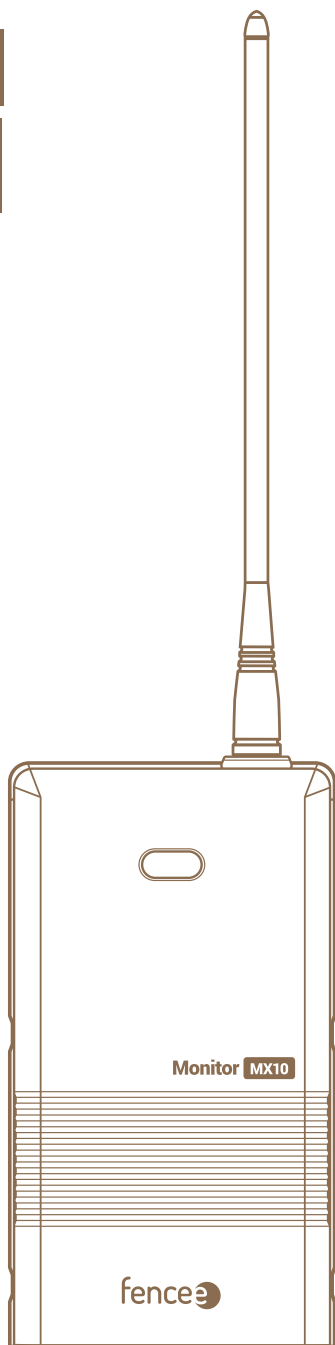


EN

User  
manual



# Monitor **MX10**

## REMOTE MONITORING OF FENCE PARAMETERS

WORKS ONLY IN CONJUNCTION WITH:  
FENCE **GATEWAY** **GW10**

 **SMART FARMING**



### RF TECHNOLOGY

Wireless RF connection with the Gateway.



### IT DOES NOT NEED A SIM CARD

No additional operating costs.



Electric **fencing**

[www.fencee.eu](http://www.fencee.eu)

Thank you for purchasing the fence  MX10 Monitor from VNT electronics s.r.o.

The device complies with the safety regulations according to the valid law as well as the relevant EU regulation (CE).

The device complies with the Council of Europe Directive 2014/53/EC, meets the requirements of the General License of the Czech Telecommunication Office according to the general authorization No. VO-R/10/05.2014-3, and it also complies with the below requirements of the standards and regulations applicable to this type of equipment:

**2014/35/EU | 2014/30/EU | R&TTE EN300-220 a EN 61000-6-3:2007 + A1:2011**

**ETSI EN 301 489-1 V1.9.2 | ETSI EN 301 489-3 V1.6.1 | ETSI EN 300 220-2 V.2.4.1**

**ETSI EN 60950-1 ed.2:2006 /A1:2010 /A11:2009 /A12:2011 /A2:2014/Opr.1:2012 EN 62479:2010**



We recommend that you read this manual carefully before using the device and keep it for future reference!

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## 1. INTRODUCTION

**Use this device to ensure better protection of your animals and land.**

Local conditions and circumstances always affect the function of the device and therefore we cannot guarantee complete protection against breach of the fence. The energizer manufacturer does not warrant that there will be no breakdown of the fence installation and does not guarantee that animals cannot run away. The installation of a fence should increase the safety of the animals in the fence system or protect the land.

**Please follow the instructions for use of this device.**

### Important Notice

- Switch off the electric fence before carrying out any work on the energizer or fence.
- Read the Safety Instructions carefully.
- When installing, make sure that you observe all safety regulations.
- Use only original spare parts.

## 2. OVERVIEW OF THE MAIN BENEFITS OF THE MONITOR

- LED indication
- Audible indication
- No SIM Card required
- Magnet controlled
- Possibility of connecting an external antenna
- Up to 6 Monitors per fence system and Gateway can be connected

## 3. TECHNICAL PARAMETERS

- Range with basic antenna up to 10 km (included)
- Possibility of connecting an external antenna  
(extension cable 2 m or 10 m - range increase up to 30 km)
- RF transmission frequency - 869.525 MHz /22 dBm
- Power battery: 2 × C-LR14
- Dimensions: 78 × 144 × 42 mm
- Weight: 325 g

