



FARO

TRIBALANCE 8.12

OUTDOOR TRIPLE TECHNOLOGY DETECTOR
WITH ANTI-MASKING AND PET IMMUNITY



FIG.1

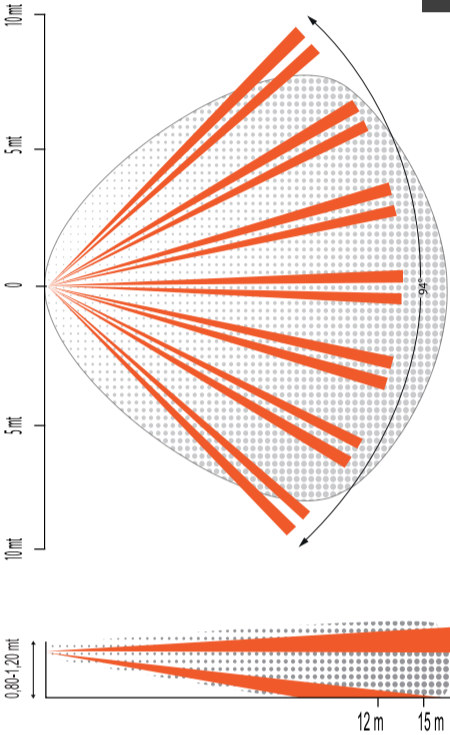


FIG.2

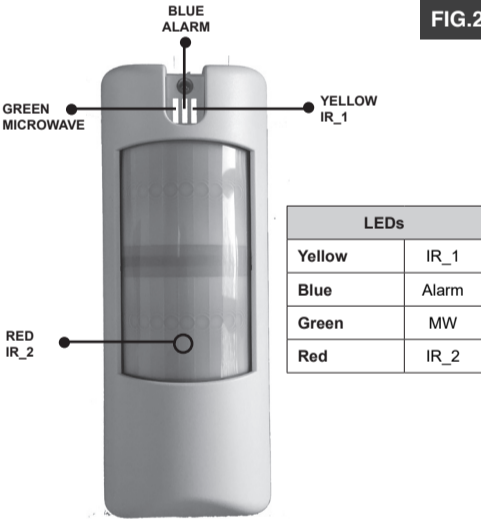


FIG.3

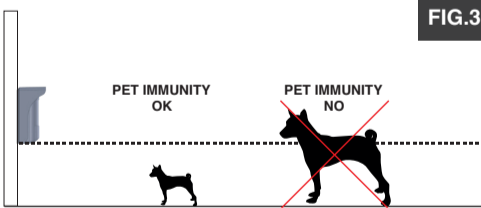
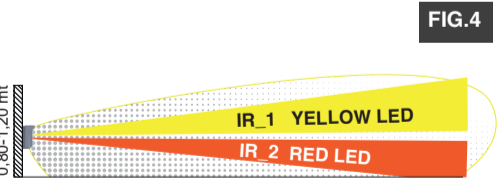


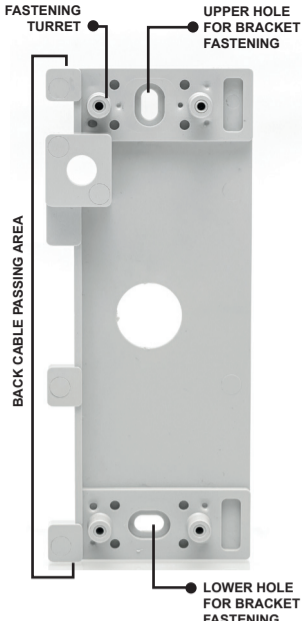
FIG.4



TECHNICAL FEATURES

Power supply:	12V ~: +/- 3V
Max. consumption:	45mA
Operation consumption:	13mA
Microwave:	10.525 Ghz
Alarm time:	5 sec
Opto relay:	100mA/24V
Tamper:	100mA/30V
Working temperature:	-10°C/+55°C
Environmental humidity:	95%
Size without accessories:	185x85x80mm

