USER MANUAL

ENERGIZER FOR ELECTRIC FENCE BRAND YONUSA.

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Welcome to a new experience in Yonusa security solutions®.
We are delighted to offer you new and innovative devices, so we would like to congratulate you on your new purchase:

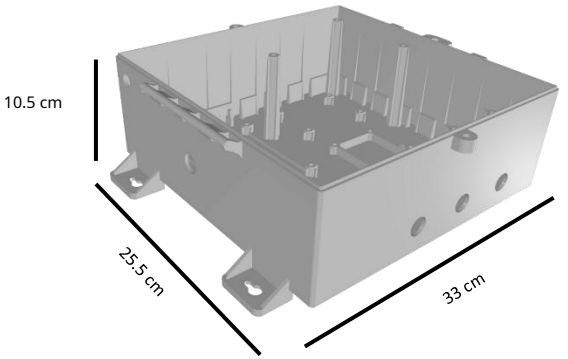
Perimeter Security System – YONUSA Energizer

SPECS

Supply voltage	90 Vac – 220 Vac
Power supply frequency	50 Hz – 60 Hz
Supply current.	0.1 Amp
Standby consumption	2.0 Wastt
Consumption in alarm	2.6 Watts
Internal battery support 12 Vdc 4 Amp/hr.	3 days
External battery holder 12 Vdc 30 Amp/hr	25 days
Approximate expenditure on electricity consumption	$0.02 USD

Output voltage.	10KV – 12KV
Average output current	0.15-0.42 mA
Output electrical frequency	1 Hz
Dry Contact Output Capacity	1000 Watts / 2 Amp
Setting the output dry contact time	1 – 60 min

Maximum battery charger capacity	80 A/Hr
Operating temperature	- 5 to 50 C°
Chassis insulation factor.	12M/20K Ω/V
Maximum vibration factor.	12 Hz/cm
Maximum humidity factor.	72%
Operating range.	±15%
* Option to be powered by solar panel	YEAH



INDEX

Congratulations on the purchase of your new and

innovative Yonusa Wireless Electrolevel.

1. YONUSA ENERGIZERS

It is a perimeter protection system that can protect homes, condominiums, warehouses, shopping malls, educational institutions, businesses, properties, and livestock enclosures. It is a high-voltage deterrent and repellent system, generating a discharge of over 10,000 volts without harming the intruder. It offers reliable, efficient, and easy-to-install equipment.

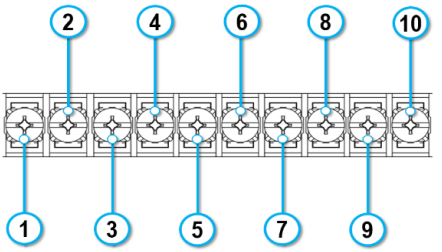
Warning: The equipment should not be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or training, and it has been ensured that children do not play with the equipment.

2 CONNECTION TERMINALS

YONUSA energizers feature a series of different connections that allow for proper use and operation of the equipment, so it is important to understand the different functions of each of the terminals that make up the energizer.

2.1 CONNECTION BOARD - KULKA

The terminal board, also known as the KULKA, is a fundamental component of energizers that provides various connection ports. Each port has a specific function in the equipment's operation and, in turn, allows us to make various connections according to the end user's needs. To do this, it is essential to understand the function of each of these terminals:



1. (+) Positive source	6. Normally Open (NO)
2. (-) Negative source	7. Normally Closed (NC)
3. Switch	8. Without Using
4. Switch	9. Voltage AC
5. Common (C)	10. Voltage AC

1. ***+Fountain:*** Positive terminal of the internal power supply of the energizer corresponding to a 12Vdc at 2Amp power supply.

2. ***–Fountain:*** Negative terminal of the internal power supply of the energizer corresponding to a 12Vdc at 2Amp power supply.

3. ***Switch:*** It corresponds to one of the terminals of the key switch (plate) that allows the energizer to be turned on and off by means of the key designated for the device.

4. ***Switch:*** It corresponds to another of the key switch terminals (plate) that allows the energizer to be turned on and off using the key designated for the device.

5. ***Common:*** Common output terminal of the internal relay that has the energizer for the activation of various actuators.

6. ***NA (Normally Open) – Alarm:*** NA output terminal of the internal relay that the energizer has for the activation of various actuators, this terminal is charged to send a signal to activate the actuators when an alert is generated in the energizer.

7. ***NC (Normally Closed):*** NC output terminal of the internal relay that has the energizer for the activation of various actuators

8. No particular use

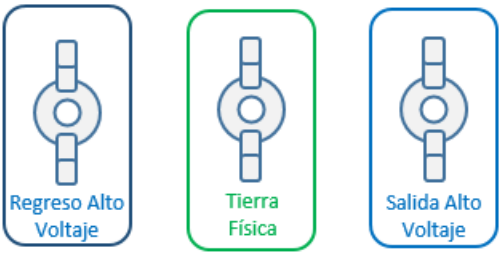
9. ***V CA:*** Alternating current (AC) power supply terminal with which the energizer is powered, corresponding to the conventional voltage supply of 110-220 Vac

10. ***V CA:*** Alternating current (AC) power supply terminal with which the energizer is powered, corresponding to the conventional voltage supply of 110-220 Vac

2.2CONNECTION TERMINALS – HIGH VOLTAGE (Butterfly Terminal)

The energizer is a perimeter protection system using high-voltage electrical pulses, supplying a voltage of 10,000 to 12,000 volts according to the YONUSA energizer model.

YONUSA energizers perform their high voltage reading and supply system through 3 terminals corresponding to the following designation:



These terminals are what will allow the passage of high voltage, making the connections to the electric fence. These terminals have a wing nut that allows easy handling of the connections to the fence itself.

As seen in the illustration, it is the same order from right to left as in the energizers, starting with:

1.High Voltage Output

The "High Voltage Output" terminal (far right) is where the voltage begins, sending electrical pulses to the "High Voltage Return" terminal through the electric fence lines.

2.Physical Earth

This terminal allows the generation of an alternative medium to the high-voltage flow whenever an intruder touches or approaches the electric fence, allowing the equipment to provide a reference to detect the interruption of the high voltage, ensuring its impact on the intruder, and protecting the energizer from the electrical charges released in each pulse generated by the device.

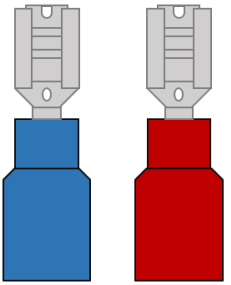
3.High Voltage Return

With the "High Voltage Return" terminal (Far Left), it is the arrival of the high voltage from the electric fence to the energizer, this terminal being the one that detects if an interruption of the voltage flow in the fence has been generated.

2.3 BATTERY CONNECTIONS

YONUSA energizers, being a safety device, must always be working at all times to provide protection at all times. That is why our energizers are designed to be powered externally by means of a battery, which will provide us with a backup power source for the devices and are in continuous operation without interruptions.

Energizers provide faston-type terminals that correspond to the battery power supply connection without the need for additional connections. These terminals have the color codes that conventionally designate the positive and negative of a battery.
power supply, these being positive-red and negative-blue.



The energizers are capable of charging the backup battery and in turn powering the entire internal system of the device, so the battery and the internal power supply of the device can work in parallel to keep the energizer in optimal operation.

2.3.1 BACKUP CAPACITY

The power capacity that a battery will provide us is related to the amount of current it stores, which will also help us define the power supply time that the battery will support the energizer.

The energizer has space for a 12V 4Ah battery, which provides a power backup of 3 to 4 days on standby. A battery of up to 12V 30Ah can even be installed, with a backup time of up to 30 days. The time variation may vary depending on the energizer's operation, the number of alarm activations, and the accessories that may be connected to the device.

Voltage	Current / Hr	Material	Backup time
12 V	4Ah	Lead-acid	3-4 days
12 V	7.2Ah	Lead-acid	8 days
12 V	9Ah	Lead-acid	10-11 days
12 V	24Ah	Lead-acid	22-24 days
12 V	30Ah	Lead-acid	25-30 days
12 V	65Ah	Lead-acid	60-65 days
12 V	100Ah	Lead-acid	90 days

Note: The battery charging time will depend on the current consumed by the source, the higher the source current, the longer it will take to charge the battery, all batteries must always be 12V.

2.4 IGNITION SWITCH

Energizers have an on/off mechanism using a plate-type switch, which can be used to turn the entire system on and off using a key. The plate has a turning direction, which corresponds to an action depending on the direction in which the key is turned.

