PROSECURE OPTI MOTION MONO

WN 058108 45532, 09/14

Sensor for approach detection at industrial doors

In order to satisfy the safety requirements specified in EN60950-1, the sensor must be operated from an SELV supply where the output is limited to 100 W. The output can be limited using a T2.5 A fuse.

Delivery package

1 Sensor

1 Connecting cable

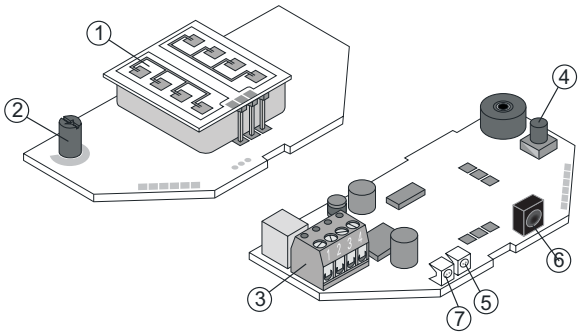
2 Screws for mounting (in the housing)

1 Self-adhesive mounting template

1 Mounting instructions

Elements

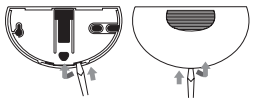
① Antenna
② Potentiometer
③ Terminals
④ Programming button
⑤ LED (red/green)
⑥ IR receiver
⑦ IR transmitter



Components can be damaged by electrostatic energy! Do not touch any electronic components. Do not use metal tools.

Preparation

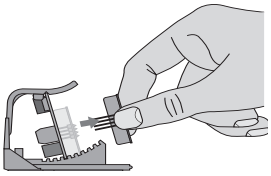
Insert the screwdriver into the opening provided from behind, carefully lift up the cover, fold upwards and remove.



Do not open the housing from the top.

Turning the antenna unit

(to change the antenna characteristics)
Remove the antenna carefully using two fingers and insert again depending on the required detection area.

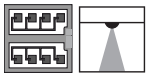


Do not bend the contacts. Do not touch the surface of the antenna.

Antenna characteristics

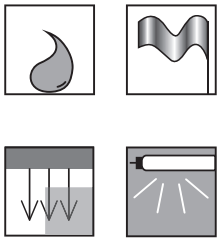
A wide or narrow detection area can be set with the plug-in and rotatable antenna.

Installation height	2.20 m
Detection area angle	30°
Detection area size	Max

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

Installation information

- Protect the sensor from rain*.
- Avoid moving objects in the detection area (fans, plants, etc.).
- Do not cover the sensor. Mount the sensor only behind suitable covers.
- Moving drive components affect the sensor.
- Avoid fluorescent lights in the detection area.
- The installation conditions may limit the programming options and the functions of the sensor.



* **DORMA recommends installing a weather cap for outdoor applications**

Accessories

Remote control
Weather cap

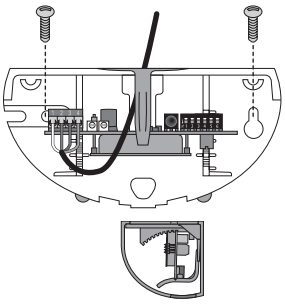
Mounting

Attach the self-adhesive template and drill according to the hole pattern.

Guide the cable through the opening provided.

Fasten the base plate using the screws (screws are in the housing).

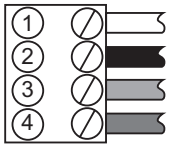
Can be mounted on the ceiling using weather cap.



Connecting the sensor

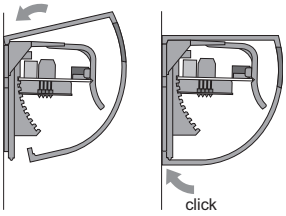
Connect the cable to the terminal as follows:

① white = GND
② brown = 12 - 36 V DC/ 12 - 24 V AC
③ green = COM
④ yellow = NO / NC

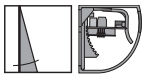


Replacing the cover

Attach the cover on the top and press down until it snaps into place.

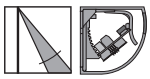


Adjusting the inclination angle



0°

Position can be modified in 5° increments.



40°

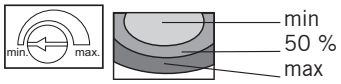
Holding the sensor's base plate by the sides, move it forward and position it as required. Default setting = 15°

Setting for an inclined detection area

The sensor's base plate can also be inserted at an angle, i.e., up to 3 notches to the right or left. Notches can also be removed.

