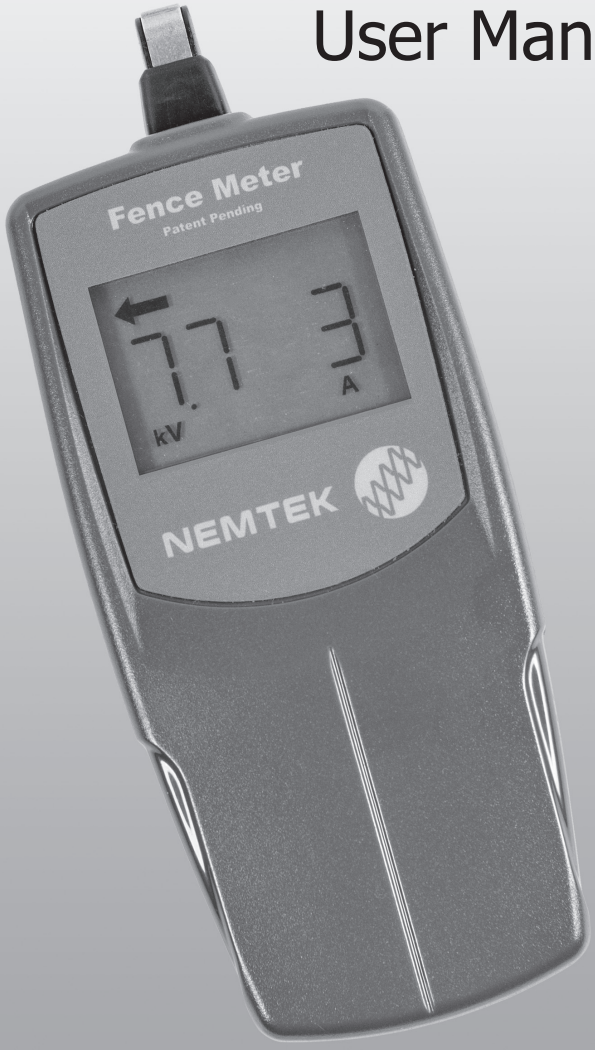
NEMTEK
Electric Fencing Products

Fence Meter

User Manual



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Company Profile

The NEMTEK Group of Companies manufacture and distribute intelligent electronic agricultural fencing systems, security and perimeter control systems and have been involved in the security industry since 1990.

We have our own research and development team, designing and manufacturing a full range of globally competitive electric fence energizers and related products.

NEMTEK is continually updating its products according to South African and international standards in order to ensure the highest quality products and continuous customer satisfaction.

Electric fencing can be lethal. Avoid head contact with the fence. When installing please take careful note of the options available for current limiting resistors, the programmable output energy levels as well as the low-voltage operation of the energizer.

Nemtek Contact Details

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Introduction

The NEMTEK Fence Meter measures the electrical condition of an electric fence. By holding the meter against the fence wire the meter will turn on automatically when it detects a fence voltage. The fence voltage, current and the direction of a possible fence fault will be displayed on the LCD. The meter will automatically turn off after a few seconds when not in use.

Technical Specifications

Parameter	Value
Voltage Display Range	**-14kV to 14kV**
Current Display Range	**1A to 85A**
Automatic Turn-On Voltage	**<-150V or >150V***
Battery Type	**2 x 1.5V AAA**
Battery Life	**~150 hours**
Operating Temperature	**-10ºC to 50ºC**

