



ELECTRIC FENCE SYSTEMS



2021/2022

TAUT WIRE MONITORING SOLUTIONS

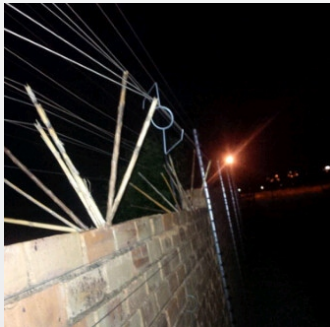
www.jvasecurity.com

JVA Taut Wire Monitoring Solutions

Keeping two steps ahead of criminals is JVA's aim and forte. As criminals become more proficient and fence tampering and bypassing become an issue, so we develop increasingly sophisticated monitoring systems to thwart their efforts.

Closer intermediate posts, narrowing the wire distance between lines and shorter strain distances all help to contribute to an effective physical fence structure. However, there is still a need to reinforce old fences and for more high-tech, anti-tampering devices to monitor new strategic fences.

While traditional methods such as High Voltage and Earth Loops are effective, JVA offers the Inline Tamper Switch and the Genius Taut-Wire Tensioner to be used on their own or in conjunction with the JVA ZLM4 monitoring system to create an even higher level of detection on existing or new electric fences.

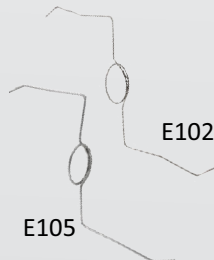


JVA Traditional Tamper Solutions

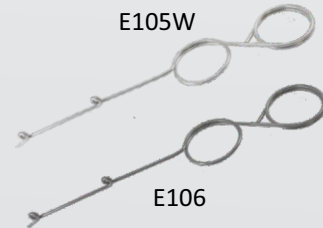
Earth Loops (Triggers alarm if fence wires are separated)



Bi-Polar Security SIS Series Monitor Loop
Allows for earth and live monitoring or Bi-Polar monitoring



Intermediate Earth Loop
316 Stainless steel or 4mm fully galvanized



Wall-Mounted Double Earth Loop
316 Stainless steel or 4mm fully galvanized



JVA ZLM4 Low Voltage Monitoring Solution



The ZLM4 is a 4-sector, low voltage, electric fence monitor. The ZLM4 may be used by itself or in conjunction with a number of high-voltage security electric fence energizers. The ZLM4 monitors up to 4 loops of fence wire, each up to several hundred meters long, to detect intruders tampering with the fence by cutting or shorting the wires.

When used in conjunction with a high voltage electric fence energizer, the ZLM4 is wired with loops of wire alternating with the high voltage fence wires. In this way, the ZLM4 can be used to split one high voltage zone into up to 4 low voltage monitored sectors for improved targeting of the response to potential security breaches.

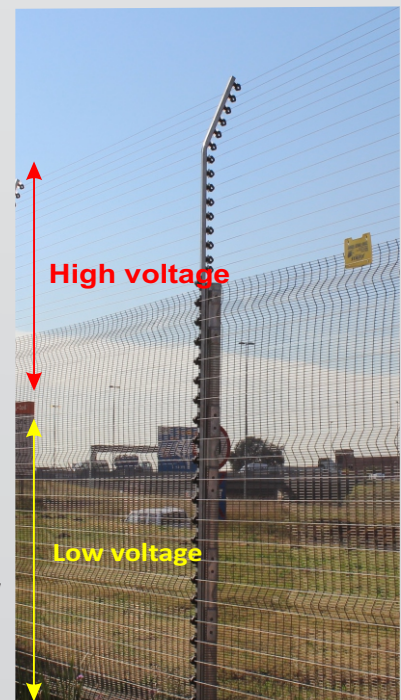
The ZLM4 is compatible with the JVA Z-Series energizers. It may be connected via a keypad bus network with other Z-Series devices to enable the whole group to be controlled via one keypad, or linked to a PC running JVA Perimeter Patrol software.

