CONTENT

viaAPP User Manual

Chapter 1: Welcome to viaAPP – Your Mobile Access to via traffic Devices

Welcome to the **via**APP! This guide will help you get the most out of the app for configuring your **via** traffic speed display and traffic counting devices, as well as for evaluating the recorded data.

1.1 What is viaAPP?

The **via**APP is a mobile application specifically developed for Android and iOS to provide you with a fast, intuitive, and wireless connection to your **via** traffic devices via Bluetooth®.

With the **via**APP, you can: * **Configure devices:** Set thresholds, schedules, display options, and more. * **Retrieve data:** Download recorded traffic data directly to your smartphone or tablet. * **Analyze data:** Visualize the captured data in clear charts and tables directly in the app. * **Manage data:** Share downloaded data via email, cloud services, or messenger, or delete it from the device.

1.3 Before You Start: What You Need

To fully use **via**APP, please ensure you have the following:

- **A compatible via traffic device:** For example, viasis LITE, viasis LITE PLUS, viasis COMPACT 3000, viasis PLUS, viasis VARIO, viasis VARIO XL, or a viacount II. The device should be ready for operation and the battery charged.
- **Your personal registration key:** A six-digit registration key is required for the initial registration in **via**APP. You receive this key from your dealer (**via** traffic controlling gmbh) when purchasing the device. The key is usually located in the battery box of the device.
- **A smartphone or tablet:** With a current Android or iOS operating system and activated Bluetooth function.
- **(Optional) Internet connection:** An internet connection is required for initial registration, verification of your email address, and optionally for sending log files or exported data files. The core functions such as device connection, configuration, and data download also work offline after successful registration.

1.4 Quick Start: First Steps (Example: Setting up a 30 km/h zone)

This section guides you through the basic steps to complete a typical task quickly. More detailed information on each step can be found in the subsequent chapters of this manual.

1. **Register & Log In (see Chapter 2):**
    - Download **via**APP from the App Store (iOS) or Google Play Store (Android) and install it.
    - Open the app and tap the "Register" button.
    - Enter your personal, six-digit registration key and follow the instructions to enter your data.
    - Verify your email address by clicking on the link in the confirmation email sent to you.
    - Then log in to **via**APP with your email address and password.
2. **Connect Device (see Chapter 3):**
    - Make sure Bluetooth is activated on your smartphone or tablet.

- Switch on your **via** traffic device and ensure it is within Bluetooth range.
- Tap the "Search Devices" button on the **via**APP start screen.
- Select your viasis device (e.g., "SISLITE..." or "VIASIS...") from the list of found devices.
- Follow the instructions for Bluetooth pairing. The default PIN code for many devices is 1234.

3. **Carry out standard configuration for a 30 km/h zone (Example for viasis devices, see Chapter 4):**
   - After a successful connection, you will automatically be taken to the device configuration view.
   - Select "Parameter Set 1" via the menu icon (three horizontal bars) at the top left (if not done automatically).
   - Switch to the "Display" tab:
     - Ensure display is activated (On).
     - Show speed Min: e.g., 5 km/h (so that very slow vehicles are not displayed).
     - Show speed Max: e.g., 60 km/h (or higher, depending on the desired upper limit of the display).
     - Color switching: Activate (On) and set the threshold to e.g., 31 km/h (speed changes from green to red).
     - Flashing LED: Activate (On) and set the threshold to e.g., 40 km/h (as an additional warning).
   - Switch to the "Symbols" tab:
     - Laughing Smiley: Activate (On), speed range e.g., from 5 km/h to 30 km/h.
     - Sad Smiley: Activate (On), speed range e.g., from 31 km/h to 40 km/h.
     - (Optional) Exclamation mark: Activate (On), speed range e.g., from 41 km/h to 60 km/h.
     - (Optional) Speed limit symbol "30": Activate (On), speed range e.g., from 31 km/h to 60 km/h (this symbol is often displayed alternating with the sad smiley or the exclamation mark).
   - **Important:** Tap the "Transfer Parameters" button at the bottom right to save your settings on the viasis device.

4. **Read data (see sections 4.2 and Chapter 6):**
   - If your device has already recorded traffic data, you can download it now. To do this, tap the "Read data" button in the configuration view.

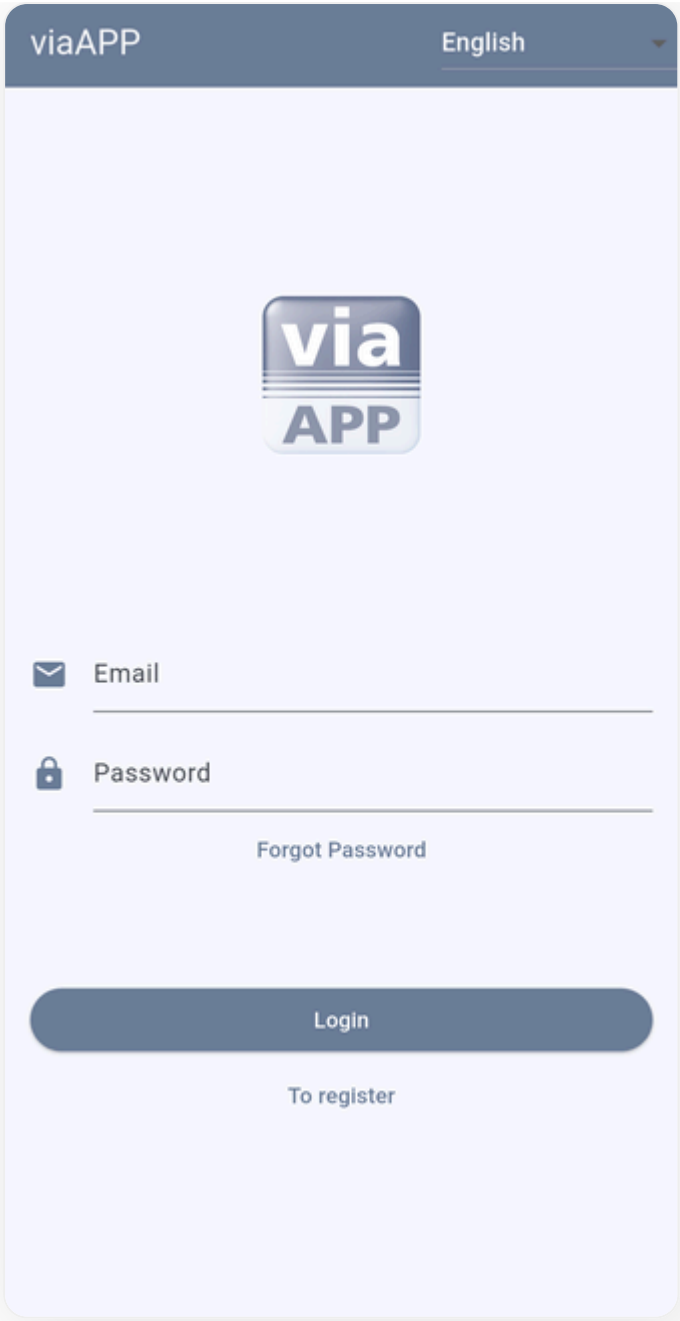
- The data will be transferred to your smartphone/tablet. You can later access these files via the file icon (folder icon top right on the app's start screen) and start an evaluation (see Chapter 8).

Congratulations! You have now fundamentally configured your viasis device for a 30 km/h zone. For more detailed settings, the use of schedules, the configuration of other device types (such as viacount II), or the exact analysis of your data, please read the corresponding chapters of this user manual.

Chapter 2: First Steps – Registration and Login

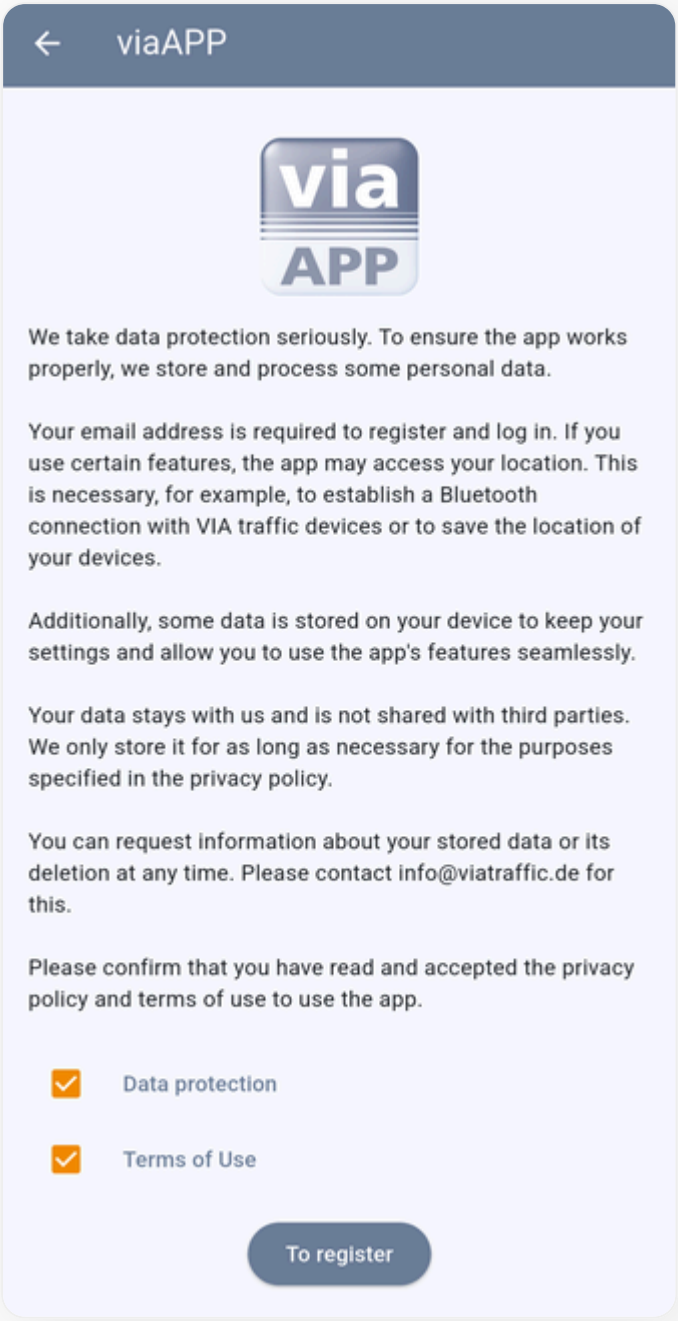
To use the full range of functions of the **via**APP, especially the data evaluation and certain configuration options, a user account and device registration are required.

2.1 Start Screen and Language Selection



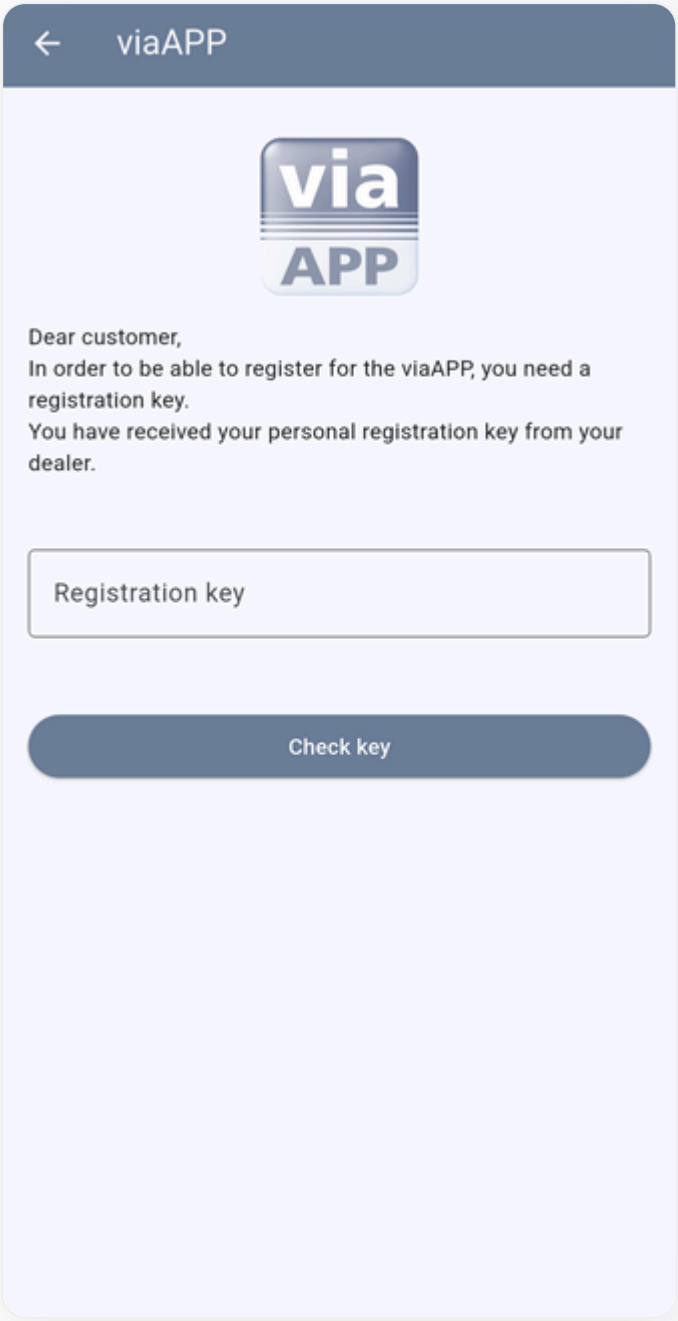
1. **Open App:** Start **via**APP on your device. You now see the login screen.
2. **Check/Select Language:**
    - The app automatically tries to detect and set the language of your device (e.g., German, if your system is set to German).
    - If your language is not automatically recognized or you prefer a different language, tap the language selection at the top right of the screen.
    - Select the desired language from the list. Available languages include: German, English, Dutch, French, Swedish, Finnish, Italian, Spanish, Polish, Slovenian, and Czech.
    - If your system language is not supported, English is used by default.
3. **Start Registration:** Tap the "Register" button at the bottom of the screen to start the registration process.

2.2 Agree to Privacy Policy and Terms of Use



1. **Read Information:** After tapping "Register", a screen with information on data usage appears.
2. **Agreement Required:** Before entering personal data, you must confirm that you have read and accept the privacy policy and the terms of use.
    - You can access and read the documents via the corresponding links.
3. **Confirm:** Check the boxes for:
    - [ ] Privacy Policy
    - [ ] Terms of Use
4. **Continue:** Then tap the "Register" button to continue.

