

INSTALLATION MANUAL

YONUSA Electric Fence Energizer

MODELS:

EY-12000-127

EY-12000-127 SI

EY-10000-127 AF

EY-10000-127 AF SI

Front panel indicators: POWER · ALARM · LINE · ON · BATTERY

IMPORTANT: READ THIS MANUAL BEFORE INSTALLING THE EQUIPMENT

English translation of the original Spanish manual. Figures are reproduced from the original; where they contain Spanish labels, an English key is given beneath each figure.

ATTENTION — CAUTION

Physical Ground (Earth) Characteristics — Parameters

1. Voltage between phase (hot) and physical ground: equal to the line voltage.
2. Voltage between neutral and physical ground within the following range:

0.3 VOLTS AC TO 2.0 VOLTS AC

If the reading is lower than 0.3 V AC or higher than 2.0 V AC, caution: the ground is inadequate, which can damage the equipment and cause operating failures in the fence.

IMPORTANT: Any power cable or connection must be inserted, placed and/or repaired by qualified technical personnel. This prevents risks or damage.

Technical Specifications

- Power supply: 127 VAC, 220 VAC or solar panel (depending on model).
- Operating range: $\pm 25\%$.
- Battery charger for batteries up to 80 Ah.
- Port for connecting a solar panel.
- Average output current: 0.015–0.42 A.
- Built-in safety switch and output for a remote switch.
- Internal board for a local switch.
- Timed siren output, 1–60 minutes.
- Insulation factor: 1×10^{12} / 50,000 V to chassis.
- Dry contact rated 3 A, 250 V.
- Dry-contact interface for an alarm zone or telephone dialer.
- Interface for magnetic contacts and infrared sensors.
- Operating temperature: -5°C to 50°C .
- Maximum humidity: 72%.
- Maximum vibration factor: 12 Hz/cm.
- Immune to RF.
- Operating (pulse) frequency: 1 Hz.

Parameter	Conventional	High Frequency
Current draw	0.1 A — 1.6 Wh	0.3 A — 3.6 Wh
Output voltage	12,500 V	10,000 V (anti-plant)
Pulse energy	1.2 joules	4.5 joules
Battery backup	5 days (external battery: 30 days)	3 days (external battery: 30 days)
Power consumption	2.0 W on standby, 2.6 W in alarm + siren consumption	3.5 W on standby, 4.1 W in alarm + siren consumption
Running cost	1.2 kWh/month — US\$0.20	2.0 kWh/month — US\$0.30

Plastic Enclosure
NEMA 2 cabinet (drip/spray resistant)
Dimensions: 36 cm × 25.5 cm × 11 cm
High-impact polystyrene
Flame retardant
Weight: 3.4 kg

Electric Fence

Basic Guidelines for Installing Electric Fences with YONUSA Equipment

For the **conventional** model, the wall or perimeter to be fenced must be free of plants, vines, etc. For the **High Frequency** model, keeping the fence free of plants can be skipped when the load is light.

The fence must have metal posts for support, polycarbonate insulators to hold the wires, and turnbuckles (tensioners) to tighten them.

Suggested post materials:

- 1" outside-diameter galvanized water pipe.
- Square tubular steel, 18 gauge.

Posts should be cut to 1.28 m: one meter gives the height of the electric fence and the remaining 28 cm is for anchoring.

High-voltage wire or conductor:

Material	Fence length	Conductor gauge
Galvanized wire or Temper 5 aluminum	1 to 30 m	18
	31 to 300 m	16
	301 to 700 m	14

Use 3/16" antimony turnbuckles to tension the wires.

Post Preparation

There are two types of post:

- **A** — Corner post
- **B** — Line (pass-through) post

First, determine how many posts the fence will need and what type each will be. To identify post types, it is suggested that you draw a sketch of the fence perimeter:

1. All posts at a corner, or that span a distance greater than 25 meters, are called **corner posts**, since they bear mechanical tension.
2. All posts that only let the conductor pass through are known as **line posts**.

como de passo.

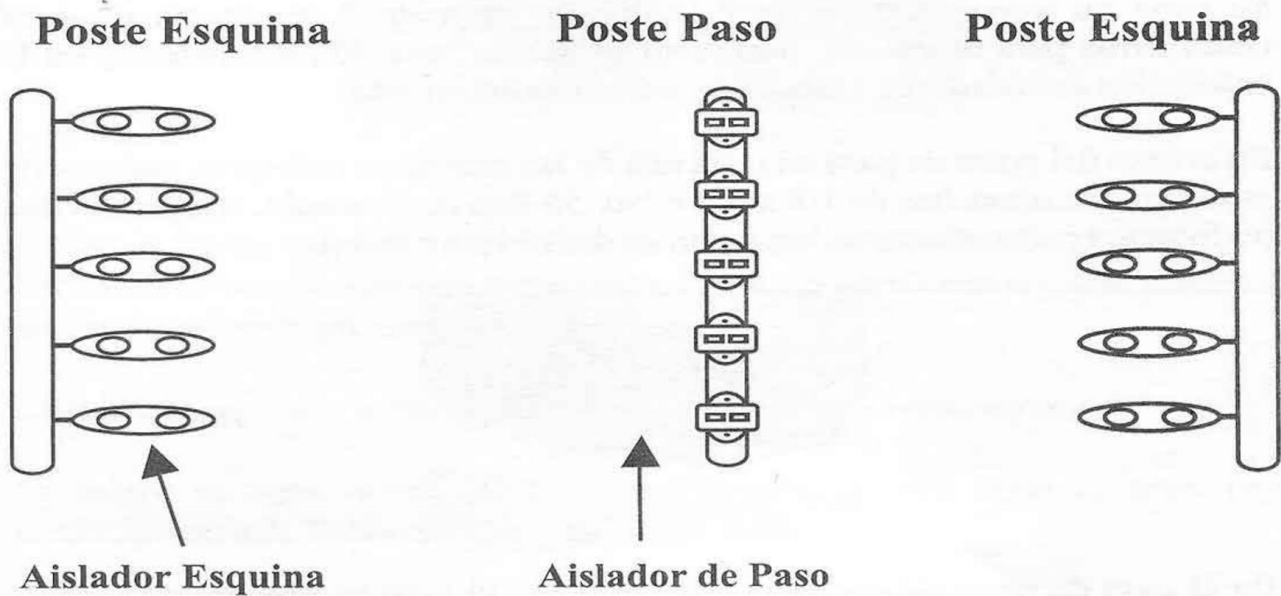


Fig. 1

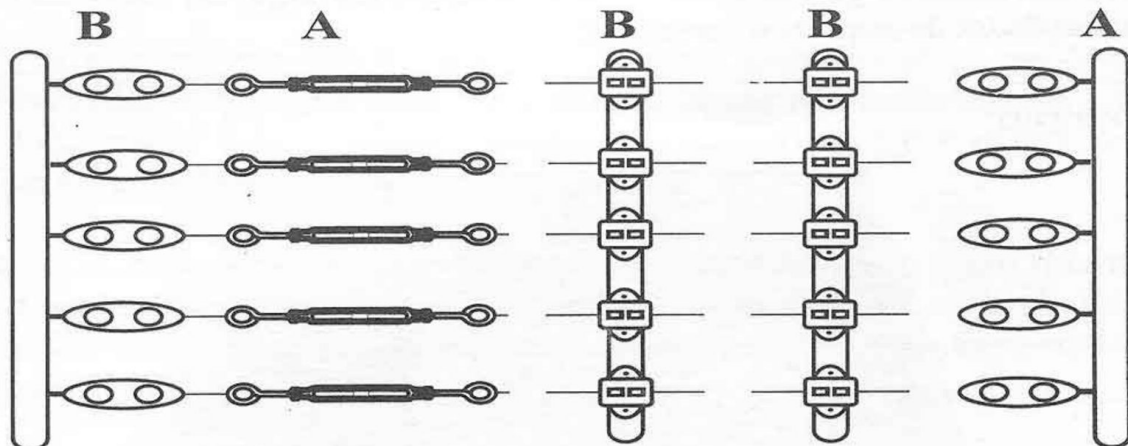
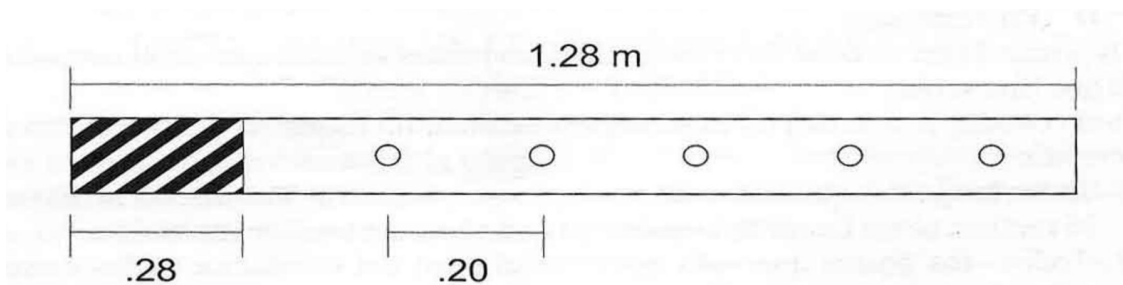


