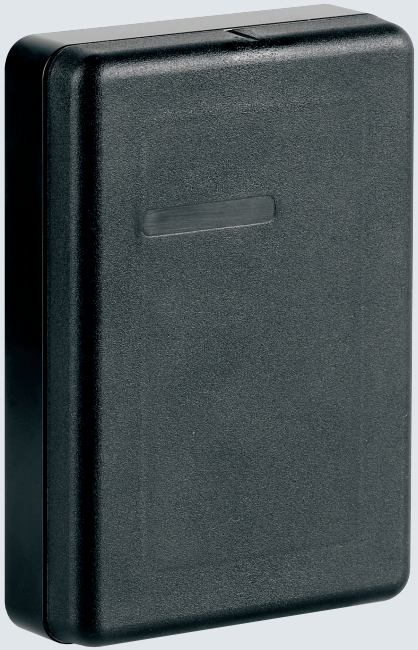
R3S-8

Radar Scanner



EN 12453
Protection level D

Operating manual for the app
EN Version 1.0

sensoltek®
Intelligent Sensor Solutions

1 EN – User Manual

Contact

Sensotek GmbH
Stuttgarter Straße 119
73061 Ebersbach/Fils
Germany

Phone: +49 7163 93926-0
E-mail: info@de.sensotek.com.de
Website: www.sensotek.com

2 Download, start and connection

2.1 Downloading the Scanner Assistant app

Download in the App Store.

JETZT BEI Google Play

Download on the App Store

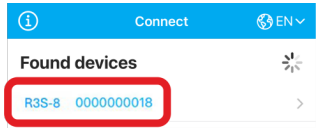
2.2 Starting the app

1. Activate Bluetooth® on the mobile end device.
2. Open the Scanner Assistant app.

2.3 Connecting the app with Radar scanner

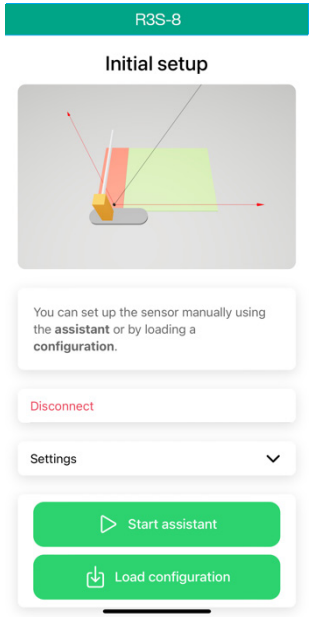
NOTE

- The radar scanner must be connected to the power supply, otherwise no device will be displayed.
- The distance between the radar scanner and the app must not exceed 10 centimetres, so as to allow the radar scanner to be detected.
- Once a connection has been established, the distance to the radar scanner can be increased to up to ten metres. Provided that the connection is not restricted by obstacles.

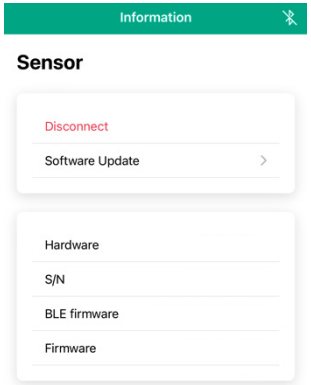


Tap on the serial number of the radar scanner.

> When setting the radar scanner for the first time or applying a new setting, *Initial setup* appears upon starting



> If the radar scanner is already set, *Information* appears upon starting.



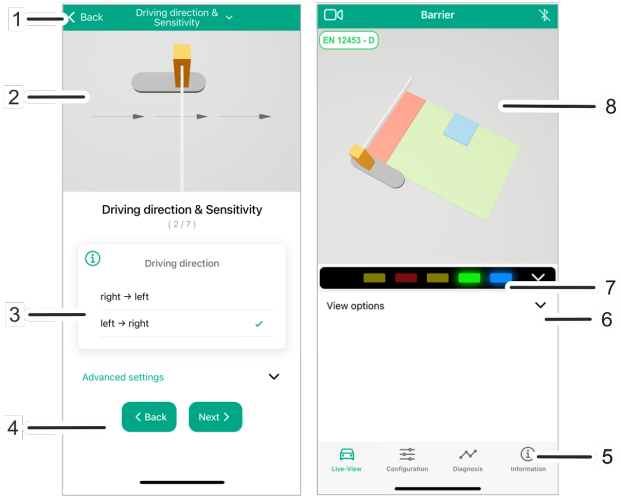
3 User interface

3.1 Structure of the user interface

The structure of the user interface depends on the window you are in: Setting or Live-View

Note:

The illustrations of the user interfaces are only examples and may differ depending on the individual application.



