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# Intelligent Intrusion Detection

GALLAGHER D10 TAUTWIRE SENSORS & D21 DISTURBANCE SENSORS INTEGRATION WITH GALLAGHER  
COMMAND CENTRE - HIGH INTEGRITY, LOW MAINTENANCE, SIMPLE OPERATION WITH ONE INTEGRATION



# An innovative integration enabling the D21 Disturbance Sensor and D10 Tautwire Sensor to be configured and monitored by Gallagher Command Centre for the purpose of enhanced perimeter intrusion detection.

## **D21 DISTURBANCE SENSOR**

The D21 Disturbance Sensor can measure the transfer or changes of energy within a physical structure when disturbed. The D21 sensor analyses the information and signals an alarm event when certain limits are exceeded. The D21 Sensor is suitable for metallic type fence structures. It performs well on internal and external walls and floors. Its small profile allows use in areas where other sensors are impractical. It can be easily mounted using two mounting screws and embedded cable connection.



An important feature of the D21 sensor is the alarm processing software which rejects environmental conditions such as change in temperature or disturbances caused by wind and rain. Detection parameters can be defined remotely to achieve the best balance between probability of detection and nuisance alarms.

The D21 Sensor has the following qualities and value added components making it suitable for perimeter detection:

- > Retrofit detection solution - fast installation times - can be mounted to existing fences or structures
- > Very cost effective when compared to other perimeter technologies.
- > Detection parameter control on individual sensors e.g. built-in tilt measuring capability that monitors any angular change in position of the structure
- > High integrity detection (adjustable parameters in two detection areas)
- > Low nuisance alarm rates
- > Unmatched sensitivity
- > Cost effective & low maintenance -pre-wired, fully encapsulated within a cast alloy shell to suit all environmental conditions - solid state device
- > Simple installation indoor or outdoor
- > Highly configurable to suit a variety of environments and multiple applications

- > Each sensor can be uniquely identified so alarms can be pinpointed to the nearest sensor
- > Uses pre-programmed behavioural profiles to discriminate between alarm and non-alarm events. The preprogrammed parameters are Sensor Address, Tilt, Dynamic and Event Time Thresholds.

Installation examples include: Safes and vaults, gates, fence structures, glass windows, poles, walls and roof or any combination of these features.





### D10 TAUTWIRE SENSOR

D10 Tautwire Sensors measure the mechanical disturbance of a tensioned fence wire. When a wire is disturbed through an attack – either physically climbing or by an attempt to cut the wire – the tension balance is altered. This creates an alarm in the Gallagher Command Centre software. This low maintenance system offers a high probability of intrusion detection with a low nuisance alarm rate, throughout a long lifecycle.

The D10 Tautwire Sensor has the following unique qualities making it ideal for perimeter detection:

- > Auto calibration of sensors - No seasonal wire tension adjustment or sensor calibration is required
- > Individual processor per sensor ensures equal detection sensitivity on each wire
- > Recognition of environmental noise and intrusion attempts per wire
- > Intelligence within the Gallagher D10 Tautwire sensor allows it to differentiate between environmental changes and attacks on the property
- > The unique technology within the Gallagher D10 Tautwire sensor allows detection on fence wires with a lower tension enabling lighter fence construction reducing overall installation and maintenance costs.

### GALLAGHER SECURITY SYSTEM

The Gallagher security management system consisting of a central server, multiple workstations and multiple controllers, all using a standard network infrastructure to provide communication between the component parts of the system. The comprehensive Microsoft® Windows® based security system provides high-level security management for perimeter protection, global access control, intruder alarms and alarm management requirements. Gallagher Command Centre is the central management software for the Gallagher security system (formerly Cardax FT). The software is powerful and has a number of features, including those that provide the ability to integrate with third party systems.



# What are the Benefits of Integrating D10 & D21 Sensors with the Gallagher Command Centre?

## **Effective Management and Monitoring of Perimeter Alarms and Events**

The Gallagher system allows effective management of alarm events highlighted by the D10 and/or D21 Sensors as the integration will allow approved users to view alarm details and instructions, then acknowledge and process alarms. Users have the ability to identify the source of the alarm right down to an individual sensor.

## **Ability to Monitor Multi-Sites, Multi-Zones from One Central Work Station**

Authorised system operators can configure all system components of the security system for either individual or multiple sites from one central work station, irrespective of the number or type of sensors installed. This feature eliminates the need for operators to be in the field monitoring individual zones or sensors delivering your organisation efficient work flows and reduced downtime.

Gallagher Command Centre software also provides extensive operator privileges to control who can view and edit information.

## **Flexibility to Design Installations for Ultimate Detection Coverage**

Integration of either D10 Tautwire Sensors only, D21 Disturbance Sensors only or a combination of both to provide ultimate detection coverage. Installation can incorporate a sensor response profile (more or less sensitive per sensor) to suit the location, application and environment of the installation.

## **Comprehensive Audit trail with Flexible Search and Reporting Options**

If the monitored perimeter or asset is attacked, an alarm is raised in the Gallagher Command Centre. The alarm details include the Fence Zone affected, the date and time that the event occurred. All alarms and events are permanently recorded in the Gallagher system event database.

