

Gallagher Trophy FT Fence Controller

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



TROPHY FT FENCE CONTROLLER

Trophy FT Fence Controllers actively deter and detect intruder attempts on the perimeter fence. They monitor and control perimeter security by sending regulated non-lethal electrical pulses around high voltage fence zones, sections of the perimeter fence.

CONFIGURATION OPTIONS

Trophy FT Fence Controllers are supported in Gallagher Command Centre, the server software of the Gallagher security system. The following properties can be configured for each Trophy FT Fence Controller:

- > Pulse interval ranging from 1.0 to 10.0 seconds
- > Power level ranging from 10% to 100%
- > Authorization source to synchronize the electric pulse of the Trophy FT Fence Controller with other electric fences in close proximity
- > 'Go Slow' settings which define the power level and pulse rate in the event of either an AC power outage or if the battery output is below a pre-set threshold; in either event triggering a warning
- > 'Stop battery' level which defines the backup battery voltage level at which the electric pulse will be switched off and alarms raised.

FENCE ZONES

A fence zone is a section of the perimeter fence (up to 300m/984ft length) which is assigned to a Trophy FT Fence Controller in Gallagher Command Centre. Up to three fence zones can be configured per Trophy FT Fence Controller.

The Trophy FT Fence Controller sends regulated electrical pulses around the fence zone. The status of each fence zone is monitored by the Trophy FT Fence Controller.

Fence zones are linked to Gallagher access alarm zones for raising and processing warnings and alerts that occur in the fence zone.

WARNINGS AND ALERTS

Warnings and alerts are typically configured for low and high voltage and pulse count.

- > A warning is generated when the voltage level falls below a threshold, typically 5kV, indicating that maintenance is required. For example, vegetation growth loading the fence.
- > An alert occurs at a lower Voltage threshold than a warning and is higher priority. It is indicative of an attack requiring urgent attention. For example, an attacker cutting the fence.

Differentiating warnings from alerts helps sites to determine the appropriate response and prevent unnecessary security response callouts.

INTRUDER DETECTION

When the electrical pulses are sent around the fence, the Trophy FT Fence Controller monitors the returning pulses. Any attempt to disable the fence, whether climbing, cutting or tampering with the fence, will be detected.

HIGH VOLTAGE ZONE SEPARATION

If an intruder attacks a fence zone the performance of the remaining zones will not be affected. Therefore, if the intruder causes an alarm and enters the site, they cannot easily escape through another zone, as the remaining zones will continue to be armed with the full deterrent.

PULSE SYNCHRONIZATION

The pulse synchronization enables the Gallagher perimeter fence to be integrated with other fences in close proximity. This ensures that the system operates within standards for pulse frequency through synchronizing pulses with adjoining fences.

EVENT LOG

All events relating to Trophy FT Fence Controllers and fence zones, including voltage logging, are date/time stamped and logged in Gallagher system via the Gallagher Controller (6000, 3000, 5000GL).

Events for voltage may be logged in response to a voltage change (e.g. when the fence voltage changes by more than 500V) and/or time interval (e.g. every hour). A comprehensive voltage report is available through Gallagher Command Centre.

INPUTS

The Trophy FT Fence Controller has two 4-state balanced inputs typically used for motion sensors or key switches.

The four states monitored are:

- > Open
- > Closed
- > Short Circuit (Tamper)
- > Open Circuit (Tamper)

Inputs can be configured for use anywhere in the Gallagher system.

END OF LINE RESISTORS

For ease of installation and configuration, typical wiring and resistance values used on Inputs that are connected to the Trophy FT Fence Controllers are defined in Gallagher Command Centre.

OUTPUTS

The Trophy FT Fence Controller has two relay outputs typically used for alarm outputs such as sirens. The Trophy output board is available to provide an additional 4 relay outputs.

An auxiliary DC output of up to 1A is available to power any relay outputs. Outputs can be configured for use anywhere in the Gallagher system.

COMMUNICATIONS AND CONNECTIVITY

Trophy FT Fence Controllers connect to the Gallagher controller GBUS port. They communicate via asynchronous RS485.

Up to 16 Trophy FT Fence Controllers are supported by each GBUS port.

DATA SECURITY

The Trophy FT Fence Controller communications between the Gallagher Controller (6000, 3000, 5000GL) and the Trophy FT Fence Controller are secured using 40 bit AES encryption.

MONITORED STATUS

The communications status between the Gallagher Controller (6000, 3000, 5000GL) and the Trophy FT Fence Controller is monitored via polling.

If the Trophy FT Fence Controller stops communicating an alarm will be raised at the Gallagher Command Centre.

