

# NOVA WIRELESS

FOTOCELLULE - PHOTOCELLES  
PHOTOCELLS - FOTOZELLEN - FOTOCÉLULAS

cod. ACG8047



(Batterie AA non incluse - Piles AA non incluses - AA batteries not included - AA Batterien nicht beiliegend - Baterías AA no incluidas)

EN ISO 13849-2:2013 PL»c» CAT.2

(a condizione che il sistema di controllo effettui il monitoraggio del rilevatore almeno una volta per ogni ciclo porta)

(à condition que l'opérateur surveille le détecteur au moins une fois par cycle de porte)

(under the condition that the door control system monitors the sensor at least once per door cycle)

(unter der Bedingung dass der Türantrieb den Sensor mindestens einmal pro Türzyklus testet)

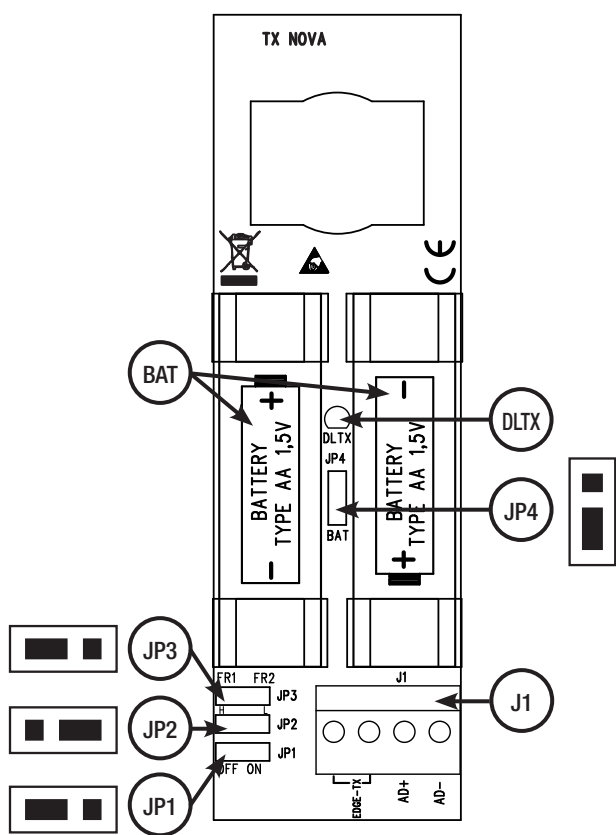
(con la condición de que el sistema de control de puertas supervise el sensor una vez como mínimo por ciclo de puerta)



### SETTINGS AND TRANSMITTER CONNECTIONS

- J1**    **AD+**        Feed terminal 12÷24 V ac/dc
- AD-**        Feed terminal 12÷24 V ac/dc
- EDGE TX**    Feed terminals for mechanical or resistive safety edge
- JP1**    Safety edge enabling/disabling jumper (standard jumper not inserted for unconnected safety edge. Disable the jumper if a safety edge is connected)
- JP2**    Range selector jumper (15 or 30 meters - factory setting 30 m)
- JP3**    Frequency selector jumper (2 available)
- JP4**    Power selector jumper (battery or network)
- BAT**    Alkaline batteries 2 x AA 1,5V (if network power is not used)
- DLTX**    Green LED function indicator