A full audit trail of all alarm events is maintained and can be searched in the Gallagher system event database. Operators can utilise the Find Tool to search and report perimeter related events and items. Reports on system activity and performance are also available through Gallagher Command Centre and can be retrieved for future reports.

The Gallagher security system delivers full alarms management, with the ability to channel all alarms from across distributed sites for appropriate action.

## **Enhanced Perimeter Security**

When the Gallagher D21 Tautwire or D10 Disturbance sensors are installed in conjunction with a Gallagher electric security fence your perimeter security is greatly enhanced. The integration of these sensors enables the end user to maintain its perimeter security without deterrent pulses monitoring perimeter security in the daytime but providing the ability to arm the deterrent mode automatically at a preset time or when the facility is under a higher threat level.



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# Reference Sites

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## **Air Force Base**

*South Africa (2007)*

14km

> D21 Sensors

## **Fuel Storage Facility**

*United Kingdom (2007)*

4km

> D21 Sensors

## **Army Base**

*South Africa*

1.4km

> D10 Sensors

## **Department of Correctional Services**

*South Africa*

70km across 58 sites

> D21 Sensors

> D10 Sensors

## **Correctional Facilities**

*USA*

3.5km

> D10 Sensors

## **Mining Facility**

*South Africa*

5.8km

> D21 Sensors

## **Nuclear Power Plant**

*South Africa (2007)*

3km

> D21 Sensors

> D10 Sensors

## **Roads & Traffic Authority Depots**

*Australia*

450m

> D21 Sensors

## **Customs Departments**

*Australia*

400m

> D21 Sensors

## **Local Council Depots**

*Australia*

300m

> D21 Sensors

## **Winery maintenance areas**

*Australia*

400m

> D21 Sensors

## **Water Utilities**

*Australia*

200m across multiple sites

> D21 Sensors

## **Residential Compounds**

*Malaysia*

> D21 Sensors

## **Tata Motors**

*India*

> D10 Sensors

# Case Study

## Tata Motors India



Tata Motors Limited is the world's fourth largest truck manufacturer, and the world's second largest bus manufacturer, with consolidated revenues of Rs.70,938.85 crores (USD 14 billion) in 2008-09. It is the leader in commercial vehicles in each segment, and among the top three in passenger vehicles with winning products in the compact, midsize car and utility vehicle segments.

In January 2008, Tata Motors unveiled its People's Car, the Tata Nano, which India and the world have been looking forward to. The Tata Nano has been subsequently launched, as planned, in India in March 2009. A development, which signifies a first for the global automobile industry, the Nano brings the comfort and safety of a car within the reach of thousands of families. The standard version has been priced at Rs.100,000 (excluding VAT and transportation cost).

To support development of the vehicle, the company is constructing a new factory in a high residential area of Gujarat, India. Construction of India's largest automobile manufacturing site

will incorporate the country's first non-electrified, monitored perimeter security system supplied by Ibex Gallagher. Working in partnership with Advanced System Limited, IBEX Gallagher will be responsible for the installation of a 10-kilometre tautwire perimeter security system at the new factory.

Ibex Gallagher Business Development Manager, NV Gautham explains the opportunity to incorporate a tautwire perimeter security system in their project was driven by the company's desire to maintain a high level of credibility regarding safety.

"Ibex Gallagher has a strong work history with Tata and we were able to recommend a Tautwire system to allay safety concerns regarding an electric fence which may arise from residents." He explains, "Tautwire measures the mechanical disturbance of a fence with monitoring to a central alarm system without giving electric shocks."

While this is the first tautwire installation in India, Mr Gautham confirms that his

team has received extensive training from Gallagher Security technical managers who were also involved in original site testing with Tata representatives.

"We're confident this project will be a success as we have a previous work history with Tata. Our relationship began with the installation of perimeter security systems at the Tisco power grids and we have successfully secured four of these major sites over the past 7 years."

Although the initial contract pertains to the physical perimeter security system, Mr Gautham indicates there are further opportunities for his company.

"This site will be monitored on the Cardax FT platform and seamlessly integrated with CCTV systems"



# Technical Specifications

## D10/D21 SENSORS - GALLAGHER INTEGRATION

MAY 2011

Gallagher Command Centre	Version 6.02 or later
System Supported	Gallagher D10 Tautwire Gallagher D21 Disturbance Sensor

## COMMAND CENTRE HIGH LEVEL INTEGRATION (SOFTWARE) SYSTEM-WIDE CAPACITIES

Controller Support	Gallagher Controller 6000
Number of sensors per Controller	Up to 64 (32 per comms line) (Combination of D10 and/or D21)

## D21 DISTURBANCE SENSOR

Structure Type	Uncoated Galvanised Chainlink	Suggested sensor spacing 6-12 m
	Uncoated Galvanised Weld mesh	Suggested sensor spacing 9-20 m

## D10 TAUTWIRE SENSOR

Maximum Sensor Spacing	Mid-span on spans up to 100 metres One sensor per wire
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Disclaimer: System configuration, network capacities and the volume of system activity affect performance. Please contact Gallagher Security for advice. In accordance with the Gallagher Group policy of continuing development, design and specifications are subject to change without notice. Gallagher Security is a division of Gallagher Group Limited, an ISO 9001:2000 Certified Supplier. Copyright © Gallagher Group Limited 2011. All rights reserved.

