

Movement detector radar for automatic doors

The **OCM20** microwave movement detector controls the opening of factory gates and automatic doors. 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.



OCM20 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.

TECHNICAL DETAILS

Power supply voltage	12 – 24 V _{AC} /12 - 30 V _{DC}
Current supply	50 mA max.
Operating frequency	9,90 GHz
Output Power (EIRP)	≤14 dBm
Range detection	1 – 10 m settable
Duration of relay input	1 – 6 s settable
Insulation class	IP 66
Installation height	6 m max.
Detectable speed	0,1 m/s min.
Relay contact	1A - 24 V _{AC/DC}
Vertical adjustment	0° ÷ 60°
Horizontal adjustment	-45° ÷ +45°
Operating temperature	-20 ÷ +50 °C
Dimensions/weight	160 x 95 x 110 mm / 500 g

OCM Industrial Doors

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OPERATION MODE SETTINGS

The **OCM20** movement detector can be configured in **mono-directional** 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	SENSIBILITA'	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

OCM20 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 **OCM20**:

- 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.

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

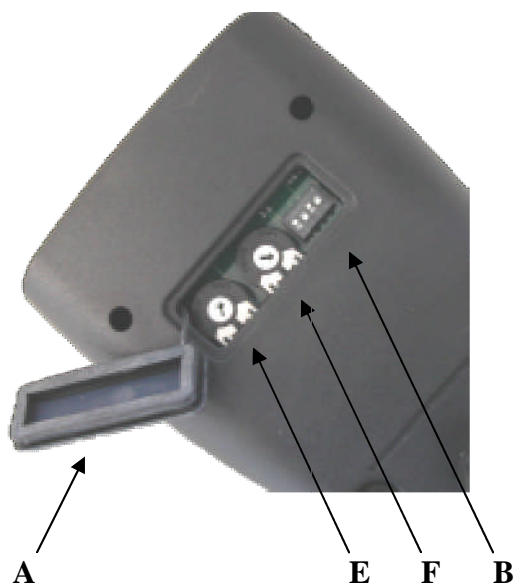


Fig. 1

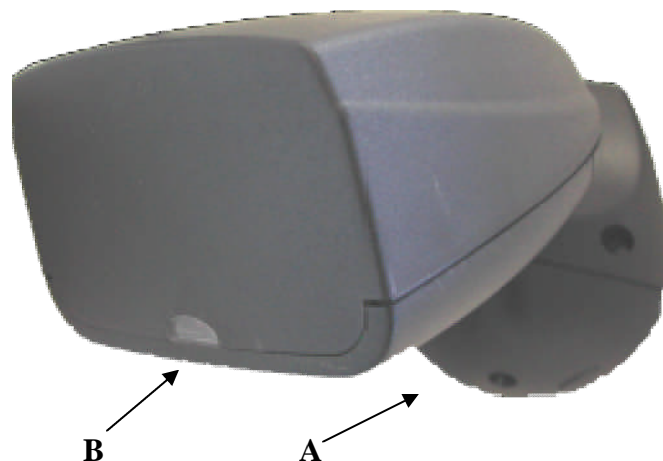


Fig. 2

Wire colour	Description
Red	12-24 V _{AC/DC}
Black	12-24 V _{AC/DC}
Green	COM contact relay
Brown	Contact NO (without power supply)
Blue	Contact NC (without power supply)

Tab. 1

RELAY CONTACT SETTING

OCM20 has a relay with switching contact.


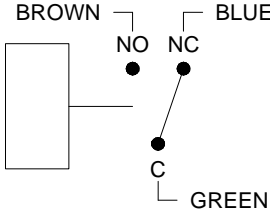

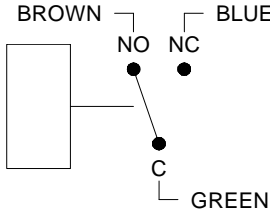

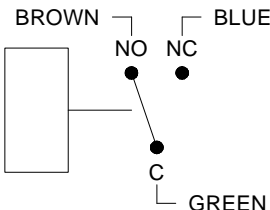

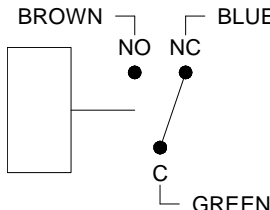
According to the setting of the dip-switch 3 (Fig. 1-B) in the lower section of the detector, the combinations described in table 2 can be obtained.

These conditions are valid when the device is powered.

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 0.5 – 6 seconds.

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DSW3 ON (Normal mode)				
DSW3 OFF (Safety mode)				

Tab. 2

DETECTION RANGE SETTINGS

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.

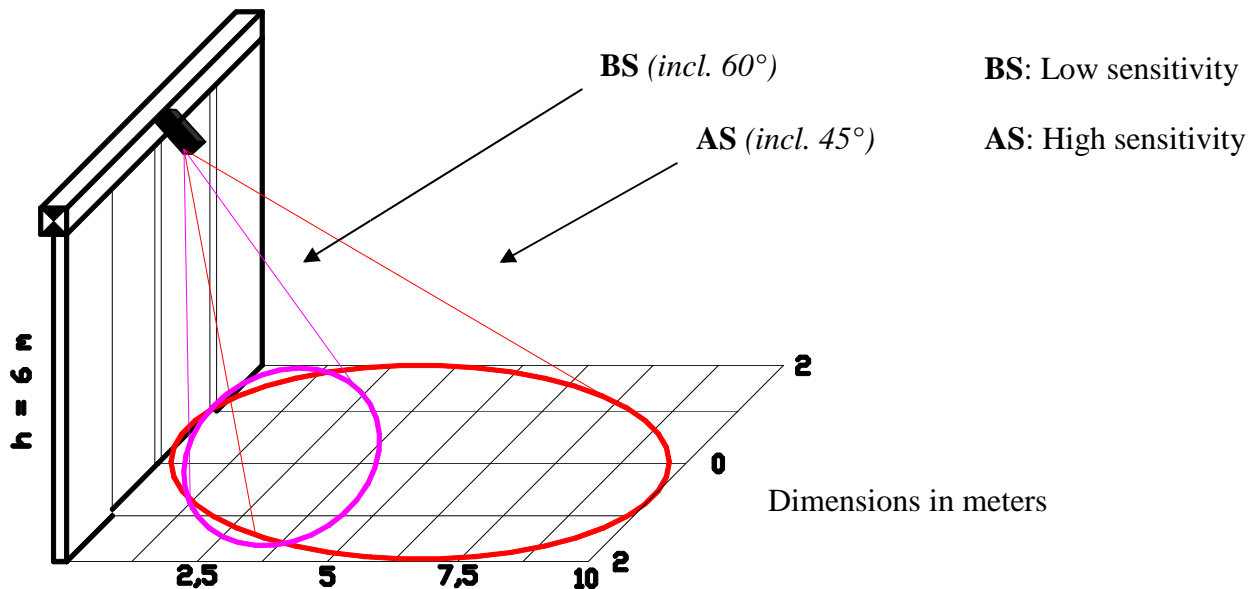


Fig. 3

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