intelbras
intelbras IVA 8040
AT Wireless
Articulated Active
Sensor

intelbras IVA 8040 AT Wireless Articulated Active Sensor User Manual

Contents

intelbras IVA 8040 AT Wireless Articulated Active Sensor

- Follow all instructions in the manual for correct assembly and installation of the product.
- LGPD – Data processing by Intelbras: Intelbras does not access, transfer, capture or perform any type of processing of personal data from this product.
- Install the sensor in a stable location that is not subject to vibrations.
- Install the transmitter and receiver so that they are aligned.
- Do not install the sensor in places where the beams may be obstructed. Check that there are no plants, branches or other objects that may obstruct the sensor beam(s).
- Do not install the receiver and transmitter with the lens facing directly at the sun.
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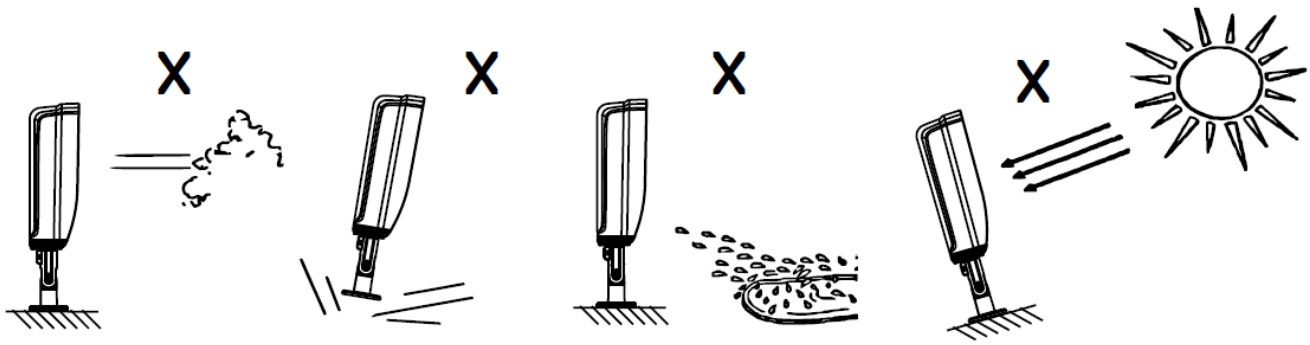

Do not install the sensor beyond the recommended distance.

- Always check that there are no reflections on clear, polished surfaces, which may prevent the sensor from triggering. Perform walking tests in different positions along the barrier to ensure that there are no reflections.
- To clean the outside of the sensor, use a damp cloth; never use chemical products.
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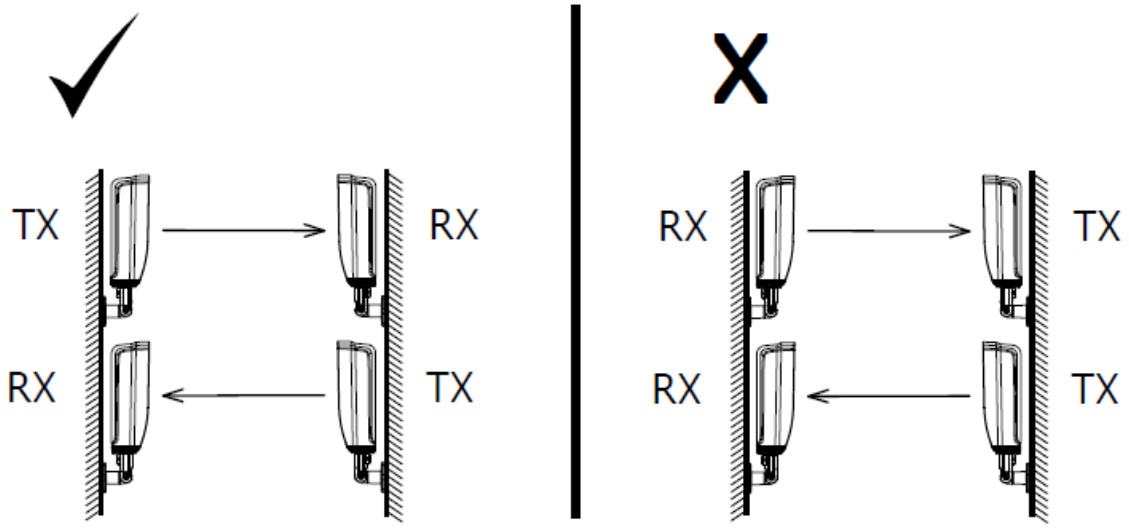
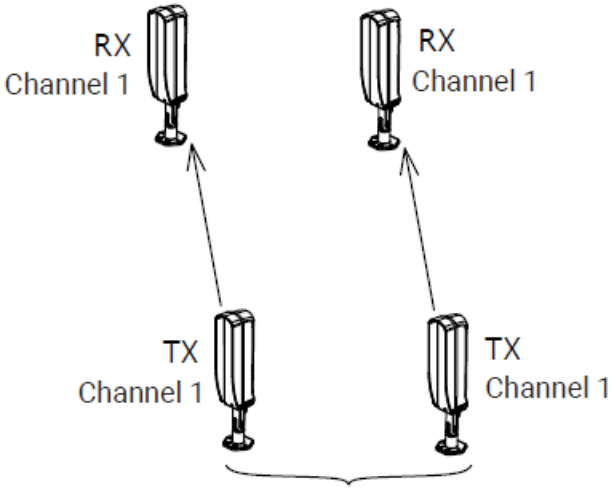


