

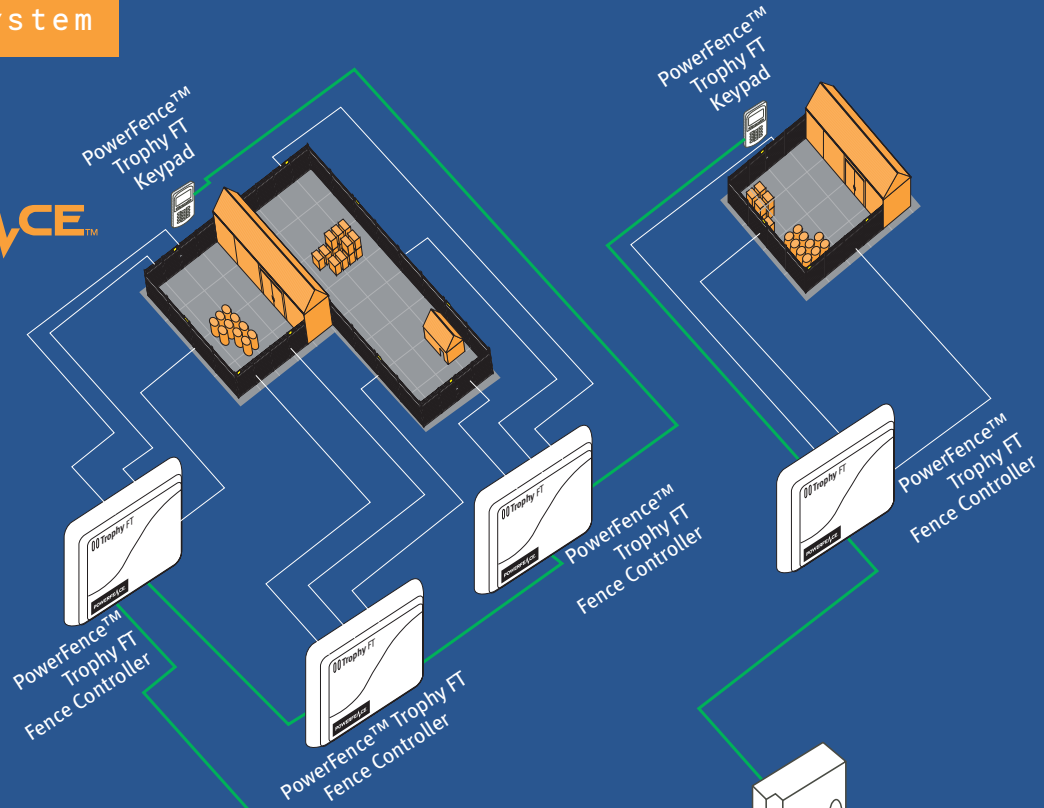
# PowerFence™ Trophy FT System Catalogue



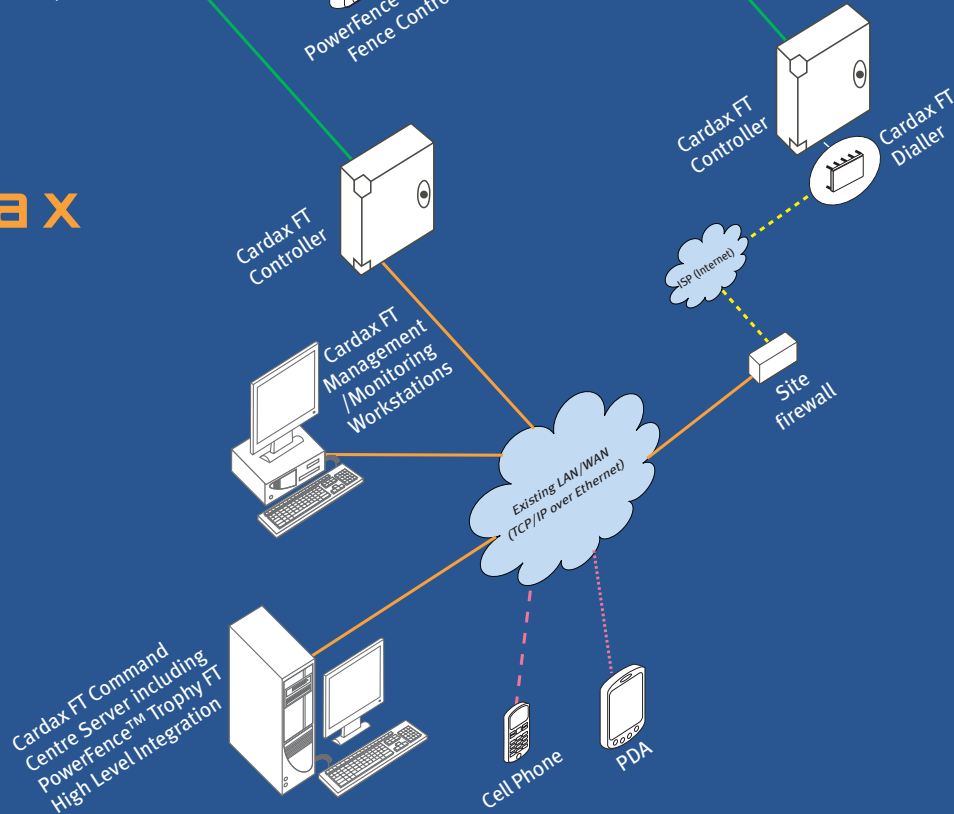
From the  GALLAGHER suite of security systems

