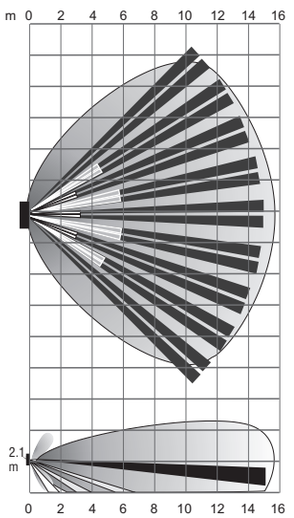
The **FARO DT AM Plus** is a dual technology motion detector . It consists of a Microwave's section (MW) and a Passive Infrared's section (PIR).It is recommended for highly professional installations, it exell for its important features such as:Antimask on Microwave with dedicated relè; ABP, function AntiBlinding of Infrared, indicated to counter sabotage with paper or spray paint; ECO, the possibility of switching off the microwave.

INSTALLATION GUIDE

Before the installation analyze the characteristics of the site to be protected and identify the position of the sensor that allows the best coverage possible.
Always prefer an installation at the corner.
The best condition of detection, especially for ABP, is when the lobes of detection intersect at 45° the direction of the intruder transit..
Place the sensor toward to the inside of the site and away from doors, windows, moving machinery and heat sources.
Avoid to direct the detector toward glazings because they don't limit the coverage of microwave.
The optimum installation height for the sensor is between 2.1 m and 2.3 m.
In that condition you get the pattern detection of fig.1

Fig.1 Total coverage

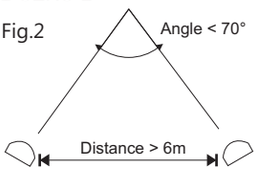


Note: be careful not to obscure, even partially, the field of view of the detector.

Interference between Microwave

It is good practice to install microwave sensors with increased distance of 6m from each other and at an angle less than 70 ° (fig2).
This practice ensures the reduction of the probability of interference between microwaves, and so the limitation of the consequent phenomena of false alarms.
For the sensor **FARO DT AM Plus** in an environment where you can have microwaves interference, prefer the setting:
-AND SENS-L

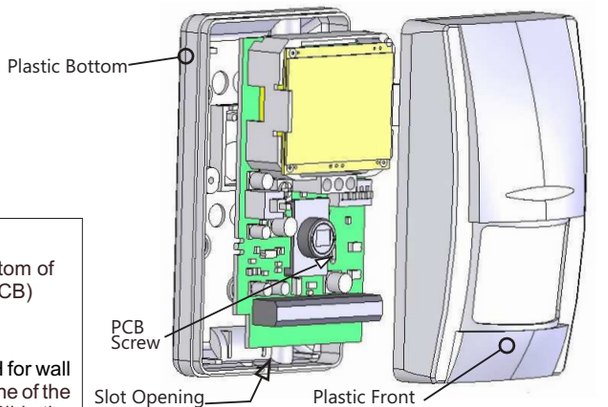
Fig.2



MAIN SPECIFICATIONS

- Antimask on Microwave with dedicated relè
- ABP, antiblinding function on Infrared
- ECO, microwave switching off in occupied site
- DEOL,end of line resistors , internally selectable,
- Modes of detection AND-OR
- Sensitivity selectable on two levels
- TimedMemory of type ofAlarm
- Remote enabling Led
- Anti Fluorescent digital processing
- Opto relè for a long life and low consumption
- Microwave with pulsed emission with low environment impact
- Fresnel Lenswith 18 zones on 4 planeswith look down zone
- WallTamper optional.
- Total coverage 90° per 15m
- Wall,Corner, Bracketmounting
- HUB, Bracket divalent wall / ceiling (optional)

