



- Infrared safety sensors are a complementary safety device to prevent persons or vehicles from trespassing a gate driveway to be touched from a gate while it is closing. One pair of photocells consists of a transmitter (TX) and its receiver (RX). The TX transmitter emits a modulated infrared light beam received by the receiver RX. If this invisible light beam is interrupted a signal is sent to the electronic board.

Transmitter and Receiver must be installed on side posts or walls and be correctly aligned. While the infrared beam is received by the photocell receiver, the NC (normally closed) contact on the gate opener control board is kept closed. Photocells are not active while the gate is opening.

Should a person, pet, or vehicle break the beam, while the gate is closing, the gate will immediately stop and reverse.

While the contact is kept open the gate will no longer close until the infrared beam alignment is restored and the contact kept closed.

Photocells should not be installed more than 10 meters distance

It is recommended to install the photocells at about 60cm high from the ground in order to easily detect a trespassing vehicle, pet or person.

They can be installed inside or outside of the property on the sides of the gate, directly on gates posts or on small columns in a position where the opening and closing operation of the gate does not interfere with their effectiveness.

It is possible to install as many pairs of photocells as desired. The connection must be made in series.

It is recommended to avoid to use at same time SW7120 or LASER7120 with different photocell models if more pairs are installed on the same device. This could create wiring confusion as model 7120 has a specific and unique wiring diagram.



WARNING: Photocells models featuring a NO (normally open) contact, can be mounted inside the property and connected to the “START” connectors of any gate opener to be used as opening command of the gate. Be aware that this type of use could be dangerous if children or pets are left alone in the gate’s area as they could command an unwanted opening maneuver. When

List of Photocells Models:

SW 7012.....standard universal 12V/24V ac/dc pair of infrared sensors with NC contact

LASER 7012.....stainless steel cover universal 12V/24V ac/dc pair of infrared sensors with NC contact

SW 7120.....reduced consumption universal 12V/24V ac/dc pair of infrared sensors with NC contact

LASER 7120..... stainless steel reduced consumption universal 12V/24V ac/dc pair of infrared sensors with NC contact

LASER 100.....standard universal 12V/24V ac/dc pair of infrared sensors with NC contact + NO contact

LASER 100/B...standard universal 12V/24V ac/dc pair of infrared sensors with NC contact or NO contact

LASER 200..... 90° rotating eyes standard universal 12V/24V ac/dc pair of infrared sensors with NC contact + NO contact



WARNING : photocells model SW7012 and SW7120, as well as model LASER7012 and LASER7120 are aesthetically identical.

They shall be identified and distinguished by the part number written on the PCB (printed circuit board) of the receiver. To check it unscrew the inner cover that protects the PCB and read the correct part number. Caution: with CTH44 and CTH48 electronic boards powered by the solar panel is indispensable use of photocells model 7120 in order to contain the consumption of the system. It is advisable, in such cases, to install a single pair of photocells.

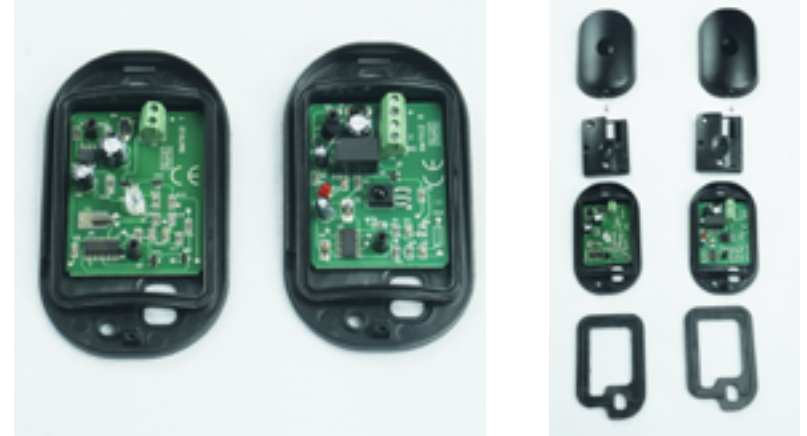
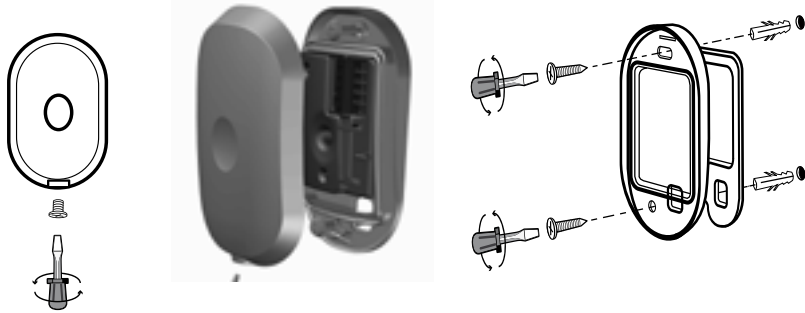
DUCATI Infrared safety sensors (photocells/safety beam) SW7012 / LASER 7012

Model 7012 standard universal 12V/24V ac/dc pair of infrared sensors with NC contact.

