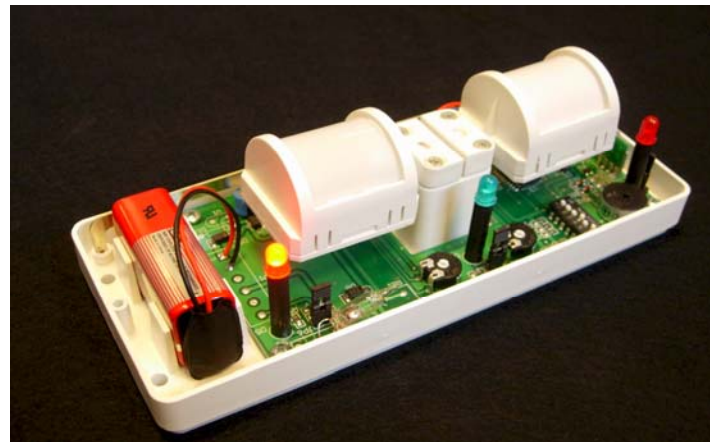


We thank you very much for choosing our item.
Now we would like to invite you to read carefully the following instructions before installing the product in order to use all its capacities.

DIRVE K

LOW CONSUMPTION IR OUTDOOR DUAL SENSOR



MANUAL VERSION 0.5



The above symbol guarantees that the item complies with EU norms (EUROPEAN COMMUNITY) on devices that can generate interferences. The acronym CE means Conformit e Europ enne (EUROPEAN CONFORMITY). All our equipment are certified according the EU norm and are also certified PPTT.

SUGGESTIONS and PRECAUTIONS

Warning: DIRVE K has been designed to guarantee a very high immunity to light interference, however very bright light can produce instability. It is therefore recommended to take great care in installation to avoid direct or reflected sunlight or high intensity light beams.

Warning: It is recommended to use the outdoor sensor as an additional tool to a security system and not for activating directly alarm tools as sounders and phone diallers.

Warning: Avoid to orient the sensor towards moving objects such as bushes, flags, branches etc, because it may cause an unwanted relevation.

Warning: In outdoor installation, it is recommended to use the sensor in the "AND" mode for higher security and to set both beams in the same direction. Incorrect installation could reduce security level.

Warning: If possible, avoid to installing the sensor in areas directly exposed to rain or snow. Do not spray any water on the sensor.

Warning: If you do not comply with the above-mentioned precautions, it may cause a malfunction and in such an event, the manufacturer will decline any responsibility.

INSTALLATION SUGGESTIONS

DIRVE K sensor can be fixed at heights between 50 and 250 cm, on vertical surfaces, walls or posts, using the anchor clamp and protection (item STAK). Obviously the detection units **MUST** be oriented horizontal or facing downwards, never upwards, in order to avoid situations of blinding by sunlight during the day and to safeguard the good running of the sensor.

The two detection units **MUST** be positioned on the vertical axis, so that the two beams cause slight divergence to detect an intruder with human form and not animals or objects that you do not want to be considered intruders.

Looking at Fig. 1 and 2, you will notice that it is possible to detect the intrusion of a man from a distance of 8 m from the sensor avoiding the animal's detection by tilting the lower unit more strongly downwards in comparison to the upper unit.

Each detection unit has 5 double horizontal beams oriented on a 100° aperture.

In some cases, such width of sight can be a problem if the detection area is not clear due to branches, curtains, glass window etc.

If this does occur, you need to reduce the area by masking the side or intermediate beams with some white adhesive tape over the sections of unit lenses (beams blinding), so that the beams are only oriented on stable zones of detection.

This precaution avoids unwanted alarms raised by wind, moving branches, curtains or other objects present in the area.