FIG.5A WALL FIX BRACKET



DETECTOR BASE

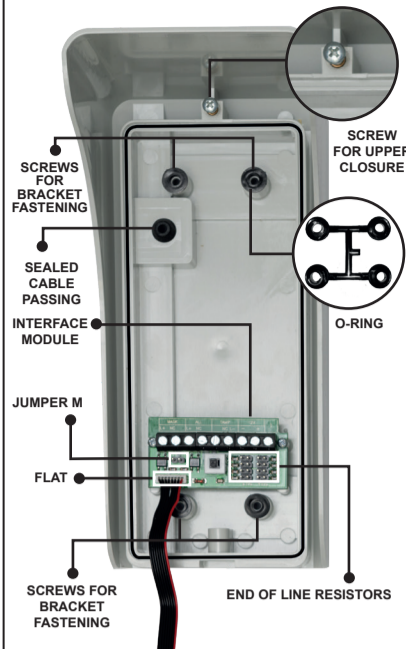


FIG.5B

FIG.6A

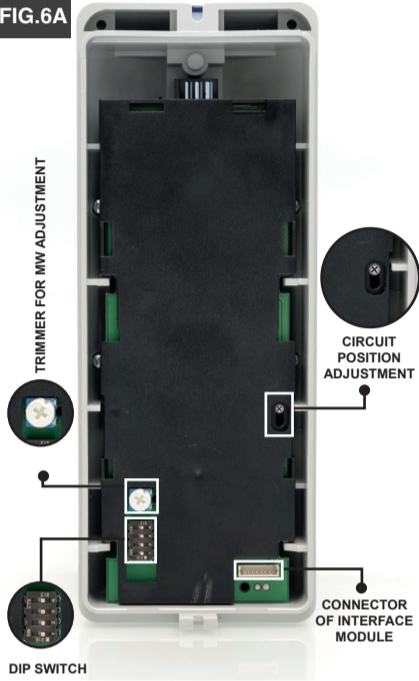


FIG.6B

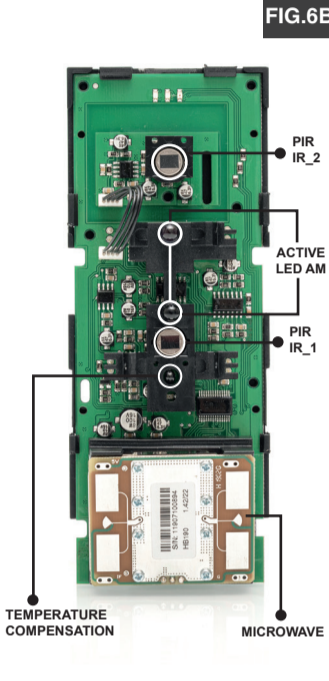


FIG.7

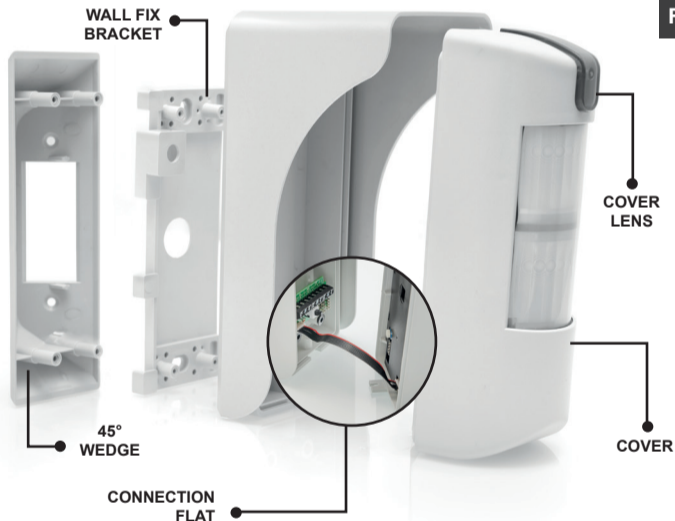
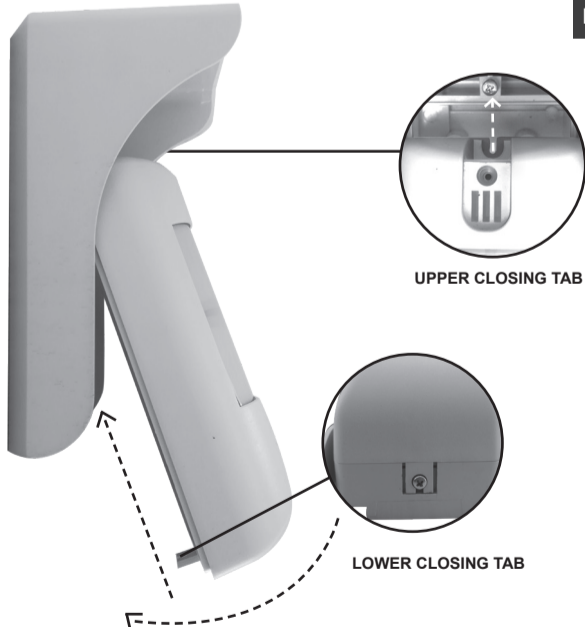


