



# **THE LAW AND ELECTRIC FENCING**

**A Pocket Ready-Reference Guide  
to the Legal Dos And Don'ts of  
Electric Fencing In South Africa**

Revised July 2017



*Ignorance of the Law is No Excuse*



***Compliments of Ndlovu Fencing (Pty) Ltd***  
***Importers and Distributors of the Stafix and JVA Ranges of  
Electric Fence Energizers***



## SECURITY SYSTEMS

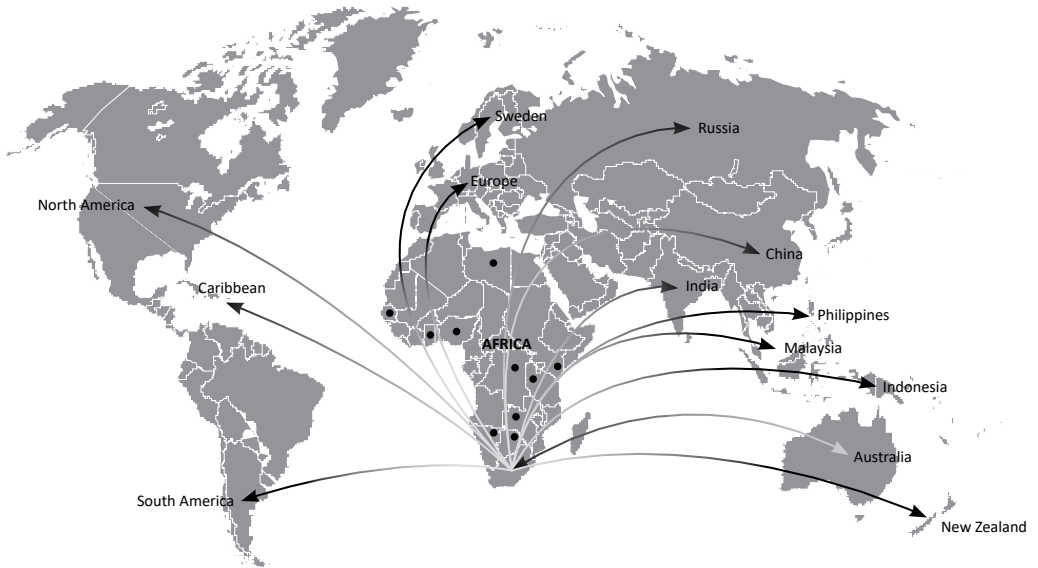
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- First Wireless Energizer Sites in the world

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*JVA exports worldwide*



## **Introduction**

On the 25th of March 2011 Parliament promulgated amendments to Electrical Machinery Regulations contained within the Occupational Health and Safety Act 1983 (Act No, 85 of 1983). Some of these amendments relate specifically to the electric fencing industry and are therefore relevant to any seller, installer or end user of an electric fence.

Furthermore, some of the SANS Standards referred to in this Act were further amended in 2016.

It is the goal of this booklet to provide electric fence sellers, installers and end users with a condensed, easy-to-consult, explanation of the Act and the Standards referred to in the Act.

This booklet does not profess to cover every aspect of the Act and SANS documents as to do this would require simply reprinting in full the Act and SANS documents. We strongly recommend that registered installers acquire unabridged copies of these relevant documents pertaining to the industry. It is prudent to remember that ignorance of the law is no excuse.

### ***What is the purpose of this Act?***

There has been legislation in place since the 1980's relating to non-lethal electric fencing. However, because electric fences were used mainly on farms and in rural areas, the Act was never really actively applied. With the proliferation of what was formally an agricultural management tool, into the urban environment as a security product, governments around the world have taken note of this phenomena and decided that the legislation pertaining to non-lethal electric fencing needed revising and updating.

So the primary purpose of the OHS Act is to protect and ensure the safety of the citizens of South Africa with regards to all electrical systems and appliances. Thus the section of the Act relating to non-lethal electric fencing, to which this ready reference refers, is meant to protect the public from receiving inadvertent and possibly dangerous shocks from badly sited or poorly erected electric fences.

A second objective of the Act is to prevent Radio, TV and Telephone interference caused by non-compliant energizers, poor earthing, and any other unacceptable installation practises.

Finally the Act and SANS standards protects the consumer by specifying minimum fencing material quality and acceptable erection standards.

Applying these standards to a monitored electric fence installation will ensure a safe, effective and trouble free security barrier providing both deterrence and detection, something no other security system can offer.



## **The Act and Relevant SANS Standards and Codes of Practice Applicable to Non-Lethal Electric Fencing**

The amended legislation covering the safety standard requirements for the manufacture of electric fence energizers and the erection and installation of non-lethal electric fence systems, as well as the laws relevant to sellers, installers, users, and lessors of such systems are to be found in:

- The Department of Labour's **Occupational Health and Safety Act 1993** (herein referred to as the Act) under **Sections 12 to 16, Electric Fences**. These amended regulations can also be found in the **Government Regulation Gazette No. 9509 Vol 549, published in Pretoria 25th March 2011 No. 34154 Clause 12 Electric Fences**.

