intelbras IVA 5040 AT Articulated active sensors User Guide

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User Guide

IVA 5040 AT and IVA 5080 AT Articulated active sensors
Congratulations, you have just purchased a product with Intelbras quality and safety.
The IVA 5040 AT and IVA 5080 AT sensors were developed with the objective of offering an effective infrared barrier, combined with a high flexibility of installation and alignment through its articulation system. Both models have more configurations to meet the demands of installation scenarios, always maintaining the quality of Intelbras products. Read the information carefully for the correct use of both sensor models.

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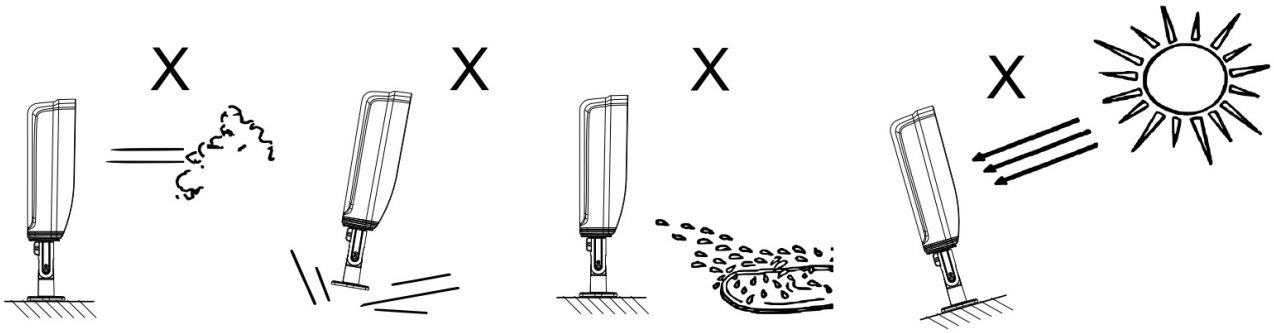
Care and safety

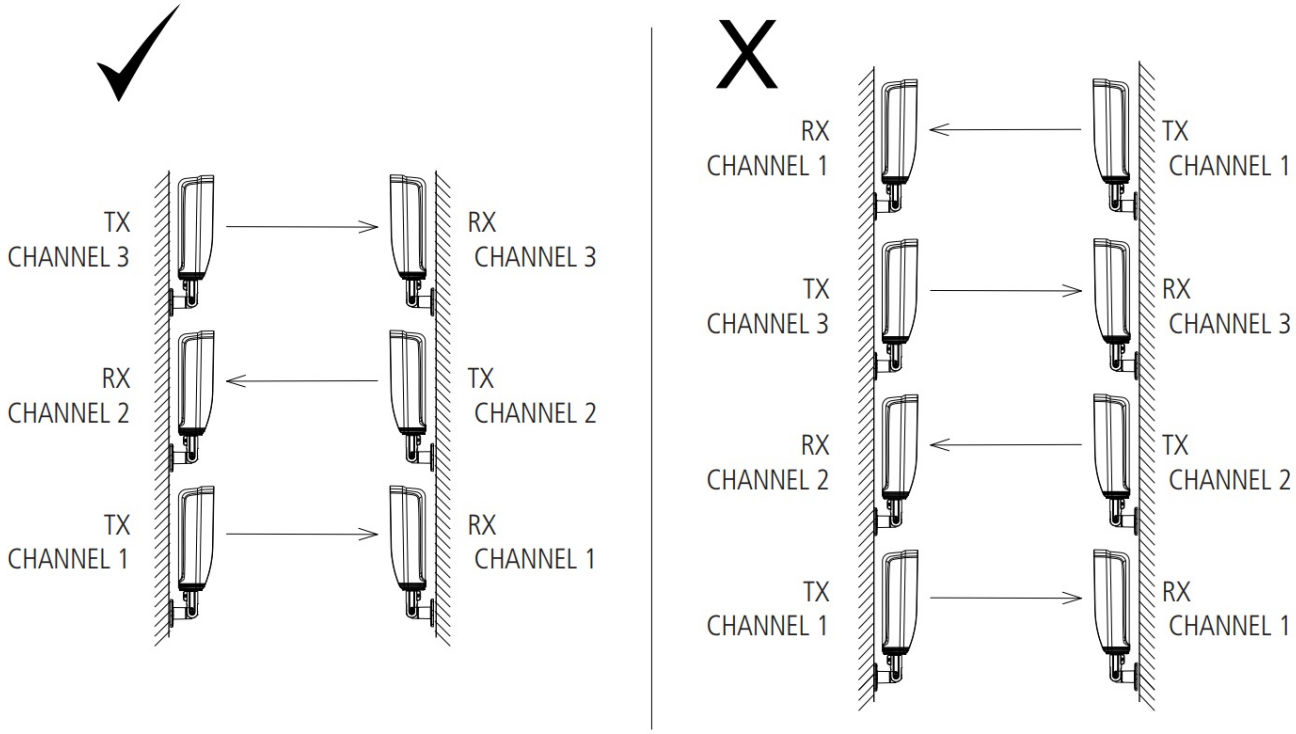
- Install the sensor in a stable location that is not subject to flickering.
- Install the transmitter and receiver so that they are aligned;
- LGPD – General Law for the Protection of Personal Data:

Intelbras does not access, transfer, capture, or perform any other type of treatment of personal data from this product.