FIG.8



MAIN FUNCTIONS

- Outdoor triple technology detector (two PIR+MW);
- Protection level: IP65;
- Complying with: EN50131-2-4 Degree 2, Class III;
- Two infrared PIR sensors with dual-element technology for high efficiency and filtered for white light;
- Fresnel lenses on parallel levels, UV-stabilized;
- ACTIVE LEDs ANTI-MASKING;
- Approaching system;
- High-quality polycarbonate housing, UV-stabilized;
- Protected electronic board;
- High-resolution dynamic temperature compensation;
- Pet Immunity with THREE_BALANCE™ logic.

PRODUCT DESCRIPTION

FARO TRIBALANCE 8.12 is an outdoor triple technology detector for installations between 0,80 and 1,20m height from the ground. The sensor consists of two PASSIVE PYROELECTRICS with Fresnel lens and a MICROWAVE.

The detector has an operating range between 3m and 12m.

FARO TRIBALANCE 8.12 features many key points:

- High-performing detection and stability against false alarms thanks to **HIGH-RESOLUTION DYNAMIC TEMPERATURE COMPENSATION**;
- ACTIVE LEDs anti-masking system for detector protection and a microwave approaching system (settable through DIP SWITCHES);
- Pet immunity guaranteed by the **PET IMMUNITY THREE_BALANCE™** logic.

WARNINGS

Before proceeding to FARO TRIBALANCE 8.12 installation, please consider the following elements:

- Adjust the sensor such that its operating coverage does not coincide with any moving objects (if needed, please use the partializing lens, PAR LIM LM+CM);
- The ground of covered area should not have significant slopes (see section ADJUSTMENT ACCORDING TO GROUND SLOPE);
- The bracket used for detector mounting must be firm, without any odd protrusions/grooves and not subject to vibrations;
- Detector positioning must not be under direct sun light;
- Detector coverage area must not include wide reflective surfaces such as metallic ones;
- Pay attention not to darken detector's field of vision with objects, not even in part;
- Please remember that the best operating condition is given with detection lobes intersecting at 45° the direction of intruder transit.**

INSTALLATION HEIGHT AND PET IMMUNITY

It is highly recommended to install FARO TRIBALANCE 8.12 between 0.80m and 1.2m height from the ground. In the event of small animals passing within the coverage area, please consider an installation height greater than the animal to distinguish (FIG.3). To check this element, please refer to the YELLOW LED of IR_1 beam (FIG.2 and 4).

DETECTOR FIXING

Mount the WALL FIX BRACKET on the wall (FIG.5A) using screws suitable for wall material. Drill two holes, coinciding with the "HOLES FOR BRACKET FASTENING" highlighted in figure 5A. Apply the O-rings (FIG.5B) inside the cylindrical turrets located on the "BASE" to avoid infiltrations through the holes on the turrets. After running the cable in its specific "SEALED CABLE PASSING" on the base, place the detector base on the fixing bracket aligning so that the turrets for bracket fixing are on cylindrical holes on the base. Fasten the base to the bracket using the 4 "SCREWS FOR BRACKET FASTENING" – operate from the inner of the base. After installation and wiring, slide the detector towards the upper closing screw and slightly press downwards (FIG.8). Fasten both upper and lower screw to ensure total closure.

WIRING

Wire the SYSTEM CABLE on the INTERFACE MODULE terminal board, following the instructions of FIG.9.

Make connections as indicated in FIG.9-10.

