

Radar motion sensor for approach detection at industrial doors



Safety information

The device must only be operated with Safety Extra Low Voltage (SELV) which complies with the stipulations in the safety standards based on IEC 60950. This device must only be installed and maintained by trained, qualified persons.

In order to meet UL508 requirements, a 2.5 A slow-blow fuse should be used between the Domino 500 and the power supply.

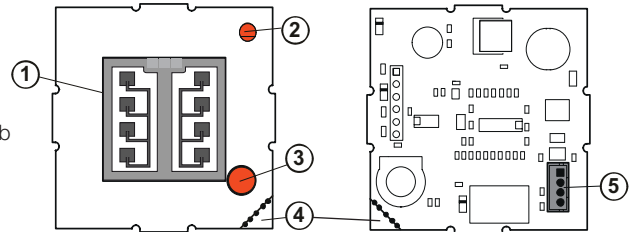
Product information

Included with delivery

Quantity	Description
1	Domino 500 sensor
1	2 m connecting cable with connector
2	Screws for mounting
1	Mounting instructions
1	Self-adhesive mounting template

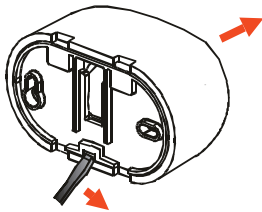
Operating controls

- ① Antenna
- ② LED (red)
- ③ Potentiometer
- ④ Predetermined breakaway tab
Relay switching mode
- ⑤ Connector



Mounting

Opening the device

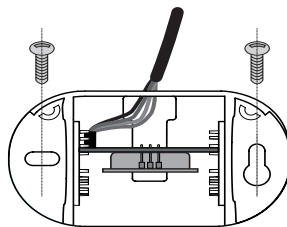


1. Insert the screwdriver into the opening provided and carefully remove the cover.
2. Pull the cover forwards and remove.



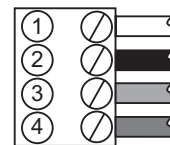
Do not open the housing from the top.

Mounting the device



1. Attach the self-adhesive template and drill according to the markings on the template.
2. Pull the cable through the opening provided.
3. Fasten the base plate using the screws (screws are in the housing).
4. Insert and connect the cable.

Connecting the sensor

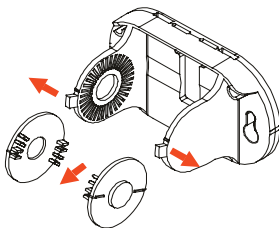


Connect the pre-assembled sensor cable to the connector as follows.

Connector assignment:

- ① AC/DC supply (white)
- ② AC/DC supply (black)
- ③ Relay contact 1 (red)
- ④ Relay contact 2 (green)

Replacing or turning the antenna

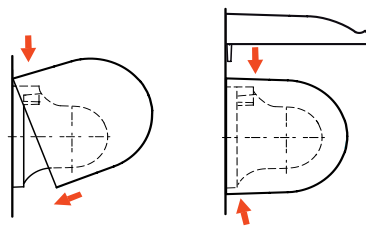


1. Push apart the tabs on the arms of the base plate.
2. Carefully remove the PCB and locking discs.
3. Move the locking discs to the new position on the PCB.
4. Push apart the tabs on the arms of the base plate.
5. Insert the PCB and locking discs again. The locking discs must snap into place.



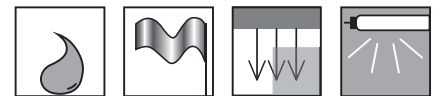
Do not touch any electronic components. Do not use metal tools.

Replacing the cover



1. Attach the cover on the top and press down until it snaps into place.
2. Attach weather cap if required (see accessories).

Installation information



- Protect the sensor from rain*.
- Avoid moving objects in the detection area (fans, plants, trees, flags).
- Mount the sensor only behind suitable covers. Mechanically-operated drive components can affect the sensor.
- Avoid fluorescent lights in the detection area.



*** Installing the Domino 500 Weather Cap is recommended (see accessories).**





Troubleshooting

Fault	Corrective action
Door is detected.	Reduce the sensitivity. Pivot the sensor further forward.
LED not lit up.	No power supply, device not functioning.
Sensor responds to very slight interference such as rain, vibration or reflections. Door opens for no apparent reason.	Reduce the sensitivity.

