# ENCODING PHOTOCELLS " IR/IT 2241



Wall-mounted encoding photocells, 180° rotation and range of up to 20 mt.

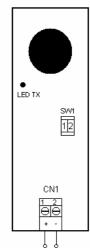
The code for the transmitted signal, which must be set at the time of installation, minimises the possibility of interference between devices.

### **TECHNICAL DATA:**

#### - Max. range

- TX power supply
- RX power supply
- TX absorption
- RX absorption
- Relay contact capacity
- Operating temperature
- Container
- Protection rating
- Container dimensions

: 20 metres : 12-24V AC-DC : 12-24V AC-DC : 10 mA Max. : 25 mA Max. : 1A max at 30 VDC : -10 ÷ 55 : Polycarbonate : IP 54 : 41 x 94 x 45 mm.



## IT 2241 DESCRIPTION OF THE TRANSMITTER (TX):

#### Selecting the Operating Range (SW1 Dip Switch No. 1):

The maximum distance of operation of the battery-operated photocell is approximately 10 metres at normal power (Dip Switch No. 1 OFF "factory configuration") and approximately 20 metres at maximum power (Dip Switch No. 1 ON).

#### Selecting Operating Code " A " and " B " ( SW1 Dip Switch No. 2 ) :

The photocell has two operating encoding channels "A" and "B", in this way it is possible to install 2 pairs of the same model without any interference between them. Code "A" ( Dip Switch No. 2 OFF "factory configuration" ) and code "B" ( Dip Switch No. 2 ON ), must be accordingly selected in the same way, at the time of installation, on both the transmitting part ( IT 2241 ) and the receiving part ( IR 2241 ).

#### **Connections:**

1 - 12/24 Vac-dc 2 - 0V

# ENCODING PHOTOCELLS " IR/IT 2241 BATTERY "



Wall-mounted encoding photocells with the battery-operated Transmitter function, with 180° rotation and range of up to 16 mt.

The battery-operated photocell IR/IT 2241 solves problems related to setting up electrical cables to connect the transmitter The code for the transmitted signal, which must be set at the time of installation, minimises the possibility of interference between devices.

## **TECHNICAL DATA:**

- Max. rang	e
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- TX power supply
- RX power supply
- TX absorption
- RX absorption
- Relay contact capacity
- Operating temperature
- Container
- Protection rating
- Container dimensions
- : 16 metres
  : 1 x 1,5V Alkaline battery mod. AA
  : 12-24V AC-DC
  : 0.30 mA Max.
  : 25 mA Max.
  : 1A max at 30 VDC
  : -10 ÷ 55
  : Polycarbonate
  : IP 54
  : 41 x 94 x 45 mm.



## IT 2241 BATTERY DESCRIPTION OF THE TRANSMITTER (TX):

#### Power supply and autonomy:

The transmitter is powered by a 1.5 Volt Alkaline battery. The average battery life is approximately 18 months at normal power and approximately 12 months at maximum power. The battery life depends on the quality of the batteries being used.

#### Selecting the Operating Range (SW1 Dip Switch No. 1):

The maximum distance of operation of the battery-operated photocell is approximately 8 metres at normal power (Dip Switch No. 1 OFF "factory configuration") and approximately 16 metres at maximum power (Dip Switch No. 1 ON).

#### Selecting Operating Code " A " and " B " ( SW1 Dip Switch No. 2 ) :

The photocell has two operating encoding channels "A" and "B", in this way it is possible to install 2 pairs of the same model without any interference between them. Code "A" ( Dip Switch No. 2 OFF "factory configuration" ) or code "B" ( Dip Switch No. 2 ON ), must be accordingly selected in the same way, at the time of installation, on both the transmitting part ( IT 2241 ) and the receiving part ( IR 2241 ).

#### Important:

It is possible to connect an "NC" safety device to the transmitter (for example a safety edge mounted on the mobile edge of a sliding gate): when the contact opens the transmitter stops transmitting. If no "NC" safety device is used, inputs 3 and 4 must always be jumpered.

#### **Connections:**

- 1 Do not use
- 2 Do not use
- 3 "NC" safety device (Jumper only if not used)
- 4 "NC" safety device (Jumper only if not used)

#### Attention

- The alkaline battery 1.5V (AA) must be replaced every year to guarantee optimal functioning.

- To replace the discharged battery remove the plastic lid, extract the battery in use and insert a new one, respecting the polarity indicated on the battery compartment.

The used batteries must be disposed of in the appropriate gatherers.

# ENCODING PHOTOCELLS " IR/IT 2241 SOLAR "



Wall-mounted encoding photocells with Transmitter operated by solar panel and re-chargeable battery, with 180° rotation and range of up to 16 mt.

The IR/IT 2241 Solar photocell solves problems related to setting up electrical cables to connect the transmitter. The code for the transmitted signal, which must be set at the time of installation, minimises the possibility of interference between devices.

## **TECHNICAL DATA:**

- Max. range
- TX power supply
- RX power supply
- TX absorption
- RX absorption
- Relay contact capacity
- Operating temperature
- Container
- Protection rating
- Container dimensions
- : 16 metres : 1 x 1.2V Re-chargeable battery mod. AA : 12-24V AC-DC : 0.30 mA Max. : 25 mA Max. : 1A max at 30 VDC : -10 ÷ 55 : Polycarbonate : IP 54 : 41 x 94 x 45 mm.