For stacked sensors, the maximum number of sensors installed is 2 (two); they must be crossed, as shown in the following image.



Side protection distance

- Wireless communication technology, when exposed to environments with high-power radiation, may suffer interference and have its performance impaired. Example: locations near TV towers, AM/FM radio stations, amateur radio stations, routers, etc.
- In order to avoid interference between sensors, observe the lateral protection distance as specified below:

For the IVA 8040 AT sensor, observe the following protective distances:

	Distance between TX and RX		
	20 m	40 m	60 m[1]
Lateral Protection Distance (DPL)	> 3 m	> 4 m	> 5 m
Vertical Protection Distance (DPV)	Maximum stacking of 2 sensors		

Distance for indoor area only.
For the IVA 8040 AT, the lateral protection distance is always the distance between RX and TX divided by 20 (twenty) plus 2 (two) meters.

$$DPL > \frac{\text{Distance between TX and RX}}{20} + 2\ [m]$$

In environments with high levels of fog or rain, install the sensors at a maximum of 50% of the maximum distance to external environments, in order to avoid false alarms.

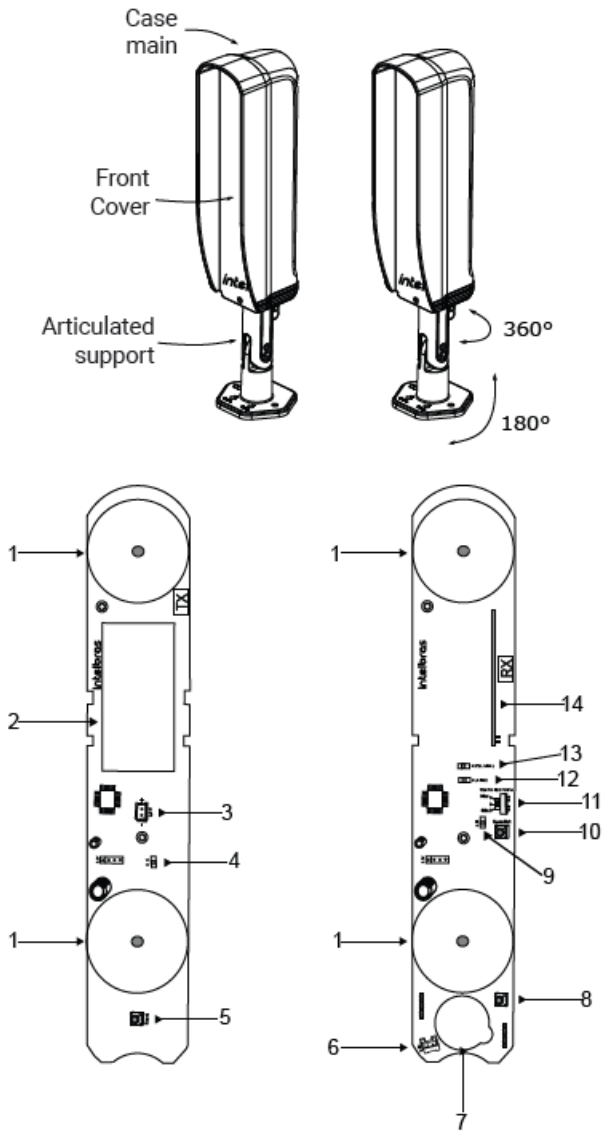
Technical specifications

Number of beams	2
Supply voltage	3.6 Vdc
Consumption current	TX: 55uA
	RX: 240uA
Frequency range	915 Mhz to 928 Mhz
Modulation	DSSS BPSK 40kbps
Outdoor protection range	40 meters
Indoor protection range	60 meters
Batteries	LITHIUM ER 34615M 3.6V for TX
	LITHIUM ER 26500H 3.6V for RX
Response time	Max 50 ms
	Med 300 ms
	Min 700 ms
Detection method	Block 2 beams simultaneously
Alignment indication	Green LED
Trigger indication	Red LED
Horizontal alignment	360°
Vertical alignment	180°
Outdoor solar filter	Yes
Operating temperature	-10 °C a +55 °C
RF range	1000 meters without barriers
IP protection rating	IP55
Dimensions (W × H × D)	35 × 7 × 8 cm
Weight (RX / TX)	0,4 / 0,5 kg

Features

- Articulated support that adapts to any installation environment;
- Adjustable response time;
- IP55 protection rating;
- Communication status check via LED, keyboard and app;
- Wireless communication with a range of up to 1000 meters with direct line of sight in open field;
- Front anti-tamper switch (tamper switch) on the receiver;
- Supervised wireless communication;
- Encrypted transmission;
- Easy installation.