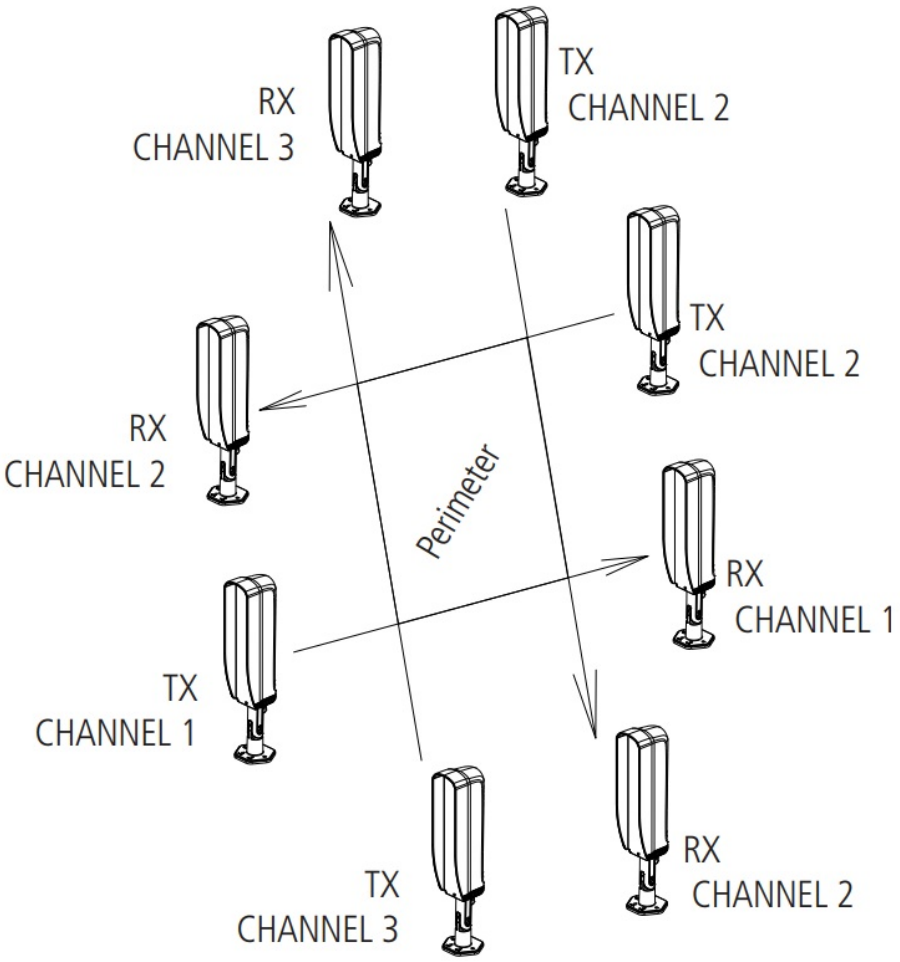
- Do not install the sensor in locations where beam obstruction may occur. Check that there are no plants, branches, or other objects that could obstruct the sensor beam;
- Do not install the receiver and transmitter with the lens facing the sun;



