English

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User manual

High Power ELC 5002
High Power ELC 5003
ELC 5112

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High Power ELC 5002 / High Power ELC 5003 e ELC 5112
Electric fence electrifiers

Congratulations, you have just purchased a product with Intelbras quality and safety.

The High Power ELC 5002/ELC 5003 and ELC 5112 electrifiers for electric fence are microprocessor-based, monitor the high voltage output, generating a trip by grounding or breaking the fence. They have a mixed zone (wired and/or wireless) for connecting aperture and/or infrared sensors. They also have a specific output for activating conventional or monitored alarm systems, in addition to an LED output and an output that informs activation and deactivation for alarm panels.

Care and safety

- Read and follow all instructions in this user manual before installing and/or using this equipment.
- The product was developed in accordance with the ABNT NBR IEC 60335-2-76 standard.
- The equipment, cables or the electrified fence must not be installed in places where extreme conditions prevail, such as the presence of corrosives, explosive atmosphere (with the presence of gases), flammable liquids, etc.
- The equipment must be installed in a ventilated place.
- Fixed wiring for powering 115-230 Vac equipment must have a safety switch or similar device such as a circuit breaker. Such device must allow the disconnection of the electrical network, without the need to open the equipment cabinet, in addition to protecting the installation against possible shorts in the power input.
- The equipment must be fixed to a rigid wall or similar construction, so that the user cannot change its position without the aid of tools. Do not install the control board on wooden surfaces or materials that favor the propagation of flames, in case of a short in the wiring or equipment.
- Only use 12 Vdc rechargeable batteries designed for security/intrusion systems.
- The equipment must never be opened, programmed or handled by the end user. Whenever there is a need for repair, reprogramming or installation, a specialized technician must be hired.
- Before installing the product, it is important to check if the municipality or state in which you want to install the electric fence has a specific law that regulates this type of installation. If it exists, it must be fulfilled in its entirety.
- Follow the recommendations in this manual regarding installation procedures and materials to be used in carrying out the installation.
- In case of defect, malfunction or questions, please contact our support department or authorized technical assistance.
- Inform the system user about the operation and danger of the electrified fence, and the care that he must take when handling the product and signaling the protected area.
- Inform the user that vegetation or objects must not touch the fence wires, respecting a distance of 15 cm from the wires. If it is necessary to remove something from the wiring, disconnect the product from the mains and also from the battery.
- Never connect more than one switch to the same fence to be electrified.
- Do not install the electrifier close to another electronic device (minimum 3 meters).
- Provide the user with a complete description of the entire installed system and make sure he understands and is able to use and/or operate the system.
- The installation of the electrified fence must be carried out in accordance with the determinations present in the ABNT NBR IEC 60335-2-76 standard.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capacities, or by persons with a lack of experience and knowledge, unless they have received instructions regarding the use of the appliance or are under the supervision of a person responsible for your safety.

» It is recommended that children are supervised to ensure that they are not playing with the appliance.
» LGPD - General Personal Data Protection Law: Intelbras does not access, transfer, capture or perform any other type of processing of personal data from this product.

Note: *before accessing the terminals, all feeder circuits must be de-energized.*

Cautions and recommendations for battery usage

To install or replace the equipment's battery, it is mandatory that the shock is deactivated by the remote control. It is also necessary to turn off the mains through the safety switch or similar device.

Battery-powered product. Dispose of at authorized Intelbras sites or at collection points specifically designed for this purpose. It can cause risk to human health and the environment. Questions: www.intelbras.com.br, soporte@intelbras.com or (48) 2106-0006 or 0800 7042767.

Summary

1. Technical specifications

		ELC 5002	ELC 5003	ELC 5112
Supply voltage		115 - 230 Vac (it is recommended to use a cable with gauge ≥1 mm)		
Nominal frequency		50 - 60 Hz		
Consumption in 115 - 230 Vac		4,5 W	6,5 W	4,5 W
Tensão de saída	With low position jumper	16,000 pulsating V, ±5%	16,000 pulsating V, ±5%	8,000 pulsating V, ± 5%
	With middle position jumper (disconnected)	18,000 pulsating V, ±5%	18,000 pulsating V, ±5%	10,000 pulsating V, ± 5%
	With high position jumper	20,000 V pulses, ±5%	21,000 pulsating V, ±5%	12,000 pulsating V, ± 5%
Output pulse energy		<0,7 joules	<1,2 joules	<0,7 joules
Pulse duration		360 µs		
Interval between pulses		1s		
Pulses per minute		+/- 60 pulses		
Dimensions (W × H × P)		275 × 215 × 85 mm		
Gross weight		1,150 kg		
Auxiliary output		14.5 Vdc/250 mA (it is recommended to use a CCI cable with gauge ≤26 AWG)		
Siren output current		With battery up to 1.5 A No battery 400 mA		
Recommended battery		12 Vdc / 7 A		
Protection index		IPX4		

2. Characteristics

The purpose of the ELC 5002/ELC 5003 and ELC 5112 electric fence centers is to energize the fence for the protection of commercial, residential and industrial areas and must be installed within the current technical standards, in order to generate overt protection, without generating risks fatal to anyone who touches the wiring that makes up the installation.