# PowerFence™ Trophy FT System

**POWERFENCE™**



**cardax**



## Cardax FT .... The platform for integration:

- Electronic access control
- PhotoID
- Intruder alarms
- Interfaces for other systems: DVR, Intercom, Elevator, Building Management, People Management ...
- Cardax FT Online Manager web interface
- PowerFence™ Trophy FT perimeter security

System configuration, network capacities and the volume of system activity affect performance. Please contact Gallagher Security Management Systems for advice.

### Legend

- Internet Protocol
- LOCAL BUS High Speed RS485
- GBUS Low Speed RS485
- - - Dial-up Connection
- ..... Wireless TCP/IP Comms
- - - SMS Comms
- Hard Wired Connection

# Introducing PowerFence™ Trophy FT

PowerFence™ Trophy FT integrates the unique advantages of advanced PowerFence™ perimeter security with the sophisticated integration platform provided by Cardax FT. The integrated solution enables sites to manage system-wide security through one management platform, through a single user interface.

Gallagher Security Management Systems, a division of Gallagher Group, is a global leader in security fencing. Over 60 years of experience in researching and developing electric fence systems has enabled us to develop PowerFence™ systems, solutions for advanced perimeter protection.

PowerFence™ perimeter security solutions are founded on two core principles:

- i. Active Deterrent – Incorporating purpose-designed electric fences, PowerFence™ systems actively deter attempts to breach the perimeter by delivering a safe, non-lethal shock to the would-be intruder
- ii. Detection – Attempts to breach the fence are detected and generate alarms providing information for an appropriate response.

Through high level integration with the Cardax FT electronic access control and intruder alarm system, PowerFence™ Trophy FT systems combine all the unique advantages of PowerFence™ perimeter security technology with the sophisticated integration platform of Cardax FT.

Cardax FT provides sites with the opportunity to incorporate any combination of the following:

- › PowerFence™ perimeter security
- › Electronic Access Control and PhotoID
- › Intruder alarms
- › Interfaces for biometric systems
- › Interfaces for imaging systems
- › Interfaces for elevator and building management systems such as air conditioning and lighting
- › Interfaces for sharing cardholder data

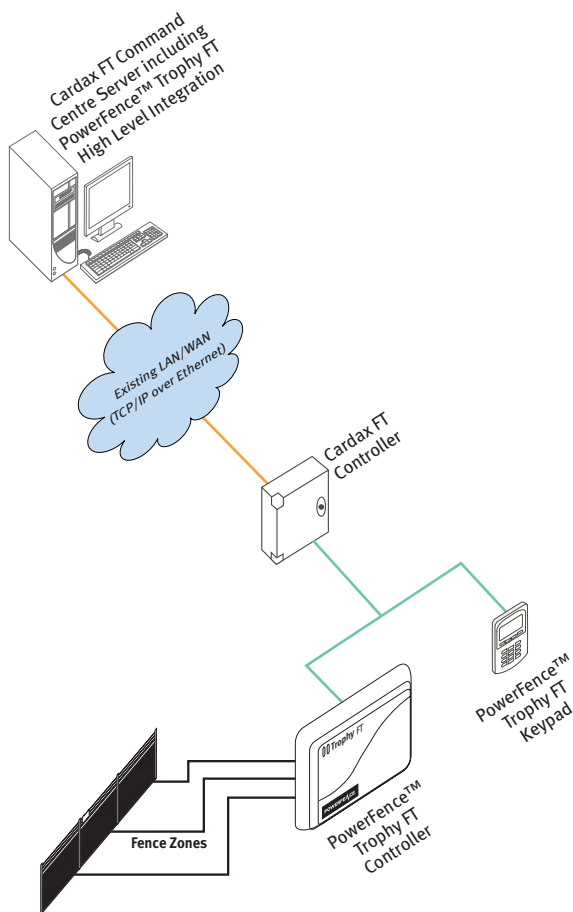
**The integrated solution provides the opportunity to implement layered security, from the outside in.**