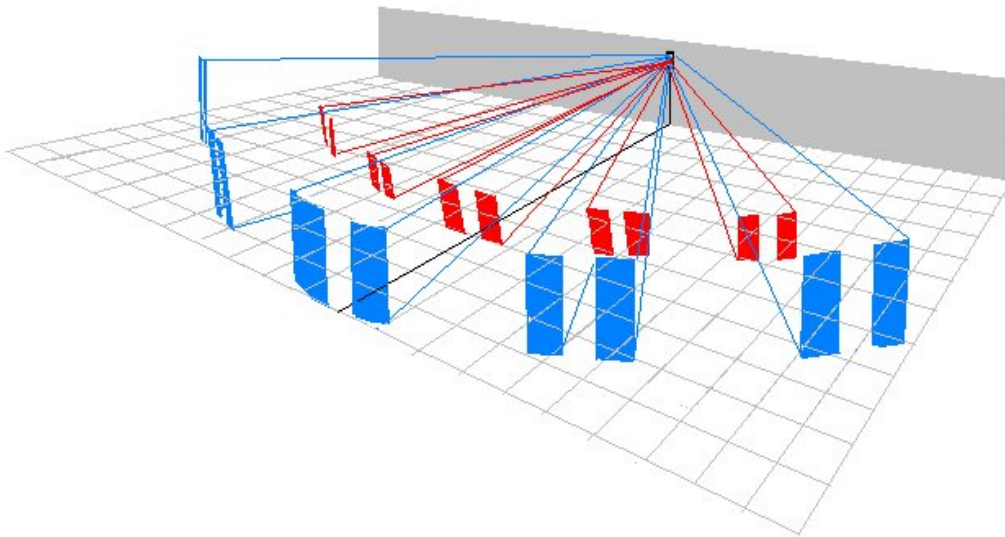


FIG.1 Prospective view of covered area

It is possible to orientate the detecting units in opposite directions horizontally, in order to prevent triggering an alarm if only one sensor detects movement. Only the crossing of both covered areas of the two detection zones will be considered an alarm. This mode is useful on balconies, terrazzos or corridors, where movement in only one direction is unavoidable. Furthermore it prevents unwanted alarms, due to people moving on adiacent areas.

It can also be set the “intelligent AND” mode, that programs the sensor only to trigger a real alarm when the sequence begins with the A beam (upper detecting unit) and ends (in the “AND” time) by detecting the B beam.

This function permits a directional detection, in other words it allows the sensor to detect an approach towards the protected area avoiding detections of movement on a nearby area.

You should also consider that the regulation of the detecting units has to be very meticulous, as small alterations of the position, over a length of 8 m, cause large movements of the beams.