Product

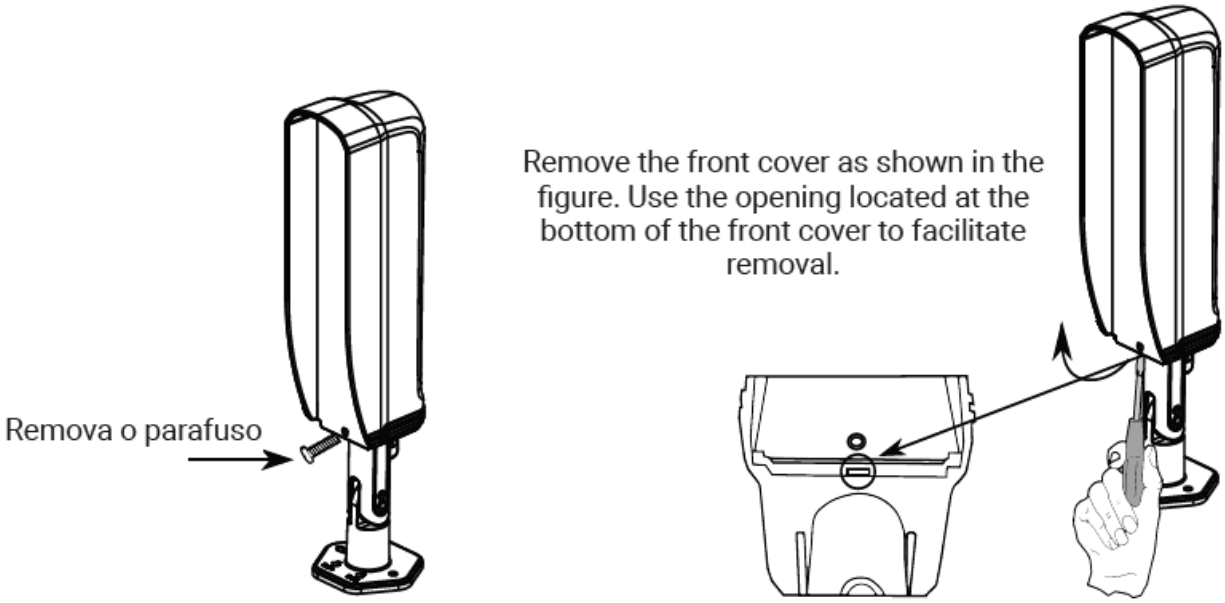


1. Lens
2. TX battery housing
3. TX battery connector
4. ON LED
5. TX Reset button
6. RX battery connector
7. RX battery housing
8. RX tamper switch
9. Status LED
10. Synchronization button
11. Response time switch
12. Alarm LED
13. Signal level LED
14. Wireless module

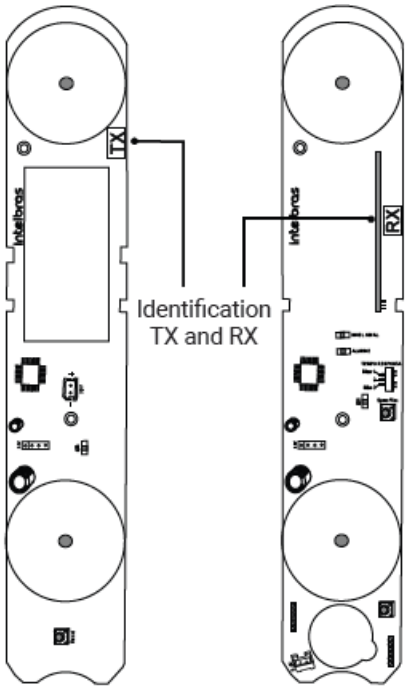
Sensor opening

For security reasons, it is necessary to open the sensors to identify which is the transmitter and which is the receiver.

To access the IVA 8040 AT sensor board to register it, change the battery, unregister it from the control unit or identify the transmitter and receiver, it is necessary to remove the front cover. See image below:



See below how to identify the transmitter and receiver:



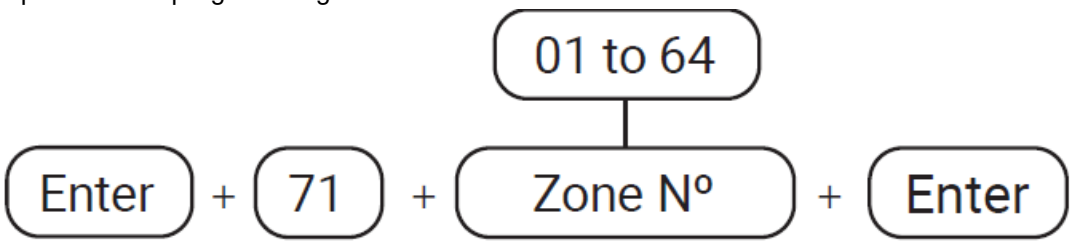
Cadastrando o sensor IVA 8040 AT

Sensor registration can be performed using the AMT 8000 Desktop Programmer software, AMT mobile remote application, keyboard commands and synchronization button on the alarm control panel. In this type of registration, the sensor address follows the registration sequence, Example: First sensor will be registered in zone 1, the second sensor in zone 2 and so on. For other registration methods, please consult the complete manual for the AMT 8000, AMT 8000 LITE and AMT 8000 PRO control panels.

1. Press the synchronization button on the alarm control panel.
2. LED 3 on the control panel will remain lit for 3 minutes, indicating that it is waiting for the sensor to be registered.
3. Insert the battery and press the sensor synchronization key (only on the receiver).
4. The status LED will flash green, indicating correct registration. If it flashes red, registration was not performed and the procedure must be repeated.

Deleting the sensor registration

To remove the device from the alarm control panel, two steps are required, one directly on the sensor and the other on the alarm control panel.
Sensor: press and hold the sensor synchronization key (RX Receiver) for approximately 10 seconds, observing the status LED, which flashes red twice.
Alarm control panel: enter programming mode and enter the command below:



For other ways to remove the sensor from the alarm control panel, please consult the complete manual for the AMT 8000, AMT 8000 LITE and AMT 8000 PRO control panels.

