JVA SECURITY ENERGIZERS AND ACCESSORIES 2017/18

JVA Technologies (Australia), in partnership with Ndlovu Fencing (South Africa), has drawn on over 40 year's experience in some of the world's most tesng` internaonal` and local security markets, to produce a product range to satisfy the needs of the world security electric fencing markets ranging from simple domesc` requirements, to high security installaons.` JVA products and experse haàve become trusted choices for local and internaonal` customers as they meet the strict specificaons` required to secure important government contracts for prisons, airports, power staons,` banks, housing estates, defence facilies` and municipalities.

JVA's global partnerships enable it to combine award winning Australian engineering design experse` with local South African, cost effective, assembly and accessory manufacture. From lessons learnt in challenging African, South American, Asian and other world markets, combined with the high tech demands of South Africa and countries such as America, Australia and Europe, JVA engineers have succeeded in producing a robust product range that connuously` sets internaonal` standards of quality, innovaon` and cost effectiveness.

Ndlovu Fencing has strategically posioned,` sales and service outlets throughout Southern Africa, each with its own in-house technical personnel, which makes it the ideal partner for JVA to offer fast and efficient a. er-sales repair service and on-the-spot expert technical advice throughout Africa.

May 2017 Edion

Introduction

Welcome to the world of JVA monitored electric security fences. The proliferation of non-lethal, monitored, electric security fences in our towns and cities is indicative of the confidence the public has in this form of perimeter security. The reason for this popularity is simple – monitored electric security fences are effective, economical, relatively simple to install, and the JVA Electric Security Fence offers more Ds of security than any other perimeter system:

Demarcaon – The JVA fence around your property shows you mean business.
Deflecon – W ould-be intruders will be deflected to so er targets.
Deterrence – The safe, powerful JVA shock is a strong deterrent to intruders.
Delay – The physical barrier will delay an intruder, something they do not like.
Detecon – The JVA's voltage monitor warns you of any tampering with the fence.
Deny – A well-erected electric security fence will deny entry.
Dependable – 60 seconds a minute, 60 minutes an hour, 24 hours a day, 365 days a year, your JVA electric security fence is monitored by an alert, sober, electronic watchman.

Every second the JVA energizer discharges a very short-duration, safe, high-voltage impulse down the fence live wire. The JVA security energizer then monitors the voltage at the end of this live wire, thereby checking that the voltage is being maintained along the entire fence line. In the event of a voltage drop caused by either shorting, cutting or poor maintenance, the monitor will trigger an alarm, thus alerting you.

Manufactured to meet the most stringent international safety standards, the JVA Range is in a class of its own when it comes to features and benefits at an affordable price.

JVA Z14, Z18 and Z114 Energizers

The JVA Z-Range of One-Zone Security Energizers with LCD displays are top-of-the-range energizers meeting all requirements from the basic home security fence to fully integrated high profile installations. These energizers have LCD displays showing out and return voltages, battery condition and fence programming settings. The units are fully compatible with the Z-Range keypad and when wired up to a keypad are fully programmable. The energizers can be networked with other Z-Range energizers to synchronise pulses and become a multi-zone group for larger sites where many zones are required. These energizers can be controlled by a PC or up to 3 keypads, or 1 keypad up to 14 Z-Range energizers.

Features:

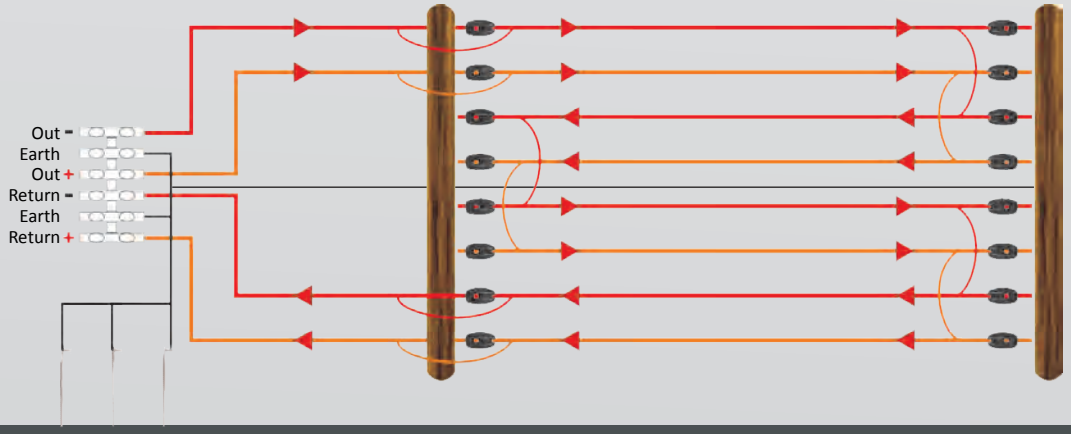
- High-Voltage, Single-Zone Fence Monitor triggers alarm when live wires are tampered with
- Earth Wire Monitor triggers alarm when the earth wires are tampered with
- LCD Voltage Out and Return Display
- Gate Monitor input to monitor the gate
- Dynamic Voltage Monitoring minimizing arcing and false alarms while maximizing power and battery life
- 4, 8 and 14 Joules maximum output energy respectively
- Compliant with IEC60335-2-76
  Built-in Lightning and Surge Protection
- Up to 24-Hour Monitoring in the event of a power failure
- High and low power options
- Energizer supplied with secure Key Switch Operation
- Diagnostic Mode
- 2 Standard Fully Programmable Relays plus option for 3 more on request
- Keypad Compatible – Use a Z-Range Keypad
- Programmable to Bi-polar or Standard
- Pulse Synchronisation in group mode
- Anti-tamper option programmable on request
- Internal Battery Backup in case of power failure

What is Bi-POLAR fencing?

The JVA Z14, JVA Z18 and Z114 Energizers can be programmed to Bi-Polar mode. This gives rise to the question: What is Bi-Polar Fencing and what exactly are the benefits of this wiring configuration?

A Bi-Polar fence is an all-live wire fence. A Bi-Polar energizer has the ability to pulse synchronized positive and negative pulses down alternate wires of the same fence line. So, instead of having alternate live and earth wires on the same fence line, one now has one wire with a positive pulse and one wire with a negative pulse. This means that all the wires on the security fence are live with the exception of the open true-earth wire in the fence grid, should one be included.

A reading taken between the positive pulsing or negative pulsing live wires and the earth, will give half the voltage of a normal live/earth configuration. However, when one touches both the positive and negative pulsing wires, one will receive the 'full monty'. The big plus factor of this configuration is that, by reducing the voltages to each wire, one helps eliminate the annoying and often difficult-to-eliminate arcing experienced in coastal or dusty areas.



JVA Z28 Standard

Z28

The JVA Z28 Two-Zone Security Energizer with LCD display is a top-of-the-range high power energizer ideal for installations where better zone identification is required. The Z28 can meet all requirements from longer wall-top fences to industrial and high profile installations. The energizer has an LCD display showing return voltages for each zone, battery condition and fence programming settings. The unit is fully compatible with the optional Z-Range keypad and when wired up to a keypad is fully programmable. The energizer can be linked with other Z-Range energizers to synchronize pulses and become a multi-zone group for larger multi-zone sites. The Z28 can be controlled by a PC or up to 3 keypads, or 1 keypad can control up to 14 Z - Range energizers.

The Z28 is unique in that each zone is individually controllable, allowing each to be individually operated and programmed via the keypad. Unlike many other energizers available in the market, a short on one zone on the Z28 will have no effect on the voltage on the other zone. The Z28 is in essence two Z14 energizers in one. This means each zone, powered by one Z28, can be individually armed or disarmed in high or low voltage mode – an excellent safety feature.

Features:

- High Voltage, Dual-Zone Fence Monitor triggers alarm when live wires are tampered with
- Earth Wire monitor triggers alarm when the earth wires are tampered with
- LCD Voltage Return Display for both zones
- Gate Monitor input to monitor the gate
- 4 Joules maximum output energy per zone
- Compliant with IEC60335-2-76
- Built-in Lightning and Surge Protection
- Internal Battery Backup in case of power failure
- Dynamic Voltage Monitoring minimizing arcing and false alarms while maximizing power and battery life
- High and low power options
- Energizer supplied with secure key switch operation
- Diagnostic Mode
- 3 Standard programmable relays (1 siren and 2 strobe) – excellent for communication
- Optional extra Relay Board on request – total 6 relays
- Keypad Compatible – Add Z-Range Keypad
- Up to 18-Hour Monitoring in the event of a power failure
- Pulse Synchronization