*Measured at a pulse length of 100ms and direct earthing

Warnings

1. This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety.

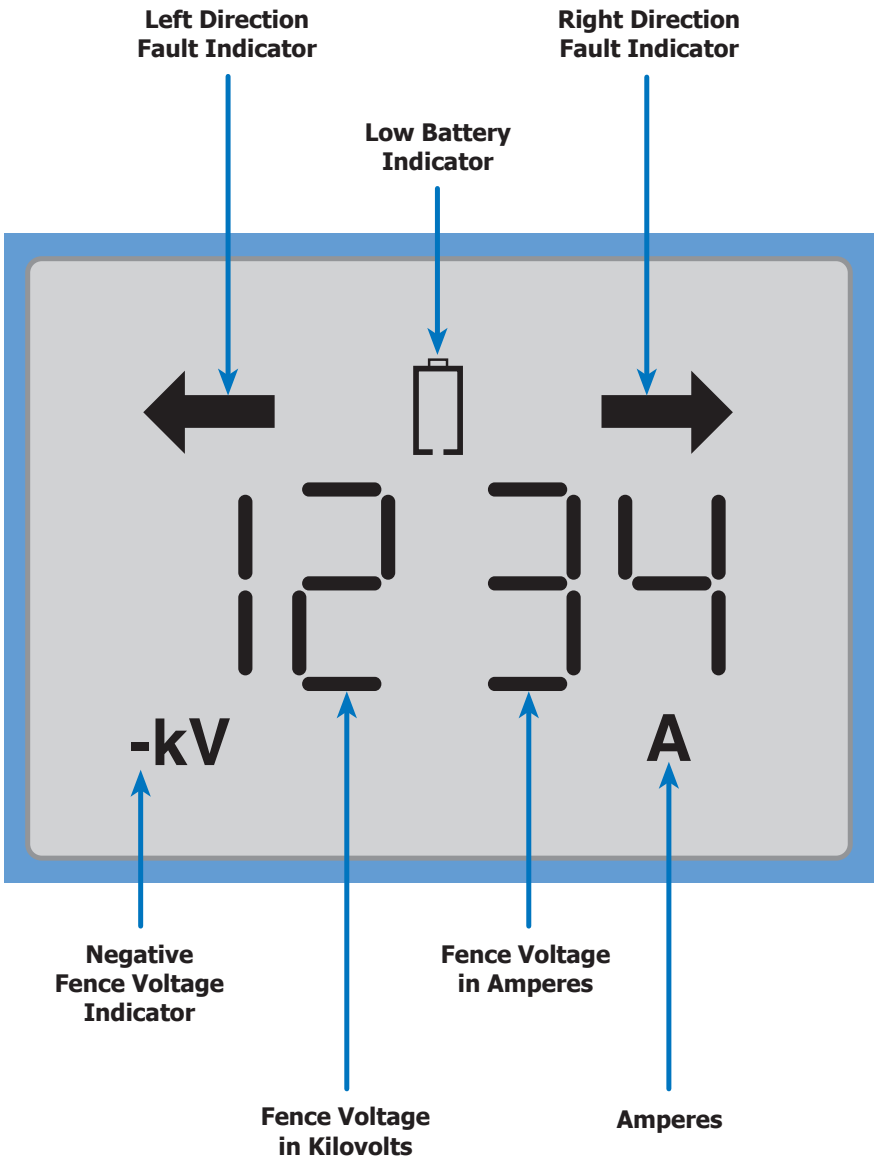
2. Electric fencing can be lethal. Avoid any head contact with the fence.

3. Do not attempt to use or store this product in the presence of excessive moisture, as this may lead to electrical shock.

4. Do not attempt to measure voltages in excess of 14 kV as this may damage the device or cause electrical shock.

5. Do not attempt to measure any other electrical outputs other than that of electric fence energizers complying with the IEC 60335-2-76 specification.

Screen Layout



Using Your Fence Meter

Holding the Meter

1. Grip the fence meter tightly in your hand, taking care not to grip too close to the electric fence wire, contact strip or LCD screen.

2. This meter makes use of capacitive coupling between the user, meter and earth and therefore, a firm grip with sufficient skin contact will ensure a more accurate reading.

3. A more accurate measurement can be achieved by holding on to a ground point like a ground wire, grounded metal pole etc. with your other hand while taking a measurement.



Taking a Measurement

1. Place the live fence wire in the slot of the measuring tip, making sure there is good contact between the fence wire and the metal strip.

2. If there is a voltage pulse in excess of 150V present on the wire, the Fence Meter will turn on automatically and display the fence voltage, current and if present, the direction of a possible fault (see screen layout image on page 4). If the fence voltage is more than 150V, but less than 0.5kV, the meter will turn on and show 0kV.

3 If the energizer has a negative voltage output or in some instances, where the ground fence wire is measured, the negative voltage indicator will be displayed.

4. If the current in the fence wire is less than 2A, no fault direction arrows will be shown.

Using Your Fence Meter

Taking a measurement (continued)

5. If the Fence Meter does not detect an energizer pulse for 10 seconds, the meter will automatically switch off.

6. Measurements taken in close proximity (less than 1m) to the energizer might not be accurate.

7. If only a voltage measurement is desired, it is not necessary to place the wire in the measuring pin slot, any contact to the metal strip will be sufficient.

Battery Replacement

1. If the battery symbol is displayed along with the measurements, the batteries will need replacement soon.

2. If only the battery symbol is displayed, the batteries need to be replaced before any measurements can be made.

3. The batteries (2 x AAA 1.5V) can be replaced by loosening the 6 screws at the back (leave the screws on the belt clip) and opening the meter.

