



VOSS farming FS10 Fence Sensor Instruction Manual

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VOSS farming FS10 Fence Sensor



INSTRUCTION MANUAL

1. ABOUT THIS MANUAL

In this manual you will find all important information about your new product.

Read this manual carefully before using the product for the first time to avoid misunderstandings and prevent damage. This manual contains important instructions for the safe use of your new product. Keep this manual in a safe place. If the product is passed on to a third party, the instruction manual must also be handed over.

Observe and follow the safety instructions contained in this manual.

1.1 USED SYMBOLS

The following symbols may appear in this manual:



WARNING AGAINST ELECTRICAL VOLTAGES

This symbol stands for possible dangerous situations caused by electrical voltages, which, if not avoided, can lead to serious injury or death!



WARNING

This symbol stands for possible dangerous situations, which, if not avoided, can lead to serious injury or death!



CAUTION

This symbol stands for possible harmful situations, which, if not avoided, may lead to slight or minor injuries.



NOTICE

This symbol stands for possible dangerous situations, which may cause damage to property in the event of non-compliance.



Info

This symbol provides further useful information.

Product and instructions are subject to change without notice. Technical data may also change without notice.

2. GENERAL SAFETY TIPS

Observe and follow the safety tips contained in this section.



WARNING AGAINST ELECTRICAL VOLTAGES

» Make sure that the electric fence is not live before working on it. Switch off the energiser battery before performing any work on the electric fence.



WARNING

- » Do not expose the device or the batteries to naked flames, heat or excessive pressure. Adhere to the instructions attached to the batteries. Always use the batteries for their intended purpose and according to the manufacturer's instructions.
- » Keep the device out of reach of children. The device contains small parts that may be swallowed.
- » The device provides additional safety, but does not release the fence operator from the obligation to check the electric fence regularly for faults. Regularly check the voltage and grounding of the fence and conduct regular visual inspections.

CAUTION

- » Prior to inserting the battery, check for dirt and remove any contamination using a dry cloth or soft brush.
- » Risk of chemical burns. Leaking or damaged batteries may cause burns on contact with the skin. You must therefore always wear suitable protective gloves. Use a dry cloth to clean the battery compartment if your batteries have leaked and/or become damaged.

NOTICE

- » Operate the device only using the accessories and batteries that are enclosed or approved by the manufacturer.
- » Do not mix old batteries with new ones. Remove empty batteries from the device.
- » Use the enclosed batteries only for their intended purpose as described in these instructions.
- » Do not immerse the device in water or other liquids. This may otherwise cause a short circuit.
- » Do not use the device if it is visibly damaged.
- » Never open the housing and do not perform repairs by yourself. Contact Service in case of repairs.
- » Do not change or modify the device for unintended purposes. Exclusively use original spare parts and accessories that are approved by the manufacturer.

3. INTENDED USE

The VOSS.farming Fence Sensor FS10 is used to measure the voltage at any point of your electric fence system in connection with the VOSS.farming Fence Manager FM10 or FM20 WiFi. Any other use is prohibited. The purpose of the device is exclusively to enable additional monitoring and safety for your electric fence system. The device does not release the fence operator from the obligation to check the electric fence regularly for faults. The device is intended for personal and commercial use.

4. CONTENTS

The contents include the following:

- 1x VOSS.farming Fence Sensor FS10
- 2x C-LR14 batteries 1.5 V
- 1x magnet with ribbon
- 1x grounding rod
- 1x grounding cable
- 1x connection cable to the fence system
- 1x base antenna
- 2x plastic cable ties for attachment to a fence post