The switch position is located on the right side of the device and has two keys.

3 ALARM SYSTEM WITH TIMER

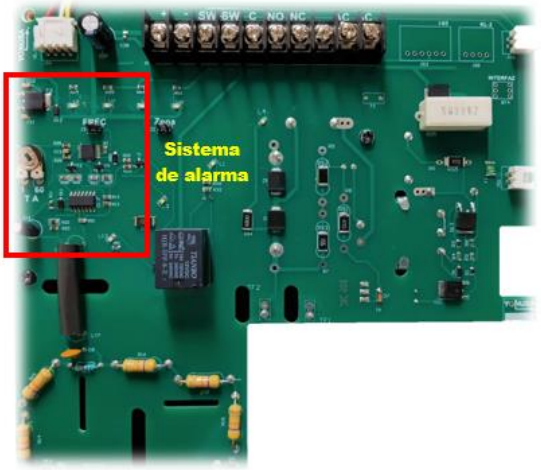
The YONUSA energizer alarm system has a built-in siren timer function, which allows us to configure certain siren operating modes.

The alarm system has two timer modes:

- Flashing Mode (1). The siren will turn on for the desired time and then remain off for the same amount of time. At the end of the same period of siren off, the cycle will repeat indefinitely until the energizer is turned off.

- Continuous Mode (2). The siren will be on for only the set time and then will turn off without turning back on until the energizer is restarted.

To select the operating mode we use jumper J2, when it is placed on the terminals it will work in mode 2 and when the jumper is free it will be in mode 1.



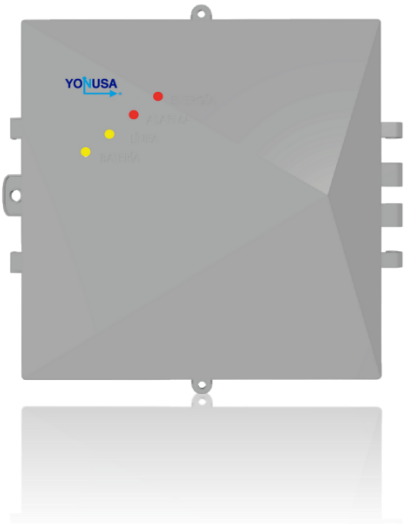
With the time selector P3 (P1 in other energizer models) you can set the desired time as follows:

- In the counterclockwise direction, the minimum time is 1 minute and 17 seconds when turning fully counterclockwise.
- In the clockwise direction, the maximum rotation time is 60 minutes, turning fully clockwise.

The energizer supports powering up to two 30-watt, 120 dB 12V DC sirens and can be connected to any alarm system.

4 INDICATORS

YONUSA energizers feature a front panel that offers a series of indicators that make it easy to read the device's operating status.



1. ***Energy:*** Power supply pulse to the electric fence. 1 second between pulses.

2. ***Alarm:*** AC line power (127-220 Vac)

3. ***Line:*** Internal device power supply. Energizer active.

4. ***On:*** Fence alarm sensor activation. Fence cutting or grounding.

5. ***Battery:*** Battery status according to the intensity of the LED.

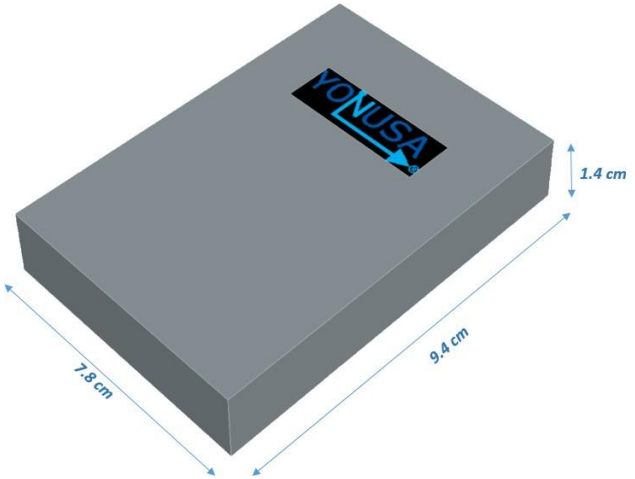
5 ACCESSORIES

YONUSA offers accessories that allow you to expand the operation of your energizers, each providing specific functions to complement your facilities and create an even more complete perimeter security system, compatible with all YONUSA energizers.

5.1 POWER AMPLIFIER MODULE

It is an accessory for an electric fence energizer, useful when you want greater impact power or to protect an additional area already installed.

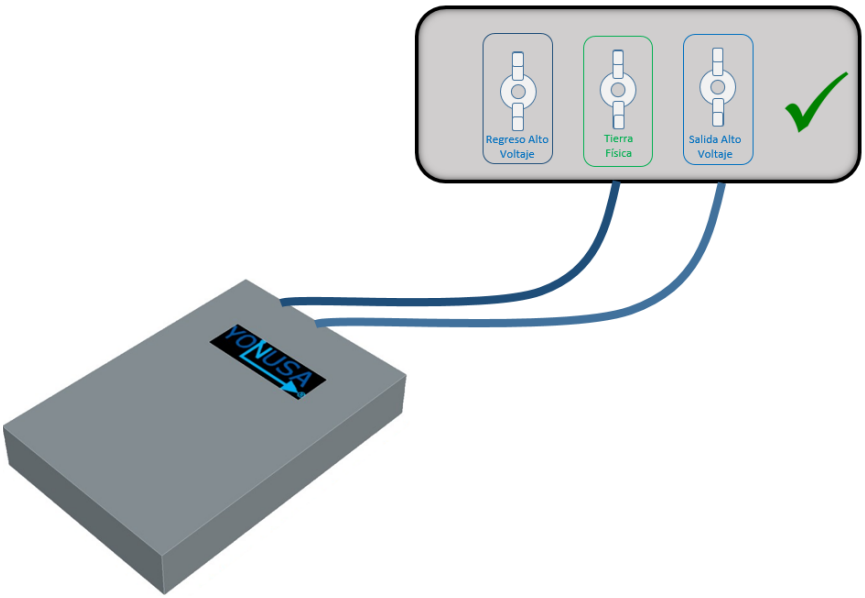
Its electronic design also includes an anti-induction filter that ensures proper operation and prolongs the life of the energizer when it powers an electric fence near high-voltage towers.



Technical Features:

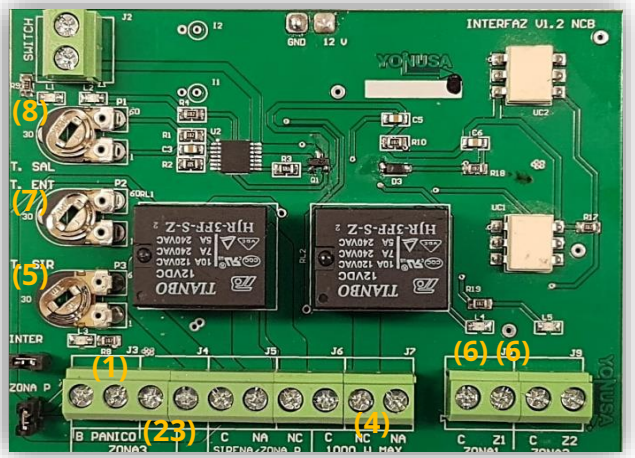
- Increased equipment power by 30%.
- Increase in the electric arc to ground of 1 cm.
- Compatible with any type of YONUSA Energizer.
- Filters induction in the Energizer generated by high voltage towers of up to 230 KV.
- Circuit insulation level: 20,000V.
- It is powered by the same energy as the electric fence.
- Input voltage: 10,000 V minimum.
- Easy installation. Simply connect to the power return and ground terminals. Non-polarity.
- Anti-UV resin.
- Cable length: 20 cm.

- ***Connecting the power amplifier to the energizer.***



5.2 INTERFACE CARD

The interface card provides additional alarm functions beyond those already found in YONUSA energizers, functioning as a mini alarm panel, easy to use and configure, and compact in size unlike many alarm panels.

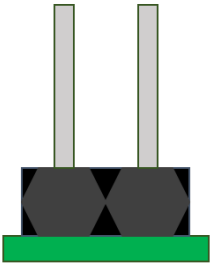


Its functions allow you to expand the alarm system that the energizer already has, giving us a greater number of configurations, such as:

1. ***Panic button:*** It is an option capable of alerting the user, through the siren connected to the energizer, about irregular situations that are occurring in the perimeter protected by the system, using any type of switch.
   This function corresponds to terminal block terminals 1 and 2, referenced from left to right.