The Act then refers to a number of SANS Standards, namely:

- **The South African National Standard – SANS 60335-3-76:2006**. This is the same as the International Electro-technical Commission's **IEC 60335-3-76:2006** standard which stipulates the safety specifications that have to be met by manufacturers of electric fence energizers in order to qualify for a test certificate, issued by an internationally accredited test laboratory, certifying that their energizer complies with the standards. In South Africa the only internationally accredited test laboratory for energizers is Test Africa based in Pretoria. (The SABS is not an internationally recognised test laboratory for energizers.) There is a small section in this standard that also relates to fence erection but the following SANS 10222-3-2016 standard over-rides some of these clauses. In order for an energizer to qualify to receive a *Certificate of Compliance* the testing laboratory will also have tested the energizer to ensure that it complies with **SANS 214-1/ CISPIR 14-1 Electromagnetic compatibility** and **IEC 60335-1:2010+A:2013**.
- **The South African National Standard – SANS 10222-3-2016 Edition 5. Part 3: Electric fences (non-lethal) and manufacture requirements**. This is a purely South African standard that specifies the erection and system installation standards and also the minimum quality specifications. Of the materials to be used in the construction of an electric fence. It is important that an installer is well versed in the requirements of this standard.

The above are the documents that relate to the erection of non-lethal electric fencing installations and monitoring systems and are the laws and standards that we have endeavoured to condense in this booklet.



## Important Definitions from the Act and SANS Documents

**Bracket:** A device, normally fabricated out of metal, with attached fence insulators, that can be attached to a building element with the objective of supporting electric fencing wires.

**Circuit:** An arrangement of conductors for the purpose of conducting electrical energy.

**COC: *Certificate of Compliance*** Is a document, issued by a Registered Installer, certifying that the electric fence installation complies with all the requirements of the Act and SANS standards.

**Electric Fence:** Barrier that includes one or more conductors, insulated from earth, to which electric pulses are applied by an energizer.

**Electric Security Fence:** Fence used for security purposes that comprises an electric fence installation.

**Electric Fence Energizer:** Appliance that is intended to deliver voltage impulses periodically to a fence connected to it.

**Earth Electrode:** Metal structure that is driven into the ground to be used by the energizer and is connected electrically to the output earth terminal of the energizer and that is independent of other earthing arrangements.

**Fence Circuit:** All conductive parts or components that are connected to an energizer high voltage output terminals.

**Fence length:** Length measured in meters of the physical electric fence.

**Fence live wire length:** Length measured in metres of the series (live loop) of the live wire of an electric fence.

**Physical barrier:** A barrier not less than 1.5m high with one dimension of the opening no greater than 150mm, intended to prevent inadvertent contact with the pulsed conductors of the electric fence.

**Public Area:** Area within a secure area to which any person can gain legal access without the permission of the land owner or where members of the public are allowed to enter. (i.e. within a housing complex the car park, sports and recreational area.)

**Registered person:** Is a person registered under the Occupational Health and Safety Act 1993 (Act 85 of 1993) who has satisfied the chief inspector that he/she has sufficient knowledge of the safety standards and that he/she has been furnished with a ***Certificate of Registration*** by the chief inspector and that such registration has been entered into the national database.

**Sector:** A zone can be partitioned into sectors. (See Zone below) Thus a single zone can be partitioned into a number of sectors and one could have a single zone, four sector fence.

**Secure area:** area where one is not separated from pulsed conductors below 1.5m by a physical barrier.

**Urban area:** (High density population area) municipal/metropolitan areas or where population would exceed 400 or more persons per square kilometre.

**Zone:** Length of electric fence powered by a single energizer.



## Requirements of the Act

In a nutshell, the new OHS Act requires that any non-lethal electric fence erected after 1<sup>st</sup> October 2012 requires a **COC** (*Certificate of Compliance* – see Annexure 1 page 12) issued by a **Registered Person**. (See page 2 for definitions for explanation of **COC** and **Registered person**.) This **COC** is valid indefinitely provided no major structural alterations or modifications are made to the fence. (Replacement of broken insulators or broken wires is allowed – replacement of the energizer or additions to the fence are deemed major structural alterations.)

However, the Act goes further and states that any property sold after the 12<sup>th</sup> October 2012, that has an electric fence around it and which is **less than** two years old, will now require a **COC**. before transfer can be registered. This means that properties which had electric fences around them before 1<sup>st</sup> October 2012, and do not require a **COC**, will require one if and when the property is sold. As it is not possible to apply laws retrospectively this **COC** will have to be issued by the **Registered Person** based on the law applicable at the time of initial fence installation.

It will be the responsibility of the person issuing this **COC** to be satisfied that the fence is indeed safe before issuing this **COC** and this may require some improvements to the fence. (e.g. improving the earthing, ensuring that the energizer being used is safe, providing adequate lightning protection and warning signs.)