Identifying the best location for installation

The IVA 8040 AT sensor has signal level indications for communication with the AMT 8000, AMT 8000 LITE and AMT 8000 PRO control units (only on RX), to help choose the best installation location. Follow the procedure:

1. Once properly registered, take the sensor to the environment you want to protect;
2. Check the position where the sensor will be installed;
3. Position the sensor in the location where it will be installed and perform transmission through detection or by pressing the synchronization button;
4. Observe the color that the LED will light up and check in the following table whether the sensor can be installed in that location.

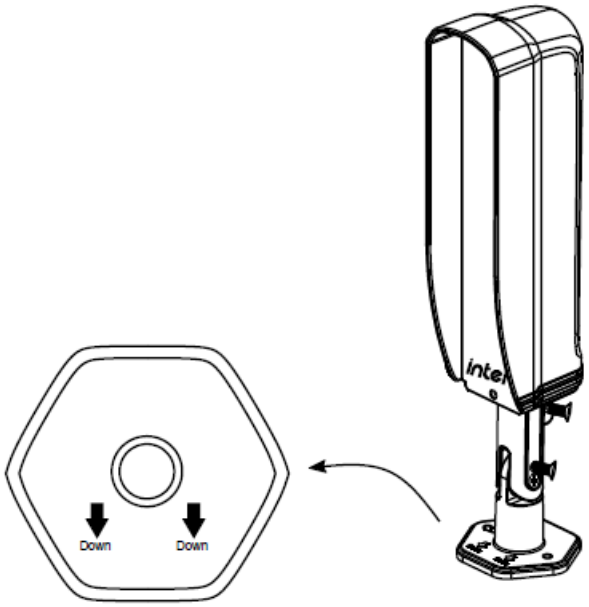
LED Status	Communication level
Green	Excellent signal level (recommended installation location)
Orange	Local regular signal level not recommended for installation (communication failure may occur)
Red	Local regular signal level not recommended for installation (communication failure may occur)

If the signal level is not excellent, reposition the sensor or use a REP 8000 repeater and perform the procedure again. For more information about the REP 8000 repeater, consult the manual on the website: www.intelbras.com.br

Installation

- Do not install the sensor upside down.

- Make sure the sensor is securely fixed and free of vibrations to avoid unwanted triggering.
- Use the positioning arrows on the sensor's articulated bracket to guide you.

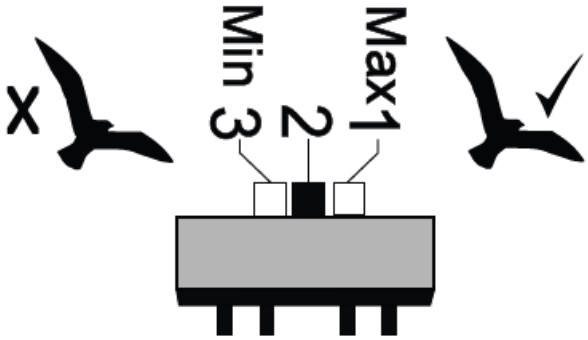


Response time
Configure the Response Time. The Response Time is the time in which the infrared barrier must be interrupted for the trigger to occur. This setting is only relevant to the receiver:

Level 1 is the highest speed and level 3 is the lowest speed. Factory default: level 2.
It should be noted that in outdoor environments, birds can cut the beams and cause false alarms. Therefore, adjust the response time so that the sensor does not de-tect a bird but is able to detect an intruder. Simulate by cutting the beams by hand at different speeds.