2. ***Smoke Sensors (Zone 3):*** It is an alternative option to the panic button, performing the same function of alerting the user about any anomaly detected by the sensor, since this terminal corresponds to relay outputs allowing the same switching function as a switch.
   This function corresponds to terminal block terminals 1, 2 and 3, referenced from left to right.

These terminals also have the option of changing their function to dry contact, by means of a jumper with designation ***ZONAP***, as follows:



Without the jumper placed you have the panic-function terminals

With the jumper in place, the terminals are dry contacts.

3. ***Contact Sirena (ZonaP):*** It provides power for the activation of one 30-watt, 120 dB siren and has a timer to determine the duration of the siren activation.
   This function corresponds to terminal block terminals 5, 6 and 7, referenced from left to right.

4. ***Dry Contact:*** Relay output terminals that perform dry contact activation with a capacity of up to 1,000 watts of resistive load.

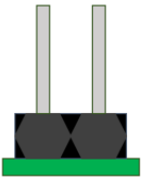
   This function corresponds to terminal block terminals 8, 9 and 10, referenced from left to right.

5. ***Siren Timer:*** Adjustable knob that allows the time the siren is activated to be varied, as follows:

- In the counterclockwise direction, the minimum time is 1 minute and 17 seconds when turning fully counterclockwise.
- In the clockwise direction, the maximum rotation time is 60 minutes, turning fully clockwise.

The timer has a jumper with the designation _____ function to select two modes:

- Intermittent Mode (1). The siren will turn on for the desired time and then remain off for the same amount of time. When the off period ends, the cycle will repeat indefinitely until the energizer is turned off.



- Continuous Mode (2). The siren will be on only for the set time and then turn off without turning back on until the energizer is restarted.

6. ***Two Cutting Zones:*** These terminals are designed to generate an alert when any of the zones stops receiving a signal, that is, when there is no continuity between the terminals in the same zone through some type of closed circuit, such as magnetic contacts or some other type of opening mechanism.

7. ***Entry Timer:*** The entry time corresponds to the duration that you configure to allow you to turn off the interface card before the alarm is triggered by interrupting the continuity of the signal from the zones. This adjustment is made by means of the adjustable knob as follows:

- In the counterclockwise direction, the minimum time is 1 minute and 17 seconds when turning fully counterclockwise.
- In the clockwise direction, the maximum rotation time is 60 minutes, turning fully clockwise.

8. ***Exit Timer:*** You will configure the exit time so that the function is activated before the alarm is triggered when the zones are interrupted. This adjustment is made in the following way:

- In the counterclockwise direction, the minimum time is 1 minute and 17 seconds when turning fully counterclockwise.
- In the clockwise direction, the maximum rotation time is 60 minutes, turning fully clockwise.

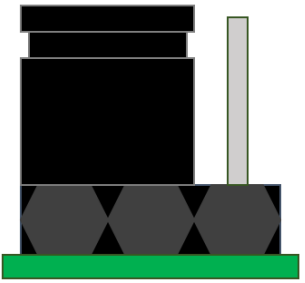
5.3KL2 RECEIVER

The KL2 receiver is a device that allows us to turn ON/OFF by implementing RF (Radio Frequency) communication, which allows remote control of devices on and off wirelessly.

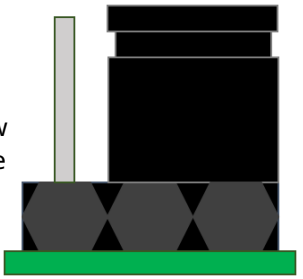
The KL2 receiver features two remote controls, each with two buttons, which are linked to the device's channels and configured according to the device's needs and required functions.

The device provides two dry contact channels, being relay outputs with a capacity of 10 Amp – 12 Volts and a fixed channel configured as a panic button that allows the power supply of one 30 Watt 120 dB 12 Volt siren.

The device configuration offers two usage options for the relay outputs, having the pulse and latching mode;



Pulse Mode: When you press the button on the remote, the receiver will activate the channel you linked to that button and will light up two LEDs for 3 seconds: one yellow, the other red, and then the LEDs will turn off. The receiver will also remain active as long as you hold the button down.

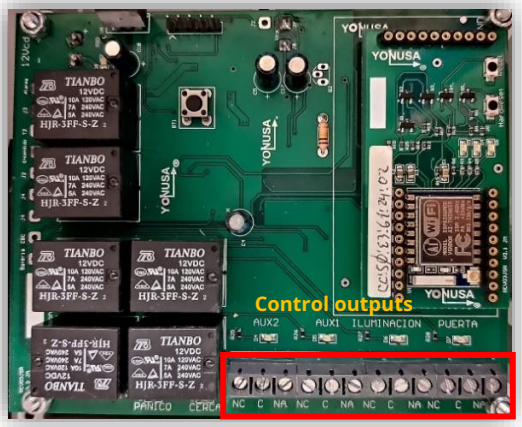


Latched Mode: When you press the button on the remote, the receiver will activate the channel linked to that button and will light up two LEDs, one yellow and one red. However, unlike the pulsing mode, the latched mode will stay on and turn off until you press the same button again. To configure these modes of use, we have two 3-pin jumpers, (J1) and (J2), with an integrated connector that allows you to make the configurations.

5.4WIFI module

The WIFI module offers control and monitoring of the electric fence through the use of WIFI communication with your mobile device through our YONUSA 2.0 application.

The WIFI card has 6 outputs (FENCE, PANIC, 3 FIXED AUXILIARY) and a pulsating output with real-time notifications of turning on and off auxiliary outputs of 12Vdc – 127/220 Vac – 2A. All outputs have control through the application.



The WIFI module connects to the energizer via connections through the kulka of both devices, allowing it to be turned on and off using the control button in the application, notifying the user in real time of the action performed from the application.

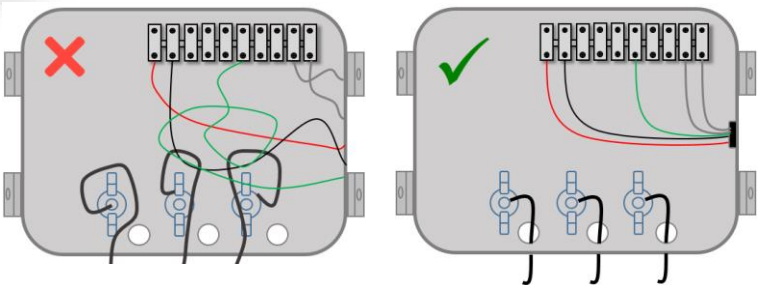
The YONUSA 2.0 mobile app has more benefits:

- Notification of disconnection or connection of 127-220 AC power
- Low battery notification
- Displays event history by date
- Share controls of your devices with other users

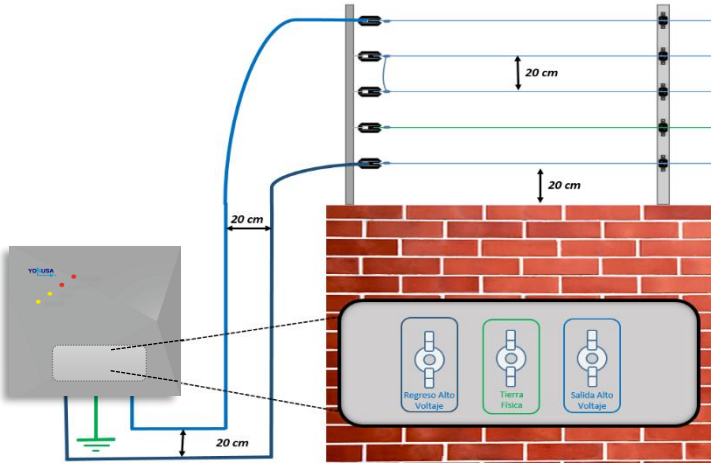
- Control permissions for all shared users
- Notifications of each action performed on the fence

6 INSTALLATION AND CONNECTION RECOMMENDATIONS

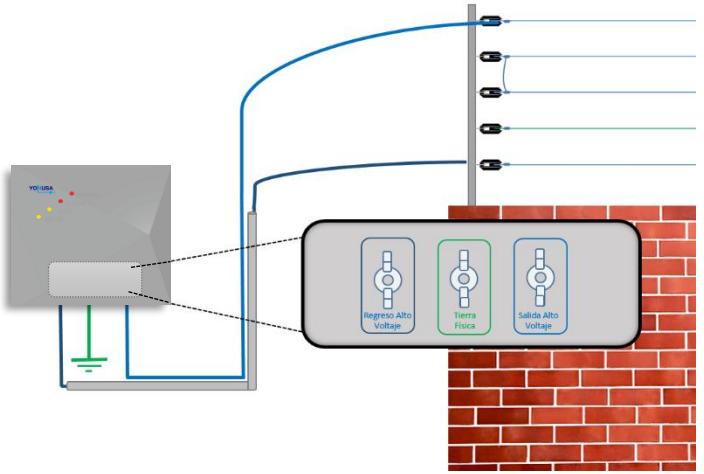
- The connections that are made inside the energizer due to the KULKA terminals, the connections (wiring) are as orderly and clean as possible, with this we mean that the cables used do not interfere with any of the internal connections that are made in the energizer, the most important thing is that **The cables do not pass through or interfere with the high voltage terminals that energize the electric fence to prevent induction from traveling through the connections.**.