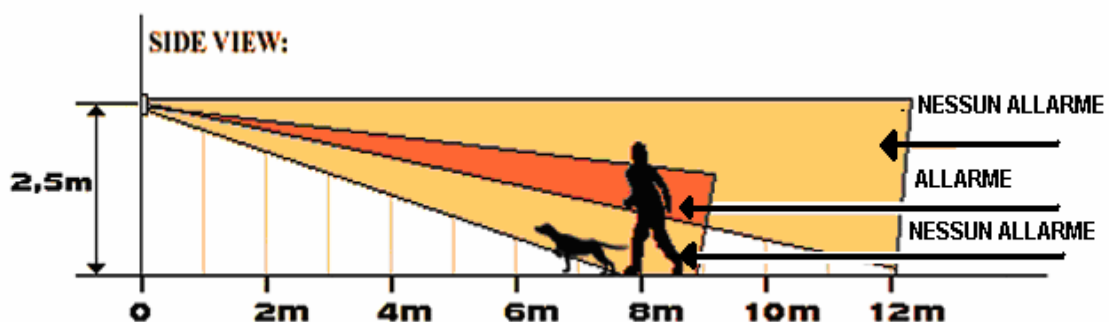
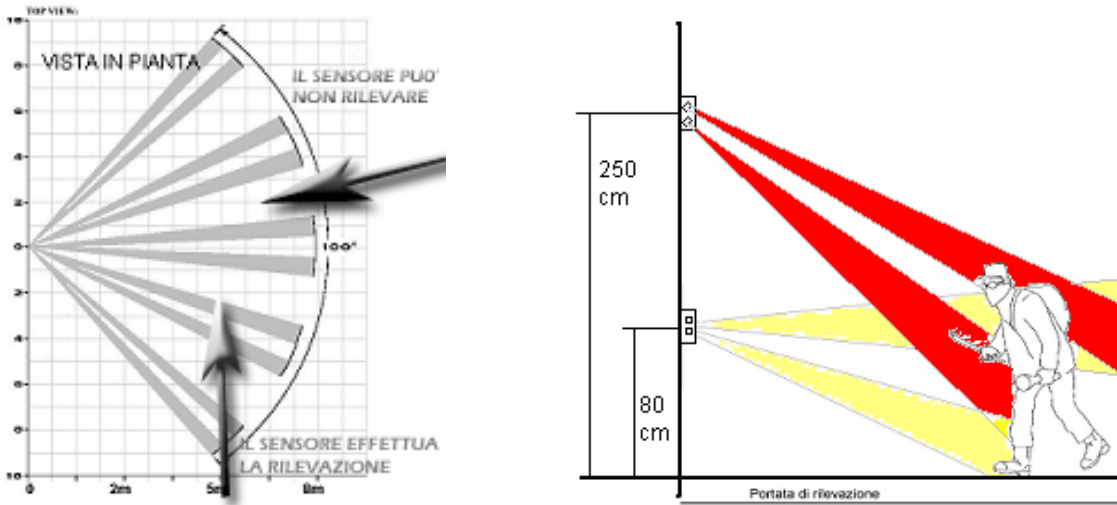


FIG. 2 “Intelligent AND”: human is detected by the crossing of both the beams, the dog doesn’t alarm the sensor

It is therefore suggested to keep the screws relaxed during the orientation of the heads. When this operation is complete, screws should be fully tightened. As the cover causes an attenuation of about 30% of the length of the beams, this should be also considered during the setting (without cover).

Due to the detecting units feature of being able to rotate on all axes, it is also possible to place the sensor on a slanting wall upwards without using further clamps, however detection from lower beams should be lost. Reducing the mounting height can compensate for this loss.



For a sure and repeatable detection, it is suggested to install the sensor in order to have the intruder that moves accross the beams and not toward the sensor.

The more interesting feature of this infrared sensor is to have two different and completely independent detection heads that can be orientated separately. This allows the infrared sensor to function in “OR/AND” mode. If turned to “OR”, when one of the two sensors detect a movement, an alarm is triggered. When turned on “AND” mode, only detection by both sensors will create an alarm signal. Furthermore it is possible to select the priority of the head that triggers the alarm. This means higher security and less risk of “unwanted alarms”. The optical range is 8m per ray.

Sensor use:

Mount the sensor taking account of a max coverage area of 8 m in distance and a max. angle of 100° (see fig. 1).

Fix the bottom of the sensor with the 4 fisher screws included (Ø6mm – screw 3,5x35mm – see points **A** in figure).