LCD Display

- Fence *Out* and *Return* Voltage Display on Z14 and Z18
- Fence Return Voltage Display on Z28 and Bi-Polar models
- Actual Ba ery Voltage
- Low Ba ery Warning
- Ba ery Condion
- Programme Sengs
- Sow are Version
- Diagnosc F eed-Back

Certification

It is a legal requirement both locally and internationally that electric fence energizers must comply with stringent safety criteria as stipulated in IEC 60335-2-76:2006. JVA energizers comply with these standards. All JVA units are tested and certified by Power Lab Limited and Test Africa both internationally accredited test laboratories.

TEST Africa
Locally certified

Internationally certified
Power Lab Limited
Report Number PL2008039/ASNZS

JVA Arming Devices

The standard JVA Energizer can be chosen with a keyswitch or a magnec tag to arm and disarm the unit.

Magnec K eys

Radial Keys

JVA Keypad

JVA Menu-driven Keypad

The Z Range JVA Keypad is manufactured specifically for the JVA Z Range. JVA has simplified things by designing one keypad to operate the full range of Z Energizers from a simple home Z13 system to a high profile multi-zone system. The JVA Keypad with its backlit LCD display gives the user, at a glance, all the information that may be required. The JVA Keypad displays out and return voltages and can be fully customized with custom messages and names for Zones and Gates –*e.g. Front Gate/Back Fence*, etc.

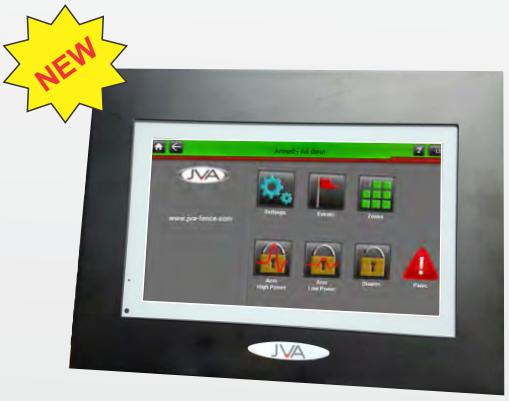
Z14KP

Features:

- One JVA Keypad operates the full Z Range
- Backlit LCD Display
- 1 to 14 energizers can be controlled from one keypad
- 1 to 3 keypads can be used to control one energizer
- Zone Voltage displayed on the keypad
- Zone Voltage Scrolling Function display for Multi-Zone systems
- Simple 3-wire operation
- Battery Voltage Request display to energizer LCD
- User menu-driven display
- Ability to customize zone and gate names
- Maximum 100m on conventional communication cable

JVA Android Keypad

JVA 9-Inch Android Keypad with housing



The JVA Touch Screen Keypad is manufactured specifically for the control and management of the full range of JVA Z-Range Energizers and Monitors, from a simple home Z11 to a high profile mul-z one ZM20 system. The nine inch screen gives the user, at a glance, or a touch all the informaon that may be required.

Features:

- New easy-to-use graphical user interface, touch screen keypad for the JVA Z Series range
- Provides a menu driven programming interface for devices: each device can have its unique sengs programmed from a drop-down list of possible values, with names and descripons of each se ng a vailable. So installers will not need to refer to a manual to configure a device
- Provides a method of loading and saving site configuraons, including de vice configuraons, cus tom zone names and configuraons, individual user permissions and more which means ZM20 sector programming can be saved and recalled and common setups can be saved and quickly loaded into new devices
- Generates Maintenance Alarms when the site isn't correctly configured
- Alarms can be sent to a user via email or SMS by ulising the inbuilt Wi-Fi connecon (V ersion dependent)
- Supplied with a wall mountable steel casing