HIGH PERFORMANCE HOUSING

The housing of the Trophy FT Fence Controller is purposely designed to accommodate an internal battery back up and support tidy cable management. It is weather resistant to IPX4.

TAMPER PROTECTION

Optical tamper protection is provided for the front of the Trophy FT Fence Controller. An alarm will be raised in the event the cover is removed.

SMART BATTERY BACK UP

Gallagher recommends the internal installation of a back up battery in all Trophy FT Fence Controllers. This will typically provide back up power for 8

hours under default settings with the system fully armed. This can be extended further through additional external back up batteries as required.

In the event of AC power failure the system will automatically switch over to the back up battery. While being powered by the battery, the system will monitor the duration of the power failure and the condition of the battery. The internal battery will be charged automatically on resumption of AC power.

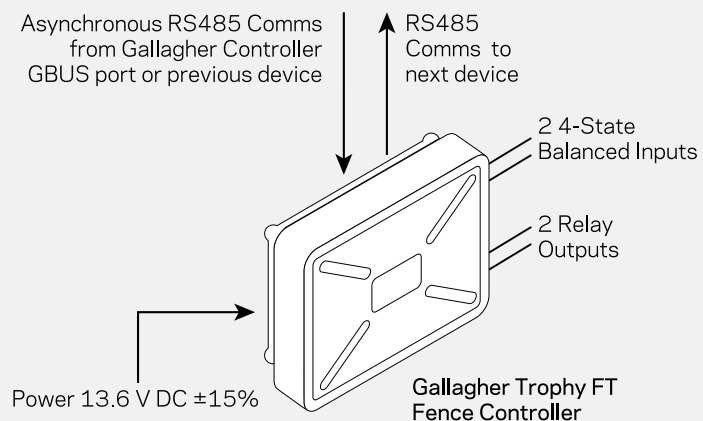
As the battery voltage drops the system reduces the power consumption of the total perimeter system in order to increase the battery life, while still maintaining site security ('Go Slow' settings). If the battery voltage drops below the minimum threshold, an alarm will activate.

OPTIONAL GALLAGHER FENCE INTEGRITY MONITOR

The Gallagher Fence Integrity Monitor is a single or three zone alarm detector that can operate on the perimeter fence. An optional product for 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 Fence Integrity Monitor data sheet or contact Gallagher.

CONNECTIVITY DIAGRAM Gallagher Trophy FT Controller connecting to a Gallagher Access Controller