2.3 Entering the Registration Key



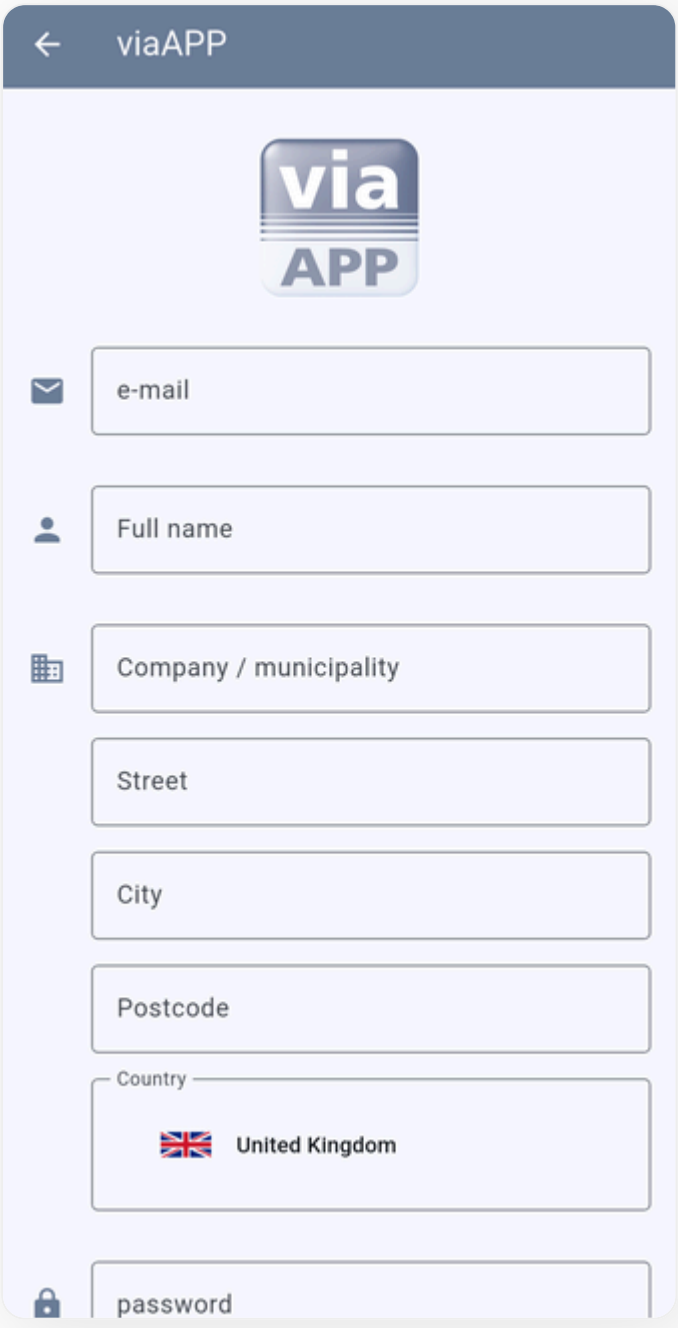
1. **Request Key:** You need a personal registration key to continue registration.
    - You receive this key from your dealer (**via** traffic controlling gmbh) when you order a **via**APP-compatible device.
    - The key is usually located in the battery box of the device.
    - The key consists of six characters (numbers and/or letters).

2. **Enter Key:** Enter your personal registration key in the field provided.
    - Example (fictitious): A1B2C3

3. **Check Key:** Tap the "Check Key" button.

4. **Result:** If the key is valid, you will automatically proceed to the next step, the actual registration form. If the key is invalid, you will receive an error message.

2.4 Filling out the Registration Form

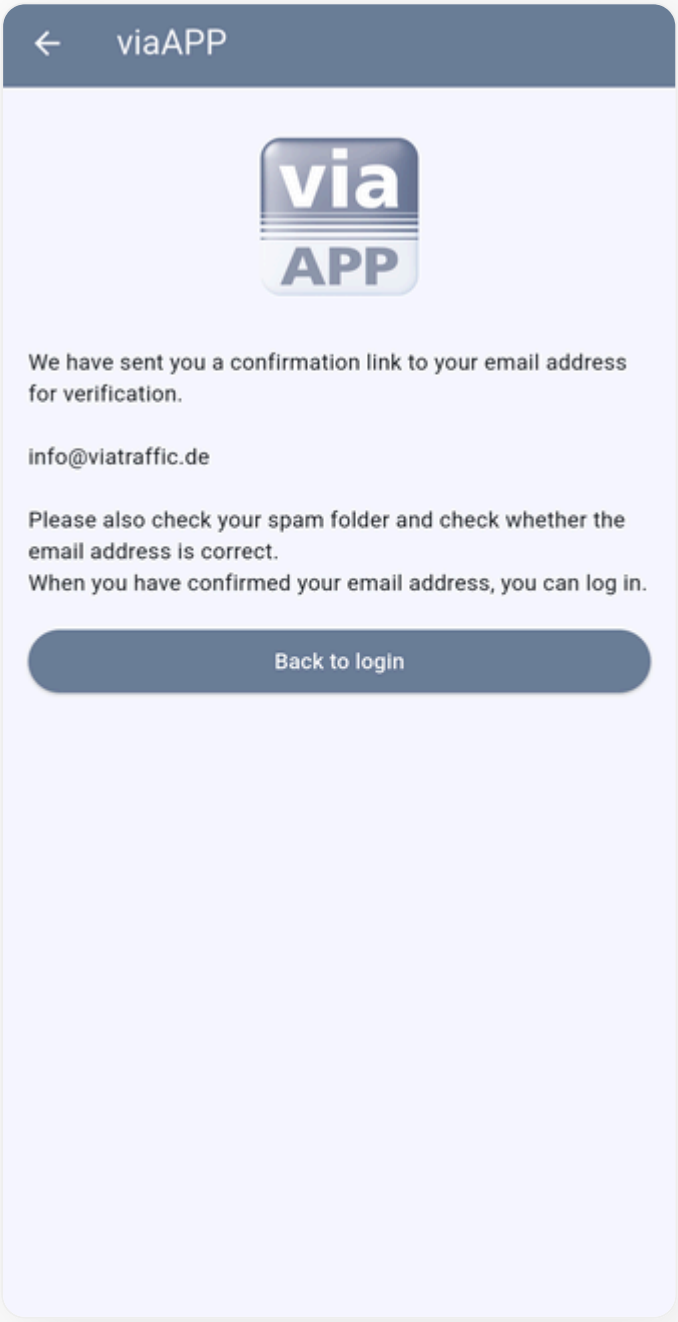


After successful verification of the key, the registration form opens. Please fill out the following fields carefully:

1. **Email:** Enter your valid email address. This is required for login and verification.
2. **Full Name:** Enter your first and last name.
3. **Company / Municipality:** Enter the name of your company or your municipality/city administration for which you are using the app.

4. **Street:** Enter the street name of your address.
5. **City:** Enter the name of your city.
6. **ZIP Code:** Enter the postal code.
7. **Country:** Select the appropriate country (often Germany is already pre-selected).
8. **Password:** Choose a secure password for your access to **via**APP.
9. **Repeat Password:** Re-enter the chosen password to confirm.
10. **Complete Registration:** When all fields are correctly filled out, tap the "Register" button.

2.5 Verifying Email Address

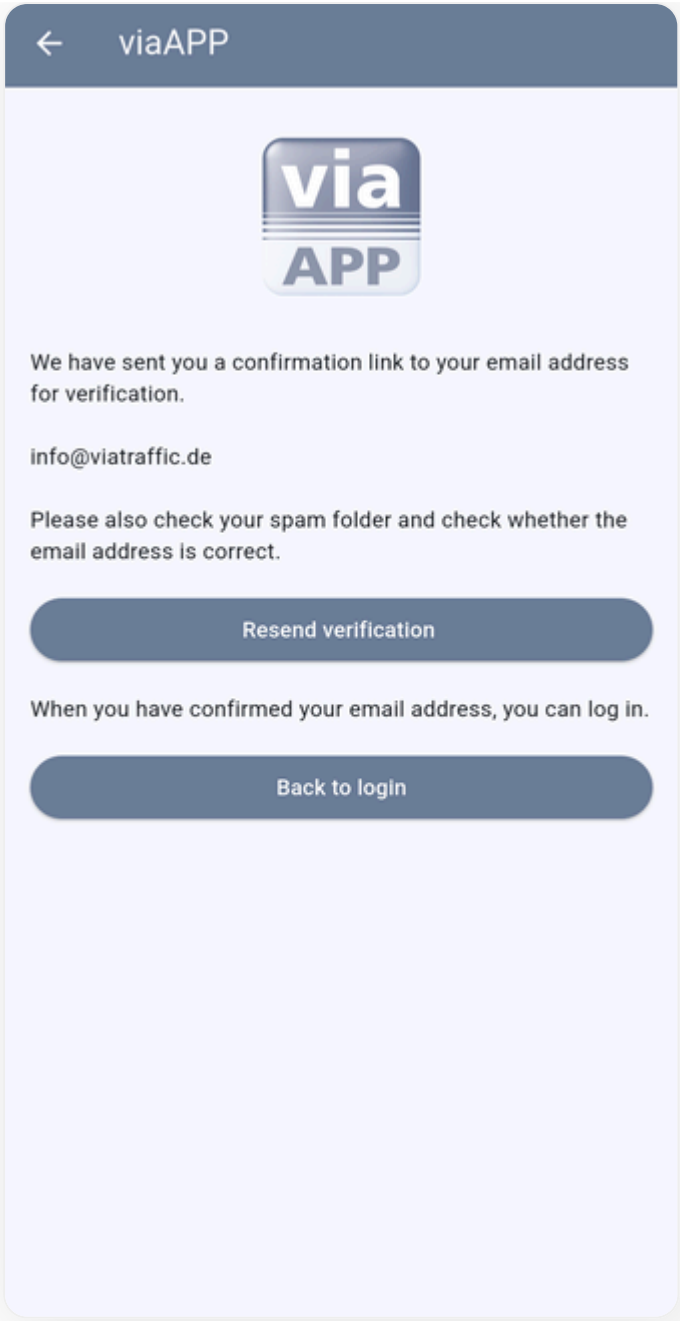


1. **Confirmation Email:** After submitting the form, the system automatically sends a confirmation email to the email address you provided. A screen in the app confirms the sending of the email and shows your email address.
2. **Check Inbox:** Open your email program and look for an email from **via**APP or **via** traffic controlling gmbh. Also check your spam folder.
3. **Click Link:** Open the email and click on the confirmation/verification link contained therein.
4. **Wait for Confirmation:** You will usually be redirected to a website confirming that your email address has been successfully verified.

Important: You must confirm your email address before you can log in to **via**APP for the first time.

What to do if no email arrives?

- Wait a few minutes.
- Check your spam/junk folder again.
- Return to **via**APP. On the screen confirming the sending of the verification email, you will find the option "Resend verification". Tap it to request the email again.



2.6 First Login

1. **Back to the App:** Return to **via**APP after successful email verification. You will see either the "Verification sent" screen or the login screen. If necessary, tap "Back to login".
2. **Enter Login Data:** Enter your registered email address and the password you chose on the login screen.
3. **Login:** Tap the "Login" button.
4. **Success:** You will now be successfully logged in and see the start screen of **via**APP (recognizable, e.g., by the "Search Devices" button).

Problem: Login not possible despite registration? If you try to log in before you have clicked the link in the confirmation email, a message appears stating that your email address has not yet been

verified. In this case:

1. Verify your email address as described in step 2.5.
2. Use the "Resend verification" option if necessary if you cannot find the email.
3. Tap "Back to login" and try logging in again after the email has been verified.

Chapter 3: Establishing a Connection

Before you can configure a device or retrieve data, you must establish a connection between your smartphone/tablet and the **via** traffic device.

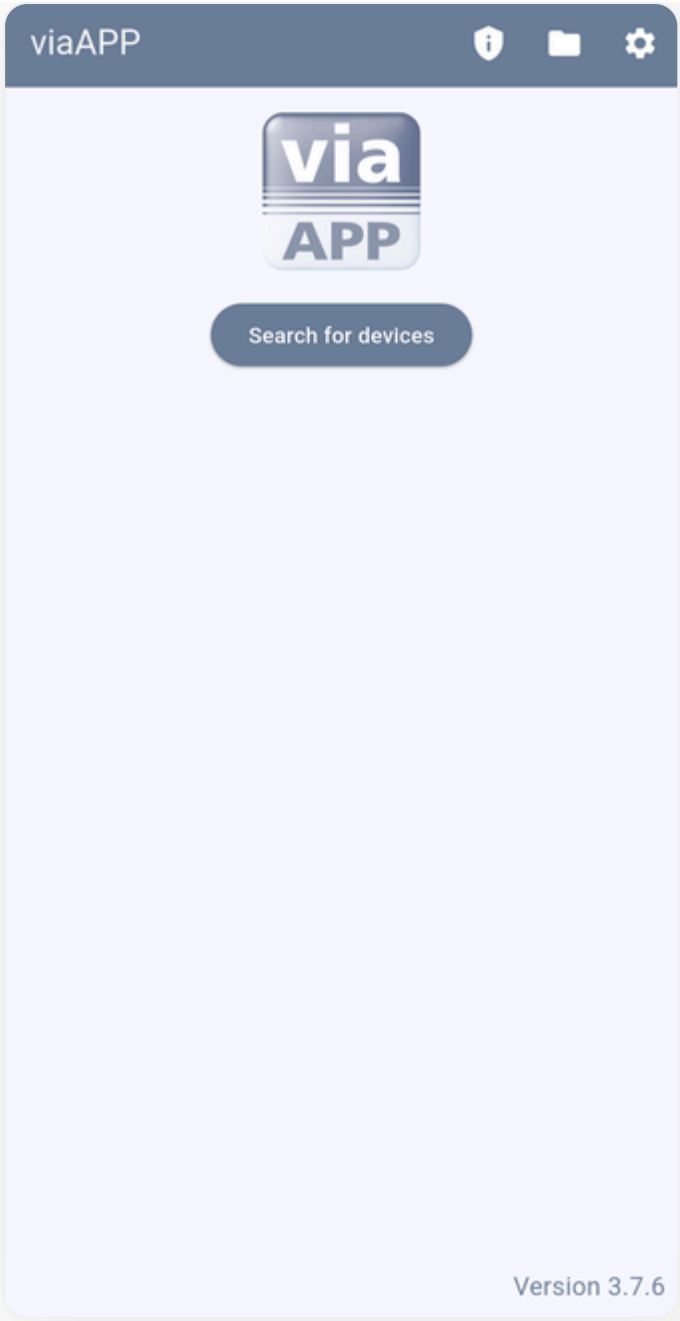
3.1 Activating Bluetooth®

The communication between the **via**APP and the devices is done via Bluetooth®.

- Make sure that Bluetooth® is activated on your mobile device.
- Ensure that the **via** traffic device is within range (approx. 5-10 meters) and powered on.

3.2 Searching for Devices

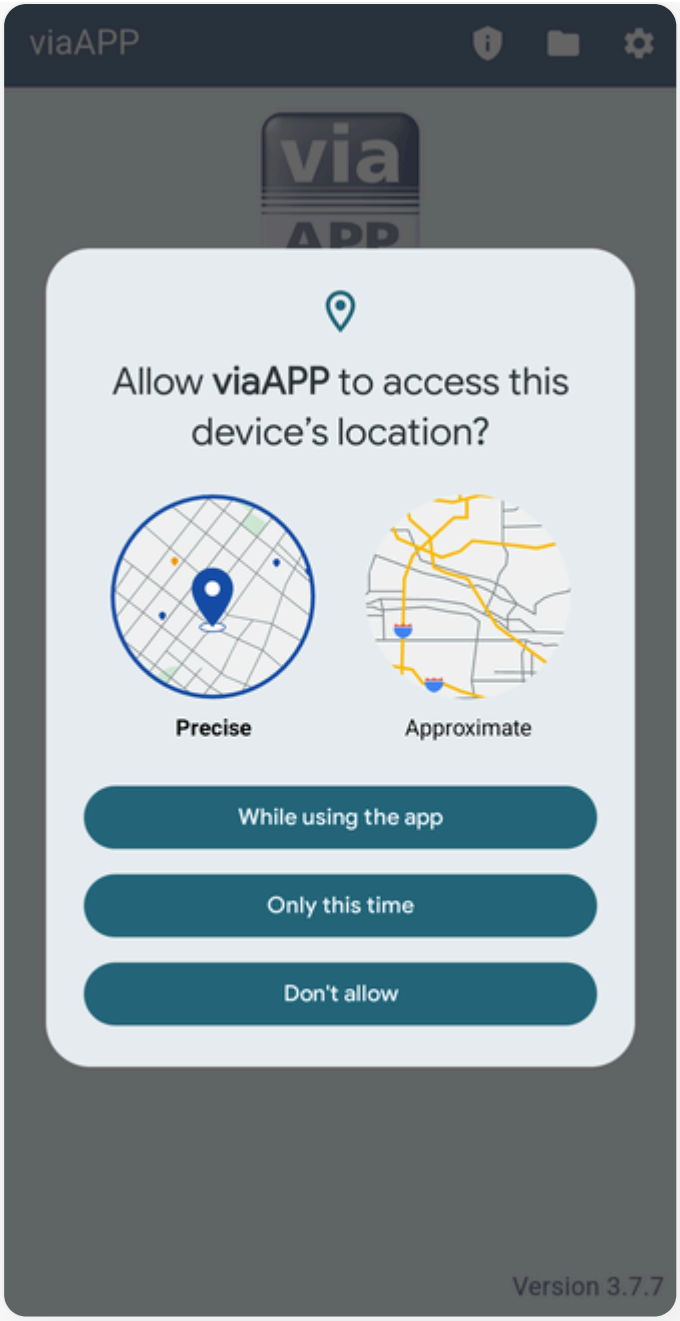
On the app's start screen (after login), tap **Search Devices**.