The information in this catalogue describes the perimeter system components for the PowerFence™ Trophy FT system and introduces the Cardax FT system on which it resides. For more information about PowerFence™ systems please visit [www.powerfence.com](http://www.powerfence.com) and for Cardax systems [www.cardax.com](http://www.cardax.com). Alternatively contact your PowerFence™ or Cardax partner.



# PowerFence™ Trophy FT System Architecture

PowerFence™ Trophy FT components are integrated through High Level Integration with the Cardax FT system architecture. All the features available in the Cardax FT system are available to PowerFence™ sites for advanced perimeter security.



The PowerFence™ Trophy FT system for perimeter security comprises:

- › Cardax FT Command Centre, the central management software for the integrated system for configuration, control and monitoring
- › Cardax FT Controllers, intelligent TCP-IP field controllers which support the PowerFence™ Trophy FT Fence Controllers and Keypads
- › PowerFence™ Trophy FT Fence Controllers to manage the regulated pulses sent around the fence and Fence Zones
- › PowerFence™ Trophy FT Keypads to enable localized control for example, setting and un-setting alarm zones on the fence
- › All the PowerFence™ electric fence components

**For PowerFence™ Trophy FT systems, the Cardax FT scalable technology platform provides scope for unlimited perimeter security management across distributed sites.**

# Introducing Cardax FT

Core Security  
Integration Platform

Cardax FT technology has been developed using industry standard software development tools to deliver the latest platform for integrated security ... including PowerFence™ Trophy FT systems

PowerFence™ Trophy FT systems are configured and managed through Cardax FT, an electronic access control and intruder alarm system.

Designed and manufactured by Gallagher Security Management Systems, the key features of the Cardax FT technology platform include:

- › Microsoft® Windows® Operating Systems
- › Microsoft® SQL Database options
- › OPC enabled for sharing event information
- › XML Interface for sharing cardholder data
- › Encrypted communications
- › Internet compatible
- › Upgradeable and scalable solutions

## Encryption

One of the attributes that sets Cardax FT apart is the high level of security inherent in Cardax FT system communications. The system employs 40-bit Secure Socket Layer (SSL) encryption to encrypt data communicated over the network. This includes communications between Cardax FT Command Centre server and Cardax FT Controllers, and peer-to-peer Cardax FT Controller communications. High security system options offering higher levels of encryption are available.



business partner



# Cardax FT Command Centre

PowerFence™ Trophy FT is supported through High Level Integration with Cardax FT Command Centre, the central management tool and user interface for the system.

In addition to managing access control, Cardax FT Command Centre leverages a client-server architecture to enable authorized system operators to:

- › Configure the site and all system components including PowerFence™ Trophy FT Fence Controllers, Keypads and Fence Zones
- › Configure events and alarms, alarm instructions and action plans; for example, intruder detection on PowerFence™ Trophy FT Fence Zones
- › Monitor and process alarms including those generated by the PowerFence™ Trophy FT system components through alarm windows and site plans
- › Retrieve and report on stored system information.

All the features of Cardax FT Command Centre from site plans to audit trail and reporting options are available. System features that are especially relevant for PowerFence™ Trophy FT systems include:

- › Site plans that act as a graphical representation of the site, and reflect the real time status of items
- › Full alarms management, with the ability to channel all alarms from across distributed sites through the Cardax FT system for appropriate action
- › Comprehensive audit trail, and flexible searching and reporting options
- › System division, enabling the system to be segmented for management and monitoring purposes
- › Extensive operator privileges to control who can view and edit information.

Cardax FT caters for small, single sites, through to large multinational, enterprise wide installations, ensuring scalability as systems grow. For PowerFence™ Trophy FT systems it means additional PowerFence™ Trophy FT Fence Controllers, Keypads and Fence Zones can be added as required to fences located across multiple sites.