The products have the following characteristics:

- Enables/disables shock via remote control.
- Supports up to 30 wireless devices (supports OOK modulation only).
- Range: up to 100 meters with direct view across open countryside.
- Programmable siren activation time.
- Auxiliary output protected against overload.
- High voltage, fence breach, AC/DC and sensor monitoring.
- Allows interconnection with alarm centers and sirens.
- Floating battery charger with short circuit and polarity reversal protection.
- Interval between electrical pulses of 1 second.
- Built-in high voltage module.
- 12 Vdc output for siren.
- Protection against penetration of liquids IPX4.
- LED output for arming and disarming visualization.
- 2 outputs for monitoring.
- Capacity of 3000 linear meters of 0.6 mm stainless steel wire (ELC 5002 / ELC 5112).
- Capacity of 7000 linear meters of 0.9 mm stainless steel wire (ELC 5003).

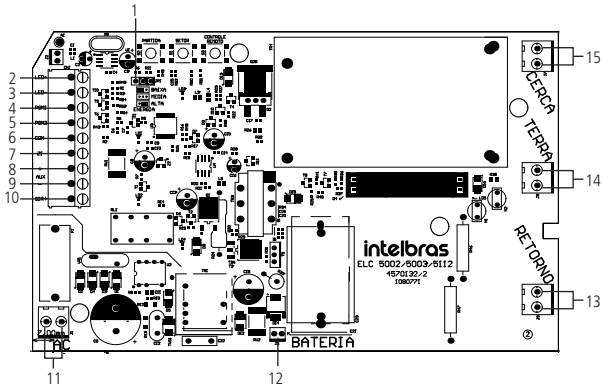
We do not guarantee the registration/operation of our switches with wireless sensors that are not manufactured by Intelbras.

As far as remote controls from other manufacturers are concerned, they must have the following characteristics to work with our control panels:

1. Work on OOK modulation;
2. Work on frequency 433.92 Mhz;
3. Baud rate of 1,886 Kbps.

3. Products

3.1. Main components



Internal view of the board

1. High voltage adjustment:
   - » With the Energy jumper in the low position = 8000 V pulsating (ELC 5112) or 16,000 V pulsating (ELC 5002 / ELC 5003), ±5%.
   - » With the Power jumper in the middle position (disconnected) = 10,000 V pulsating (ELC 5112) or 18,000 V pulsating (ELC 5002 / ELC 5003), ±5%.
   - » With the Power jumper in the high position = 12,000 V pulsating (ELC 5112) or 20,000 V pulsating (ELC 5002) or 21,000 V pulsating (ELC 5003), ±5%.

   Note: *check model for correct output voltage.*
2. Positive output for LED.
3. Negative output for LED.
4. Output PGM1.
5. PGM2 output.
6. Common for sensor connection.
7. Entry to zone 1.
8. Auxiliary output positive.
9. Auxiliary output negative and siren output.
10. Siren positive.
11. 115 – 230 Vac AC power supply.
12. Battery connector.
13. High voltage return.
14. Electrifier Earth.
15. High voltage output.

4. Installation

» To guarantee the sealing of the product, screw the lid close to the base, until you feel a good grip and add another ¼ of rotation.

» Check the table below to select the minimum diameter of the wire to be used, according to the installed perimeter:

	3.000 m	5.000 m	6.000 m	7.000 m
High Power ELC 5002 / ELC 5112	0,6 mm	1,2 mm	x	x
High Power ELC 5003	0,6 mm	0,6 mm	0,9 mm	1,2 mm

Note: *table relating to stainless steel wire.*

» The product and its auxiliary equipment must be installed, operated and maintained in a way to minimize the danger to people, reducing the risk of electric shock; unless someone tries to cross the physical barrier or is in the protected area without authorization.

» The construction of electric security fences where the accidental entrapment or entanglement of individuals is likely should be avoided.

» Gates with electric security fences must be able to open without the user receiving an electric shock.

» An electric security fence must not be powered by two separate electrifiers.

» For any two separate electric safety fences, each powered by a separate, independently timed electrifier, the distance between the wires of these two electric safety fences must be at least 2.5 m. If this space is protected, this protection must be carried out by means of an electrically non-conductive material or an insulated metal barrier.

» Barbed or sharp wires must not be electrified by the product.

» The recommendations regarding grounding contained in this manual must be followed.

» The distance between any earth electrode of an electric security fence and other earthing systems must not be less than 2 m, except when associated with an earthing mesh.

» Whenever possible, the distance between any electrical grounding electrode of the security fence and other grounding systems should be at least 10 m.

» Exposed conductive parts of the physical barrier must be efficiently grounded.

» When the electric fence passes below uninsulated power line conductors, its highest metallic element must be efficiently grounded for a distance of not less than 5 m to either side of the crossing point.

» High voltage conductors installed inside buildings must be efficiently insulated from the grounded structural parts of the building. This can be achieved using a high voltage insulating cable.

» High voltage conductors installed below ground must be placed inside conduits/ducts made of insulating material or an insulating high voltage cable must be used. Damage to high voltage conductors due to vehicle wheels when pressing on the ground must be avoided.

» High voltage conductors must not be installed in the same conduit/duct as mains wiring, signal cables, audio, video and others.

» High voltage conductors and electric security fence wires must not run over overhead power lines and/or communication lines.

» Intersections with overhead power lines should be avoided whenever possible. If such crossing cannot be avoided, it should be done below the power line and as close as possible so as to be perpendicular to the line.