4. Ensure the correct polarity as shown on the housing below the batteries.

Finding a Fault

Open-circuit Fault

1. Start as close as possible to where the high voltage (HV) leads from the energizer connects to the electric fence and take a measurement on the live wire.

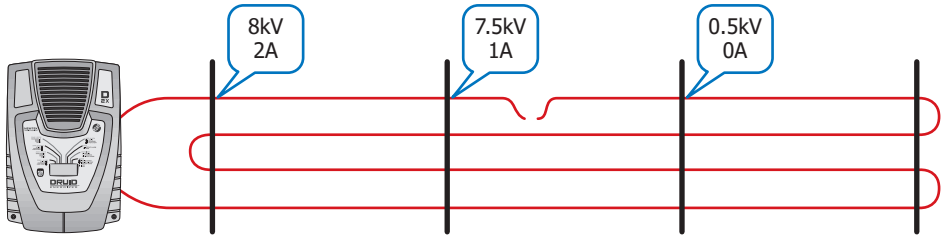
2. Depending on the location of the open-circuit fault, the current might be higher than for a healthy fence.

3. Take a measurement at regular intervals along the fence, while moving away from the energizer.

Open-circuit Fault (continued)

4. When the measurement shows a significant drop in voltage and current, the fault should be between the current and the previous measurement points.

5. Parallel fence wires should be inspected individually following the above process.



Energizer

Note: Ground wire omitted from example for simplicity

Short-circuit Fault

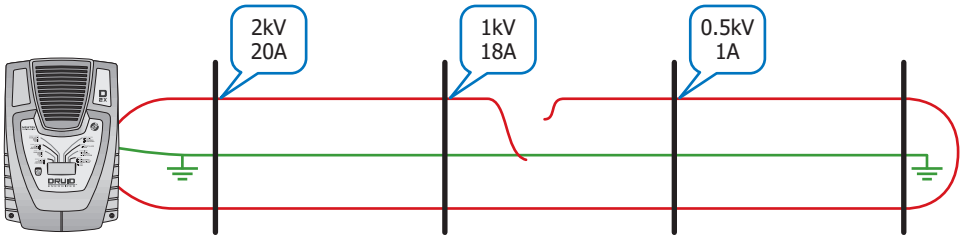
1. Start as close as possible to where the high voltage (HV) leads from the energizer connects to the electric fence and take a measurement on the live wire.

2. The fence current will be significantly higher compared to a healthy fence.

3. Take a measurement at regular intervals along the fence, while moving away from the energizer.

4. When the measurement shows a significant drop in current, the fault should be between the current and the previous measurement points.

5. When fault finding parallel fence wires, follow the wire with the highest current reading.



Energizer

IEC Safety Information

- **There are no user serviceable parts inside the energizer.**

- **If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.**

- **This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.**

- **Electric fencing can be lethal. Avoid head contact with the fence. Ask the installer to explain the options of current limiting resistors, the programmable output energy levels as well as the low-voltage operation of the energizer.**

WARRANTY

The Fence Meter, manufactured by NEMTEK, is guaranteed for a period of one year from date of sale against defects due to faulty workmanship or materials. NEMTEK will, at its discretion, either repair or replace a product that proves to be defective. NEMTEK guarantees that the product, when properly used in line with the specification as determined by NEMTEK from time to time, will execute its function. NEMTEK does not guarantee that the operation of the product will be uninterrupted and totally error free. Faulty units must be returned to one of the NEMTEK Group outlets. The buyer shall pay all shipping and other charges for the return of the product to NEMTEK or NEMTEK Security Warehouse.

LIMITATION OF WARRANTY

The warranty does not apply to defects resulting from acts of God, modifications made by the buyer or any third party, misuse, neglect, abuse, accident or mishandling.

EXCLUSIVE REMEDIES

The remedies provided herein are Nemtek (Pty) Ltd's sole liability and the buyers sole and exclusive remedies for breach of warranty. Nemtek (Pty) Ltd shall not be liable for any special, incidental, consequential, direct or indirect damages, whether based on contract, tort, or any other legal theory. The foregoing warranty is in lieu of any and all other warranties, whether expressed, implied, or statutory, including but not limited to warranties of merchantability and suitability for a particular purpose.

NEMTEK
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Rev 1.0, 21 January 2020
Rev 1.1, 17 March 2026
Manual design updated