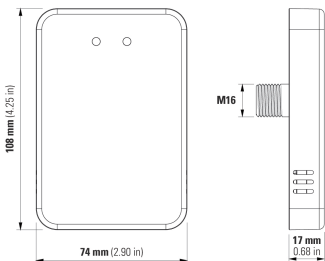


EasyLoop D



Vehicle detection sensor for activating or safeguarding automatic barrier systems



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1 Description

1.1 Function

The sensor detects vehicles using a high-frequency microwave technology. The device is designed for the entrance and exit management of parking lots or underground garages.

The sensor can be used for:

- presence detection for safeguarding the movement zone of the barrier
- **or** motion detection in proximity of the barrier for activation purpose

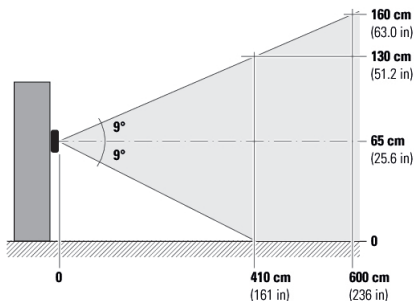
1.2 Scope of delivery

1 sensor, 1 connection cable 10 pin × 1.2 m (4 ft), mounting material, instructions

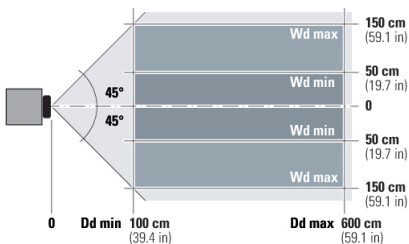
Package dimensions: 140 × 85 × 60 mm

1.3 Radar zone dimensions

Side view



Top view



Wd detection width, configurable via mobile app

Dd detection distance, configurable via mobile app,
default 300 cm (118 in)

2 Safety instructions

Read the operating instructions carefully before commissioning the device. Keep the instructions for future use.

Intended use

The manufacturer is only liable for products used as intended. Only use this product for the function specified:

Vehicle detection sensor for activating or safeguarding automatic barrier systems

Personnel qualification

Only trained and qualified personnel may install and commission the device.

The installer is responsible for installing the device and the connected system in accordance with the regulations and standards.

General safety instructions

It is the responsibility of the equipment installer to carry out a risk assessment and to install the system, in compliance with applicable regulations and safety standards.

The cables must be protected against mechanical damage.

3 Installation

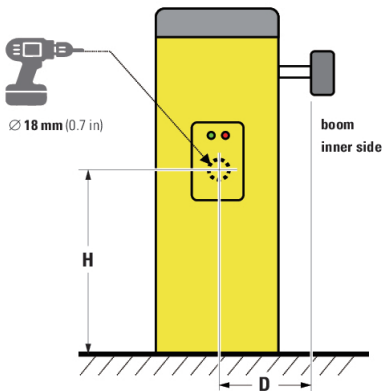
3.1 Mounting position

Sensor mounting height H above road level

Vehicle size	Mounting height	
	min.	max.
Small vehicles	65 (26)	75 (30)
Small vehicles when speed bumps are used	75 (30)	80 (32)
Trucks, chassis height 70 (27.6) – 100 (39.4)	75 (30)	80 (32)
Large trucks, chassis height > 100 (39.4)	Use of 2 sensors recommended	

All dimensions in **cm** (in)

Position in presence detection mode (safety)



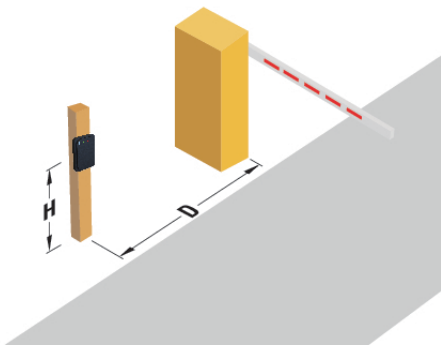
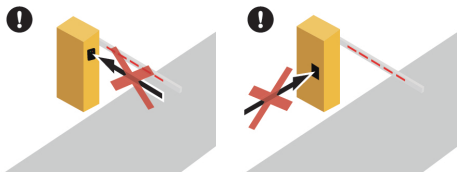
H 65 – 80 cm (26 – 32 in), see table above for details

D 20 – 30 cm (8 – 12 in)

- Mark the mounting position on the barrier control box at the distance **D** from the barrier arm and at the height **H** from the barrier arm and at the height as specified above.

Position in motion detection mode (activation)

For activation purpose, do not mount the sensor on the barrier control box.