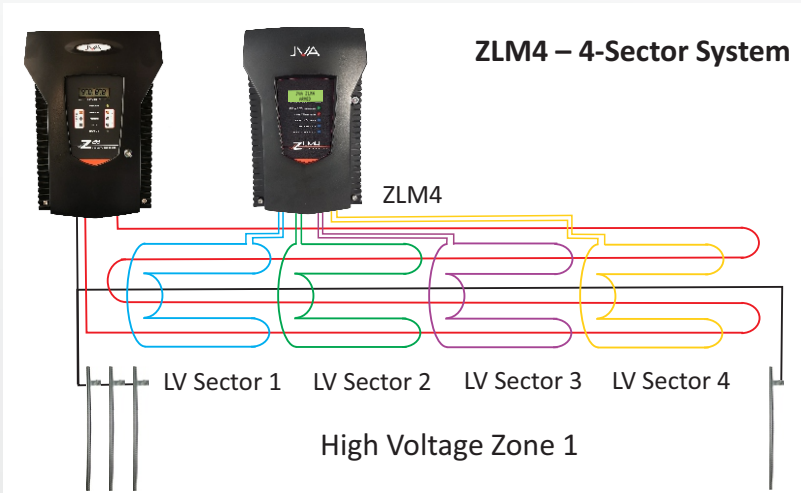
The ZLM4 monitors a low voltage loop using intrinsically safe, isolated ELV (Extra-low Voltage) DC. It employs a continuity check for detecting open circuits, DC voltage level sensing to detect a short to ground and pulse voltage sensing to detect a short to a line powered by a high voltage fence energizer. The advanced features of this device allow the performance to be tuned to the fence and to the particular requirements of the site. This is done by adjusting the device's programmable options.

The ZLM4 will report an alarm on: detecting a low voltage loop cut (open circuit); shorted to ground (short); when high-voltage from an electric fence energizer wire is shorted to the monitored low voltage loop; or when two low voltage loops short to one another (cross couple). The ZLM4 is an ideal solution for maintaining detection but enabling an installer to keep his fence SANS 10222-3 compliant in public access areas, by keeping the fence below 1.5m monitored but without a high voltage shock.

Features

- Can be used to split a single security electric fence zone into up to 4 low voltage zones
- Can detect a short, cut, or if the monitored wire is touching a high-voltage wire
- Optional LCD display – displays which zone is in alarm and other information
- Controlled and programmed via a JVA Keypad with similar codes to the JVA Z-Series
- Able to be integrated into third party access control and security information management systems at a variety of levels
- Enables the construction of systems from economical Key-Switch operations to complex PC controlled applications
- Runs from 16V AC or 12V DC or 24V DC external source
- Built-in battery charger for optional 7Ah backup battery
- Siren and strobe switched 12V DC outputs for stand-alone operation
- 2 Control inputs and 4 relays with many programmable functions for low level integration with other systems
- Fence connections are fully isolated from power and IO as per relevant part of ICE60335.2.76





JVA Electric Fence Intermediate Tamper Switch

The JVA Tamper Switch is a simple, clever patented product designed to be fitted to new or old fences, to detect when a live wire on an electric security fence line is being tampered with. This tamper switch will then trigger the fence line voltage monitor which in turn will trigger an alarm (siren, armed response, security lights, etc.) to warn the occupants of a property that their perimeter is being challenged. (The electric wire may have been cut or forced apart.)