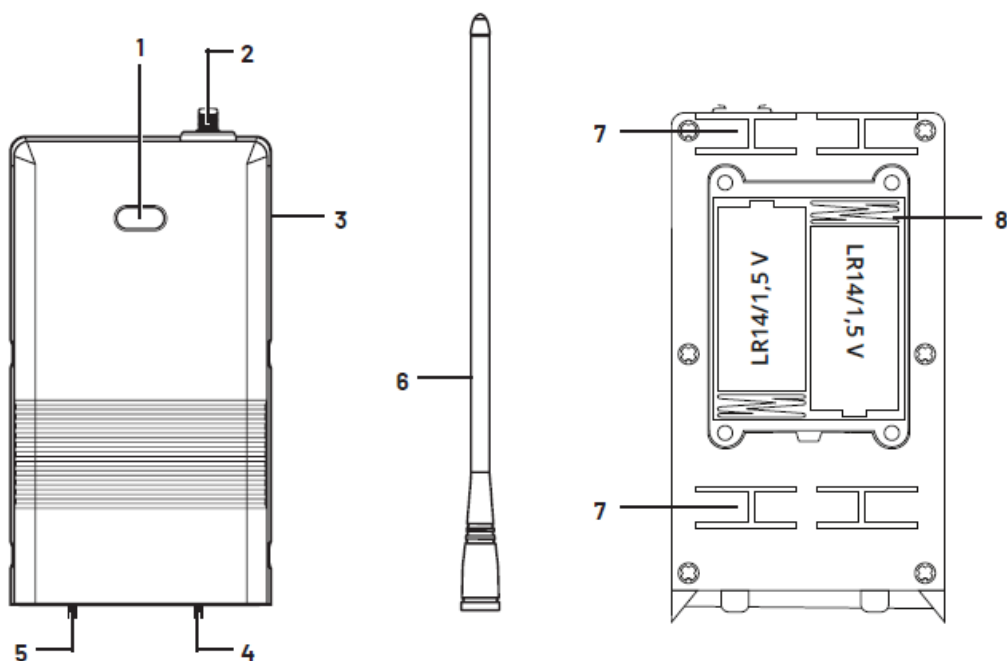
5. TECHNICAL DATA

- Base antenna range: up to 10 km (connection to an external antenna using an extension cable (2 m or 10 m) is possible)
- Range with external antenna: up to 30 km
- RF transmission frequency: 869.525 MHz/22 dBm
- Power supply: 1.5 V C-LR14 batteries (2x)
- Operating temperature: -15°C to +50°C
- Protection class: IP44

Dimensions and weight

Dimensions incl. antenna (HxWxL) approx.: 39.5 x 7.8 x 5.2 cm
Dimensions without antenna (HxWxL) approx.: 15.1 x 7.8 x 5.2 cm
Weight incl. antenna and batteries approx.: 366.2 g
Weight incl. antenna, without batteries: approx.: 230 g

6. DEVICE OVERVIEW







No.	Name
1	LED
2	SMA connector for base antenna
3	Magnetic point
4	Fence connection
5	Ground connection
6	Base antenna
7	Opening for cable ties
8	Battery compartment for LR14 batteries (2x 1.5 V)

6.1 HOW IT WORKS

The VOSS.farming Fence Sensor FS10 measures the voltage at any point of your electric fence system. The measured data is transmitted by radio frequency to the central interface, the VOSS.farming Fence Manager FM10 or FM20 WiFi, where it is shown on the display. You can pair

6.2 EXPLANATION OF THE PRODUCT LABEL

up to six resp. twelve devices with the interface.

Icon	Meaning
	Disposal of electrical items
	Documents the product's compliance with EU directives
IP44	Protected against splash water and foreign bodies according to protection class IP44
	Low voltage protection
	Reading the instruction manual

7. INITIAL SET-UP

7.1 INSERTING THE BATTERIES

Info

Required tools: Phillips-head screwdriver, size 1 (PH1)

1. Remove the four battery compartment screws (8) on the back of the device.
2. Open the battery compartment (8).
3. Insert the enclosed batteries into the battery compartment (8) to connect with the right poles.

NOTICE

Do not mix old batteries with new ones. Remove empty batteries from the device.