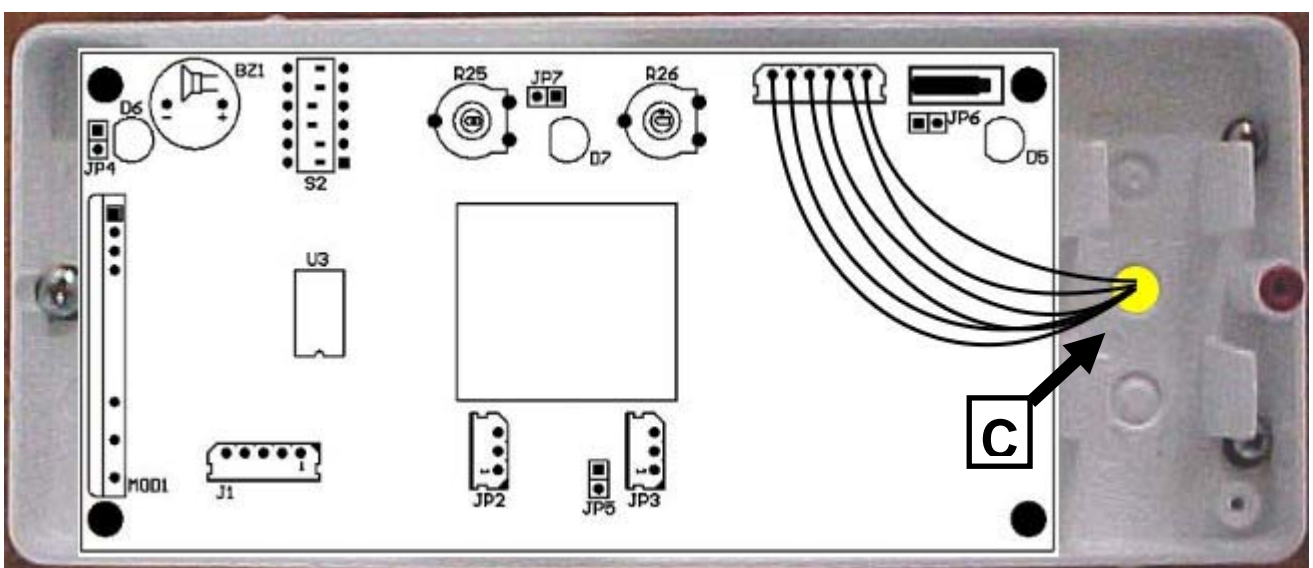
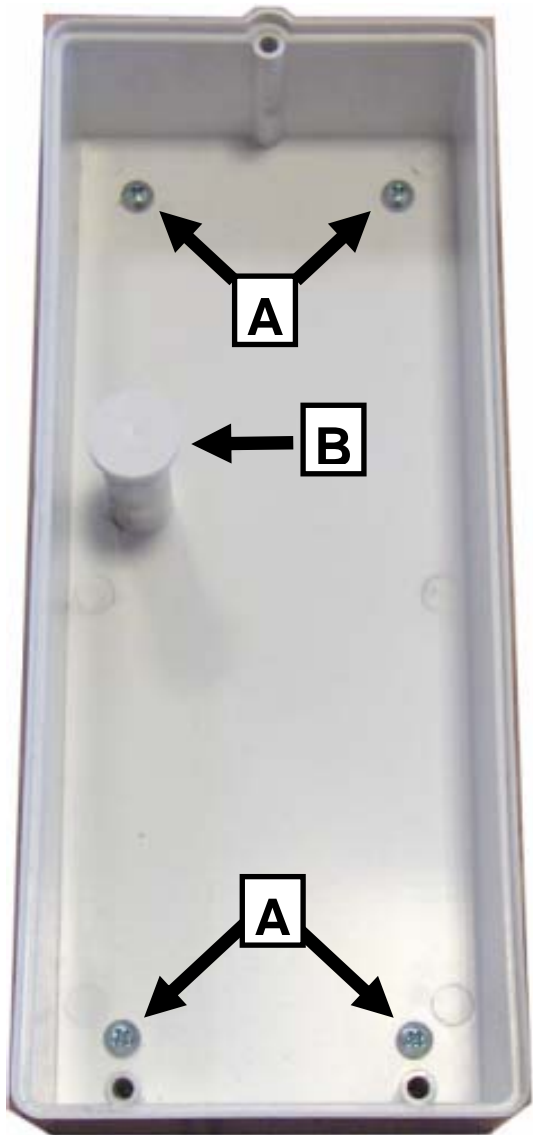
Insert the extension for the Tamper protection (see **B** in figure).

Drill the sensor case in the point **C** and pass through the hole the signalling wires to be connected to the wireless transmitter.

Put the wireless transmitter in the empty case behind the sensor and fix the sensor with the 3 included screws (2,9x19mm – see points **D**)

To set the sensitivity of the detectors, start from a minimum setting condition i.e. **regulation trimmers turned in an anticlockwise direction** and **detectors placed at the lowest possible position**. Increase gradually the range of detection only in the area you want to protect, in order to avoid the risk of detecting insignificant movements and unnecessary alarms.

