Art.EWC1AM-EWC1AMW

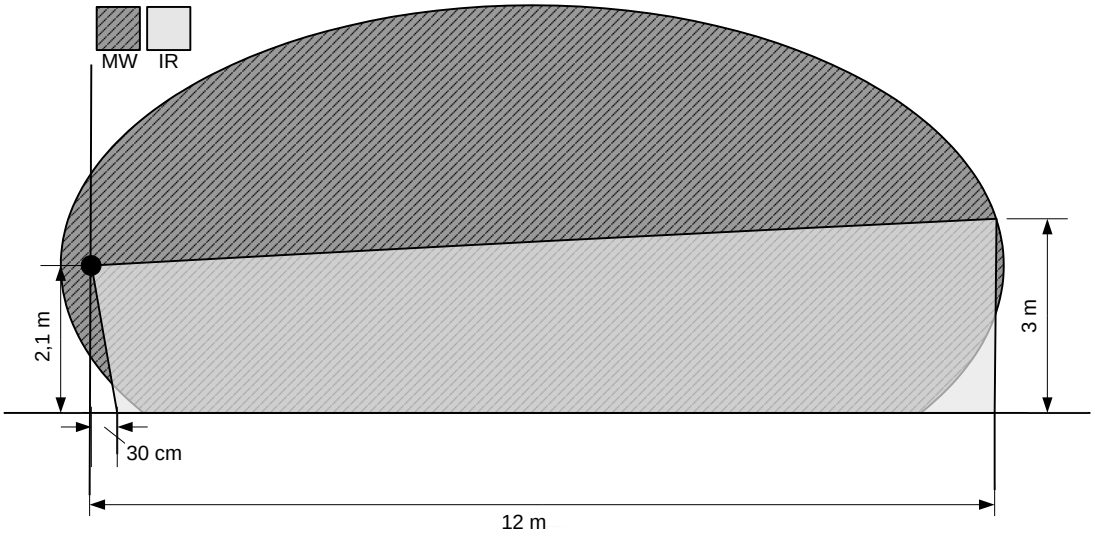
LOW CONSUMPTION OUTDOOR DUAL TECHNOLOGY CURTAIN DETECTOR WITH ANTIMASKING AND TILT FUNCTION