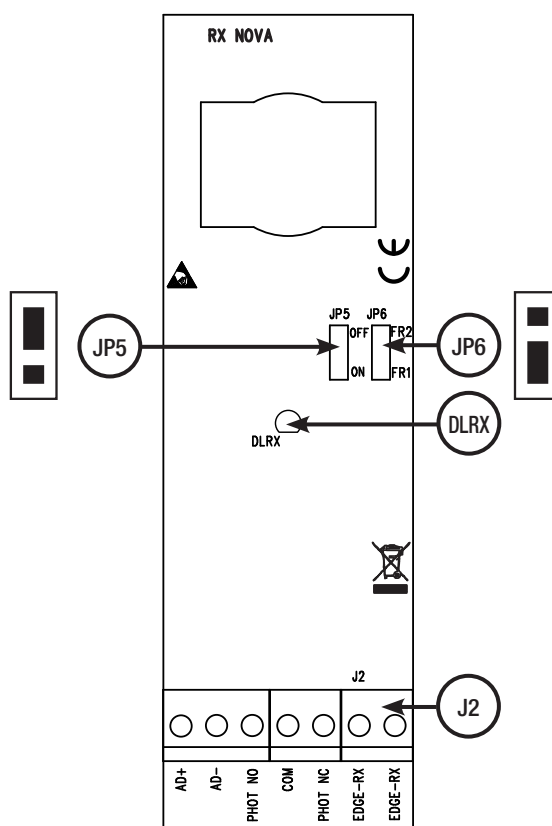
STANDARD POSITIONS JUMPERS



### SETTINGS AND RECEIVER CONNECTIONS

- J2**    **AD+**        Feed terminal 12÷24 V ac/dc
- AD-**        Feed terminal 12÷24 V ac/dc
- COM**        Contact system
- PHOT NC**    Contact normally closed
- PHOT NO**    Contact normally open
- EDGE RX**    Feed terminals for mechanical or resistive safety edge
- JP5**    Safety edge enabling/disabling jumper (standard jumper not inserted for unconnected safety edge. Disable the jumper if a safety edge is connected)
- JP6**    Frequency selector jumper (2 available)
- DLRX**    Red LED indicating correct power and infrared signal alignment

STANDARD POSITIONS JUMPERS



**NOTE: EACH TIME A NEW JUMPER CONFIGURATION IS USED IT IS NECESSARY TO TURN OFF AND TURN ON POWER TO BOTH THE TRANSMITTER AND THE RECEIVER.**

### REFERENCE TO STANDARDS FOR AUTOMATIC GATES AND DOORS

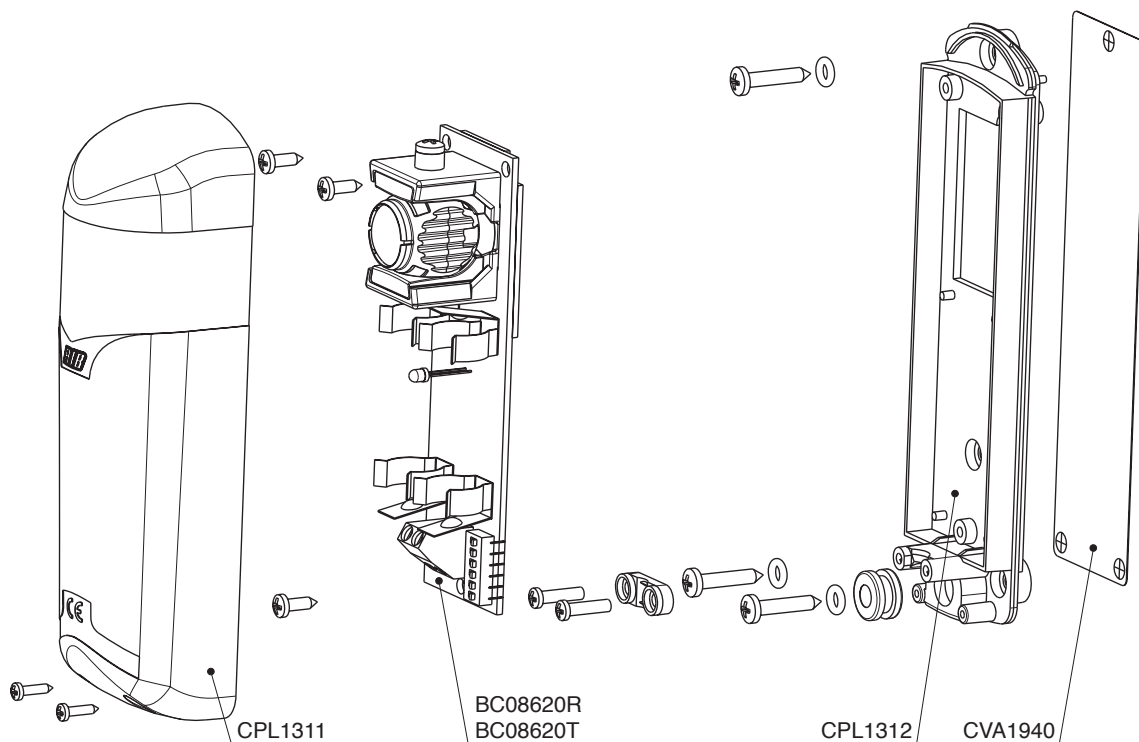
The installer must ensure that the installation of the NOVA WIRELESS photocells is performed only in the presence of further protection as specified by standard EN12453:2017 in 5.1.3. (general protection requirements).