JVA Specifications

SPECIFICATIONS	Z11	Z13	Z14	Z18	Z114	Z28
Stored energy	3J	5J	6J	12J	17J	2x6J
Maximum Output energy	1.8J	3J	5J	8J	14J	2x4J
Output voltage maximum	10kv	10kv	10kv	10kv	10kv	10kv
Output voltage LCD display	Keypad	Keypad	✓	✓	✓	
Return voltage LCD display	Keypad	Keypad	✓	✓	✓	✓
Backup time maximum	24hrs	24hrs	18hrs	18hrs	16hrs	14hrs
Ext 16VAC transformer	✓	✓	✓	✓	✓	✓
Battery volts	12v	12v	12v	12v	12v	12v
Battery capacity	7Ah	7Ah	7Ah	7Ah	9Ah	7Ah
Pulse frequency	0.8 Hz	0.8 Hz	0.8 Hz	0.8 Hz	0.8 Hz	0.8 Hz
Pulse width	0.3ms	0.3ms	0.3ms	0.3ms	0.3ms	0.3ms
Alarm delay	*	*	*	*	*	*
Siren time out	*	*	*	*	*	*
Bi-Polar Capability			✓	✓	✓	

*Programmable by keypad

RECOMMENDED SERIES WIRE LENGTH	Z11	Z13	Z14	Z18	Z114	Z28
1.2mm s/steel	0.6km	0.8km	1km	1.5km	2km	2x1km
1.6mm s/steel	1.2km	1.4km	1.6km	2km	2.5km	2x1.6km
2mm s/steel	1.8km	2.1km	2.4km	3.3km	3.6km	2x2.4km
1.2mm braided galvanized	2km	3km	4km	8km	10km	2x4km
2mm braided galvanized	2.5km	3.5km	5km	8km	10km	2x5km
2.24 galvanized HSS	3km	4km	6km	10km	14km	2x6km
1.6mm aluminium wire	6km	8km	10km	20km	25km	2x10km

DIMENSIONS	Z11	Z13	Z14	Z18	Z114	Z28
Size (height, width, depth) mm	300×190×115	300×190×115	300×190×115	300×190×115	300×190×115	300×190×115
Weight (without battery)	2.0kg	2.0kg	2.1kg	2.4kg	3kg	2.4kg

POWER CONSUMPTION	Z11	Z13	Z14	Z18	Z114	Z28
Average current draw	500mA	500mA	550mA	1000mA	1200mA	1000mA
Peak current draw	600mA	600mA	700mA	1200mA	1400mA	1200mA

All energizers in the Z-Range can be used in a Multi-Zone Network

JVA Specifications

SOLAR PANEL SPEC	Z11	Z13	Z14	Z18	Z114	Z28
Recommended battery	50 Ah	50 Ah	50 Ah	105 Ah	105 Ah	105 Ah
Solar panel	75w	75w	75w	100w	100w	100w

Solar panel calculations based on an installation in Johannesburg, South Africa.
Location-specific recommendations available on request.

