

Gallagher F22 Fence Controller



The Gallagher F22 Fence Controller is a networked controller which actively deters and detects intruder attempts on the perimeter fence. It monitors and controls perimeter security by sending regulated electrical pulses around the perimeter fence.

Key Features of the Gallagher F22 Fence Controller

- Any attempt to attack the fence is detected through monitoring of the electric pulse around the fence
- **Active high voltage deterrent**
- Independent fence circuits (x2)
- Pulse synchronization
- **Intelligent battery backup**
- **Dual Pulse functionality** provides enhanced detection and deterrence
- 'Low feel' mode
- HBUS compatible

Deterrent and Attack Detection

- Uses a highly effective electrical pulse
- Configure the electric fence up to 14kV, nearly doubling the deterrent effect and detection capability with Dual Pulse
- Attempts to defeat the fence through climbing, cutting, shorting, or other tampering can be detected to generate an alarm
- **Strong, but safe, 4.6 joules output**
- Interleaved alarmed-deterrent dual pulse zone wiring supported



Fence Circuit Separation

If an intruder disables or disturbs a fence zone (circuit), the performance of the remaining zones is unaffected and an alarm is generated. If an intruder then enters the site, they cannot easily escape through another zone, as remaining zones continue to be armed with the full deterrent.



Pulse Synchronization

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.

Automatic Upgrades

Software on the F22 Fence Controller is automatically upgradable. When new features are released within Gallagher Command Centre, controller code updates will automatically make these features available to the F22 Fence Controller for the customer.

Smart Battery Backup

In the event of AC power failure the system automatically switches over to the backup battery. While being powered by the battery, the system monitors the duration of the power failure and the condition of the battery. The internal battery is 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. An alarm activates if the battery voltage drops below the minimum threshold.

Battery save functionality can extend battery backup duration by either doubling pulse period or changing to low feel mode.

Automatic Battery Test

Every two weeks the internal battery is automatically tested by the F22 Fence Controller. Confirmation of this test will be logged within the Gallagher Command Centre database.

In the event that the battery fails this test, an alarm will be raised in Gallagher Command Centre.

Event Log

Events relating to F22 Fence Controllers and fence zones, including voltage logging, are date/time stamped and logged in the Gallagher system via Gallagher Controller 6000.

Events for temperature or voltage may be logged in response to a temperature or voltage change and/or time interval. A comprehensive voltage report is available through Gallagher Command Centre.

Temperature Management

The temperature of the internal battery compartment is continually monitored. An output can be configured (this could be connected to supplementary cooling) to switch on in the event that this temperature exceeds a configurable value.

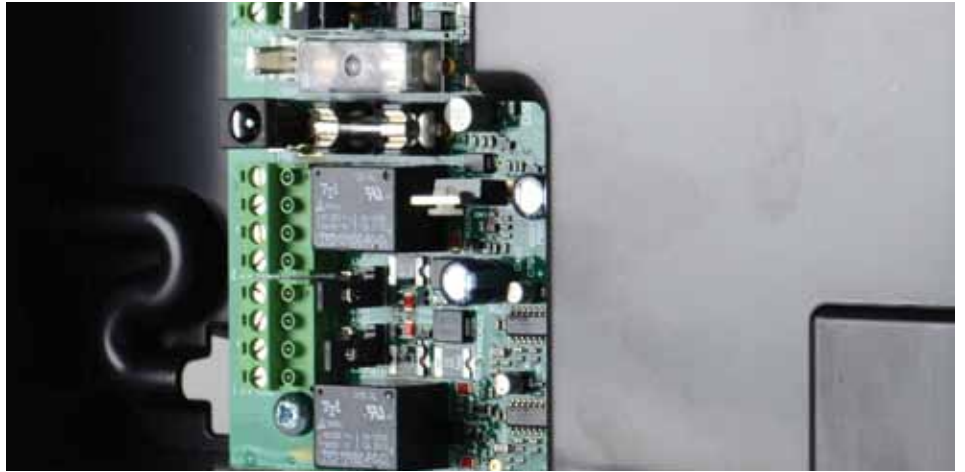
In the event that the temperature inside the battery compartment exceeds a temperature which could affect long term product reliability, an alarm is raised. If there is further increase in temperature, the output frequency of the F22 Fence Controller is reduced to cool the compartment.

Tamper Protection

Optical tamper protection on the front of the F22 Fence Controller raises an alarm if the cover is removed.

Monitored Status

The communications status between the Gallagher Controller 6000 and the F22 Fence Controller is monitored. If the F22 Fence Controller stops communicating an alarm is raised at the Gallagher Command Centre.



HBUS Communication Protocol

HBUS increases field data security and speed, and makes the F22 Fence Controller compatible with Gallagher's latest technology.