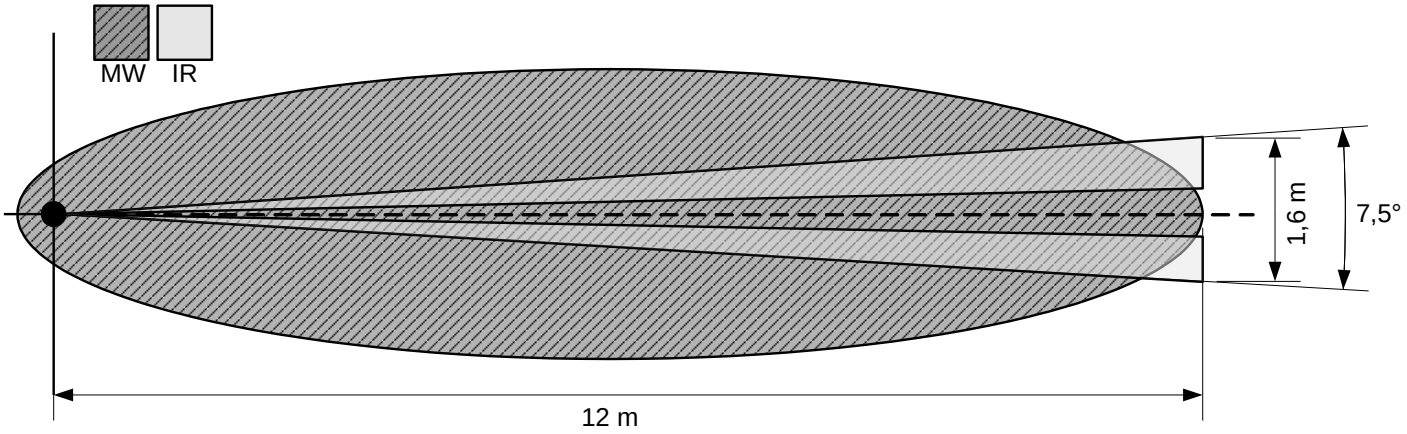
INSTRUCTION MANUAL

Rev.1120AG

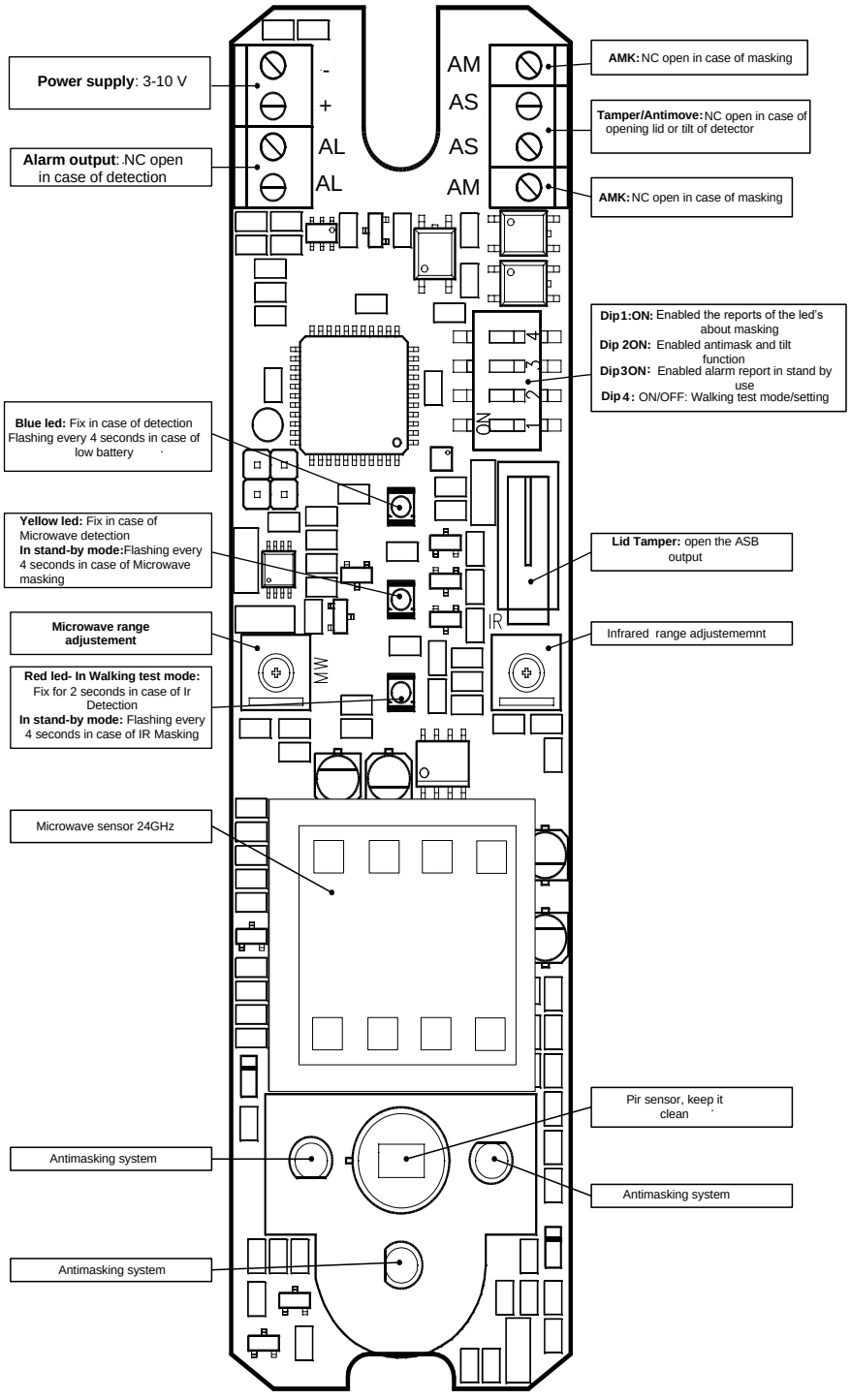
Thanks for having purchased our detector Art.9456/57 UAD the only one universal low consumption dual technology curtain detector for outdoor use with double antimask for PIR and microwave.
You can connect to 9456/57 UAD, any radio transmitter which will be placed inside the case , making it compatible with any existing wireless system
Thanks to its low power consumption, could be powered by lithium battery as follow 14500 or 14750.
Is an outdoor miniaturized double technology detector, particularly suitable for being installed on shutters. Its characteristics make it suitable for any external place, and wherever it is necessary to protect some specific areas. Art. 9456/57 UAD , in fact, creates a very narrow curtain barrier (about 7.5°) and it has an adjustable covered area up to 12m. It is made with atmospheric resistant agents material and it is protected from a watertight cover.
Moreover its electronic pcb is covered with resin capable to assure its correct working in every atmospheric condition. Accurate planning and digital microwave signals analysis make Art. 9456/57 UAD a very stable detector.
The detector is equipped with a double anti-masking system and an anti-tilt system that detects and reports movements greater than 3.5 ° of the device.

