

The **APRO 20K** microwave movement detector controls the opening of factory gates and automatic doors. It works in the **K band**. It can be installed at a height ranging from 3 to 6 metres and guarantees the surveillance of an area from 3 to 30 square metres .

The device will be automatically activated by moving persons or vehicles within the controlled perimeter.

APRO 20K has been developed using planar technology, and can be set in **mono-directional** (to detect movement either in forward or backward direction) or **bi-directional** (activated by movement in both directions). A microprocessor processes the signals received – generated through a Doppler effect – and sends an OK to the opening command.

A LED on the front panel indicates that movement has taken place inside the controlled area.

APRO 20K



TECHNICAL DATA

Power voltage	12 – 24 V _{AC} /12 - 30 V _{DC}
Power current	max. 40 mA
Operative frequency	24,000-24,250 GHz
Output Power (EIRP)	≤20 dBm
Range	1 – 10 m adjustable
Relay control time	1 – 6 s adjustable
Degree of protection	IP 66
Installation height	max. 6 m
Detectable speed	0.1 m/s minimum
Relay contact	1A - 24 V _{AC/DC}
Vertical directionality	0-60°
Horizontal directionality	+/- 45°
Operating temperature	- 20 °C to + 50 °C
Dimensions/weight	160x95x110 mm / 500 g
Warranty	24 months

NOTE: A SELV power source must be used (certified power supply unit or safety transformer) in compliance with CEI EN 41003:1993 standard.

We hereby declare that Apro20K complies with the essential requirements of Directive 99/05/EC (R&TTE) harmonised radio standard pursuant to Art. 3.2 of Italian Law No. 269 dated 9.5.2001: EN300440-2 V 1.1.2



SETTING FOR OPERATION

The *APRO 20K* movement detector can be configured in mono direction mode (one direction only) or in bi directional mode (in both directions).

Remove the rubber plug from the lower section of the detector (Fig. 1-A) and set the required function through the dip-switch (Fig. 1-B), choosing from the possibilities indicated in the table:

DSW1	DSW2	DSW4	SENSITIVITY	CONDITION
OFF	-	ON	Low	Movement is detected in both directions
OFF	-	OFF	High	Movement is detected in both directions
ON	OFF	ON	Low	Approach to the sensor is detected
ON	OFF	OFF	High	Approach to the sensor is detected
ON	ON	ON	Low	Movement away from the sensor is detected
ON	ON	OFF	High	Movement away from the sensor is detected

ASSEMBLY AND ORIENTATION

APRO 20K can be installed at the centre of the door to be controlled or on the side, on non-vibrating structures (walls or ceiling) and at a maximum height of 6 m. Use the template supplied to prepare the holes.

Fasten the device using the prepared holes, remove the lower cover (Fig. 2-A) and loosen the screw that blocks the detector orientation. Direct the detector toward the area to be controlled and lock in that position.

For correct operation, do not install *APRO 20K* :

- facing the moving parts of the door
- facing fluorescent lights (minimum distance 2m)
- facing areas where rain could provoke water fluxes

These conditions could activate the device and cause the unwanted opening of the door.

ELECTRICAL CONNECTIONS

Connect the pre-wired cable as indicated in table 1 then power the detector.

The LED on the detector front panel (Fig. 2-B) will indicate the detection of a movement, for all the time the relay is excited.

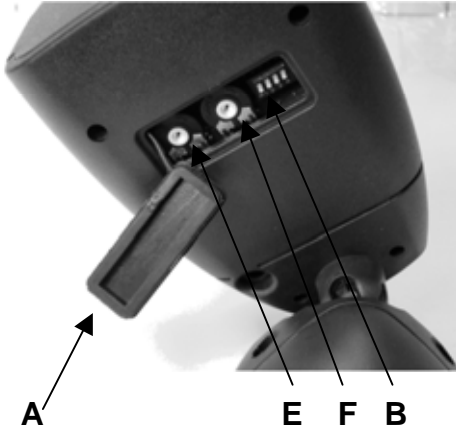


Fig.1

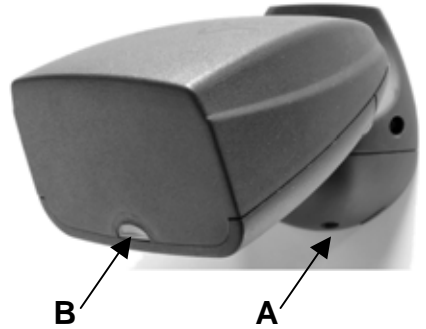


Fig.2

Wire colour	Description
Red	12-24 V _{AC/DC}
Black	12-24 V _{AC/DC}
Green	COM relay contact
Brown	NO contact (when device is not powered)
Blue	NC contact (when device is not powered)


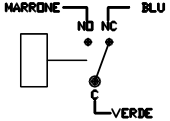

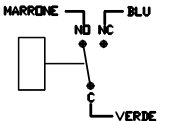

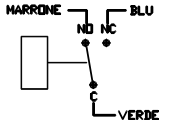

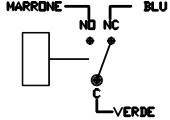
Tab.1

RELAY CONTACT SETTING

APRO 20K has a relay with switching contact.

According to the setting of the dip-switch 3 (Fig. 1-B) in the lower section of the detector, the combinations described in table 2 can be obtained.

These conditions are valid when the device is powered.

<p>DSW3 ON (Normal operation)</p>				
<p>DSW3 OFF (Positive safety)</p>				

Tab.2

SETTING OF DETECTION RANGE

It is possible to define the controlled area by changing the inclination of the detector and the position of dip-switch 4 (Fig. 3). With trimmer TR1, located on the lower section of the detector (Fig. 1-F), the regulation can be optimised to activate detection only for the desired area.

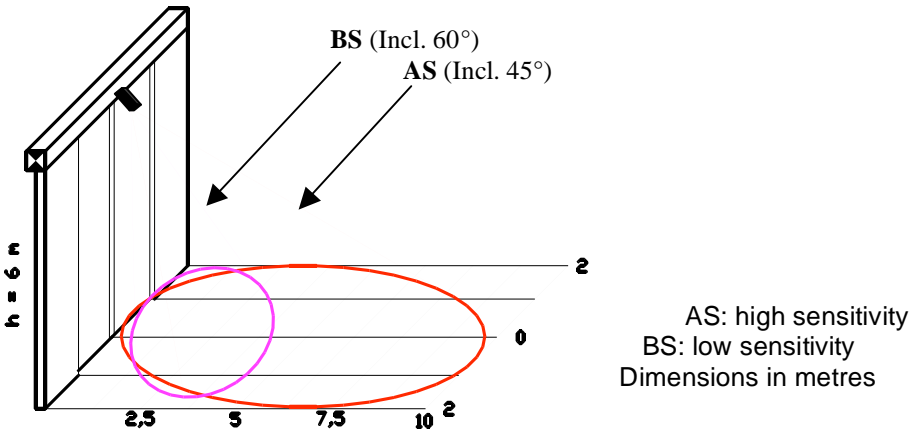


Fig. 3

REGULATION OF CONTACT DURATION

The trimmer TR2 on the lower section of the detector (Fig. 1-E) can be used to set the desired duration of the electric contact, which can vary from 1 – 6 seconds.