Fig. 2

Key: Poste Esquina = Corner Post · Poste Paso = Line Post · Aislador Esquina = Corner Insulator · Aislador de Paso = Line (pass-through) Insulator · A = Corner post · B = Line post

Fig. 1 (top) and Fig. 2 (bottom)

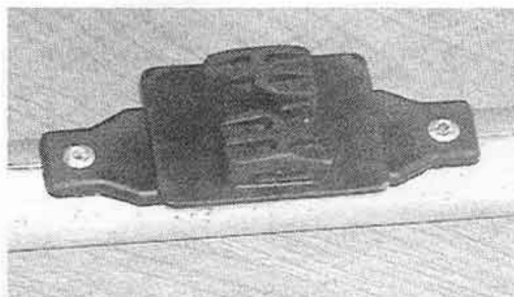
After counting the corner and line posts, here is a suggested way to prepare them.



Post layout: 1.28 m total; 0.28 m anchoring section (hatched); insulator marks every 0.20 m

Cut a 1.28-meter length of pipe, measure and set aside the 28 centimeters for anchoring, and divide the rest every 20 centimeters for placing the insulators, making a mark at each point.

For **line posts**, a line insulator is fastened at each mark with two 1/8" × 3/4" (No. 56) aluminum pop rivets, drilling a hole for each rivet with a 9/64" metal drill bit.



Line insulator riveted to the post

For **corner or starting posts**, the pipe is prepared differently. At each division, drill a hole all the way through; through it, tie first a turnbuckle with 16-gauge galvanized wire, and then from the turnbuckle a corner (egg-type) insulator.

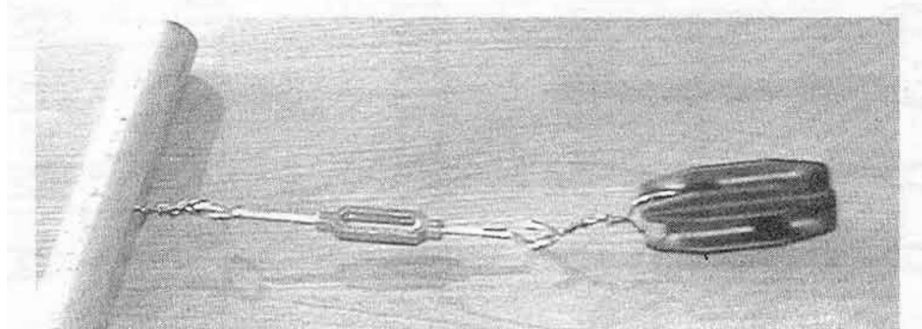


Fig. 4 — Example: post, turnbuckle and corner insulator

Keep in mind that the high-voltage wire should be tied with only a small single turn, so that it holds the conductor's tension but cannot support any additional weight. This prevents someone from laying an insulating cover over it and then using it to climb over the fence. This tie will come loose when it receives more weight (Fig. 5). This type of tie is known as a **mechanical tension fuse**.

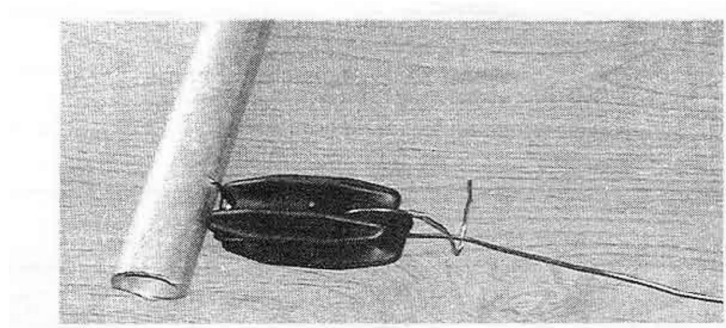


Fig. 5 — Mechanical tension fuse tie

Once the posts are ready, install them on the wall. The suggested distance between posts is **6 meters maximum**, depending on the terrain.

How to drill the wall for the posts:

Mark the spot where the post will go and draw a 1" circle there for the post.

Inside this circle, it is suggested that you drill 5 pilot holes of 5/16" × 30 cm deep, then run a 1" × 30 cm bit.

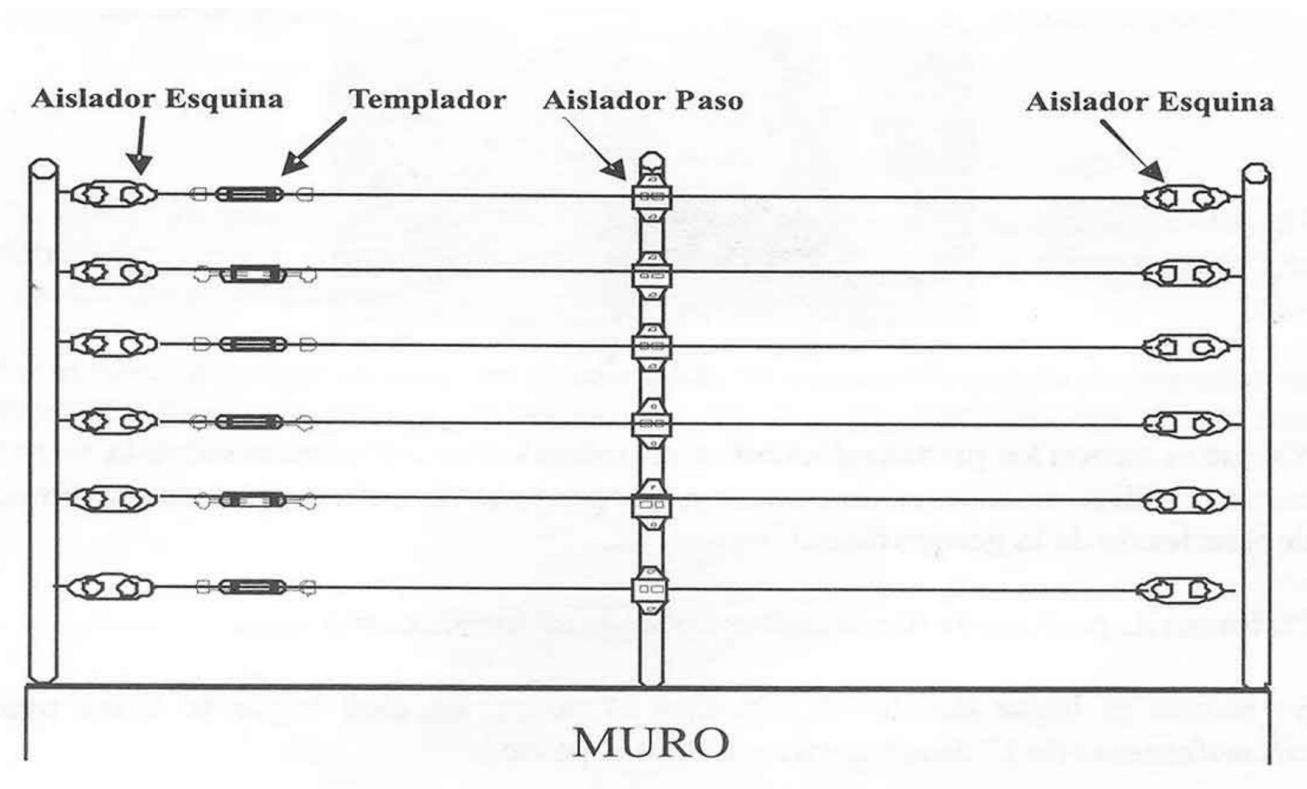
Finally, the dust must be removed from the cavity. A simple way to do this is to insert a 1/2" plastic hose and blow hard through it; this leaves a clean hole free of dust particles.