**Type A
Wall-Top**

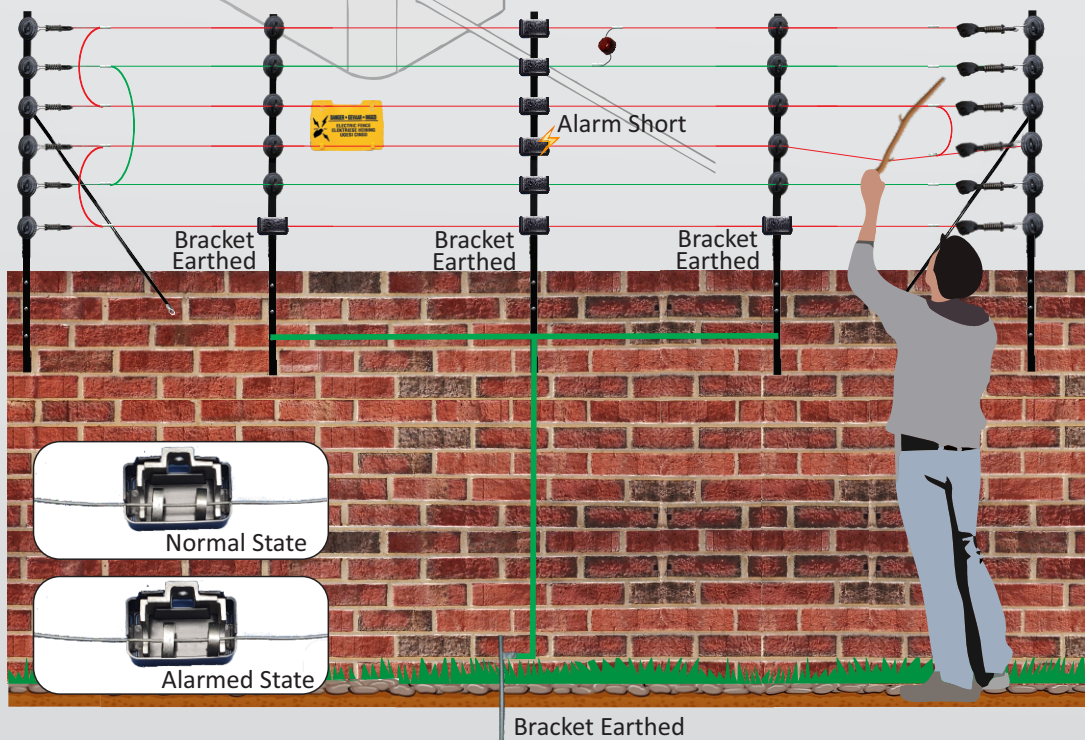


N942

**Type B
JVA Profile**



N943



The Switch has adjustable disks with which one can set the sensitivity of the tamper. Ideally the switch should be centred between two spring-loaded tension points. The switch can be retro-fitted to Flat Bar and Square Tube brackets using the Type A Plate, and to JVA Profile and JVA Y-Standards using the Type B Plate. Multiple Switches can also be used on one post. Multiple switches can be added in a single strand if higher security is required (see bottom strand above). The switch can be used on HV and LV fencing. The sensitivity to wire movement can be made very acute on low voltage fences (ZLM powered), where the arcing of high voltage is less of an issue. It is important to make sure that the post to which the Tamper Switch is attached is earthed to ground.

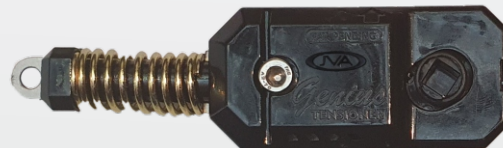
JVA Genius Taut Wire Tensioner

The JVA Genius range of tensioners are specifically designed to work in conjunction with the JVA ZLM4 monitor to detect fence line tampering. The tensioner is designed to work with 1mm to 1.6mm high strain wire.

This Patented Monitoring System will trigger an internal monitored switch if tension on the fence is released by interference such as an intruder pulling on or cutting the wires. The tensioner can be retrofitted if required.