To facilitate the association of the sensor response time with the interruption speed of the infrared beams, consult the following table:

Response Time	Detection speed
1 Max – 50 ms	Intense running
2 Med – 300 ms (Factory Default)	Moderate running
3 Min – 700 ms	Walking

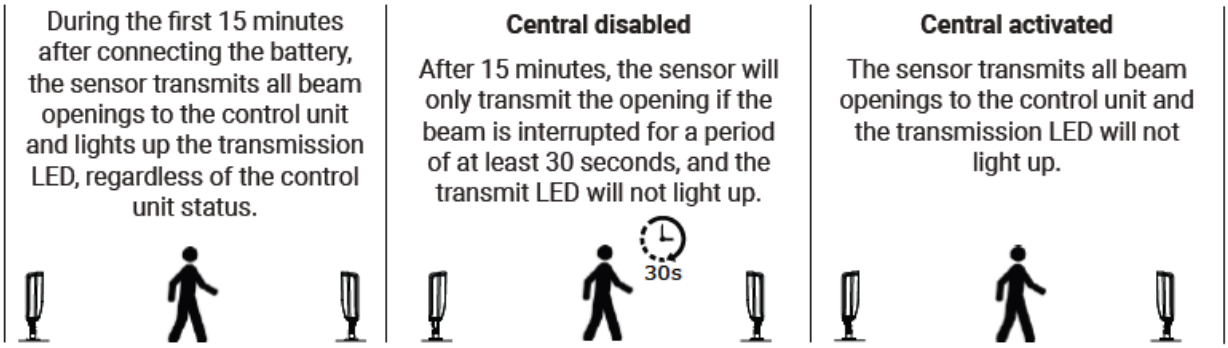


Alignment
The quality of the sensor alignment is identified by the status of the Green LED (Signal Level) on the receiver (RX). To obtain a satisfactory alignment, which will avoid false or unwanted triggers, the alignment must be optimal – green LED on continuously;

Green LED (RX) Signal Level	Alignment quality	Alarm output (Red LED)	False alarm probability
OFF	Beam interrupted or misaligned[1]	ON[1]	None (beam not aligned)
Slow Flashing	Poor alignment	OFF	High
Fast Flashing	Good alignment	OFF	Medium
ON	Excellent alignment	OFF	Low

Receiver

- After inserting the battery, the SIGNAL_LEVEL LED and the ALARM LED become visually accessible to help the installer in the installation process for a period of 1 hour.
- After this period, the LEDs will automatically turn off to save energy. When the sensor cover is opened or the sensor is reset, the LEDs will return to their normal display state.
- Note: after removing the battery, press the synchronization button to completely discharge the circuit.
- With the control panel disabled, the sensor will only generate triggers if the beams are interrupted for a period of at least 30 seconds. This means that in places with a lot of movement the sensor will not generate unnecessary trans-missions. Ex: sensor installed at the entrance of a store.



Transmitter
After inserting the battery, the ON LED will light up for a period of 1 hour. After this period, the LED will automatically turn off to save energy. To turn the ON LED back on, press the RESET button.
Perform walk tests at various points along the barrier to ensure that the infrared beams are not reflected off the floor, wall, or reflective objects. If reflection is detected, the sensor installation position will need to be changed. After completing the configuration, tighten the screws securing the sensor position on both the receiver and the transmitter (Fig. 1).

- Place the front cover, first fitting the upper lock and then the lower lock (Fig. 2).
- Place the front cover screw (Fig. 3).