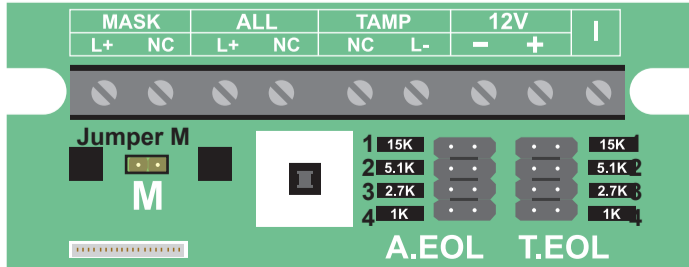
Through the 2 jumpers ALL EOL 1...4 and TAMP EOL 1...4 and jumper M (FIG.10), it is possible to select the end of line resistors for double or triple balancing. Resistors are connected as indicated in the table below. The line coming from the control panel must be connected with a pole to terminal <L-> and the other one to terminal <L+ALL> or <L+MASK>. With jumper M closed and <L+MASK> connected, Mask contact is in series with tamper contact. At this point, it is possible to get a triple balancing by applying a resistor of value required by the control panel (R3B FIG.10) to MASK terminal. With no resistor selected and jumper M open, contacts are independent.

Once the appropriate adjustments are made, close the detector fastening the 2 specific screws (one located in the upper part under the "roof", the other one located in the lower part near the closing slot of the sensor).

TERMINAL BOARD

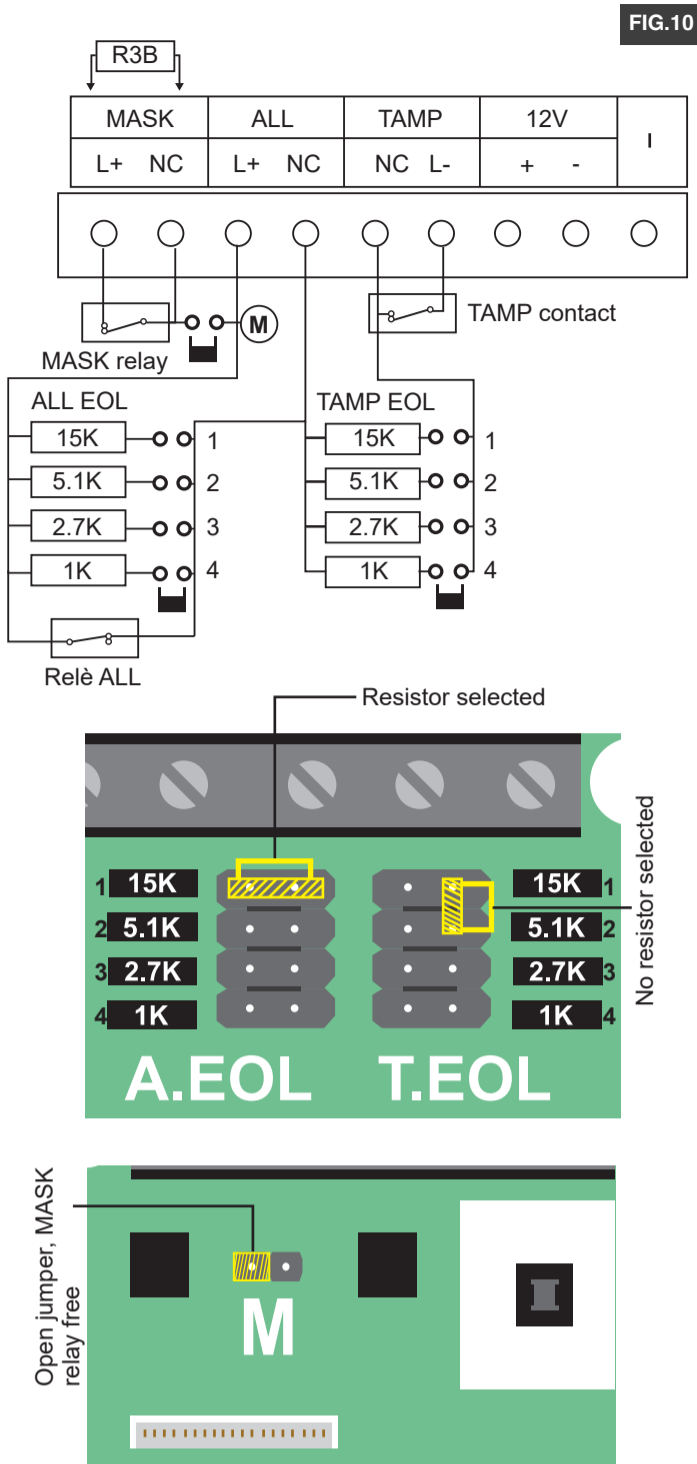
I	INPUT: aux input
+	12V power supply input
-	
TAMP	NC tamper
ALL	NC alarm relay
MASK	NC anti-masking relay