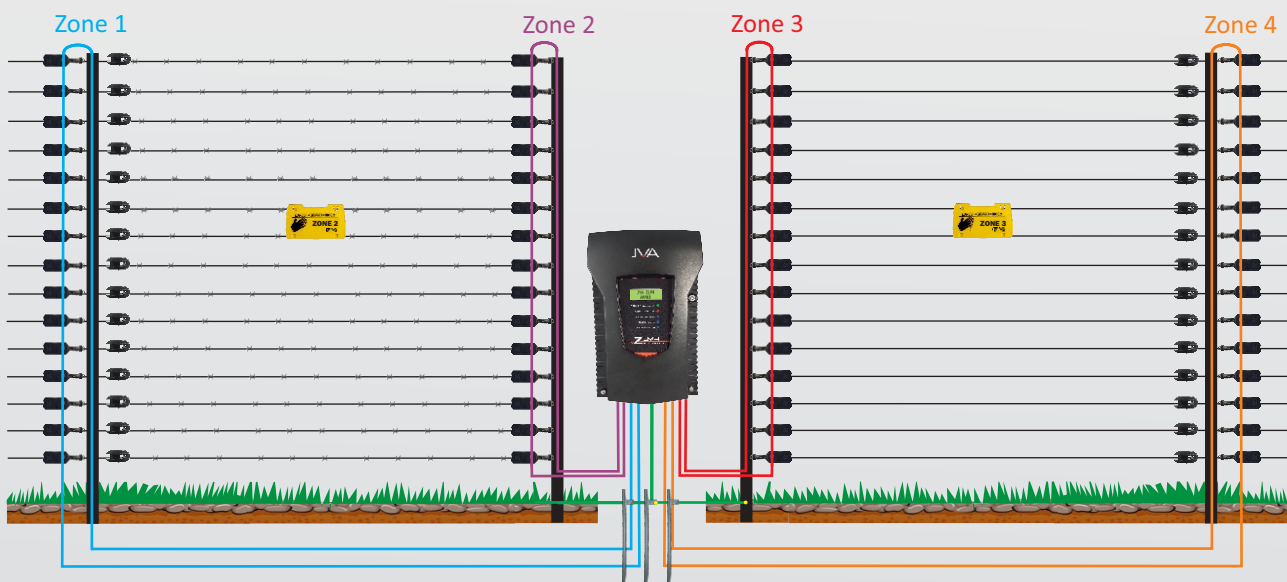


TWGLD

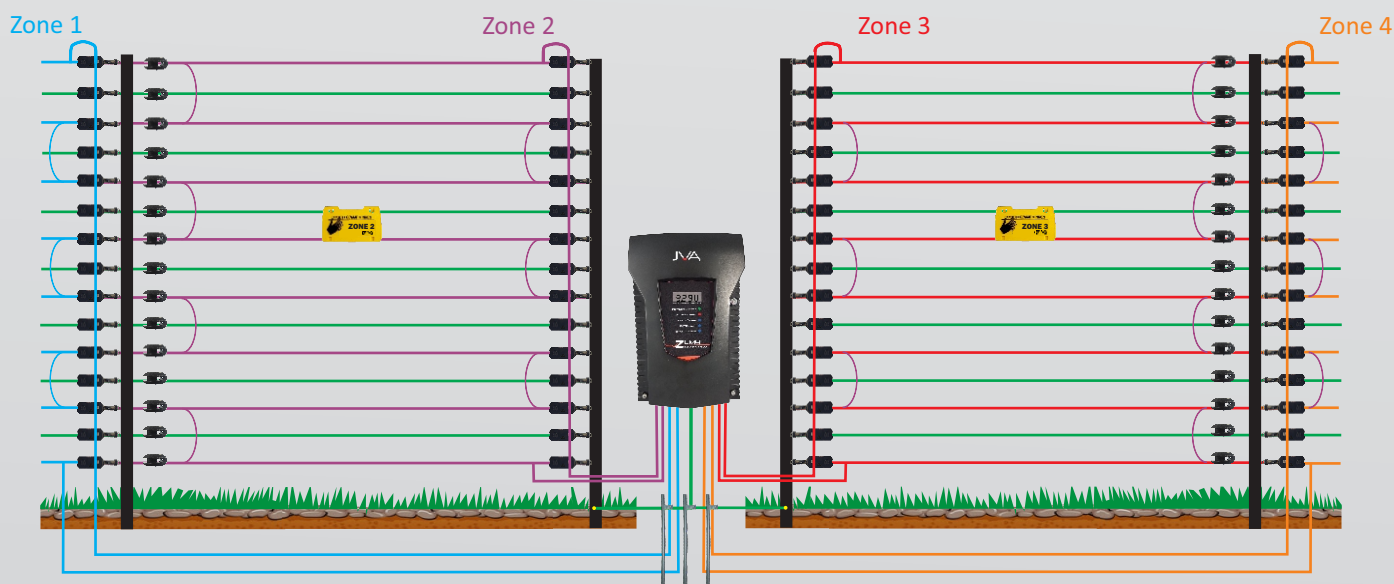


TWGHD

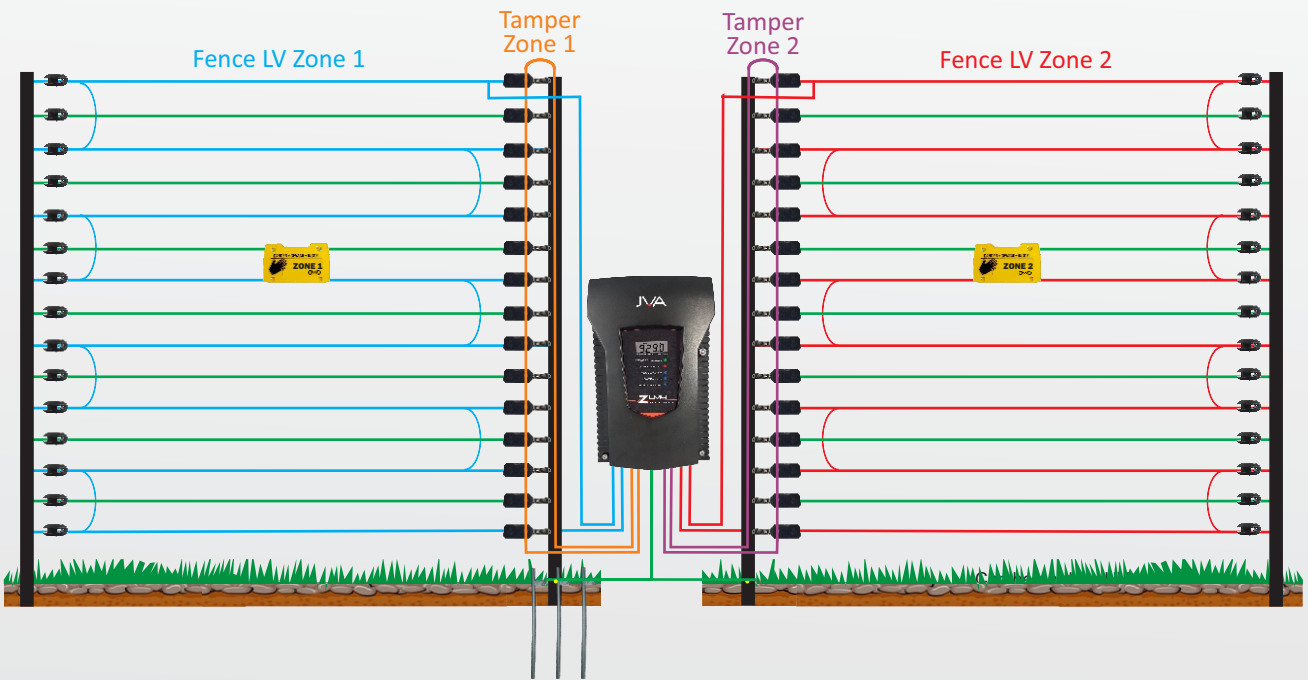
