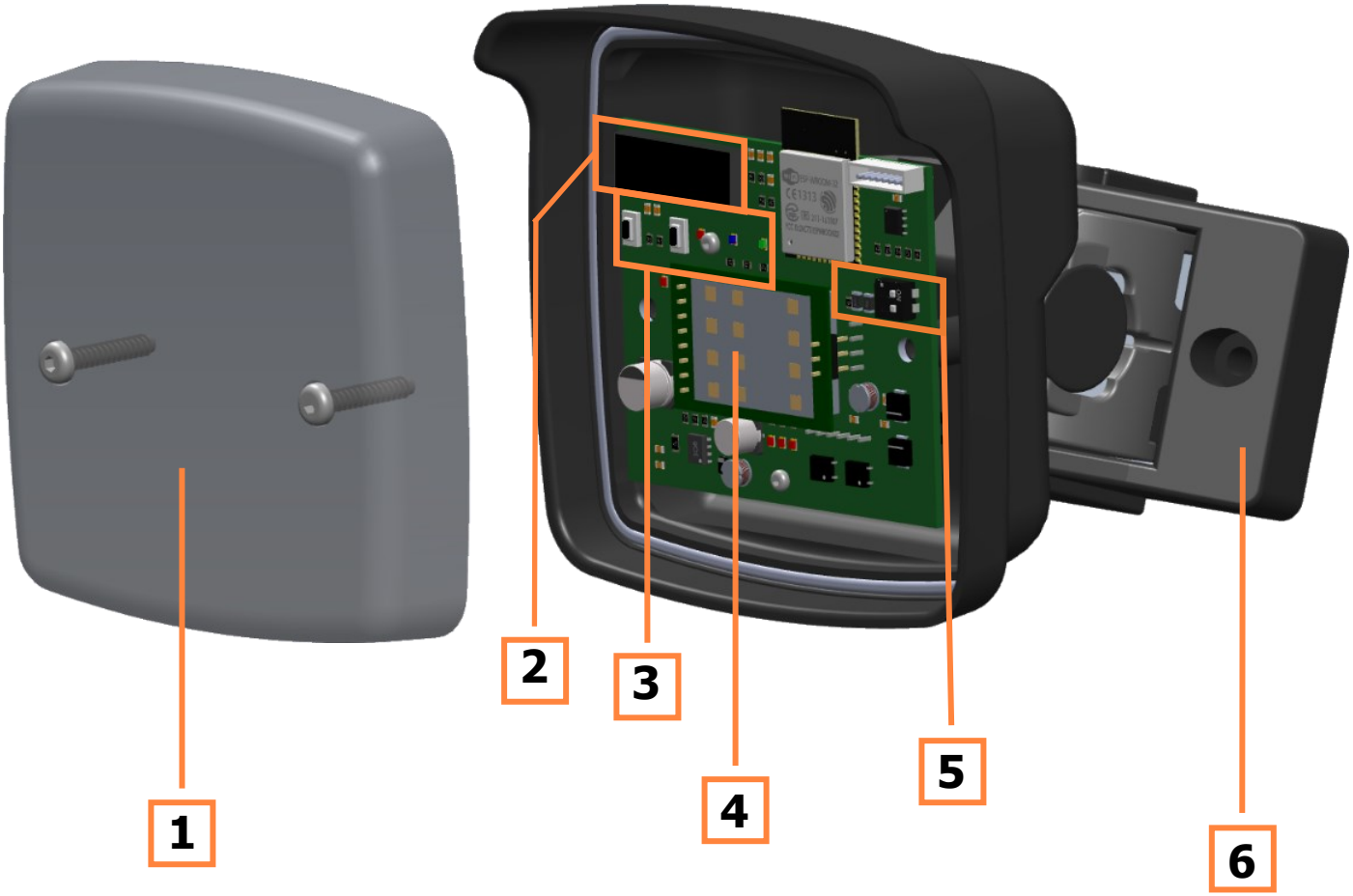
Art. 50500442 (CAPTURE PRO)

Art. 50500404 (CAPTURE)

CAPTURE / CAPTURE PRO

Microwave motion sensor for industrial doors* (2 m - 10 m)



1. Front face
2. OLED display
3. Push buttons and programming LEDs
4. Radar sensor
5. Dip Switch
6. Support

*Any other use of the radar other than the function described cannot be guaranteed by the manufacturer