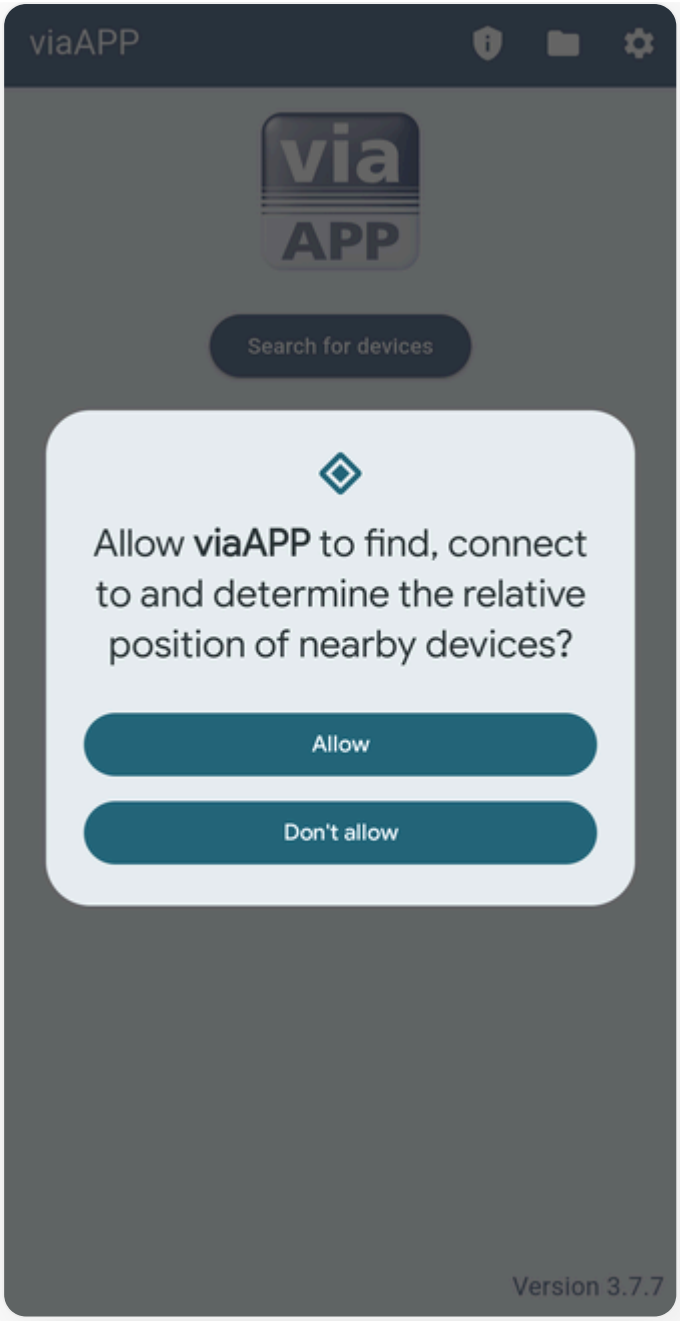
3.3 Permissions

To search for and connect to Bluetooth® devices, the **via**APP requires certain permissions from the operating system (Android or iOS):

- **Location Access:** Required by the operating system for Bluetooth® specialized searches.



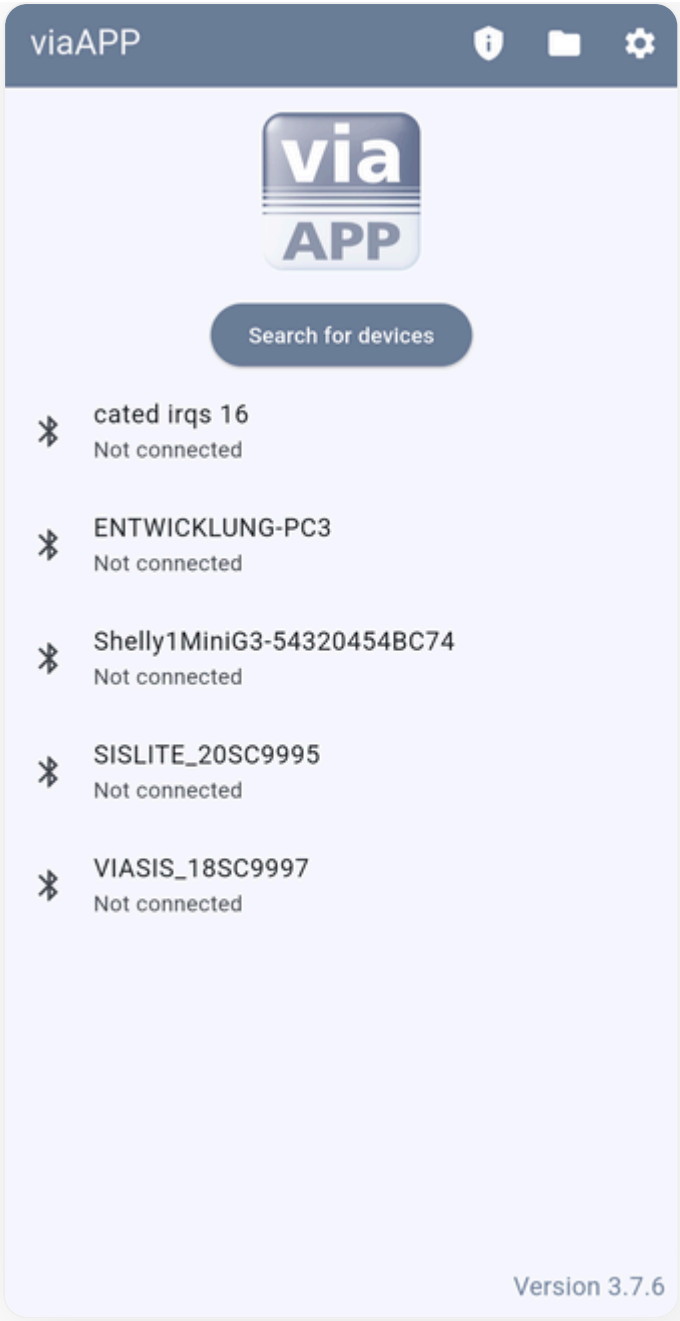
- **Bluetooth/Nearby Devices:** Required for communication with the device.



*Confirm these requests with **Allow** or **OK**.*

3.4 Device List and Connection

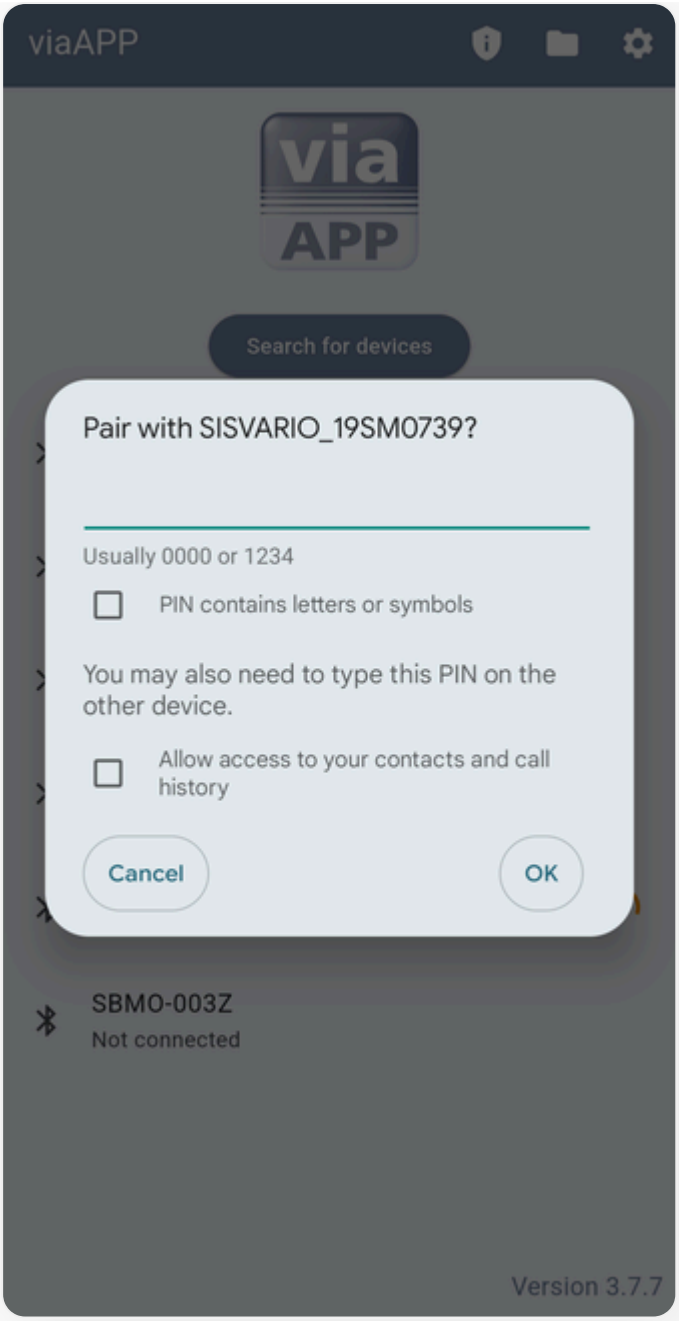
After the search, all **via** traffic devices in range will be displayed with their serial number.



- Tap the desired device to establish a connection.
- If your device is not found, check the power supply and range, and tap **Search again**.

3.5 Pairing

Before a permanent connection can be established, your smartphone/tablet and the **via** traffic device must be paired once.



- A pairing request appears on your mobile device.
- Enter the pairing code:
  - **Standard Code:** For many devices (e.g., viacount II, older viasis models), the code is **1234**.
  - **New 6-digit PIN:** For viasis devices from the **end of 2025** onwards, a 6-digit PIN is required. This PIN corresponds to the device's **serial number**.
- **Where to find the Serial Number?** You can find the serial number on the label on the back of the device.

- Confirm the pairing. The connection will now be established.

Chapter 4: Device Configuration (viasis Models)

Once you have successfully connected your viasis device to the **via**APP (see Chapter 3), you can view and adjust its settings (parameters). The available options vary depending on the device type. This

chapter describes the specific configuration options for the various supported viasis models.

4.1 Basics of Parameter Sets, Sheduling, and General viasis Settings

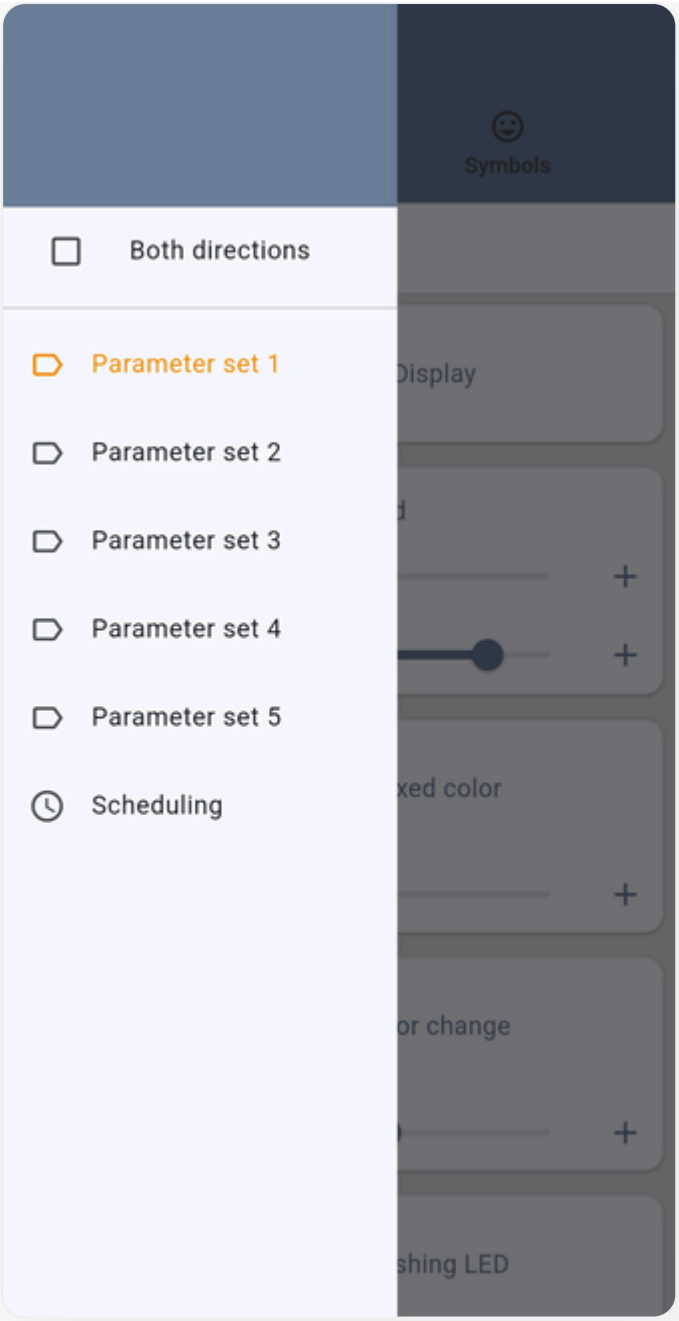
All viasis display devices offer the possibility to work with up to five different parameter sets. A parameter set is a complete collection of display settings (e.g., which symbols are shown at which speeds, color changes, etc.). By using multiple parameter sets, you can flexibly adapt the behavior of your viasis device to different situations (e.g., different speed limits at different times of the day).

4.1.1 What are Parameter Sets?

- You can define up to five independent parameter sets (Parameter Set 1 to Parameter Set 5) for your viasis device.
- Each parameter set contains its own specific settings for the "Display", "Symbols" and, if applicable, "Matrix" / "Switching Outputs" tabs (see sections 4.3 to 4.8).
- **Application Examples:**
    - **School Path:** One parameter set for lower speed thresholds and special warning symbols during school hours, another parameter set for normal traffic times.
    - **Different Speed Limits:** If a device is used at locations with varying speed limits, a separate parameter set can be prepared for each limit (e.g., Parameter Set 1 for 30 km/h zone, Parameter Set 2 for 50 km/h zone).