Method 1: Taut Wire Only – Tension Monitoring Only



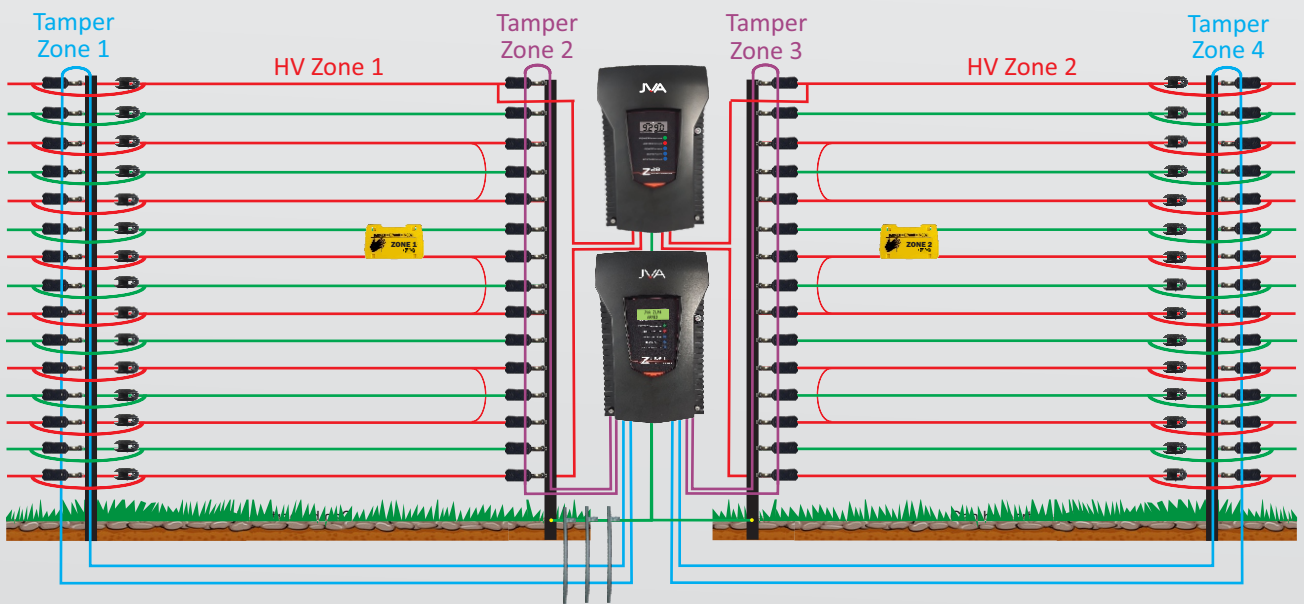
Method 2: Taut Wire and LV Fence Monitoring Together