4. Close the battery compartment (8) again and re-tighten the screws.

Info

Using rechargeable batteries may shorten the service life of your device.

7.2 SWITCHING THE DEVICE ON AND OFF

1. To switch on the device, hold the magnet against the magnetic point (3) on the side of the device for around two seconds.

You will hear an acoustic signal and the LED (1) will light up red.

The LED (1) flashes green and you will hear three acoustic signals.

The device is switched on and the LED (1) lights up green in regular intervals.

Info

Flashing stops after around two minutes to preserve the battery life.

2. To switch off the device, hold the magnet against the magnetic point (3) on the side of the device for around two seconds.

You will hear an acoustic signal and the LED (1) will light up green.
The LED (1) flashes red and you will hear three acoustic signals.
The device is now switched off.

7.3 PAIRING THE DEVICE WITH THE FENCE MANAGER FM10 OR FM20 WIFI

The device must be paired with the Fence Manager FM10 or FM20 WiFi in order to display the Fence Sensor data.

Info

- » The Fence Sensor can only transmit data to one Fence Manager. It is not possible to transmit data between different Fence Sensors or to more than one Fence Manager.
 - » The Fence Sensor can only be paired with one Fence Manager. Any previous pairings are immediately cancelled as soon as the device is paired with a new Fence Manager.
 - » The Fence Manager can be paired with up to six resp. twelve Fence Sensors.
1. Place the Fence Sensor next to the Fence Manager at a distance of no more than 30 cm.
 2. Switch off the Fence Sensor.
 3. Hold the magnet against the magnetic point (3) on the side of the Fence Sensor for more than three seconds. The LED (1) flashes alternately green and red.
 4. Pair the Fence Sensor with the Fence Manager as described in the Fence Manager FM10 or FM20 WiFi instructions.

Info

Pairing ends automatically after one minute. You can interrupt the process by holding the magnet against the magnetic point (3).
Once successful pairing is complete, the LED (1) flashes green and you will hear an acoustic signal.
The Fence Sensor switches off automatically.

Info

The Fence Sensor is not yet connected to the fence and is not measuring voltage, so it switches off automatically to avoid triggering an alarm via the Fence Manager.
The Fence Sensor is shown in the Fence Manager display with a reading of 0 kV.
The Fence Sensor is now paired and can be mounted at the selected point of the electric fence.

8. MOUNTING

Make sure that the device is coupled with the Fence Manager before mounting it on the fence.

WARNING AGAINST ELECTRICAL VOLTAGES

Before performing any work on the electric fence, switch off the energiser battery and ensure that the fence is not live to prevent injury due to electric shock.

NOTICE

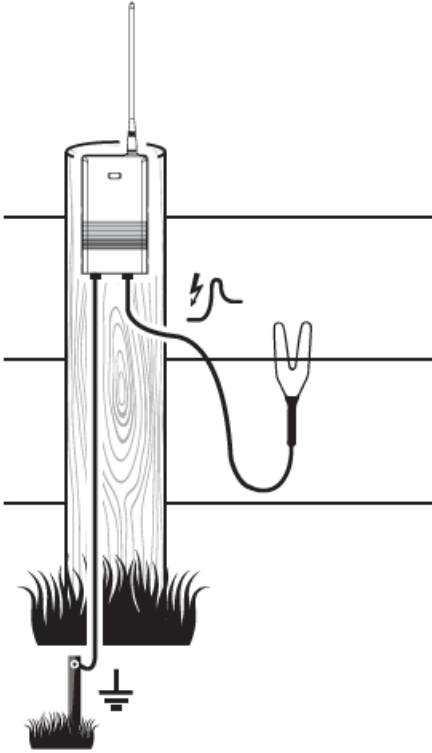
- » The device is suitable for outdoor use and is able to withstand normal weather conditions.
- » Do not mount the device on the ground or in a damp, wet environment.
- » Do not expose the device continuously to water.

