of conventional devices and a sounder circuit. It integrates small conventional fire detection with Protec addressable systems. Powered externally from an ancillary 24 Volt supply, it provides a larger output capability allowing for ten Protec conventional sounders per APZA.



Addressable 2-Way Loop Powered Zone Alarm Interface - 6000/2LPZA

The loop-powered zone alarm interface is a dual input/output device which provides two local zones of conventional detectors and two locally monitored alarm outputs.



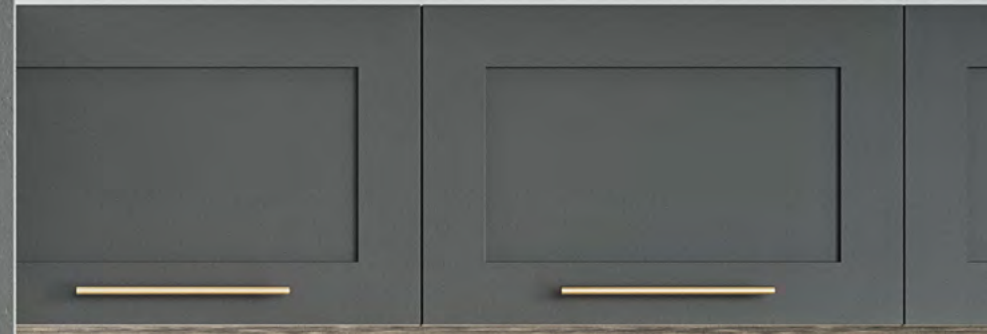
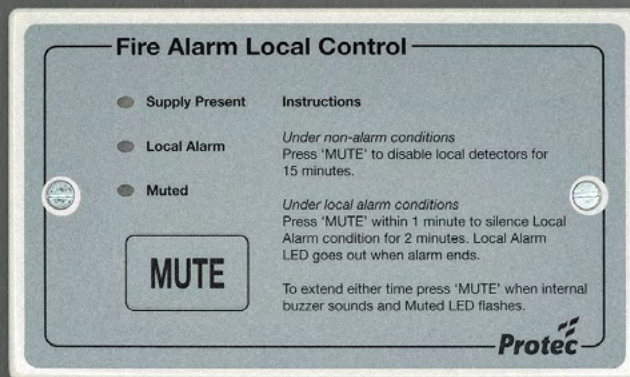
Addressable 2-Way Ancillary Powered Zone Alarm Interface - 6000/2APZA

Protec's dual auxiliary powered zone alarm interface is an addressable input/output device which provides two local zones for conventional detectors in addition to two locally monitored alarm outputs.



Addressable 16-way Ancillary Powered Zone Alarm Interface – 6000/16WAY ZAI

Our addressable 16 channel auxiliary powered zone alarm interface provides input/output device allows for up to 16 local zones of conventional detectors and two locally monitored alarm outputs to integrate with a Protec addressable system. The 16-way board can also be supplied with monitored inputs and clean contact outputs if required.




Local Control Module

Locally combat false alarms to prevent false evacuations

Truly Identifying Fires

The Protec 6000 Local Control Module (LCM) is designed to seamlessly integrate a Protec addressable fire detection system into Houses of Multiple Occupancy (HMOs). It is specifically developed to handle false and nuisance alarms in residential and student accommodations, making it a reliable choice for property owners.

The module provides tenants with an element of fire alarm self-sufficiency in their apartments. Simultaneously, it keeps the landlord's master fire alarm control panel informed about individual apartment fire alarm status at regular intervals, ensuring a sense of dependability.



False alarms make up over 95% of automatic fire alarm-confirmed incidents

* Based on Home Office statistics

Key Features

Conventional Compatibility

Compatible with Protec's range of conventional fire alarm devices.

Visual Device Indication

Multiple LED indicators offer visual system status. Highlighting supply, local alarm, and muted conditions.

One Button Operation

Allows for both mute and disablement options by pressing and holding for a length of time to ensure no false operations are made.