The Act stipulates that the seller, importer or manufacturer of an energizer must be able to produce a **test certificate** issued by an internationally recognised test laboratory certifying that the energizer complies with **SANS 10335-76**. This *Certificate of Compliance* is valid for five years. Further the Act requires that an electric fence installation must comply with the **SANS 10222-3:2016** standards. (See page 1.)

South Africa also has certain **Compulsory Certification Requirements** and those are that all electrical appliances and electronic products that connect to the power grid (220volt) require a mandatory **LOA** approval. An **LOA** is a **Letter of Authority** issued by the National Regulator for Compulsory Standards. An **LOA** is valid for three years.

This Act does not exclude anyone from installing an electric fence themselves provided they meet all the specifications and regulations but the final issuing of a **COC** has to be done by a **Registered Person**. (Just as one may wire one's own house but the final safety approval and issuing of a wiring certificate has to be done by a registered electrician.)

This brings us to the question, how does one become a registered electric fence installer?



## How Does One Become a Registered Electric Fence Installer?

***The Electrical Machinery Regulations 2011 promulgated under the Occupational Health and Safety Act 1993 state:***

*Application for registration as registered person*

1. Application for registration as a registered person shall be made to the Chief Inspector in the form of Annexure 2 (See page 14.) and shall be accompanied by the registration fee prescribed by regulation 23. (The current fee is R120 and the address is: The Chief Inspector, Department of Labour, Occupational Health and Safety, PB X117 Pretoria 0001.)
2. Any natural person, who satisfies the chief inspector that he or she has sufficient knowledge of the safety standards applicable to electric fence systems, may be registered by the Chief Inspector as a *Registered Person*.
3. The Chief Inspector shall furnish a registered person with a *Certificate of Registration* and enter such registration into the National Data Base.
4. A registered person shall on request produce his or her *Certificate of Registration* to any inspector and any supplier or any person for whom he or she intends to install an electric fence system and issue an electric fence certificate.

### ***What steps need to be taken to qualify for registration by the Chief Inspector?***

First and foremost an applicant for registration as a professional electric fence installer must be able to present the Chief Inspector with proof in the form of a competency declaration that s/he has attended and been assessed by a recognised Electric Fence Installation course.

There are two categories of applicants for enrolment in such a course: Category A for those who have less than two years' prior experience; Category B for those who have more than two years.

Stafix Electric Fence and Security Centres offers, and provides facilitators at a number of our branches around the country, for the Atlantic Accord (t/a Electric Skills) COC course. This course is registered and endorsed by the EWSETA (Reg. No. EtDei7ENER13032008).

Briefly, in order to secure a place on a course, one must procure from Stafix and fill in an *Electric Skills Training Provider* application form – Category A or B, depending on experience; provide prior learning certificates (if not Cat B); give 5 reference sites; a brief CV of experience and jobs done; a copy of Temporary COC (If applicable); 2 × original certified copies of ID and certified ID photos; and a certified copy of the Dept. of Labour Registration form. Currently the course costs R4,500 plus R120 for DOL registration. After the course is completed the attendees will sit a theoretical examination, followed by a practical examination.

For a full explanation of how to enrol on such courses and to receive all the necessary enrolment paperwork contact your nearest Stafix Electric Fence branch or email [ndlovu@stafix.co.za](mailto:ndlovu@stafix.co.za).





## Summary of Relevant Safety and Installation Requirements of the OHS Act and SANS 10222-3:2016 Standard

The following are the most important specifications extracted from the Act and SANS standard which an installer must observe when installing an electric fence system.

### A Planning Principles

1. Because an electric fence has the potential to cause electromagnetic interference on communication lines, cognisance must be taken of any communication or overhead power lines when planning an installation. Always keep the distance between the electric fence and communication lines or overhead wires as far as possible.
2. Do not install an electric fence around communication poles in a way that it causes a safety hazard to employees of the communication company.
3. It is good practise **not** to have the top wire on the electric fence electrified where a communication line runs above and parallel to the electric fence.

### B The Energizer and Electric Fence

1. The energizer must have a valid *Certificate of Compliance* issued by an internationally certified test laboratory verifying that it has been tested and complies with **SANS 10335-76** and it must have a valid **LOA** issued by the SA National Regulator for Compulsory Standards.
2. An electric fence erected after 1st October 2012 must have a *Certificate of Compliance* issued by a *Registered Person* certifying that the fence meets the requirements of **SANS 10222-3:2016**.
3. The energizer must be installed in a dry, dust-free location and in a position as to be out of reach of children.
4. You may not electrify barb or razor wire.
5. Below 1.5m you may not put more than one energizer on a fence line unless they are synchronised.
6. In an urban area (population exceeds 400 per sq. Km.) the electric fence energizer output shall be limited to a maximum of **8 joules** under any load condition.
7. The energizer should only be operated by persons competent to do so.
8. Feed-out and return cables should be double insulated and should be enclosed in conduit.