COVERAGE AREA





DESCRIPTION



INSTALLATION AND POWER ON

Install the detector on the jambs of the window or upper door using the flat bracket and, in the case of installation outside the frame (for example perimeter protection), use the optional angle bracket. Connect the alarm (ALM) and anti-masking (AMK) outputs to two inputs of your transmitter, connect the tamper / anti-tamper (ASB) output to the tamper of your transmitter, connect the battery so that it feeds both devices. After an initial pause there is a flashing of the three LEDs on board for about 60 seconds. This phase allows the device to exhaust all transients, to stabilize and at the same time allows to close the lid. Subsequently, if the anti-masking function is activated, there is a flashing of only the yellow LED for about 15 s (microsampling) and finally the red LED flashes for about 30 s (infrared sampling). When this last phase is over, the device goes into service, bringing it into low consumption mode.

We recommend that you use a transmitter that allows you to send the three information separately, so that you can take full advantage of the features of the device.
Make sure that the area to be monitored is free of obstacles and check that there are no sources of heat near the detector.

WALKING TEST

It is advisable to adjust the range of the infrared and microwave sections to prevent detection from intervening on areas outside the area to be monitored, causing false alarms. Proceed as follows. Open the lid, put the Dip4 in ON. In case the Dip4 is already ON, bring the Dip4 to OFF and after a few seconds turn it back ON. Some simultaneous blinks of the three LEDs signal the entry into the walking test: for the next three minutes the sensor is always ready for detection and never goes into inhibition. In addition, the LEDs are always active, signaling the detection. Adjust the trimmers until you have detected all the area to be monitored. After 3 minutes the detector automatically exits the walking test, signaling with a few simultaneous flashes of the three LEDs.

If the infrared section has a limited flow rate, clean the lens and the pyroelectric element with a cotton cloth soaked in alcohol..
However, the sensor exits the walking test after three minutes regardless of the position of the Dip4

CONFIGURATION

The following table shows the features that can be set using the dip-switch and factory settings:

DIP 1	On Off	Masking and low battery report enabled Masking and low battery report disabled	**OFF**
DIP 2	On Off	Anti masking and tilt system enabled Anti masking and tilt system disabled	**OFF**
DIP 3	On Off	Alarm report enabled Alarm report disabled	**ON**
DIP 4	Off→On	Walking test	**OFF**

