

# FLIPS BAT SCREENED EN R3

## PHOTOELECTRIC BARRIER

### 23102143



The **FLIPS BAT SCREENED EN R3** photoelectric barrier allows to place the transmitter photocell (TX) on an unmovable surface or on the mobile leaf connected to the safety edge (*in this case it will be necessary to use the special connection cable code 13100100 sold separately*). Furthermore, it is equipped with a TILT sensor which allows to save energy on the TX photocell when the gate is stopped.

The **FLIPS BAT SCREENED EN R3** photoelectric barrier can be easily installed and guarantees maximum reliability!

➔ For FLIPS BAT versions prior to R3 version, please refer to the instruction manuals with previous revisions!

TECHNICAL DATA	
MAX. RANGE (WITH J2 «ON»)	15 metres outside **
SIGNAL	Modulated Infrared
WAVELENGTH	880 nm
MODULATION FREQUENCY	1000 Hz
POWER SUPPLY	TX: Li-SOCl <sub>2</sub> battery (8,5Ah - 3,6V) RX: from 10 to 36Vdc (—) RX: from 8 to 26 Vac ( ~ )
ABSORPTION	TX: 300 µA RX: 30 mA
OPERATING TEMPERATURE	- 15° C / + 60° C
RELAY CONTACT RATING	24V - 1A Max
HUMIDITY	from 5% to 90% non-condensing
RX/TX SIZE	129 x 48 x 42 mm
PROTECTION DEGREE	IP 45

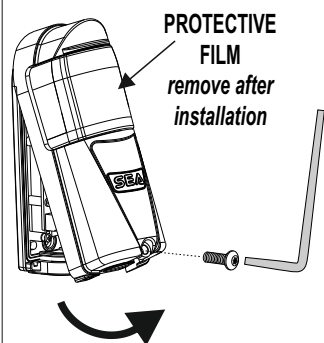
ESTIMATE OF BATTERY LIFE *				
DAILY OPERATION	CYCLE: OPEN - CLOSE STAND-BY	TOTAL DAILY DURATION	J2 SETTINGS	BATTERY LIFE
20	60 sec.	20 min.	LOW	23 MONTHS
20	60 sec.	20 min.	HIGH	22 MONTHS
200	60 sec.	3h:20 min.	LOW	15 MONTHS
200	60 sec.	3h:20 min.	HIGH	13 MONTHS

\* The battery life estimate is indicative and it is valid at an ambient operating temperature of 20 °C

\*\* The photocell range, independent of the configuration of J2 on the Tx, can be reduced by up to 70% in case of adverse weather conditions (fog, rain, etc.)

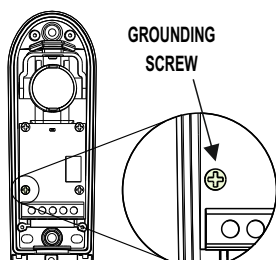
## GENERAL INFORMATION

### OPENING OF THE PLASTIC COVER



### GROUNDING

If the photocells are installed on a metal structure, use a grounding cable to connect the grounding screw to the metal structure

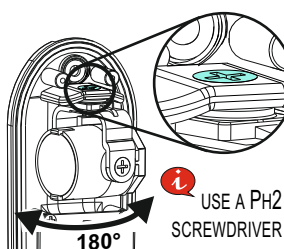


**CAUTION!**  
the grounding is allowed only if the Rx photocell is 12/24VDC powered

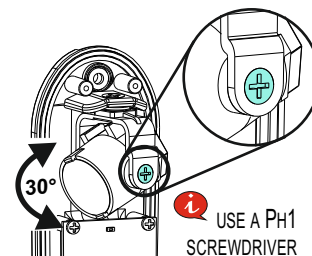
### PHOTOCELLS ALIGNMENT

Alignment possible only for photocells installed on unmovable surfaces!  
Tighten both screws once installation is complete!

#### FIXING SCREW FOR HORIZONTAL ALIGNMENT

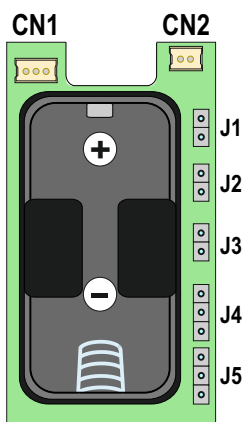
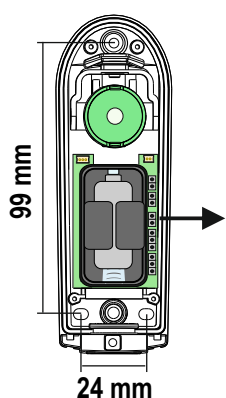