Loop Powered

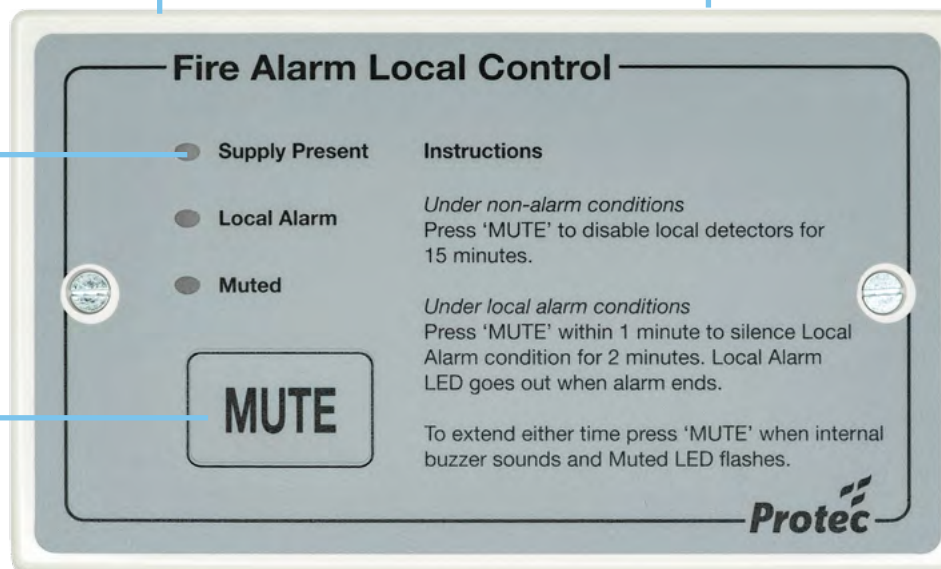
Powered by the 6000PLUS digital addressable loop, ensuring a low current fully monitored method of operation.

Internal Audible Indication

The integral buzzer indicates the unit is in alarm or, when in an isolated condition, or when the muted condition is about to expire.

Industry Certification

Approved to EN 54-17, and EN 54-18.



How Does it Work?

When an apartment conventional detector triggers, an automatic countdown begins, allowing the occupant to investigate the cause and identify an actual fire. If a false alarm is created by sources such as vape smoke or burnt toast, it allows adequate time for the 'mute' button to be pressed. If the investigation period isn't cancelled, The Local Control Module will continue to sound the building-wide alarm to notify people of a potential fire in the building.

1



Detector senses smoke

2



LCM buzzer sounds

3



LCM timer starts

4



False alarm identified

5



Mute button pressed

6



Fire alarm system back to normal



Damper Control Module

Control the smoke to stop the spread of fire

Directing Smoke to Prevent Fire

The Protec 6000/DCM is an advanced fire alarm system module that meets the current standards for fire alarm systems (EN 54-17 and EN 54-18). This module enables a building's HVAC smoke dampers to be controlled directly from the fire alarm system through the innovative Protec 6000PLUS Protocol. Configuration is a breeze due to its FAST™ addressing feature alongside the addition of NFC (Near Field Communication) programming, which provides ultimate flexibility to match various damper actuator types.

Supporting both 2-position (power open/fail-safe closed or control closed/fail-safe open) and 3-position modulating (power open, modulating, fail-safe closed) actuators, it offers position monitoring and clear indication on connected dampers. All this information is relayed to fire alarm system displays and optional front-end graphics packages, Hercules 6, or bespoke firefighter's override control panels.

In addition, the module's monitored inputs can trigger customised outputs via the fire alarm cause and effect matrix. Fine-tuning is made simple with modulated damper support, allowing local and remote vane adjustment from the fire alarm control equipment. The module also accepts 230 Vac or 24 Vdc input supply, adapting seamlessly to actuator specifications.

The fault delay feature ensures controlled damper movement within a selectable timeout period of 60 to 240 seconds, even in case of loss of loop control. With Protec 6000/DCM, you can be confident that you are getting a reliable and efficient fire alarm system module that meets your needs.



Key Features

Flexibility

Works with both two and three-position dampers.

Complete Control

Works with the fire alarm cause and effects and delay timers.

Third Party Friendly

Monitored inputs and clean contact outputs and for linking to other systems.

Safety

Certified to EN 54-17 and EN 54-18 with European CE and United Kingdom UKCA marks.