1	Navigation bar at the top
2	2D/3D view for the respective setting

3	Settings for the parameters
4	Buttons for navigation and confirmation
5	Navigation bar at the bottom
6	Live-View settings
7	Display of the LED signals
8	Live 2D/3D view

Navigation bars

The buttons in the navigation bars have the following functions:

Live-View	Opens the Live-View of the application
Diagnosis	Opens the diagnosis for error output and measurement data If there is an error, a red circle with a number also appears on the button
Configuration	Opens the settings
Information	Opens the information about the sensor and the app

3.1.1 Controls

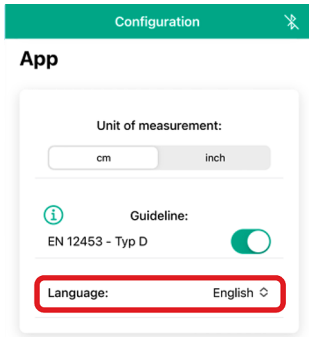
Next >	Opens the next parameter settings window
< Back	Opens the previous parameter settings window
Apply	Accepts all settings or input changes
Delete	Deletes all inputs in the blanking area
	Provides additional information on the setting option or function
	Provides information on compliance with the standard specifications for EN 12453 Protection Level D
	Value does not comply with the standard specifications for EN 12453 Protection Level D
EN 12453 - D	Opens the checklist to check whether all settings are compliant with EN 12453 Protection Level D
EN 12453 - D	Standard specifications for EN 12453 Protection Level D not complied with
	Changes the view in Live-View (2D/3D)

3.2 Setting the language

There are two ways to set the language:

- **Before connecting** via the navigation bar at the top

- **After connecting** via *Configuration*



3.3 Entering the values

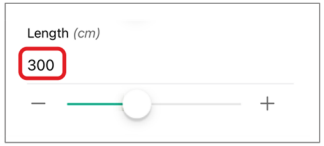
Various options are available for entering the values.

Note:

The minimum and maximum value is defined for each setting.

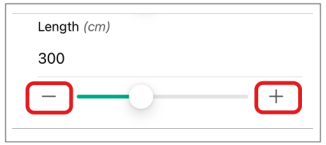
- *Input via the keyboard*

  Click in the number or field > Keyboard input opens, enter the value



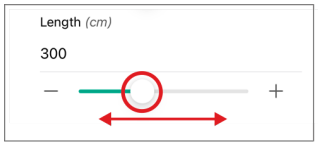
- *Input via plus/minus sign*

  Click on the plus or minus sign > Increase or reduce value



- *Input via the slide switch*

  Move the slide switch to the right or left > Increase or reduce value. This option is only recommended for rough adjustment or for increasing/reducing values by increments.



3.4 Live-View (display and navigation)

Display of the values in the Live-View

The input of a value or change to a value in the respective setting is simultaneously visualised in the Live-View.

Navigation in the Live-View

Rotate: Moving your finger to the left or right rotates the view

Zoom: Moving two fingers towards each other or away from each other reduces or enlarges the view

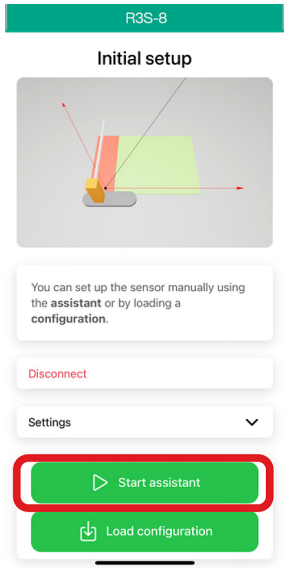
4 Setting the radar scanner

The radar scanner can be set using the setup assistant.

Note:

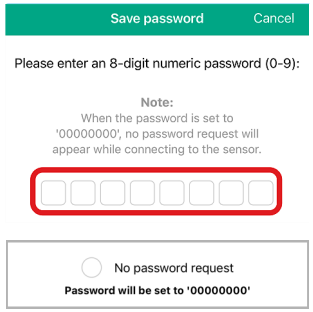
The "Initial setup" window appears automatically when the radar scanner is set for the first time or the specifications have been reset.

4.1 Standard configuration

1. 

   Click the "Start assistant" button.

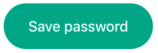
   If there is a file in which the appropriate settings have already been configured: Click the "Load configuration" button.

2. 

   Enter password

   Note: The numeric password can be freely selected.

   If no password is required, a tick must be put here.

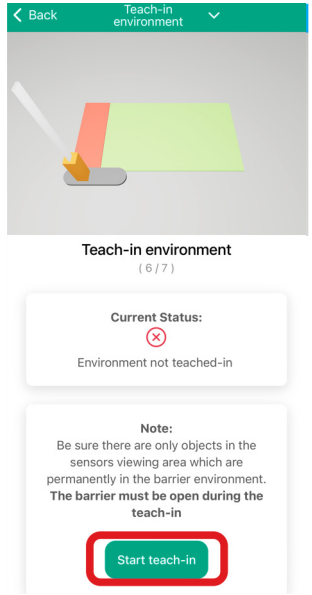
3. 