FIG.9

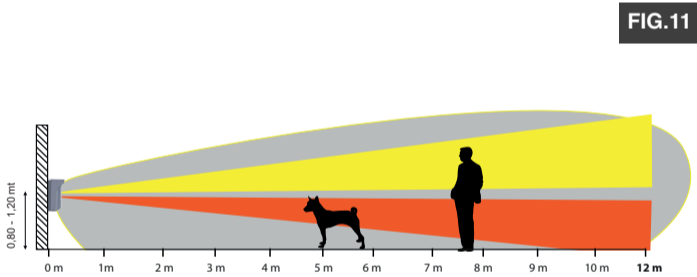


JUMPER M: if connected, alarm relay is in series with anti-masking relay.

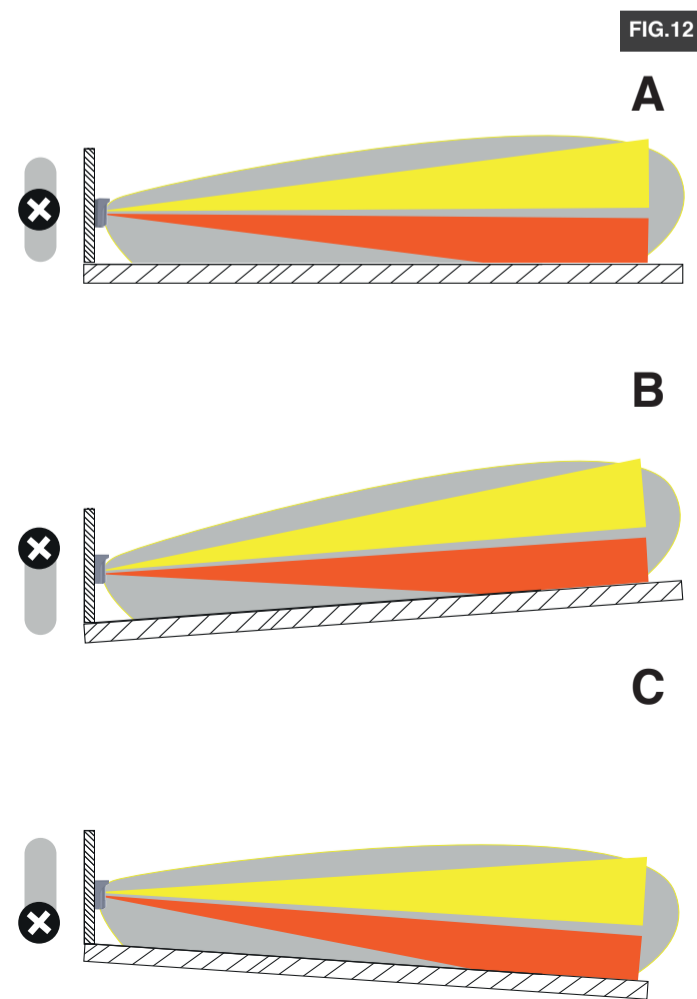
DEOL OUTLINE



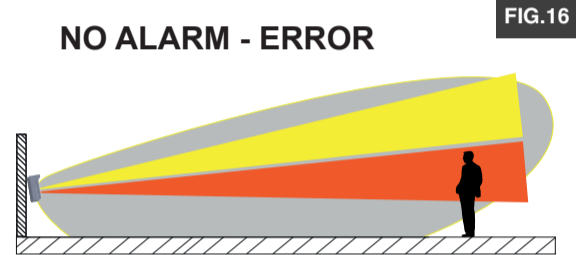
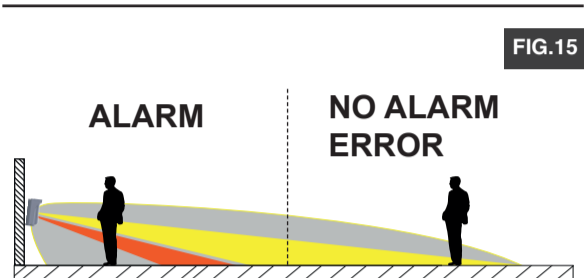
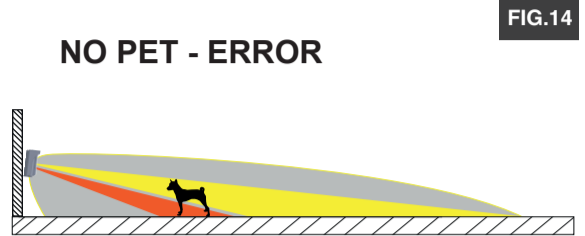
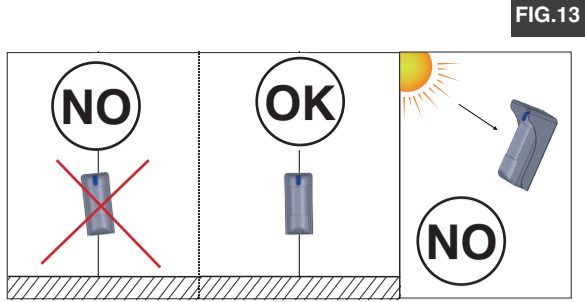
PROPER DETECTOR POSITIONING



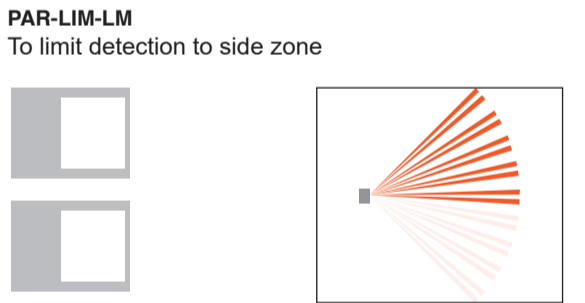