9. Electric fence feeder and return wires must be in separate conduits and must never be included in the same conduit or trunking with any communication cabling.
10. The fence line must be kept free of vegetation and should be maintained regularly.

### **C Earthing**

1. Three earth electrodes shall be installed in close proximity to the electric fence energizer. The earth electrodes shall be linked together and inserted a minimum distance of the length of the earth spike from each other.
2. The distance between the earth electrodes and any other earthing system shall **not** be less than 2m.
3. The earth electrodes shall be a minimum length of 1.2m long and a minimum of 10mm thick and be manufactured out of galvanised steel, copper clad steel, copper or stainless steel. (We strongly recommend hot-dipped, galvanized earth stakes to avoid electrolysis.)
4. On a security fence additional earth electrodes should be inserted at a minimum distance of 30m apart. (On game fences this distance is increased to 100m.)
5. The connecting lead used to connect the earth electrodes to the energizer shall be of a similar or larger diameter than the electric fence's wires.
6. The full length of the earth electrodes shall be inserted vertically into the ground, or in rocky ground at a maximum of 45 degrees.
7. All the earth wires of an electric fence must be connected together when connected to an earth electrode.
8. To test the energizer's earth create a short between the furthest earth electrode from the energizer and a live conductor of the fence. Check that the voltage on the fence has been reduced to below 2,000 volts. Disconnect the last earth electrode at the energizer and then measure the voltage between this electrode and the two remaining connected electrodes. The reading should be less than 300 volts. More than 300 volts means additional earth electrodes are required.

### **D Lead-Outs**

1. An insulated fence high tension cable shall not run:
  - a. In the same trench or wire-way with a mains AC current supply; in the same wire-way with cables or wires of telecommunication, radio, or signalling circuits;
  - b. Where it is likely to be damaged by corrosive liquids;



- c. Within 150mm of hot surfaces if heat is likely to damage it (i.e. hot water pipes);
- d. Where it is likely to be damaged unless mechanically protected.
- e. In a case of connecting leads that run inside a building shall be effectively insulated from the earthed structural parts of the building. (Use insulated HV cable.)

## **E Barrier Fencing**

A freestanding electric fence requires a **barrier fence** in front of it to prevent the public from making inadvertent contact with the electric fence. Such a barrier fence shall be **1.5m** high and one dimension of the opening shall not be greater than 150mm. The distance between the barrier fence and the electric fence shall be less than 200mm or greater than 1,000mm.

The minimum height of this barrier fence can be reduced to **1.2m** provided that the barrier fence is erected more than 1.5m from the electric fence.

A barrier fence is also required within a secured area (e.g. inside a secured housing estate) where the general public who have been given access to the estate may make contact with the electric fence (e.g. parking and recreational areas). A barrier fence that meets the above specifications should extend not less than 20m on either side of the public area.

## **F Lightning Arrestors**

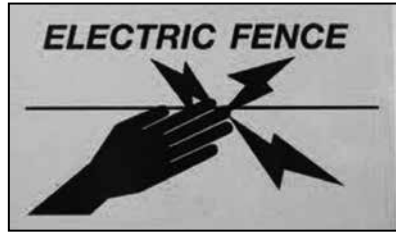
Lightning arrestors must be attached as close to the connection from the energizer and the electric fence as possible and in the case of a security energizer, two arrestors (or a double arrestor) must be installed. (One for feed-out and one for return wires.) The lightning arrestors should also have their own earth grid that is independent of the energizer's earth grid.

## **G Minimum Clearance from Power Lines for Security Electric Fences**

<b>Power line voltage V</b>	<b>Clearance M</b>
Less than or equal to 1,000	2
1,000 to less than 33,000	4
Greater than 33,000	8

## **H Warning Signs**

1. All electric fences shall be identified by prominently displaying warning signs.
2. Size should be at least 100mm × 200mm.
3. Background on both sides shall be yellow
4. Symbol of a black hand touching a wire with flashes (See diagram.)
5. Such warning signs shall be securely fixed to the fence post, the fence itself or a building element not more than 200mm from the fence.
6. Warning signs must be placed in clearly visible positions **1.5 to 2m** above ground level.
7. Warning signs shall be displayed on access gates, if present, and not more than 500mm on either side of the access area on which an electric fence is erected.
8. Spacing between warning signs must not exceed 10m apart in urban areas.
9. Warning signs shall be displayed not more than 2000mm from each corner or bend in a straight length of electric fence.
10. In low density population areas (game and agricultural fences) warning signs shall not be more than 100m apart.



*Symbol for a non-lethal electric fence warning sign*

## **I Wall-Top Fencing**

1. Wall-top fences must be at least 1,500mm above walking ground level.
2. Wall top brackets shall be installed at a maximum of 3,000mm. If there are obstructions, distance can be stretched to 5,000mm but the average distance apart over the overall length cannot exceed 3,000mm.
3. The maximum spacing between wires on brackets must be 100mm.
4. Strainer brackets must be adequately stayed.
5. Fastening devices shall penetrate a minimum of 50mm into the wall.