### Cardax FT Online Manager

Cardax FT Online Manager is a thin-client interface into the Cardax FT system using client-server architecture. It is an online management tool for distributing management responsibility of alarms and/or cardholders – from anywhere, at anytime. For PowerFence™ Trophy FT systems it means that security guards and managers can be mobile, monitoring perimeter security alarms through PDAs and cell phones.

For more information, please refer to the datasheets for Cardax FT Command Centre and Cardax FT Online Manager.

# Cardax FT Controllers 3000 and 5000GL

Cardax FT Controllers are intelligent TCP/IP field controllers which support the integration of PowerFence™ Trophy FT Fence Controllers and Keypads in the Cardax FT system. They make all the security decisions in the field, independent of Cardax FT Command Centre.

Providing flexible configuration options to meet site specific requirements, Cardax FT Controllers:

- > Support peer-to-peer communications with any other Cardax FT Controller over a LAN/WAN for the purposes of monitoring, back-up and control independent of the Command Centre
- > Communicate with the Cardax FT Command Centre using TCP/IP, a world standard network and Internet transmission protocol, over an Ethernet network
- > Support downloadable code for software upgrades.

The Cardax FT Controllers also support dial-up communications for the support of remote sites and for off-site alarm monitoring.



There are three variants of Cardax FT Controllers: 3000-8R, 3000-4R and 5000GL. All variants incorporate a GBUS port for the support of:

- > 8 PowerFence™ Trophy FT Fence Controllers
- > A total combination of 4 PowerFence™ Trophy FT Keypads and Cardax FT Remote Arming Terminals
- > 8 Cardax FT GBUS Universal Reader Interface and I/O devices.

The Cardax FT Controller 5000GL also incorporates a LOCAL BUS port for the support of 16 Cardax FT LOCAL BUS devices for I/O expansion and reader connections. The LOCAL BUS port can be converted to a second GBUS port providing further flexibility in system design.

The Cardax FT Controller 5000GL is ideal for ‘alarms only’ applications. This may be the case where the Cardax FT system is being used to primarily support distributed networked perimeter security.

On-board connections for each Controller are listed in the table below:

	Cardax FT Controller 3000-8R (3000-4R)	Cardax FT Controller 5000GL
 GBUS port	1	1 (or 2)
 LOCAL BUS port	-	1 (or 0)
Cardax Readers	8 (4)	-
Wiegand Readers	4 (2)	-
4-State Balanced Inputs	16 (8)	4
Relay Outputs	8 (4)	1
Flash memory* defaults	Approx. 10,000 events and 30,000 card records.	Approx. 20,000 events and 60,000 card records.

\* This ratio can be reconfigured

For more information, please refer to the data sheets for the Cardax FT Controller 3000, Cardax FT Controller 5000GL, Cardax FT GBUS I/O Devices and Cardax FT LOCAL BUS I/O Devices.



# PowerFence™ Trophy FT Controller

The PowerFence™ Trophy FT Fence Controller is a key component to support the high level integration of the PowerFence™ perimeter security with the Cardax FT security system.



PowerFence™ Trophy FT Fence Controllers monitor and control Fence Zones, actively deterring and detecting intruder attempts.

They do this by sending regulated electrical pulses around configured high voltage Fence Zones (sections) of the physical PowerFence™ perimeter fence. The pulse interval and power level are properties configured for the PowerFence™ Trophy FT Fence Controller.

Key features of the PowerFence™ Trophy FT Fence Controller include:

- › High Voltage Zone Separation to ensure that if an intruder attacks one zone of the fence, the performance of the remaining zones is not affected
- › Voltage monitoring to detect and report an alarm should the earth system be compromised
- › Pulse synchronization to enable the PowerFence™ Trophy FT Fence Controller to be integrated with other electric fences in close proximity
- › Smart battery back up to maintain site security if AC power fails
- › Differentiating maintenance warnings from real security alerts to help sites action an appropriate response.

The PowerFence™ Trophy FT Fence Controller is a GBUS device in the Cardax FT system. Communications between the PowerFence™ Trophy FT Fence Controller and its associated Cardax FT Controller are secured using 40 bit AES encryption.

For more information please refer to the PowerFence™ Trophy FT Fence Controller data sheet.