4.1.2 Accessing Parameter Sets, Scheduling, and Further Settings (Menu)

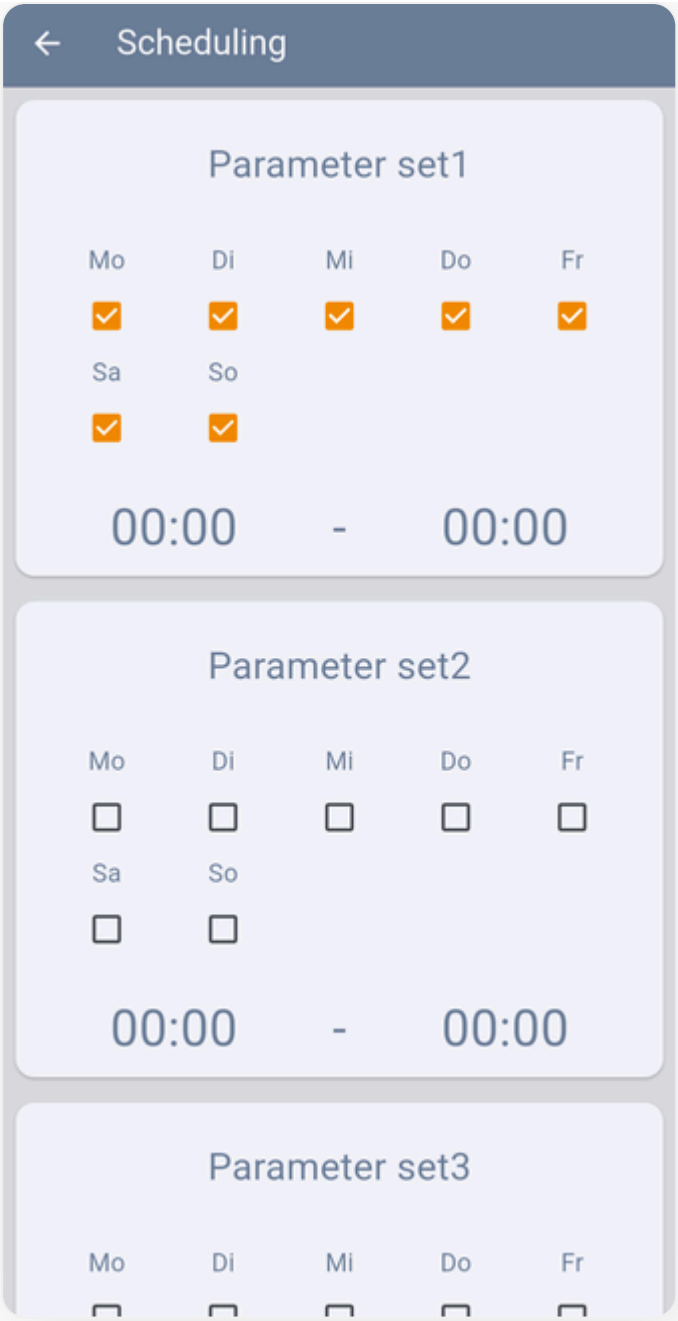
The selection of the parameter set to be edited, as well as access to the scheduling and other device-specific basic settings, is done via a menu. You can reach this menu via an icon with three horizontal bars (often referred to as a "burger menu") at the top left of the device configuration view.



The menu typically contains the following options:

- **Parameter Set 1 to Parameter Set 5:** Select one of these items to edit the settings (Display, Symbols, etc.) for the respective parameter set. The currently selected parameter set is usually highlighted.
- **Scheduling:** Opens the screen for configuring the time-controlled activation of the different parameter sets.
- **Both Directions (Bidirectional Tracking):** A setting whether traffic data should be recorded for both directions of travel.

4.1.3 Configuring Scheduling



With scheduling, you can determine which of the five parameter sets should be automatically active at which times on which days of the week. This is particularly useful for dynamically adjusting the display behavior, e.g., for lower speed limits during school hours.

1. **Open Scheduling Screen:** Select the "Scheduling" item in the menu (see 4.1.2).
2. **Configuration per Parameter Set:** For each parameter set (e.g., Parameter Set 1, Parameter Set 2, etc.), you can individually specify:
    - **Days of the Week:** Mark the days (Mon, Tue, Wed, Thu, Fri, Sat, Sun) on which this parameter set should be controlled by scheduling.
    - **Time From/To:** Set the start and end time within which the respective parameter set should be active on the selected days (e.g., from 07:00 to 16:00).
    - If no specific parameter set is active by schedule for a period, or if the rotary switch on the device is set to a specific number, a default parameter set (often Parameter Set 1) or

the manually selected parameter set may be active.

Note on the rotary switch on the device: Many viasis devices have a physical rotary switch on the back. This switch can be used to manually select a parameter set (1-5), or it can be set to a "clock" position, which activates the scheduling configured here in the app.

4.1.4 Setting Up Bidirectional Tracking

You can also configure bidirectional tracking via the menu (see 4.1.2).

- **Both Directions:** If this option is activated, the viasis device records traffic data for vehicles moving towards the device (incoming traffic) AND for vehicles moving away from the device (departing traffic). If the option is deactivated, typically only incoming traffic is recorded.

4.2 Important Operating Elements of the Configuration Tabs (viasis)

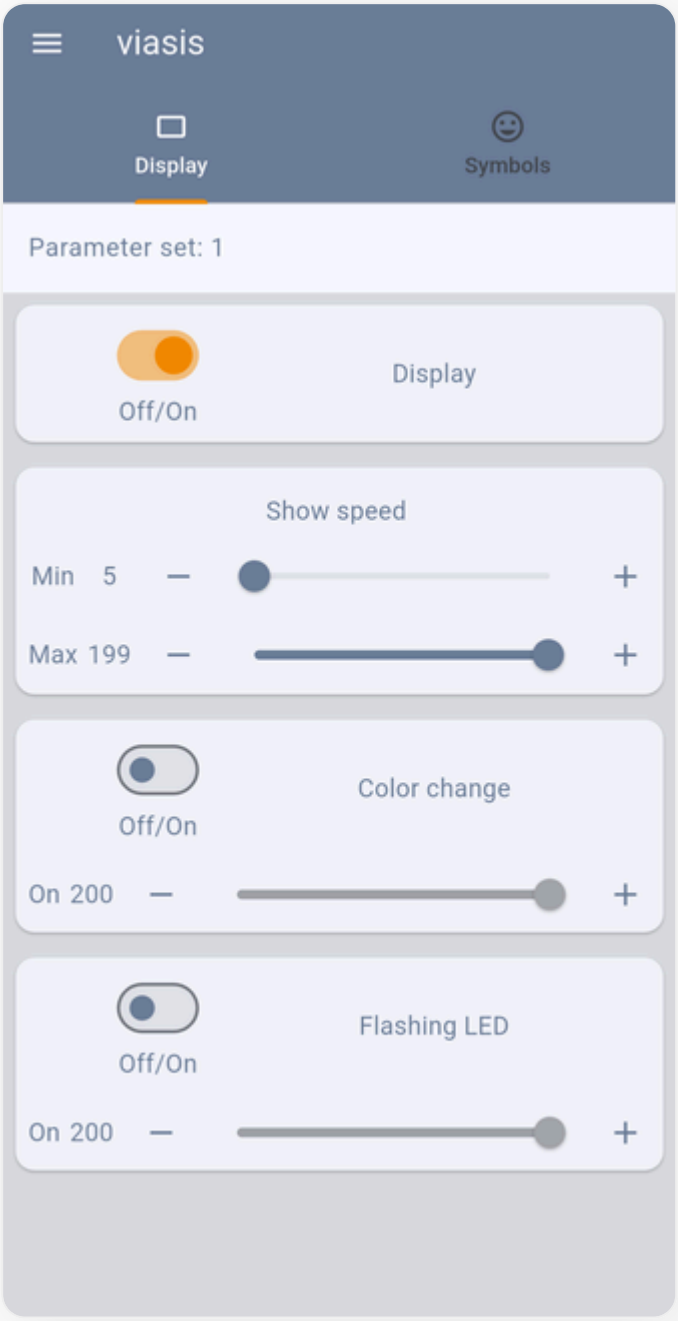
Once you have selected a parameter set for editing (see 4.1.2), you will see the specific configuration tabs for that set. The following operating elements are typical for the configuration of viasis devices:

- **Tabs:** At the top of the screen, you will find tabs such as "Display" and "Symbols". Depending on the device type, additional tabs such as "Matrix" or "Switching Outputs" may be present. Switch between these tabs to make the corresponding settings for the currently selected parameter set.
- **Transfer Parameters:** After you have made changes in the tabs of a parameter set, you must send them to the device via the "Transfer Parameters" button (often at the bottom right) for them to take effect. (Note: This bar is not visible in the demo mode of the app.)
- **Read Data:** Via the "Read Data" button (often at the bottom center), you can download the traffic data collected by the device. Immediately after the download, you have the option to send the file. All downloaded files are also stored in the app and can be managed later via the File Manager (see Chapter 6) and opened for evaluation. (Note: This bar is not visible in the demo mode of the app.)
- **Terminal:** The "Terminal" button (often at the bottom left) leads to advanced service functions of the respective viasis device. These are usually not required for normal operation. For a detailed description of all terminal commands and menu items of the specific viasis device, please refer to the separate operating manual of the respective device. (Note: This bar is not visible in the demo mode of the app.)

4.3 Configuring viasis COMPACT 3000

The viasis COMPACT 3000 (sometimes referred to in the app just as "viasis") is a versatile speed display device with a 3-digit LED display and various symbol options. After successful connection (Chapter 3) and selection of a parameter set (see 4.1.2), you can configure the following tabs:

4.3.1 "Display" Tab



Here you configure the basic speed display for the selected parameter set.

1. **Display (Main Switch):**
    - **On/Off:** This switch allows you to activate or deactivate the entire speed display for this parameter set. Even if the display is deactivated, the device can still record data (depending on other settings).

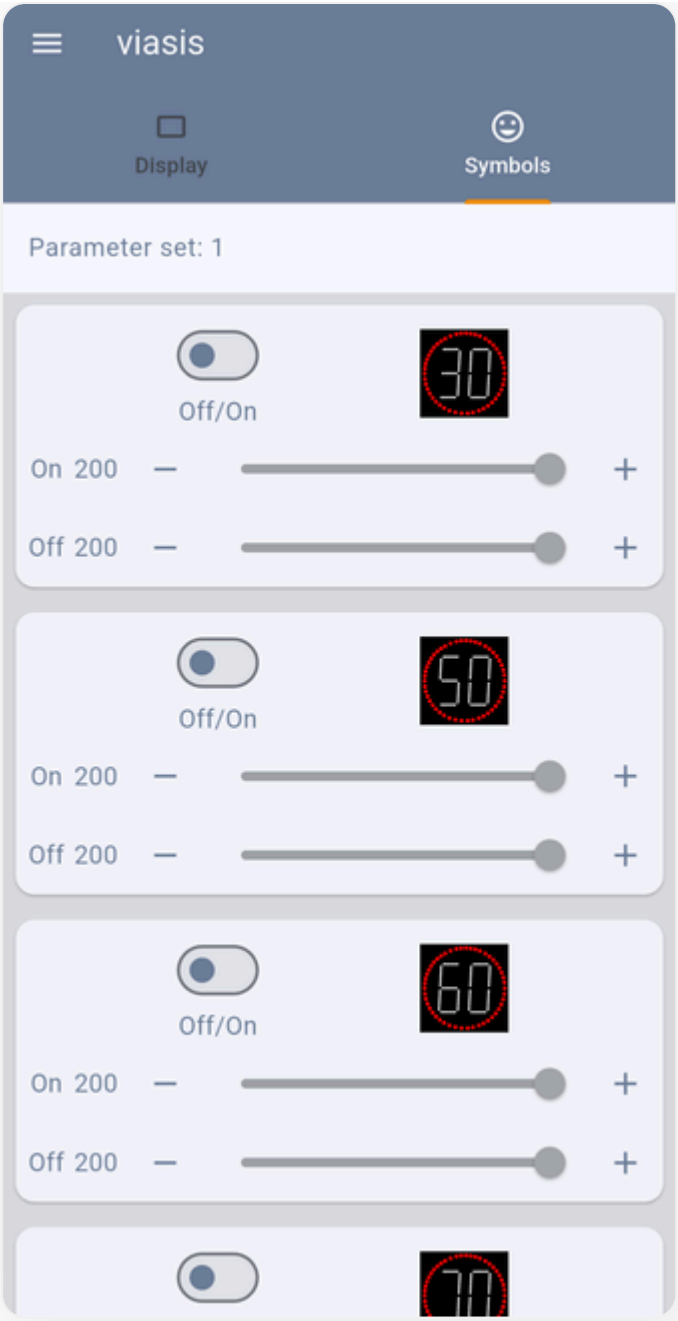
2. **Display Speed:**

- **Min:** Sets the minimum speed at which a measurement is shown on the display (e.g., 5 km/h).
- **Max:** Sets the maximum speed that can be shown on the 3-digit display (up to 199 km/h). Use the - and + buttons or the slider to adjust the value.

3. **Color Switching:**
   - **On/Off:** Activates or deactivates the color change of the displayed speed when a certain value is exceeded.
   - **On:** Sets the speed threshold at which the color changes (e.g., from green to red). Adjust the value with - / + or the slider.

4. **Flashing LED:**
   - **On/Off:** Activates or deactivates the flashing of the speed display when a certain value is exceeded.
   - **On:** Sets the speed threshold at which the display flashes in addition to the color change (if active). Adjust the value.

4.3.2 "Symbols" Tab



Here you configure which additional symbols (speed limits, smileys) should be displayed under which speed conditions. The viasis COMPACT 3000 offers a "Speed Limit Function" and a "Smile Function".

For each available symbol, you can individually specify whether and in which speed range it is displayed:

1. **Activate/Deactivate Symbol:**
   - **On/Off:** With the switch next to each symbol, you activate or deactivate its display for the current parameter set.

2. **Set Speed Range:**
   - **On:** Sets the lower speed threshold at which the symbol is displayed.
   - **Off:** Sets the upper speed threshold up to which the symbol is displayed.
   - Adjust the values with the - / + buttons or the sliders.

Available Symbols for viasis COMPACT 3000:

- **Speed Limit Symbols (e.g., 30, 50, 60, 70, 80):** Display the applicable speed limit, often alternating with the measured speed when it is exceeded. You can define multiple limits for different ranges (e.g., display 30 km/h when driving between 31 and 40 km/h).
- **Exclamation Mark (!):** Serves as an additional warning symbol in case of clear speed violations.
- **Sad Smiley:** Typically displayed when the speed limit is exceeded (or a defined tolerance threshold).
- **Laughing Smiley:** Displayed when the driven speed is within the permitted or desired range ("Speed ok").