## **J Free-Standing Electric Fence**

1. A freestanding electric fence shall not be installed in a public area unless the lowest wire of its live strands is 1,500mm above walking distance, or the public is protected from inadvertent contact with the fence by a barrier fence with a minimum height of 1,500mm (See Barrier fencing page 7 and diagrams on page 10.)
2. If a barrier fence is not, or cannot, be installed in front of the electric fence below 1,500mm the fence can still be legally monitored by installing a low voltage monitoring system. Low voltage monitoring, by definition, is applying a voltage of less than 50 volts along the insulated wires and then monitoring this voltage.

## **K Joints and Terminations**

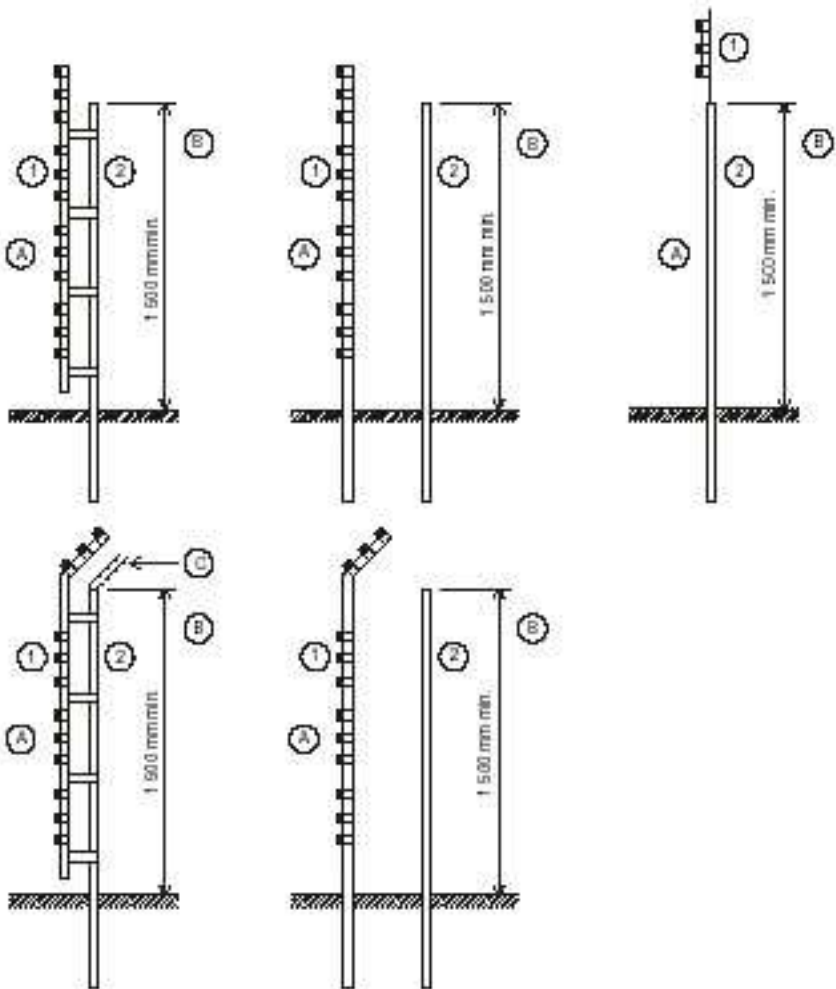
To ensure good electrical contact and carrying capacity and to avoid any communication interference it is mandatory that all joints must be clamped either using ferrules, line clamps or soldered.

## **L Materials used for the construction of an Electric Fence.**

There are many specifications contained in the SANS 10222-3: 2016 Edition 5 publication that cover virtually every material that an installer would use to erect and install an electric fence. If an installer is purchasing his/her materials from a reputable supplier they will no doubt ensure that the materials they are supplying meet these required specifications. This would cover products such as insulators, cabling, wire types, line clamps, tensioners and intermediate poles and posts and the metal used for bracket manufacture.

For the record, brackets manufactured out of steel shall in the case of:

- a) Flat Bar – have a minimum width of 19mm and a minimum thickness of 4.5mm
- b) Square Tubing – have a minimum width of 19mm and minimum thickness of 1.6mm
- c) Round Bar – have a minimum diameter of 8mm
- d) Angle Iron – have a minimum width and depth of 19mm and a minimum thickness of 3mm.



**Key**

- A – Secure area
- B – Public access area
- C – Barrier where required
- 1 – Electric security fence
- 2 – Physical barrier

*Typical constructions where an electric security fence is exposed to the public*



## **Conclusion**

As stated at the beginning of this booklet, this summary or Ready Reference, does not presume to cover every aspect of the Act and SANS Standards. We have however endeavoured to cover the most common questions and misconceptions we encounter almost daily.