H 65 – 80 cm (26 – 32 in), see table above for details

D $\geq$ 150 cm (59 in)

- ▶ Install a separate pole at the distance **D** from the barrier gate.
- ▶ Mark the mounting position on the pole at the height **H** as specified above.



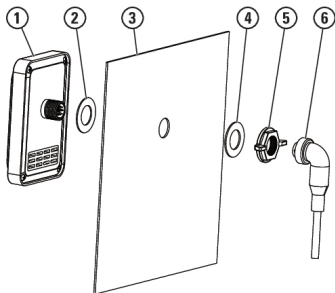
NOTE

Application position

- Avoid obstructions (e.g., metal fences, walls, cameras) within the sensor's detection field.
- Performance may degrade in muddy or extreme weather (e.g., heavy rain, snow).

3.2 Mounting

- Drill a hole, $\varnothing 18$ mm (0.7 in), on the position marked, see section 3.1 "Mounting position".
- Fix the sensor by usage of the mounting material as illustrated.



- | | | | |
|---|----------------|---|-----------------------|
| 1 | sensor | 4 | washer |
| 2 | rubber seal | 5 | M16 wing nut (5/8 in) |
| 3 | mounting plate | 6 | wire harness |

3.3 Electrical connection

Wiring

	1	red	9 – 24 V DC	pos. +	power supply
	2	black	GND	neg. -	
	3	blue	NO1	normally open (no polarity)	
	4	green	NO1		
	5	brown	NC2	normally closed (no polarity)	
	6	purple	NC2		
	7	white	RX	B -	RS485
	8	gray	TX	A +	
	9	orange	INPUT	reserved	
	10	yellow	GND		

Power supply

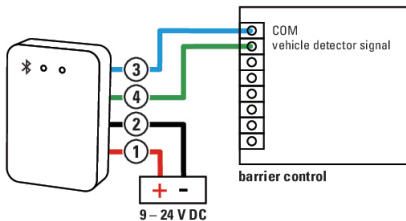
Note the polarity while connecting.

- 1 red: positive pole
 - 2 black: negative pole
- Ensure a stable 9 – 24 V DC power source.
A dedicated 12 V / 1 A power adapter is recommended for optimal performance.

Connection to barrier control

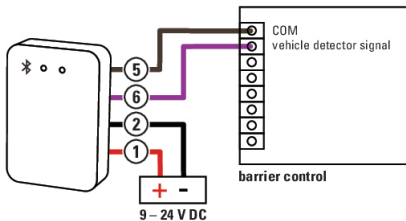
- Connect the sensor to the barrier control depending on the intended switching logic (NO/NC).

NO output



- 3 blue
- 4 green

NC output



- 5 brown
- 6 purple

4 Settings

4.1 Installing the app

The device can be configured using a smartphone. The dedicated App is free of charge.

Please note that the app requires access to the location services, the Bluetooth® connection and the camera function of your device. Grant these authorizations when requested to ensure smooth operation of all functions.

-
- ▶ Scan or click the QR link.
 - ▶ Install the configuration app on your mobile end device.
 - ▶ Read the General Terms and Conditions and the Privacy Policy carefully before using the app.
-

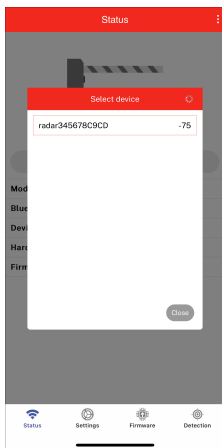
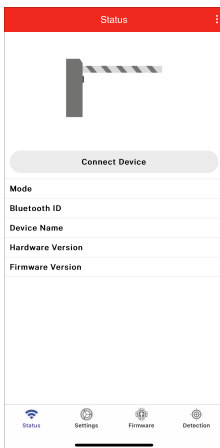


4.2 Configuring the sensor

Selecting a device

The app is used to configure different sensors via Bluetooth® connections.

- ▶ Click the **Connect Device** button displayed on the screen.
- ▶ Select the Bluetooth® ID of your sensor and initiate the pairing process.



Setting the password

The app is used to configure different sensors via Bluetooth® connections.

- When you connect to a sensor for the first time, the default password is "88888888". To ensure security, create a new login password.

The password may only contain numbers (no special characters or letters). Determine a password that will not be easily guessed by others. Protect your login data to prevent unauthorized access or loss.



NOTE

Lost password

If you have forgotten your password:

- select the option "Forgot Your Password" and contact the manufacturer to obtain the administrator password.