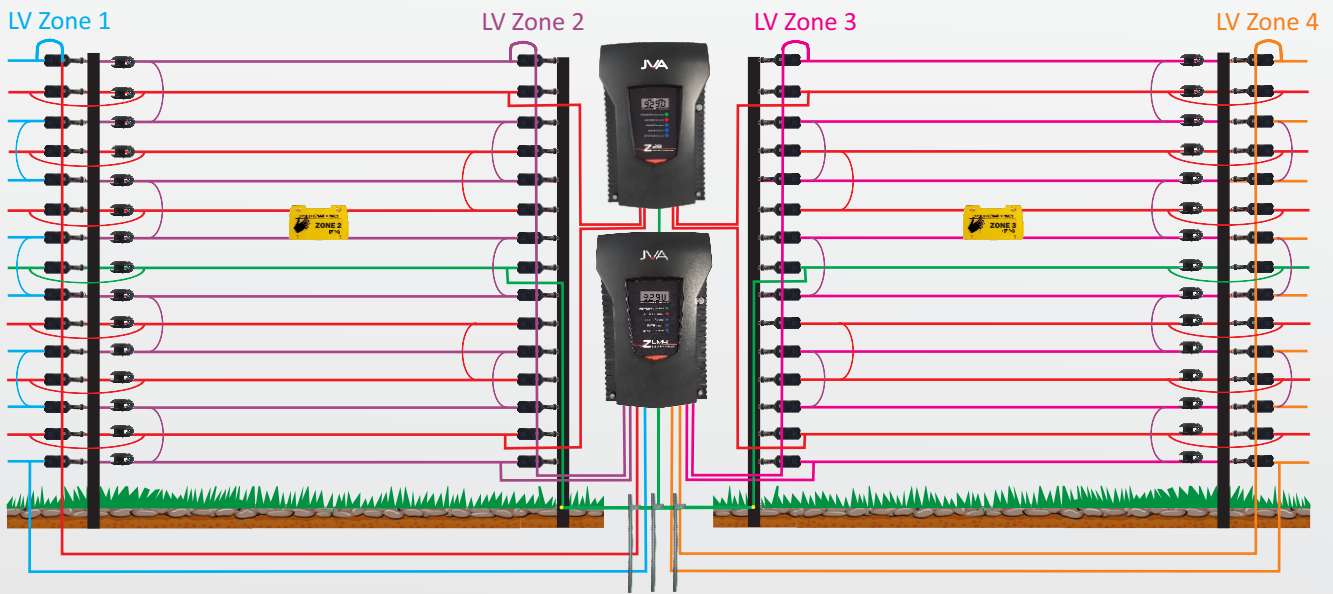
Method 3: Taut Wire and LV Monitoring Separately