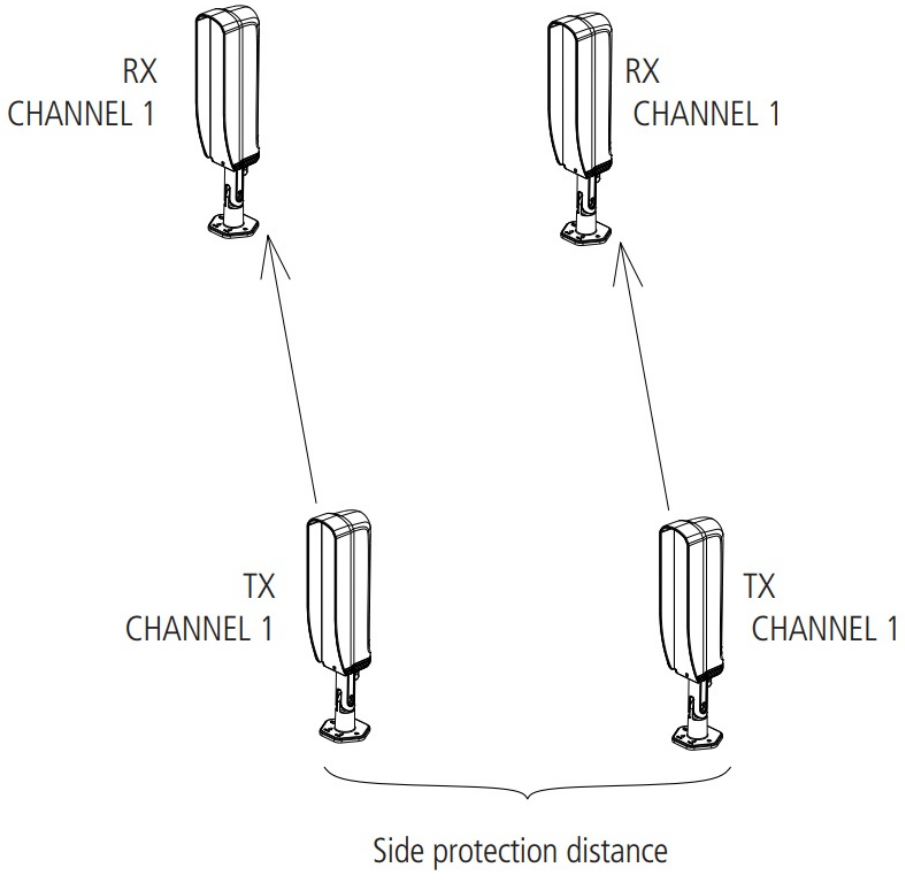
- Size the power supply and power cord correctly;
- Do not leave the cable exposed to the sun, rain, or moisture;
- Do not install the sensor above the recommended distance; » Always check that there are no reflections on clear and polished surfaces, which can prevent the sensor from triggering.
- Do do walking tests in different positions along the barrier to make sure there are no reflections;
- Use the sealing rubber correctly to prevent insects from entering the sensor;
- To clean the outside of the sensor, use a cloth moistened with water; never use chemicals.
- For the installation of stacked sensors, the maximum number of sensors installed is 3 (three), they must be indifferent and crossed frequency channels, as shown in the following image.



» For installing sensors in perimeters, always follow the sensor layout below:



» In order to avoid interference between sensors that may be on the same channel, respect the side protection distance as specified below:



» For the IVA 5040 AT sensor, follow the protection distances below:

	Distance between TX and RX		
	20 m	40 m	60m’
Side Protection Distance (DPL)	>2 m	>3 m	>4 m
Vertical Protection Distance (DPV)	Maximum stacking of 3 sensors		

Side Protection Distance (DPL) Vertical Protection Distance (DPV)

	Distance between TX and RX		
	40 m	80 m	120m’
Side Protection Distance (DPL)	>3 m	>5 m	>7 m
Vertical Protection Distance (DPV)	Maximum stacking of 3 sensors		