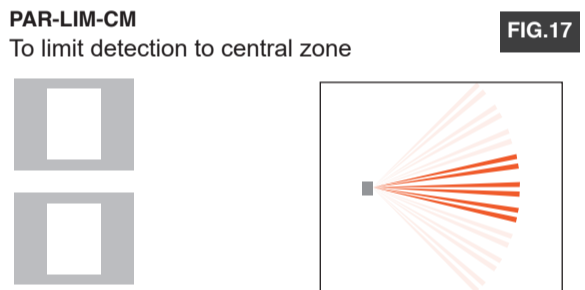
ADJUSTMENT ACCORDING TO GROUND SLOPE



EXAMPLES OF IMPROPER POSITIONING

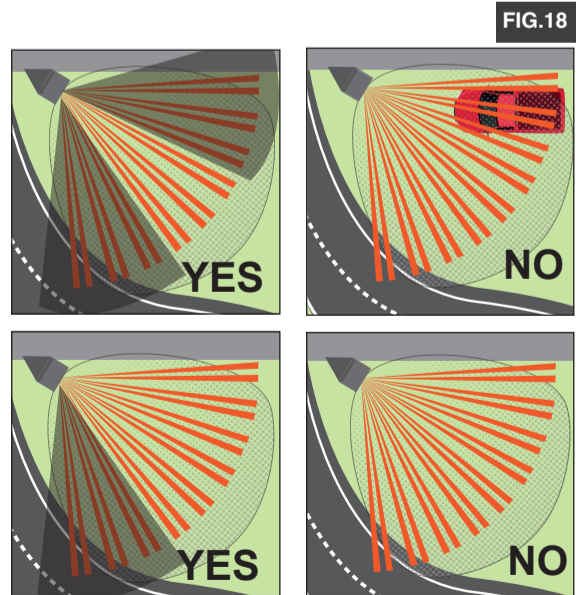



PARTIALIZING LENSES FOR COVERAGE LIMITATION (provided)



45° WEDGE INSTALLATION

Detector fixing is ensured by the supported fixing system with "45° WEDGE" bracket, that allows to turn coverage 45° to the left or right in relation to the installation wall (**FIG.7-18**).