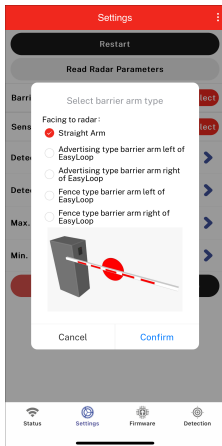
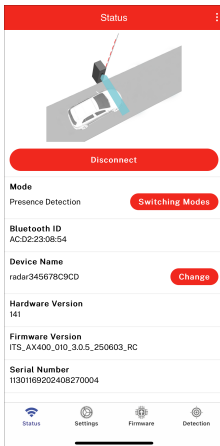
Selecting the sensor mode

Select the mode according to the intended sensor function.

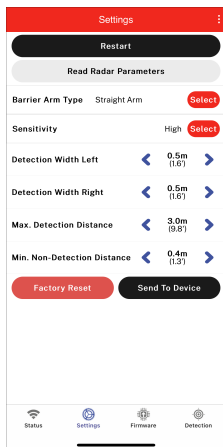
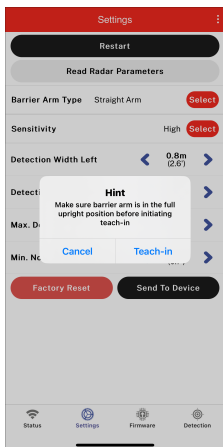
- Safety:**
continue with the section
4.2.1 "Configuring presence detection".
- Activation:**
continue with the section
4.2.2 "Configuring motion detection".

4.2.1 Configuring presence detection

- Set the mode to **Presence Detection**.
- Select the appropriate **Barrier Arm Type** in the settings.



- Set sensor parameters according to site-specific requirements.
- Clear the detection zone from pedestrians and vehicles. Set the barrier arm to the raised position. Initiate the teach-in process by pressing the button **Send to Device**.



Teach-in

Teaching-in the application background increases the stability of vehicle detection by recording the environment. The teach-in process is required after every sensor installation.

The duration of the teach-in process depends on the barrier arm type.

Straight arm teach-in

Duration: 2 – 3 seconds

- Keep the detection zone clear from traffic.



Advertising or fence arm teach-in

Duration: 30 – 60 seconds

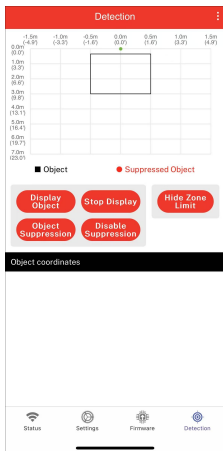
- Keep the detection zone clear from traffic.
- Trigger some opening-closing sequences of the barrier via the remote control.



Detection

When the teach-in process is complete, select **Display Object** to visualize detection data.

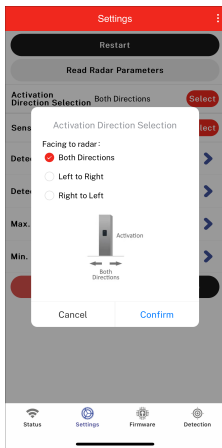
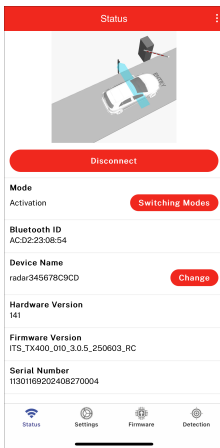
During this phase, do not perform any other operations except for selecting **Stop Display**.



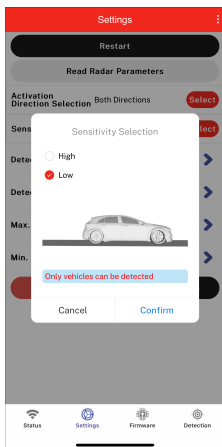
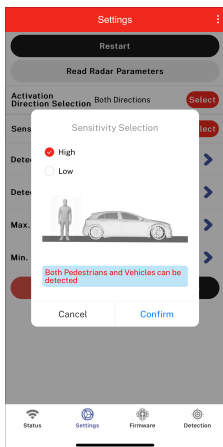
If an object will be detected, click **Stop Display** and then the **Object Suppression** button to resolve issues before resuming normal operation.

4.2.2 Configuring motion detection

- Set the mode to **Activation**.
- The sensor can activate the barrier depending on the direction of movement of a detected object. Select the activation direction.



- Select the sensitivity: **high** for detection of vehicles and pedestrians, **low** for vehicles only.