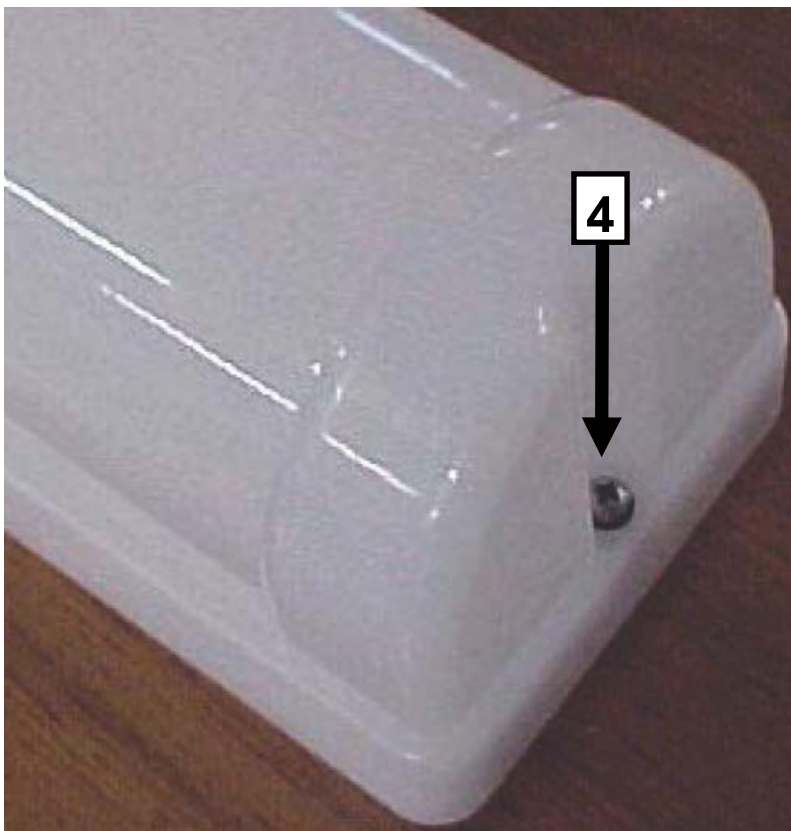
AFTER POWERING THE SENSOR, IT IS ACTIVATED AND STABILIZED ONLY 20 SECONDS AFTER THE END OF FLASHING RED LED'S.



O-RING MOUNTING

DIRVE K is provided with 5 silicon O-RINGS to be mounted on the sensor for a good weather protection.

The O-RINGS are in different colors (black and red). It is **mandatory** to respect the position of the different colors, because they have different purpose and if they are scrambled it is not guaranteed a good weather protection.