Versatility

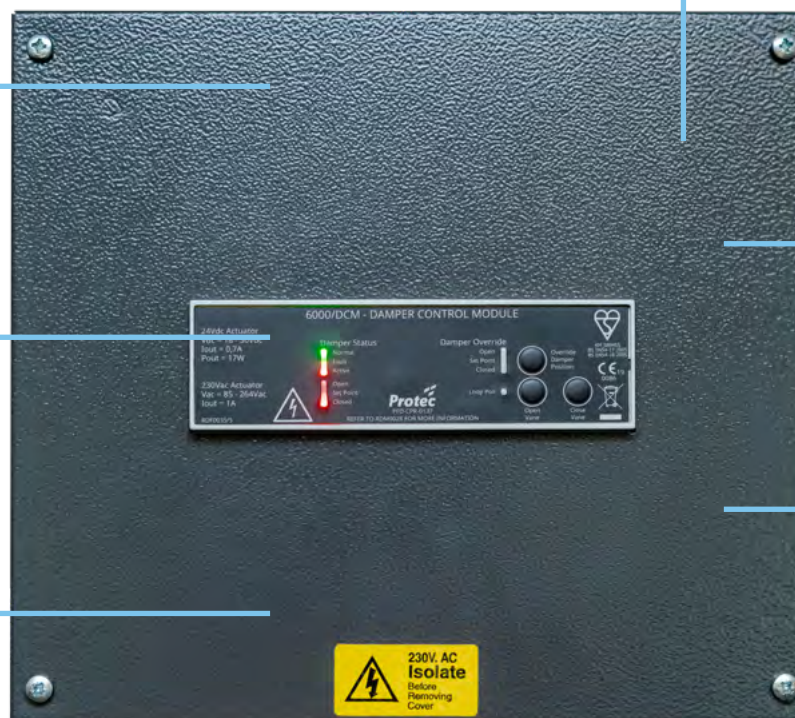
Compatible with 24 Volt and 230 Volt Dampers.

Graphically Pleasing

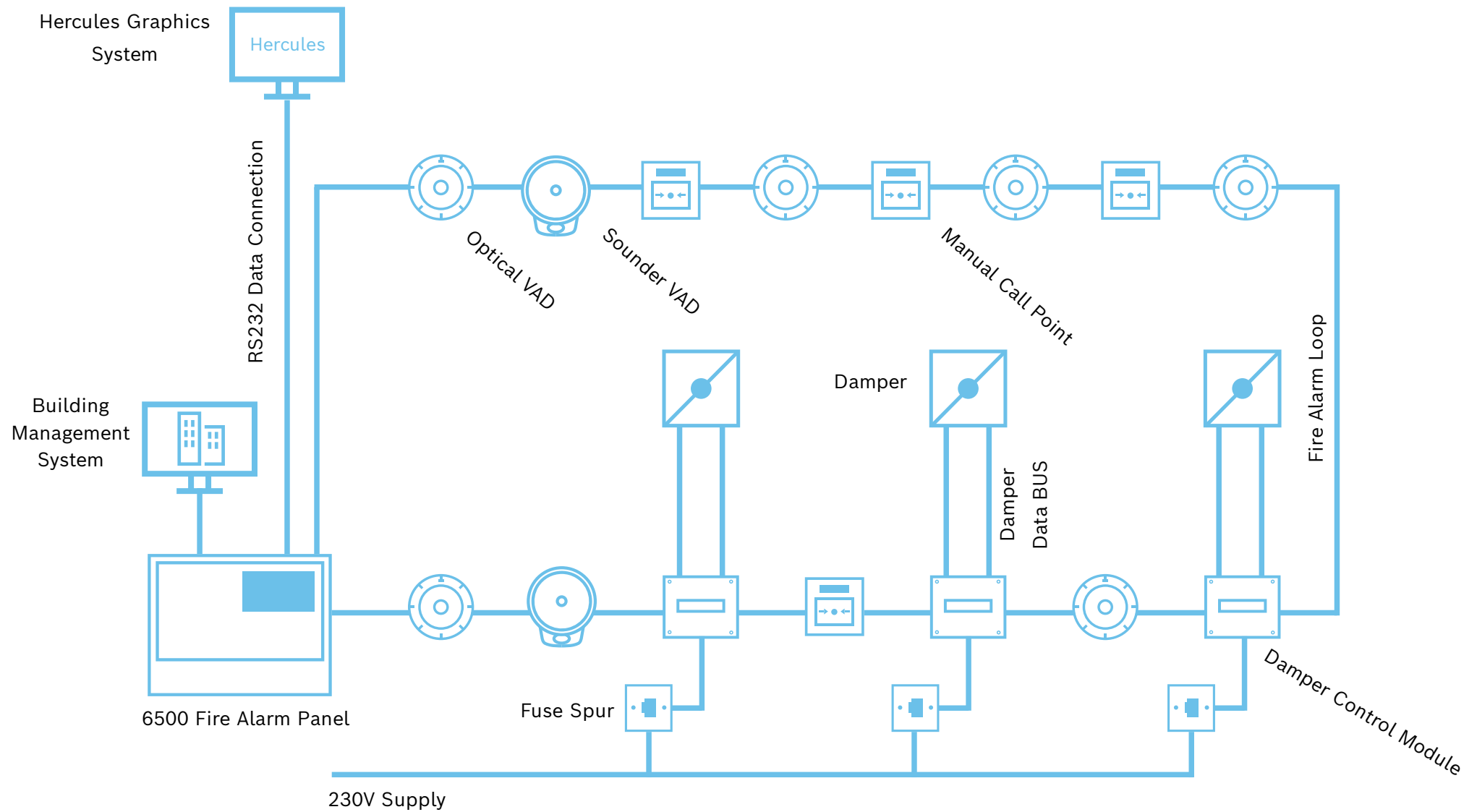
Works with front-end graphics systems like Hercules 6.