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# IT 2241 SOLAR DESCRIPTION OF THE TRANSMITTER (TX):

#### Power supply and autonomy:

The transmitter is powered by a solar panel mounted on the cover of the box and a 1.2 Volt re-chargeable battery that allows it to operate in the absence of light.

#### Selecting the Operating Range (SW1 Dip Switch No. 1):

The maximum distance of operation of the battery-operated photocell is approximately 8 metres at normal power (Dip Switch No. 1 OFF "factory configuration") and approximately 16 metres at maximum power (Dip Switch No. 1 ON).

#### Selecting Operating Code " A " and " B " ( SW1 Dip Switch No. 2 ) :

The photocell has two operating encoding channels "A" and "B", in this way it is possible to install 2 pairs of the same model without any interference between them. Code "A" ( Dip Switch No. 2 OFF "factory configuration" ) or code "B" ( Dip Switch No. 2 ON ), must be accordingly selected in the same way, at the time of installation, on both the transmitting part ( IT 2241 ) and the receiving part ( IR 2241 ).

#### Important:

It is possible to connect an "NC" safety device to the transmitter (for example a safety edge mounted on the mobile edge of a sliding gate): when the contact opens the transmitter stops transmitting. If no "NC" safety device is used, inputs 3 and 4 must always be jumpered.

#### **Connections:**

- 1 Connection for red wire (+) Solar Panel.
- 2 Connection for black wire ( ) Solar Panel.
- 3 "NC" safety device (Jumper only if not used)
- 4 "NC" safety device (Jumper only if not used)

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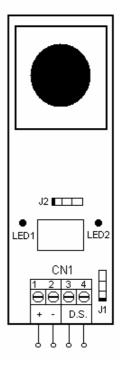
# IR 2241 DESCRIPTION OF THE RECEIVER (RX):

#### Power supply:

The receiver can be powered with 12 or 24 Volts in either DC (observing the polarity) or in AC.

#### **Connections:**

- 1 0 Vac-Vdc Power Supply
- 2 12-24 Vac-Vdc Power Supply
- 3 NO/NC photocell contact ( J1 selection )
- 4 NO/NC photocell contact (J1 selection)



#### Selecting the NO/NC Relay Contact ( with Jumper J 1 ) :

With jumper selection J1 it is possible to choose the type of relay contact as NO (Normally Open) or NC (Normally Closed). J1 position 1-2: NO relay contact.

J1 position 2-3 : NC relay contact (factory configuration).

#### Selecting Operating Code " A " and " B " ( with Jumper J2 ) :

With selection Jumper J2 it is possible to choose operating channel "A" or "B"

J2 position 1-2: Channel B operation.

J2 position 2-3 : Channel A operation (factory configuration).

The photocell has two operating encoding channels "A" and "B", at the time of installation, be very careful that the channels are selected accordingly in the same way, on the transmitting part (IT 2241) as well as the receiving part (IR 2241).

#### Checking TX - RX (LED 1) alignment:

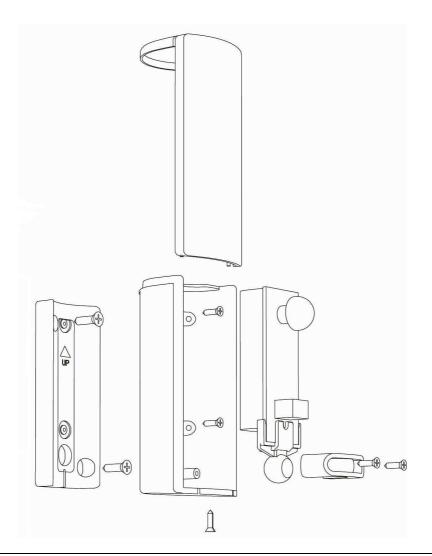
Led 1 is installed on the receiver indicating when the TX - RX pair of photocells is aligned.

Led 1 will be on steadily when the infrared ray is aligned and will go off the when infrared ray goes off.

#### Checking the quality of the received signal (LED 2):

Led 2 is installed on the receiver and flashes based on the quality of the signal received from its matching transmitter. The number of flashes is proportional to the intensity of the signal being received; four flashes, maximum signal, one flash is a weak signal.





#### **IMPORTANT FOR THE INSTALLER**

- If installing multiple devices it is advisable to cross beams (i.e. transmitter A and receiver B on the left and transmitter B and receiver A on the right). If this were not possible maintain a distance (especially between receivers) of at least one metre.

- Always set the minimum power necessary to cover the application distance: this increases battery life and decreases the possibility of interference with existing devices.

- The photocell allows the circuit to be oriented inside the box: in this way the transmitter can be aligned to the receiver, while preventing reception from other devices.

#### **IMPORTANT FOR THE USER'S**

- The device must never be used by children or persons with reduced physical-psychological abilities, unless supervised or trained on the functioning and the use modalities.

- Do not allow children to play with the device and keep the radio-controls away from their reach.

- ATTENTION: keep this instruction manual and respect the important safety prescriptions contained herein. The non compliance with the prescriptions may cause damages and serious accidents.

- Frequently examine the plant to detect any signs of damaging. Do not use the device if a repair intervention is necessary.

#### Attention

All operations which require the opening of the casing (cables connection, programming, etc.) must be carried out by expert personnel during installation. For any further operation which requires the casing to be re-opened (re-programming, repair or installation amendments) contact the after-sales assistance.

the products: IR/IT 2241, IR/IT 2241 BATTERY, IR/IT 2241 SOLAR are compliant with the specifications of Directive EMC 2004/108/EC.

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