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1 TECHNICAL SPECIFICATIONS

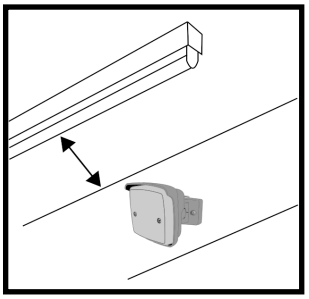
Technology:	Microwave doppler radar
Transmitting frequency:	24,150 GHz
Transmitter radiated power:	< 20 dBm EIRP
Transmitter power density:	< 5 mW/cm^2
Detection mode:	Motion
Detection zone:	34° x 80°
Minimum detection speed:	5 cm/s**
Supply voltage:	12V or 24V AC; 12V or 24V DC
Mains frequency:	50 - 60 Hz
Max power consuption:	< 2 W
Outputs:	2 outputs: NO/NC configuration (Normally open/closed) Max. load voltage: 60V AC/DC; Max. load current: 500 mA
Mounting height:	2-10 m
Degree of protection:	IP65
Temperature range:	-30 °C to +60 °C
Inclination angles:	0° to 45° vertically; +30°, +15°, 0°, -15°, -30° horizontally
Materials:	ADA + Polycarbonate
Weight:	240 g without cable, 637 g with cable
Cable lenght:	10 m
Norm conformity:	EN IEC 62311:2020; EN IEC 62368-1:2014/AC:2015/ AC:2017/A11:2017; EN 55032:2015 + A11:2020; EN 55035:2017/A11:2020; ETSI EN 301 489-1 V2.2.3; ETSI EN 301 489-3 V2.1.1; ETSI EN 301 489-17 V3.2.4; EN 300 328 V2.2.2

Specifications are subject to changes without prior notice.

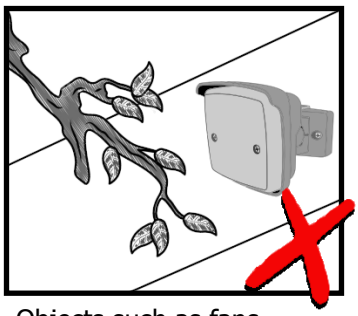
** Measured in optimal conditions.

2 MOUNTING ADVICE

Avoid unstable surfaces and vibrations.

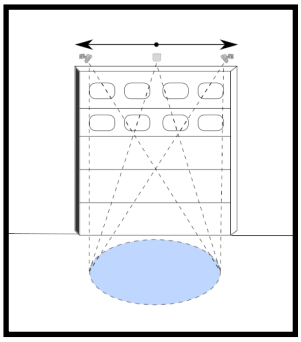


Mount sensor away from fluorescent or HID light sources.

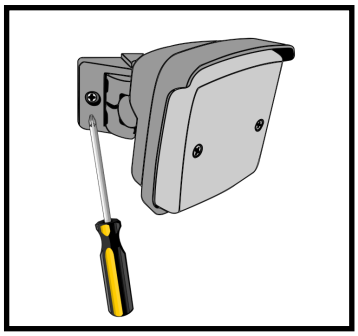


Objects such as fans, plants, etc must not protrude into the detection area.

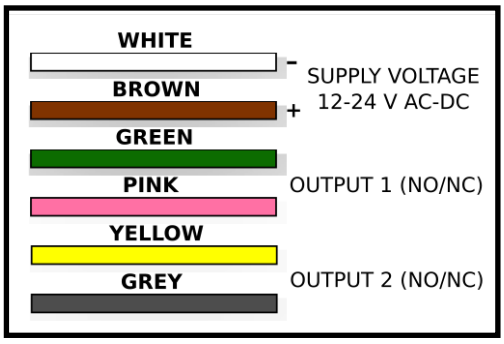
3 MOUNTING AND WIRING



Can be mounted on the entire lenght of the door.



