essegibi
SECURITY SOLUTION

Outdoor dual technology sensor
low consumption, universal

Thank you for purchasing 24Universale sensor, the low-absorption dual technology curtain sensor for outdoor use with accelerometer-based displacement sensor.

It is possible to connect to the 24Universale, any radio transmitter found place in theprepared housing, thus making it compatible with any existing Wireless system.

Thanks to its very low absorption, it can be powered by the same battery of the transmitter that you intend to use, or, alternatively, with another battery from 3 to 10 Volts.

24Universal, thanks to its small size, is particularly suitable for the protection of doors, windows and showcases and, thanks to the materials used and advanced technology, it can be used in any outdoor installation where it is necessary to protect well-defined areas. It creates a small curtain curtain (about 7.5 °) and has an adjustable range of up to 12 m.

It is made with resistant materials (IP54). In addition, the electronics are subjected to a tropicalization process to ensure correct operation in all conditions of humidity and temperature, this makes it a stable sensor and immune to false alarms.

GENERAL FEATURES

- ✓ Dual technology sensor (passive infrared + microwave)
- ✓ Indoor and outdoor use
- ✓ Infrared with curtain barrier (about 7.5 °)
- ✓ 24 GHz miniaturized microwave
- ✓ Led display in "Test" mode
- ✓ Adjustable passive infrared range
- ✓ Adjustable microwave flow
- ✓ Self-compensation in temperature
- ✓ Digital microwave signal analysis
- ✓ Digital anti-displacement sensor

- ✓ High immunity to false alarms
- ✓ RF immunity up to 2 GHz
- ✓ Low consumption (< 8 µA)
- ✓ Universal power supply (3-10V)
- ✓ Reverse polarity protection
- ✓ Possibility of using internal battery
- ✓ Double bottom for accommodation transmitter or additional battery
- ✓ Max IR range: 12m
- ✓ Max MW range: 12m
- ✓ Low battery display
- ✓ Settings via dip-switch

DESCRIZIONE DISPOSITIVO
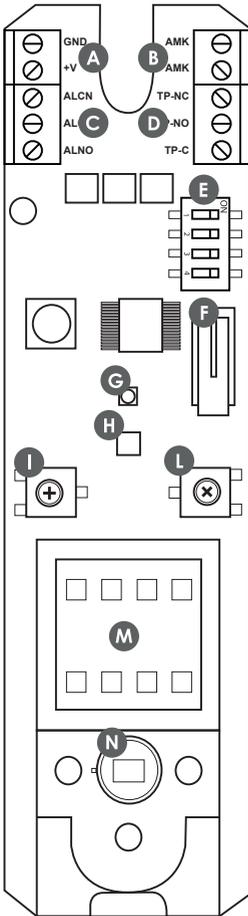
A **GND/+V**
Power supply 3-10V. Respect the polarity. The circuit is protected against polar inversions

B **AMK**
Anti-masking / disorientation terminal block

C **ALC**
Alarm output, in case of alarm generated by microwave and / or infrared ALNC opens, ALNO closes. Max current 55mA

D **TPC**
Tamper output, in case of tampering TPNC contact opens, TPNO closes.

E **DIP SWITCHES**

F **TAMPER**

G **RED LED**
In test mode it flashes quickly as soon as it detects IR and becomes steady for 2 seconds if it also detects the microwave

H **ACCELEROMETER**

I **MW TRIMMER**
MW adjustment, clockwise rotation increases the flow

L **IR TRIMMER**
IR adjustment, clockwise rotation increases the range

M **MICROWAVE SENSOR**

N **PYROELECTRIC ELEMENT**

COVERAGE AREA

Side view

2,10 m
30cm
12 m
3,0 m

Top view

1 mt 1 mt
7,5°
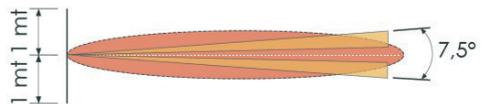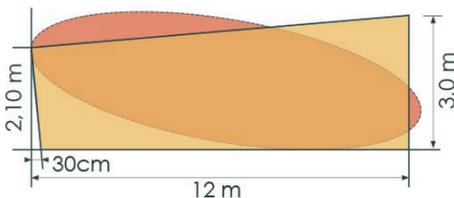
DIP SWITCH SETTINGS