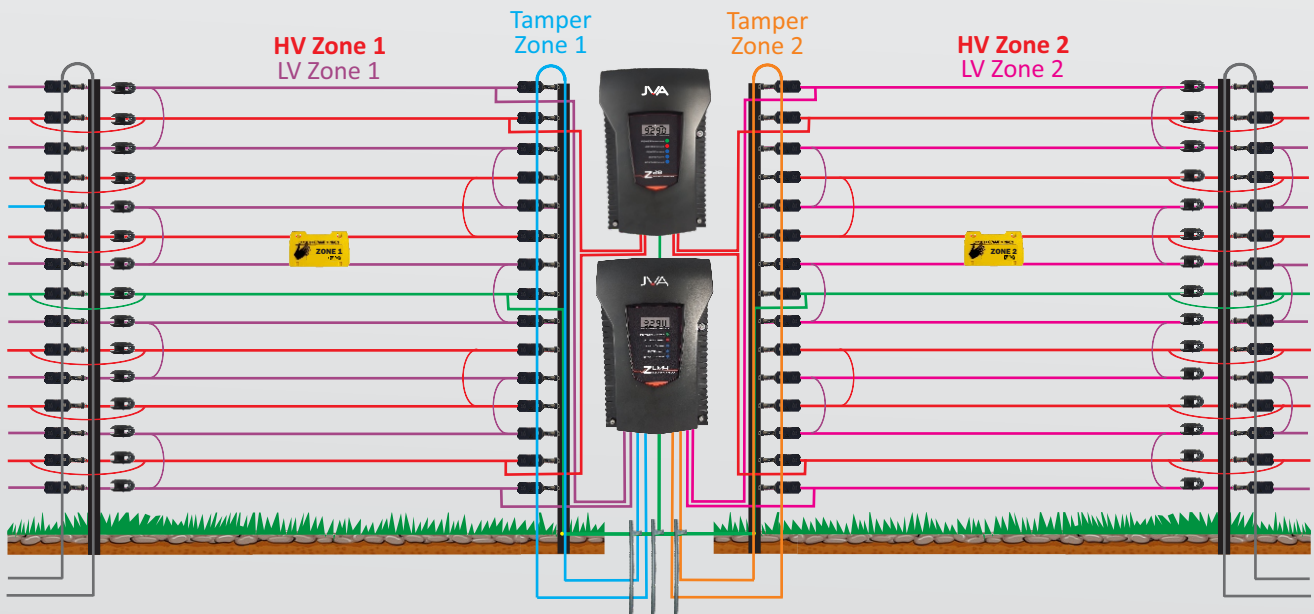
Method 4: Taut Wire and HV Monitoring Together



Method 5: Taut Wire and LV Fence Monitoring Together with HV Monitoring



Method 6: Taut Wire and LV Fence Monitoring Separately with HV Monitoring



JVA Perimeter Integration Functionality

The ZLM4 can operate as a Stand-Alone unit or be combined with other products such as the Genius Tensioners, Z-Range High Voltage Energizers, ZM Multi-Sector Amperage Monitors and the VM2 Vibration Monitor.

All these products can be integrated to create a multi-level, multi-layered, high level security solution. This solution can be managed via JVA Perimeter Patrol, JVA Site Patrol or further integrated into other external management systems.



JVA Perimeter Patrol Integration Functionality



General Purpose Input Output Board
 Monitors and Controls: 4 inputs, 4 outputs
 PIRs, temperature, pumps, water level,
 access control, beams, lights, gate control,
 camera integration.

GPIO Board
eGPIO Board – TCP/IP



Ethernet Adaptor Device
 Connected to single and multiple groups of energizers and monitors



TCP/IP Interface

Perimeter Patrol
 A powerful, flexible, intuitive user interface

Features Include

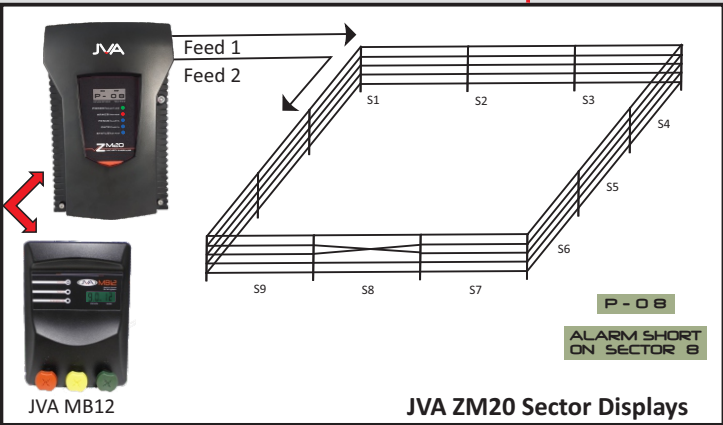
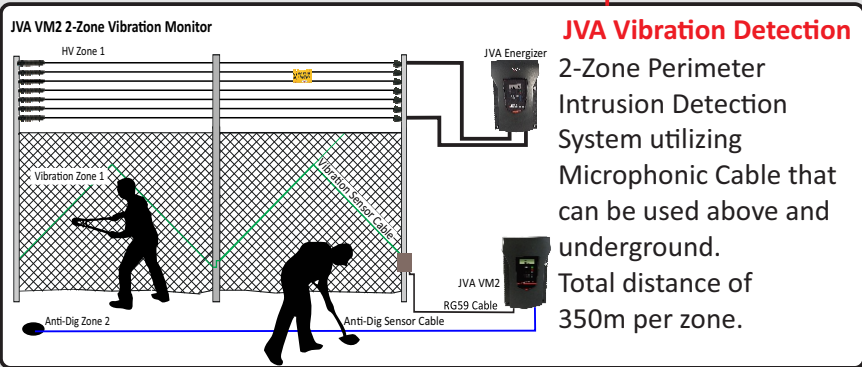
- User Authentication
- Remote Access
- Multiple Site Monitoring
- Event Logging/Archives
- High Level Interface API
- Cloud Backup
- Multiple user access levels
- Quick view screen
- Control on schedule
- Global Site Arm/Disarm
- Individual Arm/Disarm
- Export Event Logs
- Print Event Logs
- Built-in relay controller
- Integration
- Serial Comms
- Ethernet Comms
- Alarm Popups
- Map Zooming
- Custom URL (Hyperlink buttons)
- Server/Client configuration
- Alarm Escalation
- Graphical Log View