» If the high voltage conductors and electric security fence wires are installed close to overhead power lines, the separation distances must not be less than those indicated in the following table:

Electric power line voltage (V)	Separation distance (m)
≤1.000	3
>1.000 and ≤33.000	4
>33.000	8

» If high voltage cables and electric fence wires are installed close to overhead power lines, their height from the ground must not exceed 3 m. This height applies to either side of the orthogonal projection of the outermost conductors of the electrical power line on the ground surface; for a distance of 2 m for lines operating at rated voltage not exceeding 1000 V, and 15 m for electric power lines operating at rated voltage exceeding 1000 V.

» A spacing of 2.5 m must be maintained between uninsulated conductors or between uninsulated high voltage cables of electric fence energized by separate electrifiers. This spacing may be smaller where high voltage conductors or cables covered by insulating jackets consist of cables with insulation for at least 10 kV. This requirement does not apply where these energized conductors are separated by a physical barrier that does not have any openings greater than 50 mm.

» A vertical distance of not less than 2 m must be maintained between conductors energized by pulses from different electrifiers.

» The installation of the electric fence must be identified by warning signs, installed in such a way that they are evident and legible from the protected area and the public access area.

» Each side of the electric fence must have at least one warning sign. There must be signs at each gate, at each access point, at intervals not exceeding 10 m and adjacent to each sign related to chemical hazards, for information regarding emergency services.

» Any part of an electric fence installed along a public road or highway must be identified at regular intervals by means of warning signs that are securely affixed to the fence support rods, or securely attached to the fence wires.

» The warning signs must be at least 100 mm × 200 mm, have a yellow background and the following inscription in black: CAUTION: ELECTRIC FENCE, as indicated in item BB.1 of annex BB of the ABNT NBR IEC 60335 standard -2-76.

» The inscription must be legibly and durably identified, inserted on both sides of the warning plate and have a height of at least 25 mm.

» It must be ensured that all auxiliary equipment powered by the electrical network, connected to the electric fence circuit, have a degree of isolation between the fence circuit and the electrical network equivalent to that assigned to the electrifier.

» Mains wiring must not use the same conduits/ducts used by the signal cables associated with the electric fence installation.

» Weather protection must be provided for auxiliary equipment unless this equipment is certified by the manufacturer to be suitable for use outdoors and has a minimum degree of protection IPX4.

» The installations must comply with the ABNT NBR IEC 60335-2-76 standard.

- The installation of the equipment must only be carried out by a specialized technician.
- Before performing maintenance or inspections on the system, all feeder circuits must be de-energized (mains and battery).
- Do not install this equipment on structures that spread flames, due to the risk of shorting the wiring or the product. Also do not install on electrical conductor structures.
- The power cable must be connected to the mains through a safety switch or similar device accessible to the user, so that the same can turn off the electricity at any time.
- If any power cord or cord is broken or damaged, it must be replaced by the installer or qualified professional in order to avoid scratches.
- The sensation of shock to the individual who eventually touches the fence wire depends on the individual's own insulation (use of shoes, gloves, etc.), the level of moisture in the soil or wall and the quality of the grounding.
- Use high insulation cable and insulators in the installation, with a dielectric strength of at least 20 kV.

4.1. Siren

One or more sirens of the alarm system can be connected, as long as the total current is:

- **With battery:** 1.5 A.
- **Without battery:** 400 mA.

Note: *when turning on, observe the polarity. The positive point must be connected to the SIR (+) terminal and the negative point to the AUX(-) terminal.*

4.2. Auxiliary: 14.5 Vdc output

This output is used to power infrared sensors.

- **Maximum current:** 250 mA.

Note: *when turning on, observe the polarity (+/-).*

4.3. Zone

The terminal, marked Z1, corresponds to zone 1. The terminal, called COM, is the common terminal.

Note: *if you are using only wireless sensors, Z1 and COM must be short-circuited.*

4.4. Triggering the alarm panel

To connect the electric fence to an alarm control panel, follow the procedure:

- Connect a wire from the PGM1 terminal of the fence to the ZONE terminal of the control panel and interconnect the two COM terminals of the electric fence and the control panel. This zone must be configured as 24h so that the perimeter is protected even when the control panel is disabled.
- The Alarm Sector has a fixed time delay of 5 seconds to start the wireless sensors violation reading, that is, the sensors opening transmissions will only be read when 5 seconds after activation has elapsed.

4.5. Monitoring on/off fence

PGM2 is a dry contact that is activated when there is activation or deactivation of the fence system, that is, if it is connected in the central area, it will send a trip and restoration to the monitoring company. For connection, follow the procedure:

» Connect two wires to the PGM2 and COM terminals and connect them to the control panel's zone connection. This zone must be configured as 24h in order for the control panel to send a 24 hour zone trigger signal and 24 hour zone restoration even when the control panel is disabled.

4.6. LED output

This output is used to indicate activation and deactivation when the electric fence is in a non-visible location. To use it, simply place a 5 Vdc LED with a maximum current of 20 mA on the LED+ and LED- outputs. This lit LED indicates that the fence shock or alarm is activated.

Note: *it is not possible to measure this LED output with a multimeter as it is a pulsating output.*

4.7. Battery start

When feeding the electrifier only from the battery, it will not be possible to activate the pulse emission from the fence, when trying to activate it, it will only emit 4 beeps on the siren and will deactivate automatically, for safety reasons.