PowerFence™ Trophy FT Fence Controller

## PowerFence™ Fence Integrity Monitor

The PowerFence™ Fence Integrity Monitor is a single zone alarm detector that can operate on the PowerFence™ perimeter fence. An optional product for PowerFence™ Trophy FT systems, it enables the detection of fence damage without the deterrent feature of the active, high voltage electric pulse.

For more information, please refer to the PowerFence™ Fence Integrity Monitor data sheet.



PowerFence™ Fence Integrity Monitor

# PowerFence™ Trophy FT Keypad

PowerFence™ Trophy FT Keypads enable authorized users to manage and monitor Alarm Zones, Fence Zones and Inputs onsite for effective alarms management.

G  
GBUS



PowerFence™ Trophy FT Keypad

The PowerFence™ Trophy FT Keypad provides a user interface for alarms management in the field.

Key features of the PowerFence™ Trophy FT Keypad include:

- › A key pad for PIN entry and arming and disarming of Alarm Zones
- › Real-time information on Fence Zones voltages and the status of Alarm Zones and Inputs
- › Viewing and acknowledging alarms
- › One step logoff key for quick and simple exit
- › A graphical LCD capable of displaying messages and prompts
- › Context sensitive function keys enabling the user to perform actions which they are privileged to perform.

The PowerFence™ Trophy FT Keypad is a GBUS device in the Cardax FT system. Communications between the PowerFence™ Trophy FT Keypad and its associated Cardax FT Controller are secured using 40 bit AES encryption.

For more information please refer to the PowerFence™ Trophy FT Keypad data sheet.

# PowerFence™ Perimeter Fence Components

PowerFence™ perimeter fence components have been specifically designed to meet the demands for high security catering for environmental extremes ... from the desert to the sea, from summer to winter.



## Everything you need

There is an extensive range of high quality PowerFence™ perimeter fence components to accommodate full height or wall top applications:

- › Intermediate posts and rods
- › Insulators
- › High voltage cables
- › Sleeve insulators and caps
- › Wall top strain support posts
- › High performance earth stakes and clamps
- › Hardware to secure gates
- › Warning signs
- › And more ...

The following products described are examples to demonstrate the consideration that has gone into each product that together make up PowerFence™ systems. For more information, please contact your PowerFence™ dealer or Gallagher Security Management Systems.

# PowerFence™ Perimeter Fence Components

The range of PowerFence™ perimeter fence components enables custom-designed fence configuration to suit your specific site requirements.

## Diagnostic Tools

PowerFence™ dealers and customers have access to a range of diagnostic tools to analyze faults. These include:

- › Digital Volt Meters to display fence voltage to enable tracing and servicing fence line conditions
- › Fence Impulse Analyser to analyze all variables related to the operation of the PowerFence™ perimeter fence for example, energy, peak voltage, peak current, pulse duration and interval



DVM2

## Security Posts

PowerFence™ Security Posts are available in a range of lengths and thicknesses to accommodate both the site's security and environmental requirements. Key features include:

- › Pointed tips to prevent intruders from climbing over the fence
- › Pre-punched holes for insulators and offset mounting blocks to assist installation
- › Roll-formed to increase strength
- › Fully hot dipped to galvanise the steel posts at the end of the production process, protecting all surfaces from corrosion.



Security Post

## PowerFence™ Insulators, Hooks and Springs

PowerFence™ insulators, hooks (strains) and springs have been specifically designed to meet security requirements. Options are available to accommodate a wide variety of installation applications including corners, gates and fence termination.

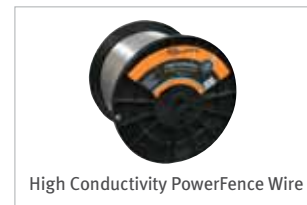


Pull Through Insulator

## PowerFence™ Wire

PowerFence™ wire options include:

- › High tensile steel fencing wire which is fully galvanised coated to prevent corrosion
- › High conductivity fencing wire which never rusts. Made of an aluminium alloy to help maintain the pulse strength right through to the end of the fence.



High Conductivity PowerFence Wire

## Double Insulated Cable

PowerFence™ Cable is available for under-gate and lead-out applications. The cable is double insulated to guarantee high voltage insulation even when submerged in water. A high conductivity option is available to accommodate lead-out cabling over long distances.



Double Insulated Undergate Cable

# Cardax FT For Intelligent System Design

Maximize the value from your security system: enhance it by interfacing with other systems to enhance overall site security.