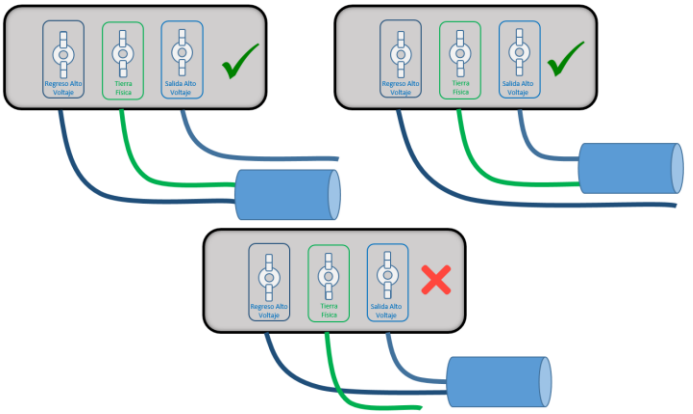
- The connections corresponding to the high voltage, these being the butterfly terminals, the wiring must have a separation of at least 20 cm during the route that it makes to the installation of the electric fence, in order to avoid induction between the cables and this can generate false alarms in the system and prevent the energizer from functioning properly.



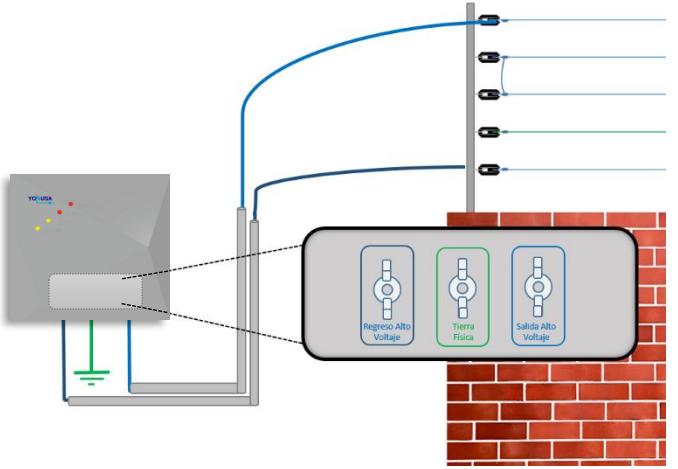
- Sometimes, installations require the minimum separation distance between high-voltage cables, and they are close together. For these cases, metal conduit or metal tubing can be used. It must be metalized. This will act as a Faraday cage over the cables, preventing the high-voltage flow from generating electrical induction in the other cables.



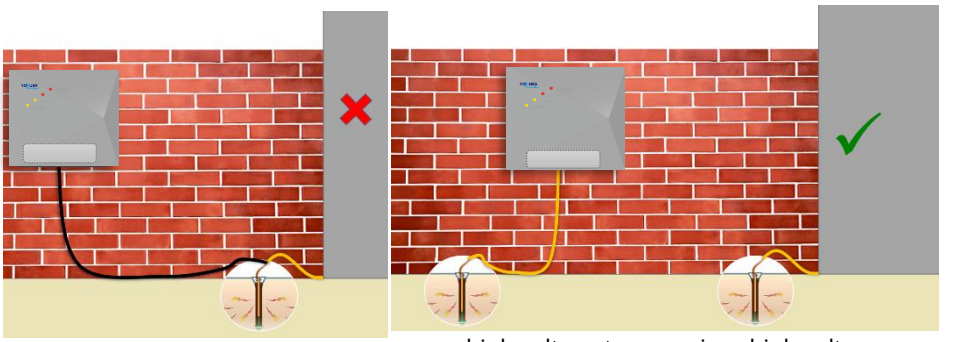
- Only one of the cables, either the high-voltage output cable or the high-voltage return cable, should be inside the pipe. Never insert both cables into the pipe, leaving the other cable outside. Even if the installation requires it, the ground cable can be inserted along with either cable.



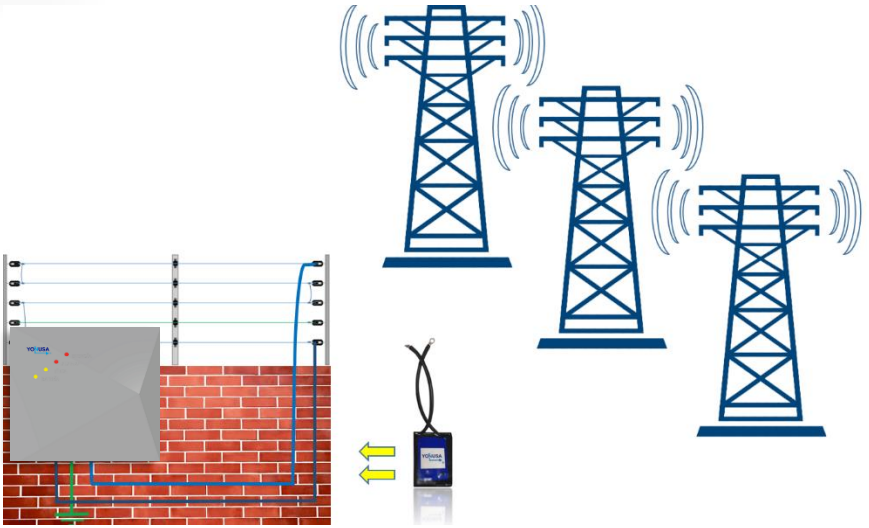
- Similarly, as a protective measure for the cable outside the pipe, we can insert it inside another metal pipe so that it is not damaged on the outside, further ensuring that induction is not generated between the cables. This recommendation is optional.



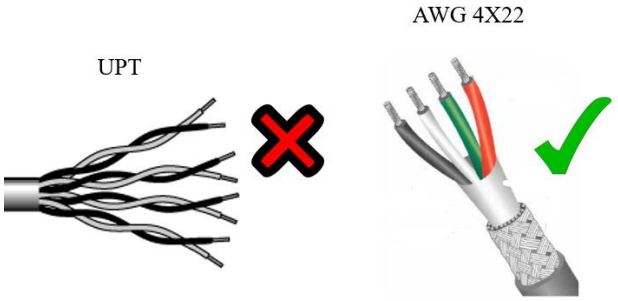
- The physical ground must be solely and exclusively for the energizer, it must not share the physical ground with another device, nor even use the physical ground of the home or property where the energizer will be installed, since the high voltage can damage the devices within the property that are using that physical ground, in addition to the energizer may have false alarms due to inadequate connection and installation of physical ground.
    -
- Care must be taken when installing energizers where there are



near high voltage towers, since high voltage The voltage the towers handle is so large that, due to its induction effect, it affects the operation of the energizer, generating false alarms. For this reason, installing electric fencing in areas with high-voltage towers is not recommended. In these cases, it's very useful to use a power amplifier, as this greatly helps keep the energizer stable and the tower's induction from affecting it.



- Use 20 or 22 gauge wire for connections between devices. The resistivity of the wire allows for good conduction without voltage drops. There are types of wire that allow for easy connections and clean, organized wiring, such as 4x20 and 4x22 wire.**IT IS NOT FUNCTIONAL TO USE UTP CABLE.**

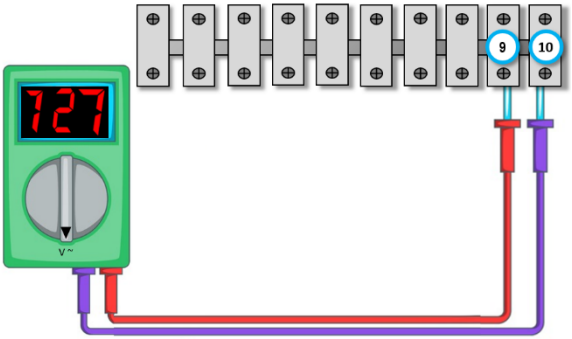


6.1FUNCTIONAL TESTS

To determine that the equipment is working properly, there is a quick test method that helps you determine that the equipment is working properly and detect an existing fault caused by the energizer or the installation of the electric fence.