Unscrew the front cover to fix the photocells on the wall/post. Use an outdoor use a 2 wires 0,3-0,5mmq cable to power the Photocell transmitter (TX).

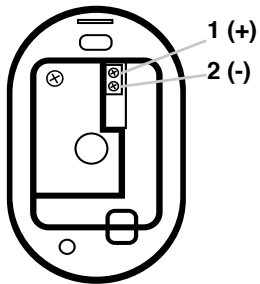
Use an outdoor use 4 wires 0,3-0,5mmq cable to power the Photocell receiver (RX).

Transmitter and receiver should not be installed at more than 10 m from each other. Make sure they are correctly aligned.

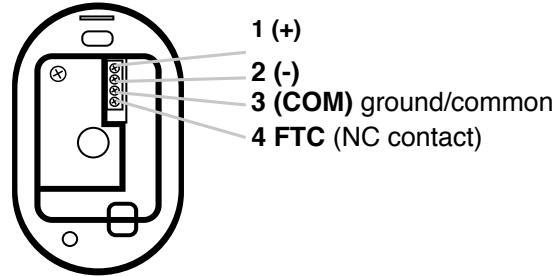


Wiring of 1 pair of photocells model 7012

Transmitter TX
(photocel model 7012)



Receiver RX
(photocel model 7012)

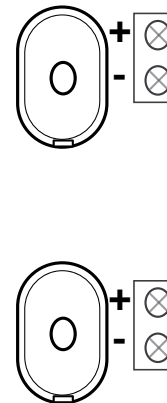


- 1 = + positive power supply 12/24V ac/dc
- 2 = - negative power supply 12/24V ac/dc
- 3 = COM ground/common.
- 4 = FTC NC (normally closed) photocell contact

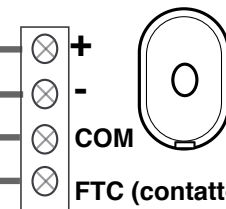
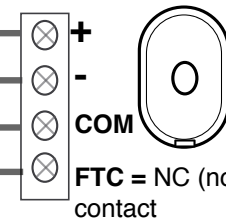
WARNING by connecting the photocells to the electronic board, you must remove the bridge which keeps the photocell contact closed.

In series wiring of 2 pairs of photocells model 7012

Transmitters TX
(photocel model 7012)



Receives RX
(photocel model 7012)



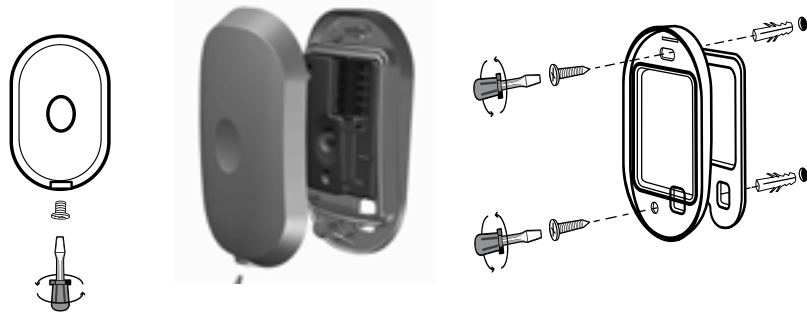
COM + - FTC

Model 7120 reduced consumption universal 12V/24V ac/dc pair of infrared sensors with NC contact.

Unscrew the front cover to fix the photocells on the wall/post. Use an outdoor use a 2 wires 0,3-0,5mmq cable to power the Photocell transmitter (TX).

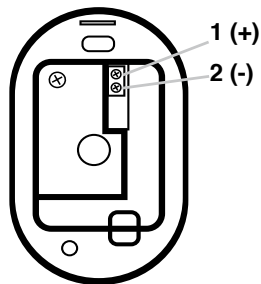
Use an outdoor use 3 wires 0,3-0,5mmq cable to power the Photocell receiver (RX).

Transmitter and receiver should not be installed at more than 10 m from each other. Make sure they are correctly aligned.