**RIB MAY NOT BE HELD RESPONSIBLE FOR DAMAGES CAUSED BY IMPROPER, WRONG OR UNREASONABLE USE.**

### USES

NOVA WIRELESS photocells are technologically advanced and completely meet the active security demands of all types of automatic opening systems. They are produced in versions for wall mounting, for mounting to columns of iron or other smooth material, or on dedicated SUPPORT COLUMNS cod. ACG8039.

## MOUNTING



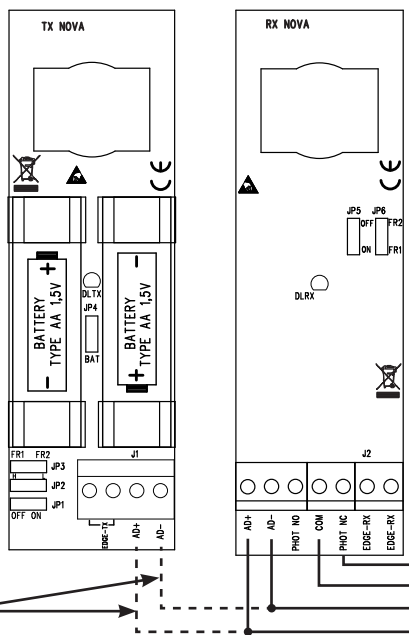
N.B.: Before placing the drilling template (code CVA1940) make sure that the contact surface is clean.

- Affix the plastic bases CPL1312 to the pillars or columns about 40-60 cm from the ground and at a maximum distance of 10 cm from the conveyance or pressure area or immediately out of range of any protruding edge.
- After adjustment attach the protective casing CPL1311.
- Install the receiver in a shaded area or in a position not exposed to horizontal sunlight.
- In every case it is advisable to place the photocells at the same height and in line with each other.
- For the correct positioning of the photocells refer to the user installation manual or to standard EN 12453:2017.

## CONNECTIONS

**ATTENTION:** In case the receiver led remains lit, malfunctioning of the main supply is suspected. It is advisable to connect electrically the photocells stands to the contact "A/D-", to shield the photocells from external noise. **Be careful not to short circuit the system when the supply phases are inverted!**

Do not perform the connection when using battery power.

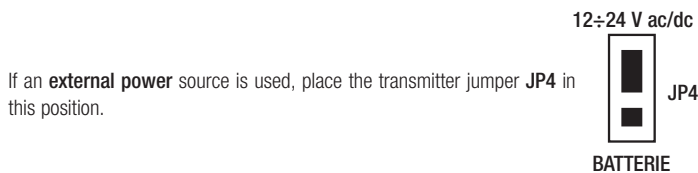


Use H05RN-F cables, with a minimum section of 0,75 mm<sup>2</sup>. If you exceed the distance of 10 m between photocells and control panel, the wire section must be increased to 1 mm<sup>2</sup>.