## 4. PACKAGE CONTENTS

- MX10 Monitor
- Two C-LR14 batteries
- Magnet with a string
- Earthing pin
- Earthing cable for grounding
- Connecting cable to the fence system
- Antenna
- 2 pcs plastic cable tie for mounting on a post

## 5. DESCRIPTION OF THE DEVICE

- The Monitor MX10 is used to measure voltage anywhere in your fence system.
- Up to 6 MX Control Monitors can be paired on one Gateway and thus divide the fence system into several zones. Everything then communicates with the central Gateway and the energizer of the fencee **power DUO RF PDX** series (it is not part of the Monitor package).
- Using radio frequency technology, it transmits the measured data wirelessly to the central Gateway, where the values are shown on the display.
- In the event of a voltage drop at the measured point below the set limit, an alarm is sent and signalling to the Gateway immediately notifies the user of the fault.

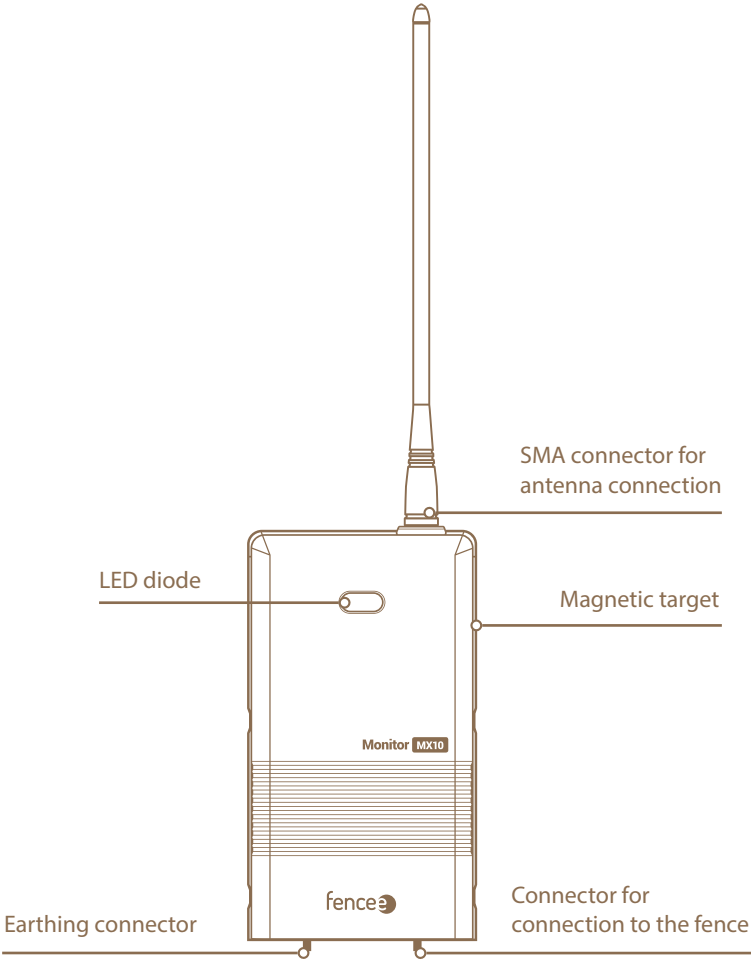


Figure 1: Description of the device

### Inserting the batteries

- Unscrew the screws and open the cover on the back of the Monitor.
- Insert two C-LR14 batteries according to the instructions in the plastic cover.
- Return the cover to its original position and tighten the screws firmly.