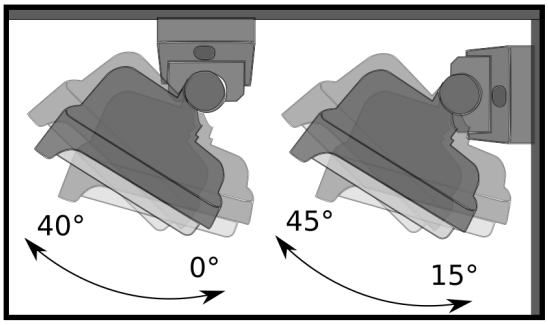
Tilt completely the sensor on one side to have access to fixing holes.



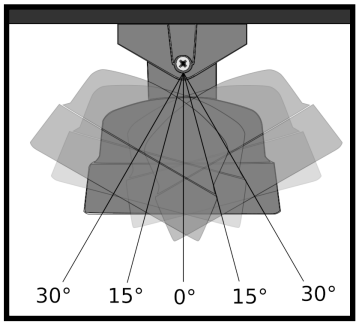
Connect the wires to the door controller/inverter.

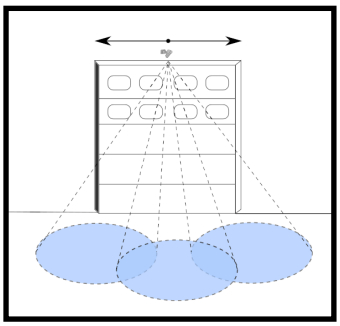
4 DETECTION FIELD ADJUSTMENTS

Adjust the vertical angle depending on wall or ceiling mounting.



Adjust horizontal angle.

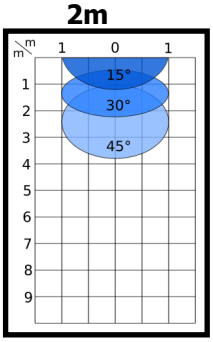




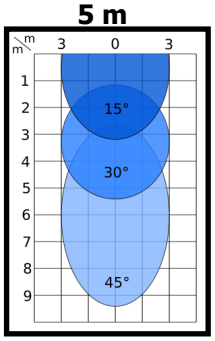
With the double joint it's fast and easy to adjust angles depending on needs.

Mounting height:

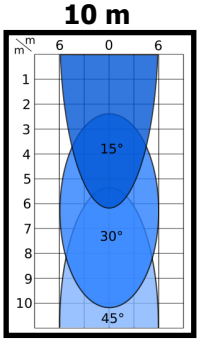
2m



5 m



10 m



All detection field dimensions were measured in optimal conditions with default field size value

5 APP CAPTURE SENSORS

The radar can also be configured through the free **Capture Sensors** app, available for Android and iOS.

The only way to access the change of advanced parameters is to request the password from the dealer.

GET IT ON Google Play

Search "**Capture Sensors**" on your App Store, use the QR_Code or click on the **Playstore / App Store** icons

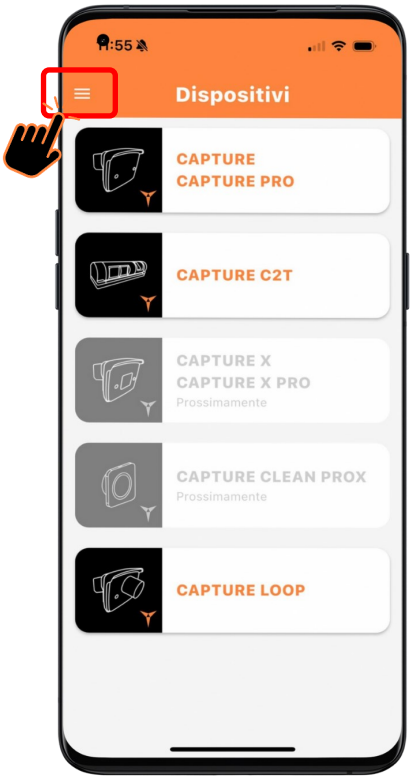
Download on the App Store

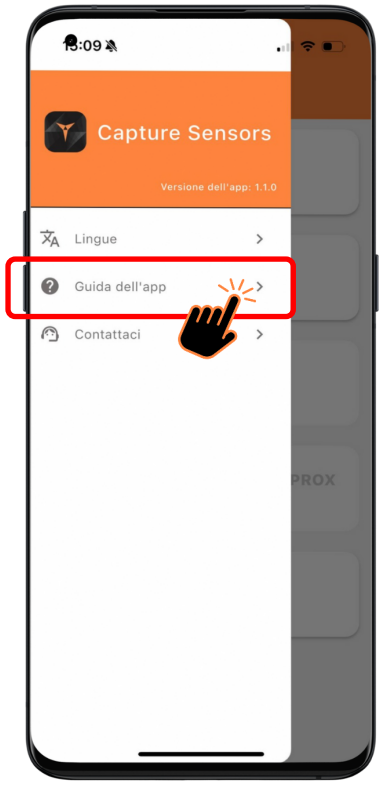
> To connect to the available devices, enter the default password "**capture".**
> It can be changed later.