Then insert the pipe or post by the end marked with the 28 cm anchoring section, and drive it into the cavity with a hammer, making sure the line insulators face outward from the property and the corner insulators are parallel to the wall (Fig. 6).

Once the pipes are installed, two things are recommended:

- Apply waterproofing sealant at the base of the pipe.
- Fit a rubber cap on the top of the pipe to keep water from entering the pipe and seeping into the wall.

Once the pipes are in place, install and tension the wires, tying them to a corner insulator, running them through the line insulators, and ending at another corner insulator.



Key: Aislador Esquina = Corner Insulator · Templador = Turnbuckle · Aislador Paso = Line Insulator · Muro = Wall

Fig. 6

It is important to install the turnbuckle first and then the insulator. One turnbuckle every 12 meters is suggested.

Tie the high-voltage wire with just a hook, insert it into the line insulator, then take it to the other corner insulator and tension it by hand until the wire looks rigid and straight. Repeat this for all five wires.

When done, tension lightly with the turnbuckles, about ½ to 1 turn, starting with the highest wire and finishing with the lowest.

The fence should now look as shown in Figure 6.

Wire Continuity and Jumpers

The electric fence must be continuous, so each of the conductors must be bridged (jumped) to give it continuity.

In other words, the conductors must act as a single line, so that the fence can be fed from one end and the voltage received at the far end.

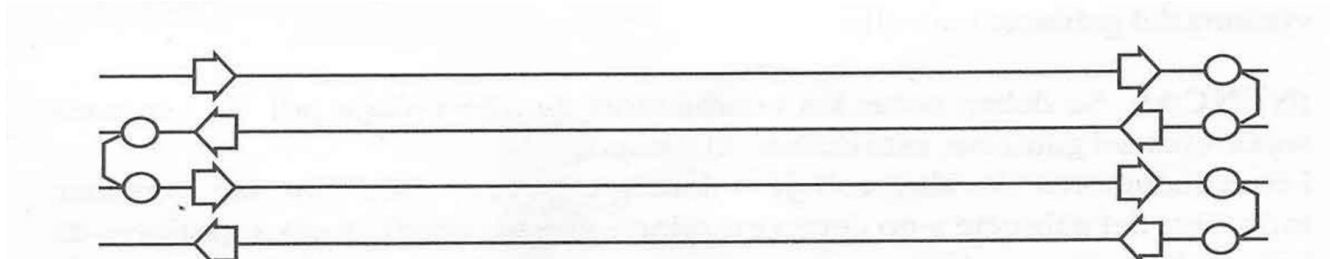


Fig. 7 — Note: the physical ground wire is excluded from this example for now.

We now suggest a jumper system, made with the same galvanized wire.

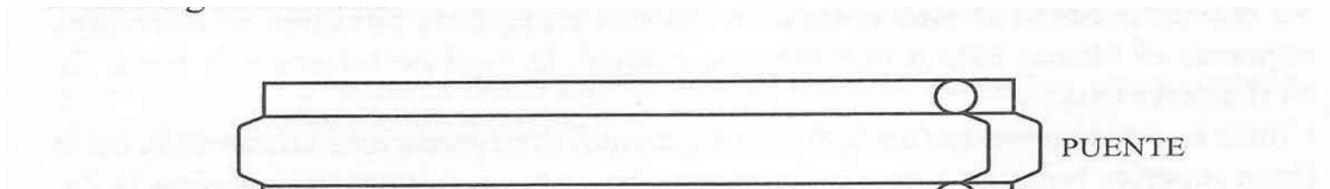


Fig. 8 — Jumper (PUEENTE = Jumper)

Note that power is fed at the top and returns at the bottom.

The high-voltage supply comes from the energizer's three lower wing-nut terminals. The one marked "**CERCA**" (FENCE, far right) is where the high voltage originates.

The one marked "**REGRESO**" (RETURN, far left) is the return from the fence to the energizer; this line tells the energizer that the fence circuit is complete (the labels are on the equipment cover). The **center** wing-nut terminal is physical ground.

ATTENTION: On High Frequency models, after making all connections and turning the equipment on, turn the knob to the right so the equipment begins generating high voltage and the siren does not sound.

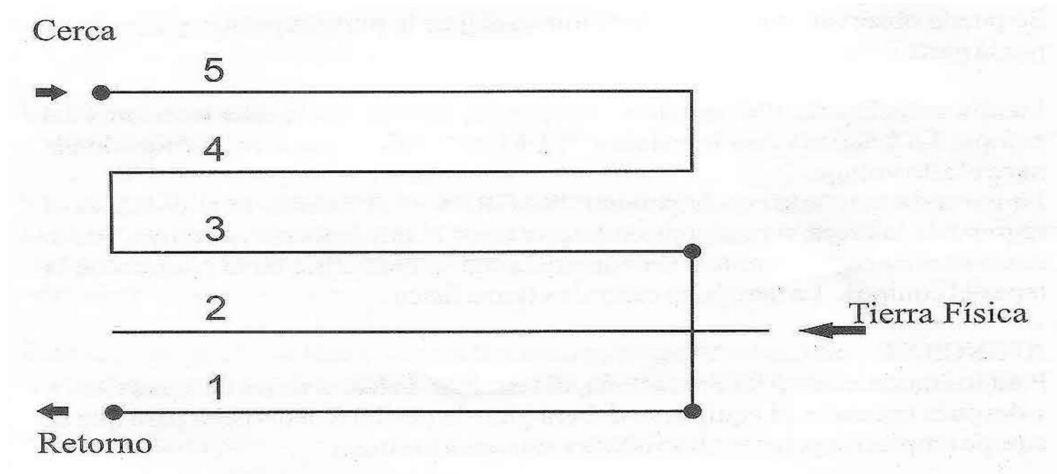
Important Note

Connections from the energizer to the electric fence must be made with high-voltage cable (never use any cable rated below 15,000 V; therefore neither "Pot" cable nor single-strand THW cable is suitable). It is extremely important that each wing-nut terminal be connected independently with its own high-voltage conductor, and that the conductor exit through the cabinet window directly below it.

NEVER route the high-voltage conductors out through the upper windows of the cabinet; this would damage the equipment. High-voltage conductors may only exit through the lower windows and must not be mixed with the upper low-voltage conductors, either inside or outside the equipment, because the induced currents would damage the internal electronics. The energizer cannot be installed more than **15 m** from the fence, and the high-voltage conductors (both feed and return) must be kept at least **20 cm** apart. They must never run in the same conduit; each must always have its own conduit.

Once the high voltage is connected to the two side terminals, connect the last wire to the center terminal, which corresponds to **"PHYSICAL GROUND"**.