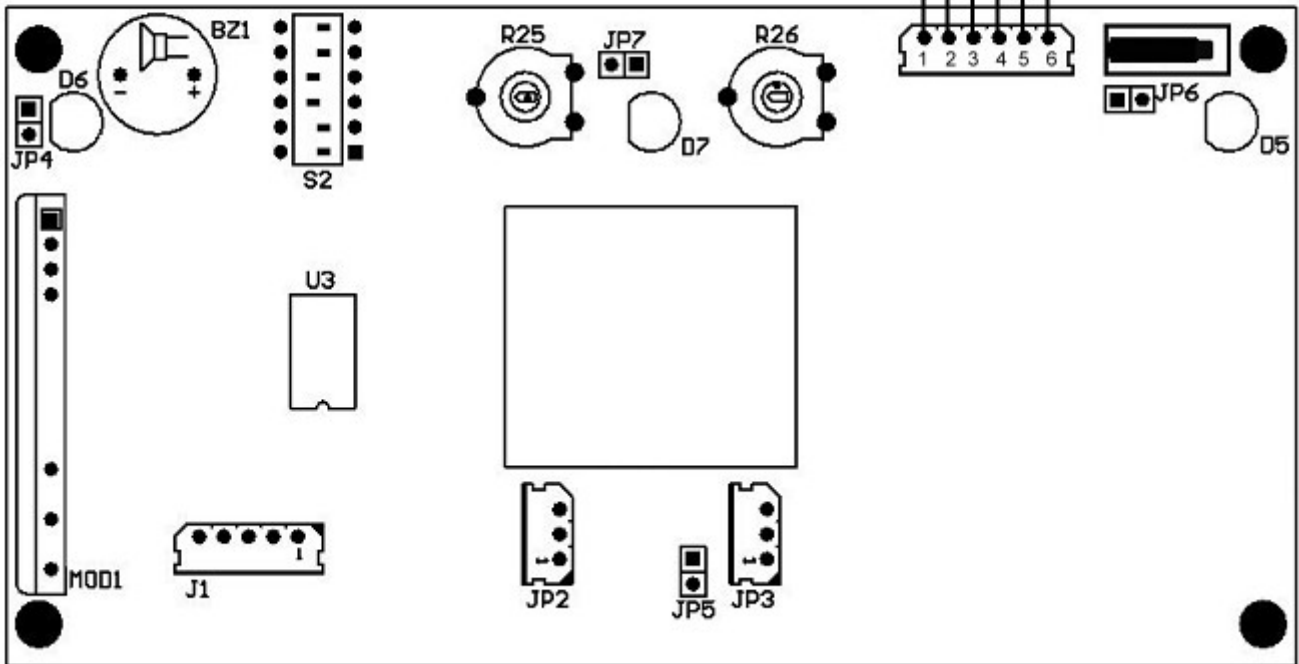
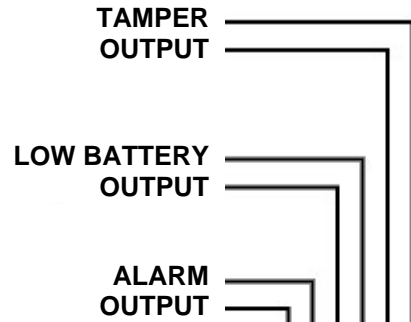
**BLACK O-RINGS
(1-2-3-4)**
Mount the o-ring on the screws body in order to realize a perfect tight under the screw head.

**RED O-RINGS
(5)**
Mount the o-ring in the groove where tighteten the cover screw.

FUNCTIONS SETUP:

ALL THE OUTPUTS ARE N.C.
(NORMALLY CLOSED) FREE
VOLTAGE CONTACTS

- CLOSED IN STAND-BY
- OPEN WHEN ACTIVE



JUMPERS

| | | |
|------------|--|---|
| JP5 | Wall Tamper | Closed = tamper disabled Open = tamper enabled |
| JP6 | Cover Tamper | Closed = tamper disabled Open = tamper enabled |
| JP4 | Test Buzzer (only with DIP4 ON) | Closed = Buzzer disabled Open = Buzzer enabled |
| JP7 | Alarm Blue Led | Closed = led enabled Open = led disabled |