It should be noted that in the SANS Standards there are also special specifications for Pet Control fences, Strip Grazing, Wildlife/Game control, as well as general agricultural fences. However, as these are mostly, with the exception of Game fences, DIY installations, they are not included in this summary as they are usually adequately covered in the literature that accompanies these products when purchased.

We hope that this pocket booklet will be of use to you as a ready reference in the field.

Should you require any further information please do not hesitate to contact any one of our Stafix Electric Fence and Security Centres listed on the back cover.

# Annexure A

## Annexure 1

### DEPARTMENT OF LABOUR

#### OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

#### ELECTRIC FENCE SYSTEM CERTIFICATE OF COMPLIANCE



Electric Fence System Certificate of Compliance in accordance with regulation 12(4) and 13(1) of the Electrical Machinery Regulations, 2011.	Certificate No.	
	Certificate Type (Tick appropriate block)	
	Initial Certificate	
Supplement No. .... to Initial Certificate No. .... as issued on: .....		
<b>Identification of the relevant installation</b> (Address or other unique reference, where applicable)		
Physical address: ..... .....		
Name of premises: ..... GPS Coordinates: .....		
Suburb/Township: ..... Pole number: .....		
District/Town/City: ..... Erf/Lot No.: .....		





<b>Declaration by registered electrical fence installer</b>		
<p>I _____ (ID No. _____), a registered electric fence system installer, declare that I have personally carried out the inspection and testing of the electric fence system described above as per the requirements of regulation 13(1), and deem the installation to be reasonably safe when properly used.</p>		
<p>Registered person registration number: ..... Date of registration .....</p> <p>Signature: ..... Date: .....</p>		
Contact details of registered person:	Tel No.	.....
	Fax No.	.....
	Cell No.	.....
	Email	.....
	Address	..... ..... .....
<b>Declaration by user or lessor</b>		
<p>I declare that I am aware of my responsibilities in terms of regulation 12 of the Electrical Machinery Regulations and undertake to operate and maintain the electric fence system in a safe manner.</p>		
<p>Recipient Name: ..... Signature: ..... Date: .....</p>		



# Annexure B

STAATSKOERANT, 25 MAART 2011

No. 34154 29

## Annexure 2

### OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO. 85 OF 1993) REGULATION 14(1) OF THE ELECTRICAL MACHINERY REGULATIONS

### APPLICATION FOR REGISTRATION AS AN ELECTRIC FENCE SYSTEM INSTALLER

The Department of Labour  
Occupational Health and Safety  
Private Bag X117  
Pretoria  
0001

R120,00

Surname (block letters): .....  
First names (block letters): .....  
Postal address: .....  
Code: .....  
Telephone Nos.: (W) ..... (H) .....  
(Fax) ..... (Cell) .....  
Date of birth: ..... Place of birth: .....  
Identity number (immigration permit number): .....  
A certified copy of electric fence system installer proficiency must be attached.

Two clear identical unmounted photographs of 40 mm by 30 mm showing the face and shoulders of the applicant to be submitted. One photograph to be certified on the back as follows:



I certify this to be a true photograph of.....

.....  
Signature of Magistrate, Justice of the Peace or Commissioner of Oaths  
Date

I hereby declare that the above particulars are, to the best of my knowledge and belief, correct.

Signature of applicant: ..... Date: .....

**SPECIMEN SIGNATURE OF APPLICANT**

Note - The specimen signatures should be the normal signature of the applicant and should be carefully completed. One specimen will be affixed to any certificate of registration that may be issued.

1	2	3

## Annexure C



Room S166, Building 33  
CSIR Grounds  
Brummeria  
Pretoria

PO Box 36335  
Menlopark  
Pretoria, 0102  
South Africa



T0146

WCT (PTY) LTD T/A T.E.S.T. Africa  
reg #: 2000/024600/07  
vat reg #: 4620192684

Tel.: (+27 12) 349 1145  
Fax.: (+27 12) 3491249  
E-mail: [info@testafrica.co.za](mailto:info@testafrica.co.za)  
Internet : <http://www.testafrica.co.za>



### Test Report

IEC 60335-2-76: Particular requirements for electric fence energizers  
Household and similar electrical appliances - Safety

REPORT # : WCT 17/0037

**CLIENT:**

Nalloyu Fencing T/A Stafix Electric Fencing  
PO Box 13898  
Cascades  
3202

Attention: Mr Hennie Olivier

Order #: Application Form  
Date of Order: 12 January 2017

**SAMPLE:**

Security Electronic Fence Energiser with AC Adaptor

**TEST SPECIFICATION:**

IEC 60335-2-76:2002 & A1:2006 & A2:2013  
IEC 60335-1:2010 & A1: 2013

**SUMMARY OF RESULTS:**

Complied

**DATE STARTED:**

2017-01-24

**DATE COMPLETED:**

2017-06-15

**DATE OF ISSUE:**

2017-06-15

**TESTED:**

  
G.H. Holzhausen (Technical signatory)