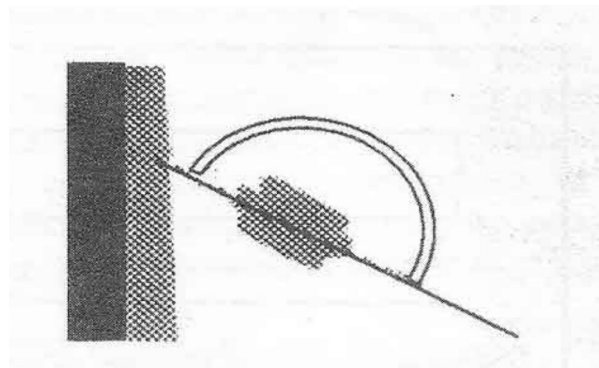
As the figure below shows, the fence is fed at the top wire and runs down through the jumpers to the 1st wire, without connecting the 2nd wire, which is reserved for physical ground. It is also very important to feed the fence at the top and exit at the bottom.



Key: Cerca = Fence (feed) · Tierra Física = Physical Ground (wire 2) · Retorno = Return

Wire arrangement (wires numbered 5 at top to 1 at bottom)

The energized wires must be in pairs so they can return to the energizer, and there must always be a ground wire, connected to the energizer's center wing-nut terminal through the lower center window. This ground wire must touch every post: it is very important that it be short-circuited across the insulators to the pipes that hold it, so that it becomes part of the post structure.



Ground-wire jumper bypassing the insulator to touch the post

This physical-ground jumper must touch the posts. These jumpers can be avoided by omitting the upper insulators; however, the insulators are suggested to give the fence a neater appearance.

Another way to install the physical ground is at the base of the posts, without insulators; this avoids extra cost.

Another option is to use the second wire as ground, to prevent an intruder from lifting the first wire to get in: lifting the first wire will make it arc to the ground wire, and the energizer will trigger the siren.

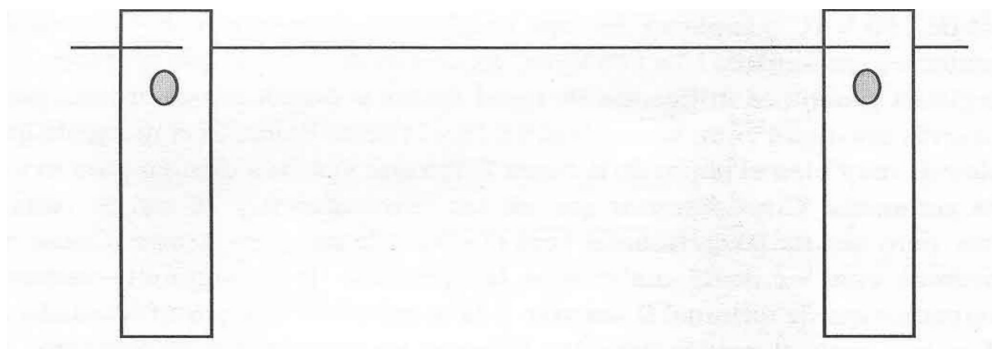
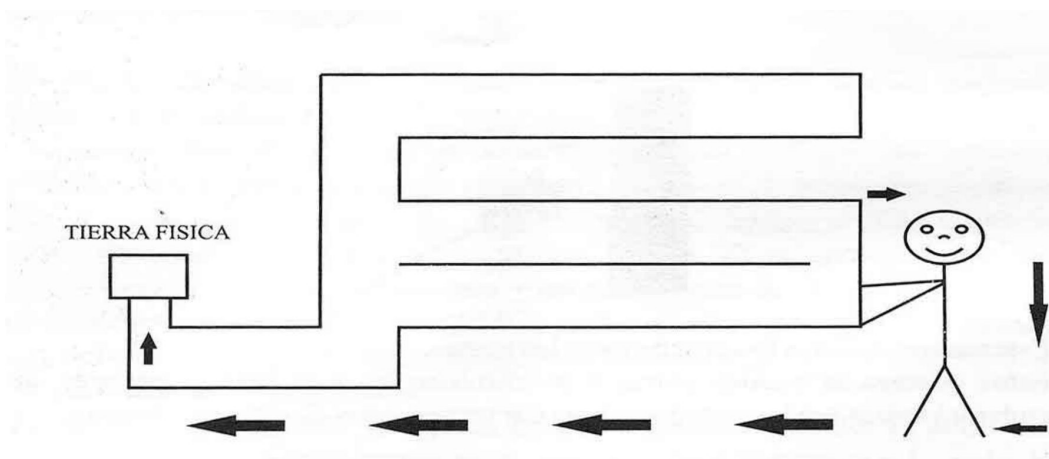


Fig. 10 — Ground wire without insulators

Physical Ground

Now connect the center terminal to a good physical ground. This can be a ground rod at least 3.00 m long, or perhaps a cold-water pipe, where the AC voltage difference with respect to the line neutral is no greater than 2 volts. In other words, all the energy the fence emits when a person touches it is received by the ground through the soil.



Energy path through a person touching the fence back to ground (TIERRA FÍSICA = Physical Ground)

If the energizer does not have a good physical ground, the return through the person will not be enough to deliver the intended shock, and they will very likely get past the perimeter. Whether a physical ground (ground rod or cold-water pipe) is correct is assessed by performing three tests with a voltmeter; these indicate whether the ground is working.

Test 1: Measure the energizer's supply line at upper terminals 9 and 10. Read this voltage with a voltmeter on the 150 VAC scale or higher. The supply voltage should be between 110 and 130 V, depending on the country.

Test 2: Using the voltmeter the same way and on the same scale, measure between terminal 9 or 10 and the physical ground. It is important to clean the ground point thoroughly to avoid false contacts. Terminals 9 and 10 carry AC voltage, but one is hot and the other neutral. Since we don't know which is which, let's reason as follows. Suppose terminal 9 is hot and terminal 10 is neutral (careful: it may be the reverse, but the readings will tell us). If we measure between terminal 9 (hot) and the physical ground, the reading should be exactly the same as in Test 1; if it is lower, we can begin to doubt the quality of the ground.

Test 3 is the most important, since it defines how effective the ground is. Measure terminal 10 (neutral) against physical ground with the same voltmeter and scale. The expected reading must be between **0.2 V and**

2.0 V. If the reading is above 2 V, the physical ground is not adequate and another ground point will be needed. Driving a 3-meter ground rod is recommended; it will almost certainly give an excellent ground value. If a better ground is needed or the required value cannot be achieved, it is suggested that several ground points be connected together in parallel until the desired value is reached. Once the physical ground has been evaluated and found correct, connect it to the energizer's lower terminal with cable of at least **14 AWG**; joining different ground points will give a better, more effective physical ground.

Translator's note: page 12 of the original gives 0.2–2.0 V for Test 3, while page 2 and the installation examples give 0.3–2.0 V AC. Both values are reproduced as in the original.

Upper Terminal Strip Connections

As the diagram shows, terminals **1 and 2** are the battery connections, 1 = (+), 2 = (–) (available via the connection leads). It is very important not to reverse the polarity; otherwise the equipment's power supply will blow the fuse and it will have to be replaced. These terminals also serve as an auxiliary power supply for sensors, wireless switches, sirens, etc. Maximum capacity is **12 VDC, 1.5 A**.

Terminals **3 and 4** are the energizer's on/off switch. A safety switch is supplied on one side of the unit, or the switch can be wired up to 30 meters from the energizer to any part of the property being protected. Another advantage is that two three-way (staircase) switches can be used, allowing two properties to share the same energizer (Fig. 11), or a YONUSA-brand wireless switch with up to 20 transmitters can be used.