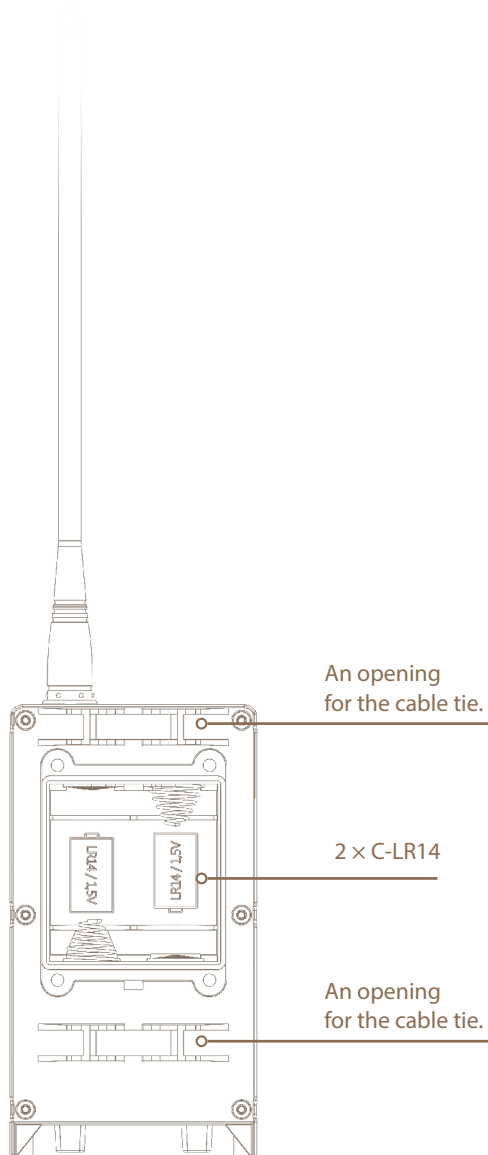


Figure 2: Back side of the device

## 6. DESCRIPTION OF CONTROLS

### Power supply

The Monitor is powered by two C-LR14 batteries, which must be inserted through the back cover and the correct polarity must be observed. It is recommended to install alkaline batteries for longer life. The battery status is indicated in the Gateway as a percentage. Battery life is about 1 year.

### Control

The device is controlled by the included magnet, which must be attached to the target on the side of the MX10 Monitor. When the magnet approaches, the status of the Monitor is indicated by an LED diode:

Red = off

Green = on

If no LEDs light up, the batteries need to be checked and replaced.

### Switching on

Place the magnet on the target for about two seconds.

The Monitor first beeps and lights up the red indicator LED. Subsequently, the Monitor will flash green and beep 3 times. The Monitor is now on and indicates its ON status by regular flashing green LED. When the Monitor is ON, it indicates its activity for a limited time of 2 minutes to save battery power.

### Shutdown

By bringing the magnet closer to the target for about two seconds.

The Monitor first beeps and lights up the green indicator LED.

Then the Monitor will flash red and beep twice.

The Monitor is now turned off.

## TIP:

You can check the status at any time - by bringing the magnet closer to the target for <1s. The colour of the LED indicates the status: red = off, green = on.

## 7. PAIRING THE MONITOR WITH THE GATEWAY GW10

First, the MX10 Monitor must be paired with the Gateway in order to display the measured data. Pairing is performed by the following steps:

- ➊ Place the Monitor and Gateway next to each other, up to a maximum distance of approx. 30 cm.
- ➋ The Monitor must be turned off.
- ➌ Attach the magnet to the Monitor target for > 3 s.
- ➍ The green and red LEDs on the Monitor will start flashing simultaneously.
- ➎ Now it is necessary to trigger the pairing mode on the Gateway too.  
– description is provided in the Manual for GATEWAY GW10
- ➏ Upon successful pairing, the Monitor beeps and flashes green.  
At the same time it also automatically shuts off so as not to trigger the alarm immediately, because it is not connected to the fence yet and has no voltage.  
It is displayed on the Gateway with a value of 0 kV.
- ➐ The Monitor is now paired and can be installed on the fence system in the required measuring point.



The Monitor can only be paired to one Gateway - after pairing with another Gateway, the previous device will be deleted. The pairing mode ends automatically after 1 minute or it can be interrupted by applying a magnet to the target.

## 8. CONNECTION WITH GATEWAY

The Monitor measures each pulse in the fence system and sends the values to the Gateway every 15 minutes. If a voltage lower than the set limit is measured , data is sent to the Gateway immediately and an alarm is triggered.

### Setting the low voltage alarm level on the fence system

The 3 kV limit is set at the factory. The user can freely adjust this value in the Gateway (see instructions for the Gateway). If the alarm limit on the Gateway is changed, it will not take effect in the Monitor until the next time new data is received, i.e. in a 15 min cycle.

### Low battery alarm

The Monitor's low battery is indicated on the Gateway when it drops below 10%. We recommend replacing it within 2 weeks at the latest.