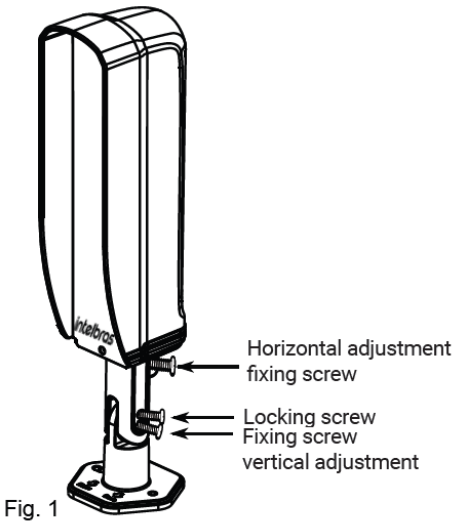


Fig. 1

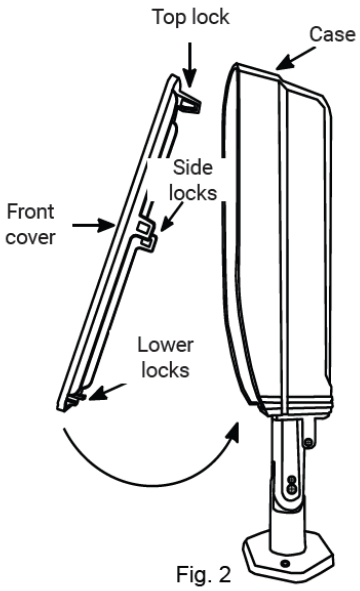


Fig. 2

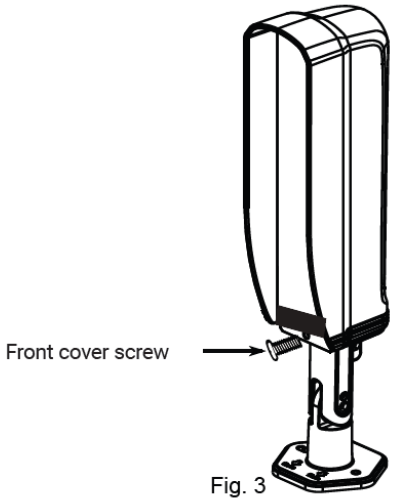


Fig. 3

- The IVA 8040 AT sensor settings are only made physically, it is not possible to make the settings through applications.

Battery

- The sensor monitors the battery level and sends low battery information to the alarm control panel, indicating that the battery must be replaced. To identify which battery is below the recommended level, it is necessary to measure the battery on the TX and RX. Once you have identified which battery it is, it must be replaced following the procedure in item 10.
- Use only quality batteries with the correct size for the device. The battery model must be ER 26500H 3.6 V for the receiver (RX) and model ER 34615M 3.6 V for the transmitter (TX).