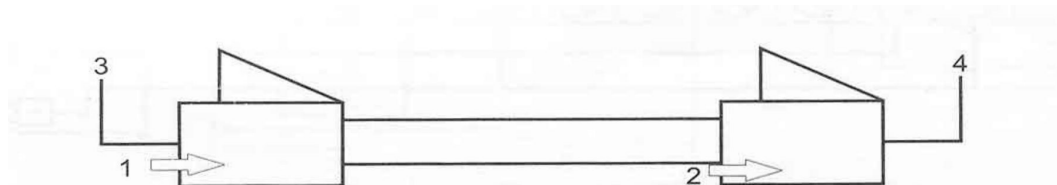


Fig. 11 — Two three-way switches wired to terminals 3 and 4

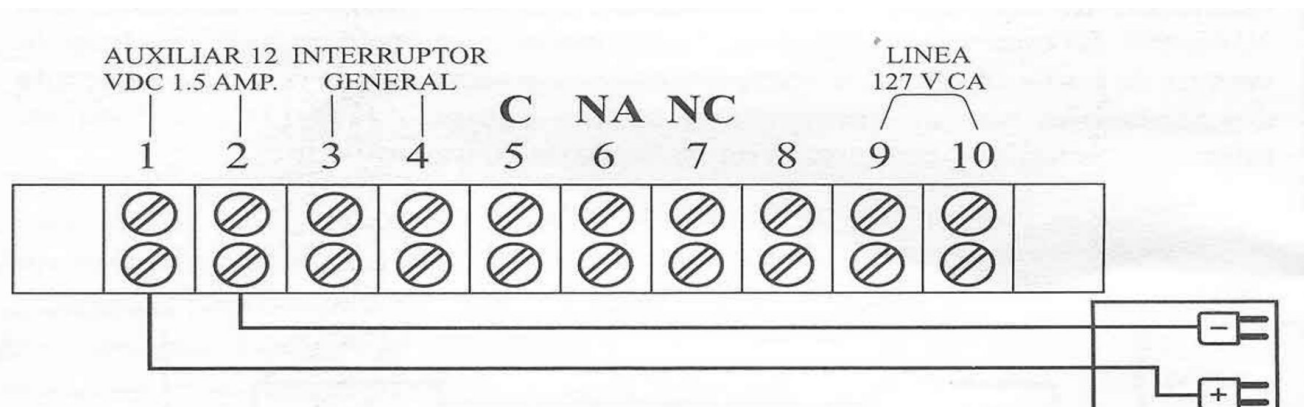
Note that the energizer can be turned on from either switch, but it is also important to connect an indicator light to show the energizer's operating status. This indicator connects between terminals "1" and "4" of the terminal strip. It operates at a nominal 12 VDC but with a very small current; we mean a pilot lamp or an LED with its 1 k Ω resistor.

Terminals "5", "7" and "8" are not used.

Terminal **"6"** is used as the siren (+) if you want an untimed alarm, i.e. the siren will sound until the user switches it off. By contrast, if the siren positive is connected to terminal "6" of the interface's blue terminal strip, the siren's operating time can be adjusted from 1 minute to 60 minutes using the adjustment marked **T-Sirena**. The siren's negative wire must be connected to upper terminal "2" for it to work properly.

Finally, connections **"9" and "10"** are for the 110–127 VAC line, phase and neutral, which must come directly from the mains. This supply must not be controlled by any switch.

If the energizer is connected to 220 V, it will certainly burn out (YONUSA supplies the equipment in 220 V on request).

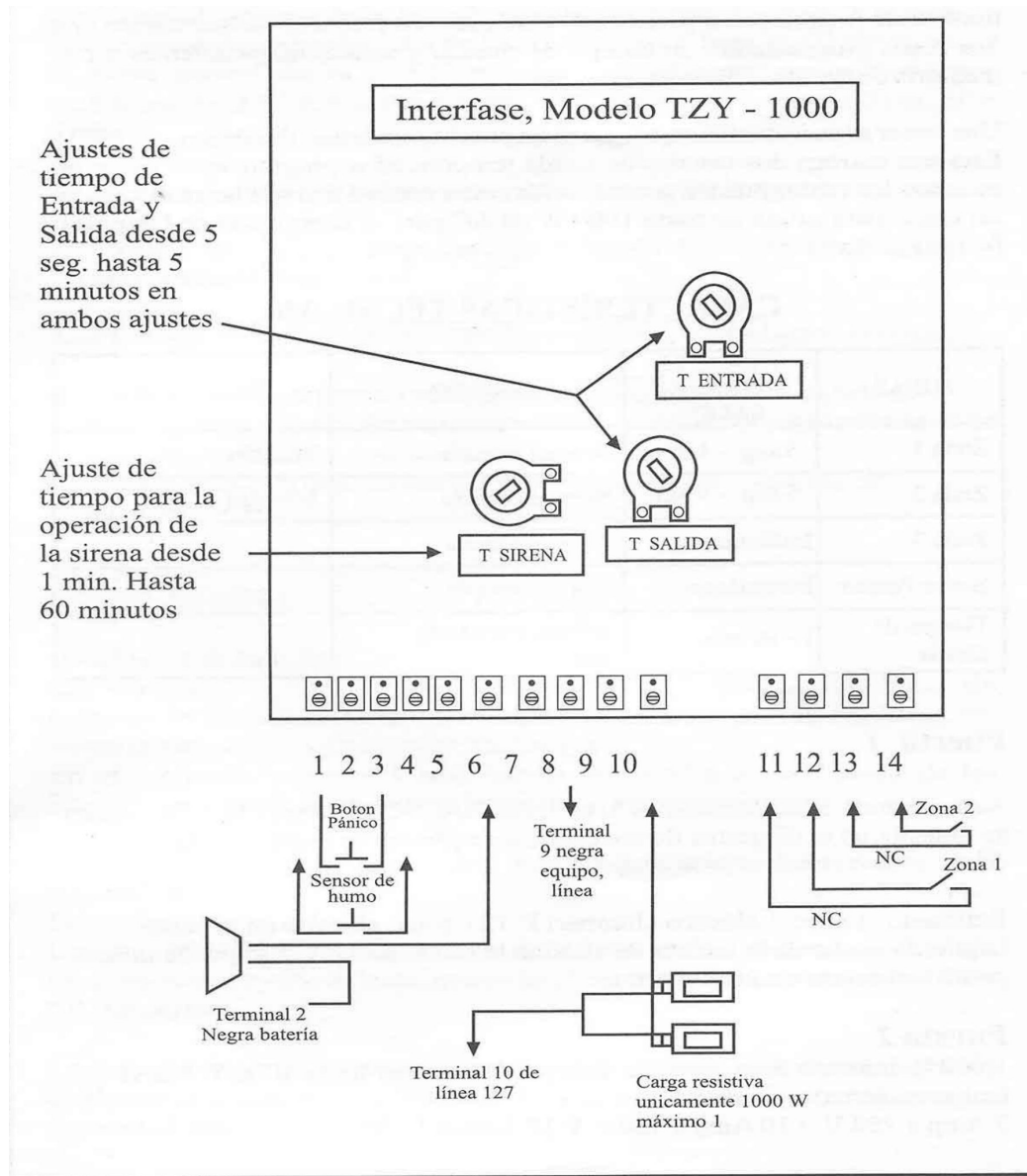


Key: 1–2 = 12 VDC 1.5 A auxiliary (battery + and – leads shown at right) · 3–4 = Main switch (Interruptor General) · 5 C = Common · 6 NA = Normally Open · 7 NC = Normally Closed · 9–10 = 127 VAC line (Línea)

Upper Terminal Connection Diagram

Warning: Do not use disposable (non-rechargeable) batteries.

Connection Diagram — Interface PS/PT-60 S 1 W Alarm Module



Key: Ajustes de tiempo de Entrada y Salida... = Entry and exit time adjustments, from 5 s to 5 min each (T ENTRADA = Entry time, T SALIDA = Exit time) · Ajuste de tiempo para la operación de la sirena... = Siren operating time adjustment, 1 to 60 min (T SIRENA) · Botón Pánico = Panic button (terminals 1–3) · Sensor de humo = Smoke sensor (terminals 1–4) · Terminal 2 Negra batería = Terminal 2, black (battery) · Terminal 9 negra equipo, línea = Energizer black terminal 9, line · Terminal 10 de línea 127 = Line terminal 10 (127 V) · Carga resistiva únicamente 1000 W máximo = Resistive load only, 1000 W max · Zona 1 / Zona 2 (NC) = Zone 1 / Zone 2, normally closed (terminals 11–14)

Interface, Model TZY-1000

Interface PT-60S1W

YONUSA, always striving to offer more and better products, integrates into its fence energizers a new electronic module that provides complete perimeter protection. It features two zones with independently programmable entry and exit times and event memory.