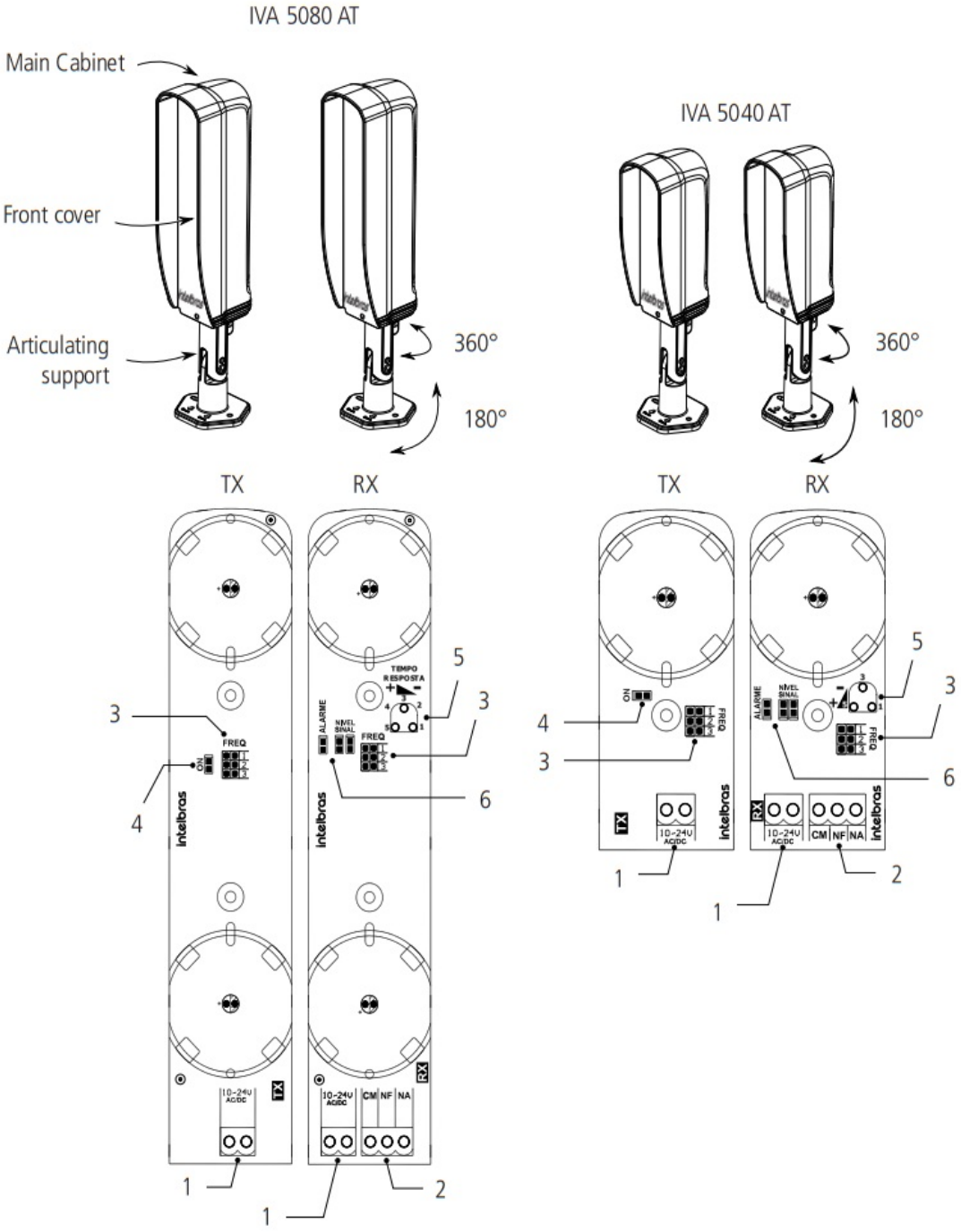
Distance between TX and RX
That is, for both IVA 5040 AT and IVA 5080 AT, the side protection distance is always the distance between RX and TX divided by 20 (twenty) plus 1 (one) meter.
DPL> Distance between TX and RX + 1 [m] 20

 In outdoor environments with a high rate of fog or rain, install the sensors at a maximum of 50% of the distance specified for each model, in order to avoid false alarms.

Technical specifications

Model	IVA 5040 AT		IVA 5080 AT	
Number of beams	1		2	
Power supply voltage	10 — 24 Vdc /		Vac (without polarity)	
Consumption current (TX + RX)	<65 mA			
Frequency channels		3 channels, frequencies 1, 2 and 3		
Maximum protection distance	External	40 m		80 m
	Indoor	60 m /120 m		
		NA and		NF output
Alarm output		2 A @ 24 Vdc		
Alarm Time		> 2s		
Response time		50 ms to 1s, adjustable by trimpot		
Detection method		Block 1 beam 1		Block 2 simultaneous bea ms
Alignment indication		green LED		
Trigger indication		red LED		
Horizontal Alignment		360°		
Vertical Alignment		180°		
Solar filter for outdoor environments		Yes		
Operating temperature		-10° to +55°C		
IP protection grade				IP55
Dimensions (B x W x D)		8 x 24 x 7 cm		8 x 35 x 7 cm
Weight		0.4 KG		0.7 kg