Info

Position the device in places where voltage measurement is required (e.g. fence passage) or in places where problems are more likely to occur (e.g. due to heavy vegetation).

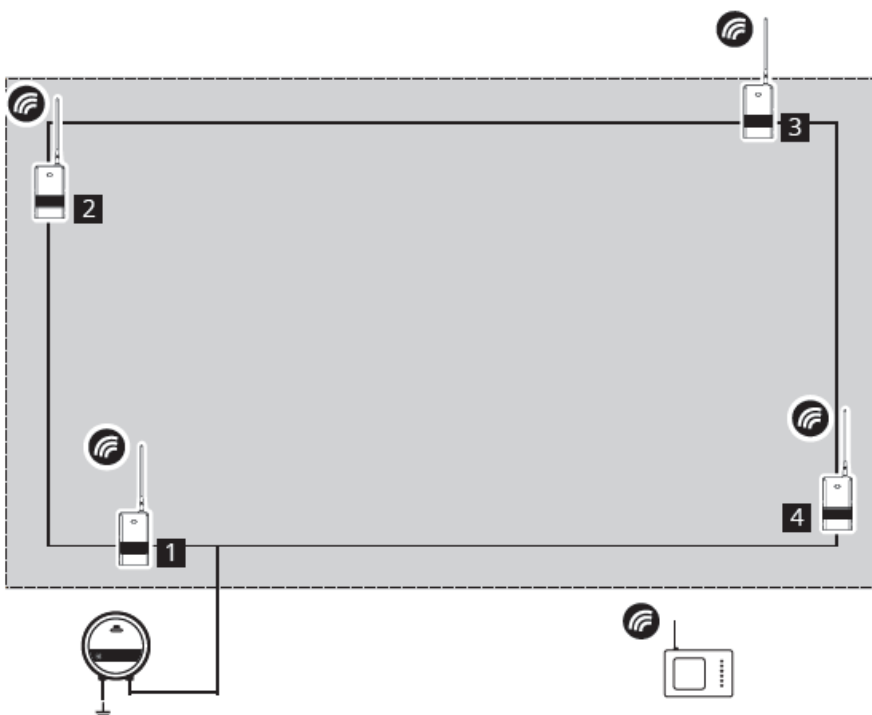
1. Switch off the energiser battery and the Fence Sensor.
2. Attach the base antenna (6) to the plug connector (2) on the device.

3. Insert the grounding rod into the ground.
4. Connect the grounding cable to the grounding rod and the ground connection (5) on the device.
5. Connect the connecting cable to the fence connector on the device (4) and the electric fence.
6. Pass the cable ties through the brackets on the back of the device and use them to attach the device to the fence post.
7. Then check whether the cables are correctly connected to the device and the fence, i.e. the grounding pin.
8. Switch the energiser battery and the Fence Sensor back on.