A third, instant zone, plus a panic-button port. It provides two timed output channels programmable from 1 to 60 minutes, which can be used as zones or as siren outputs, as well as an output of up to 1000 W AC for powering lamps (resistive load).

Technical Specifications

Zone	Entry & exit time	State	Units
Zone 1	5 s – 5 min	Normally closed	Minutes
Zone 2	5 s – 5 min	Normally closed	Minutes
Zone 3	Instant	Normally open	
Panic button	Instant	Normally open	
Siren time	1 – 60 min	Dry-contact outputs	

Port 1

Siren or zone. Terminals 5, 6, 7 (C / NO / NC) deliver 12 VDC as shown in the connection diagram, but they can also behave as a zone or dry contact.

Removing the plastic jumper **P.12/Zona**, located at the middle left of the board, eliminates the 12 V output so it can be used as a dry-contact output.

Port 2

1,000 W maximum. This dry contact can handle up to 1000 W, $\cos \phi$ (resistive load): 7 A at 250 V // 10 A at 120 V // 10 A at 12 V.

Programming

Times are programmed with the trimmer knobs located in the inner center of the board, marked T Sirena (siren time), T Entrada (entry time) and T Salida (exit time). They are graduated from 1 to 60: at (1) you get the minimum time of 1.17 minutes and at 60 the maximum of 61 minutes for T Sirena. For T Entrada and T Salida, 1 = 0.5 s and 60 = 5 min.

1. **T Sirena**: the time the siren and lamps operate.
2. **T Salida**: the time allowed to leave the protected property without triggering the siren.
3. **T Entrada**: the time allowed to enter without triggering the siren.
4. **SW4**: a port for a switch — bank-type key lock, dry-contact keypad — used to start the exit time and to disarm before the entry time runs out. The existing switch can be disconnected and replaced with any other required or more secure switch.

NOTE: THE ENERGIZER'S BATTERY MUST BE INSTALLED FOR THE INTERFACE TO WORK.

Interface Installation

Terminals **1 and 3** are for a wired panic button; a wireless receiver can also be connected to operate it remotely, powered from the auxiliary supply (1 and 2). When 1 and 3 are joined by either switch, the siren and the lamps (if installed) operate.

Note: The siren will operate only if its positive is connected to blue terminal "6". Terminal 2 is not used.

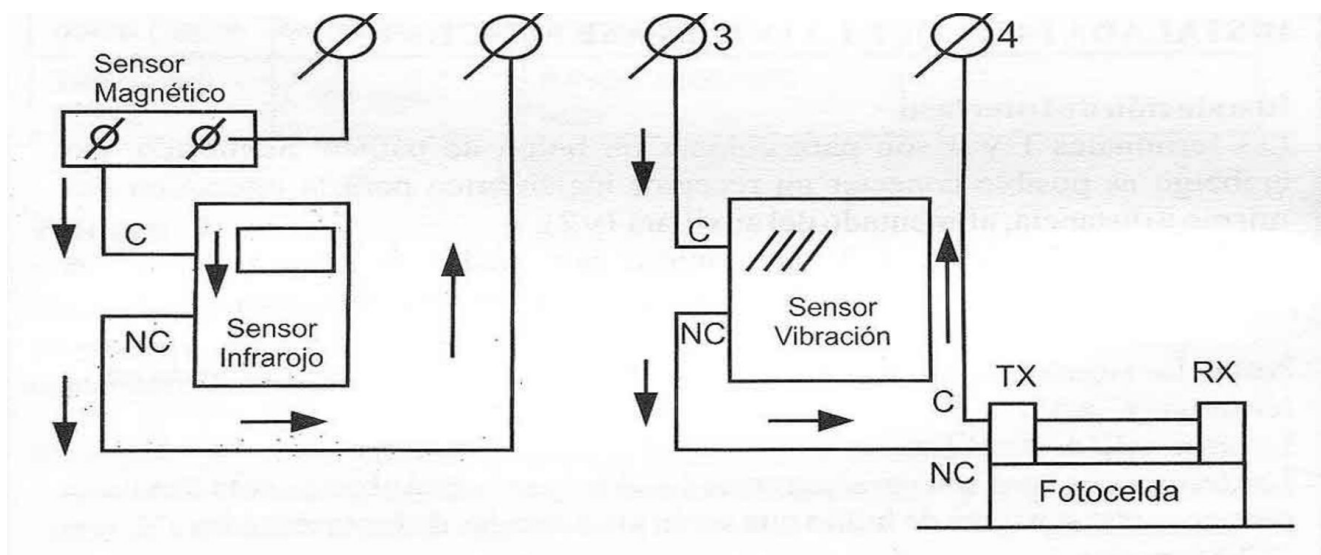
Terminals **1 and 4** are for a 24-hour normally-open zone, designed for smoke sensors powered from upper terminals ("1" + and "2" -).

Terminal **6** powers the siren (+), allowing it to be timed from this point with the adjustment marked T Sirena, from 1 to 60 minutes.

Terminals **5 C, 6 NO, 7 NC** can be used as a dry contact to connect the energizer to a zone of an alarm system. These terminals operate as a dry contact only if the bridge clip, or "jumper", marked P:12/Zona, located at the center left of the interface board, is removed.

Terminals **8 C, 9 NC, 10 NO** are a dry contact designed to power up to 1000 W of lamps. Connecting the lamps is very simple: connect one lamp lead to upper terminal 10 and the other lead to blue terminal 10, and finally jumper blue terminal 8 to upper terminal 9. All this lighting wiring must use at least 16 AWG cable.

Terminals **11, 12, 13, 14** connect infrared motion sensors, magnetic door contacts, glass-break and vibration sensors, photocells, etc. These terminals are zones 1 and 2 respectively: Z1 = 11 and 12, Z2 = 13 and 14. Sensors must be wired so that their contacts are in series, i.e. the zone voltage leaves terminals 11 and 13 and must return to terminals 12 and 14 respectively. An example follows:



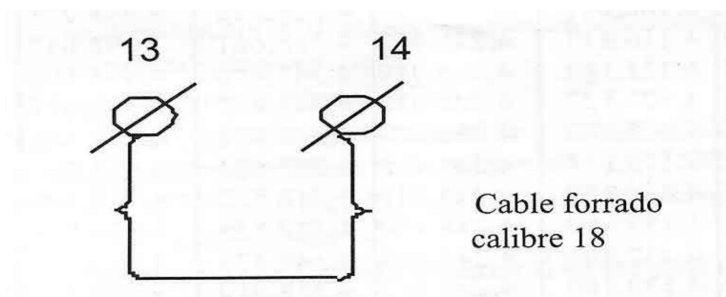
Key: Sensor Magnético = Magnetic sensor · Sensor Infrarojo = Infrared sensor · Sensor Vibración = Vibration sensor · Fotocelda (TX/RX) = Photocell (transmitter/receiver) · C = Common · NC = Normally closed

Wiring zones to different types of sensors

All sensors must be powered from upper terminals 1 and 2 (the energizer's auxiliary supply provides 12 VDC, 1.5 A). Another application of the zones is what we call **"sensorized"** protection.

This system is used where there is flooding and the electric fence would cause an alarm, or to protect chain-link mesh underwater, or simply to protect against cutting in a fence that looks electrified but is passive.

The connection is very simple: use 18-gauge general-purpose THW insulated wire, which can be woven into the mesh regardless of whether it touches water.