**APPROVED:**

  
I.P. Kuisis

**NOTE:**

\* The South African National Accreditation System (SANAS) is a member of the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). This Arrangement allows for the mutual recognition of technical test and calibration data by the member accreditation bodies worldwide. For more information on the Arrangement please consult [www.ilac.org](http://www.ilac.org)

IEC 60335-2-76			
Clause	Requirement - Test	Result - Remark	Verdict

### 1. DESCRIPTION OF SAMPLE

Manufacturer:	<i>Fence Energiser: Pakton AC Adaptor: Pakton</i>
Model:	<i>Fence Energiser: Z-Series/ Z11, Z13, Z14, Z18, Z28, Z114 AC Adaptor: YL40</i>
Trade Name:	<i>Fence Energiser: JVA AC Adaptor: Stafix/ JVA</i>
Country of Origin	<i>Fence Energiser: Designed in Australia/ Manufactured in Republic of South Africa AC Adaptor: China</i>
Rated Input:	<i>Fence Energiser: 1,5 A AC Adaptor: Class II</i>
Rated Voltage:	<i>Fence Energiser: 16 V ac AC Adaptor: 220 -240 V ~ 50/ 60 Hz</i>

### 2. ABBREVIATIONS

TEST DOES NOT APPLY:	N/A
SAMPLE MEET REQUIREMENTS (COMPLY):	C
SAMPLE DOES NOT MEET REQUIREMENTS (FAIL):	F
NOT TESTED:	N/T

### 3. SYMBOLS

- Tests are not included in the SANAS Accreditation Schedule for our laboratory.
- ▲ Results from sub-contracted tests
- ◆ Opinions and interpretations expressed herein are outside the scope of SANAS accreditation

### 4. GENERAL REMARKS

- \* Only a brief description of the requirements, measurements, etc. is given to indicate the nature of these. Consult the specification for details.
- \* The sections and subsections refer to in this report, are numbered as the test specification.
- \* This document shall not be reproduced in full unless approved by T.E.S.T. Africa.
- \* For sample identification, please see Appendix 1.

### 5. TEST CONDITIONS

Climatic conditions that prevailed during tests:

	Maximum	Minimum	Limits
Ambient temperature	25 °C	20 °C	25 °C ± 5 °C
Relative humidity	62 %	39 %	None

### 6. COMMENTS

A new sample, in working condition, was submitted for testing.



## Annexure D



### NRCS HOUSEHOLD APPLIANCES/ELECTRONIC LETTER OF AUTHORITY

APPLICANT NAME :	NDLOVU FENCING (PTY) LTD		
TRADING NAME :	STAFIX ELECTRIC FENCE AND SECURITY CENTRES		
POSTAL ADDRESS :	PO BOX 13098 CASCADES 3202	PHYSICAL ADDRESS :	219 JET PARK ROAD WITFIELD 1467
CONTACT PERSONS :	RICKARDO PACHECO		
TEL NO :	011 3673507 / 082783449		
FAX NO :	033 472780		
E-MAIL :	ndlovu@stafix.co.za		

CUSTOMS IMPORTER CODE :	CHECKED
VAT REGISTRATION NO :	CHECKED
COMPANY REGISTRATION NO :	

TARIFF HEADING:	8543.70	REBATE CODE:	
DESCRIPTION	BRAND	COUNTRY OF ORIGIN	APPLICABLE STANDARD
PTE 1044 ELECTRIC FENCE ENERGISER	JVA	AUSTRALIA CHINA	SANS IEC 60 335-2-76

MODEL#	Z114Z114 (BETA)
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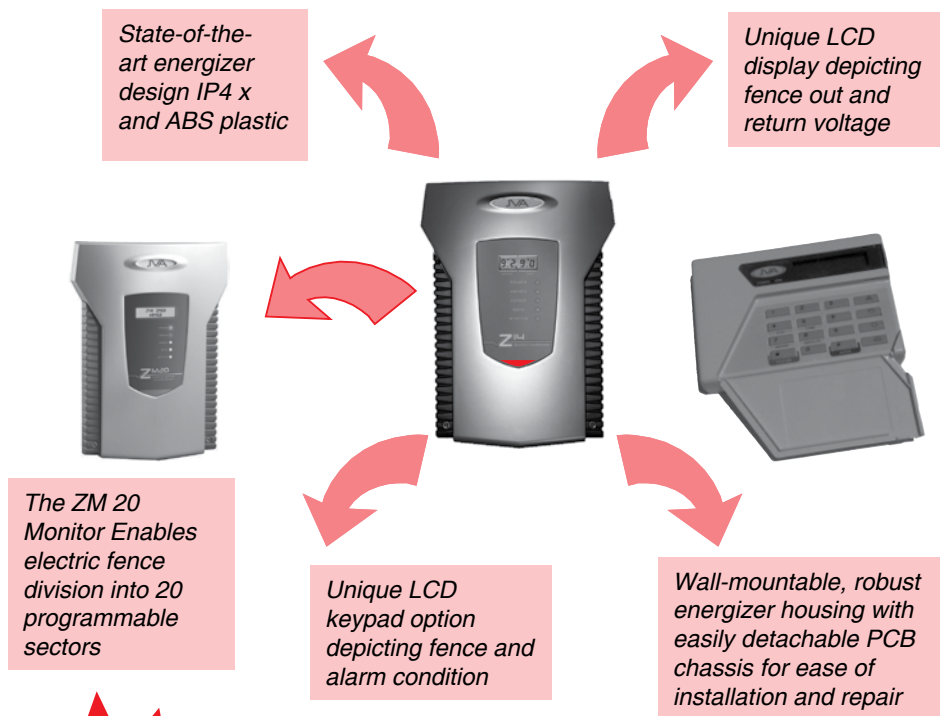
ACCEPTED VARIATIONS	AC ADAPTOR CHINA CLASS II 20 mA / 17Vdc
Z11Z13/Z14Z19Z28	
where I = Blank S = Alpha # = Numeric @ = Alphanumeric * = Blank or Alphanumeric	

