



**User Manual**

**DMS**

**EN**

## Description

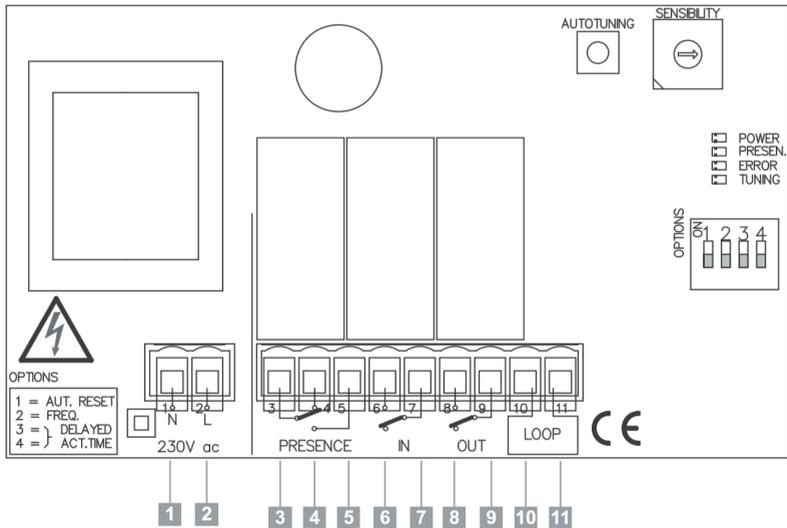
High precision magnetic detector to which a loop is connected to detect the presence of vehicles (metal masses) in a pre-determined area.

Main applications:

- Vehicle entry/exit control to provide access to garage doors, gates, barriers, etc.
- Detection of vehicles near to automatic traffic light installations.
- Detection of metal masses from a pre-determined area.

## Technical characteristics

Parameter	Value
Supply	230V ac
Consumption max.	14mA a 230V ac
Oscillation frequency	40kHz a 140kHz
Loop inductance	30 $\mu$ H a 250 $\mu$ H
Possible no. of loops connected	1
Relay contacts	6A , 230V
Operating temperature	-20°C a +85°C (hasta 98%Hr)
Watertightness	IP54 (with glands IP65)
Dimensions	140x220x55mm
Weight	623grs



- |                      |                    |             |
|----------------------|--------------------|-------------|
| 1 230V ac line       | 5 NA Open presence | 9 NA output |
| 2 230V ac line       | 6 NA input         | 10 Loop     |
| 3 Common presence    | 7 NA input         | 11 Loop     |
| 4 NC closed presence | 8 NA output        |             |

# Installation

## Loop installation

- Make a rectangular chasing groove in the ground according to the table of dimensions relating to the number of loops, the maximum depth of which must be 5cm.
- Insert the flexible braided 1.5 or 2mm<sup>2</sup> section wiring, surrounding the inside of the rectangle until the correct no. of loops (turns) has been completed.
- Braid the two outgoing ends of wiring to terminals 10 and 11 of the magnetic detector.
- Fill the chasing where the loops are located with fast-drying cement in a compact and firm manner so that they cannot be moved, either through vibrations or through the cracking of the covering itself.

## Examples of installations

Table of dimensions 1

A x B (m)	No. of loops
1 x 0,5	5
1,5 x 0,75	4
2 x 1	4
2,5 x 1,25	4
3 x 1,5	3
3,5 x 1,75	3
4 x 2	3
4,5 x 2,25	3
5 x 2,5	2

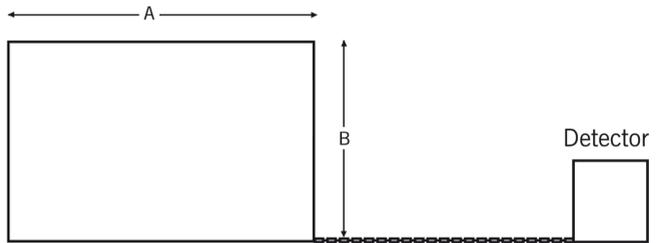
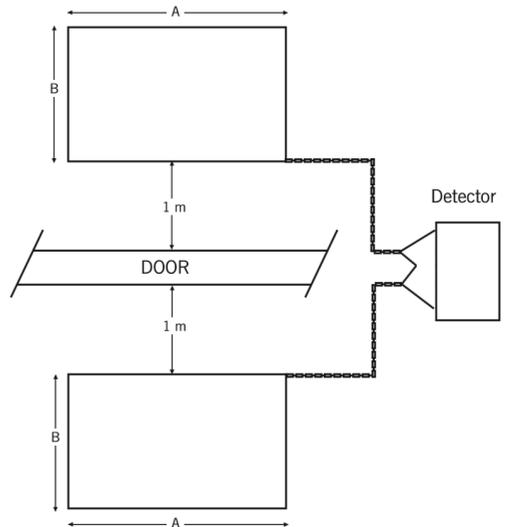