NFC Programming

Certified to EN 54-17 and EN 54-18 with European CE and United Kingdom UKCA marks.



Schematic



Note: For class A Damper systems, an external Power Supply Unit will be required.

Front End Control

Our DCM units complement our range of front-end control systems, such as our bespoke mechanical damper control panels and Hercules 6 digital front-end system. Engineered for precision and reliability, our system ensures that your fire safety infrastructure operates with maximum efficiency and responsiveness.

Mechanical Damper Control Panels

Our bespoke mechanical control panels work as the primary control for your damper systems and are meticulously crafted to be used in place of or alongside your Hercules 6 system, delivering robust performance and exceptional durability. These units are engineered to operate flawlessly under critical conditions, offering front-end control of the damper system and status, ensuring fire dampers respond promptly to fire emergencies and effectively contain the spread of smoke and fire.

Hercules 6

Our advanced touch screen or desktop graphics package offers unparalleled ease of use, allowing you to monitor and control fire dampers effortlessly. The system is designed with user-friendly graphics and intuitive controls, enabling quick access to essential functions, and providing real-time status updates and alerts for immediate action. Whether you're managing a single building or an extensive complex, our front-end system offers scalable solutions, reassuring you that it can adapt to your specific needs.



Programming on the Move

Using the same Near Field Communication (NFC) you use paying for items with your contactless payment we use that same technology to enable the programming of our DCM units. Simply open the app, present your phone and you can program or interrogate that DCM on the spot.