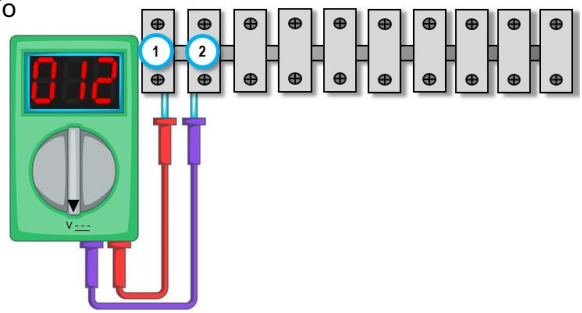
1- Alternating Current Voltage

Using a conventional multimeter, a measurement must be made between the terminals corresponding to the alternating current supply in the KULKA energizer, these being numbers 9 and 10. This measurement should give us a result of 110-220 Vac, which corresponds to the conventional power supply in a room. To perform this measurement, make sure the multimeter is in alternating current reading mode (V~).



2- Direct Current Voltage

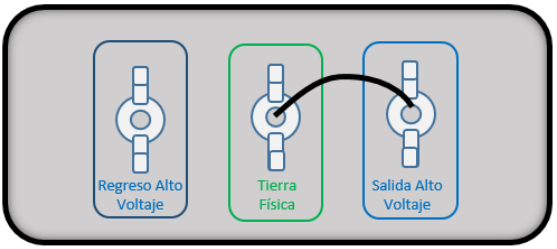
Using a conventional multimeter, a measurement must be made between the terminals corresponding to the direct current supply in the KULKA energizer, these being numbers 1 and 2. This measurement should give us a result of 12-14 Vdc which corresponds to the internal power supply of the device. To To perform this measurement, we must ensure that the multimeter is in alternating current reading mode (V---), taking into account that terminal 1 corresponds to the positive and terminal 2 to the negative of the power supply.



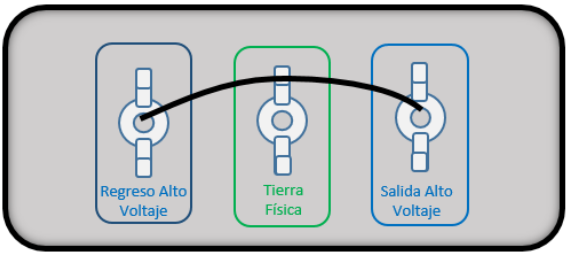
3- Alarm activation without a fence

To determine that the device is generating the alarm correctly, two tests must be performed without the fence connected:

- ***Siren activation***: To activate the energizer alarm and sound the siren, a jumper must be connected between the energizer's ground terminals and the high-voltage output. This simulates a power cut. After this jumper is connected, the siren and alarm indicator should activate after 10 seconds.



- ***Siren activation.*** To deactivate the energizer alarm and disable the siren, a jumper must be connected between the energizer's high-voltage return and output terminals, simulating line continuity. By connecting this jumper, the siren and alarm indicator must immediately be deactivated.



This indicates that the energizer fulfills the alarm function and that the energizer does not have any faults in the high voltage output terminals of the energizer.

4- Alarm activation with fence

With the tests performed above, we determined that the energizer is working correctly and is being powered by both AC and DC voltage sources.

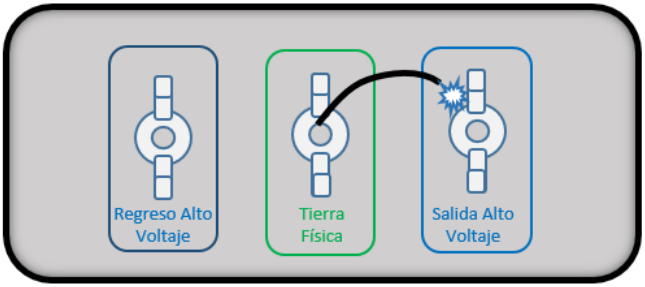
With the fence connected to the energizer it should present the same result as in test #3, if despite having the fence connected and without performing any type of

If the alarm is activated, this means the problem lies with the electric fence installation. It is recommended to check the entire electric fence for any interference occurring on the fence lines or any arcing between the posts and the lines.

5- Visualization of electric arc.

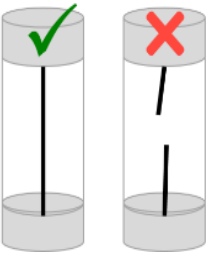
An electric arc is generated between the lines or terminals of the energizer's physical ground and high-voltage output. Similarly, a bridge between these terminals can also generate the arc. With one of the bridge terminals fixed to either of the two butterfly terminals of the energizer, either physical ground or high-voltage output, and the other terminal 1 cm away from the other butterfly terminal, the electric arc generated by the energizer can be visualized and its correct operation confirmed.

This test can also be performed with the bridge across the electric fence lines, and the same phenomenon should be observed around the entire perimeter. This test should activate the energizer alarm by activating the siren after generating an arc for 10 seconds. As soon as the arc stops, the alarm will deactivate, since the fence is connected and the system is closed-circuit at all times.



6.2FUSES

The energizers have American type fuses of 1 Ampere and 3 Ampere as protection of the internal electronic components of the equipment, therefore it is always important to check the fuses before turning on the equipment to ensure that the equipment will operate correctly.
correct.



Fuses are encapsulated and have a wire inside that, in the event of a short circuit, discharge, or overcurrent, will cut the wire, preventing damage to the equipment. Therefore, the wire must be continuous at all times.

In the energizers we have pressure and cartridge rifle holders, it is necessary to identify which one corresponds to each one in order to be able to change each one when necessary.

Cartridge Fuse Holder

Pressure Fuse Holder

- *Fuses that are handled for each energizer model.*

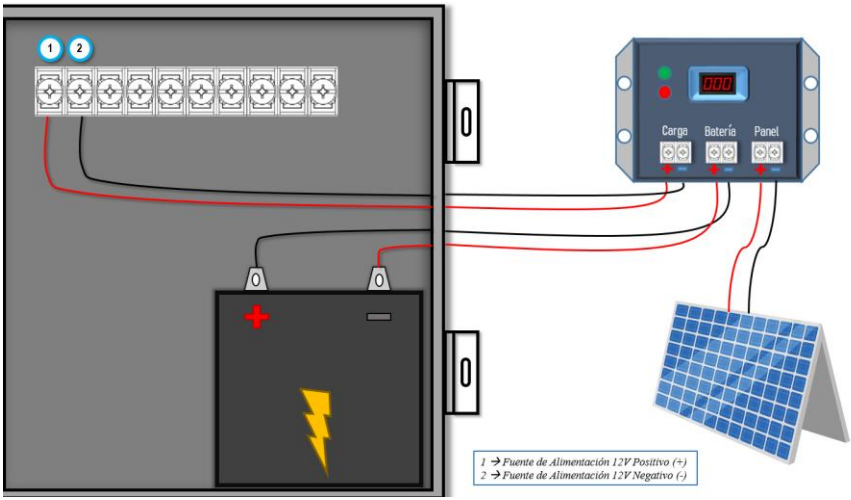
Energizer model	Fuse	Worth	Fuse holder
EY 12000 127 250	American	1A	Pressure
EYNG 12000	American	1A	Pressure
EY 12000 127P	American	1A	Cartridge
EY 12000 127AF	American	1A, 3A	Cartridge
EY 10000 2Z	American	1A, 3A	Cartridge

7 SPECIAL CONNECTIONS

7.1 Solar panel

The energizers have battery connections, but they are also compatible with solar panel power. This is a great help in installations that don't have alternating current (AC) power near the energizer, and it also prevents the unit from consuming energy. A charge controller is used to regulate the voltage between the battery and the solar panel.

The charge controller has its own terminals for each device: the battery, solar panel, and power outputs, which are the terminals that must be connected to the energizer corresponding to terminals 1 and 2 of the Kulka.