In order to activate the electrifier, powered only by the battery, it will be necessary to perform the following steps:

1. Press the Start button;
2. Activate the electric fence.

Note: *after pressing the Start button, the fence will wait for 5 seconds to be activated. After this time the process will have to be repeated from the beginning. Battery starting is only required when the product has been completely removed from power. After being connected to AC mains, the product will work normally on battery.*

4.8. Activation and deactivation through PGM

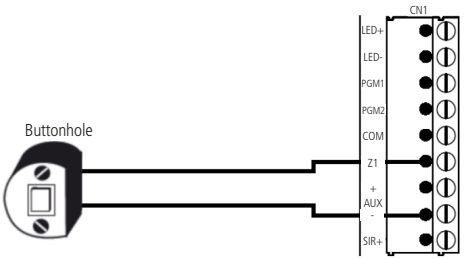
This product can be activated or deactivated through a PGM. Follow the instructions below:

» Connect the Z1 terminal of the electric fence to the PGM terminal of the control panel and the COM terminal to the AUX - of the control panel. When the PGM is turned on, the electric fence will be activated. When the PGM is turned off, the electric fence will be deactivated.

4.9. Activation and deactivation via pushbutton or key

This product can be activated or deactivated through a retentive pushbutton or On/Off switch.

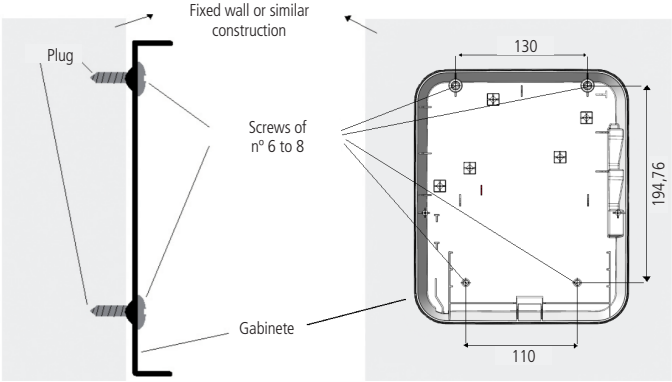
Connect the pushbutton or the switch to the Z1 and PGM terminal of the fence, as shown in the image below:



Note: *for Activation and deactivation via PGM or Activation and deactivation via pushbutton or switch, the electric fence must be programmed to be activated/deactivated by the alarm sector. According to the schedule in item 4.30. Arm/disarm the fence via the alarm sector.*

4.10. Fixing the switch

The equipment must be fixed to a fixed wall or similar construction, so that the user cannot change its position without the aid of tools. Always install the equipment in a vertical position and never upside down or horizontally, check the diagram below.



Note: » *Do not install the product on surfaces that favor the propagation of flames, in case of a short circuit in the wiring or equipment.*

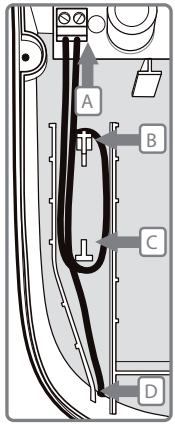
» *When possible, this equipment should be fixed in a place protected from the sun, rain and humidity, even with IPX4 protection level.*

» *The electrifier may cause interference to electronic equipment when installed nearby.*

4.11. AC power connection (mains)

The AC terminal is used to connect the equipment to the 115 – 230 Vac mains. Next to the terminal is located the protection fuse of the control unit. If you need to replace it, use a fuse of the same value (1 A) with a delay.

To guarantee the user greater safety in case of bumps in the power supply cable, it must be installed, as shown in the following figure:



1. Leave approximately 27 cm of the power cable inside the cabinet, through point D;
2. Fold the cable between points B and C as shown in the figure above;
3. Push the cable to the surface of the base;
4. Connect the cable to the AC terminal on the board;
5. Check mains voltage.

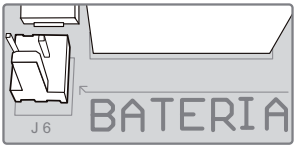
Mains power wiring must have a safety switch or similar device, such as a circuit breaker. Such a device must allow the disconnection of the electrical network, without the need to open the equipment cabinet, in addition to protecting the installation against any shorts in the power input.

4.12. Battery connection (bicolor parallel wire cable)

The J6 connector, as shown in the figure below, is used to connect the battery to the system. During normal operation, this output acts as a battery charger and, in the event of a power failure from the mains, it supplies energy to the system.

To install or replace the equipment's battery, it is mandatory that the shock is deactivated by the remote control, it is also necessary to turn off the electrical network through the safety switch or similar device. Only after ensuring that the electric fence is completely inactive and without electricity, open the equipment cover by loosening the screws and disconnect the J6 connector (battery). Then install and replace the battery, closing and screwing the cover when finished.

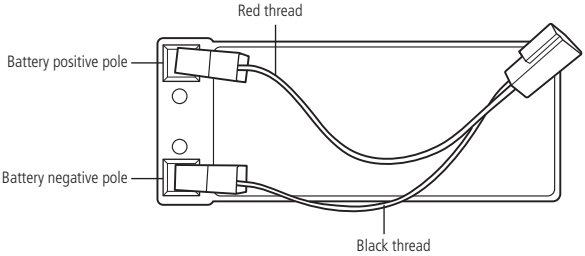
It is necessary to obey the order indicated below, avoiding the risk of electric shock.