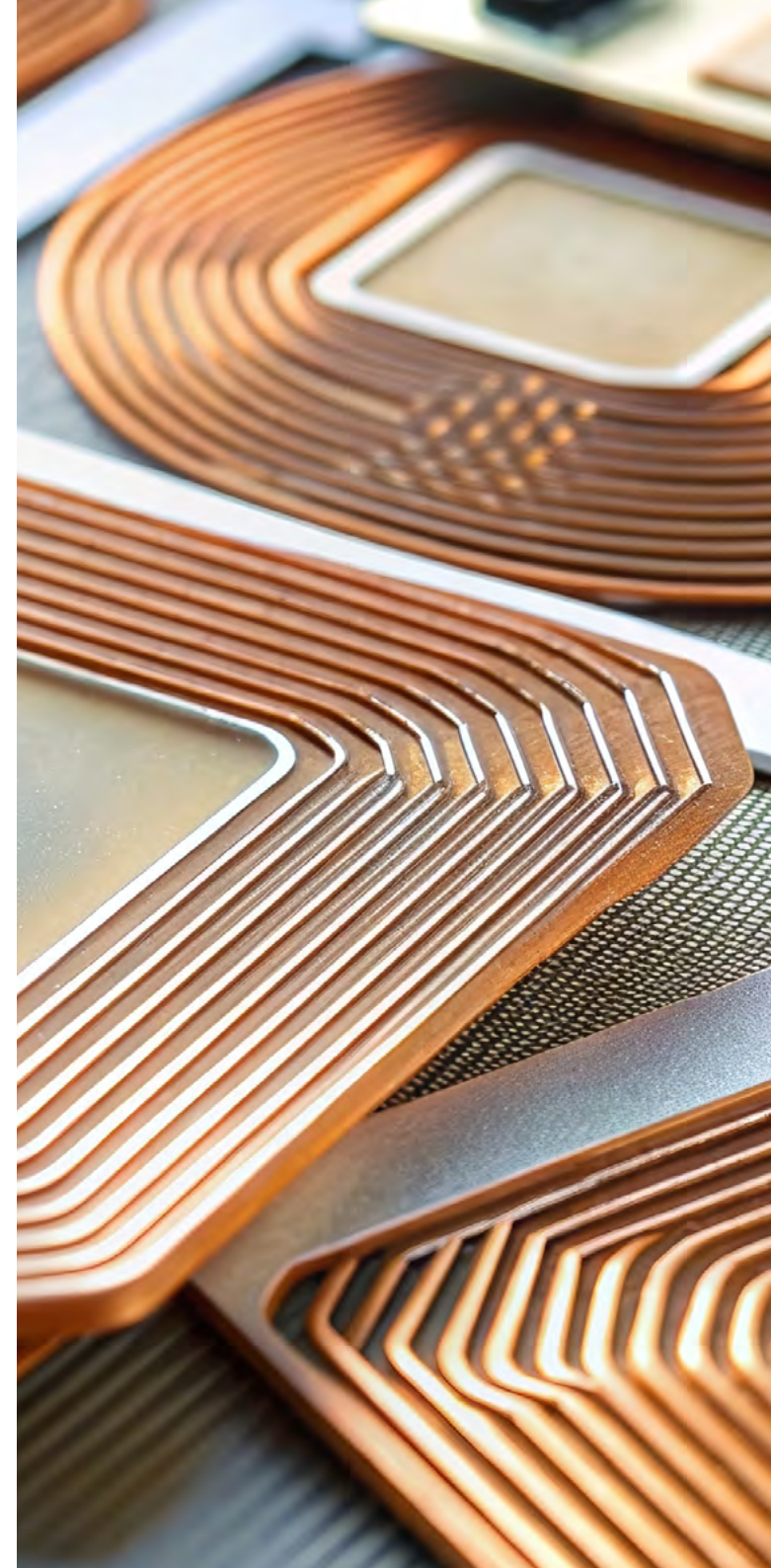
What is NFC and NFP?

NFC is a wireless frequency which enables data exchange between devices like smartphones and other NFC-enabled objects.

In practical terms, Near Field Programming (NFP) uses NFC to simplify the process of setting up and configuring devices. Imagine setting up a new smart home device: instead of plugging it into a computer or navigating complex menus, you can simply tap your smartphone to the device. This action initiates a secure data transfer where your smartphone sends configuration instructions or updates directly to the device.

This technology is widely used in various applications. For instance, it's employed to program IoT (Internet of Things) devices, update access control systems, or customise wearable gadgets. The beauty of NFP lies in its ease of use and convenience - it eliminates the need for cables or extensive setup procedures, making device setup quicker and more intuitive for users.

Overall, NFP leverages NFC's capabilities to streamline device programming, offering a wireless and straightforward method for configuring electronics in our increasingly connected world.





6000 Sounder Range

Loop-powered sounders that demand
attention

Addressable Sounder

A sounder is a crucial component that ensures your fire alarm system raises the alarm in an emergency. Our range of addressable sounders are loop-powered devices that deliver a powerful sound with minimal current consumption.

The addressable sounder range are low-current loop-powered devices that deliver an impressive sound output of 100dB(A) at one metre. The sounder offers three distinctive tones: warble, continuous, and pulse. Control is at your fingertips, allowing you to adjust the volume across three levels—100dB(A), 95dB(A), and 75dB(A), all configured at the main fire alarm control panel.