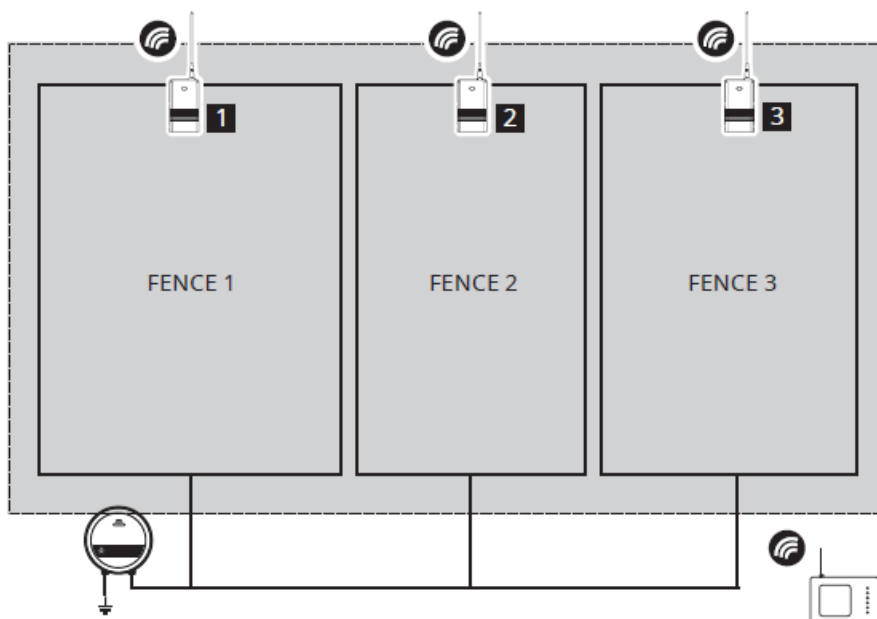
8.1 MOUNTING EXAMPLE 1

Partitioning the fence system. The benefit in this case is to facilitate localisation in the event of a voltage drop.



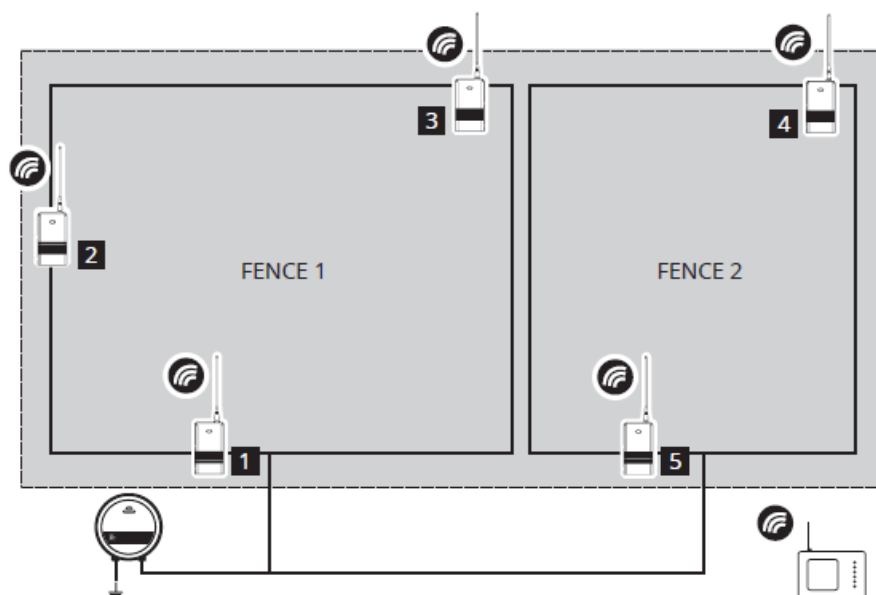
8.2 MOUNTING EXAMPLE 2

Distribution over several fence systems. The benefit in this case is to enable immediate localisation of the affected fence in the event of a voltage drop.



8.3 MOUNTING EXAMPLE 3

A combination of mounting examples 1 and 2. The benefit in this case is to enable localisation of the affected fence and the position in the event of a voltage drop.



9. LED

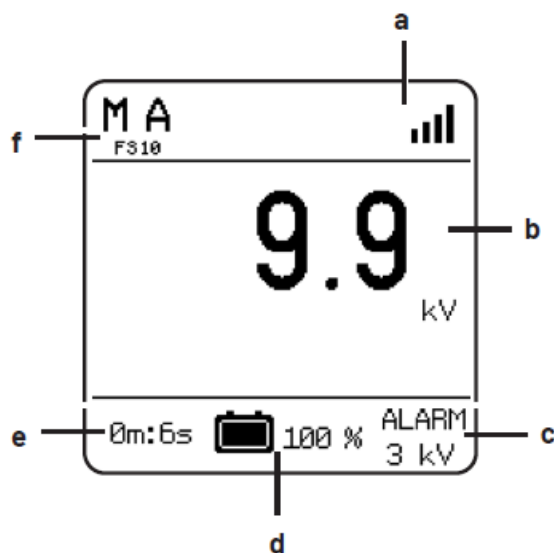
The supplied magnet can be used to query the device status. To do so, hold the magnet against the magnetic point (3) on the side of the device for less than one second.