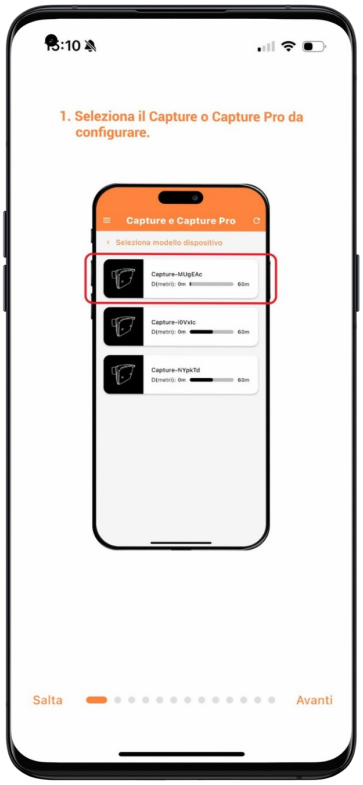
6 APP INITIAL SETUP

Quick setup guide access:

1. **Select the ≡ (three lines) icon at the top left**
2. From the side menu, choose "**App Guide"**
3. The quick guide with the main instructions will open



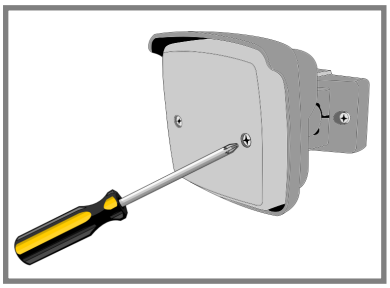




7 CONFIGURATION THROUGH PUSH BUTTONS

To access the configuration buttons, remove the two screws from the front panel.

The setup uses two buttons and three colored LEDs (red, blue, green).



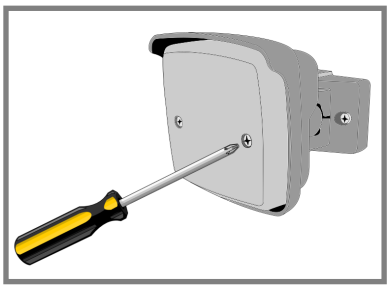
- **Start / end session** → hold the **left button** until the three LEDs flash twice (confirmation beep).
- **Select parameter** → press the **left button** (count the LEDs flashes to identify the parameter and current value, referring to the table below)
- **Change value** → press the **right button**
- **Factory reset** → press **both buttons** until the LEDs flash (long confirmation beep)

You must end the setup session before performing the reset

Parameter n°	Values (factory value)
1 FIELD DIMENSION	(4)
2 RADAR SENSIBILITY	(1)
3 HOLD-OPEN TIME	(3)
4 VIBRATIONS SUPPRESSION	(1)
5 MOUNTING HEIGHT	(4)
6 CROSSTRAFFIC FILTERING	(1)
7 OUTPUT 1 CONFIGURATION	(1)
8 DETECTION TYPE OUTPUT 1	(2)
9 DETECTION MODE OUTPUT 1	(1)
10 OUTPUT 2 CONFIGURATION	(1)
11 DETECTION TYPE OUTPUT 2	(1)
12 DETECTION MODE OUTPUT 2	(1)

8 CONFIGURATION THROUGH DISPLAY (CAPTURE PRO ONLY)

To access the configuration buttons, remove the two screws from the front panel.
Configuration is performed using the two buttons next to the OLED display



Button functioning:

- **Normal display state** → "CAPTURE PRO" appears.
- **Enter the menu** → press either button (beep).
- **Scroll trough parameters:**
  Right = next parameter
  Left = previous parameter
- **Select a parameter** → press both buttons (beep).
- **Modify the value:**
  Right = increase
  Left = decrease
- **Confirm the displayed value** → press both buttons (beep).
- **Exit a parameter without modifying** → hold the right button for 3s (beep).
- **Exit the configuration menu**
  Select **Exit** (confirmation beep) or wait 30s for automatic exit
- **Factory reset** → press both buttons until the LEDs flash.
  You have to end the configuration session before performing the reset

1) FIELD SIZE						
15°	20°	25°	30°	35°	40°	45°

2) SENSITIVITY						
1	2	3	4	5	6	7

3) HOLD-OPEN TIME						
1s	2s	3s	4s	5s	6s	7s

4) VIBRATIONS SUPPRESSION						
1	2	3	4	5	6	7

5) MOUNTING HEIGHT								
2-2,4m	2,5-2,9m	3-3,9m	4-4,9m	5-5,9m	6-6,9m	7-7,9m	8-8,9m	9-9,9m

6) CROSS-TRAFFIC FILTER			
Off	1	2	3

7) OUTPUT 1 CONFIGURATION		
	(NO)	(NC)

8) DETECTION TYPE 1			

9) DETECTION MODE 1			

10) OUTPUT 2 CONFIGURATION		
	(NO)	(NC)

11) DETECTION TYPE 2			

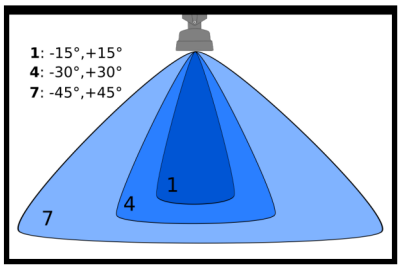
12) DETECTION MODE 2			

13) CALENDAR SCHEDULER
YYYY-MM-DD
HH:MM:SS

14) EXIT

9 LIST OF PARAMETERS

1. **Field dimension**: Regulate the width of the radar area.
Starts from level 1 (minimum width), to level 7 (maximum width).
More specific configuration can be set with the smartphone app;



1	2	3	4	5	6	7
-15°,+15°	-20°,+20°	-25°,+25°	-30°,+30°	-35°,+35°	-40°,+40°	-45°,+45°

2. **Radar sensitivity**: Regulates the sensitivity and anti-interference filter.
Starts from level 1 (maximum sentivity + minimum anti-interference filter), to level 7 (minimum sensitivity + maximum anti-interference filter);

3. **Hold-open time**: Sets the time during which the door stays open. Starts from level 1 (1 second), to level 7 (7 seconds);

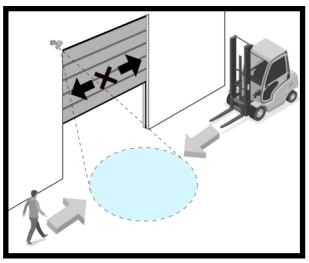
4. **Vibrations suppression**: Allows to filter the measurements in presence of strong vibrations. Level 1 (no suppression), level 2 (minimum filtering), level 7 (maximum filtering); It is recommended to not modify the default value;

5. **Mounting height**: Sets the installation height of the device.

1	2	3	4	5	6	7	8	9
2 - 2,4 m	2,5-2,9 m	3 - 3,9 m	4 - 4,9 m	5 - 5,9 m	6 - 6,9 m	7 - 7,9 m	8 - 8,9 m	9 - 9,9 m

6. **CrossTraffic Filtering**: Allows to ignore traffic that moves parallelly to the door;

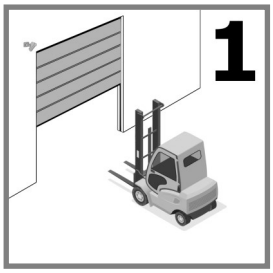
Off	Door always activates for every detection
1	Door occasionally activates when crossing traffic is detected
2	Door rarely activates when crossing traffic is detected
3	Door ignores most crossing traffic

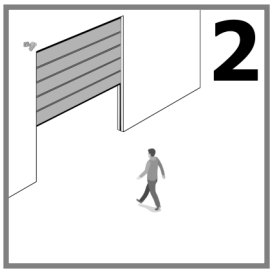


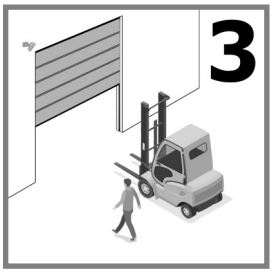
⚠ You have to specify the installation type (**central, left corner, or right corner**) via the smartphone app for the product to work as intended. By default, it is set to central installation.

