LINEAR-B

BATTERY POWERED
PHOTOCELLS

Made in Italy

SHORT CUTS

See the Install video for this product at downee.com.au Search: Linea B

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1. Product conformity

LINEAR/B is a CE marked product. DEA System assures the conformity of the product to European Directives 2004/108/CE “electromagnetic compatibility” (EN 61000-6-2 :2005; EN 61000-6-3 :2007).

Also meets, as applicable, the requirements in paragraph 5.1.1.6 of the standard EN12453, and can therefore be used in devices PSPE type “C” as defined in the standard, this compliance is only guaranteed if the motion sensor is disabled (see “product description”).

DEA System also grants quality and conformity to rule 2002/95/CE (RoHS) of materials used for the product assembly. The Declaration of conformity may be viewed at: “http://www.deasystem.com/area-download_eng.php”.

2. Dangers and warnings

Read carefully; ignoring the following warnings may cause dangerous situations.

WARNING Exclusively qualified personnel must perform any operation of installation, maintenance, cleaning or repairing of the whole automation. Always operate when main power supply is disconnected and follow carefully all the laws, concerning electrical installations, in the country where the installation is made.

3. Technical characteristics

Power supply	TX - 3,6V 7Ah, C size battery RX - 24 V⎓/⎓			
Battery life	**ASSEMBLY ON A MOBILE PART** (JP1 closed)	Residential use (20 manoeuvres/ day)	Gate up to 7m (JP2 opened)	7 years
		Intensive use (100 manoeuvres/ day)	Gate up to a 15m (JP2 closed)	3 years
	ASSEMBLY ON A FIX PART (JP1 open)	Gate up to 7m (JP2 opened)		2 years
		Gate up to 15m (JP2 closed)		1 year
“RX” absorption	40 mA			
Contacts capacity	500 mA max 24V			
Assured distance	7 m (with JP2 opened on “TX”) 15 m (with JP2 closed on “TX”)			
Maximum length of connection cables	50 m cable 2 x 0,5mm			
Protection degree	IP54			
Operating temperature	-20÷55 °C			
Dimensions/weight	125 x 40 x 44 mm /150 g			

4. Product description

LINEAR/B is an infrared communication device, used to avoid the use of connection cables of sensitive profiles applied on the gate mobile part. The battery-powered transmitter device is installed on the mobile part and connected to the sensitive edge whose condition is constantly monitored and communicated to the receiver (mounted on the fixed part). If you enable the edge, that communication is interrupted, and the receiver provides for opening the contact connected to the control unit.

LINEAR/B has a motion sensor on the transmitter, allowing both to take action only at the beginning of each manoeuvre, allowing a considerable saving of the battery. When the gate is stationary transmitter will still work, noting any obstacles, however, with a greater delay time (see “installation instructions and wiring”, point No. 8).

WARNING: Compliance to paragraph 5.1.1.6 of standard en12453 is only guaranteed if the motion sensor is disabled.

WARNING: LINEAR/B is not considered a PSPE safety device, but only a part of it. Remember that PSPE safety devices must be conformable to standards EN12453 and EN12978.

LINEAR/B may also be used (without sensitive edge) as a simple presence detector, “D” type, as per Standard EN 12453. The photocells provide an opportunity to rotate to 210° horizontally and 30° vertically (Pic. 6), this can be fixed to surfaces that would normally prevent the correct alignment between “TX” and “RX”.

5. Assembly and wiring instructions

WARNING: Keep the cables separate from any other cable for connecting devices that can generate noise (motors, flashing lights, etc. ..) and which could jeopardize the proper functioning of the system.

Depending on the type of automation, identify the points of installation of various elements: when used in combination with an edge, the “TX” will be installed on the mobile part (remember to enable the motion sensor, see Table 1) and the ‘RX “on the wall.

However, both elements can be mounted on the wall: in this case, remember to disable the motion sensor, see Table 1. As the sensitive edge is not present, short circuit terminals “SFT” and “-” on the “TX”. In any case, select the appropriate transmission power to the distance between the “TX” and “RX”.