Talking sounder variants are equipped with integrated voice-enhanced sounders, pushing the number of audible sounds to fourteen. These units can deliver synchronised alert and evacuation messages around a building, removing any ambiguity, particularly for anyone unfamiliar with the building alert and evacuation strategy, enabling a more prompt and safe building evacuation.



Sounder Variations

Like other Protec products, design is vital, and our sounder range is no different. By combining products, we strive to reduce installation and commission time. That's why all our sounders come complete with our FAST™ addressing and incorporate loop isolators into the device.

We take this design philosophy further by incorporating our sounder technology into other Protec products, such as our VAD and sensor range, negating the need for multiple devices and streamlining the design and installation experience for designers, engineers, and end-users.



Wall Mounted

The 6000/SSR2 is available in red and white body colours. With versatility through two base options, the standard 'shallow' for a less intrusive appearance or an optional 'deep' base, which offers an IP65 rating, makes it suitable for indoor and outdoor installations. The deep base welcomes surface-mounted cables to converge directly into the sounder, further streamlining the setup.



Sensor

Our 6000PLUS sensor range combines alarm and detection into one unit. The synergy technology creates an all-in-one solution without requiring additional bases, devices or system addresses.



Discreet

Specifically designed to go unnoticed and blend into a contemporary space, our discreet sounder is a sounder disguised as a sensor. These prove great for rooms where aesthetics are essential when red wall-mounted sounders are deemed unsightly, and detection isn't needed or done by other methods.

Vocalising an Evacuation

The beauty of the Protec talking sounders isn't limited to fire alarms. With seven voice messages and a 'bell' sound, harmonising with the three traditional fire alarm tones from our sounder range. You can select voice messages from the predefined options, allowing you to repurpose the fire alarm as a class change or school lockdown system.

Did you know?

A Protec talking sounder has 14 predefined tones/messages plus the ability to add your own

"May I have your attention, please? An incident has been reported in the building? Please listen for further instructions."

"Attention, attention. This is an emergency. Please leave the building by the nearest available exit."

"Attention, please, attention, please. Fire has been reported in the building. Please leave the building immediately by the nearest exit."

"This is a test message. No action is required."





Visual Alarm Devices

Bright lights to instigate an evacuation

Visually Address the Emergency

Visual Alarm Devices (VAD's) are high-output LED beacons that alert deaf or hard-of-hearing people of a fire in a building. They work by emitting flashing pulses of bright white when the fire alarm is activated. The Protec VAD's offer intense attention-grabbing light, which can be seen around a room, making them unavoidable in a fire.

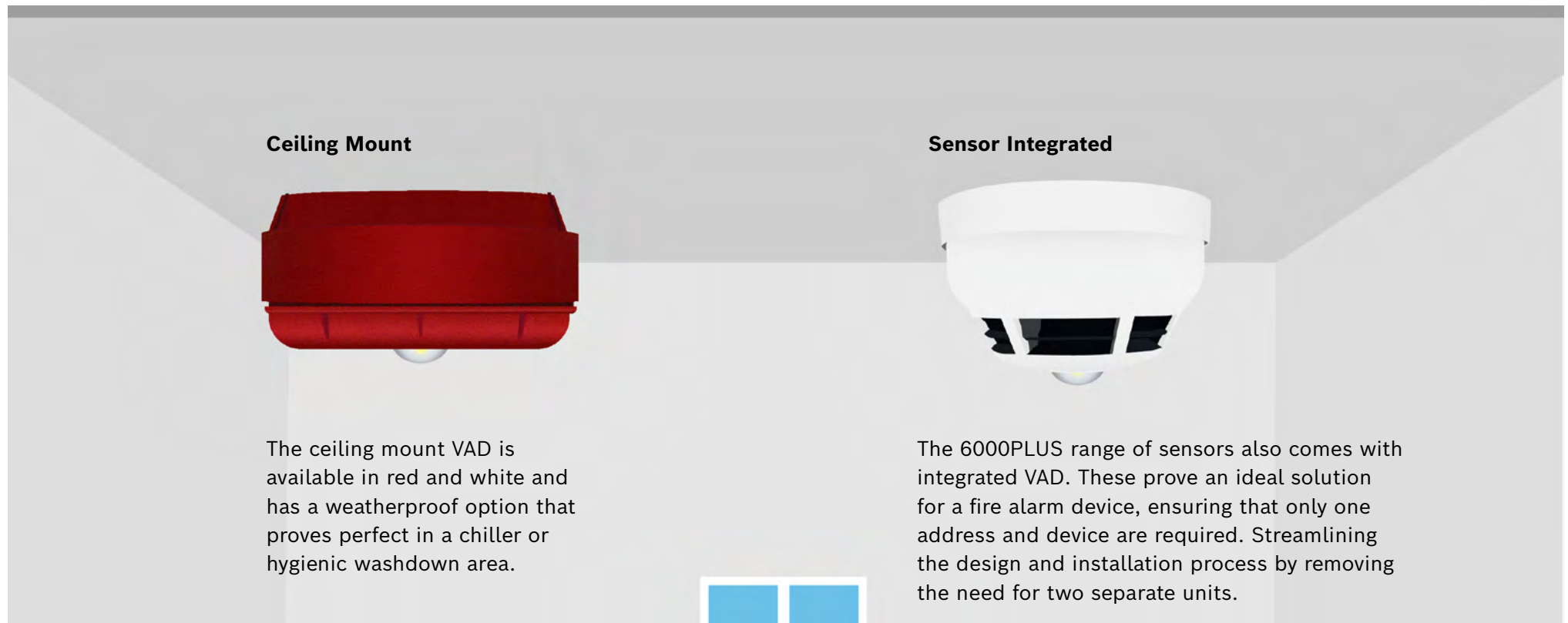
Our range of visual alarm devices meets industry regulations and is purposely designed to fit all types of scenarios to ensure the correct coverage in an emergency. Our VAD's redefine efficiency by embracing low-consumption loop-powered technology, removing the need for additional power supplies and cables.