#### FIXING SCREW FOR VERTICAL ALIGNMENT



## COMPONENTS AND OPERATION OF THE TX PHOTOCELL

TX PHOTOCELL



CN1 = OPTICAL CIRCUIT CONNECTOR

CN2 = SAFETY EDGE CONNECTOR (the safety edge connection cable is sold separately)

J1 (EDB) = OFF → OPERATION WITH SAFETY EDGE (N.C. NORMAL \* or 8K2\*\*)

J1 (EDB) = ON → OPERATION WITH PHOTOCELL

J2 (PWR SAVE) = OFF → NORMAL TRANSMISSION - ENERGY SAVING

J2 (PWR SAVE) = ON → MAXIMUM POWER TRANSMISSION (reduced battery life)

J3 (8K2) = OFF → OPERATION WITH N.C. SAFETY EDGE \* or PHOTOCELL

J3 (8K2) = ON → OPERATION WITH 8K2 BALANCED SAFETY EDGE \*\*

J4 (SLT1) = OFF  
J4 (SLT1) = ON  
J5 (SLT2) = OFF  
J5 (SLT2) = ON

} = STAND-BY

J4 J5  
DISABLED  
(less energy saving!)

J4 J5  
ENABLED AFTER  
10 SECONDS\*

J4 J5  
ENABLED AFTER  
90 SECONDS\*

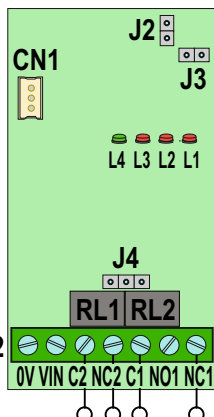
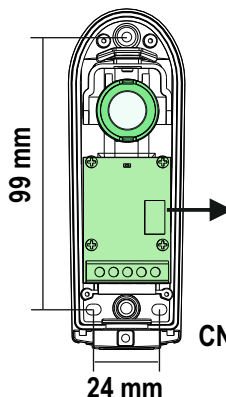
\* from the last detected movement

\* SETTING REQUIRED FOR USE WITH  
J1 J3 NORMAL N.C. SAFETY EDGE

\*\* SETTING REQUIRED FOR USE WITH  
J1 J3 8K2 BALANCED SAFETY EDGE

## COMPONENTS AND OPERATION OF THE RX PHOTOCELL

RX PHOTOCELL



CN1 = OPTICAL CIRCUIT CONNECTOR

CN2 = CONNECTOR ON ELECTRONIC CONTROL UNIT \*

J2 = OFF → OPERATION WITH BATTERY POWERED TX PHOTOCELL

J2 = ON → OPERATION WITH «EYES» TX PHOTOCELL \*\*

J3 = OFF → INSTALLATION ON MOBILE LEAF

J3 = ON → INSTALLATION ON UNMOVABLE SURFACE

J4 = OFF → USE WITH 10K RECOGNITION CONTROL UNITS

J4 = ON → USE WITH CONTROL UNITS WITHOUT 10K RECOGNITION

\* CN2 - to be wired to the control unit, on clamps «PHOTOCELL» or «SAFETY EDGE»

\*\* J2 - If «ON» (with Tx «EYES»), the synchronization is always enabled if the power supply is AC

## LED SIGNALS ON RX PHOTOCELL

### L1 - RED

**ON STEADY** - when the battery voltage is lower than 3.4 Volt (low battery indicator)

### L2 - RED

**ON STEADY** - if the safety edge to which the TX photocell is connected has been activated (both > 8K2 and < 8K2)

**SWITCHED-OFF** - when the reception is correct and the resistance value of the safety edge is 8K2

### L3 - RED

**ON STEADY** - when the photocell is activated

**SWITCHED-OFF** - when the photocell is not activated

### L4 - GREEN

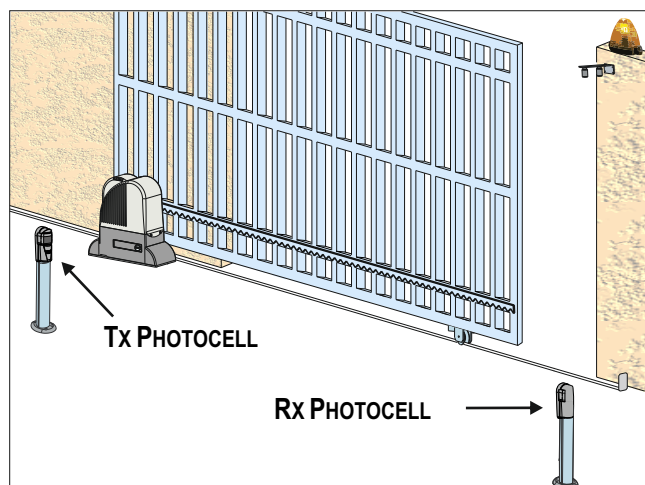
**ON STEADY** - when the photocell is not activated (stationary gate or in stand-by for energy saving)