CERTIFICATE NO :	00000008/526/001	EXPIRY DATE:	04 Sep 2017
DATE OF ISSUE :	03 Sep 2014		
AUTHORIZING OFFICER :	Isaac Matlapeta		
DATABASE ENTRY NO :	87526	AUTHORIZED :	

This certificate is issued subject to the conditions attached overleaf

**THE JVA Z RANGE ENERGIZER CONCEPT**

The JVA Range of Energizers has been collaboratively designed and manufactured by an international team with over 30 years of electric fence experience earned in some of the most testing security environments in the world. It aims to provide the very best low-cost, high-voltage security energizers. They are compact, integrated and fully programmable energizers with built-in alarm units and LCD *out* and *return* voltage display. They also have the option of being controlled from a remote LCD keypad.



**TWO-YEAR WARRANTY**

Although the information in this booklet is believed to be accurate, no responsibility for inaccuracies can be assumed by Ndlovu Fencing. Legislation is subject to change.



## **STAFIX ELECTRIC FENCE CENTRES**



### **Bloemfontein**

36 Kolbe Lane  
Oranjesig  
Tel: 051 448 6695

### **Cape Town**

Unit 15, Viking Business Park  
Park Road (off Viking Way)  
Epping Industria  
Tel: 021 534 5056

### **Centurion**

74 Cantonments Road  
Lyttleton  
Tel: 012 880 0222

### **Durban North**

Unit B, 13 Kenneth Kaunda Road  
(Old Northway)  
Tel: 031 563 0274

### **East London**

Shop 8 & 9, Paphos Park  
Devereaux Avenue  
Tel: 043 726 6652/60

### **East Rand (Jet Park)**

Aerostar Business Park  
219 Jet Park Road, Jet Park  
Tel: 011 397 3507

### **George**

Shop 3, 57 York Road  
George  
Tel: 044 874 0669/ 044 873 2958

### **Kimberley**

29 Schmidtsdrift Road  
Rhodesdene  
Tel: 053 861 5631

### **Klerksdorp**

72 Central Avenue, Flamwood  
Tel: 018 468 8273

### **Nelspruit**

Unit 4, 20 Rapid Street  
Riverside Industrial Park  
Tel: 013 752 7152/55

### **North Rand (Kya Sand)**

174 Bernie Street  
Randburg  
Tel: 011 708 6442

### **Pietermaritzburg**

51 Winston Road  
Tel: 033 342 6722/27

### **Pinetown**

Unit 1, 7 Suffert Street  
Tel: 031 702 6351

### **Polokwane**

9 Suez Street, Nirvana  
Tel: 015 292 6273

### **Port Elizabeth**

45 Mangold Street, Newton Park  
Tel: 041 365 7178/9

### **Potchefstroom**

35 Dr James Moroko Street  
Tel: 018 297 1488

### **Pretoria**

1185 Steve Biko Road  
(977 Voortrekker Road)  
Wonderboom South  
Tel: 012 335 4290

### **Rustenburg**

Shop 7  
Waterfall Mall  
1 Howick Avenue  
Tel: 014 537 2884

### **Somerset West**

4 Broadway Centre  
Urteel Crescent  
Tel: 021 851 1978

### **Upington**

Unit 2B  
Industria Business Park  
4 Progressus Street  
Tel: 054 332 1458

### **Vanderbijlpark**

5 Prime Business Park  
Rabie Street  
Tel: 016 931 0408

### **Vanderbijlpark Manufacturing (Pta. Wire)**

18 Fairbank Street, NW7/  
7 Elgar Rio, Elgar Street  
Tel: 016 986 2144

### **Vryheid**

Unit F  
153 President Street  
Cnr. Hlobane Street  
Tel: 034 981 0318

### **West Rand (Roodepoort)**

599 Ontdekkers Road  
Delaréy  
Roodepoort  
Tel: 011 472 8823