Perimeter Patrol Management Software
 Real Time monitoring of Energizers, Monitors, Cameras, Access Control and Beams



Radio Frequency Interface

Radio Frequency Interface
 Monitors and controls: 2 inputs, 2 outputs
 Roboguards, PIRs, door sensors, beams, gates, etc.



Redundancy Solution Cloud Router®

The JVA Cloud Route® provides access to your electric fence and other devices in the field through GSM and Wi-Fi. Devices are linked to the Cloud Router® via Nimbus Gateways. The Cloud Router® Solution gives a complete alternate Cloud Based Software solution to run parallel to the onsite Perimeter Patrol system giving a complete alternate offsite redundancy system.



JVA Perimeter Patrol PC

Site Monitor (Remote)

Enables you to view multiple sites on a simple platform



Cloud Backup

Remote backup of configuration, maps, licence activation, data



Google Earth Integration

Google earth interface, Google Earth Map – import coordinates



HLI – High Level Interface

To enable remote site monitoring and customization



Scada Integration

Customization of Sites

Integration with VMS



SDK Software Development Kit

Enables you to view multiple sites on a simple platform

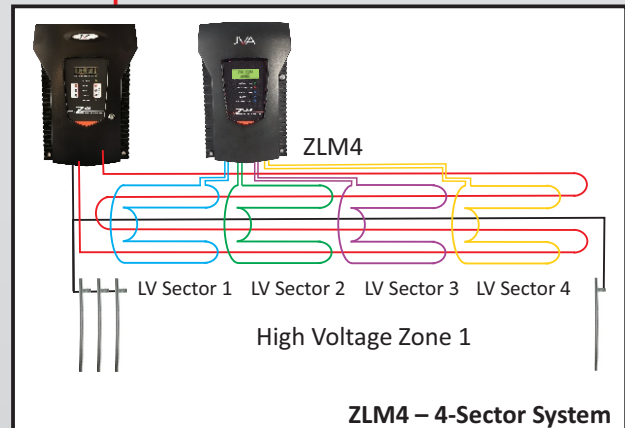
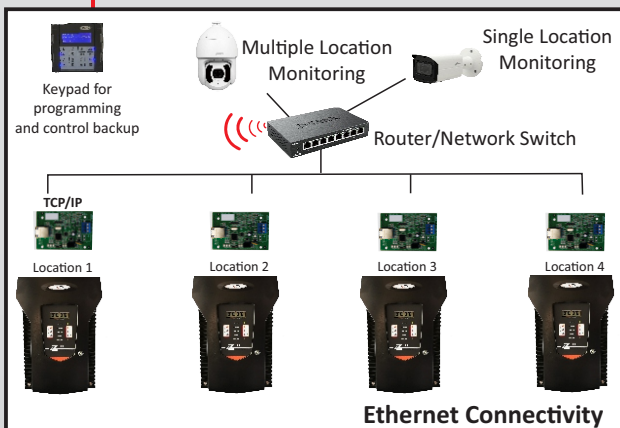
IOT – integration LoRaWAN – integration

TTN - The Things Network



Allows customization onto different platforms

JVA Product Integration





ELECTRIC FENCE SYSTEMS

TAUT WIRE MONITORING SOLUTIONS

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