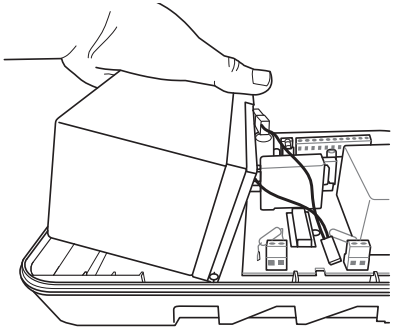
1. Disable shock by remote control;
2. Turn off the power supply using the safety switch or similar device;
3. Ensure the electric fence is completely inactive and free of electricity;
4. Open the equipment cover by loosening the screws and disconnect the J6 connector (battery);
5. Install and replace battery;

Battery snap orientation:

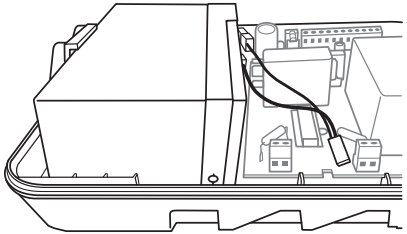
» Insert the battery cable;



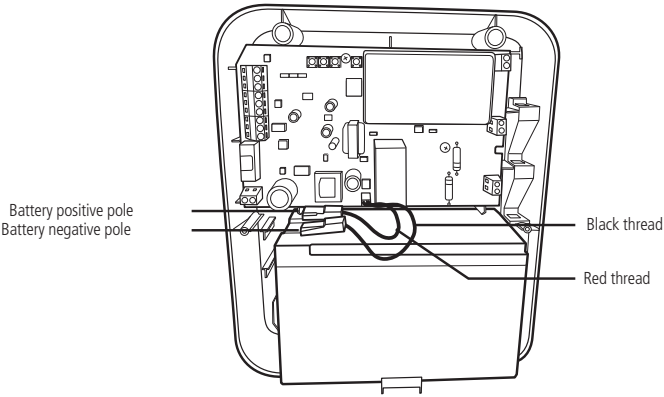
» Position the battery at an angle for a better fit in the cabinet;



» Lower the battery until it touches the bottom;



» Connect the battery cable to connector J6 on the board.



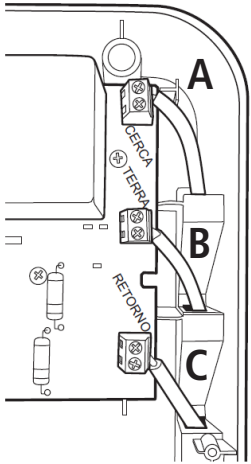
6. Close and screw the lid when finished.

Attention: when the control unit is initially powered only by battery, check the procedure for the item Starting with battery.

If you do, the control panel will generate 4 beeps on the siren, indicating an error. This happens when the fence is turned on for the first time or after there is no power at all.

4.13. Connection of high voltage cables and grounding

The high voltage input and ground cables must be installed through the holes on the right side of the cabinet. After passing the cables, it is necessary to make the connection at their respective terminals, as shown in the figure below, it is necessary to have a high voltage cable with a dielectric strength of at least 15 kV.



A. High voltage output cable.

B. Ground cable.

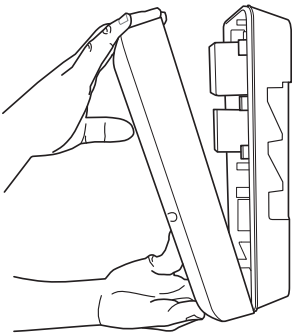
C. High voltage return cable.

Note: *a minimum distance of 0.5 m from the high voltage cables is recommended for any other electronic device.*

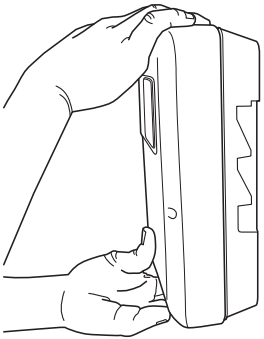
After installing the cables, fit the electrifier cover as follows:

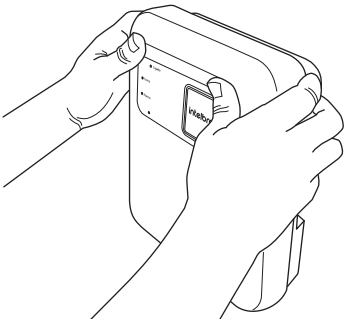
Cover fit orientation:

» Position and snap the cover to the bottom of the case;

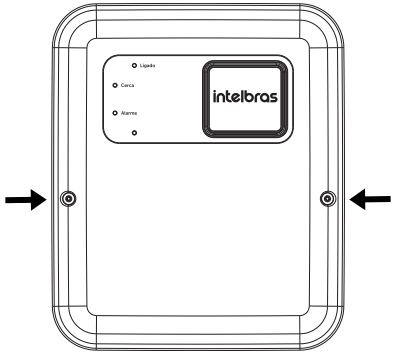


» Position the lid on top and fit the lid to the bottom until the cabinet snaps into place;





» Make sure there are no gaps between the lid and the base. Place the cover fixing screws in the indicated location.