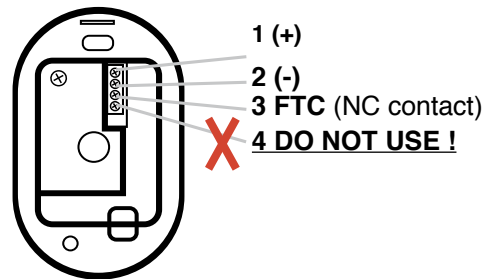


Wiring of 1 pair of photocells model 7120

Transmitter TX
(photocel model 7120)



Receiver RX
(photocel model 7120)



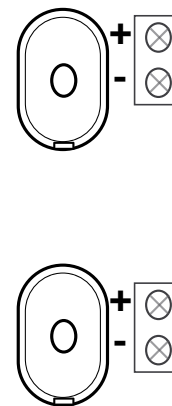
- 1 = + positive power supply 12/24V ac/dc
- 2 = - negative power supply 12/24V ac/dc
- 3 = FTC NC (normally closed) photocell contact .
- 4 = DO NOT WIRE THE CONNECTOR N° 4!**



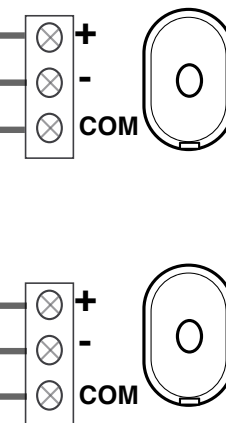
WARNING by connecting the photocells to the electronic board, you must remove the bridge which keeps the photocell contact closed.

In series wiring of 2 pairs of photocells model 7120

Transmitters TX
(photocel model 7012)



Receives RX
(photocel model 7012)



FTC + -

LASER 100 Standard reduced consumption universal 12V/24V ac/dc pair of infrared sensors with NC contact + NO contact

LASER 100B Standard reduced consumption universal 12V/24V ac/dc pair of infrared sensors with NC contact / NO contact

LASER 200 Standard reduced consumption universal 12V/24V ac/dc pair of infrared sensors with NC contact + NO contact.

Photocell eye can be rotated 90°

Unscrew the front cover to fix the photocells on the wall/post. Use an outdoor use a 2 wires

0,3-0,5mmq cable to power the Photocell transmitter (TX).

Use an outdoor use 4 wires 0,3-0,5mmq cable to power the Photocell receiver (RX).

Transmitter and receiver should not be installed at more than 10 m from each other.

Make sure they are correctly aligned.

Use the Photocells as safety device:

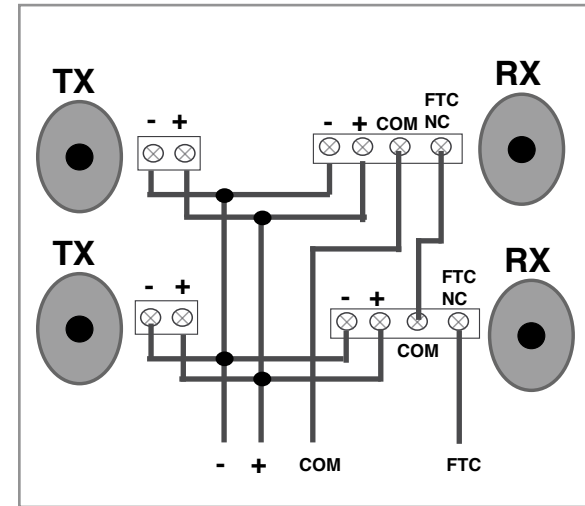
power the photocells (connectors 1 & 2) + Wire connector n° 4 (COM) and N° 5= FTC (NC) contact to the electronic bord of the device. Do not wire connector n° 3 (NO contact)

Should a person, pet, or vehicle break the beam, while the gate is closing, the gate will immediately stop and reverse. While the contact is kept open the gate will no longer close until the infrared beam alignment is restored and the contact kept closed.

Use the Photocells as gate opening command:

power the photocells (connectors 1 & 2) + Wire connector n° 4 (COM) and connector with NO contact (n° 3 on LASER 100 and N°4 on LASER 200) to the START connectors of the electronic bord of the device.

Should a person, pet, or vehicle break the beam, the gate will start an opening cycle.



LASER 100

Wiring:

- 1 = - negative power supply 12/24V ac/dc
- 2 = + positive power supply 12/24V ac/dc
- 3 = START NO (normally open) contact
- 4 = COM ground/common.
- 5 = FTC NC (normally closed) photocell contact

LASER 100B

Wiring:

- 1 = - negative power supply 12/24V ac/dc
- 2 = + positive power supply 12/24V ac/dc
- 3 = COM ground/common
- 4 = OUT= depending on Jumper position it becomes NO(normally open) or NC (normally closed) output contact

LASER 200

Wiring:

- 1 = - negative power supply 12/24V ac/dc
- 2 = + positive power supply 12/24V ac/dc
- 3 = FTC NC (normally closed) photocell contact
- 4 = COM ground/common.
- 5 = START NO (normally open) contact