Detection area size/Sensitivity

Change the size of the detection area using the potentiometer.



Immunity

Immunity can be used to minimize interference such as rain, vibration and reflections.

LED status display

Color indicator		Status
G	Green	Device ready for operation
R	Red	Detection active
G flashing	Green flashing	Command received
R flashing	Red flashing	Error
R/G flashing	Red/green flashing	Initialization after switching on

Setup

Remove all objects from the door area that do not normally belong there.
Switch on the device and wait 10 s (red LED flashes).
Test the settings by walking near the sensing area.

The red LED lights up when an object is detected.

Programming with pushbutton and potentiometer

The programming button activates programming mode and confirms settings. Use the potentiometer to set functions and values. The LEDs flash to indicate the individual settings.
An overview of the setting options can be found in the "Settings with pushbutton and potentiometer" table.
The setting is saved each time the button is pressed. Programming mode automatically ends if there are no changes made for 10 minutes. The set values are stored.

The potentiometer is adjusted during programming. For this reason, make a note of the potentiometer position prior to programming, so that you can reset the detection area size to the original value after programming has been completed.

Setting the function

> 2 s

Press the programming button for approx. two seconds.
Programming mode is activated.

To set the function, select the appropriate potentiometer position. The green LED indicates the selected function by flashing.

Setting the value

> 2 s

Press and hold the programming button for approx. two seconds.

To set the value, select the appropriate potentiometer position. The red LED indicates the selected value by flashing.

Confirming the settings

< 1 s

Press the programming button for less than one second.

Programming mode is exited.

The settings are saved.

Programming example:
Changing the relay off-delay time to 3.0 s

Function/ Setting	Action	LED
> 2 s	Press the programming button for two seconds to activate programming mode.	
	Set the potentiometer to position 2-4 The green LED flashes twice indicating the function "output off-delay time".	G
> 2 s	Press the programming button for two seconds to set the off-delay time.	
	Set the potentiometer to position 6. The red LED flashes six times indicating the value "3.0 seconds".	R
< 1 s	Press the programming button for one second to end programming mode.	
	Reset the potentiometer to the orignal detection area size value.	

Settings with pushbutton and potentiometer (check the setting by walking the sensing area)

Function		G	Setting		R	Description
Relay contact	0-2	1x	NO NC	0-5 5-10	1x 2x	Relay contact closes on detection (NO) Relay contact opens on detection (NC)
Off-delay time (output)	2-4	2x	Off 0.2 s 0.5 s 1.0 s 1.5 s 2.0 s 3.0 s 4.0 s 5.0 s 10.0 s	0 1 2 3 4 5 6 7 8 9	0x 1x 2x 3x 4x 5x 6x 7x 8x 9x	Off: Relay is not operating 0.2 s: Shortest off-delay time 10.0 s: Longest off-delay time
Respon-siveness	4-6	3x	Fast Normal Slow Very slow	Select position in adjustment range 0-10 according to LED display.	1x 2x 3x 4x	Fast: Sensor triggers faster (high sensitivity) Slow: Sensor triggers slower (low sensitivity)
Immunity	6-8	4x	Off Normal Min max	0 1 2 3 4 5 6 7 8 9 10	0x 1x 2x 3x 4x 5x 6x 7x 8x 9x 10x	Off: Immunity deactivated Min: lowest immunity Max: highest immunity
Device addresses	8-10	5x	1 - 8	Select position in adjustment range 0-10 according to LED display.	0x 1x 2x 3x 4x 5x 6x 7x 8x	Remote control mode deactivated Address 1 Address 2 Address 3 Address 4 Address 5 Address 6 for programming with Address 7 the remote control Address 8
Reset	10s	R/G	Press and hold the programming button until the LED flashes alternately green/red for 10 seconds.			Reset to default settings

Programming with the "Prosecure Remote Control"

For communication with the remote control, an address must be set on the sensor (see "Settings with pushbutton and potentiometer" table). If there are several sensors within the range of the remote control, different addresses must be used. Before starting programming, read the remote control instructions.
The remote control must be directed accurately towards the sensor to establish a connection with the sensor.

Establishing a connection with the sensor

1. Select the sensor type and confirm with ✓.
2. Select or search for an address and confirm with ✓.
3. If the sensor is protected, enter the 4-digit code and confirm with ✓.
   - The sensor can now be programmed.