Fig.3



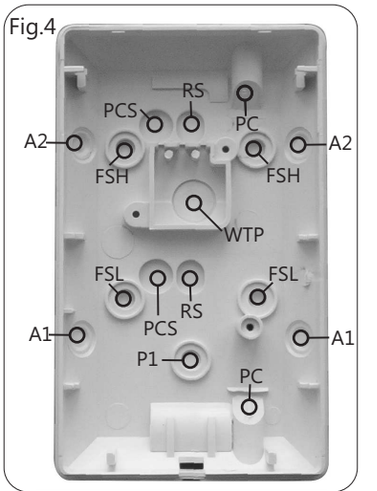
FIXING THE SENSOR

Remove the front plastic inserting a screwdriver into the Slot Opening located at the bottom of the sensor (fig.3) and exert a slight pressure to release it. Pull out the electronic card (PCB) unscrewing the screw (fig.3).

WALL / CORNER

Engrave, as necessary, the holes in A1 and A2 for corner mounting , or P1 and one of FSH for wall mounting (WTP in alternative to FSH if you want to use Wall Tamper) fig.4. Engrave also one of the holes (PC) in the plastic bottom. (fig.4) .Practice the of holes 6mm onthe wall for fixing . Slide the cable through the cable keyhole chosen.
Fix the plastic bottom to the wall with screws and anchors provided, ensuring that the heads of these do not touch the electronic card..
To configure the sensor to CEI 79-2 Liv II, apply the microswitch Wall Tamper in his housing. Fold up the lever so that will remain pushed by the screw and than fix the tamper cover with the furnished screw.
There after it will be connected in series to the line tamper sensor.
Put the PCB on the plastic bottom.

Fig.4



WITH BRACKET

If required CEI 79-2 Liv II, insert the micro switch Wall tamper in his housing (Fig.6) and run the cables through the cable keyhole.
With the screws furnished with the detector, fix the bracket to the wall with the arrows upside (Fig.7).
Continue the assembling. Engrave completely the holes (FSH) or (FSL) on the bottom of the sensor that will be used to fix the sensor to the Hub, (PCS) for the cable, and (RS) for the adjustment of the bracket (Fig. 4).
Pass the cables through the hole PCS. centre the bracket on the referring (Fig. 5), and fix the sensor with the provided screws through the holes FSL or FSH
Direct the detector and block the bracket by clamping the screw through the hole RS . (Fig. 3)
Put the PCB on the plastic bottom.
____Refer to the Manual of the hub for other types of assembly.

Fig.5

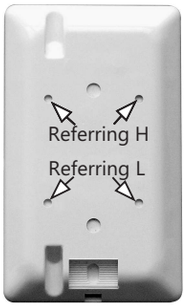


Fig.6

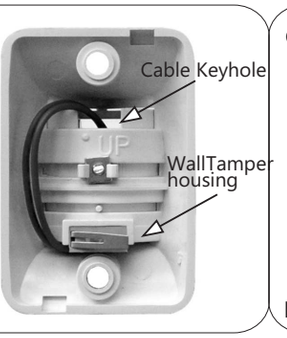


Fig.7

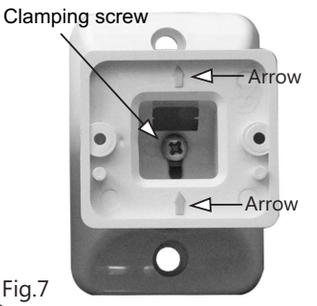
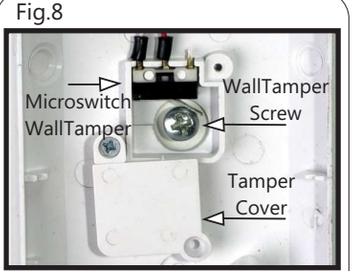


Fig.8



DEOL RESISTORS

Through two Jumpers ALL EOL 1...4 e TAMP EOL 1...4and the Jumper M (fig.9),you can select the End of Line Resistors for the double or triple balance.