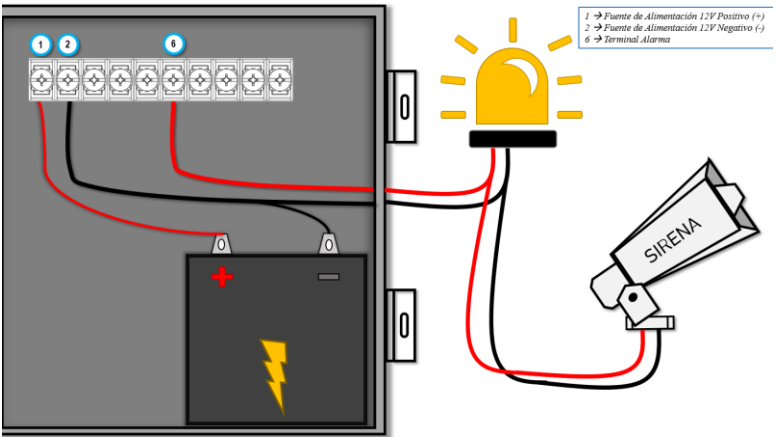


Note: *A 50-watt solar panel is recommended to quickly and efficiently power the battery and provide enough power to power the energizer, even in conjunction with its corresponding siren and strobe light.*

7.2Siren and Strobe

The energizer has a 12 Vdc – 2A auxiliary output for powering peripherals, which, through the energizer relay output, provides power for one 30 Watt 120dB siren and one 12 Vdc Strobe light of up to 20 Watts.

This output corresponds to terminal 6 of the Kulka (see point 2.1) where the positive terminals of the actuators will be placed, while the negative terminals will be placed on terminal 6 of Kulka.

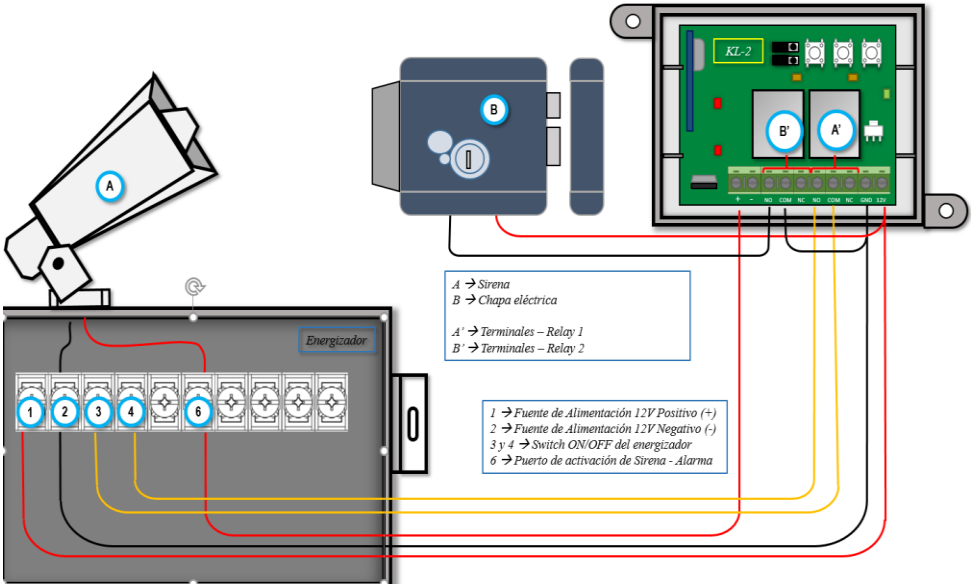


Note: *If you want to connect more than one siren or actuator, you must connect a more robust power supply to the equipment, maintaining the same voltage, but with a current greater than 2 Amps.*

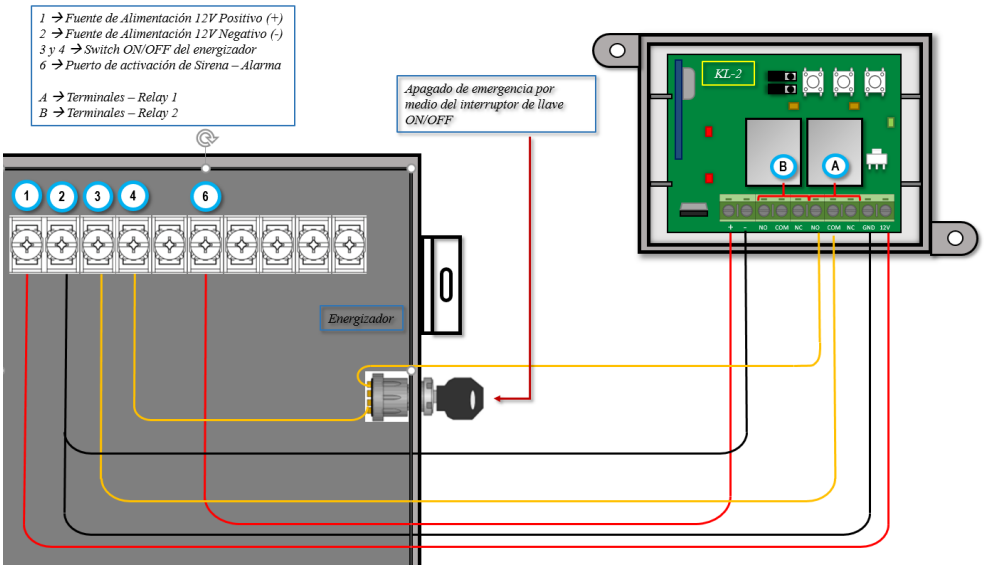
7.3Remote control

This device allows us to activate our devices, such as turning our energizer on and off, or any other type of device that allows us to switch any system. The remote control has two auxiliary outputs corresponding to a relay output as a dry contact, and one auxiliary output corresponding to a siren power supply, which can be activated with a panic button configurable with the same device.

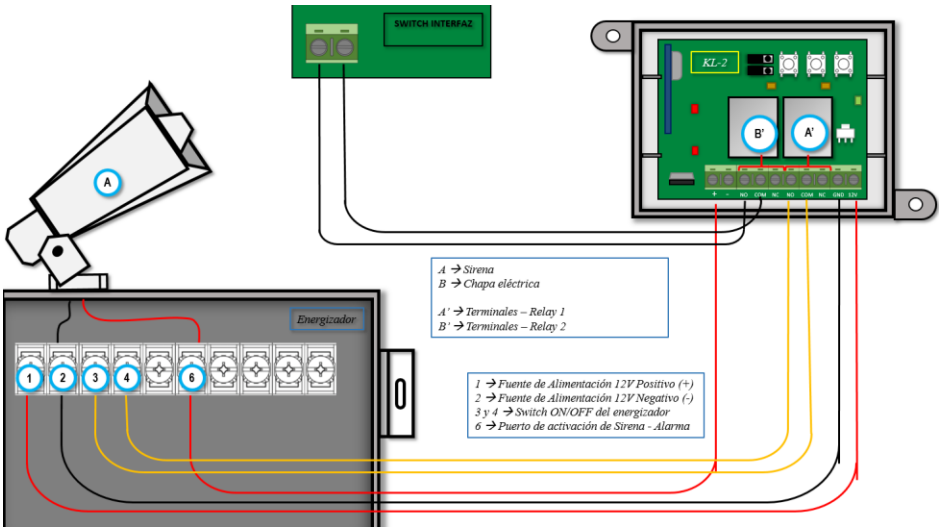
- ***ENERGIZER CONNECTION – KL-2 (option with electric plate)***