4.14. Ground connection

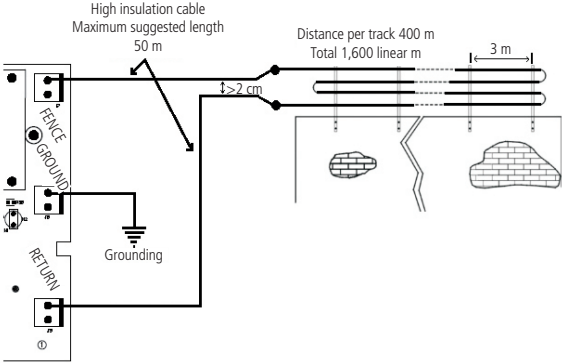
Grounding is mandatory and very important for the sensation of shock to anyone who touches the fence wires, in addition to protection against lightning and overload of the electrical network and/or sensor wiring.

Always look for a wetter place to fix the ground rod (copper bars). The rods must be longer than 2 m, except when associated with a ground loop.

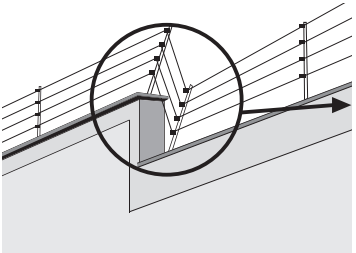
Attention: do not use the neutral of the electrical network as a ground.

4.15. Connection and assembly of the electric fence

Rods and insulators specially developed for the assembly of electric fences can be purchased easily in the market. The rods are in flat aluminum or in the shape of an angle, to facilitate assembly. Your material should absorb impact and have minimal wind flexibility. If desired, the rod can be made of iron, as long as these characteristics are observed. The insulators are made of polypropylene or with dowels. Due to the high voltage applied to the fence, these must have excellent electrical insulation between wire and rod. The rods for fixing the wires must be secured with screws and dowels at a minimum height of 2.10 m with a recommended maximum spacing of 3 m between them, as shown in the figure below.



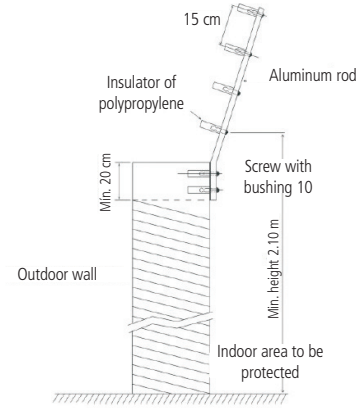
Keep a minimum distance of 15 cm between the wires and the wire to the wall.



Note: *this distance (15 cm) must be respected even on unevenness.*

4.16. Mounting the rods

Use quality threads with a section greater than 0.60 mm² as it has good durability, low electrical resistance per meter and resistance to the mechanical tension required by stretching, in order to avoid bellies and overhang that would cause breakage.



Mounting the rods

4.17. Programming

The electric fence has several programmable parameters, which makes it versatile and allows you to configure its operation as needed.

These settings are stored in a special internal memory that maintains this information even when the fence is disconnected from the mains and the battery is removed, thus avoiding the need for frequent reprogramming.

In addition to configuring the operation of the fence, it is also possible to perform tests on the functioning of the sensors.

Attention: all the following schedules must be carried out with the fence turned off.

4.18. Programming the remote control to arm/disarm the fence

1. Place the Power jumper (JP1) in the High position;
2. Press the C key. Remote and the Fence LED will light up;
3. Engage the remote, and the Enabled, Fence, and Zone LEDs will flash rapidly, indicating the code has been learned. If the LEDs flash slowly, an error has occurred or the control key has already been programmed.

To program another remote, repeat steps 2 and 3.

4.19. Programming the remote control to arm/disarm the alarm and fence

1. Place the Power jumper (JP1) in the Medium (disconnected) position;
2. Press the C key. Remote and the Fence and Zone LEDs will light up;
3. Engage the remote and the Enabled, Fence, and Zone LEDs will flash quickly, indicating the code has been learned. If the LEDs flash slowly, an error has occurred or the control key has already been programmed.

To program another remote, repeat steps 2 and 3.

4.20. Programming the remote control to arm/disarm the alarm

1. Place the Power jumper (JP1) in the High position;
2. Press the Sector key and the Zone and Enabled LEDs will light up;
3. Engage the remote and the Enabled, Fence, and Zone LEDs will flash rapidly, indicating the code has been learned. If the LEDs flash slowly, an error has occurred or the control key has already been programmed.

To program another remote, repeat steps 2 and 3.

4.21. Wireless sensor programming for the alarm

Set the Power jumper (JP1) to the Low position;

1. Press the Sector key and the Zone LED will light up;
2. Engage the sensor and the Enabled, Fence, and Zone LEDs will flash rapidly, indicating the code has been learned. If the LEDs flash slowly, an error has occurred or the sensor has already been programmed.

To program another sensor, repeat steps 2 and 3.

Note: *wireless communication technology, when exposed to environments with high power radiation, may suffer interference and have its performance impaired, for example: places close to TV towers, AM/FM radio stations, amateur radio stations, etc.*

Erase all programmed remotes

4.22. Place the Power jumper (JP1) in the High position;

1. Press the C key. Remote and the Fence LED will light up. Press and hold the key for approximately 5 seconds until the Fence and Zone LEDs flash, indicating that the controls have been turned off.