Sensorized loop on terminals 13–14 (Cable forrado calibre 18 = 18-gauge insulated wire)

The maximum cable length is **500 meters**.

Interface Alarm Operation

Once the sensors are installed, set the entry and exit times with the T Entrada and T Salida knobs respectively. These adjust from 5 seconds to 5 minutes. Once set, turn on the switch on the SW4 terminals, located at the upper left of the board.

This factory-supplied switch can be replaced with any other type of switch, such as a bank-type key lock, a wireless switch, a keypad switch, etc.

Once activated, the **yellow** light turns on, indicating that the exit time has started and that we must leave the property, closing all doors before leaving.

When the exit time ends, the **green** light turns on, indicating that the alarm is ready (armed). When any zone, Zone 1 or Zone 2, detects the opening of any of its sensors, its light will turn on to indicate which, and the entry time will begin. If switch SW4 is not turned off before the entry time runs out, the siren will sound and the lamps will turn on for the time programmed with the T Sirena adjustment (1–60 minutes).

Manufactured Under One 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	4,083,637
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	4,415,992	4,602,327	4,753,897
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	4,420,700	4,606,781	4,808,555
4,087,855	4,193,037	4,296,469	4,443,932	4,609,413	4,830,973
4,090,236	4,193,118	4,297,596	4,446,194	4,614,021	RE30.111
4,090,256	4,200,912	4,300,195	4,"9,203	4,616,146	RE30.282
4,094,761	4,200,917	4,307,445	4,454,454	4,621,413	RE31.662
4,098,923	4,203,127	4,311,988	4,458,408	4,622,669	RE31.663
4,099,070	4,218,740	4,312,034	4,473,878	4,627,988	
4,099,265	4,222,103	4,320,519	4,486,674	4,631,805	
4,100,431	4,222,116	4,325,121	4,486,880	4,633,437	

Patent list as printed in the original manual

Summary of Instructions

- a) Make sure the fence area is clean and free of plants.¹
- b) Use 18 to 14 gauge annealed galvanized wire in pairs (4, 6, 8 wires). Mount the energizer in a clean, covered location, near the main power switch and water intake.
- c) Connect the center terminal to a good, previously evaluated physical ground (water pipe, copper-clad rod) with 14 AWG cable.
- d) Connect the side terminals to the two fence inputs with double-insulated or THW cable (never use "Pot" type).
- e) Connect the remote or local switch with THW cable.
- f) Make sure the switch is in the OFF position and connect the battery, paying special attention to polarity (+1 and -2): Red +, Black -.
- g) Connect the 127 VAC line to terminals 9 and 10, making sure this supply is not controlled by a switch.
- h) Connect the siren (+) to upper terminal 6 if you do not need it timed, or to the interface board if you need to adjust the time from 1 to 60 minutes.
- i) Connect accessories to the interface, such as lamps, panic button, smoke sensors, motion sensors, etc.
- j) Close the cover and turn on the switch; you will hear pulses indicating that the energizer is operating.

CAUTION: Keep the upper terminal-strip wiring away from the wing-nut terminals on the lower acrylic terminal block.

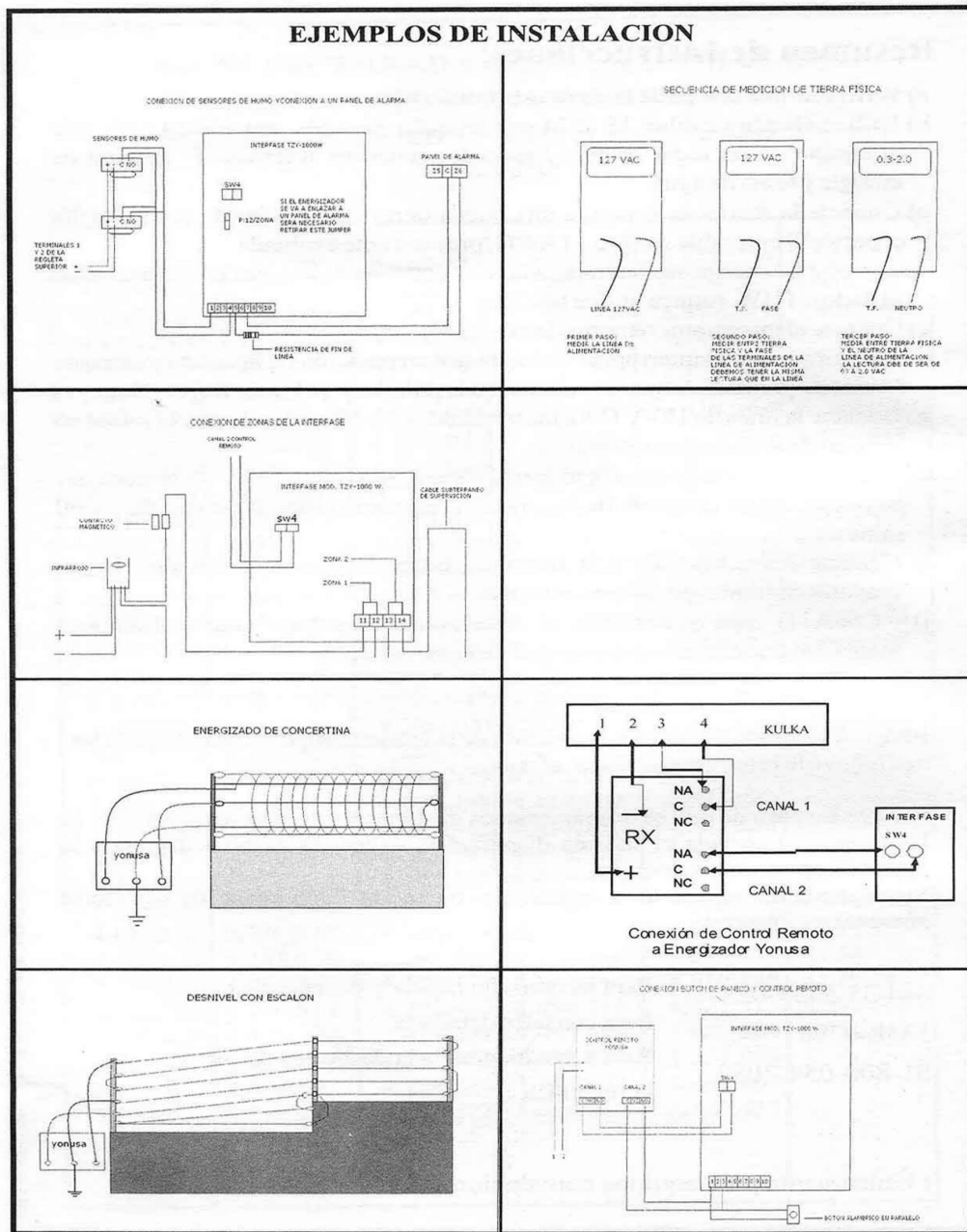
NOTE: If there are current surges on the fence or any of the wires is cut, the system will trigger the siren; the monitor will trigger the alarm 6 to 8 seconds later.

If you have any other questions or suggestions, please call us at the following numbers:

044 55 5453-0287	For quick and emergency inquiries
5358-0796	For detailed inquiries
01-800-054-7082	For detailed inquiries from elsewhere in Mexico

¹ Only for conventional equipment, EY 12000-127.