5 Operation

5.1 Status display

Operation mode	LED display		Operating status
Standard	red	on	standby
	green	on	detection
Teach-in	red	on	in progress
	green	flashing fast	complete
Area check	green	flashing	firmware update
	green	flashing	power supply unstable

5.2 Troubleshooting

Fault

Possible cause	► Possible remedies
----------------	---------------------

System failed, operating indicator (red LED) off

Power supply has failed.	► Provide a stable power supply.
Supply voltage is incorrect.	► Connect to a 9 – 24 V DC power supply, 12 V / 1 A preferred

Sensor not visible in app

Sensor is too far from your mobile device.	► For a stable connection, limit the distance to the sensor to 1 m.
Sensor is already connected to another mobile device.	Multi-device connection is not possible. ► Disconnect sensor from other device.

Detection indicated correctly (green LED), barrier works incorrectly

Sensor is incorrectly connected to barrier control board.	► Correct the wiring according to section "Electrical connection" .
Reverse switching logic is selected.	► Change NO/NC output according to section "Electrical connection" .

Detection indicated incorrectly (green LED), operating indicator (red LED) on

Detection may be affected by the background.	► Perform teach-in process again.
Detection range may be too short.	► Increase the detection range via app.

Pedestrians are detected unintentionally

Sensitivity is set too high.	► Adjust the sensitivity setting via the app.
Pedestrians with large baggage or a metal objects are passing through the detection area.	► Take coordinating measures for pedestrian traffic in the detection area.
Crowds of pedestrians are passing through the detection area.	

Barrier arm repeatedly opens and closes.

The detection range is too long.	► Reduce the setting for the detection range via the app.
Installation position of the sensor is too close to the barrier arm.	► Increase the distance between the sensor and the barrier arm to at least 3 m (12 ft).
The barrier arm is equipped with a curtain.	► Remove the curtain.

5.3 Debugging

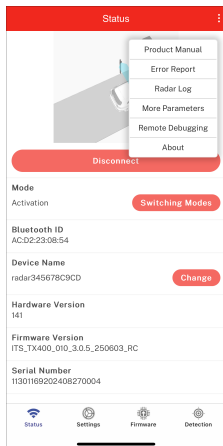
For unresolved operational issues, you can find additional information and support by selecting from the menu at the top right:

- **Error report**
- **Radar log**
- **Remote debugging**

To get assistance, contact the Bircher technical support.

✉ service@bircher.com

☎ +41 52 687 1366



5.4 Maintenance

- To avoid operational interference, keep the sensor surface clean from debris (e.g., caused by water, snow, dust).
- In case of environmental changes: if objects (e.g., guide columns, traffic cones) are added to the detection area, repeat the teach-in process.

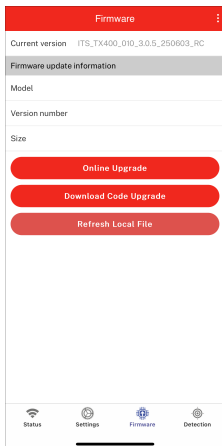
5.5 Firmware update

To update the firmware, select the **Firmware** button from the footer menu, acquire the latest firmware version and perform the online installation.

To get assistance, contact the Bircher technical support.

✉ service@bircher.com

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6 Technical data

Mechanical data

Housing material	PC, PBT, GF20, ABS
Dimensions (L × W × D)	108 × 74 × 17 mm (4.25 × 2.9 × 0.7 in)
Weight	131 g (4.7 oz)
Protection Class	IP66

Functional data

Function	safety (presence detection) activation (motion detection)
Transmission frequency	microwave 79 GHz
Detection distance	1.0 – 6.0 m (3.3 – 19.7 ft), default 3 m (9.8 ft), configurable via mobile app
Detection width	0.5 – 1.5 m (1.6 – 5.0 ft) per side, configurable via mobile app
Interface	Bluetooth® / RS485

Electrical data

Supply voltage	9 – 24 V DC (12 V / 1 A preferred)
Power consumption	< 2.5 W
Output	NO/NC dual relay
Response time	100 ms
Wiring	10 pin
Cable length	1.2 m (3.9 ft)

Ambient conditions

Operating temperature	min. -40 °C, max. 85 °C (min. -40 F, max. 185 F)
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Disposal information



The product contains electrical or electronic components. Do not dispose of the product with household waste.

Notice on conformity



BBC Bircher AG declares that this product conforms with the following guidelines and directives of the EU:

RED 2014/53/EU RoHS 2011/65/EU

Follow the QR code or link below for the detailed declaration of conformity.

Technical documentation



You will find all documents on the manufacturer website

[bircher.com](https://www.bircher.com)

7 Contact

If you have any questions about the device, please contact us:

✉ **service@bircher.com** ☎ +41 52 687 1366

Bircher Smart Access

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