### Display of the paired Monitor on the Gateway and all available information about a specific device.

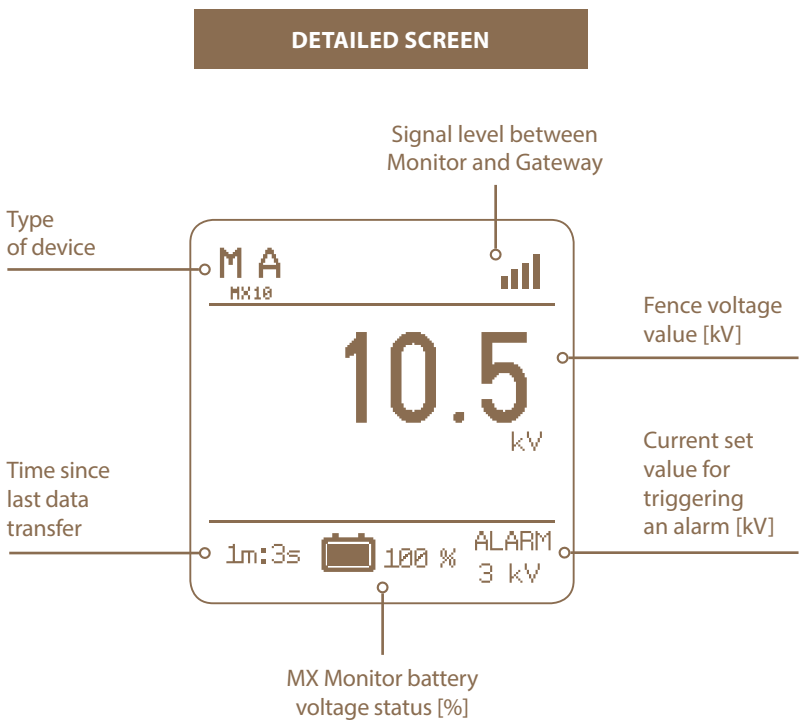


Figure 3: Displaying the paired Monitor on the GATEWAY GW10 display



## 9. INSTALLING THE MONITOR ON A FENCE

After pairing the Monitor with the Gateway, it is possible to place the Monitor in the desired location of measurement on the fence system.

Before installation, it is necessary to turn off the energizer, in order to ensure safe handling. We install the Monitor as shown in Figure 4.

After installation, it is possible to turn on the energizer and turn on the Monitor.

### Placement rules:

The Monitor can be installed outdoors in an fence system, it is resistant to normal weather conditions.

The Monitor can be easily installed with cable ties.

**Never place the Monitor on the ground - in a humid or wet environment.**

**Never expose the Monitor to a continuous stream of water.**

### TIP:

For a better signal and connection within 30 km it is possible to use an external antenna.

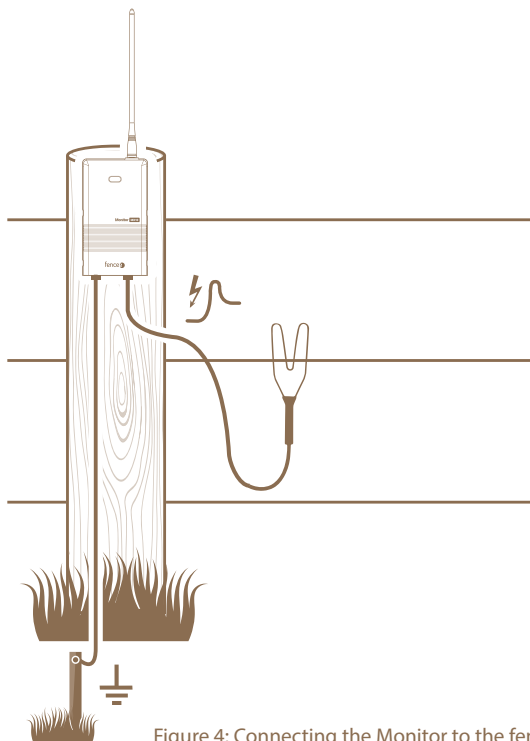


Figure 4: Connecting the Monitor to the fence system

Installation examples

**TIP:** Place the Monitor where voltage monitoring is required (entrance to the fence system) or where frequent problems can be expected, e.g. with vegetation, by the forest, by the water.