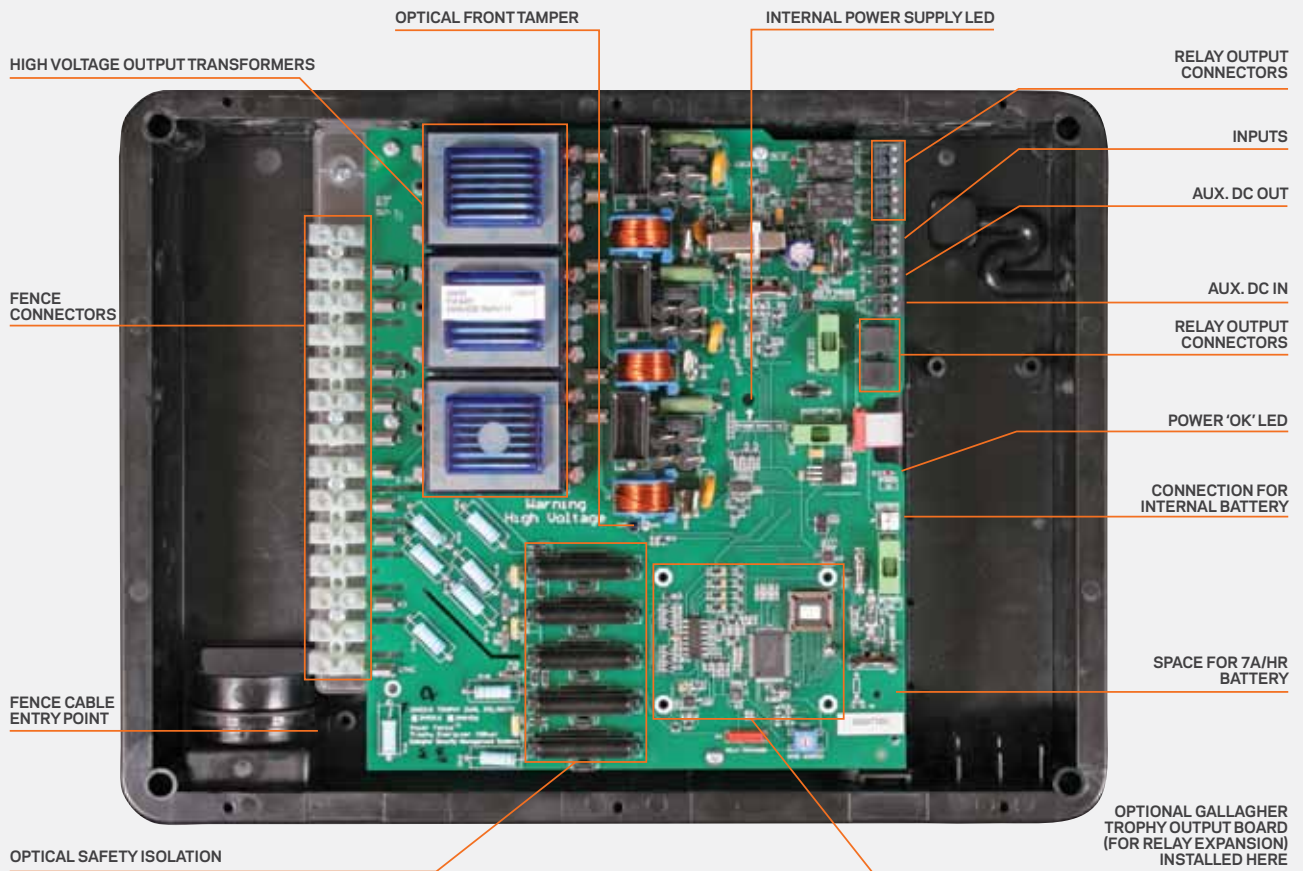


System configuration, network capacities and the volume of the system activity affect performance. Please contact us for advice.

KEY FEATURES OF THE GALLAGHER TROPHY FT FENCE CONTROLLER



- > The High Voltage Zone Separation ensures that if an intruder attacks one zone of the fence, the performance of the remaining zones is not affected
- > Through monitoring the voltage, the Trophy FT Fence Controller detects if the earth system is compromised and will raise the appropriate alarm
- > The pulse synchronization feature enables the Trophy FT Fence Controller to be integrated with other electric fences in close proximity
- > Smart battery back up maintains site security if AC power fails

GALLAGHER TROPHY FT FENCE CONTROLLER



Technical Specifications

GALLAGHER TROPHY FT FENCE CONTROLLER AUGUST 2011

| | | |
|--|--|---|
| Fence Controller | Voltage | 90 - 265 V AC, 50 - 60 Hz |
| Power Consumption | | 40 W |
| Aux. DC Output | | 12 - 15 V 1A (re-settable fuse) |
| Inputs | 4-State Balanced Inputs | 2 |
| | Default: using dual 4k7 Ω termination resistors, configurable | |
| Outputs | Dry Contact Relays | 2, expandable to 6 |
| | Resistive Load | 3 A at 24 V DC / AC |
| | Inductive Load | 1 A at 24 V DC / AC |
| Communications | Between Gallagher Controller (6000, 3000, 5000GL) GBUS port and Gallagher Trophy FT Fence Controller | RS485 at 38.4 Kbits per second |
| | Wiring format - data | 2 wire using (Cat5) |
| | Wiring format - power | 2 wire (gauge selected to suit distance) |
| | Encryption level | 40 bit AES |
| Cable Specifications | Trophy FT Fence Controller to Controller 6000, 3000 or 5000GL | 1200 m (3937 ft) max |
| Connector | 2x RJ12 (allowing loop-through to additional GBUS devices) | |
| Recommended number of Gallagher Trophy FT Fence Controllers per GBUS port on Gallagher Controller (6000, 3000, 5000GL) | | 8 |
| Number of Fence Zones per Gallagher Trophy FT Fence Controller | | 3 |
| Energizer | | 15 J stored at 100% power level 2.8 J output per zone independent of the loading of any other Fence Zones |
| Max HV Channel Loop Resistance | | 300 Ω* |
| * While the energy of this unit will allow this length - recommended 300m (984ft) - the classification of risk, the number of elevations in the fence and terrain must dictate the length of a zone for security evaluation. | | |
| Temperature Range | | -10° to +40° C (14° - 104° F) |
| Dimensions | Height | 340 mm (13½ ") |
| | Width | 460 mm (18¼ ") |
| | Depth | 120 mm (4¾ ") |
| | Shipping Weight (Excluding battery) | 5.8 kg (12 lb 13 oz) |
| Environmental Protection Rating | | IPX4 |
| Internal Back Up Battery | Recommended for 8 hours coverage | 7 Ahr / 12 V DC |
| Compliance Standards | C-Tick, CE - EN60335-2-76 |   ACN 002132943 |

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