- The estimated useful life of the battery is 1 to 2 years for the transmitter (TX) and 2 years for the receiver (RX), and may be influenced by the number of activations and weather conditions.
- We recommend replacing batteries with the same brand and industrial model as purchased from the factory.

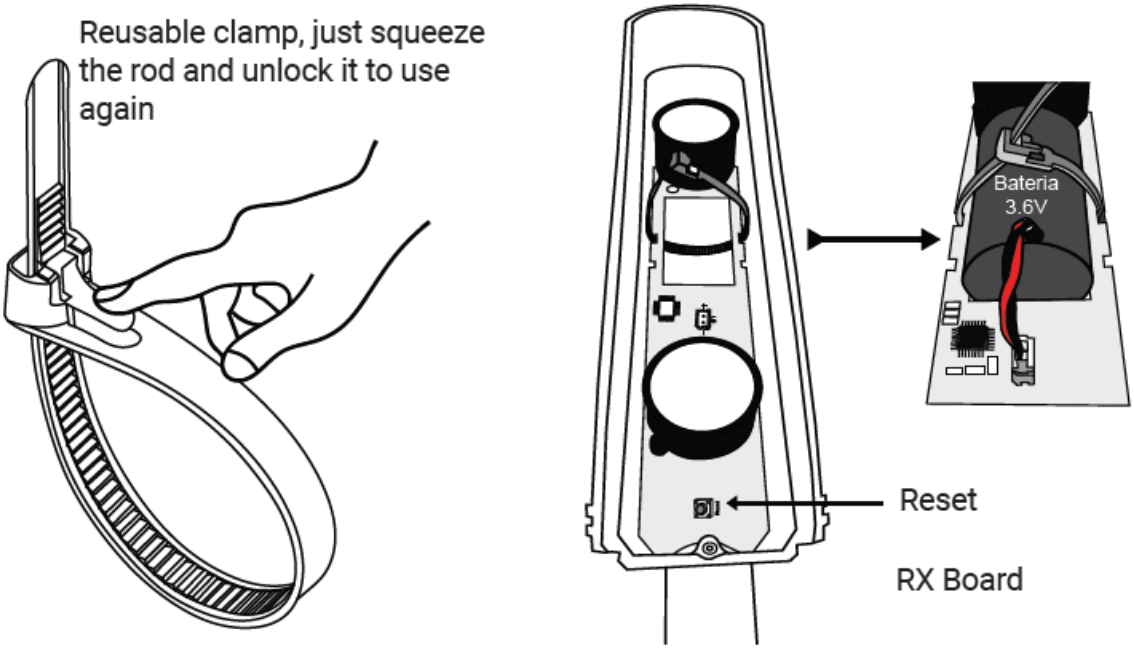
Number of beams	2
Supply voltage	3.6 Vdc
Consumption current	TX: 55uA
	RX: 240uA
Frequency range	915 Mhz to 928 Mhz
Modulation	DSSS BPSK 40kbps
Outdoor protection range	40 meters
Indoor protection range	60 meters
Batteries	LITHIUM ER 34615M 3.6V for TX
	LITHIUM ER 26500H 3.6V for RX
Response time	Max 50 ms
	Med 300 ms
	Min 700 ms
Detection method	Block 2 beams simultaneously
Alignment indication	Green LED
Trigger indication	Red LED
Horizontal alignment	360°
Vertical alignment	180°
Outdoor solar filter	Yes
Operating temperature	-10 °C a +55 °C
RF range	1000 meters without barriers
IP protection rating	IP55
Dimensions (W × H × D)	35 × 7 × 8 cm
Weight (RX / TX)	0,4 / 0,5 kg