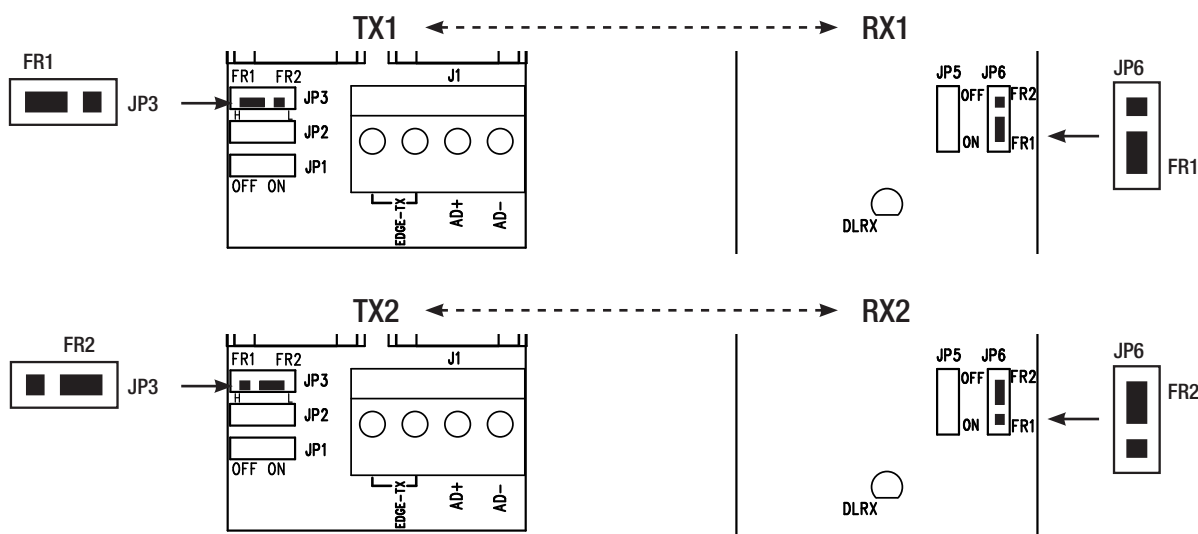
**NOTE:** It is possible to connect both the transmitter and the receiver to mechanical or resistive safety edges as shown in the paragraph "CONNECTION OF MECHANICAL OR RESISTIVE SAFETY EDGE".

Contact N.C. to connect to terminals COM-PHOT

Power 12÷24 V ac/dc to connect to terminals AD+ AD- on the RIB control panels



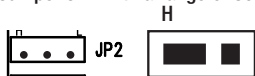
NOVA Wi-Fi photocells may be installed very close together thanks to SYNCHRONIZATION. SYNCHRONIZATION is guaranteed for up to 2 pairs of photocells working on the jumpers **JP3** for the transmitter and **JP6** for the receiver as shown below.



**RANGE**

It is possible to adjust the range of the photocells by placing a jumper on the transmitter(s).

**Jumper JP2 with a range of 30 m (factory setting)**



**Jumper JP2 with a range of 15 m**



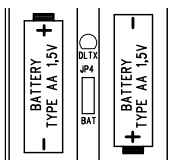
- After affixing the plastic bases of the NOVA WIRELESS photocells, insert the circuit boards into the proper places on the bases and attach them with the supplied screws.
- Make the electrical connections as in the diagram.

**CONNECTING THE BATTERY TO THE TRANSMITTER TX**

If 1,5V battery power is desired, follow these instructions:

- Check that jumper **JP4** is set for battery power.
- Insert the two AA 1,5V Alkaline batteries **checking that the polarity is correct (see side image)**.

Upon insertion of the batteries into the transmitter TX the green LED will light for 10 seconds indicating that it works correctly. The LED then shuts off so as not to waste battery energy, but the infrared signal is active.



**ALIGNMENT**

- NOVA WIRELESS photocells are packaged with central alignment however, if necessary, it is possible to adjust the optical units of the transmitter and receiver (+90°/-90° horizontally and +5°/-5° vertically).
- After performing the alignment the red LED on the receiver must emit a constant light to indicate correct reception of the infrared signal from the transmitter. If the red LED is flashing it means that the signal is weak and that the alignment must be improved until the red LED emits a constant light.
- If the transmitter and the receiver are mounted at a distance of less than 15 meters, we recommend positioning the jumper **JP2** as indicated in the paragraph "RANGE". This will provide lower battery consumption and consequently add to their duration.
- Mount the protective cover.

**SYSTEM CHECK**

- SYNCHRONIZATION:**
- Place an object in front of the transmitter.
  - Check that the red LED of the corresponding receiver turns off.
- NO SYNCHRONIZATION:**
- Place an object in front of the transmitter and then in front of the receiver.
  - Check that the red LED of the receivers is off in both cases.