7. **Outputs configuration**: 1 flash (green LED) sets the output as **NO** (normally open), 2 flashes sets the output as **NC** (normally closed);

8. **Outputs detection type**: Vehicles (**1**), people (**2**), people and vehicles (**3**);

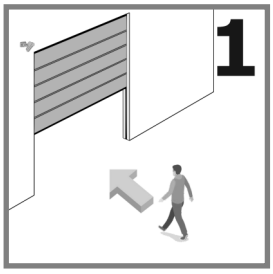


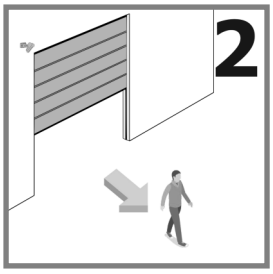


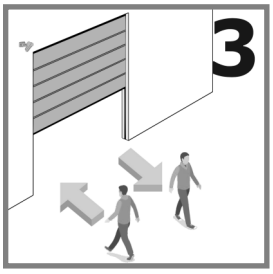


⚠ People cannot be detected beyond 7,5 m installation height

9. **Detection mode output:** sets whether to detect objects approaching the automation (**1**), moving away from the automation (**2**) or in both direction (**3**)

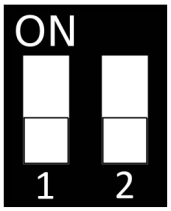






10 DIP SWITCH AND OTA UPDATE

Normally DIPs must be set **Off**.



DIP 1: when set **On,** enables battery use.

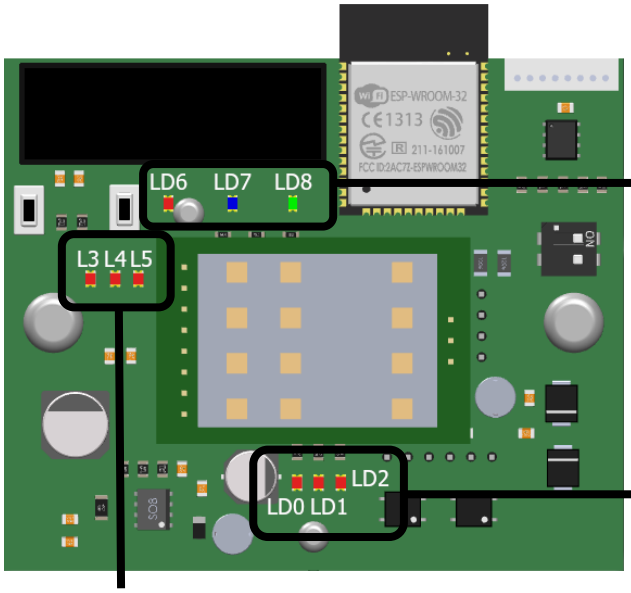
DIP 2: when set **On**, enables OTA (Over the air) update with the following procedure:

- Disconnect power supply and set **DIP 2** ON;
- Connect power supply and wait the 3 LEDs to start flashing at a constant frequency;
- Set **DIP 2 Off** and make a hotspot using your smartphone with SSID: "Capture" and PASSWORD: "password";
- The device will connect to the hotspot just made and the LEDs will stop flashing. During download only the green LED will start flashing.
- At the end of the download the LEDs will flash 2 times.

Alternatively, the OTA update can be started from the smartphone app

Set **DIP switch 1** to ON only during installation to prevent the battery from discharging

11 LED MEANING



LD8 - Watchdog. Firmware (flashes at steady frequency).

LD6, LD7, LD8 - Flash when switching on and during a Bluetooth pairing.

LD0 - Power supply OK

LD1 - Output CH1 enabled

LD2 - Output CH2 enabled

Radar sensor detections

L3 - Micro-detection

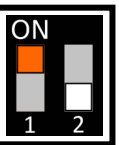
L4 - Angulation (OFF=left side, ON=right side)

L5 - Direction (ON=approaching, OFF=receading)

12 CALENDAR SCHEDULE (CAPTURE PRO ONLY)

The calendar function allows scheduling the radar operating times.
To use it, an initial configuration via the **Capture Sensors App** (Android/IOS) is required. After launching the app connect to the radar to automatically synchronize date and time.