Programming the sensor

1. Select the parameters and confirm with ✓.
2. Read the value and confirm with ✓.
   - The current value is displayed.
3. Set the required value and confirm with ✓.
4. Return to parameter list with ⌫.
5. Proceed in the same way with other parameters.

Saving access

The sensor can be protected with a code to prevent against unauthorized programming.

Activating access protection using a code

1. Select the "Code" parameter and confirm with ✓.
2. Select "Access with code" and confirm with ✓.
3. Enter 4-digit code.
4. Repeat code.
   - The sensor is now protected.

Deactivating access protection using a code

1. Establish a connection with the sensor.
2. Select the "Code" parameter and confirm with ✓.
3. Select "Access without code" and confirm with ✓.
   - Access protection is now deactivated.

Disabling access

1. Select the "Code" parameter and confirm with ✓.
2. Select "Disable access" and confirm with ✓.
   - Access with the remote control is now no longer possible.

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Remote control settings (check the setting by walking the sensing area)

Menu	Settings	Description
Sensitivity	1 - 10	1: Small detection area 10: Large detection area
Off-delay time (output)	Off 0.2 s, 0.5 s, 1 s, 1.5 s, 2 s, 3 s , 4 s, 5 s, 10 s	Off: Relay is not operating 0.2 s: Shortest off-delay time 10.0 s: Longest off-delay time
Relay contact	NO contact - activated NC contact - passive	Relay contact closes on detection (NO) Relay contact opens on detection (NC)
Responsiveness	Fast Normal Slow Very slow	Fast: Sensor triggers faster (high sensitivity) Slow: Sensor triggers slower (low sensitivity)
Immunity	Off 1 - 9	Off: no immunity 1: minimum immunity 9: maximum immunity
Reset		Reset to default settings
Code	Access without code Access with code Disable access	Access with remote control is possible at all times. Access with remote control is only possible after a code is entered. Access is disabled. No remote control access possible.
Disconnect		Exit programming mode

Troubleshooting

Fault	Corrective action
Door is detected.	Reduce the detection area size. Adjust the inclination angle.
LED not lit up.	No power supply, device not functioning.
Sensor responds to very slight interference such as rain, vibration, reflections. Door opens for no apparent reason.	Increase immunity. Reduce the detection area size.
Potentiometer does not respond.	Operation by remote control is activated. Deactivate remote control mode.
Remote control does not respond.	Operation with pushbutton and potentiometer is enabled. Activate device addresses. Device is disabled. Switch the operating voltage off and on again. Sensor can be configured for 30 minutes without code. Check the remote control battery.

Default settings

Function	Setting
Detection area size/Sensitivity	9
Relay contact	NO contact
Off-delay time (output)	1 s
Responsiveness	Fast
Immunity	1
Address	1

EC conformity

The product is compliant with Directive 1999/5/EC, device class 1 and harmonized standards EN 62311, EN 60950-1, EN 301 489-1, EN 301489-3, EN 300 440-2.

CE 0682

Technical data

Operating principle	Microwave module
Detection speed	Min. 0.1 m/s
Approvals	CE
Detection field angle	0 - 40° in 5° increments
Sensing range at installation height of 2200 mm and 30° angle:	(WxD) Wide: 2000 x 4500 mm Narrow: 4500 x 2000 mm
Operating frequency	24,15 ... 24.25 GHz, K band
Status display	Red/green LED
Operating controls	Potentiometer and programming button
Operating voltage	12 - 36 V DC/ 12 - 24 V AC
Current consumption	< 50 mA at 24 V DC
Power consumption	< 1 W
Operating mode	Active/passive
Signal output	Relay: 1 NO/NC
Switch voltage	Max. 48 V AC / 48 V DC
Switching current	Max. 0.5 A AC/ 1 A DC
Switch power	Max. 24 W / 60 VA
Off-delay time (output)	off, 0.2 s - 10 s, adjustable (default setting 1 s)
Ambient temperature	-20° C to 60° C
Relative humidity	Max. 90 %, not condensing
Installation height	Max. 4000 mm
Degree of protection	IP 54
Connection	Plug-in screw terminals, 4-pin (connector cable included with delivery)
Housing material	Polycarbonate (PC), ABS
Weight	120 g
Transmitting power	< 20 dBm EIRP
Dimensions without weather cap (WxHxD)	123 mm x 65 mm x 57 mm

DOCT-2466B part no. 245481

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