- ***ENERGIZER WITH EMERGENCY SHUT-OFF – KL-2***

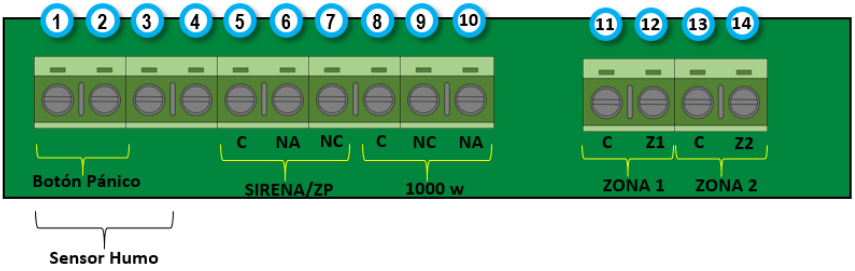


- ***ENERGIZER WITH INTERFACE – KL-2***

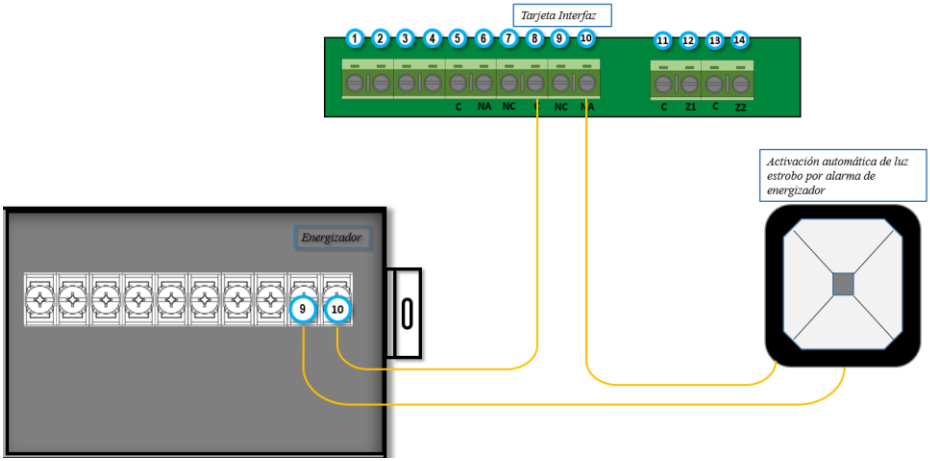


7.4Interface

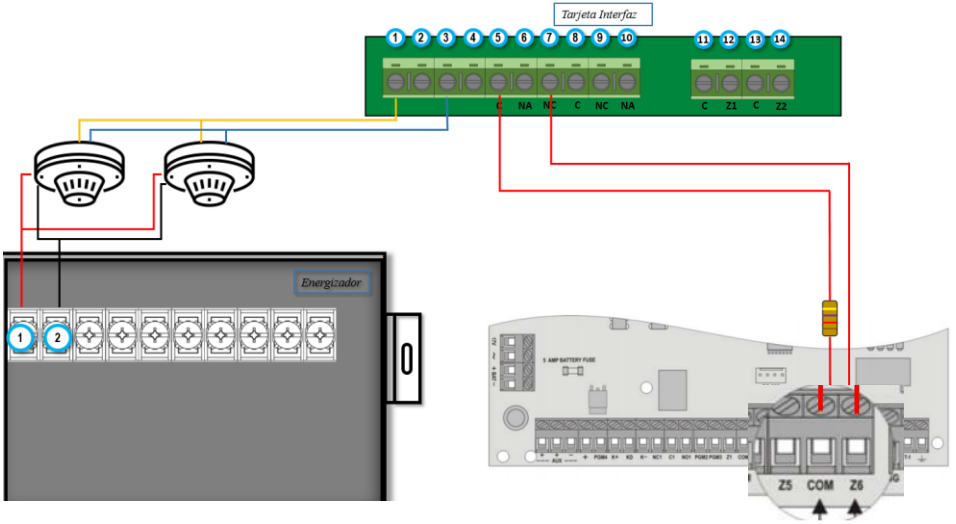
This device allows us to perform various functions (see point 5.2) and, together with the energizer, we can use various ways to connect certain devices. We need to identify each of the interface card's terminals:



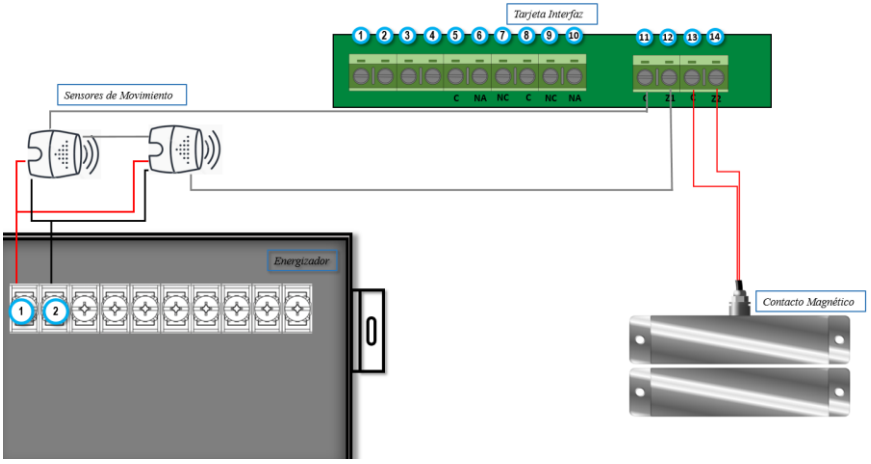
- ***CONNECTING LAMPS***



- ***CONNECTING SMOKE SENSORS TO AN ALARM PANEL***

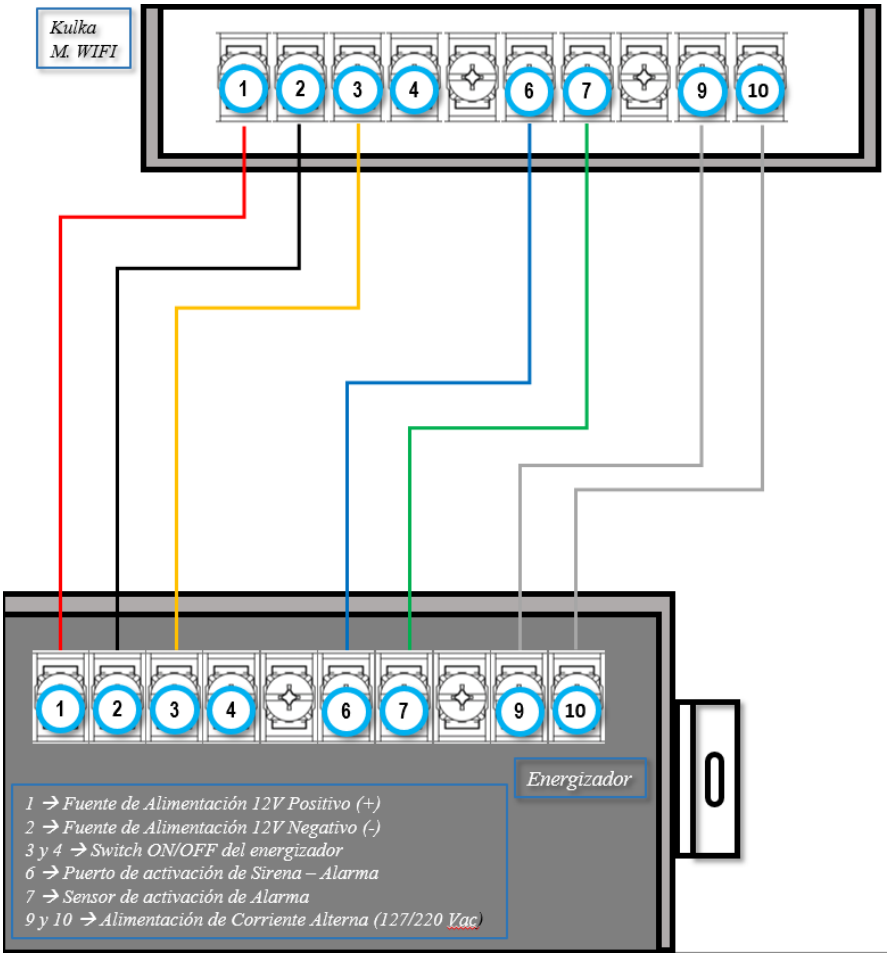


- ***WIRING OF THE 2 ZONES AND SENSOR SYSTEM***



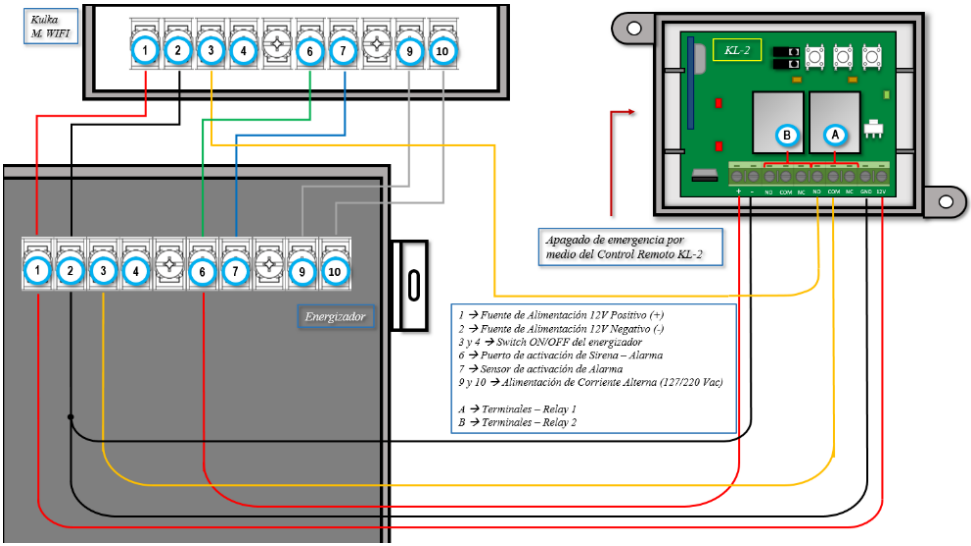
7.5 Wifi Module

To make the connections between the WIFI module and the Energizer, you must identify the connection board known as KULKA as well as the numbering of each port in order to make a proper connection.