Dip1: allows the display of infrared masking events, microwave masking and low battery on the three leds of the device. If not active these events are reported only on the related exit.
Dip2: activates anti-masking and anti-tilt systems. After activation, the sensor flashes the wait (three leds that flash in sequence) to allow the lid to close. Subsequently, the environment is sampled by the microwave (indicated by the flashing of the yellow LED) and then by the infrared (signaled by the flashing of the red LED). The anti-glare system comes into operation immediately without any indication on the LEDs.
Dip3: allows the display of alarm events even in low consumption mode. If not active, alarm events are signaled only on the related output.
Dip4: an OFF◊ON transition enables walking test: for the next three minutes the sensor has no inhibition and is always ready for detection. At the same time the leds are active to signal the measurements on the two technologies and the alarms.

The operation of the microwave and infrared antimask systems accounts for about 50% of the battery consumption. Activate only if necessary.

INIBITION

Like all low-consumption detectors, this device, for reasons related to consumption, is most of the time in a state of very low consumption (stand-by) waiting for an event that awakens it. Following a detection with consequent alarm, the device is inhibited preventing detection in the following three minutes. After this time the detector is put on standby at low consumption.

ANTIMASK

The anti-masking system intervenes when an object placed for a few minutes in the immediate vicinity of the detector prevents detection by the microwave or the pyroelectric. The intervention of the antimask system causes the AMK output to open for 2 s. In the event that the sensor remains masked, the signal is repeated every 30 minutes for another three times. Then the sensor self calibrates learning the new situation. If the signals on the LEDs are active (Dip1 ON) the red LED flashes briefly every 4 s in case of masking of the pyroleptic and / or the yellow LED flashes briefly every 4 s in case of microwave masking

In the event that the microwave antimask system is already active, the removal of the lid generates an antimask alarm with consequent opening of the AMK output.
During the sampling phase, do not stand near the detector and do not place objects between the device and the masking detection area

LOW BATTERY

The device is able to detect the low battery level. When the voltage drops below 2.7 V, if the signals on the LEDs are active (Dip1 ON) ,the blue LED flashes briefly every 4 s. Replacing the battery to restore the normal operation.

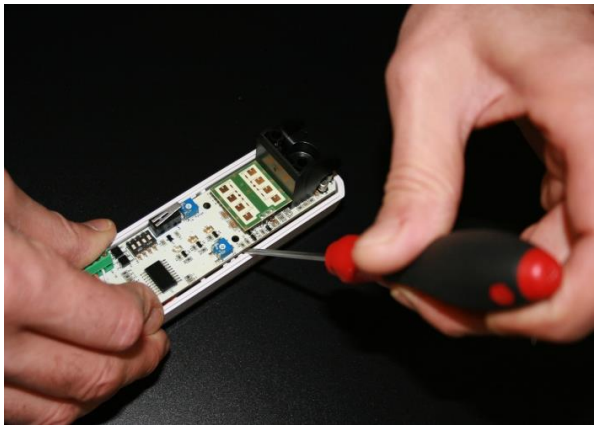
ANTI-TILT AND TAMPER

The detector is also equipped with an accelerometer anti-glare system. If the device is moved more than 3.5 °, an alarm is generated on the ASB output with opening for 2 s. Then the sensor learns the new position. Restoring the previous position and / or further movements will give rise to other reports. To activate this function, set Dip2 to ON. The anti-tamper intervenes if the lid is opened