⚠ Dip swithc 1 must be set to **ON**



The calendar can then be configured:

- Using the device's **OLED display** or
- Through the **Capture Sensors APP**, with a second-level password provided by the distributor or manufacturer.

Configuration through OLED display:

- **Enter menu 13 "Calendar"**

  Press both buttons (confirmation beep)

- **Select the day** to configure:

  Right or **left button** = scroll through the days of the week

  Both buttons = confirm the selected day (*Fig.1*).

- **Set the start time:**

  Right button = increase (+30 min)

  Left button = decrease (–30 min) (*Fig.2*).

  Both buttons = confirm the start time (confirmation beep).

- **Set the end time** = Same procedure as for the start time (*Fig. 3)*

- **Exit the menu:**

  Hold the **right** button or wait 30 seconds for automatic exit

- **Continuous functioning (24h)**

  Set the same time as start and end (*Fig.4*).

- **Radar disabled (entire day)**

  Enter the day configuration and press the **left button** --- dashes will appear instead of the time (confirmation beep) (*Fig.5*).

3-WED) 09:00 20:30	3-WED) 09:00 20:30	3-WED) 09:00 20:30	3-WED) 00:00 00:00	3-WED) --:-- --:--
Fig. 1	*Fig. 2*	*Fig. 3*	*Fig. 4*	*Fig. 5*

Configuration example:

1-MON) 09:00 20:30	2-TUE) 09:00 17:30	3-WED) 00:00 00:00	4-THU) 09:00 17:30
5-FRI) 08:30 19:30	6-SAT) 08:30 12:30	7-SUN) --:-- --:--	

13 COMMON PROBLEMS

The door remains closed. The LEDs are OFF.	The sensor power is OFF.	Check the wiring and the power supply.
The door does not react as expected.	Improper output configuration on the sensor.	Check the output configuration setting on each sensor connected to the door control unit.
The door opens and closes constantly.	The sensor is disturbed by the door motion or vibrations caused by the door motion.	1. Make sure the sensor is fixed properly. 2. Increase the tilt/inclination angle. 3. Reduce the field size.
The door opens for no apparent reason.	The sensor detects raindrops or vibrations.	1. Decrease sensitivity. 2. Enable vibrations suppression.
The door stays open.	Improper output configuration (NO/NC).	Change the output configuration.
The door does not distinguish correctly between people and vehicles.	Wrong mounting height set.	Change the mounting height value.
Cross traffic doesn't work on a corner installation.	The installation type was not selected correcly (right/left corner or central).	Connect to the radar via the smartphone app and check the calibration tab. On this page you should select the installation type (right/left corner or central).
The door opens during raining or snowing.	The default configuration has been changed.	Three settings can solve the problem: 1. Set direction detection to "approaching"; 2. Disable the first meter of the detection field; 3. Reduce the sensitivity threshold.
Wrong clock time.	The clock is not synchronised.	Connect the smartphone app to the radar to synchronize the time.
The clock always resets when power is turned off.	The battery level is low.	Replace the battery.
The calendar scheduler doesn't work.	Date and time haven't been synchronized with the smartphone app.	Connect the smartphone app to the radar to synchronize the time.
Daylight saving time (DST) shift doesn't work.	Daylight saving time is set to work properly in the european countries.	Set the calendar scheduler taking into account the time difference shift of your country compared to Central Europe.

SAFETY INSTRUCTIONS

The installer/plant technician is responsible for carrying out a risk assessment and installing the sensor and the door system in compliance with applicable national and international regulations and standards on door safety.
Only trained and qualified personnel may install and setup the sensor. Only authorised personnel may carry out modifications or repairs to the product. Otherwise the warranty is void.

STARTEC

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CE STARTEC hereby declares that the CAPTURE RADAR is in conformity with the basic requirements and the other relevant provisions of the directives 2014/53/UE and 2011/65/UE.

Devices with this symbol must be treated separately during disposal. This must be done in accordance with the laws of the respective countries for environmentally sound disposal, processing and recycling of electrical and electronic equipment.