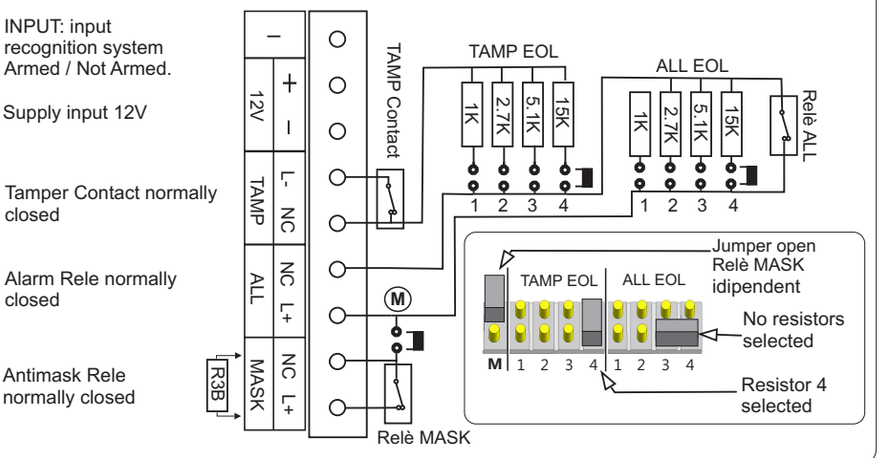
The resistors are connected as in the scheme. The line which goes from the Central Unit, must be connected one pole to <L-> terminal, and the other pole to <L + ALL> or <L+ MASK> terminal..
With the Jumper M closed and connecting to <L+ MASK> you have the Mask contact in series to the Tamper contact . In this condition you can be apply to MASK terminal contact a resistance of a required value by the central (R3B Fig. 9) to obtain the triple balance.

If you do not select any resistance, and the Jumper M is open, the contacts are all independent.

During the first 60sec after the power-up, the sensor will remain in "WARM UP". In this fase, the LED will flash alternately.
After is possible to perform the Walk Test

Fig.9

DEOL Scheme



WALK TEST (Select DipSwitch N 5 in pos. Off)

MW (Microwave)

Adjust the range of MW, through the trimmer, to the minimum necessary. Verify the detections by the GREEN LED.

NB the range of the MW must be adjusted to the minimum necessary because the Microwave can go beyond the walls and it can detect movement and noise outside the protected room..

PIR (Infrared)

Apply the plastic front and, with LED off move in the area verifying the detections of PIR through the LED YELLOW.

FUNCTIONS SETTING WITH DipSwich

ANTIMASK - Microwave Antimask
DipSwitch N°1 in pos. ON and Plastic front closed

Any element that can mask the MW generates an alarm displayed by the three flashing LEDs, and sent to the central through the connection terminal MASK. This signal remains until it is removed the cause that generated it.
The enabling of Antimask function will be active only after the closing of the plastic front and will bring the sensor in a condition to MaskAdjust

In this condition, while the LEDs will flash alternately for about 60 seconds, the sensor will calibrate its antimask levels.

Closed the Plastic Front is therefore necessary to remove your hands from the sensor, and do not move and do not put anything in its immediate vicinity.

At the end of MaskAdjust the sensor will be ready for operation.

ABP - Mode of detection anti occulting- DipSwitch N°3 in pos. ON

IN THIS CONDITION THE DIP SWITCH N ° 2 AND 4 HAVE NO EFFECT

This mode is suited to tackle of the intruder occulting through the infrared radiation shielding.
There is an alarm condition, when both sections, almost the same time, show an intrusion alarm (like AND), or if you have more detections of MW without any detection of PIR.

Guarantees a high protection in environments where there is low probability of false alarm for the MW

AND - Mode of detection - DipSwitch N°2 in pos. Off

There is an alarm condition when both the sections, MW and PIR almost simultaneously show an intrusion alarm.

This configuration is suitable for installations that may have environmental instability.

OR - Mode of detection - DipSwitch N°2 in pos. ON

There is an alarm condition if at least one of the two sections (MW or PIR) show an intrusion alarm.

This configuration is suitable for installations that do not present environmental instability and require an high capability of detection.