- LED lights up red: device is switched off
- LED lights up green: device is switched on

10. FUNCTIONS WITH THE FENCE MANAGER

The measured information from the Fence Sensor and the settings in the Fence Manager are both transmitted every 15 minutes. The information and functions shown in the Fence Manager are explained in the following.

10.1 DISPLAY OVERVIEW – FENCE MANAGER



No.	Name
a	Connection quality between the Fence Sensor and the Fence Manager
b	Fence voltage in kV
c	Set voltage level for the alarm in kV
d	Fence Sensor battery status
e	Time since last data transfer
f	Device type

10.2 ALARM FUNCTIONS

The Fence Manager emits an alarm signal in the event of a voltage drop in the fence or a low battery level in the Fence Sensor.

Voltage

The minimum voltage level (c) on the fence can be adjusted using the Fence Manager. The Fence Manager emits an alarm signal as soon as the transmitted voltage falls below the set value (c).

Info

The Fence Sensor applies the settings as soon as the data has been transferred (after 15 minutes at max).

Battery level

The Fence Manager emits an alarm signal as soon as the Fence Sensor battery level (d) falls below 10%.

NOTICE

- » Replace the batteries within the next two weeks.
- » Only use batteries that are approved by the manufacturer.

11. CLEANING

NOTICE

- » Do not use aggressive solvents/detergents, brushes, sharp objects or similar for cleaning, as they may damage the surface.
- » Do not immerse the device in water or other liquids. This may otherwise cause a short circuit.

Use a damp cloth to clean the device if it becomes dirty.

12. MAINTENANCE

The device is low maintenance. You should nevertheless perform regular visual inspections. Check the device for damage prior to each use.

NOTICE

Do not use the device if it is visibly damaged.

13. TROUBLESHOOTING

NOTICE

- » Do not make any inappropriate changes or modifications to the device.
- » Contact the Service department if repairs are required.

Contact the seller if the device malfunctions or is found to be defective in any other way, even after following the suggested solutions below. You will find the contact details in section 17.

Error/problem	Solution
Device does not pair	There are too many interference signals or the connection between the devices you wish to pair is too weak. Place the devices you wish to pair close to each other and in an area without interference signals.
Device does not respond to the magnet	Check the battery charge and replace the batteries if necessary.

14. TRANSPORT AND STORAGE

NOTICE

- » Pack the device for transport so that it is protected from impact. You should ideally use the original packaging.
- » Remove the batteries from the device prior to extended storage.
- » Do not store the device exposed to direct sunlight.

» Store the device only at an ambient temperature of between 0°C and +40°C and make sure that the environment is not damp.

15. DISPOSAL



The crossed-out wheeled bin symbol on the product or its packaging indicates that the product must not be disposed of with normal household waste. End users are required to hand in the appliance at a collection point for waste electrical and electronic equipment. If the product contains a battery or a rechargeable battery, these should be disposed of separately from the product if possible. As an end user you are legally obliged to return used batteries. You can return used batteries that we supply or have supplied as new batteries free of charge to our warehouse (shipping address) or to a recycling centre in your area. If the battery or the rechargeable battery contains more than 0.0005% mercury by weight, more than 0.002% cadmium by weight or more than 0.004% lead by weight, this will be clearly indicated by the respective chemical symbol (Hg Cd, or Pb) below the symbol of the crossed-out wheeled bin on the battery or the rechargeable battery. Recyclable materials such as zinc, iron, aluminium, lithium and silver can be found in batteries and rechargeable batteries. They may also contain substances such as mercury, cadmium and lead. These are poisonous and dangerous to the environment if not disposed of properly. Heavy metals can have harmful effects on human, animal and plant health and accumulate in the environment.