   Save input.

Several settings can then be applied for the barrier system and for the radar scanner. The respective setting or change is visible in the Live-View. Standard values are specified for each setting that can be adapted to the respective barrier situation.

Each settings page ends with 

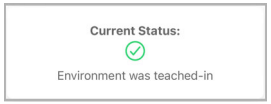
NOTE: Additional settings are possible for some functions. (see "Advanced settings", page 4)

1. Settings for the barrier boom
   - Positioning (position of the barrier boom)
   - Height (distance to the road surface)
   - Length (distance between the end of the barrier boom and the sensor)
2. Driving direction & Sensitivity
   - Driving direction (direction of the incoming vehicle or pedestrian)
3. Sensor position
   - Height above the road (distance between the sensor and the road surface)
   - Distance to the barrier boom
   - Mounting angle (determines the angle at which the radar scanner is aligned with the barrier boom)
4. Settings for the safety area
   - Length
   - Width
5. Settings for the opening area
   - Length
   - Width
   - Object detection (determines whether vehicles or pedestrians are to be detected or blanked by the radar scanner)
   - Cross-traffic suppression (Note for Live-View: Arrows indicate the direction in which object detection is possible)
   - Direction of movement (determines whether approaching and/or departing objects are to be detected)
6. 

   Save environment in the radar scanner.

   > Click the "Start teach-in" button.

   Observe the information before teach-in!

7. 

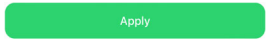
   Status changes to "teached-in"

8. 

9. **Advanced configurations**

   These settings should only be applied for special barrier systems

   - Teach-in barrier boom — If the barrier boom has an additional crush barrier/curtain, for example, it must be teached-in.
   - Drive-through detection — Contact type for signal output
   - Blanking areas — To avoid false detections; up to three blanking areas can be set
   - Error handling — Behaviour of the outputs when errors are present
   - LED settings — LEDs set to permanently on/off or automatic

10. 

    Save settings

➢ Settings are saved in the radar scanner.

The "Configuration" window appears.

For visualisation of the settings on the barrier system, click on 

in the lower navigation bar.

4.2 Advanced settings

"Advanced settings" are possible for some functions.

Standard values are specified that can be adapted to the respective barrier situation. Changes to the settings should only be made by experienced specialists.

Driving direction & Sensitivity

- Sensitivity (for the detection of vehicles)

Safety area

- Distance from the safety area to the sensor
- Distance from the sensor to the barrier boom
- Object detection
  ⚠ CAUTION: Risk of injury
  Selection of "All - also pedestrians". This setting should not be changed for the safety area.
- Contact type for the output
- Triggering of the safety area

Opening area

- Distance from the opening area to the sensor
- Distance from the sensor to the barrier boom
- Blanking static objects (enables objects that do not move for a long time to be blanked)
- Contact type for the output
- Signal type:

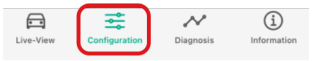
  Continuous signal – As long as an object is in the opening area, a continuous pulse is triggered.

  Single pulse – As long as an object is in the opening area, a single pulse is triggered

  Repeated pulse – As long as an object is in the opening area, the pulse is triggered every five seconds
- Testing (setting option as to whether the opening area is also to be triggered)

4.3 Checking settings according to EN 12453

If the radar scanner is to fulfil the requirements of EN 12453 Protection Level D, the required settings may be checked.

1. 

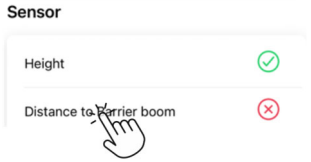
Click "Configuration".

2. 

Click on the "EN 12453-D" button.

Note: The checklist can also be opened using the button in the Live-View.

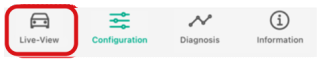
> The checklist opens with all the settings required in accordance with EN 12453 Protection Level D.
Settings that fulfil the requirements have a green tick.
Settings that do not fulfil the requirements have a red cross.



Subsequent adjustments can be made by clicking on the respective setting.

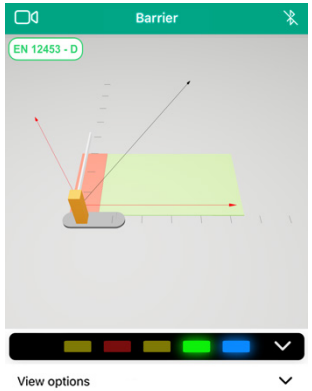
5 Applying Scanner Assistant

The functionality of the radar scanner can be tracked on the app via the virtual barrier system.



Click "Live-View".