Like all other Protec addressable devices, they utilise our 6000PLUS protocol, meaning our VAD's are easy to install and commission due to our FAST™ addressing method.



Ceiling Mounted VADs

Protec provides several ceiling mount options for VADs, which are manufactured to offer the regulatory high-output light within low-ceiling areas where a detector isn't required or when other forms of detection are in place. These provide a great solution to adding devices into low-ceiling areas such as toilet cubicles and changing rooms, etc.



For illustrative purposes only.

Wall Mounted VADs

Wall-mounted VAD's project light over a more significant amount of space. These VADs prove beneficial in high ceilings areas, such as warehouses, shopping malls, etc., where a ceiling mount alternative isn't suitable.

The design of our wall-mounted VAD range is such that it offers the optimum spread of light. By angling the high-output LED, it directs the light downwards and outwards, optimising its path and making an excellent visual notification in an emergency.

Wall Mount



The wall mount VAD is available in red or white and is created to offer sufficient light to high-ceiling areas where a ceiling VAD isn't possible. The wall-mounted VAD range also includes a weatherproof option, which proves ideal for chilled warehouses or hygienic washdown areas.

Combined Wall Mount



Our combined unit integrates a VAD into a traditional wall-mounted sounder. Created to offer both audible and visual alarms in noisy environments. Like our single wall-mounted VADs, the units still provide the same angled LED design to ensure optimum light performance.

For illustrative purposes only.



Power Supplies

Ensure your critical systems stay powered
and protected

Reliable and Efficient Power Management

Protec's series of power supplies are manufactured to power our range of life safety and security systems. Adding intelligence to a simple power supply through our system monitoring makes our units ideal candidates for power and battery backup to life-critical safety systems.