Installation Examples



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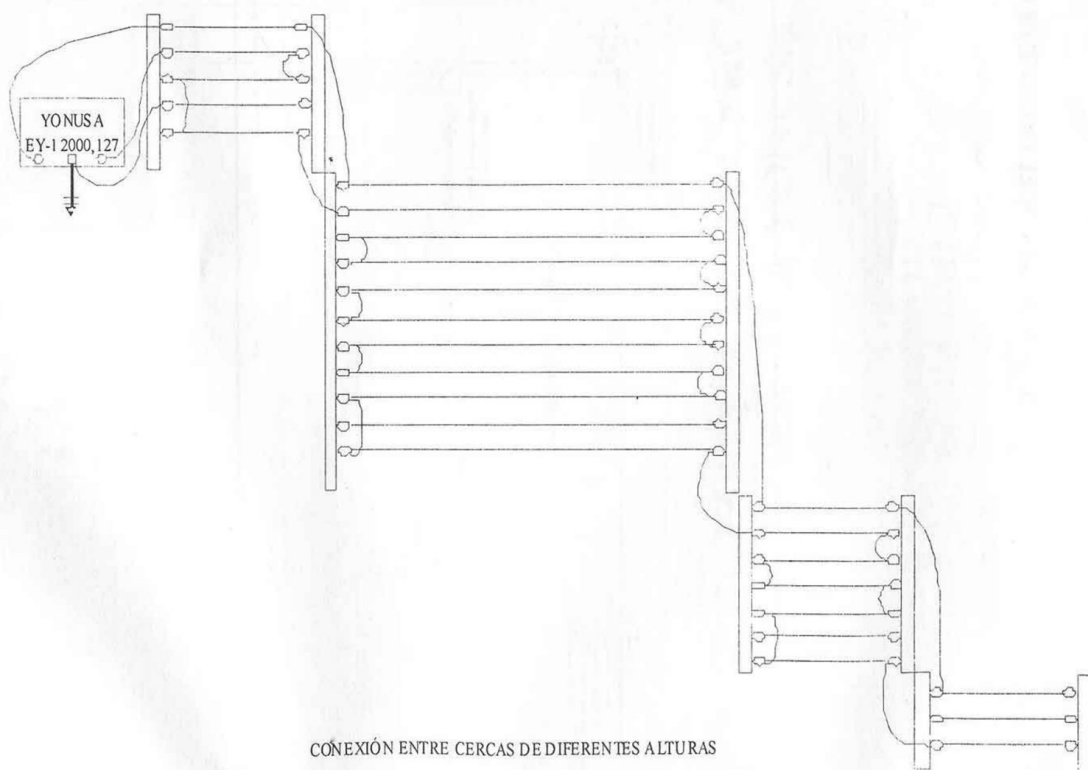
Installation examples (page 22 of original)

Key, left column, top to bottom: Connection of smoke sensors and connection to an alarm panel (Sensores de humo = Smoke sensors; Terminales 1 y 2 de la regleta superior = Terminals 1 and 2 of the upper strip; Panel de alarma = Alarm panel; Resistencia de fin de línea = End-of-line resistor; note on board: if the energizer is to be linked to an alarm panel, this jumper (P12/Zona) must be removed) · Interface zone connection (Canal 2 control remoto = Remote control channel 2; Contacto magnético = Magnetic contact; Infrarrojo = Infrared; Cable subterráneo de supervisión = Underground supervision cable) · Energizing concertina wire · Slope with a step (Desnivel con escalón).

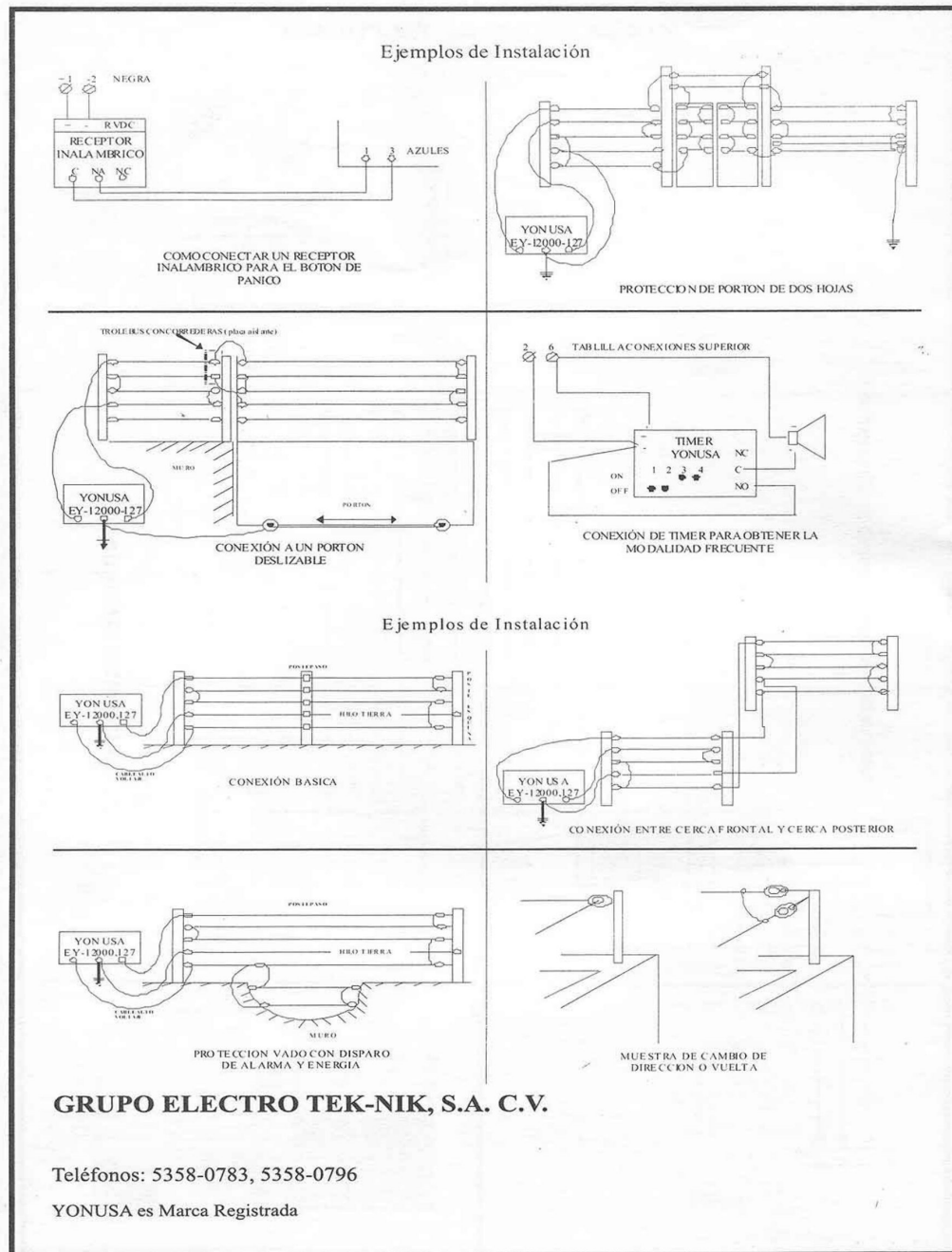
Right column: Physical ground measurement sequence — Step 1: measure the 127 VAC supply line; Step 2: measure between physical ground and the phase of the supply terminals — you should get the same reading as on the line; Step 3: measure between physical ground and the neutral of the supply line — reading must be 0.3 to 2.0 VAC · Remote control connection to the

YONUSA energizer (KULKA receiver; Canal = Channel; Interfase SW4) · Panic button and remote control connection (Botón alámbrico en paralelo = Wired button in parallel).

Ejemplos de Instalación



Installation examples — Connection between fences of different heights (page 23 of original, rotated for reading)



Installation examples (page 24 of original)

Key: How to connect a wireless receiver for the panic button (Receptor inalámbrico; Negra = Black terminals; Azules = Blue terminals) · Protection of a double-leaf gate (Portón de dos hojas) · Connection to a sliding gate (Trolebús con correderas, placa aislante = Trolley with slides, insulating plate; Muro = Wall; Portón = Gate) · Timer connection for "frequent" mode (Tablilla conexiones superior = Upper terminal strip) · Basic connection (Poste paso = Line post; Hilo tierra = Ground wire; Cable alto voltaje = High-voltage cable) · Connection between front fence and rear fence · Ditch (vado) protection with alarm and energy trigger · Example of change of direction or turn.

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