Standard installation

Fence system divided into zones. When the voltage drops on a particular Monitor, you can easily identify the zone and locate the problem.

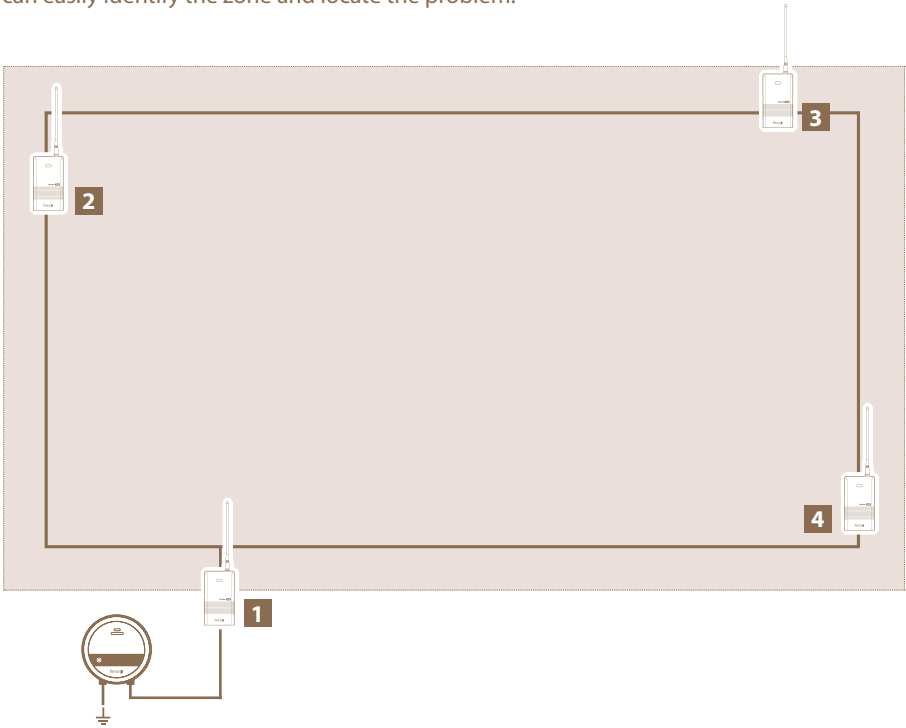


Figure 5: Standard installation

**Installation at the entrance to the fence system**

Installation for easy identification of the fence system with a non-functional fence.

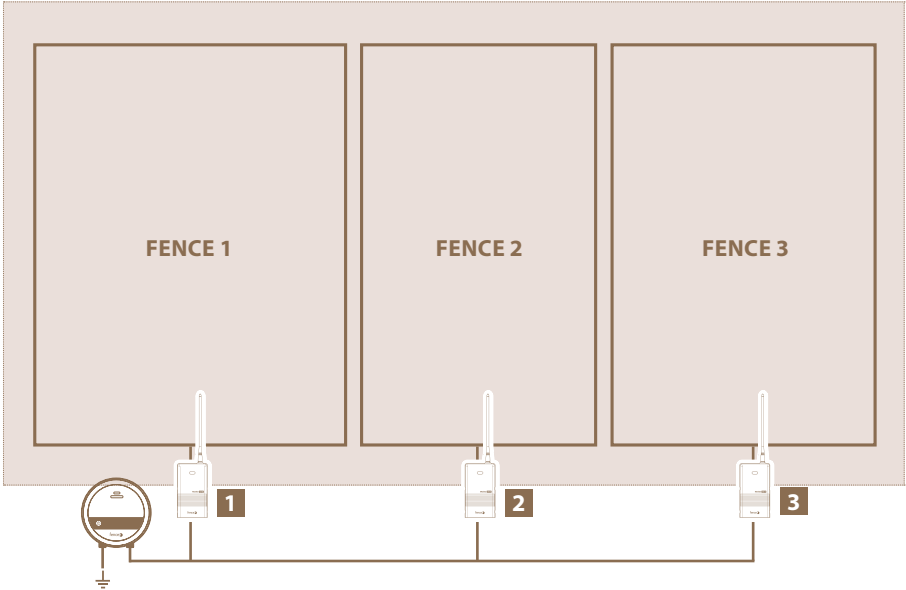


Figure 6: Installation at the entrance to the fence system

**Installation at the entrance to the fence system and problem areas**

Installation for easy identification of the fence with a non-functional fence. Or places where problems may occur more often, e.g. near the forest, near water, in places with denser vegetation.