1 Amp Power Supply Unit - 9100EN

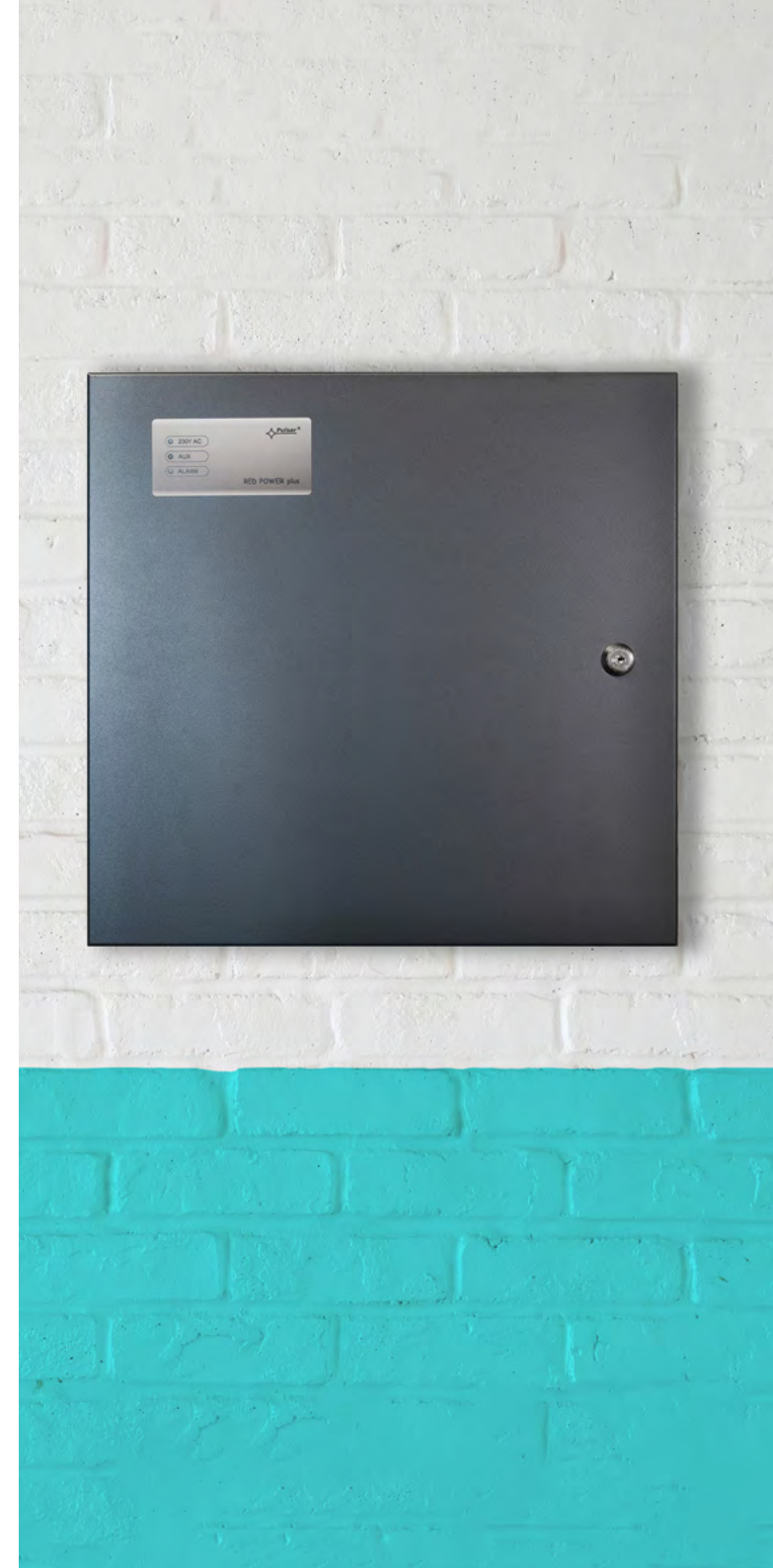
The Protec 9100EN power supply is specially created to offer dependable and compliant power output of 24 Volt 1 Amp rated for building fire systems and access control applications. Its intelligent battery charging, monitoring of mains and battery status, protection mechanisms, and diagnostic indicators are some of the key features that make it the reliable choice. In the event of a mains power outage, the unit automatically switches to a standby battery supply. The standby batteries are intelligently charged and monitored to ensure they are in optimal condition if they are needed.

10 Amp Power Supply Unit - EN 54C-10A

The EN 54C-10A power supply and charger is a lightweight and efficient unit that complies with the latest version of EN 54-4. It is designed to work seamlessly with Protec's 24 Volt dc equipment range, delivering a consistent 24 Volt dc output from a 230 Volt ac mains input. In the event of a mains power outage, the unit automatically switches to a standby battery supply. The standby batteries are intelligently charged and monitored to ensure they are in optimal condition if they are needed.

Key Benefits

- EN 54-4 compliance
- Intelligent battery charging
- LED status indication
- Mains battery switching
- Battery monitoring
- 24V dc output





If you require more information contact us today
protec.co.uk | sales@protec.co.uk
+44 (0)1282 717171