WARNING For a proper operation ensure the ‘RX’ is not disturbed by other infrared “TX” devices. When used in combination with other pairs of photocells, cross “TX” and “RX”elements appropriately (see Pic. 11).
Where “RX” receives a signal from a stranger “TX”, a false obstacle could be detected with following block of the gate.

WARNING each time you need to modify the position of JP1 and/or connect/disconnect the sensitive edge, disconnect the battery and short-circuit for a few seconds clamps + and -, modify the settings and/or connections, reinsert the battery. Now the “TX” will detect the new settings.

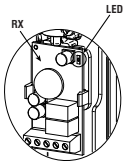
Proceed as follows for the installation of the photocell LINEAR/B:

1. Remove the circuit holder from the photocell base so as to facilitate the operations of installing;
2. release the folding hole on the back of the photocell base as shown in Pic.1, evaluate which is the best solution depending on the desired installation;
3. fix the base on the wall by using the supplied screws and anchors (Pic. 2);
4. re-assemble the circuit holder on the base avoiding screwing too much on the fixing screws (Pic.3);
5. Execute the “RX” and “TX” cabling as shown in Pic. 9. Depending on the desired operation, refer to wiring diagram 1 for the correct operation of jumper on “TX”.

Table 1	Jumper Position		Status
Motion sensor		JP1 Closed	ENABLED (Pic. 10)
		JP1 Opened	DISABLED
Signal transmission power		JP2 Closed	Signal capacity: 15m (maximum consumption)
		JP2 Opened	Signal capacity: 7m (minimum consumption)

Connect the 8,2KΩ edge to the transmitter situated on the gate choosing if positioning the cable exteriorly (Pic.4) or internally of the tubular (Pic. 4b). If the cable will be externally placed, silicone it on the folding bottom hole so as to grant an adequate protection level;

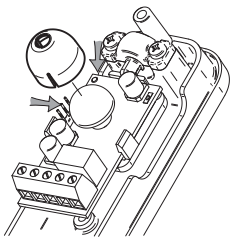
6. Mount the battery holder (Pic. 5) ensuring not to damage internal cables;
7. Install the provided battery on the transmitter (Pic. 7);
8. Adjust the direction lens (210° horizontally and 30° vertically) to find the optimal alignment (Pic. 6), verifying the correct alignment of “TX” – “RX” (refer to table 2). Block the circuit holder;

Table 2	LED	Photocell Status
	Slow flashing	Aligned devices with gate lock (only with sensor enabled).
	Rapid flashing	Devices aligned with a moving gate or with sensor disabled.
	Lighted	The ‘RX’ receives no signal: Detected obstacle or battery “TX” download.

If installing close to the ground or reflective surfaces (metal / polished, any pools of water), or other pairs of photocells, we recommend using the special tube shutter on the “RX” and possibly on the “TX”.

Using the shutter involves a decrease of the radius on the “TX” and of the coverage area on the “RX” (suggested so as to avoid the interference of sunlight).

To replace the lens holder proceed as follows:

Apply the lens shutter as shown in the picture	
Align TX-RX.	

9. Close the shell applying the hole caps (Pic. 8).

WARNING: If installing on a mobile part, make sure that throughout the operation, the LED flashes quickly. If the flashing is slow means that the motion sensor is not able to detect the vibration of the gate, in this case to ensure an adequate level of safety, it is necessary to disable the sensor by opening JP1.

WARNING For the assembly and / or breakdown, always use the most appropriate equipment meticulously following the rules in force in the Country of sale.

6. Maintenance

A good preventive maintenance and regular inspection ensure a long product life. The photocells LINEAR/B however, does not require any special control, simply check the condition of the same (lack of moisture, oxides, etc. ...), clean the lens and the outer shell of the device and perform a test to ensure proper functioning.

In order to ensure an adequate safety level to the installation, it is advisable to conduct such inspections at intervals not exceeding 6 months.

6.1 Battery replacement

Once the battery is exhausted, an obstacle is detected and gate seems blocked.

Replace the battery as follows:

1. remove the external shell;
2. replace the battery (use lithium batteries 3.6 V 7Ah size “C “);
3. re-execute the photocells alignment ensuring that everything works properly;
4. mount the external shell.

WARNING Use batteries indicated only. Exhausted batteries must be disposed in accordance with regulations.