## System Integration

Cardax FT provides the platform for a complete security solution through system integration capabilities and Cardax FT optional features.

## Integration with Imaging Systems

The ability to audit information retained in the Cardax FT system, complemented with images from either CCTV or DVR systems, provides a visual and auditable record of system events, which can be relied upon to provide evidence if needed.

- › Through standard interfaces, Cardax FT has also been integrated with DVR systems marketed by Cieffe, Dallmeier, Dedicated Micros, DigiOp, DVTel, ECamit, Genetec, Loronix, Panasonic, 3SSystems, Smartsight and Verint. Contact us for the latest information.
- › Cardax FT Challenge provides the ability to double-check the visual identity of cardholders passing through a nominated perimeter gate or door using visual comparison of a cardholder image against a live image from a third party system.



Cardax FT Command Centre

## Flexible Integration

Using the data available via the OPC (Alarms and Events) Interface and the XML Interface, the ability to integrate Cardax FT with other business systems delivers efficiencies and cost savings:

- › Through the OPC Interface, Cardax FT can be used in conjunction with a Personal Digital Assistant (PDA) or mobile phone making it ideal for mobile security monitoring
- › The Cardax FT Controller API for alarms and events enables live event data from third party systems to be imported into Cardax FT. This ensures continuity of integrated functions such as DVR should the Cardax FT Command centre server be unavailable
- › Cardax FT can be integrated with Building Management Systems to achieve efficiencies in, for example, lighting and air-conditioning
- › Where electronic access control has been configured, Cardholder Import/Export provides the ability for cardholder data to be shared with external sources such as PeopleSoft® and SAP® HR systems.

Gallagher Security Management Systems has a continuing R&D program for system development. Please contact us for further information on interface options.

# System Maintenance

Maintain site security through professional installation, site certification and by electing a Cardax FT Software Maintenance Agreement.

## A Professional Solution

The professional installation of your PowerFence™ Trophy FT system ensures your investment in perimeter security is maximised.

Following its installation, Gallagher Security Management Systems professionals or approved agent can inspect your PowerFence™ to certify it has been installed in accordance with the Gallagher PowerFence™ Code of Practice. This provides reassurance to customers and distributors and enables us to offer customers a guarantee on their investment.

The Gallagher Code of Practice outlines the minimum acceptable standards for certification of PowerFence™ systems. It covers the strict safety, installation and operational requirements of the system and its components. The Code exceeds national and international standards and was devised by Gallagher Security Management Systems to ensure professional standards.

In addition to site certification, Gallagher Security Management Systems recommends including perimeter fence audits as part of your regular security maintenance programme to ensure your PowerFence™ Trophy FT system is working in peak condition.

## Software Maintenance Agreements

The Cardax FT Software Maintenance Agreements programme provides a cost-effective means of obtaining future software upgrades and ensures sites keep pace with developments. It enables sites to:

- › Keep pace with technology and Microsoft® operating platform releases
- › Benefit from releases that will enhance system performance
- › Receive new core system functionality
- › Elect new optional features and configure new PowerFence™ and Cardax hardware devices as they are released.

The first year of a Cardax FT Software Maintenance Agreement is included with the purchase of Cardax FT Command Centre. The only prerequisite is that the Software Maintenance Agreement documentation is completed within 60 days of the date the site license was created. More information about Software Maintenance Agreements is available from Gallagher Security Management Systems.



Certified PowerFence™ System Certificate

# About Gallagher Security Management Systems

Protecting your world

Gallagher Security Management Systems, a division of Gallagher Group Ltd, markets PowerFence™ perimeter security systems and Cardax electronic access control and intruder alarm systems.

Established in 1938, Gallagher Group Ltd is the operating company for an international organisation which encompasses research and development, manufacturing and marketing of its solutions – security management systems and animal management systems.

Gallagher Group is a well-established global business group with distribution established in over 100 countries across Europe, North and South America, Asia, Africa, Australia and the Pacific.

For more information about Gallagher Group, please visit our web site at [www.gallaghergroup.co.nz](http://www.gallaghergroup.co.nz)





For more information, please contact:

[www.powerfence.com](http://www.powerfence.com)

**Disclaimer**

System configuration, network capacities and the volume of system activity affect performance. Please contact Gallagher Security Management Systems for advice.

In accordance with the Gallagher Group policy of continuing development, design and specifications are subject to change without notice.

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