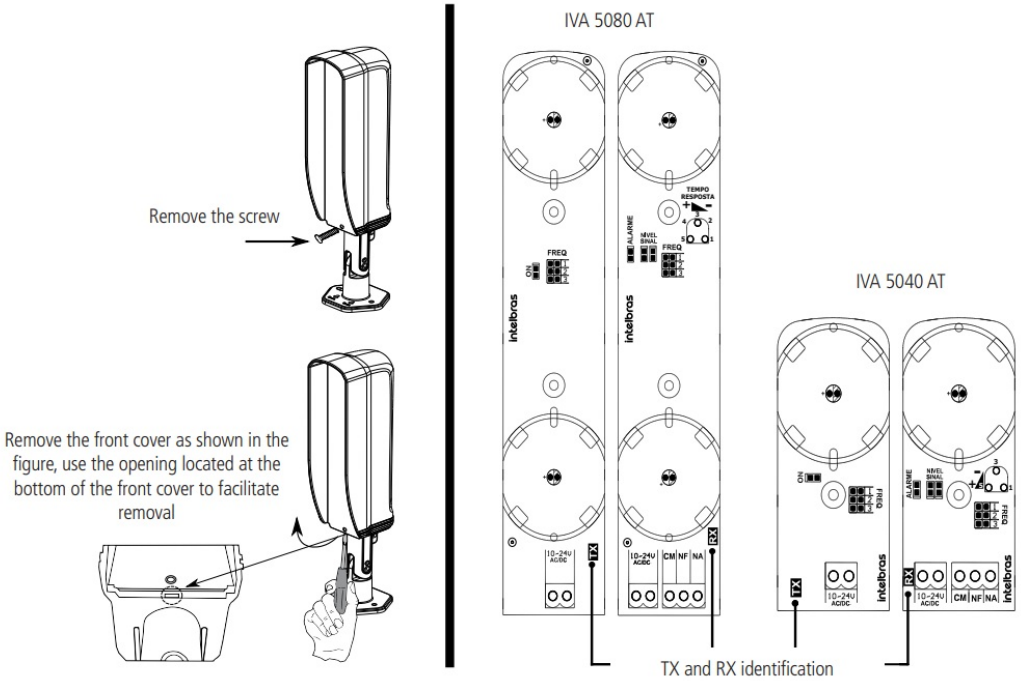
Product



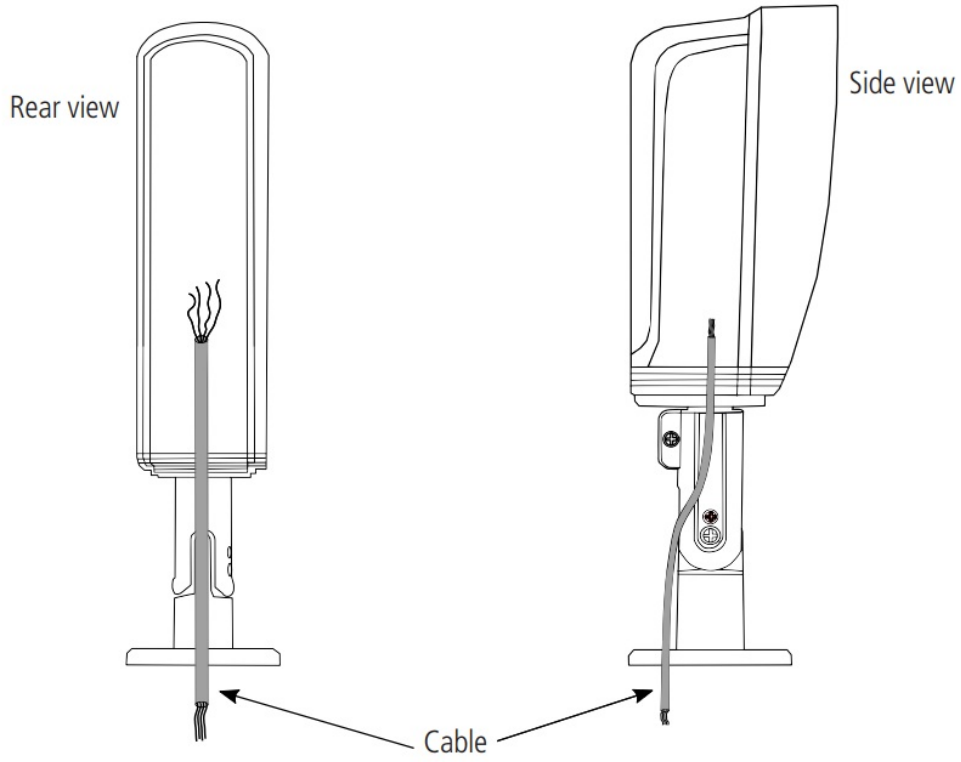
1. Power
2. Alarm output
3. Frequency channels
4. LED On TX
5. Response time adjustment
6. LEDs alignment and trigger RX

Installation

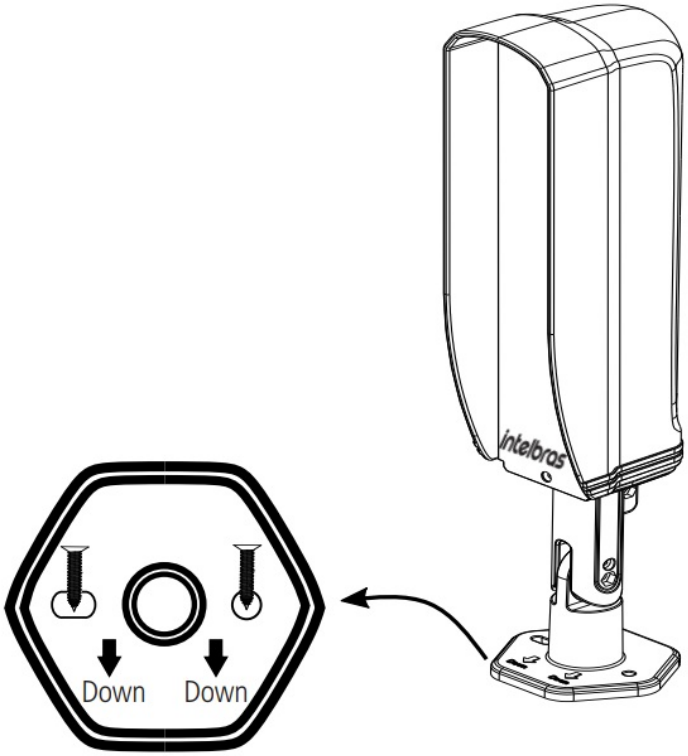
1. For security reasons, it is necessary to open the sensors to identify which is the transmitter and which is the receiver. Here’s how to open the sensor cabinet and perform the necessary identification:



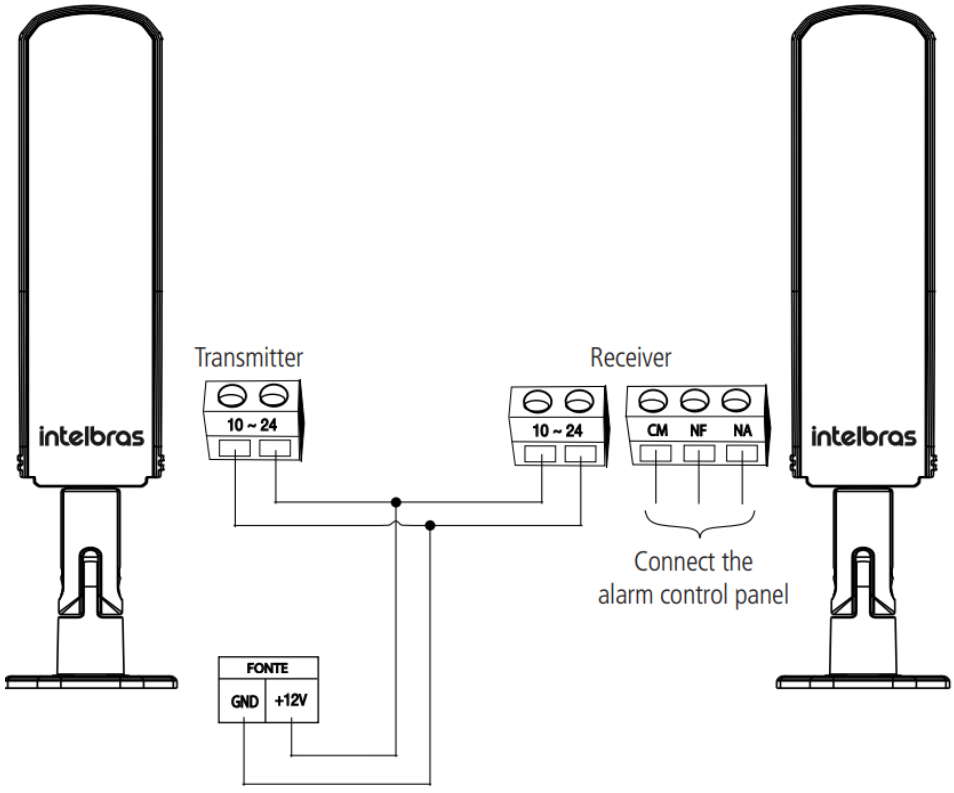
2. After identification, run the cable as shown in the following image to connect it to the terminal block:



3. Secure the sensors in the installation position following the recommendations below:
» Do not install the sensor upside down.
» Orient yourself by the positioning arrows located on the articulated sensor support.

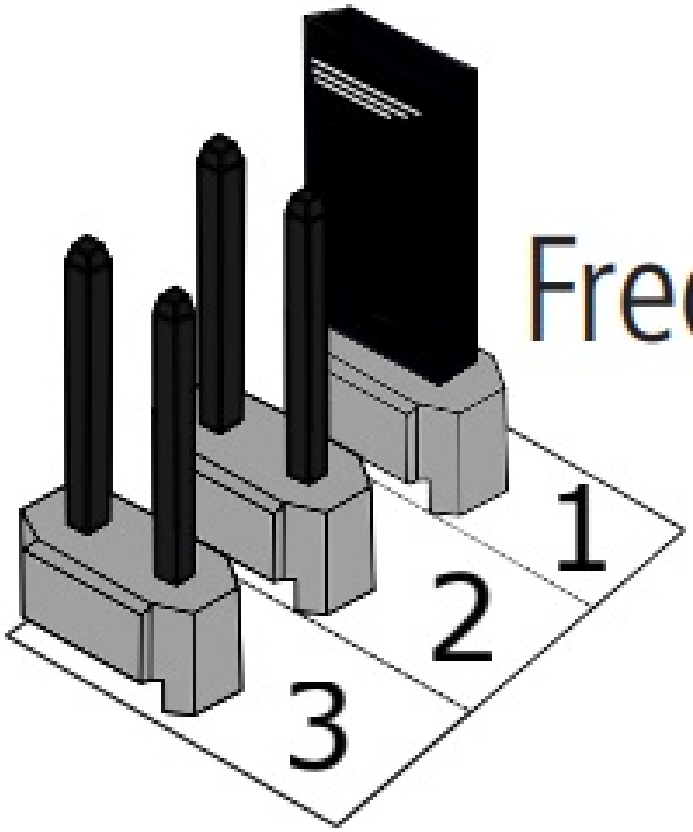


4. Turn on the power on the receiver and transmitter board (10 ~ 24 Vdc / Vac – no polarity). After that, connect the wires from the alarm output to the zone input of your alarm panel:

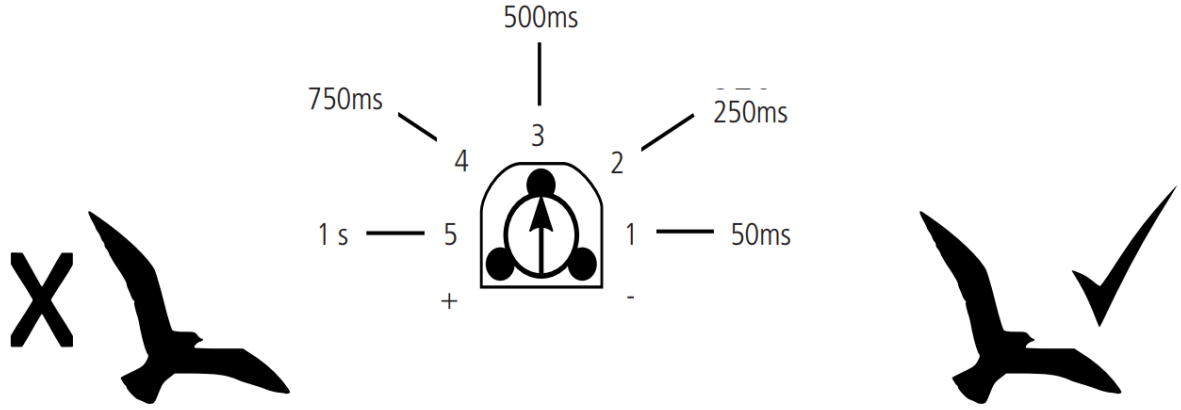


5. Configure the frequency channel using the FREQ jumper. For the sensor to function correctly, the transmitter (TX) and receiver (RX) must be on the same frequency channel:

Frequency channels



Position 1 – Frequency channel 1 (factory default)
Position 2 – Frequency Channel 2
Position 3 – Frequency Channel 3
6. Perform the Response Time setting. Response time is the time that the infrared barrier must be interrupted to trigger. This setting is only relevant to the receiver:



The factory default response time is 50 ms, ie Position 1. To facilitate the association of the response time of the sensor with the interruption speed of the infrared beams, refer to the following table:

Response time	Detection Speed
50ms	Intense running
250ms	Moderate running
500ms	Light running
750ms	Walking
1 s	Light walk

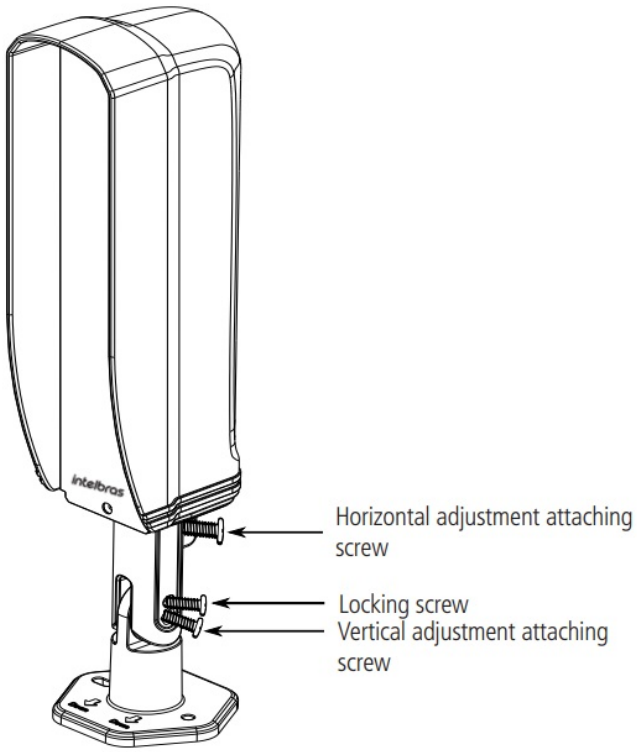
7. The quality of the sensor alignment is identified by the status of the Green LED on the receiver (RX). To obtain a satisfactory alignment, which will avoid false or unwanted triggering, the alignment must be optimal – only green LED on;

Green LED (RX)	Alignment quality	Alarm output (Red L ED)	Probability of false alarm
Turned Off	Beam interrupted ornisahrs’	ON	Null (unaligned beam)
Slow flashing	Poor alignment	OFF	
Fast flashing	Poor Alignment	OFF	High
Turned On	Optimal alignment	OFF	Lowest

7. After a period of 30 minutes, without the infrared barrier being interrupted, the Alignment Quality indication LED will be automatically turned off for energy saving. The moment the infrared barrier is broken again, this LED will return to the normal Alignment Quality display state.