Example Configuration (30 Zone):

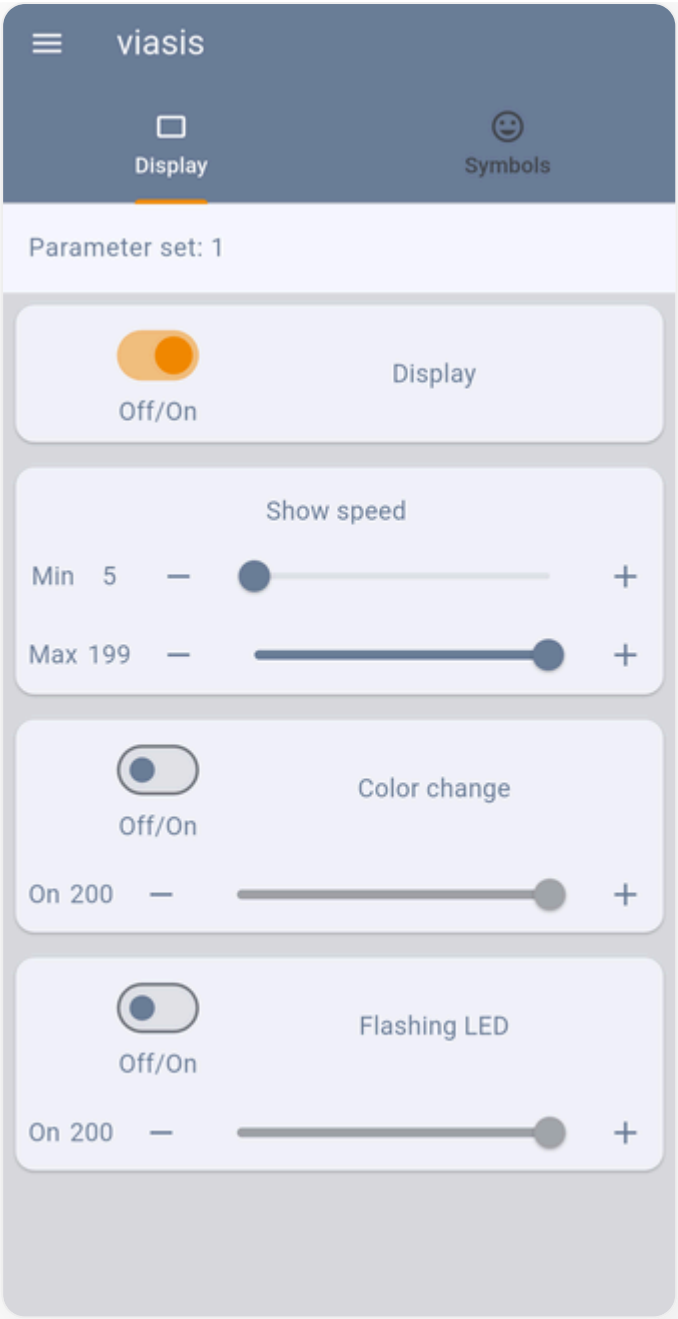
- Laughing Smiley: On 1 km/h, Off 30 km/h
- Sad Smiley: On 31 km/h, Off 40 km/h
- Exclamation Mark: On 41 km/h, Off 50 km/h
- Speed Limit 30: On 31 km/h, Off 50 km/h (can be displayed alternating with smiley/exclamation mark)

Important: Remember to tap "Transfer Parameters" after completing your configuration to save the settings on the device.

4.4 Configuring viasis LITE

The viasis LITE (sometimes referred to in the app as "SISLITE") is a compact speed display device with a 2-digit LED display and a special smile function. It supports multicolor LEDs for different color displays. After successful connection (Chapter 3) and selection of a parameter set (see 4.1.2), you can configure the following tabs:

4.4.1 "Display" Tab



Here you configure the basic speed display for the selected parameter set.

1. **Display (Main Switch):**
   - **On/Off:** This switch allows you to activate or deactivate the entire speed display for this parameter set. Even if the display is deactivated, the device continues to store speed data.

2. **Display Speed:**
   - **Min:** Sets the minimum speed at which a measurement is shown on the display (standard often 5 km/h).
   - **Max:** Sets the maximum speed that can be shown on the 2-digit display (up to 99 km/h). Use the - and + buttons or the slider to adjust the value.

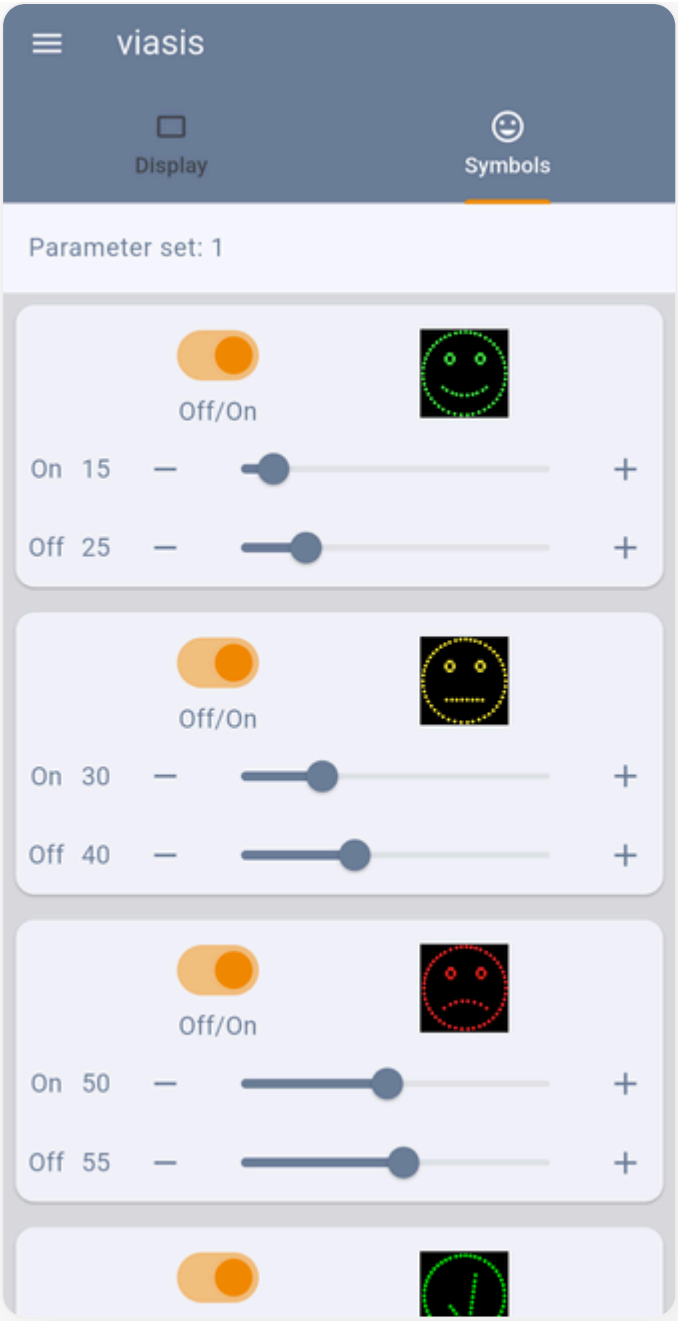
3. **Mixed Color:**

- **On/Off:** Activates or deactivates the display of both LED colors simultaneously (if the device is two-colored and supports this function).
- **On:** Sets the speed threshold at which the mixed color is displayed. Adjust the value.

4. **Color Switching:**
   - **On/Off:** Activates or deactivates the color change of the displayed speed when a certain value is exceeded (e.g., from green to red on a two-colored device).
   - **On:** Sets the speed threshold at which the color changes. Adjust the value (e.g., 33 km/h in a 30 zone).

5. **Flashing LED (Implicit, if applicable, via icon settings or special logic):**
   - The flashing of the LEDs on the viasis LITE is often controlled in combination with the icons (e.g., exclamation mark) or specific speed thresholds defined in the "Icons" tab.

4.4.2 "Symbols" Tab



Here you configure which of the specific viasis LITE symbols (smileys, checkmark, exclamation mark) are shown under which speed conditions. The viasis LITE uses a "new smile function".

For each available symbol, you can individually specify whether and in which speed range it is displayed:

1. **Activate/Deactivate Symbol:**
    - **On/Off:** With the switch next to each symbol, you activate or deactivate its display for the current parameter set.

2. **Set Speed Range:**
    - **On:** Sets the lower speed threshold at which the icon is displayed.
    - **Off:** Sets the upper speed threshold up to which the icon is displayed.
    - Adjust the values with the - / + buttons or the sliders.

Available Symbols for viasis LITE (Exemplary Standard Configuration):

- **Green Smiley (laughing):** Displayed when the speed is in the optimal range.
    - Example: On 15 km/h, Off 25 km/h (for a 30 zone)
- **Yellow Smiley (neutral/straight mouth):** Shown with a slight exceedance or within the tolerance range.
    - Example: On 25 km/h, Off 33 km/h
- **Red Smiley (sad):** Displayed with a clear exceedance.
    - Example: On 33 km/h, Off 41 km/h
- **Checkmark (✓):** Can be used for very slow speeds or as a confirmation.
    - Example: On 5 km/h, Off 15 km/h (can often be deactivated)
- **Exclamation Mark (! in triangle):** Serves as an additional, urgent warning for severe speed violations.
    - Example: On 41 km/h, Off 50 km/h

Important: Remember to tap "Transfer Parameters" after completing your configuration to save the settings on the device.

4.5 Configuring viasis LITE PLUS

The viasis LITE PLUS combines the compact speed display of the viasis LITE with a flexible text and graphic matrix below it. Unlike older models, the viasis LITE PLUS offers an integrated Matrix editor that allows you to draw your own graphics, design texts freely, and manage your own symbols.

After a successful connection and selecting a parameter set, the following tabs are available:

4.5.1 "Display" and "Symbols" Tabs

The configuration of the speed display ("Display" tab) as well as the standard smileys and limits ("Symbols" tab) corresponds to the operation of the viasis LITE. Please refer to the descriptions in section 4.4.

4.5.2 "Matrix" Tab

In the "Matrix" tab, you manage the content to be displayed on the lower text matrix (e.g., "Thank You", "Watch Out Children").

- **List of texts/images:** You see an overview of the configured Matrix content.
- **On/Off:** Use the switch to activate or deactivate the respective display.
- **Edit:** Tap directly on the preview of an entry (e.g., on the "Thank You" text) to enter the Matrix editor.

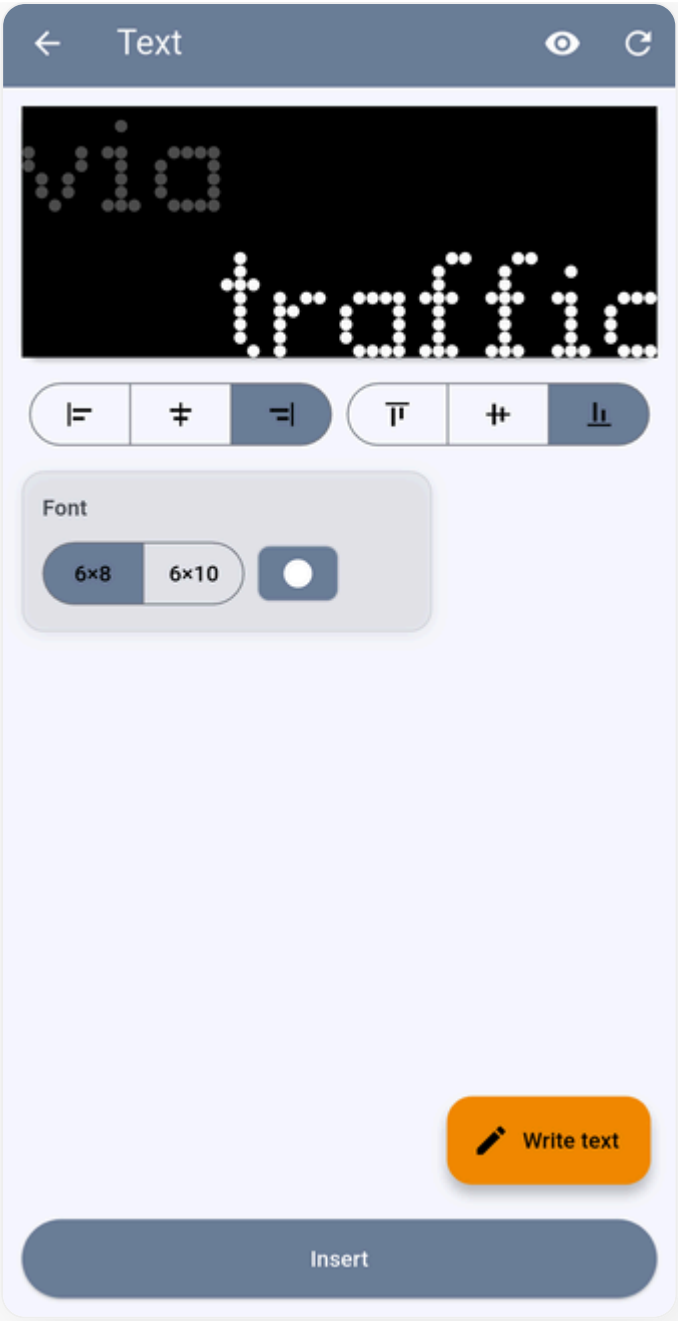
4.5.3 The Matrix Editor

The editor allows you to design the matrix pixel-by-pixel. You will find various toolbars for drawing, writing, and managing graphics here.

Tools (Top left): * **Brush (Pen):** For drawing individual points in the matrix. * **Eraser (Crossed-out brush):** For removing individual points. * **Select/Move:** Use this tool to select/highlight an area on the matrix. The selected area can then be moved to precisely position graphics. * **Color selection:** Use the small color field (often shown in white or color) to select the color for the brush or text, provided the device supports multi-color display. * **Trash can:** Deletes the entire content of the current matrix display.

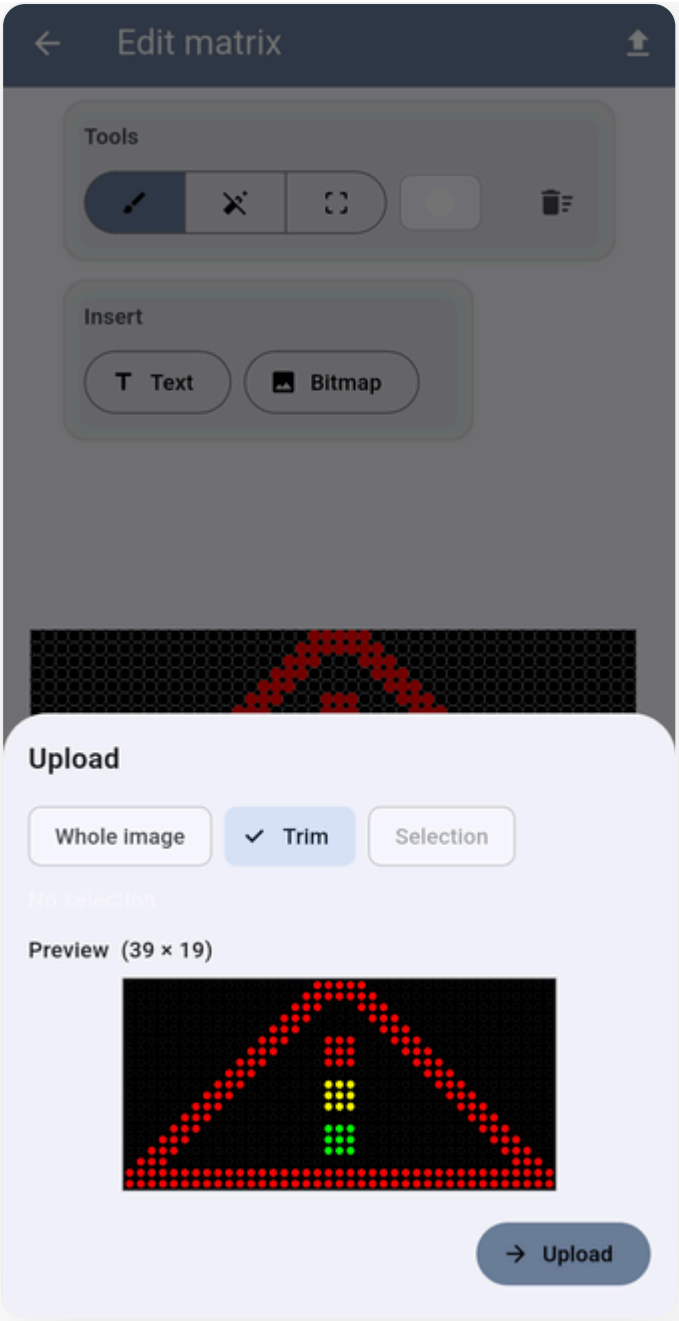
View (Bottom left): * **Magnifier (+ / -):** Use the zoom function to enlarge the view of the matrix. This makes precise drawing of individual points with your finger much easier.