**FLASHING** - when the photocell is in transmission mode (obstacle detected or energy saving option disabled on the Tx photocell)

The flashing frequency is proportional to the strength of the received signal (faster when reception is better, slower when it is worse)

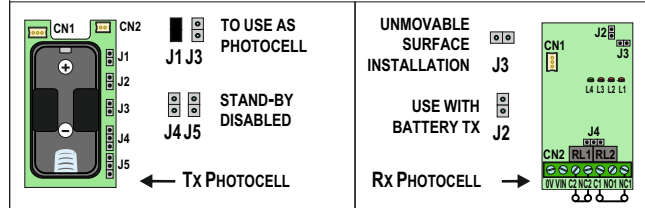
**SWITCHED-OFF** - when the photocell is activated

## INSTALLATION ON UNMOVABLE SURFACE

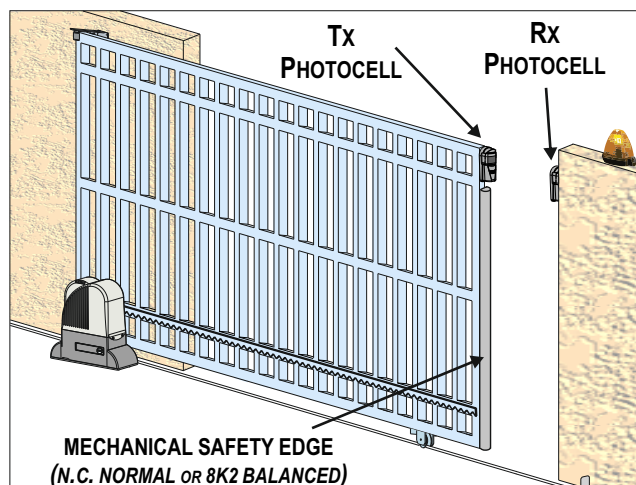


Check the alignment of the photocells using a tester; The checking of the alignment with the tester is only possible for distances less than 20 meters.

### SETTINGS REQUIRED FOR THIS INSTALLATION

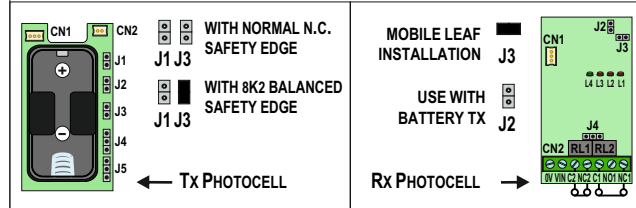


## INSTALLATION ON MOBILE LEAF



Connect the TX photocell to the safety edge using the special connection cable (sold separately). Connect the RX photocell to the «SAFETY EDGE» clamp of the control unit in use

### SETTINGS REQUIRED FOR THIS INSTALLATION



## TX PHOTOCELL (TRANSMITTER) INSTALLATION

- Place the TX photocell on the mobile leaf or on an unmovable surface (wall or column)
- Insert the cables into their housing and make wirings and settings (page 5) depending on the positioning (on a mobile leaf or unmovable surface)
- Arrange the cables to eliminate excess
- Fix the TX photocell
- Seal the sheath and any holes that may convey foreign bodies inside the container

## RX PHOTOCELL (RECEIVER) INSTALLATION

- Place the RX photocell on the gate frame or on the opposite unmovable surface and align it with the TX photocell.
- Insert the cables into their housing and make wirings to the control unit (wire the RX photocell to the «SAFETY EDGE» input or to the «PHOTOCELL» input of the control unit, according to the positioning).
- ➡ When the photocell is wired to the «SAFETY EDGE» input, its activation causes the partial or the total inversion of the movement followed by a STOP, therefore a START impulse will be required to restart the gate;
- When the photocell is wired to the «PHOTOCELL» input, its activation causes the total inversion of the movement;
- Arrange the cables to eliminate excess
- Fix the RX photocell
- Seal the sheath and any holes that may convey foreign bodies inside the container

Once the installation of both the TX and RX photocells is complete, power up the RX photocell (12V - 24V $\overline{\sim}$ / V~)

- ➡ If the wirings, positioning and alignment of the photocells have been carried out correctly, the L4 green LED on the RX photocell will flash faster the better the reception, while it will be OFF when the photocell is activated.

## CHECKING OPERATION

Block the infrared ray several times with a black board (or anything opaque to the infrared) checking:

- the response (exchange) of the relay
- that the L3 red LED on the RX photocell turns on every time the ray is blocked