⚠ Perform walking tests at various points on the barrier to make sure that there is no reflection from the infrared beams on the floor, wall, or reflective objects. If the reflection is found, it will be necessary to change the installation position of the sensor.

8. After making the configuration, tighten the screws for fixing the sensor position on both the receiver and the transmitter, as shown in the following figure:



9. To close the sensor follow the steps below:

1. Place the sealing rubber in the passage of the wires in the TX and RX. (Fig.1)
2. Place the front cover, attach the upper lock first and then the lower lock. (Fig.2)
3. Place the screw on the front cover. (Fig.3)

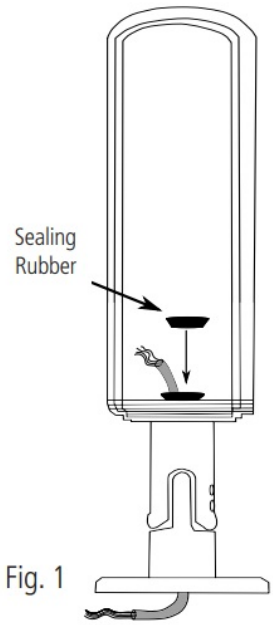


Fig. 1

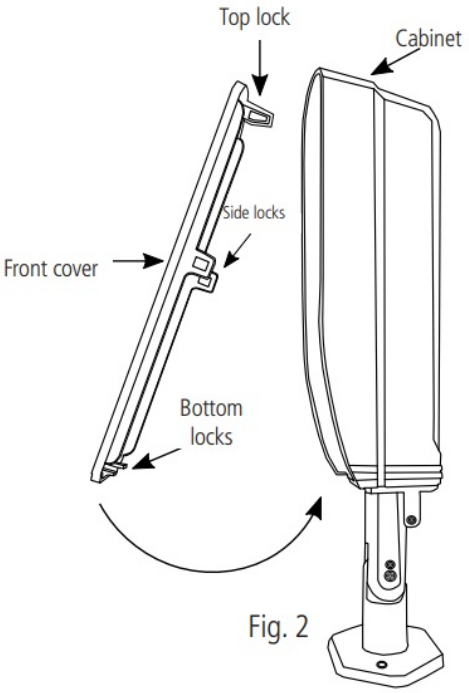


Fig. 2

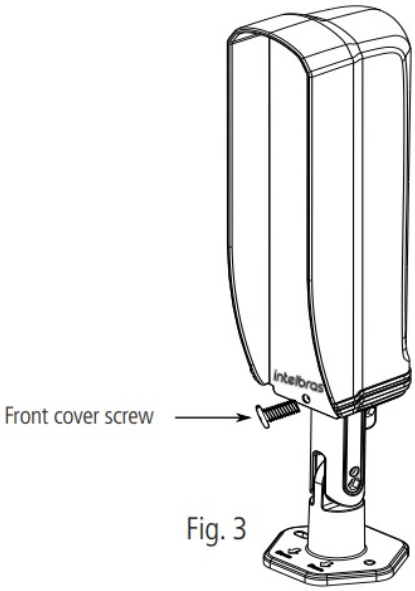


Fig. 3

Troubleshooting

Follow the steps outlined below to troubleshoot your sensor:

1. Check that the installation distance is within the specified. In environments with a high rate of rain or fog, it is recommended that the installation distance be 50% of the maximum distance for outdoor environments;
2. Check the installation wiring and that the supply voltage in the TX and RX is between 10 and 24 Vdc / Vac;
3. Check that both TX and RX are on the same frequency channel, which is selected via the FREQ jumper;
4. Check that the Response Time setting, which controls the response time from 50ms to 1s, is in accordance with the speed expected to cross the infrared beam;
5. Redo the alignment procedure;
6. Perform the detection test and confirm that there are no reflections.
7. Your infrared barrier sensor will be working!

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:……..
Retailer:……
Serial number:……..

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 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, 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 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 is 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. After its useful life, the product must be delivered to an authorized Intelbras service center or directly disposed of in an environmentally appropriate manner to avoid environmental and health impacts. If you prefer, the battery, as well as other unused Intelbras brand electronics, can be disposed of at any Green Electron collection point (waste management facility to which we are associated). If you have any questions about the reverse logistics process, please contact us at (48) 21060006 or 0800 704 2767 (Monday to Friday 8 am to 8 pm and Saturdays 8 am to 6 pm) or via -mail **support@intelbras.com.br**.

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.
The manufacturing process of this product is not covered by the requirements of ISO 14001.
All the images of this manual are illustrative.

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Documents / Resources

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References

- Fórum Intelbras - Índice
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