**WARNING (replace the batteries)**

The WARNING tells the user of the immediate need to replace the batteries. When battery power reaches 2,2V, placing or moving an object between the photocells causes the transmitter to signal the receiver of the low battery status. The receiver activates the BUZZER which emits a sound every half second for 1 minute. The warning (the sound of the buzzer) is renewed for 1 minute every time something passes between the photocells. The system is still operational during these signals, but it is advantageous to replace the batteries as soon as possible in order to avoid a full stop of the door operation which happens when the batteries reach 1,8V.

**LOW BATTERY ALARM**

The alarm activates when the batteries have been exhausted (1,8V) or when a photocell is not working. The alarm sounds 3 hours after the loss of the infrared signal by the receiver. The receiver buzzer emits a continuous sound for 1 minute every 3 hours, until the batteries have been replaced. During this time the red LED of the receiver shuts off signaling the stop of automation.

**CHANGING THE BATTERIES**

The duration of the batteries used for NOVA WIRELESS photocells is about 3 years. Replacing the Alkaline batteries AA 1,5V is easy.

- Identify the transmitter with the exhausted batteries. To do this simply check the status of the system receiver. If the red LED of a receiver is always off, the batteries of the corresponding transmitter are exhausted.
- Remove the protective cover from the transmitter.
- Replace the batteries checking that the polarity is correct.
- Check that the green LED of the transmitter and the red LED of the receiver are on.
- Replace the protective cover on the transmitter.

L'automazione può ripartire in tutta sicurezza.

**ATTENTION: Please remember that batteries must be disposed of properly according to current standards. In case of disposal of the photocells please remember to remove the AA batteries and dispose of them properly.**

**IN CASE OF DIFFICULTY**

PROBLEM	CHECK
The green LED DLTX of the transmitter does not come on when the battery is inserted.	- Check that the polarity of the batteries is correct, or - Replace exhausted batteries, or - If a safety edge is connected to the transmitter TX and this is stuck or not working, check the safety edge contacts and connections and the presence of resistance of 8,2 KΩ.
The red LED DLRX of the receiver does not come on.	- Transmitter batteries are exhausted. Replace them or - If a safety edge is connected to the receiver and this is stuck or not working, check the safety edge contacts and connections and the presence of resistance of 8,2 KΩ.
Moving in front of the photocells the buzzer emits a sound every 5 second for 1 minute and the door continues to function.	Replace the batteries of the transmitter(s) as they are exhausted.
The receiver buzzer emits a continuous sound for 1 minute and the door does not move.	Replace the batteries of the transmitter(s) as they are exhausted.
The door does not open.	- The photocell is not aligned, stuck or the transmitter has exhausted batteries, or - Resistance of 8,2k is not connected in series to the N.C. contact or in parallel to the N.O. contact of the safety edge connected to the transmitter or receiver.
The safety edge connected to the transmitter or receiver does not work.	Check the correct operation enabling of the safety edge by checking jumper JP1 on the transmitter and JP5 on the receiver. If the jumpers are correct turn off and then turn on power to the photocells.

**CONNECTION OF THE MECHANICAL (TOUCH code ACG3015) OR RESISTIVE TRIPS TO THE NOVA WIRELESS PHOTOCELLS**

**NOTE: THE SAFETY EDGES CONNECTED TO THE PHOTOCELLS MAKE THE DOOR REACT AS TO THE PHOTOCELLS THEMSELVES. THEREFORE PAY ATTENTION TO WHERE THEY ARE POSITIONED.**

**THE FUNCTIONALITY OF THE SAFETY EDGES APPLIED TO THE PHOTOCELLS ARE AS FOLLOWS:**

- if activated while the door is CLOSING => REVERSES THE OPENING MOVEMENT;
  - if activated while the door is OPENING => INTERRUPTS THE OPENING MOVEMENT for the time that it is held. Upon being RELEASED the door continues to open.
- The latter behavior of the door depends on the setting of the control panel.

**FOR TOUCH (ACG3015) MECHANICAL SAFETY EDGES WITH CONTACT N.C.**

- Connect in series to the N.C. contact of the safety edge a resistance of 8,2k (without this resistance the series will not work and the alarm will come on - see table "TROUBLESHOOTING")
- Connect the safety edge N.C. contact to the feed terminals EDGE TX for the transmitter or EDGE RX for the receiver.