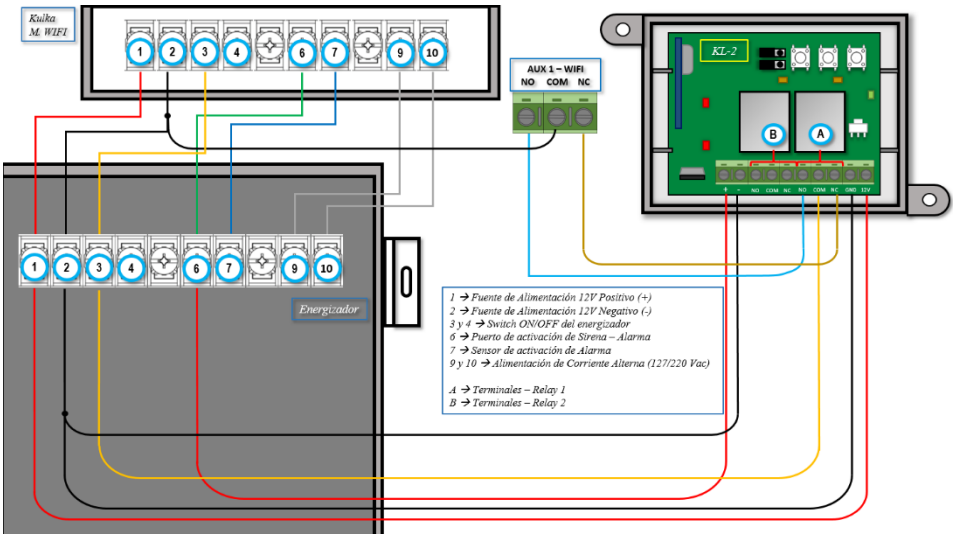


Each connection has a function that will allow the energizer to be controlled and monitored using the Wi-Fi module in conjunction with the YONUSA app.

- ***Monitoring with Wi-Fi module and emergency shutdown with KL-2***



- ***LADDER CONNECTION FOR ENERGIZER ON/OFF SYSTEM WITH WIFI MODULE AND KL-2***



7.5.1 Wifi Lite Module

We have a LITE version of the WIFI module, it performs the same function but reduces the number of control ports.

With the WIFI LITE module you can control the on/off of:

- Electric fence energizer.
- Panic Button.
- Dry contact labeled Auxiliary 1.
- Dry contact labeled Auxiliary 2.

It has the same functions as the YONUSA 2.0 mobile application:

- Notification of disconnection or connection of 127-220 AC power
- Low battery notification
- Displays event history by date
- Notifications of each action performed on the fence

Contact your authorized YONUSA equipment dealer for more information and to purchase this device.

8 PRECAUTIONS DURING MAINTENANCE

1.- Disconnect the alternating current power supply (96 to 220Vac).

2.- Verify that the equipment switch is off.

3.- Perform maintenance:

3.1- Check the battery status: Verify that the voltage is not below 11 Volts, ideally it should be greater than 12.5 volts.

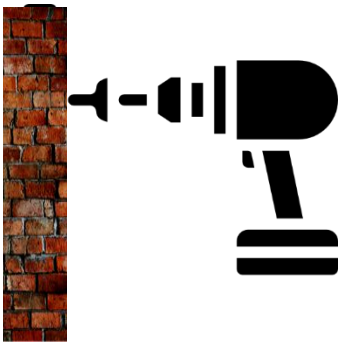
3.2 Check high and low voltage connections.

9 ASSEMBLY INSTRUCTIONS

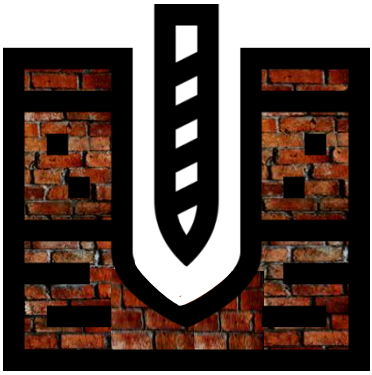
Follow the steps below to place your equipment:

Step 1: Locate the location where the equipment will be installed. It is recommended that the energizer be kept away from areas with high humidity, dust, flammable gases, or corrosive elements.

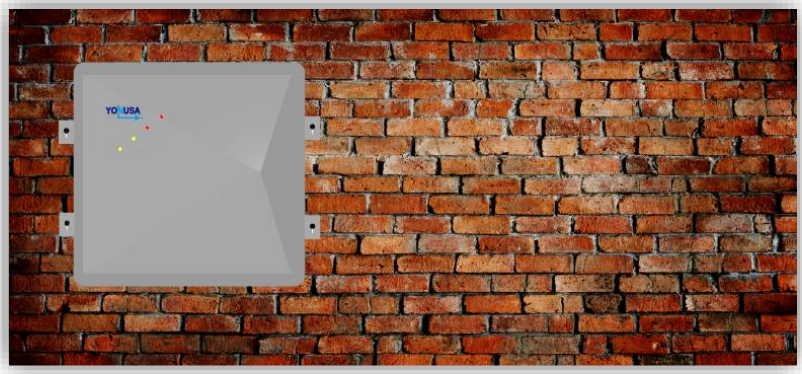
Step 2: Drill into the wall where the equipment will be installed.



Step 3: Place the anchors into the holes.



Step 4: Place the device on the wall where you previously drilled the holes and secure it with the screws.



MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING PATENTS.

(Manufactured under or more of the following US patents)

4,003,028	4,106,091	4,224,539	4,326,135	4,488,228	4,635,261
4,003,035	4,110,917	4,225,917	4,338,661	4,493,035	4,635,665
4,003,544	4,121,162	4,225,919	4,342,078	4,497,890	4,636,269
4,004,281	4,122,527	4,228,518	4,343,832	4,501,637	4,638,186
4,004,283	4,125,877	4,236,204	4,348,658	4,511,914	4,643,910
4,006,457	4,128,174	4,241,165	4,348,694	4,513,251	4,649,294
4,006,491	4,128,872	4,243,945	4,348,722	4,513,306	4,649,630
4,008,373	4,132,550	4,246,060	4,349,839	4,521,799	4,654,568
4,010,448	4,132,906	4,247,893	4,349,873	4,523,107	4,680,086
4,012,765	4,139,880	4,250,412	4,358,812	4,530,023	4,682,054
4,016,546	4,145,751	4,250,546	4,361,876	4,533,970	4,683,416
4,020,472	4,145,759	4,255,785	4,377,832	4,538,116	4,683,442
4,039,044	4,15,761	4,263,089	4,378,500	4,546,374	4.083637
4,030,079	4,149,263	4,263,650	4,380,866	4,553,084	4,687,957
4,032,896	4,152,675	4,263,660	4,381,956	4,553,100	4,689,506
4,037,204	4,159,520	4,266,270	4,382,279	4,566,063	4,698,128
4,040,035	4,159,909	4,268,764	4,383,273	4,568,410	4,717,588
4,048,575	4,161,787	4,279,947	4,392,067	4,571,817	4,717,687
4,050,096	4,165,504	4,280,190	4,396,932	4,575,674	4,725,791
4,066,919	4,167,727	4,284,953	4,405,899	4,575,812	4,732,866
4,069,510	4,169,246	4,258,039	4,412,194	4,580,213	4,740,268
4,070,630	4,170,472	4,287,439	4,412,309	4,584,640	4,740,478
4,071,784	4,172,288	4,287,442	4,413,238	4,593,238	4,740,808
4,071,887	4,176,287	4,287,563	4,671,261	4,181,967	4,292,547
4,419,586	4,603,805	4,778,879	4,086,627	4,191,898	4,296,338

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