> The Live-View of the virtual barrier system opens.



The following setting options can be found under the view options:

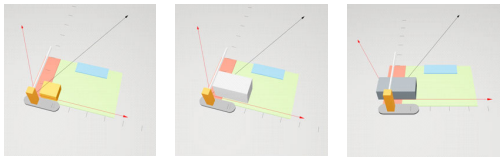
- Sensor detection area (represented by arrows)
- Sensor distance marks (represented by horizontal and vertical lines at intervals of 1 m)

Note: Both are activated as standard.

Display in the Live-View

- *Object detection*

If one or more objects have been detected in the detection area, they are represented with coloured squares.



Colour	Explanation
Yellow	Detected object: No vehicle
Light grey	Detected object: Vehicle (fast detection)

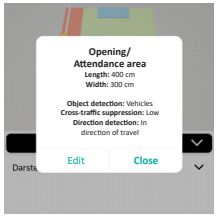
Dark grey	Detected object: Vehicle (precise detection)
Blue	Blanking area

- *Display of the settings for detection areas*

Display values for the opening area and safety area

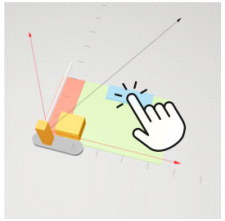
1. 

Click on an area.

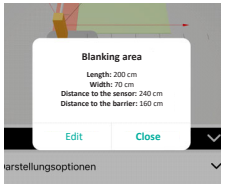
> 

The values can be edited subsequently.

- *Display of the settings for the blanking area*

1. 

Click on the blue area.

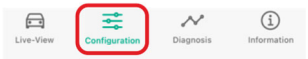
> 

The values can be edited subsequently.

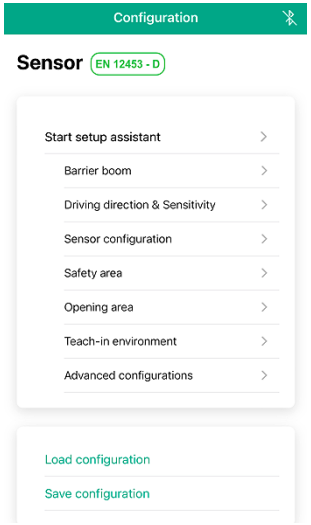
6 "Configuration" overview

6.1 Adjusting settings

Settings on the sensor and the app can be adjusted via the "Configuration" page.

1. 

Click "Configuration".

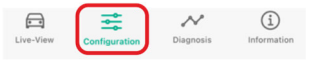
> 

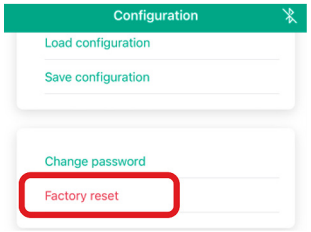
All settings for the sensor can be individually adjusted here.

A configuration can also be saved, or a saved configuration can be loaded.

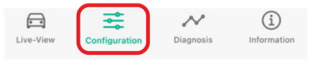
All settings for the app can be adjusted here.

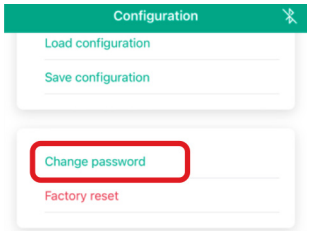
6.2 Resetting settings

1. 

2. 

6.3 Changing the password

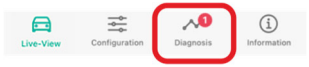
1. 

2. 

➢ "Change password" opens. A new password can be assigned here.

6.4 Diagnosis

Errors and measurement data are displayed via the diagnosis.



Click "Diagnosis".

If there is an error, a red circle with the number of errors appears next to the diagnosis.

> All errors are listed.

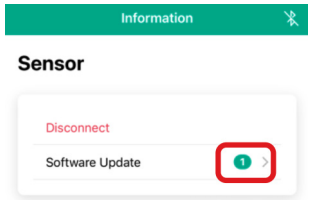
The error is explained in more detail by clicking on the arrow.

7 Software update

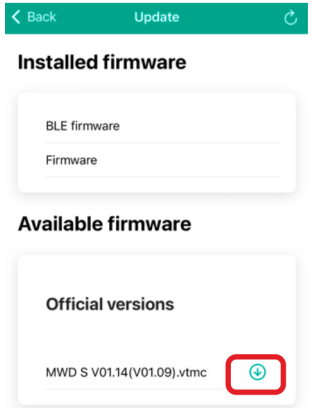
NOTE

- The current configuration is automatically saved when the update is started and automatically reloaded after the update has finished.

1. 

2. 

3. There are two ways to perform a software update:

a. 

Download update directly and install

b. 

Manual update with a file.

Note: The software file must be on the smartphone.

Select and install file