6.2 Disposal

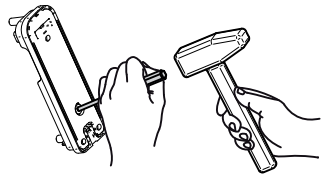
LINEAR/B Photocells are made of materials of various types, some of which can be recycled, while others must be disposed.

Proceed as follows:

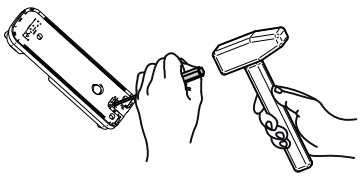
1. Remove the accessory from the power supply and disassemble in reverse order from that described in “Installation”;
2. Remove the electronic components;
3. Sorting and disposing of the materials exactly as per the regulations in the Country of sale.

WARNING In accordance with EU Directive 2002/96/EC on waste of electrical and electronic equipment (WEEE), this electrical product should not be disposed of as unsorted municipal waste. Please dispose of the product and bring it to your local municipal collection for recycling.

1.a



1.b



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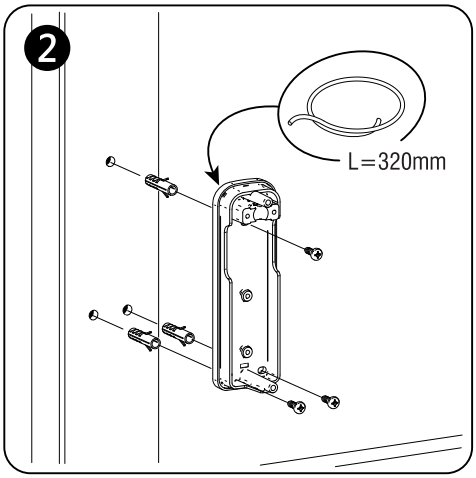

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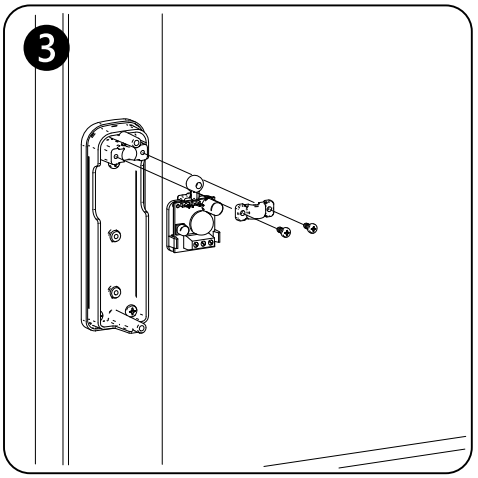

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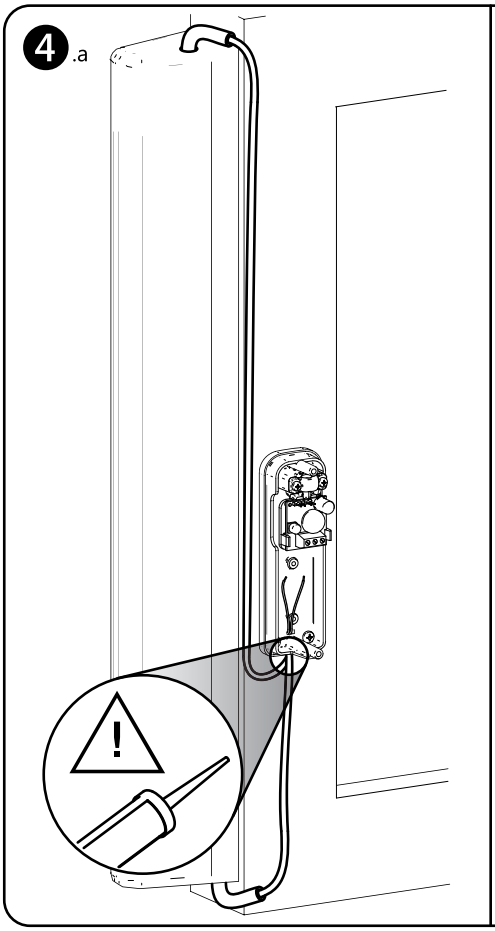