Insert (Center): * **Text:** Opens the text input field. * Type in your desired text.



* **Font:** Choose between 6x8 (small) and 6x10 (large/bold) pixel fonts. * **Alignment:** Position the text left-aligned, centered, or right-aligned. * **Bitmap:** Opens the library for ready-made or saved graphics (see 4.5.5).

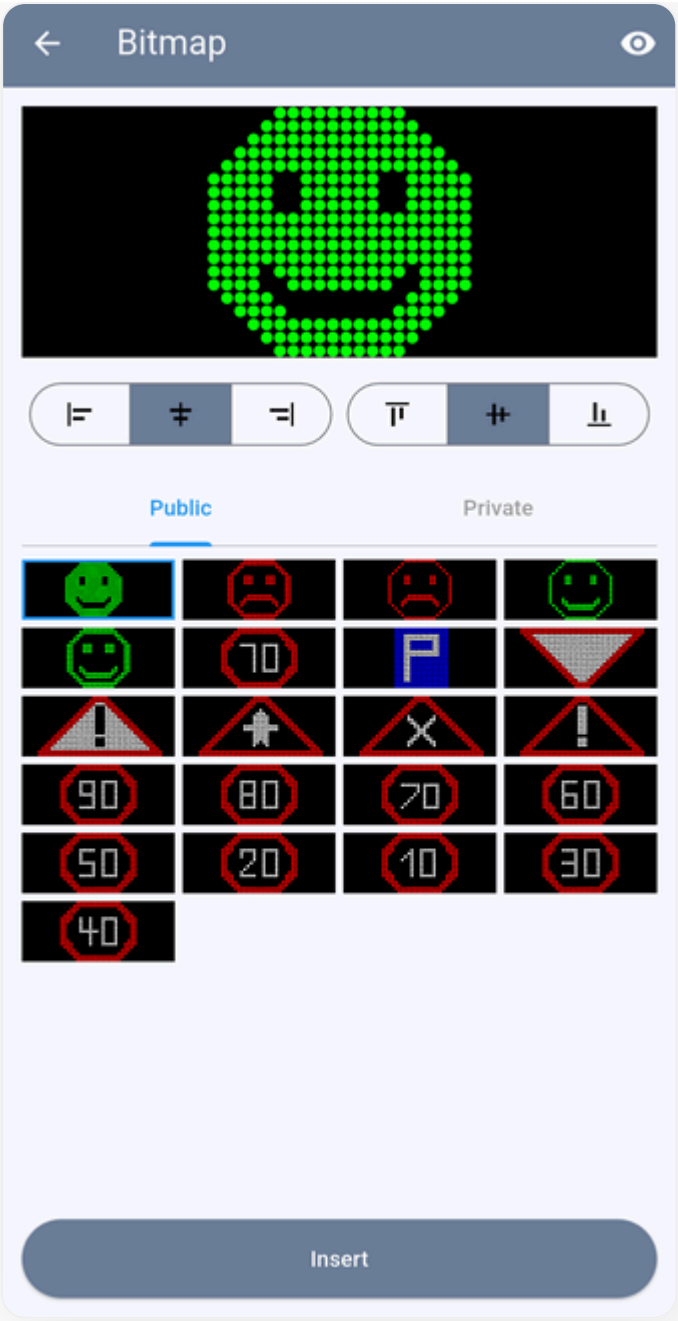
4.5.4 Saving Your Own Graphics (Upload Function)



If you have drawn your own graphic (e.g., a traffic light or a special symbol), you can save it for later use. To do this, tap the upload icon (up arrow) at the top right.

A dialog with three saving options appears: * **Whole image:** Saves the entire matrix area as it is. *Disadvantage:* The image has a fixed size. It cannot be moved left or right during insertion later. * **Trim (Recommended for symbols):** The app automatically crops the image to the size of the drawn object (removes empty borders). *Advantage:* When you insert this graphic later (e.g., a smiley), you can position it freely on the matrix (left, center, right), as it does not take up the full width. * **Selection:** This option is only active if you have previously selected an area with the select tool. Only the currently highlighted section is saved.

4.5.5 Managing and Inserting Bitmaps



When you tap "Insert" > "Bitmap", you have access to two areas: * **Public:** Here you will find standard graphics predefined by the manufacturer. * **Private:** Here you will find your own self-created graphics that you have saved via the upload function (see 4.5.4) (e.g., your self-drawn traffic light).

Positioning Bitmaps: Select a graphic. If the graphic was "trimmed" or is smaller than the total matrix, you can use the alignment tools to determine where it should appear: * **Horizontal:** Left, Centered, Right. * **Vertical:** Top, Middle, Bottom.

4.6 Configuring viasis PLUS

The viasis PLUS extends the functionality of the viasis COMPACT 3000 with an additional text matrix below the speed display. This matrix allows for the display of custom texts.

After successful connection (Chapter 3) and selection of a parameter set (see 4.1.2), you can configure the following tabs:

4.6.1 "Display" and "Symbols" Tabs

The configuration of the speed display in the "Display" tab and the default symbols (speed limits, smileys, etc.) in the "Symbols" tab is identical to the configuration of the viasis COMPACT 3000.

Please refer to sections 4.3.1 "Display" Tab and 4.3.2 "Symbols" Tab for these settings.

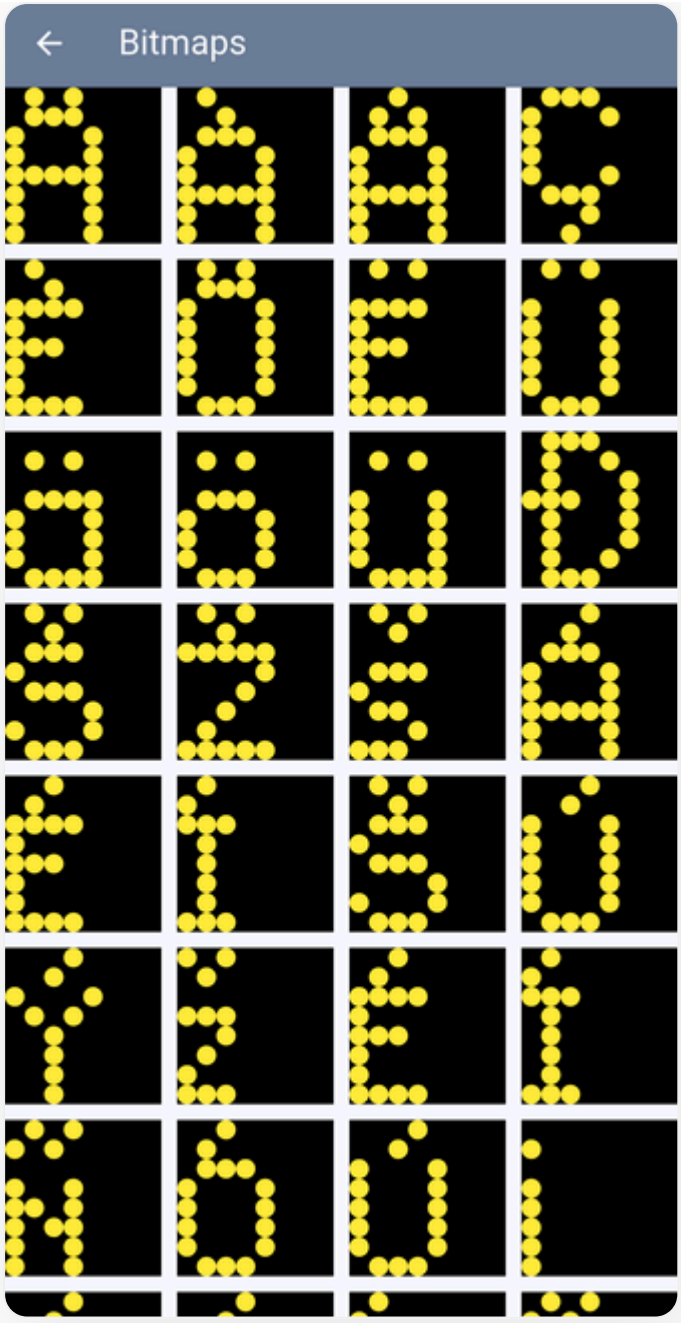
4.6.2 "Matrix" Tab

In the "Matrix" tab, you define the texts that can be displayed on the additional LED matrix. The viasis PLUS can store up to four different texts (often shown as 2 pairs of lines).

Important: The texts entered here are valid for all parameter sets. You cannot define different texts per parameter set, but only when these globally defined texts are displayed (see section 4.6.3).

For each of the available text slots (e.g., "Thank" and "you" as one text pair):

1. **Enter Text:** Tap in the text box (e.g., under the matrix preview displayed next to the gear icon) to open the screen keyboard. Enter your desired text (e.g., "Hello", "Gemini").
    - A standard font set is stored in the device.
2. **Select Color:** For each text pair, you can select "Color 1" or "Color 2" to set the display color of the text.
3. **Flashing:** Enable the "flashing" checkbox if the text should be shown flashing.
4. **Scroll Text (Marquee):** With the arrow icons (< and >) next to the text preview, you can set whether and in which direction each text should scroll. It is possible for one line to scroll left and the other to scroll right.
5. **Insert Special Characters:**
    - Standard special characters may not be available directly via the keyboard in the stored font set.
    - To insert special characters (Bitmaps), tap the gear icon next to the text input field.
    - A selection of available bitmap graphics/special characters opens.
    - Position the cursor at the desired point in your text field and then select the special character from the bitmap list.
    - **Note:** In the text field, the special character can be represented by an internal number (e.g., an '8' for a 'ü'). Don't be confused by this; the correct symbol will be displayed on the device's matrix display.



4.6.3 "Switching Outputs" Tab

In the "Switching Outputs" tab, you specify under which conditions the texts defined in the "Matrix" tab (referred to as LED page 1, LED page 2, LED page 3, LED page 4) should be displayed.

Important: These settings are parameter set-dependent. This means that for each of the five parameter sets, you can configure which of the four global matrix texts should appear and when.

For each "LED page" (which corresponds to one of the four texts configured in the Matrix tab):

1. **Activate/Deactivate Page:**
    - **On/Off:** With the switch next to "LED page X", you activate or deactivate the display of this specific matrix text for the currently selected parameter set.

2. **Set Speed Range:**
    - **On:** Sets the lower speed threshold at which this matrix text is displayed.
    - **Off:** Sets the upper speed threshold up to which this matrix text is displayed.

    - Adjust the values with the - / + buttons or the sliders.

Example:

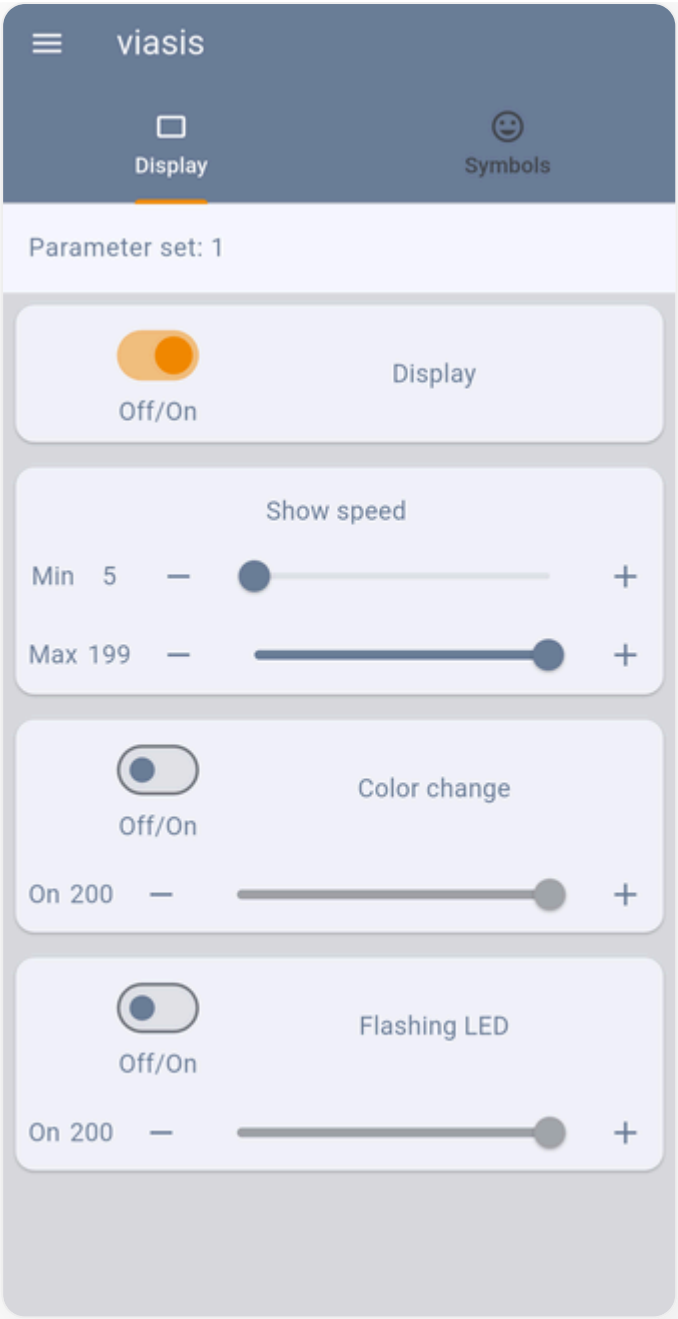
- In the "Matrix" tab, you have configured "THANK" in text slot 1 and "KIDS" in text slot 2.
- In the "Switching Outputs" tab for Parameter Set 1:
    - LED page 1 ("THANK"): On 1 km/h, Off 25 km/h
    - LED page 2 ("KIDS"): On 26 km/h, Off 35 km/h
- In the "Switching Outputs" tab for Parameter Set 2 (e.g., for another time of day):
    - LED page 1 ("THANK"): On 1 km/h, Off 20 km/h (different range)
    - LED page 2 ("KIDS"): Deactivated.

Important: Remember to tap "Transfer Parameters" after completing your configuration of all tabs to save the settings on the device.