Dip 1	ON: low battery signal, 2 flashes every 8 seconds
Dip 2	Dip 2 Leave in OFF
Dip 3	Dip 3 ON: stand-by alarm signal, the red LED lights up at each detection
Dip 4	Dip 4 ON: test mode (no inhibition, LED active) only for programming and adjustments *

* It is mandatory to set Dip 4 to OFF after having made the programming and adjustments of the sensors, it is also recommended to set all the Dip to OFF to increase battery life.

SENSOR ADJUSTMENTS

Open the lid and set Dip4 to ON (the LED will flash 3 times) then close the lid. From this moment the LED and sensor will no longer inhibit (they will always be active). At each infrared detection, the LED flashes quickly and becomes fixed for 2 seconds if the microwave also detects movement. Carry out the crossing tests and, using the MW and IR trimmers, adjust the sensitivity of the respective sensors (ATTENTION: the microwave is activated only after the PIR has gone into alarm). At the end of the detection tests, wait 10 seconds then turn Dip4 to OFF and close the lid (FROM NOW ON DO NOT MOVE THE SENSOR ANY MORE); after 10 flashes of the LED the sensor will remain inhibited for 4 min, will memorize its position and will exit the TEST mode. From this moment on, any movement of the sensor will generate a TAMPER alarm.

LOW BATTERY

If the sensor is not powered by the transmitter battery, but by the internal battery (supplied separately), set Dip1 to ON. When the battery voltage drops below the preset threshold, the red LED flashes twice every (approximately) 8 sec.

OPERATION AND DISPLAY INTRUSION

By setting Dip3 to ON, the sensor activates the red led every time it detects an intrusion. The reporting affects consumption by decreasing battery life. Remember that the sensor after the first detection of the infrared can perform a maximum of 2 more detections consecutive within a minute, after which it will go into inhibition for four minutes.

COMPATIBILITY

The sensor is compatible with all radio systems after verification of correct operation by the installer. Thanks to its raised base, it can house several transmitters for contacts to which the various signals coming from the curtain sensor will be connected.

It is recommended to follow the curtain sensor setting instructions and not to exceed the electrical limits stated in this instruction.

ELECTRIC AND MECHANICAL PARAMETERS

PARAMETER	CONDITION	VALUE
Power supply		from 3Vcc up to 10Vcc
Power supply max		10V
Average consumption		8 µA
Max consumption	Power supply 6V sensor in alarm	60 mA
Reverse protection		Yes
Inhibition time between alarms	Selectable via Dip-Switch	3-4 minutes
IR range max	Ambient temperature 25 ° C	6 m
Flow rate MW max		6 m
Low battery signal	Selectable via Dip-Switch	Yes
Coverage Test functionality	Activated via Dip-Switch	Yes
Test function duration		3 minutes
Alarm output		C - NC - NA
Alarm output impedance		100 Ω
Tamper output		C - NC - NA
Tamper output impedance		100 Ω
Anti-disorientation output		NC
Anti-masking output		100 Ω
IR flow regulation		Yes
MW flow regulation		Yes
IR self-compensation		Yes
MW frequency		24,125 GHz
Vertical lobe MW		80°
Horizontal lobe MW		32°
Vertical lobe IR		90°
Horizontal lobe IR		7,5°
Tent width 2m, 10m		25 cm - 130 cm
Tempo di riscaldamento		30 s
Warm-up time		-25/+60°C
Weight	Sensor packed	131g
IP grade protection		IP54
Dimensions	Sensor with wall bracket	H 129, L 40, P 48 mm