'Low Feel' Mode

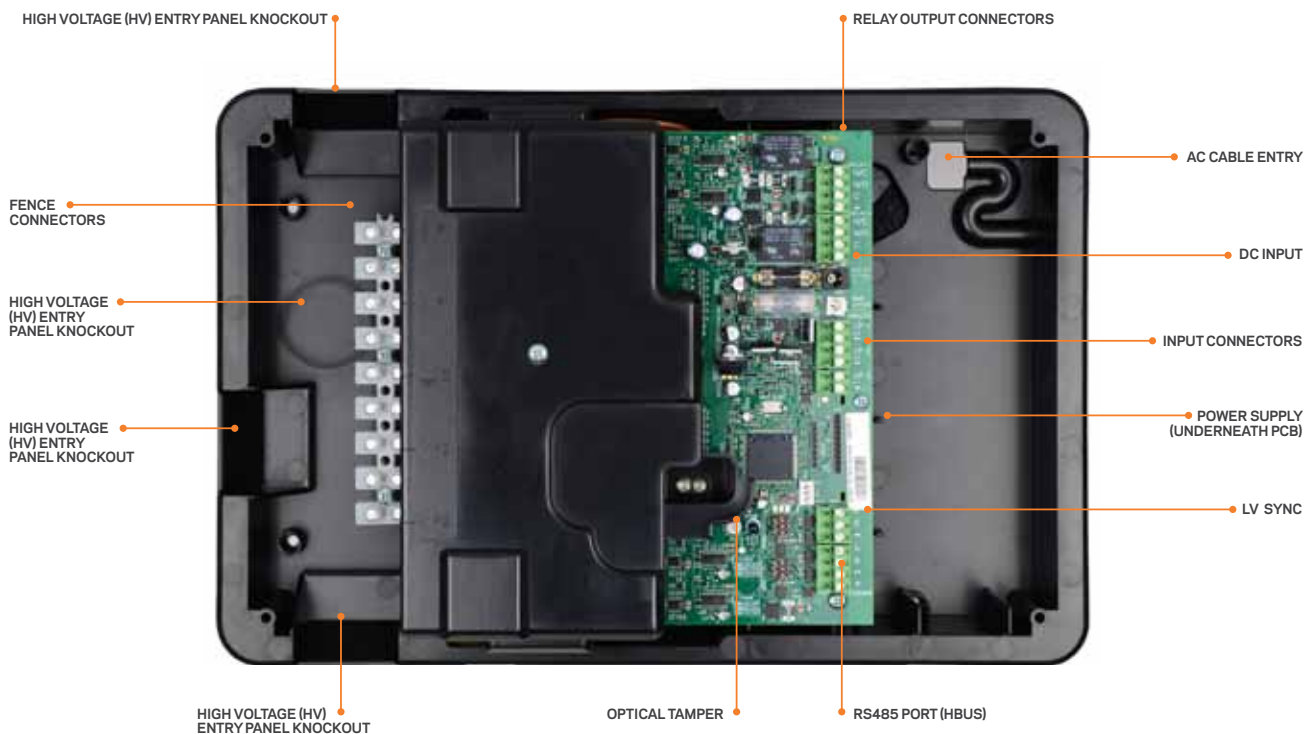
'Low feel' mode is a significantly reduced electric pulse that reminds those in contact that it is an electric fence, and has the same attack detection capability as the high voltage deterrent pulse.

At 100% power, low feel produces a 1.0kV pulse (500Ω load), this can be reduced to 10% power and 0.3kV (500Ω load).




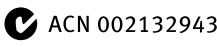
Configuration Options

The following properties can be configured for each F22 Fence Controller:

- Pulse interval ranging from 1.0 to 5.0 seconds
- Power level ranging from 30% to 100%
- Ability to provide synchronization of electric pulse timing of interconnected Gallagher F22 Fence Controllers
- Warnings (indicative of maintenance required)
- Alerts (indicative of a breach requiring urgent attention)
- Alarm levels
- Pulse count alarm detection threshold



Technical Specifications

GALLAGHER F22 FENCE CONTROLLER		MARCH 2013
Fence Controller	Voltage	90 - 265 V AC, 50 / 60 Hz
	Power Consumption	60 W
Compatible controllers		Gallagher Controller 6000
Aux. DC output		12 - 15 V 0.7A (re-settable fuse)
Inputs	4-State balanced inputs	3
	Default: using dual 4k7 Ω termination resistors, configurable	
Outputs	Wet/dry contact relays	2
	Powered load	0.5 A at 11 - 14.5 V DC overload protected
	Non-powered load	1 A at 20 V DC / AC RMS overload protected
Communications	Between Gallagher Controller HBUS port and Gallagher F22 Fence Controller	RS485 at 1Mbits/s
	Wiring format - data	2 wire
	Wiring format - power	2 wire
	Encryption level	128 bit AES
	<i>System configuration, network capacities and the volume of system activity affect performance. Please contact Gallagher for advice</i>	
Cable distance	F22 Fence Controller to Gallagher Controller 6000	500m (1640 ft) maximum (non-shielded twisted pair)
Connector	Removable screw terminals	
Maximum recommended number of Gallagher F22 Fence Controllers per HBUS port on Gallagher Controller 6000		24
Number of fence zones per Gallagher F22 Fence Controller		2
Maximum recommended fence zone length		300m (984ft)*
Maximum HV circuit resistance		300 Ω*
<i>* While the energy of this unit will allow up to a maximum of 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</i>		
Energizer		10 J stored at 100% power level (5J per zone) 2.35 J output per zone independent of the loading of any other Fence Zones
	High voltage	100% Nom 8.0kV 30% Nom 4.7kV
	Low feel	100% 1.0kV (500Ω) 10% 0.4kV (500Ω)
Temperature range		-20° to +50° C (-4° - 122° F)
Dimensions	Height x Width x Depth	255mm (10") x 380mm (15") x 115mm (4½")
	Shipping weight (excluding battery)	3.6 kg (8 lb)
Environmental protection rating		IPX4
Internal back up battery	Recommended for 13 hours coverage on default settings	7 Ahr / 12V DC
Compliance standards	C-Tick, FCC, ROHS, CE EN 60335.2.76:2005 + A12:2010, ASNZS 60335.2.76:2003 Inc A1,A2, IEC 60335.2.76:2000 + A1:2006	   

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Disclaimer: System configuration, network capacities and the volume of system activity affect performance. Please contact Gallagher for advice. In accordance with the Gallagher policy of continuing development, design and specifications are subject to change without notice. Gallagher Group Limited is an ISO 9001:2008 Certified Supplier. Copyright © Gallagher Group Limited 2012. All rights reserved.