The separate collection and proper disposal of your old appliances and used batteries/rechargeable batteries contributes to the conservation of natural resources and guarantees recycling that protects human health and preserves the environment. Information on where to find collection points for your old appliances or used batteries/rechargeable batteries can be obtained from your town or council administration, the local waste disposal companies or from VOSS GmbH & Co. KG.

16. WARRANTY CONDITIONS

Name and address of the warrantor:	VNT electronics s.r.o., Dvorská 605, 56301 Lanškroun, CZ
Warranty period:	3 years from the date of purchase. A claim made during the warranty period does not extend the warranty.
Warranty territory:	Warranty is extended to all purchasers domiciled in the European Union, Switzerland and United Kingdom.

If the purchased product was defective at the time of transfer of risk, the buyer shall be entitled to the statutory claims for subsequent performance, withdrawal, reduction of the purchase price, compensation for damages or reimbursement of wasted costs in accordance with the Consumer Rights Act 2015 (CRA 2015). The legal rights of the consumer are not limited by the warranty. The warranty applies in addition to the statutory rights.

Warranty contents

- (1) The warranty applies to products that exhibit a defect due to manufacturing faults and/or material faults during the warranty term.
- (2) In the event of a warranty claim, the warrantor has the discretionary right to repair or replace the purchased product or to reimburse the purchase price. The warrantor will only refund shipping costs by prior and explicit confirmation.
- (3) Warranty is only extended to the purchaser and is non-transferable.

Exclusion of warranty

(1) The warranty does not apply insofar as the defect is caused by improper use and/or a failure to adhere to the installation instructions, instruction manual and/or maintenance instructions.

(2) Furthermore, the warranty does not apply if the defect is due to natural wear and tear, wear and tear caused by use, overloading, overvoltage, lightning strike, wilful destruction, transport damage and accident damage after receipt of the goods, or caused by repair and rectification attempts by the customer or a third party commissioned by the customer. The warranty also does not apply to damage to the product that is caused by accessories that were not included with the original product.

(3) The warranty does not apply to accessories that are included with the original product. Exercising warranty claims

In order to exercise a warranty claim, the purchaser must send a letter or email to VOSS GmbH & Co. KG describing the warranty claim. The purchaser must prove their right to warranty by presenting the invoice or other appropriate documents (e.g. order confirmation) that enable the purchaser, the date of purchase and the purchased product to be identified.

17. SERVICE AND CONTACT

Address:

VOSS GmbH & Co. KG
Ohrstedt-Bhf. Nord 5, 25885 Wester-Ohrstedt Germany

E-mail: info@voss-group.eu

Specifications

- Range with base antenna: up to 30 km
- Frequency: 869.525 MHz/22 dBm
- Power supply: LR14/1.5V
- Operating temperature: 39.5 cm x 7.8 cm x 5.2 cm
- Protection class: IP44
- Weight with antenna and batteries: 366.2 g
- Weight with antenna without batteries: 230 g

FAQ

Q: How do I insert the batteries into the Fence Sensor?

A: Place the Fence Sensor next to the Fence Manager within a maximum distance of 30 cm as described in the manual.


Q: What do I do if the Fence Sensor does not display any voltage on the Fence Manager?

A: Ensure that the Fence Sensor is correctly positioned and follow the troubleshooting steps in the manual.

Q: How do I set up the base antenna for optimal performance?

A: Securely attach the base antenna to the connector without bending the pin at the connection point.

Documents / Resources

 The image shows a black rectangular device with a small antenna on top. It is labeled 'VOSS farming' and 'Fence Sensor FS10'. Below the device is a green rectangular area with white text, including 'VOSS farming Fence Sensor FS10' and some smaller text below it.	<p>VOSS farming FS10 Fence Sensor [pdf] Instruction Manual FS10 Fence Sensor, FS10, Fence Sensor, Sensor</p>
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References

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