 **DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE)**

The symbol of the crossed-out wheeled bin on the product or on its packaging indicates that this product must not be disposed of with other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. As an alternative to autonomous management, you can return the equipment to dispose to the dealer when buying a new equivalent product. At electronic retail shops with sales area of at least 400m², it is possible to provide free of charge, without purchase obligation, electronic waste no bigger than 25cm. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

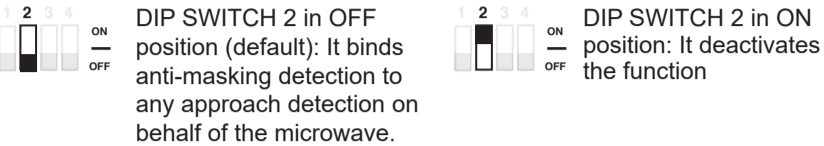
SETTINGS

To perform settings, use the DIP SWITCHES located on the back of the board (**Fig.5B**).

DIP SWITCH 1



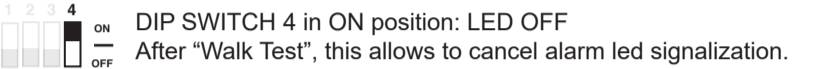
DIP SWITCH 2 (Active only with DIP1 in ON position)



DIP SWITCH 3



DIP SWITCH 4



ANTI-MASKING

When detector is closed, avoid any movements close to the device as this might compromise the SELF-CALIBRATION of anti-masking system. If the detector gets masked, the three LEDs will blink (GREEN, BLUE, YELLOW). **NOTE:** Pay attention not to place hands or tools in front of the Fresnel lens as this may cause improper self-calibration of anti-masking system.

WALK TEST

Before running "Walk Test", remove the COVER LENS (for a better visualization). The COVER LENS will be replaced at the end of calibration. During "Walk Test", all LEDs will be visible. These will remain active for 20min after front plate closure to allow detector verification/calibration. After this period, only the alarm LED will be displayed (unless prior function has been set to LED OFF_DIP4).

To run Walk Test proceed as follows:

1. Check that microwave range is set at maximum (MW ADJUSTMENT TRIMMER of **FIG.6A** fully turned clockwise);
2. Check that YELLOW (IR_1 beam) and RED (IR_2 beam) LEDs are visualized at the same time, with detector placed to the maximum distance from protected zone.

ATTENTION!

- In case of RED LED visualized alone, please note that detector is pointing too high from the ground. Slide detector circuit as shown in **FIG.12C**;
- In case of YELLOW LED visualized alone, please note that detector is pointing too low to the ground. Slide detector circuit as shown in **FIG.12B**;
- After checking that YELLOW and RED LEDs are visualized at the same time, adjust the microwave (referring to ADJUSTMENT TRIMMER) to limit coverage area at required distance.

RANGE

To adjust detector range, use the trimmer located on the base of the detector (**FIG.6A**).

Range can be increased by turning the trimmer clockwise; the minimum range is approximately 3m, whereas the guaranteed maximum one is 12m. To set range, simulate an intrusion at the maximum distance required and adjust the trimmer so that any movement is detected starting from the point desired.

ATTENTION!

In case the moving object is too big (such as cars, trucks, farm animals,...), this can be detected even at higher distances than 12m.

ADJUSTMENT ACCORDING TO GROUND SLOPE

In case of slopes, use the SCREW FOR GROUND ADJUSTMENT sliding the board in relation to the screw as shown in **FIG.12**.

PARTIALIZING LENSES FOR COVERAGE LIMITATION

When it comes to detector coverage limitation (for example in case of vegetation, moving objects, disturbed areas), apply these partializing lenses:

- PAR-LIM LM to limit detection to one side of the detector (**FIG.18**);
- PAR-LIM CM to limit detection to central beams only (**FIG.18**).

DETECTOR CLOSURE

Once the appropriate adjustments are made (wirings, DIP SWITCH setting, range adjustment, partializing lenses application), close the detector fastening the 2 specific screws (one located in the upper part under the "roof", the other one located in the lower part near the closing slot of the sensor).

NOTE: Pay attention not to place hands or tools in front of the Fresnel lens as this may cause improper self-calibration of anti-masking system.

COMPLIANCE DECLARATION

VENITEM Srl declares that this radio equipment is compatible with the essential requirements of the Directive 2014/53/UE. The declaration of conformity is available on website: www.venitem.com.

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