4.7 Configuring viasis VARIO

The viasis VARIO is a sophisticated speed display device with an LED full-matrix display. This allows for a flexible display of speeds, pre-programmed texts, graphics, and imported bitmaps. The device is always two-colored. After successful connection (Chapter 3) and selection of a parameter set (see 4.1.2), you can configure the following tabs:

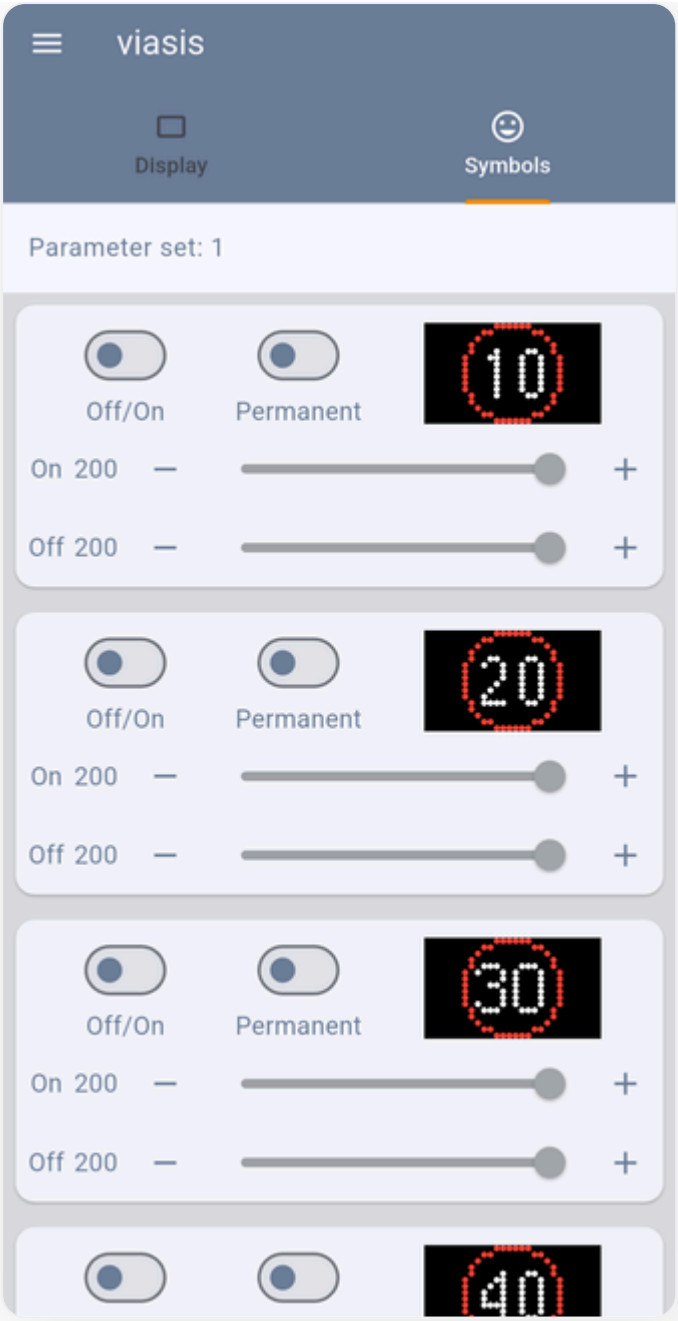
4.7.1 "Display" Tab



The basic configuration of the speed display in the "Display" tab (Min/Max Speed, Color Switching, Flashing LED) is similar to the configuration of the viasis COMPACT 3000 (see section 4.3.1). Since the viasis VARIO has a full-matrix display, it can show speeds and icons combined or alternately.

Adjust the settings for display, minimum/maximum speed, color switching, and flashing LEDs according to your requirements as described in section 4.3.1.

4.7.2 "Symbols" Tab



The "Symbols" tab on the viasis VARIO differs significantly from the other viasis models as it is a full-matrix display. Here you can configure up to 16 different symbols/graphics and make their display dependent on the speed.

Configuring Symbol Slots:

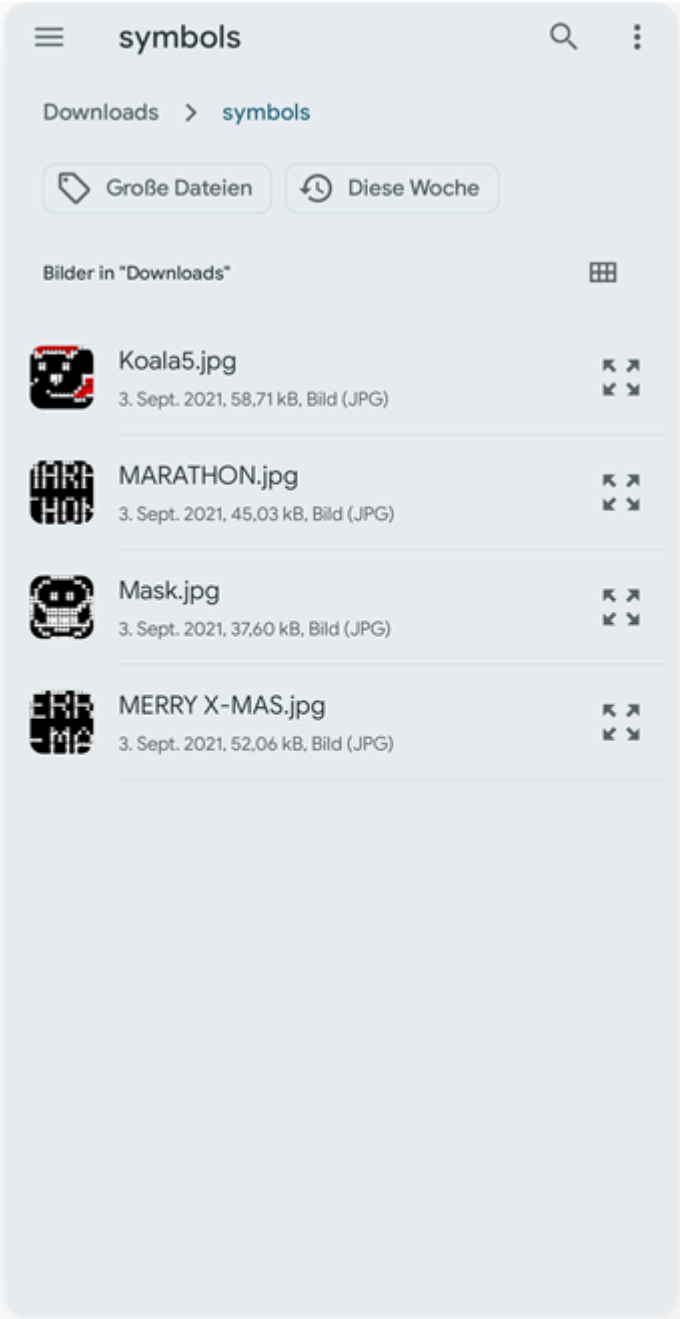
1. **Select Symbol Slot:** On the main page of the "Symbols" tab, you see a row of slots (up to 16), each representing a symbol to be displayed. Tap one of the displayed symbol slots (e.g., the preset "10", "20", or another symbol) to change it.
2. **"Bitmaps" Library Opens:** A new window titled "Bitmaps" opens. Here you can select the desired symbol or graphic for the selected slot.

3. **Select Category:** Within the "Bitmaps" library, there are several tabs/categories to facilitate the selection:
    - **Speeds (Number icon, e.g., "30"):** Contains predefined speed displays as graphics (e.g., "5", "10", "11", ... "30").
    - **Smileys/Graphics (Smiley icon):** Contains various graphic icons and pictograms (e.g., smileys, seasonal graphics like Santa Claus, Bunny, stop sign).
    - **ABC (Letter icon):** Contains predefined short texts, also in different languages (e.g., "WARNING KIDS", "DANGER", "THANK YOU").
    - **Traffic Signs (Warning triangle icon):** Contains standard traffic sign pictograms.
    - **Personal Icons (Figure icon):** This tab appears as soon as you have imported your own graphics and contains them.

4. **Select Symbol/Graphic:** Tap the desired bitmap in the selected category. The selected bitmap is then assigned to the previously chosen symbol slot on the main page of the "Symbols" tab.
5. **Activate/Deactivate Symbol and Set Speed Range:** Back on the main page of the "Symbols" tab (where all 16 slots are shown):
    - **On/Off Switch (left):** Activates or deactivates the display of the symbol in this slot for the current parameter set.
    - **Permanent Switch (center):** If activated, the symbol is displayed permanently as soon as the "On" speed is reached, regardless of an "Off" speed.
    - **On (Slider/Value):** Sets the lower speed threshold at which the symbol is displayed.
    - **Off (Slider/Value):** Sets the upper speed threshold up to which the symbol is displayed (only relevant if "Permanent" is not active).

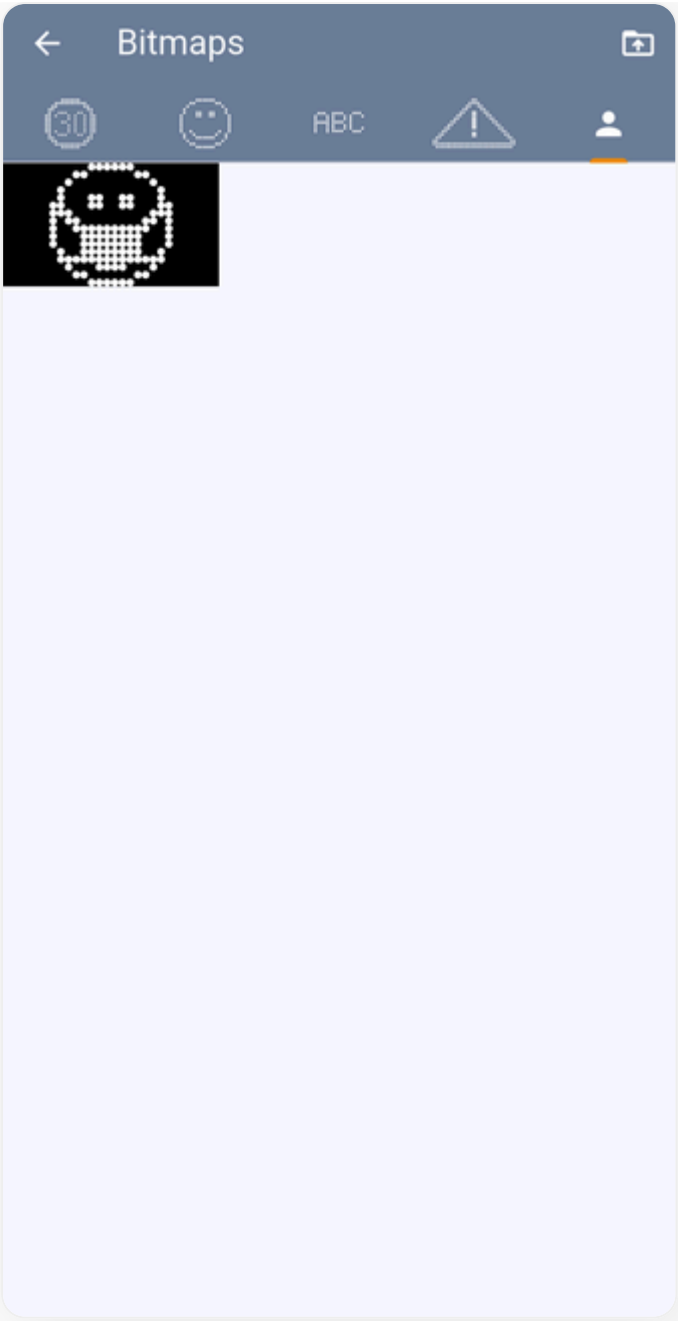
Importing Your Own Graphics: The viasis VARIO allows the import of your own graphics (bitmaps), which were created with the PC software "viagraph", for example.

1. **Start Import:** In the "Bitmaps" library, tap the import icon at the top right (file with an arrow pointing up).
2. **Select File:** Your smartphone's/tablet's file explorer opens. Navigate to the bitmap file (e.g., a .jpg file) you want to import and select it.



3. **Confirm Import:** The app asks if you want to import the selected file. Tap "Yes".

4. **Use Imported Symbol:** After successful import, a new tab "Personal Symbols" (Figure symbol) appears in the "Bitmaps" library, where your imported graphic is now available and can be assigned to a symbol slot as described above.



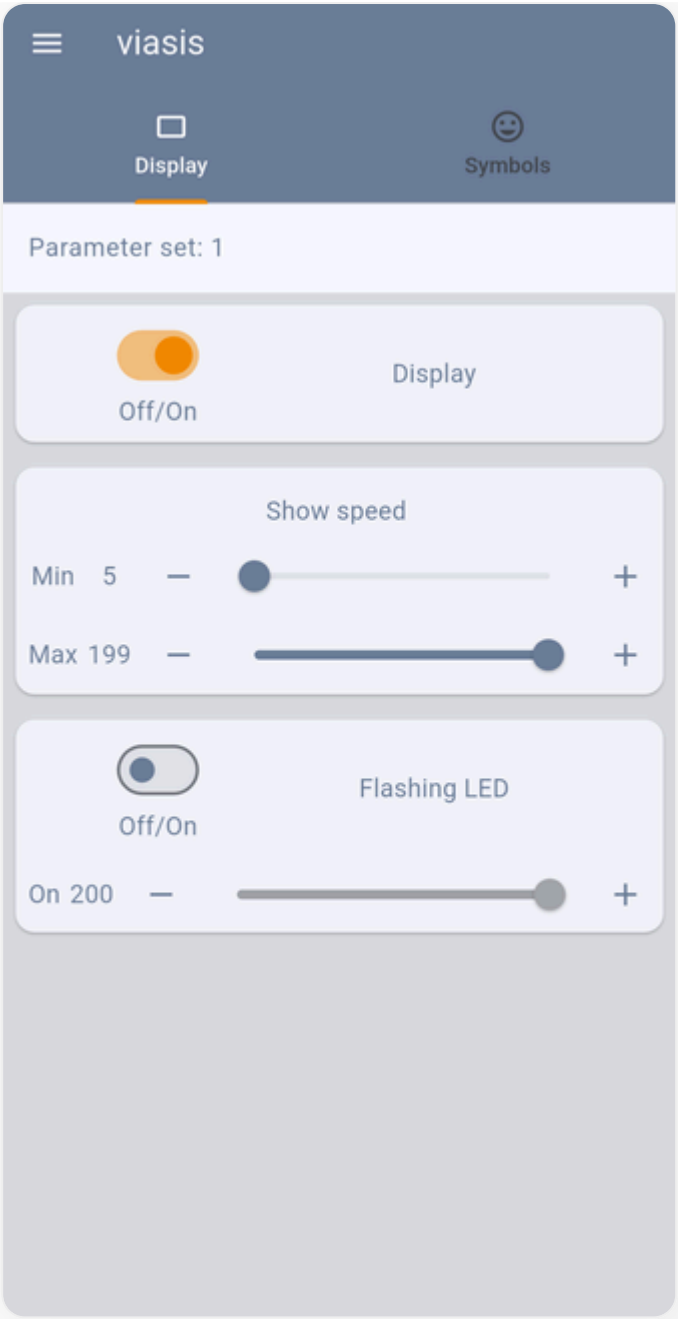
Important: Remember to tap "Transfer Parameters" after completing your configuration to save the settings on the device.

4.8 Configuring viasis VARIO XL

The viasis VARIO XL is, as the name suggests, a larger version of the viasis VARIO and also features an LED full-matrix display. A key difference is that the VARIO XL is always one-colored (e.g., only yellow or only white LEDs). This affects the available settings.

After successful connection (Chapter 3) and selection of a parameter set (see 4.1.2), you can configure the following tabs:

4.8.1 "Display" Tab



Due to the one-colored nature of the viasis VARIO XL, the "Display" tab differs from the two-colored models:

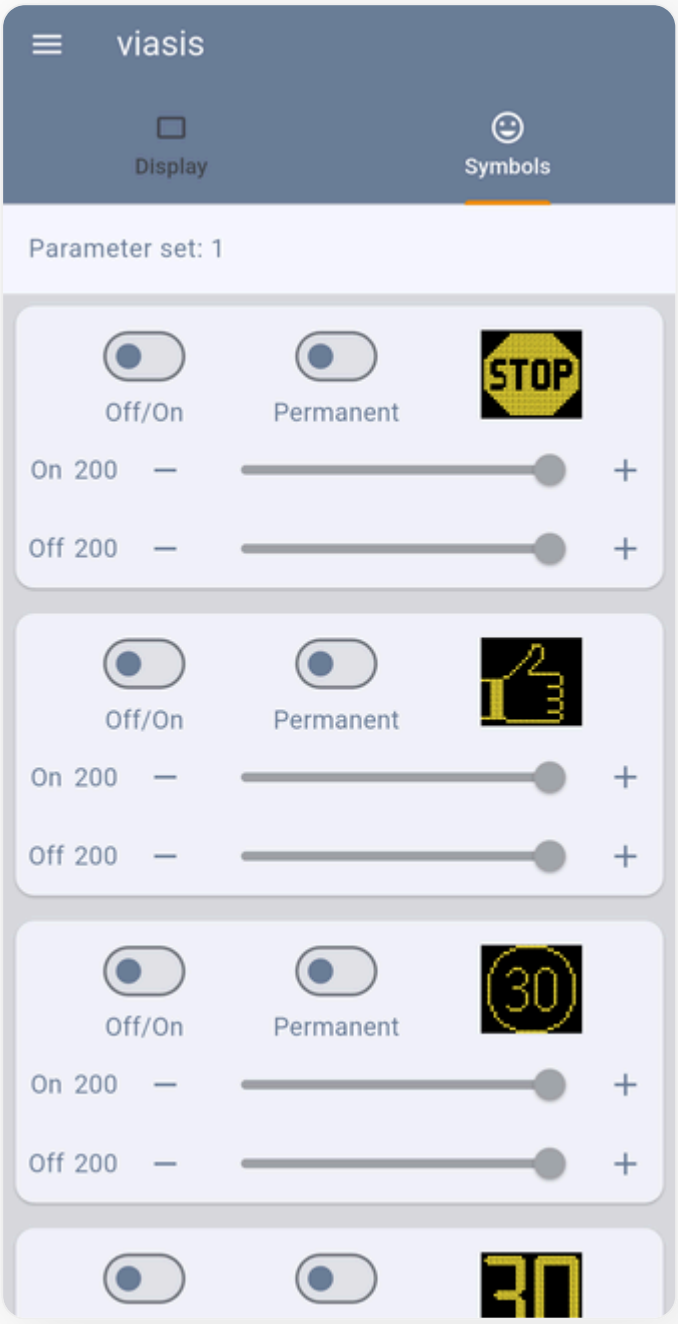
1. **Display (Main Switch):**
    - **On/Off:** Activates or deactivates the entire speed display for this parameter set.