4.23. XAC 2000 TX Remote Control User Manual

Technical specifications

Activation	3 command buttons
Frequency	433.92 MHz
Modulation	OK (on/off key)
Alimentation	12 Vdc battery

Homologation

This equipment operates on a secondary basis, that is, it is not entitled to protection against harmful interference, even from stations of the same type, and may not cause interference to systems operating on a primary basis.

4.24. XAC 4000 Smart Control remote control user manual

Congratulations, you have just purchased a product with Intelbras quality and safety.

The remote control XAC 4000 Smart Control, has 3 independent buttons (channels), modern design and powered by a single 3V Button type battery.

Technical specifications

Activation	3 botões de comando
Frequency	433,92 MHz
Modulation	FSK/OOK
Alimentation	Bateria de 3 Vdc CR2032
Color	Preto

Homologation

This equipment operates on a secondary basis, that is, it is not entitled to protection against harmful interference, even from stations of the same type, and may not cause interference to systems operating on a primary basis.

4.25. Clear all programmed sensors

1. Set the Power jumper (JP1) to the Low position;
2. Press the Sector key and the Zone LED will light up. Press and hold the key for approximately 5 seconds until the Fence and Zone LEDs flash indicating that the sensors have been cleared.

4.26. Siren beep activation/deactivation

1. Place the Power jumper (JP1) in the Medium (disconnected) position;
2. Press the Sector key and the On, Fence and Zone LEDs will light or flash. If the LEDs light, the siren beep programming has been configured, if the LEDs flash the siren beep programming has been configured.

4.27. Testing wired or wireless sensors and remote control

1. This function is used to facilitate testing of sensors/controls during installation. When activated, the siren beeps whenever a sensor or remote control is activated. For example, in the case of an auto switch installed in a door, a beep will sound when the door is opened or closed.
2. Place the Power jumper (JP1) in the Medium (disconnected) position;
3. Press the Start key.

When the fence is in test mode the On LED will flash slowly. To exit test mode, press the Start key again and the Enabled LED will go out.

4.28. Siren time change

1. The factory default siren time is 15 minutes. This is the time the siren stays on after a violation occurs and can be reprogrammed to a value between 01 and 99 minutes. To program, follow the procedure:
2. Place the Power jumper (JP1) in the High position;
3. Press and hold the Departure key. The Enabled, Fence and Zone LEDs will light for approximately 5 seconds and then go out. After this time, the On LED will flash every 1 second. Each LED flash corresponds to 1 minute of siren time.

4.29. Failed Pulse Amount Programming

1. Set the Power jumper (JP1) to the Low position;
2. Press the Start key. The Fence LED will light for approximately 5 seconds and after this time will flash every 1 second. Each blink corresponds to 1 more faulty pulse.

Note: *the minimum amount of failed pulse is 5 pulses and the maximum amount is 36 pulses, so counting starts with the first pulse. When the countdown reaches 36, the Enabled LED will light up ending the countdown. Release the key so the LED goes out. If you release the key within the first 5 seconds, the number of failed pulses will be 5 pulses.*

The factory default quantity is 8 failed pulses.

Arming/disarming the fence by the alarm sector

4.30. To enable arming/disarming the fence

1. Place the Power jumper (JP1) in the High position;
2. Press and hold the Sector key for approximately 5 seconds and the On LED will be lit. After this time the Fence and Zone LEDs will flash for approximately 3 seconds and then go out.

4.31. To disable fence arming/disarming

1. Place the Power jumper (JP1) in the High position;
2. Press and hold the Sector key for approximately 5 seconds. During this period the Enabled and Zone LEDs will remain lit. Then the Fence LED will turn on for approximately 3 seconds and after that all LEDs will go out except the Zone LED.

4.32. Learning the perimeter of the fence

After the fence is activated for the first time, after total absence of power, the Activated LED will start blinking. After 10 flashes of the Fence LED (10 seconds), the On LED will stop flashing, indicating that learning is complete.

Note: *whenever there is a need for maintenance, changing cables, insulators, pruning vegetation, changing the position of the Energy jumper, etc., a new learning process must be carried out due to the new conditions. Therefore, the central power supply (network and battery) must be completely removed and connected again so that it can perform the learning process.*

5. Installation completion

Program a key on the remote to turn on the fence.

5.1. Fence tension adjustment

1. To prevent sparking, adjust the power jumper according to the perimeter;
2. After all the wires are connected, go through the entire length of the fence, checking the stretch of the wires (they should have no belly) and the splicing points, including sensor wires, if any;
3. Make sure that there is no vegetation (branches or leaves) too close to the fence, as this can cause leaks and the microprocessor will perform a wrong learning process, causing undue triggers;
4. Activate the fence with shock and check its entire length for possible leaks (sparking);
5. Deactivate the fence using the remote control and eliminate the causes;
6. Turn it back on and learn the perimeter of the fence;
7. Simulate a fence break, turn it on and the siren should go off. Turn it off;
8. Simulate a short circuit with a wire, connecting the fence to the ground wire, turn it on and the siren should go off. Turn it off;
9. Simulate a leak, connect a wire to the fence and to the other end, leave it very close to the ground cable, about a few millimeters, turn it on and the siren should go off after N fault pulses elapse (factory default: 8 fault pulses). Turn it off.