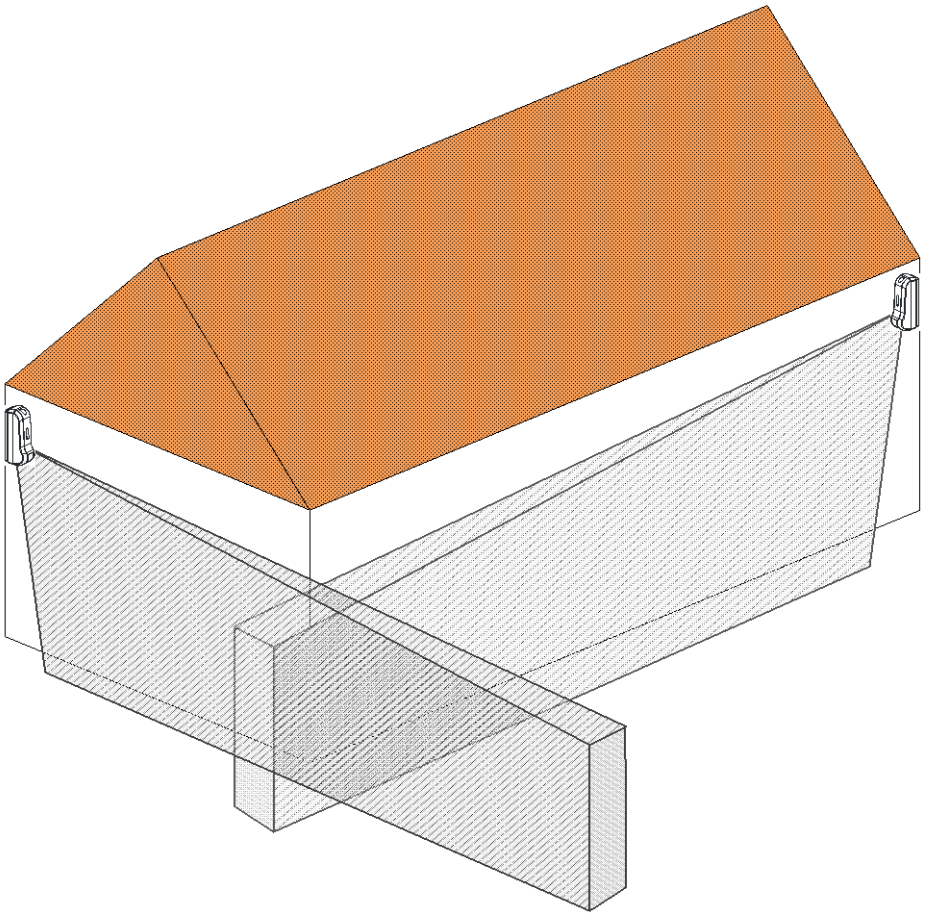
The tilt alarm is generated only once
Since the ASB output is shared by the anti-tampering and anti-tilt system, if the tamper is open, it will prevent the signal from being sent to the anti-roll system.