Table of dimensions 2

A x B (m)	No. of loops
1 x 0,75	3
2 x 1	3
2,5 x 1,25	3
4 x 2	3
5 x 2,5	2



## Installation of the magnetic detector

Fit the rear of the box to the wall using the rawlplugs and screws supplied. Pass the cables through the bottom of the equipment. Connect the power supply cables to the terminals on the printed circuit, following the indications engraved on the board. Fit the front of the equipment to the rear using the screws supplied.

### Recommendations

- The minimum distance between any of the sides of the loop and the other loop or the door itself must be 1 metre.
- The distance of braided wiring from the loop to the detector must not exceed ten metres.
- The wiring from the loop to the detector must be braided at least 20 times per metre
- The loop wiring must not be installed near to power supply cables.
- In the event of two loops operating relatively close together with their respective detectors, select a different working frequency for each one. Thus no interference will be noted.
- In the event of micro-switch 1 being ON, The door will close automatically 15 minutes after the detector has been locked, despite a vehicle remaining inside.
- This magnetic detector can only be used to detect metal objects, DO NOT USE FOR PERSONAL SECURITY.
- For detections of small vehicles, for example, motorcycles, it is recommended to use loops of small dimensions

## Operating

### Basic operating

Presence (NO/NC switched contact (by default)): when a vehicle is detected the contact is opened, activating the presence

Entry (NO): it closes when a vehicle enters the loop.

Exit (NO): it closes when a vehicle exits the area covered by the loop.

### Micro-switch operating

Detection time	Selector 1
Unlimited	OFF
Limited to 15 min (after which time it stops detecting and adjusts the frequency)	ON
Oscillation frequency	Selector 2
Normal frequency	ON
Increases frequency	OFF

The oscillation frequency depends on the loop inductance.



Delay time selection	Selector 3	Selector 4
0s delay	ON	ON
2s delay	OFF	ON
5s delay	ON	OFF
10s delay	OFF	OFF

## Adjustment

During the adjustment (10s), the red (ERROR) and green (ADJUSTMENT) leds remain lit. When this time is completed, they will switch off. Where they do not switch off, this indicates a fault in the loop connection as follows:

- ERROR and ADJUSTMENT leds flashing: loop not connected or cut at some point.
- ERROR led flashing: inductance loop too low, add loops.
- ERROR led flashing: inductance loop too low, add loops.

 During the adjustment time, the detector activates the security contact (presence), preventing any damage during this time.

## Sensitivity

10 levels of sensitivity can be selected using the 10-position rotary potentiometer. 0 indicates the minimum sensitivity and 9 the maximum.

### Typical installation with a 2x1m loop

Vehicle	Sensitivity
Car	Low
Motorcycle	Medium
Truck	High
Bicycle	High







In compliance with the European low voltage directive, please be advised of the following requirements:

- An easily accessible connection / disconnection device must be fitted to the wiring for permanently connected equipment.
- This equipment must be installed in a vertical position and firmly fitted to the building structure.
- This equipment can only be handled by a specialist fitter, by his maintenance staff or by a suitably trained operator.
- The instructions for using this equipment must remain in the possession of the user.
- This detector is designed for use on garage doors and for access control. Its use is not guaranteed for any other type of application.
- The manufacturer reserves the right to modify equipment specifications without prior notice.

## Regulatory Data

### EU Declaration of Conformity

The manufacturer JCM TECHNOLOGIES S.A. declares that the product **DMS** complies with the relevant fundamental requirements of the RED Directive 2014/53/EU and of the RoHS Directive 2011/65/EU.

See website [www.jcm-tech.com/en/declarations/](http://www.jcm-tech.com/en/declarations/)

JCM TECHNOLOGIES, SA  
C/Costa d'en Paratge, 6 B  
08500 VIC (BARCELONA)  
SPAIN