6. General reset

If the High Power ELC 5002/ELC 5003 and ELC 5112 fences are turned on and it is not possible to use the remote control, the only means available to turn off the fence is through a General System Reset. To perform the General Reset, follow the procedure:

1. Hold down the Start and C keys. Remote;
2. All LEDs will flash quickly indicating that the Master Reset has been performed;
3. After General Reset the electric fence will return to factory default.
4. It is now possible to program another remote control.

Note: » *This operation also erases all registered wireless devices.*

» *For the procedures of items 1, 2 and 3 to work, the fence must be disarmed. With the fence set up, before performing item 1, it is necessary to remove the power and re-feed it, following steps 1, 2 and 3.*

7. Operation

7.1. Activation/deactivation of the fence/alarm

Press the previously programmed remote control key. The siren will beep and the fence will be activated. The drive does not have a time delay, therefore, all modules must be closed and the fence must be in good condition. To deactivate the fence, trigger the remote control again. The siren will beep twice and the fence will be deactivated.

Note: *the siren will only beep if the key is activated.*

7.2. LEDs

LEDs	Status	Description
Activated	Wiped out	Fence and alarm off
	On	Fence or alarm activated
	Fast blinking	perimeter learning
Fence	Wiped out	Disabled fence
	Flashing 1/1 second	Fence activated
	Fast blinking	There was a fire in the fence
	Slow blinking	Electrifier failure
Zone	Wiped out	Alarm off
	On[1]	Alarm activated
	Fast blinking	There was a trigger on the alarm
Battery/network	On	Mains and active battery
	Flashing quickly	No battery or dead battery
	Blinking slowly	Lack of AC network
	Flashing slow and fast	Lack of AC power and dead battery

[1] When the fence function is disabled and the zone is open the LED will remain lit.

7.3. Electrifier operation

The fence generates a high voltage pulse every one second, monitoring the cut and ground.

If the return pulse is different from the one memorized in learning, the fence considers it as a faulty pulse. When N failed pulses occur in a row, the fence triggers the alarm.

Note: *N = programmed fault pulse amount.*

The amount of fault pulse is programmable: minimum 5 and maximum 36 pulses.

Warranty term

It is established that this warranty is granted upon the following conditions:

Client's name:
Client's signature:
Invoice number:
Date of purchase:
Model: Serial number:
Retailer:

1. All the parts, pieces and components of the product are guaranteed against possible manufacturing defects, which may arise, for the term of 1 (one) year - this being 90 (ninety) days of legal warranty and 9 (nine) months of contractual warranty –, counting from the date of purchase of the product by the Consumer, as appears in the product purchase bill of sale, which is an integral part of this Term throughout the domestic territory. This contractual warranty includes the free exchange of parts, pieces and components which have a manufacturing defect, including the expenses with labor used in this repair. If there is no manufacturing defect, but defect(s) arising from misuse, the Consumer shall bear these expenses.
2. The installation of the product shall be executed in accordance with the Product Manual and/or Installation Guide. If your product requires the installation and configuration by a qualified technician, seek a suitable specialized professional, the costs of these services not being included in the product amount.
3. Having perceived the defect, the Consumer shall immediately contact the nearest Authorized Service which appears in the report offered by the manufacturer – they are the only ones authorized to examine and remedy the defect during the warranty term foreseen herein. If this is not respected, this warranty shall lose its validity, as it shall be characterized as product infringement.
4. If the Consumer requests home service, it shall contact the nearest Authorized Service to inquire about the technical visit rate. If it is necessary to remove the product, the ensuing expenses, such as those of transportation and insurance of the taking and return of the product, shall be the Consumer's responsibility.
5. The warranty shall lose its validity totally in the occurrence of any of the following cases: a) if the defect is not one of manufacture, but is caused by the Consumer or by third parties foreign to the manufacturer; b) if the damage to the product arises from accidents, disasters, agents of nature (lightning, floods, landslides, etc.), humidity, voltage in the electrical network (excess voltage caused by accidents or excessive fluctuations in the network), installation/use in disagreement with the user's manual or arising from natural wear of the parts, pieces and components; c) if the product has undergone effects of a chemical, electromagnetic, electrical or animal (insects, etc.) nature; d) if the serial number of the product has been falsified or erased; e) if the appliance has been infringed.
6. This warranty does not cover loss of data; therefore, it is advisable that if it is the case of the product, the Consumer makes a backup regularly of the data which appears in the product.

7. Intelbras is not responsible for the installation of this product, or for possible attempts at fraud and/or sabotage in its products. Maintain the updates of the software and applications used up-to-date, if it is the case, as well as the network protection required for defense against hackers. The equipment is guaranteed against defects in its usual conditions of use, it being important to bear in mind that, as it is electronic equipment, it Is not free of fraud and scams which may interfere with its correct functioning.
8. Properly dispose of your product after its useful life - deliver it to collection points for electrical and electronic products, at an authorized Intelbras technical assistance center or consult our website www.intelbras.com.br and soporte@intelbras.com or (48) 2106-0006 or 0800 7042767 for more information.

These being the conditions of this complementary Warranty Term, Intelbras S/A reserves the right to alter the general, technical and esthetic features of its products without prior notice.

All the images of this manual are illustrative.

Product benefiting from the Legislation of Informatics.

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Produced by: Intelbras S/A – Indústria de Telecomunicação Eletrônica Brasileira
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CNPJ 82.901.000/0016-03 – www.intelbras.com.br

01.25
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