IR HEADS RANGE TRIMMERS

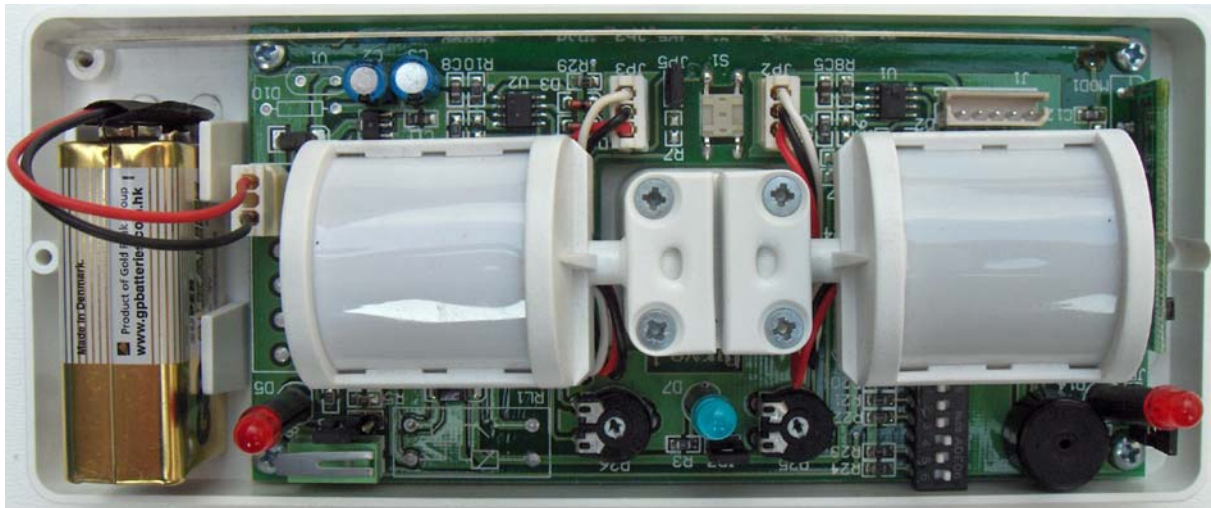
| | | |
|------------|----------------------|---|
| R25 | Upper IR Head | Sensitivity setting of upper head. Turn in clockwise direction to increase the range. |
| R25 | Lower IR Head | Sensitivity setting of lower head. Turn in clockwise direction to increase the range. |

DIP-SWITCHES

| | | |
|--------------------|---|---|
| DIP1 | Sensor Logic | OFF = AND mode for the heads |
| | | ON = OR mode for the heads |
| DIP2 | IR Sensitivity | OFF = High sensitivity (indoor use) |
| | | ON = Low sensitivity (outdoor use) |
| DIP3 | AND mode selection (with DIP1 OFF) | OFF = NORMAL AND Alarm is triggered by a detection that starts from any head and ends with the detection of the second head. If during the "AND time" the second head does not detect anything, the sensor returns in stand-by mode. |
| | | ON = DIRECTIONAL AND Alarm is triggered by a detection that starts from the upper head and ends with the detection of the lower head. If during the "AND time" the lower head does not detect anything, the sensor returns in stand-by mode. |
| DIP4 | Test | OFF = Normal use (Test OFF) |
| | | ON = Test Mode Enables head detection leds, alarm led and buzzer (if JP4 is closed), useful during the test of the detection area. |
| DIP5 | Continuous Transmission | OFF = Normal use |
| | | ON = the sensor make a cyclic switch of the alarm output (with 1 sec. period), useful for testing the range of the wireless transmitter). |
| DIP6 (*) | Quiet Time | OFF = Quiet Time enabled Alarm is triggered only if, between two detections, occurs a time gap of at least 30 seconds. If, within this time, there is another detection, the sensor resets the quiet time. If no detection is recorded after the quiet time, the sensor is ready to trigger a new alarm. This function is particularly useful in very crowded places, to extend the battery life. |
| | | ON = Quiet Time disabled Alarm is triggered each time the sensor detects a movement. |

(*) NOTICE: When DIP6 is moved from OFF to ON, before to obtain a real change of the function, it is necessary to wait the quiet time without causing any detection, otherwise the sensor will continue to work the same as with DIP6 in OFF.

TECHNICAL FEATURES



| | |
|---------------|--|
| POWER SUPPLY | Battery 9V |
| CONSUMPTION | Stand-by < 15uA – ALARME < 10mA |
| SIGNALLING | 1 LED for upper head, 1 LED for lower head, 1 LED for alarm transmission |
| ALARM INPUTS | 2 sensible elements, with selectable OR/AND mode |
| TEST | Test function selectable by dip-switch with led display and buzzer |
| WIRED OUTPUTS | Alarm, Tamper, Low battery |