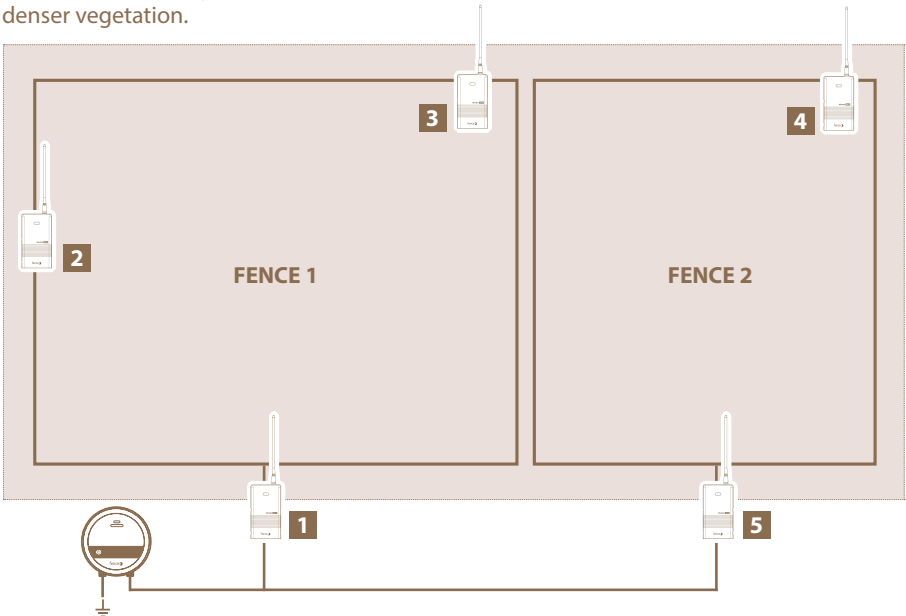


Figure 7: Installation at the entrance to the fence system and in problem areas

Control • Check • Keep informed

WORKS ONLY IN CONJUNCTION WITH:

**RF** fencee **power DUO RF PDX**

FENCE **GATEWAY GW10**

Monitor **MX10**

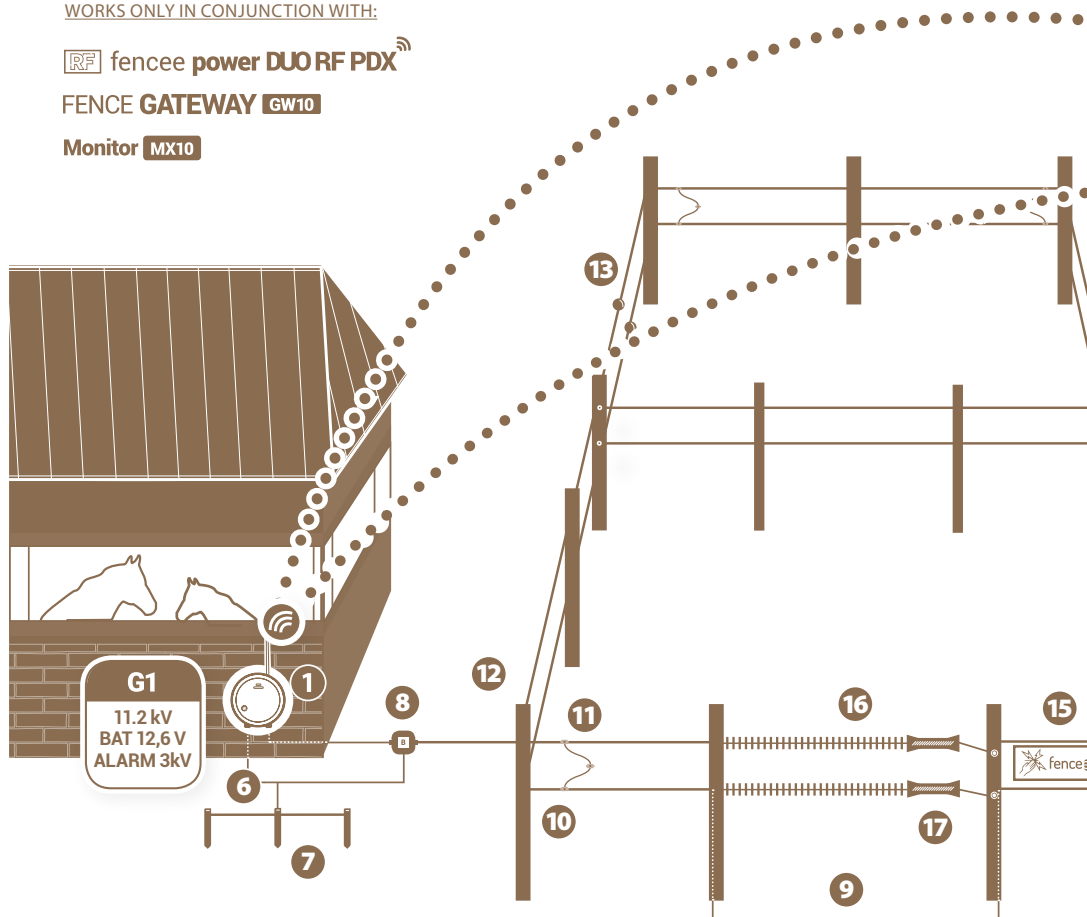
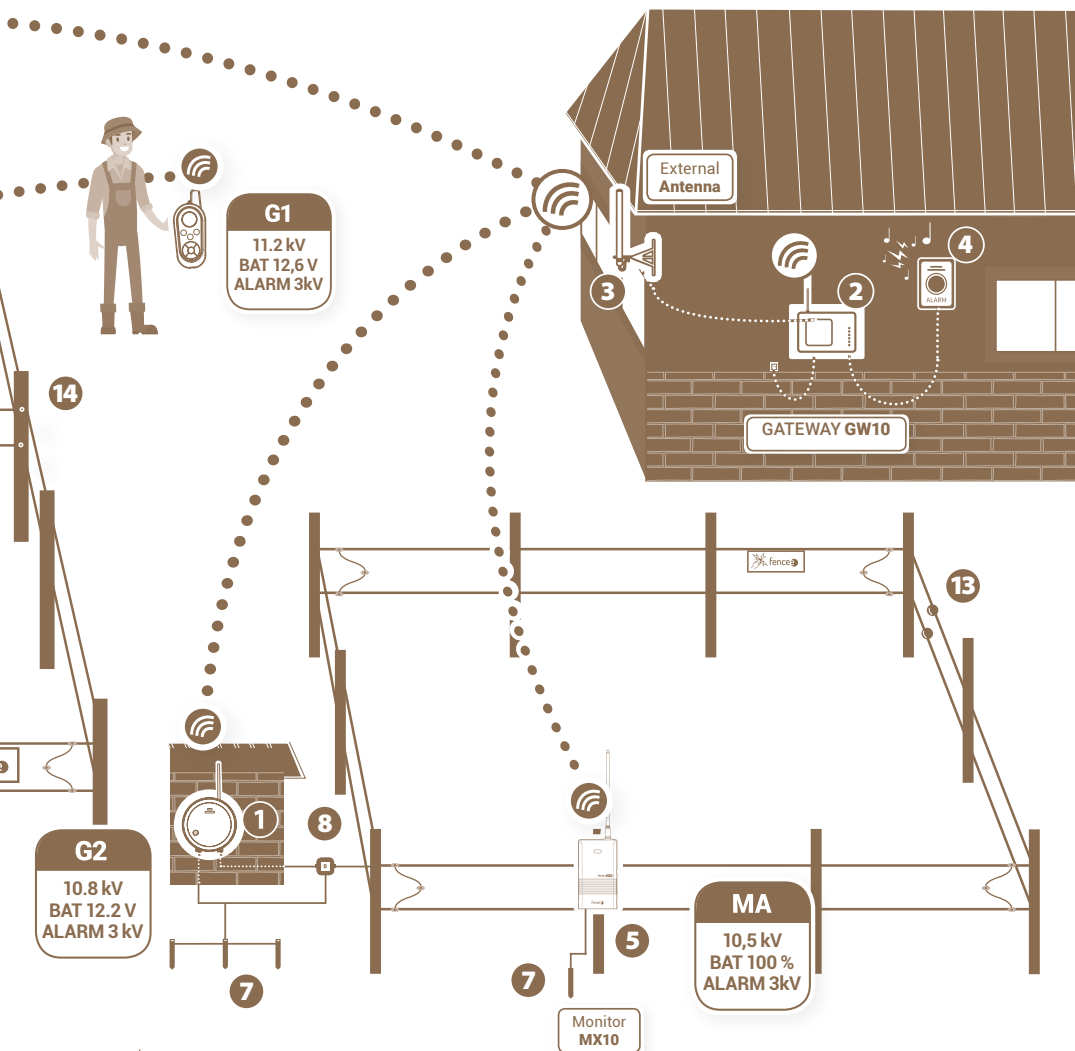