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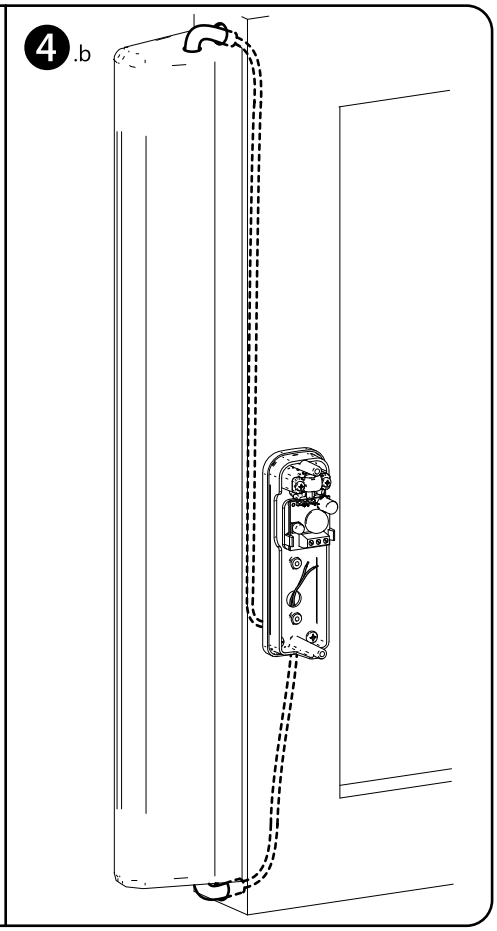

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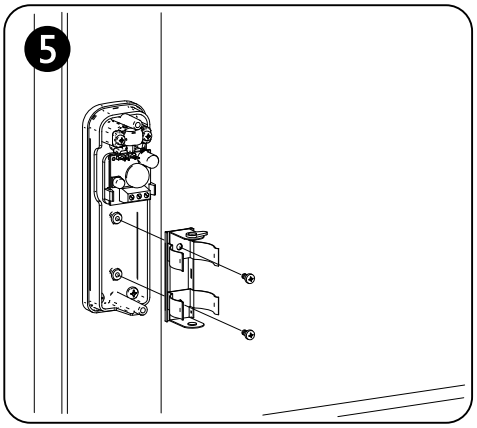

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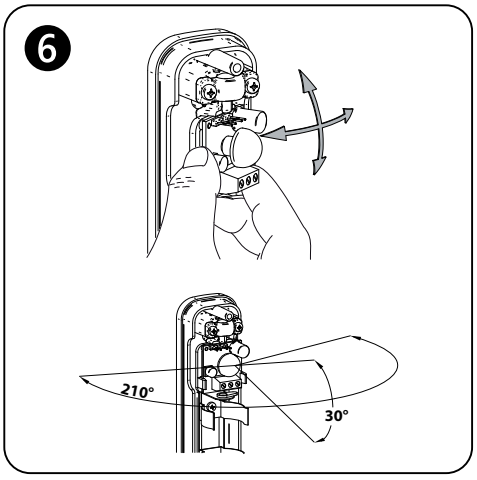

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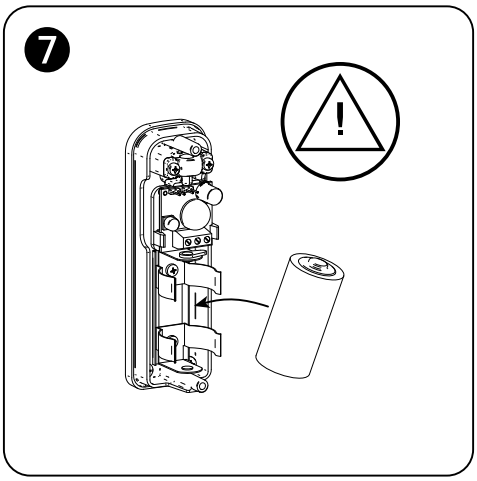