WARRANTY	Z11	Z13	Z14	Z18	Z114	Z28
2-year warranty	✓	✓	✓	✓	✓	✓

CERTIFICATION	Z11	Z13	Z14	Z18	Z114	Z28
Compliant (IEC60335-2-76)	✓	✓	✓	✓	✓	✓

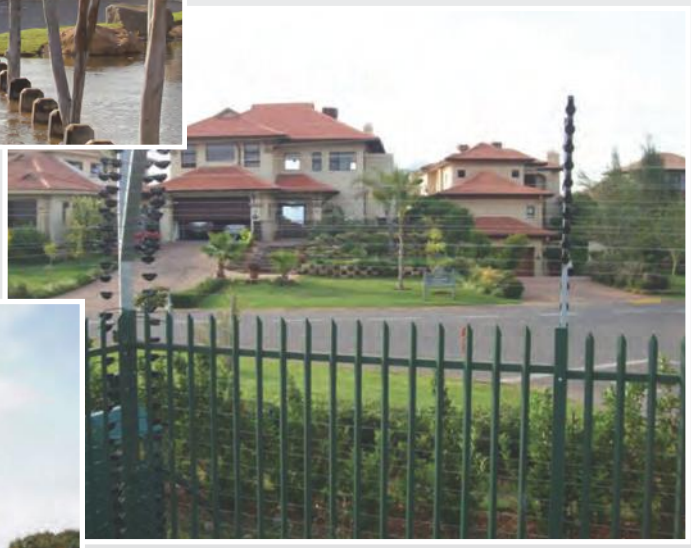
FEATURES	Z11	Z13	Z14	Z18	Z114	Z28
Fence monitor	✓	✓	✓	✓	✓	✓
Gate (aux.) monitor	✓	✓	✓	✓	✓	✓
Low voltage monitor	✓	✓	✓	✓	✓	✓
Siren driver	✓	✓	✓	✓	✓	✓
Strobe driver	✓	✓	✓	✓	✓	✓
Armed Response	✓	✓	✓	✓	✓	✓
On/Off reset key	✓	✓	✓	✓	✓	✓
Remote control option	✓	✓	✓	✓	✓	✓
Battery backup	✓	✓	✓	✓	✓	✓
Keypad LCD Optional	✓	✓	✓	✓	✓	✓
Multi-Keypad Compatible	✓	✓	✓	✓	✓	✓
Keypad Voltage Display	✓	✓	✓	✓	✓	✓
Keypad tamper Alert	✓	✓	✓	✓	✓	✓
Microprocessor	✓	✓	✓	✓	✓	✓
Programmable	✓	✓	✓	✓	✓	✓
Earth Monitoring	✓	✓	✓	✓	✓	✓
Security	✓	✓	✓	✓	✓	✓
Software Controllable	✓	✓	✓	✓	✓	✓
Solar Power Option	✓	✓	✓	✓	✓	✓
Number of Zones	1	1	1	1	1	2
Multi-Zone Pulse Sync	✓	✓	✓	✓	✓	✓

Electric Fence Applications

Domestic Applications

Aesthetically pleasing electric fences provide security and peace of mind for

… retirement villages …



… residential complexes …

… and private dwellings.

Commercial Applications

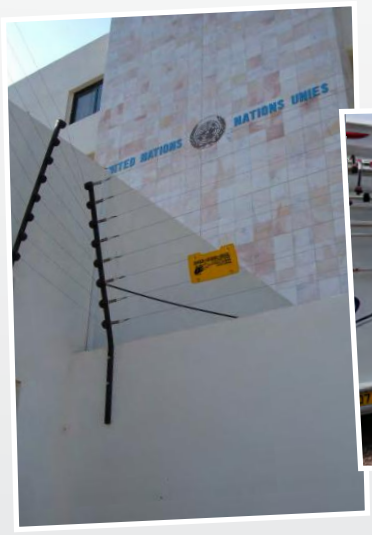
Monitored electric fences are being used extensively on commercial sites to protect company assets and personnel:

... office blocks ...

... wholesalers ...

... garages ...

... vehicle parks.



UN Embassy, Senegal

Vehicle Storage, UK

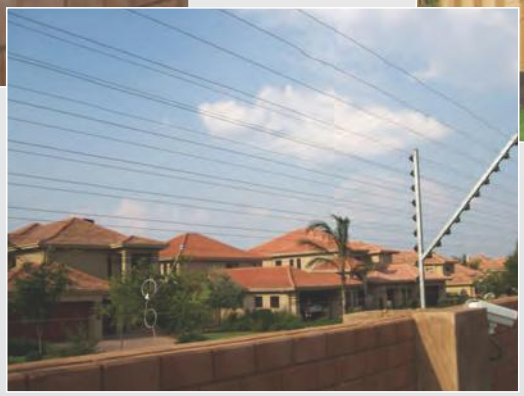
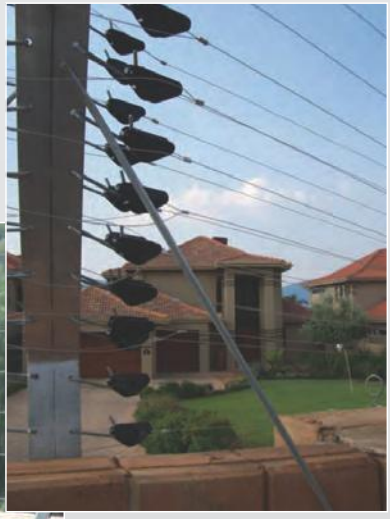
Farm security, SA

Security Fence, Santiago

Container Depot, NZ

Power Station, Chili

Petrol Storage, USA

Residential Fence, Johannesburg (SA)

Petro Chemical Plant, Nigeria