SUGGEST

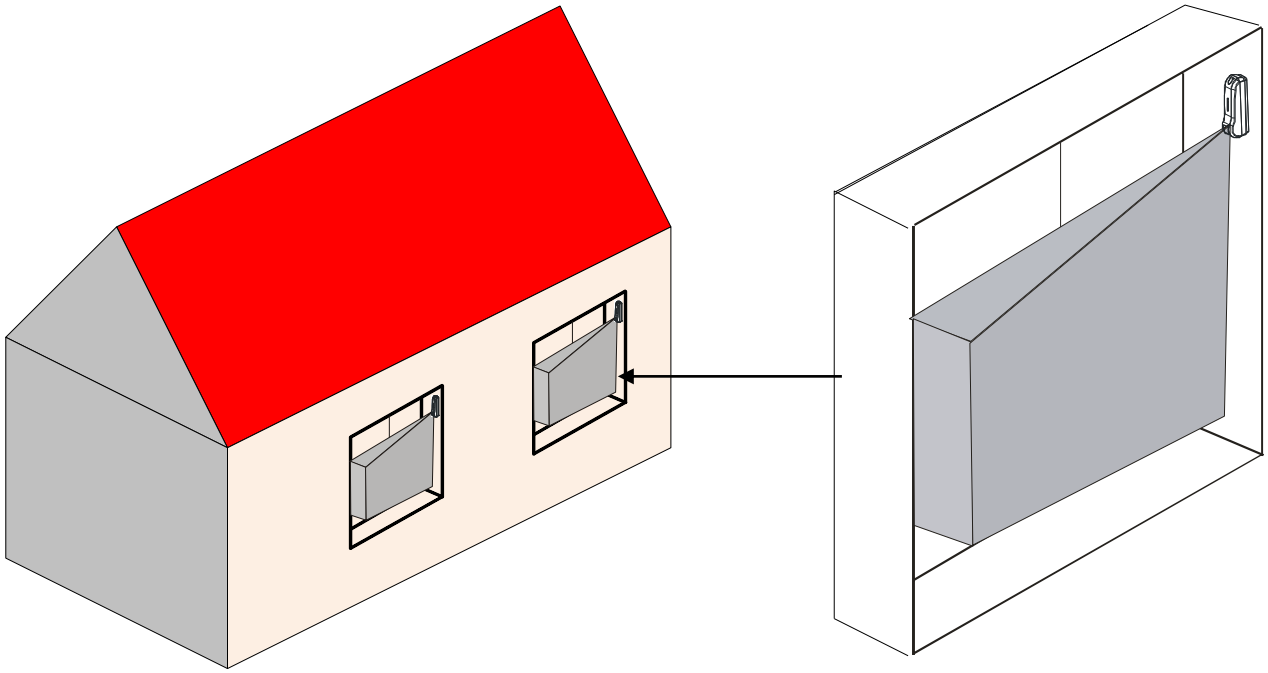
Caution!! In sensors where the radio transmitter is assembled in our laboratories, during the installation phase it is necessary to extract the circuit with extreme caution so as not to damage it. See picture:



GENERAL INSTRUCTIONS FOR INSTALLATION.



Example of installation to protect walls. Install at approximately 2.1 m in height. It can also be installed on the upper floors still at 2.1 m with a horizontal plane at least 1.5 m wide as a reference for the entire detection length (for example, balconies, frames). Make sure there are no obstacles that prevent detection (gutters, blinds, etc)



Example of installation on fixtures. The height of the detector must always be calculated with respect to the reference plane which must not be more than 2.1 m

ELECTRICAL AND MECHANICAL FEATURES

Parameter	*Condition*	*Value*
Standard power supply		3-10V
Max power supply		13,2 V
Low battery level		2,7 V
Average consumption		13 uA
Battery life	antimask enabled, suggested battery, 20 alarm/day	> 1 year
Battery life	antimask disabled,suggested battery, 20 alarm/day	> 2 years
Max consumption	Power supply 6 V with sensor in alarm	38 mA
Inversion polarity protection		Yes
Inibition time after alarm		3 minutes
IR max range	Enviromental temperature 25 °C	12 mt
MW max range		12 mt
Low battery report	By dip-switch	Yes
Walking test	Bydip switch	Yes
Walking test time		3 minutes
ALM output		NC
ALM output impedance		<10 Ω
ASB output		NC
ASB output impedance		<10 Ω
AMK output		NC
AMK output impedance		<10 Ω
Antimask MW intervention time	Enabled	<4 minutes
Antimask IR intervention time	Enabled	<4 minutes
Anti-tilt intervention time		< 8 s
IR adjust		Yes
MW adjust		Yes
Temperature Autocompensation		Yes
MW Frequency		24,125 GHz
MW Vertical range		80°
MW Horizontal range		32°
IR Vertical range		90°
IR Horizontal range		7,5°
Warm up time	Antimask enabled	45 s
Warm up time	Antimask disabled	95 s
Working temperature		-20/+60 °C
Weight	With packaging	200 gr.
Dimensions	Wall bracket	H 129, L 40, P 48 mm
Dimensions	90 ° bracket	H 129, L 45, P 52 mm