Product with battery. Dispose of at authorized Intelbras locations or at collection points designated for this purpose. May pose a risk to human health and the environment. Questions: **www.intelbras.com.br**, **suporte@intelbras.com.br** or (48) 2106-0006 or 0800 7042767.

Battery replacement and installation

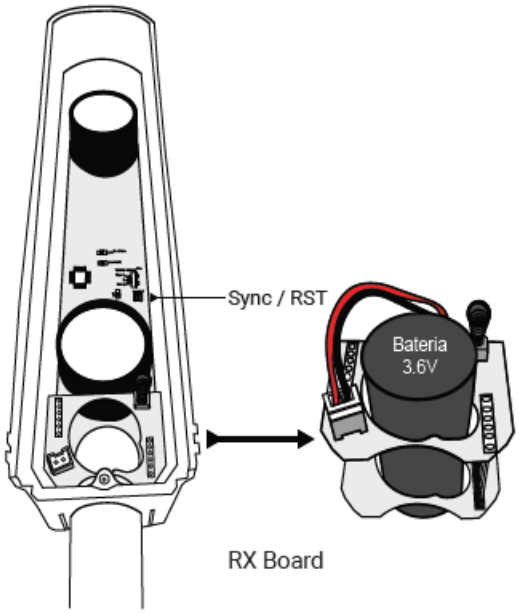
Transmitter (TX)

- Open the sensor;
- Disconnect the battery cable.
- Loosen the clamp as shown in the image below and remove the battery.
- Insert the new battery, tighten the clamp and connect the cable.
- Press the reset button to completely discharge the circuit.
- Note: there is only one position to fit the battery connector.



Receiver (RX)

- Open the sensor;
- Disconnect the battery cable and remove it from the housing;
- Press the synchronization key to completely discharge the circuit;
- Insert the new battery into the housing and connect the cable.
- Note: there is only one position to fit the battery connector.



Homologation

This equipment is not entitled to protection against harmful interference and may not cause interference in duly authorized systems. This is a product approved by Anatel, the approval number is found on the product label, for inquiries access the website: **https://www.gov.br/anatel/pt-br**

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' 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 that 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 he-rein. 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, the 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 that 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 applica-tions 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.

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.

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FAQ

- **Q: How do I know if the sensor is properly aligned?**

  A: The LED indicators on the sensor will show a green light for good alignment.
- **Q: What is the maximum distance between the transmitter and receiver?**

  A: The maximum distance is 40 meters.

Documents / Resources

intelbras Manual do usuário Manual del usuario User manual IVA 8040 AT	intelbras IVA 8040 AT Wireless Articulated Active Sensor [pdf] User Manual 8040 AT, IVA 8040 AT Wireless Articulated Active Sensor, IVA 8040 AT, Wireless Articulated Active Sensor, Articulated Active Sensor, Active Sensor, Sensor

References

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- User Manual