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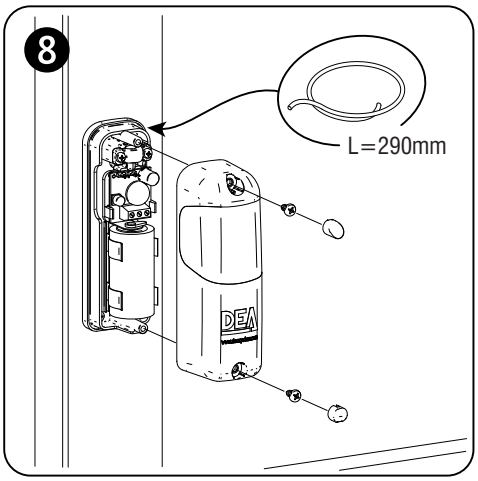

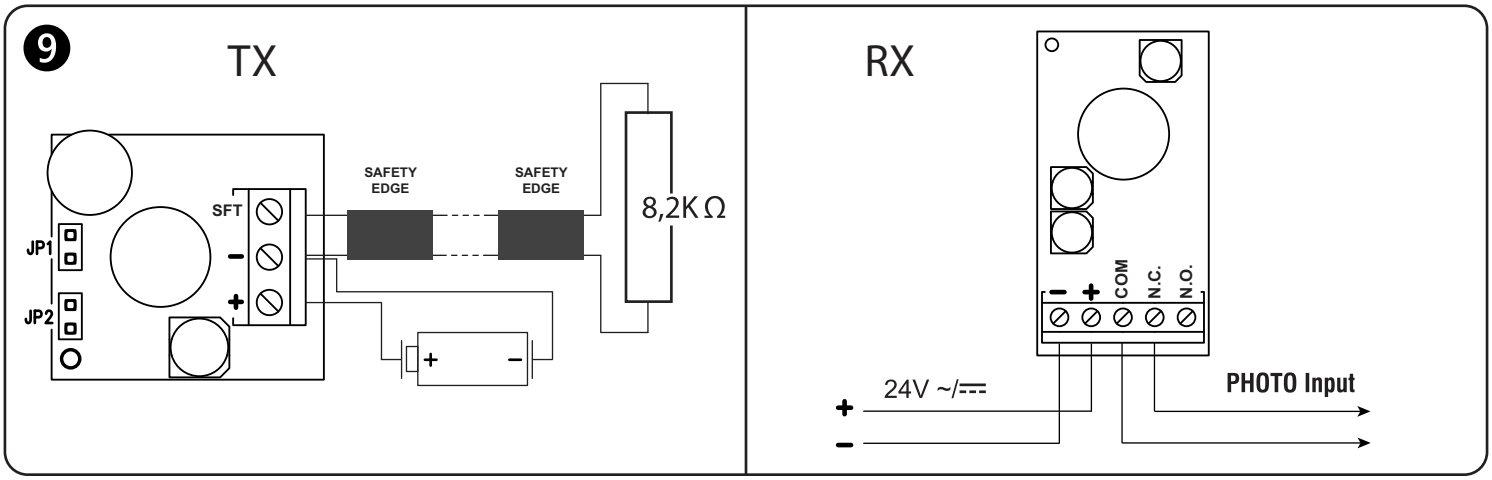