SENS L- Reduced Sensitivity - DipSwitch N°4 in pos. ON

This setting allows a reduction of sensitivity for both sections MW and IR in the mode AND and OR.

It has a better noise filtering

LED OFF- Views - DipSwitch N°5 in pos.ON

Disable the views of detection.
The views of memories remain empowered.

FUNCTIONS TROUGHT INPUT LINE

These functions are activated / deactivated by the System arming ON / System arming OFF.
It is considered:
12V on INPUT = System arming **OFF**
0V on INPUT = System arming **ON**

REMOTE ENABLING LED

REQUEST CONDITION LED OFF

At the System arming OFF, the sensor will arrange for the rehabilitation of the views of detection. The views will be rehabilitated at the first detection, and will remain active for 30sec.

FUNCTION ECO - Turning off the MW -

REQUEST CONDITIONS: LED OFF; ANTIMASK OFF

After 30sec of the rehabilitation of views (see REMOTE ENABLING LED), simultaneously at the shut down of LED, will be turned off even the emission of Microwave for not radiate unnecessarily the protected zone.
The Microwave will be rehabilitated at next System arming ON.

MEMORIES

At System arming OFF, will see the memory of the first alarm occurred, as in fig.1.
The memory will be reset to the next System arming ON

DELAY of MEMORY for use in TIMED ZONES

Time of Outing: alarms that occur within the first 30sec. from the System arming ON will be erased.

Time of Entry: alarms that occur 30 sec.before the System arming OFF will be erased

Tab. 1 MEMORY DISPLAY

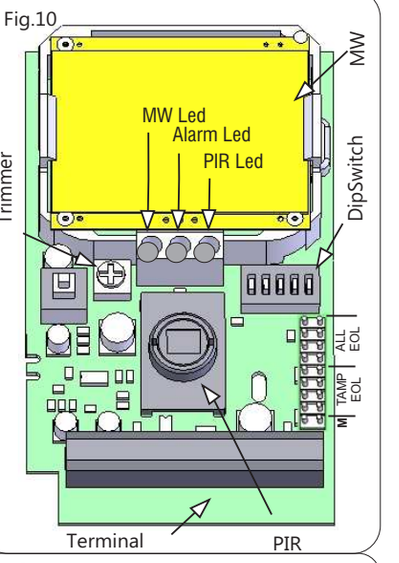
ALARM	GREEN Led	BLU Led	YELLOW Led
PIR+MW	OFF	ON	OFF
PIR	OFF	ON	ON
MW	ON	ON	OFF
ANTIMASK	FLASH	ON	FLASH

The **Serial Number «ID»** of the detector is printed on a label on the board of the detector

DECLARATION OF CONFORMITY

The Manufactor declares that this equipment is compatible with the essential requirements of the Directive 1999/5/EC

Fig.10



CE SPECIFICATION

Table of countries which are allowed frequencies of the product.

~~AT~~	BE	CY	~~CZ~~	DK
~~EE~~	~~FI~~	~~FR~~	~~DE~~	GR
HU	IE	IT	LV	LT
~~LU~~	MT	NL	PL	~~PT~~
SE	SL	ES	~~SK~~	~~GB~~
~~BG~~	RO			

REFERENCE NORMATIVES

EN50131-2-4 Grado 2, CLASSE II

CEI 79-2, I° / II° Liv

P/N: 02502

SPECIFICATION

Voltage:	12V ⎓ +/- 3V
Current: Max:	
in memory of alarm:	**26**mA
Current:. Stand By:	12mA
Microwave:	8dBm 10.525 Ghz
Alarmperiod:	3 sec
OptoRele:	100mA / 24V
Tamper::	100mA/30V
Wall Tamper:	300mA / 48V
Operating Temp.:	-10°C/+55°C
AmbientUmidity :	95%
MTBF Teoric:	120.000 Hours
Dimensionis:	108 x 64 x 46 mm
Performance Level:	**EN50131-2-4 Grade 2, CLASS II**

R&TTE

VENITEM