Figure 8: Monitor, Gateway and fence connection

|   |                     |   |                            |    |                               |
|---|---------------------|---|----------------------------|----|-------------------------------|
| 1 | RF energizer fencee | 5 | Monitor MX10               | 9  | High-voltage connecting cable |
| 2 | Gateway GW10        | 6 | Earthing cable             | 10 | Conductor                     |
| 3 | External RF antenna | 7 | Anticorrosive earthing rod | 11 | Line connector                |
| 4 | External alarm      | 8 | Lightning diverter         | 12 | Fixed post                    |



|    |                   |
|----|-------------------|
| 13 | Tensioner         |
| 14 | Insulators        |
| 15 | Warning sign      |
| 16 | Gate              |
| 17 | Insulator of gate |

Table 1:  
Description of individual parts of the connection

## 10. TROUBLESHOOTING - POSSIBLE FAULT SOURCES

| Cause   | Troubleshooting  |
|---|--|
| Pairing cannot be completed                                 | The surroundings is very noisy, or the signal between the Monitor and the Gateway is too weak. Try pairing the device with antennas closer to each other or in less noisy environment. |
| The Monitor does not respond to the application of a magnet | Check the condition of the inserted batteries, replace if necessary.   |

Table 2: Possible sources of faults

## 11. WARRANTY

**In addition to the statutory warranty, we provide a warranty in accordance with the following conditions:**

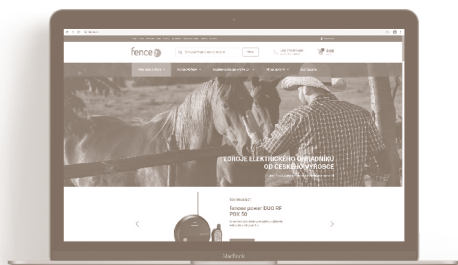
- The warranty begins on the day of purchase. Warranty claims are recognized solely upon presentation of the receipt from the purchase of the product. Warranty repair is free, or we reserve the right to deliver similar equipment of the same value.
- The warranty is valid if used correctly according to the instructions for use. It expires if there are interventions by unauthorized persons and when using spare parts other than from the producer.
- All failures resulting from defects in materials or workmanship will be rectified at the discretion of the manufacturer either by repair or free replacement of the device.
- When delivering spare parts or providing repair, the warranty period of the original product is not extended.
- The duration of the warranty and the address of the warranty provider can be found in the enclosed user instructions for the given type of equipment.
- The warranty does not include accumulator batteries or batteries of any type, excessive damage due to overvoltage (including lightning) and damage due to battery acid spillage.

This device has a 3-year warranty period according to our warranty conditions!

Safety instructions, commissioning, battery care, warranty conditions and possible sources of faults can be found in the enclosed operating instructions!

# New website

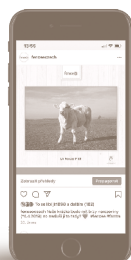
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**VNT electronics s.r.o.**  
Dvorská 605, 563 01 Lanškroun  
Czech Republic  
info@fencee.eu  
f fencee.cz    @ fenceeczech

**www.fencee.eu**  
☎ +420 730 893 828  
Servis: +420 730 893 827