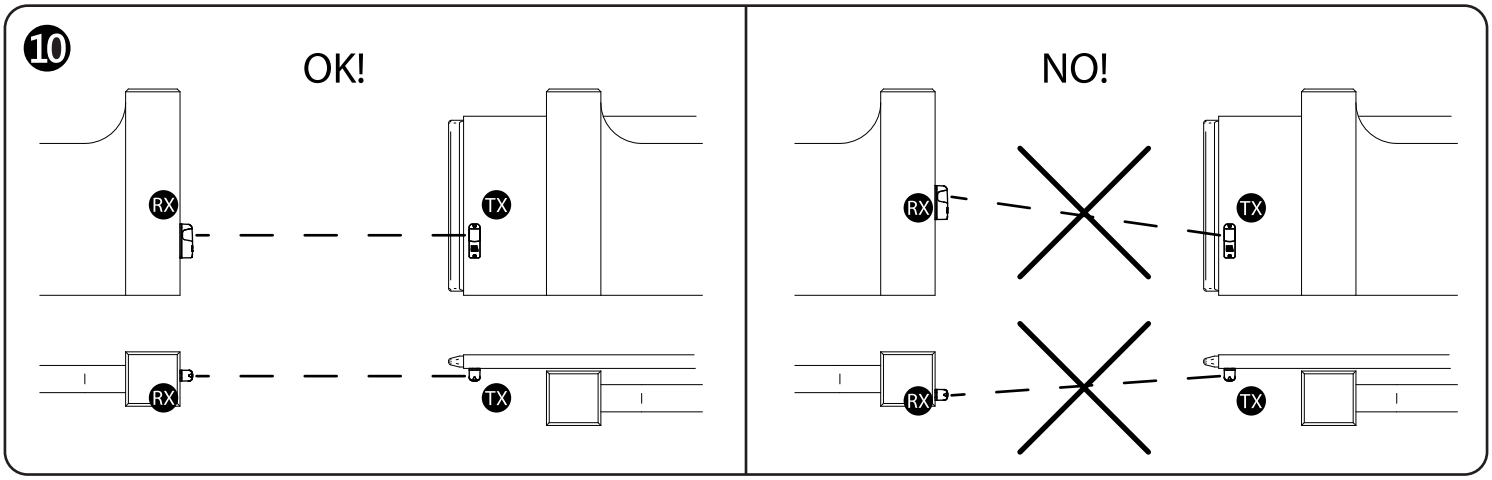

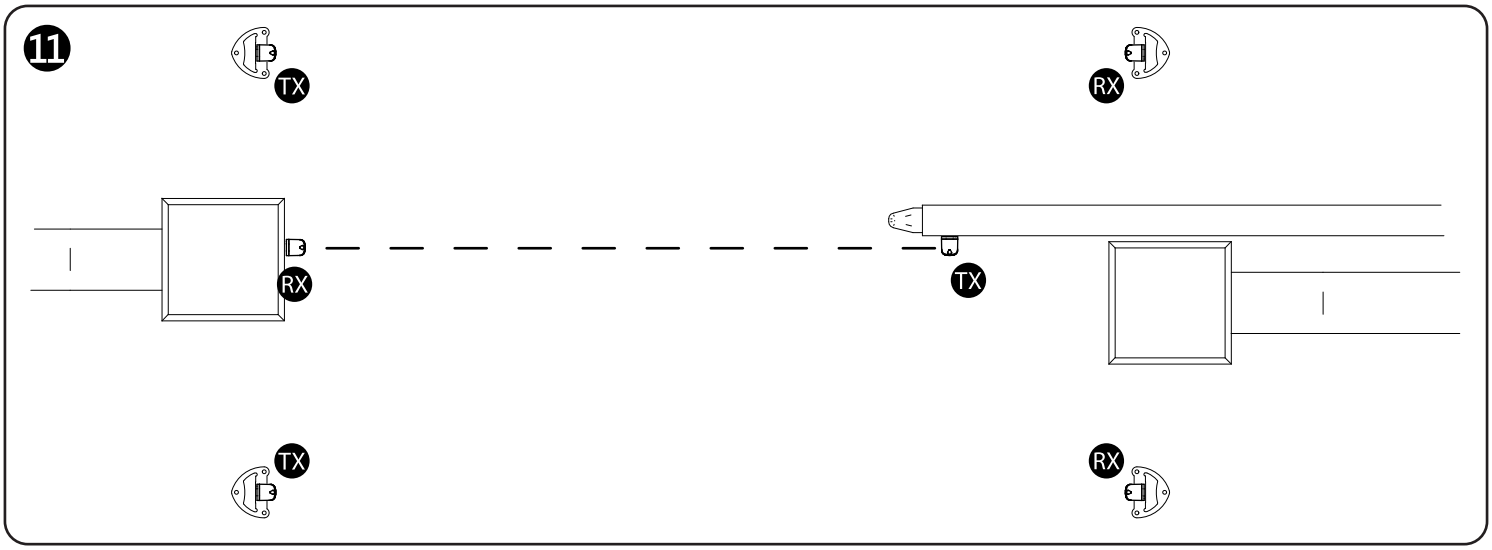

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