- Place the jumper JP5 on the receiver in the following position to enable the safety edge:



- Place the jumper JP1 on the transmitter in the following position to enable the safety edge:



**FOR RESISTIVE SAFETY EDGES WITH N.O. CONTACT**

- Connect in parallel to the N.O. contact of the safety edge a resistance of 8,2 KΩ (without this resistance the series will not work and the alarm will come on - see table "TROUBLESHOOTING")
- Connect the safety edge N.O. contact to the feed terminals EDGE TX for the transmitter or EDGE RX for the receiver.
- Place the jumper JP5 on the receiver in the following position to enable the safety edge:



- Place the jumper JP1 on the transmitter in the following position to enable the safety edge:



**PERFORM A SYSTEM CHECK ON THE SAFETY EDGES AS INDICATED ABOVE.**

## TECHNICAL SPECIFICATIONS

### NOVA WIRELESS RECEIVER

- POWER	12÷24 V ac/dc <b>(Check compatibility of power supplied by the electric panel)</b>
- MAXIMUM ABSORPTION	110 mA
- RELAY RANGE	1A - 30 V dc
- RELAY STROKE TIME	120 mS
- RED LED	on => RECEIVER aligned. <b>(N.B. when adjusted it turns off when an object is placed in front of it)</b>

### NOVA WIRELESS BATTERY OPERATED TRANSMITTER

- POWER	alkaline batteries 2 x AA 1,5V(>2,7Ah)
- POWER ABSORBED	3 µA
- BATTERY LIFE	about 3 years
- BATTERY LIFE WITH JP2 SET ON 15 m RANGE	4 years
- BATTERY LIFE WITH JP2 SET ON 30 m RANGE	3 years
- GREEN LED	on => the transmitter is aligned (this signal is only active for the first 10 seconds after the batteries have been inserted).
- ADJUSTABLE RANGE	15 o 30 m (in good weather conditions) <b>N.B.: Range may be reduced in bad weather conditions such as fog, rain, dust, etc.</b>

### NOVA WIRELESS EXTERNALLY POWERED TRANSMITTER

- POWER	12÷24 V ac/dc <b>(Check compatibility of power supplied by the electric panel)</b>
- MAXIMUM ABSORPTION	20 mA
- GREEN LED	always on
- ADJUSTABLE RANGE	15 o 30 m (in good weather conditions) <b>N.B.: Range may be reduced in bad weather conditions such as fog, rain, dust, etc.</b>

### COMMON TECHNICAL SPECIFICATIONS

- INFRARED SIGNAL	WAVELENGTH 890 nm
- OPERATING TEMPERATURE	-20°C ÷ +60°C
- CONTAINER	exterior in polycarbonate internal in abs
- PROTECTION LEVEL	IP44
- DIMENSIONS	150x45x41
- WEIGHT	0,300 kg

## ACCESSORIES

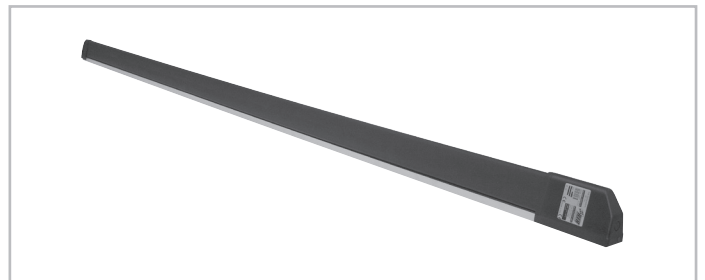
### PAIR OF COLUMNS for NOVA



H = 0,5 m

code ACG8039

### TOUCH MECHANICAL SAFETY EDGE



L = 2 m - Certified EN 13849-2 (2008) - Category 3

code ACG3015

### AA ALKALINE BATTERIES



4 X 1,5V - battery life with NOVA WIRELESS 3÷4 years.

code ACG9519

### AA LITHIO BATTERIES



2 X 1,5V - battery life with NOVA WIRELESS 4÷5 years.  
For extreme temperatures -40÷+60°C.

code ACG9509