Detection area

Antenna characteristics

A wide or narrow detection area can be set by turning the PCB.

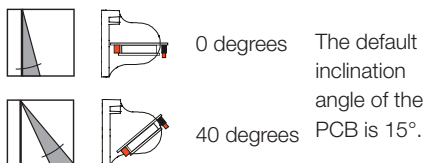
		Wide (Standard)
		Width: 4.50 m
		Depth: 2.00 m
		Narrow (optional)
		Width: 2.00 m
		Depth: 4.50 m

Installation height	2.20 m
Detection area angle	30°
Sensitivity	Max

Detection field angle

You can adjust the position in 10° increments from 0° to 90°.

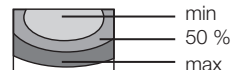
Intermediate steps of 5° are possible by inserting the PCB in the locking discs in different positions.



Detection area size



Change the size of the detection area using the potentiometer.

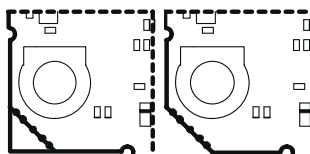


Some installations may limit the programming options and the functions of the sensor.



Settings

The corner of the PCB should be broken off at the predetermined breakage point using pliers to change the switching mode to NC. The setting becomes permanent once the breakage point is broken!

Function	Setting	Description
Relay contact switching mode	NO	Relay closes on detection (NO)
	NC	Relay opens on detection (NC)



LED status display

Color indicator	Status
 Red flashing	Initialization after switching on
 red	On: Detection active Off: No detection

Technical data

Operating principle	Microwave module
Detection speed	min. 0.1 m/s (measured in sensor axis)
Approvals	CE
Detection field angle	0° - 90° in 5° steps
Sensing range	at installation height of 2200 mm and 30° angle: Wide: 4500 x 2000 mm (WxD) Narrow: 2000 x 4500 mm (WxD)
Operating frequency	24.05 GHz - 24.25 GHz K band
Operating mode	Radar motion sensor
Function display	Red LED
Operating controls	Potentiometer for adjusting sensitivity Predetermined breakaway tab for relay switching mode
Operating voltage	12 - 36 V DC/ 12 - 28 V AC
Current consumption	< 50 mA
Power consumption	< 1.7 W at 36 V DC < 1.2 W at 28 V AC
Signal output	Relay, 1 NO contact
Operating mode	Active/passive
Switching voltage	Max. 48 V AC / 48 V DC
Switching current	Max. 0.5 A AC/ 1 A DC
Switching power	Max. 24 W/ 60 VA
Off-delay time	0.5 s
Ambient temperature	-20 °C to 60 °C/ 248 - 333 K
Relative humidity	Max. 90 %, not condensing
Installation height	Max. 4000 mm
Degree of protection	IP 54
Connection	4-pin connecting plug (2 m connecting cable with preassembled connecting plug included in delivery package)
Housing material	ABS
Weight	130 g
Transmitting power	< 20 dBm EIRP
Dimensions without weather cap	101 mm (w) x 61 mm (h) x 59 mm (d)
Dimensions with weather cap	120 mm (w) x 73 mm (h) x 74 mm (d)

Commissioning

Before switching on the device, remove all objects from the door area that do not normally belong there.

- Switch on the device and wait 10 s (LED flashes red).
- Test the settings by walking near the sensing area

Standards

2004/108/EEC EMC Directive:
EN 61000-6-1; EN 61000-6-2; EN 61000-6-3;
EN 61000-6-4;
EN 60947-5-2;
1999/5/EC R&TTE directive:
EN 300 440-1 V1.3.1; EN 300 440-2 V1.1.1;
CE0682 labeling
VDE 0848-1; VDE 0848-2;
ICNIRP guidelines (1998-04);

Accessories

Domino 500 weather cap Weather cap

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Declaration of conformity

This unit complies with the requirements of the European R&TTE directive.

The declaration of conformity can be called up on the following website: www.4tec-ag.ch

DOCT-1900

Part no. 222040 06/2009