2. **Display Speed:**
    - **Min:** Sets the minimum speed at which a measurement is shown on the display.
    - **Max:** Sets the maximum speed that can be shown on the display (up to 199 km/h).

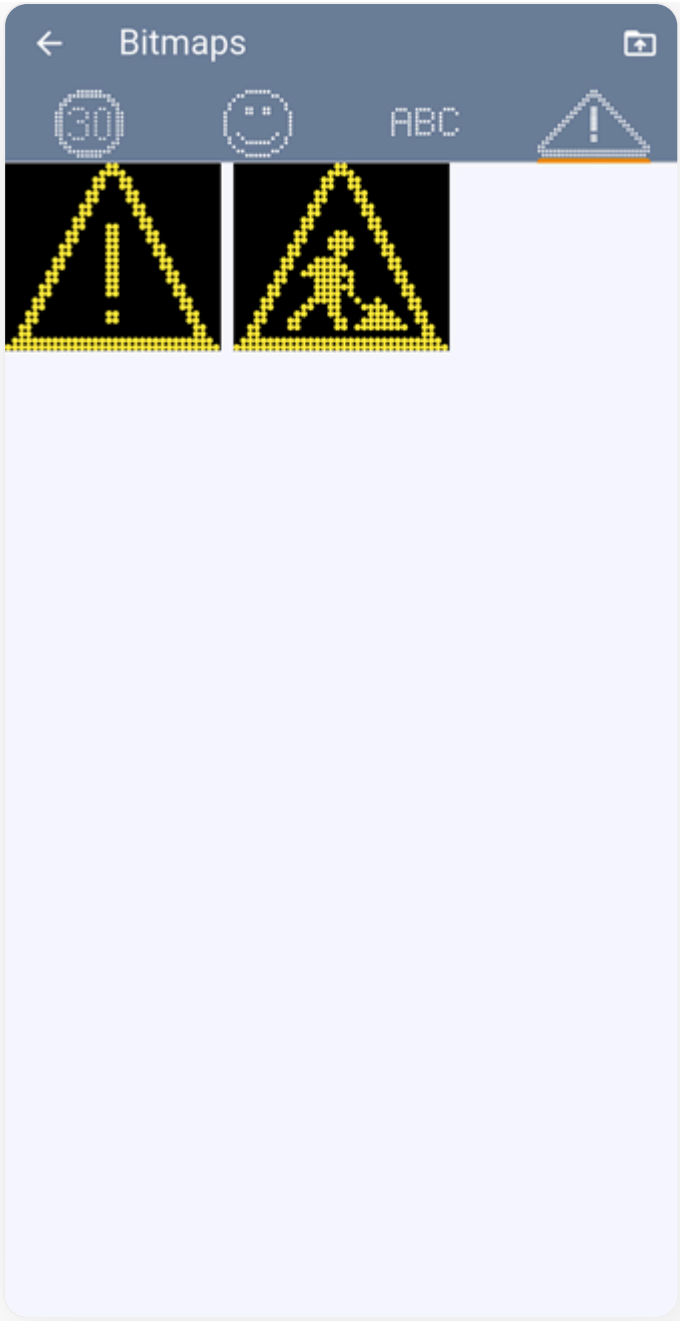
3. **Color Switching:**
    - This option is not present on the one-colored viasis VARIO XL because color switching is not possible.

4. **Flashing LED:**
    - **On/Off:** Activates or deactivates the flashing of the speed display when a certain value is exceeded.
    - **On:** Sets the speed threshold at which the display flashes.

4.8.2 "Symbols" Tab



The "Symbols" tab on the viasis VARIO XL works in principle very similar to the viasis VARIO (see section 4.7.2), but with a reduced selection of predefined bitmaps, as the device is one-colored and designed for special use cases (long visibility distance). Up to 16 different symbols/graphics can also be configured.



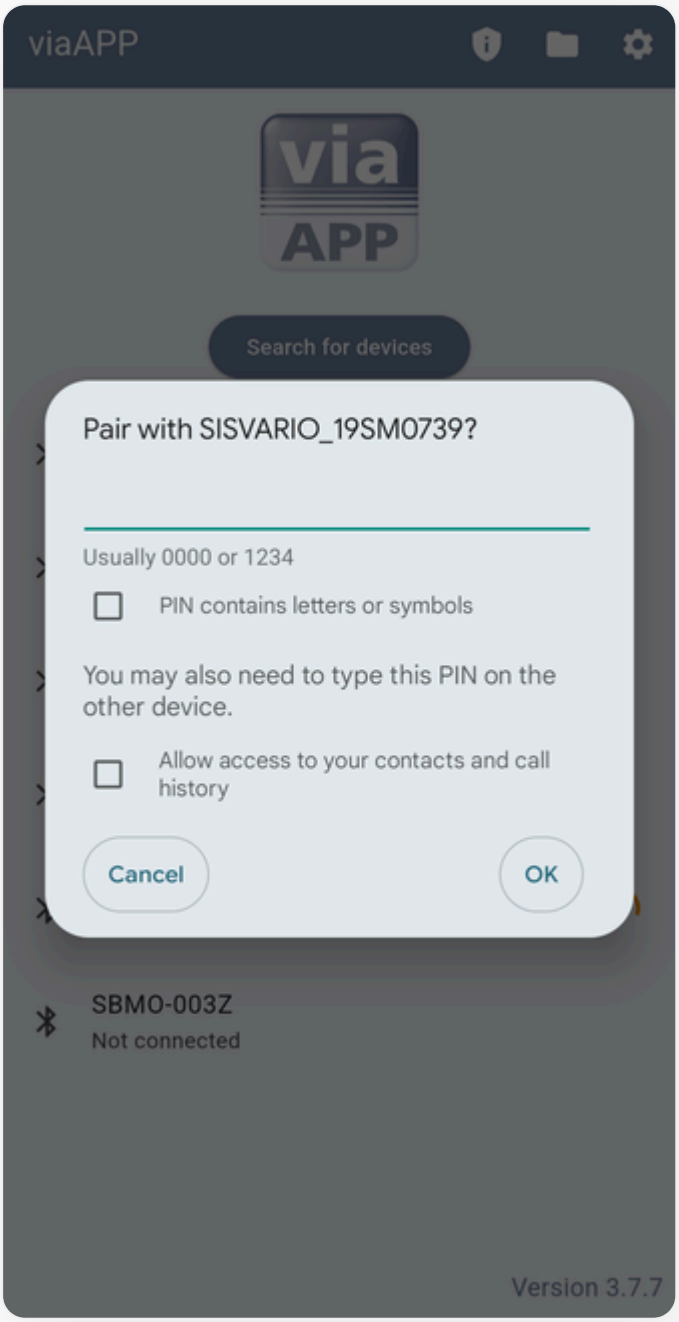
Chapter 5: Configuring and Operating viacount II

The viacount II is a specialized traffic counting device designed for the covert collection of traffic data such as speed, number of vehicles, vehicle classes, and travel direction. It has no external display of its own for road users. Interaction with the viacount II via the **via**APP is primarily via a terminal interface and data download.

5.1 Establishing a Connection

Connection to the viacount II is done via Bluetooth in the same way as for other **via** traffic devices:

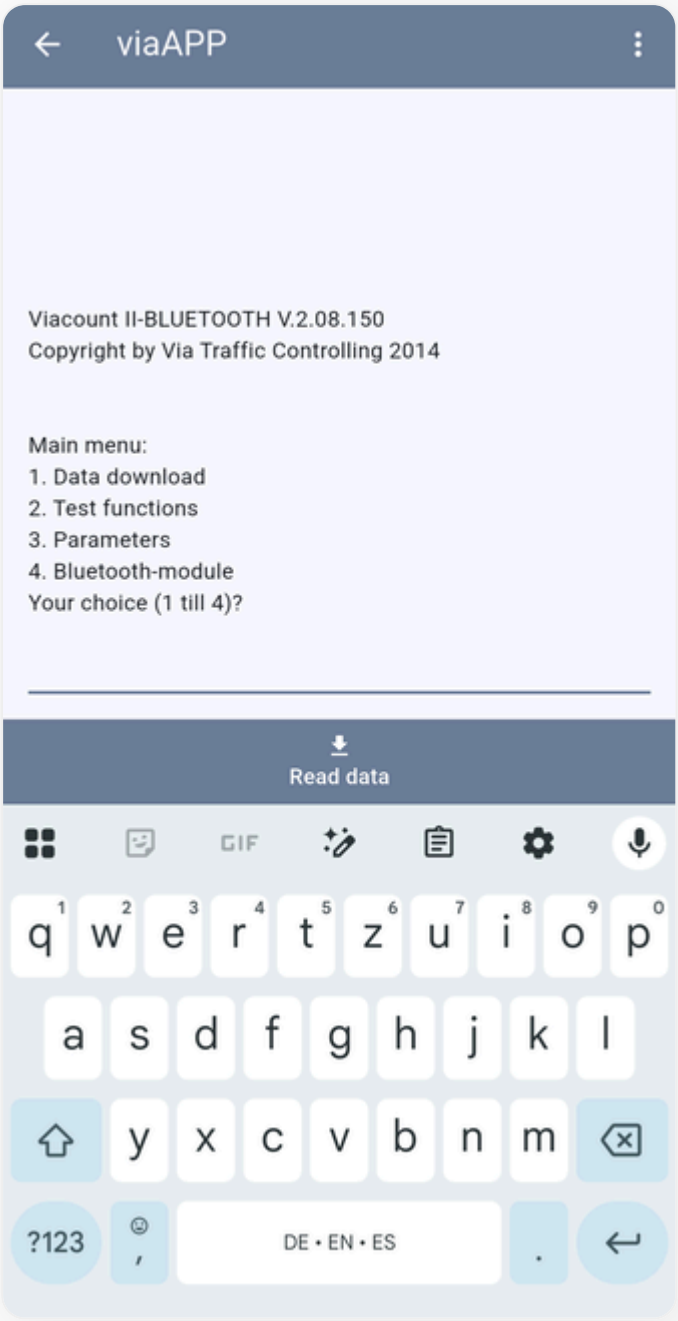
1. Start the device search in the **via**APP (see Chapter 3.1).
2. Grant the necessary permissions (location, nearby devices) if you have not already done so (see Chapter 3.2).
3. Select the "Viacount II" (or a similar name) from the list of found devices.



4. Complete the Bluetooth pairing. The default PIN code for the viacount II is also 1234.

5.2 Terminal View

After successfully connecting to the viacount II, the **via**APP opens the terminal view directly. Unlike the viasis display devices, there is no graphical interface with tabs for "Display" or "Symbols" here.



The terminal view shows the main menu of the viacount II, through which you can perform various actions by entering numbers (commands).

Typical Main Menu Items in the Terminal (Example):

1. Data download
2. Test functions
3. Parameters
4. Bluetooth module

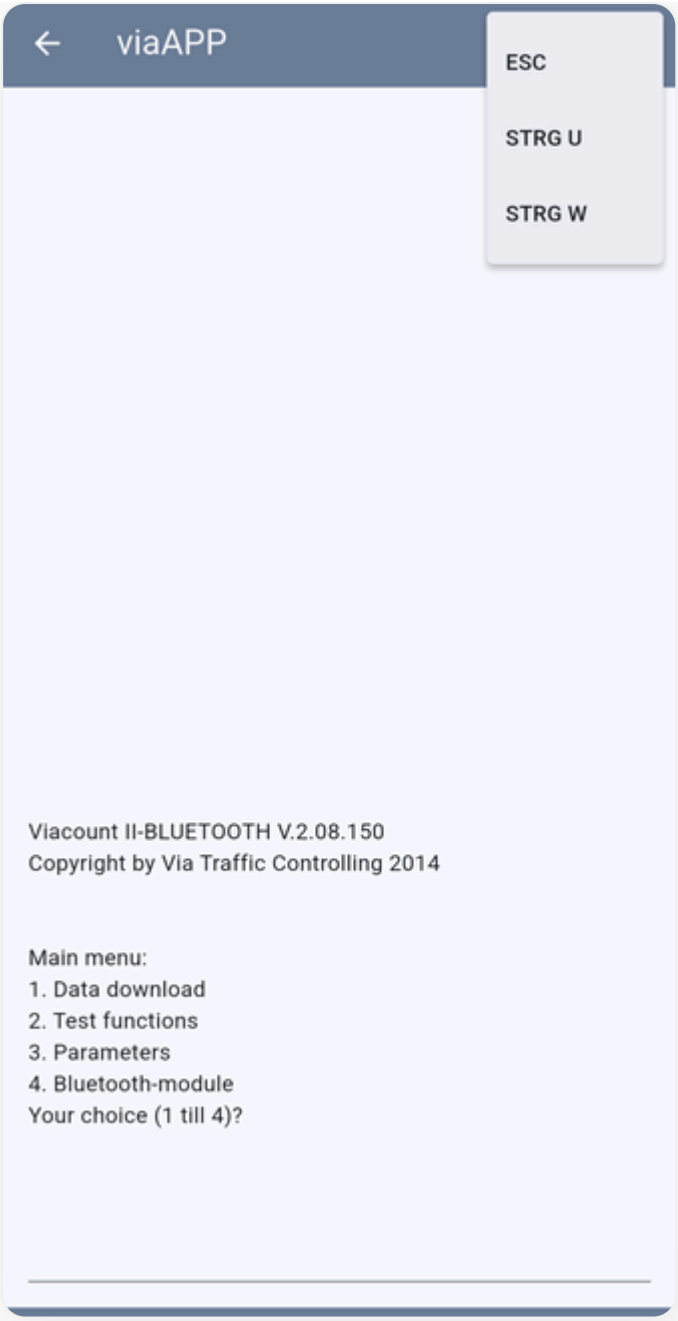
Operating the Terminal:

- Enter the digit of the desired menu item in the input field at the bottom of the screen.
- Confirm your entry with the Enter key on your on-screen keyboard.
- Follow the instructions and prompts in the terminal.

Important Note: A detailed description of all terminal commands and menu items of the viacount II would exceed the scope of this **via**APP operating manual. For a complete explanation of all device-specific terminal functions and parameters, please refer to the separate operating manual of the viacount II device.

Special Characters in the Terminal: At the top right of the terminal view is a menu icon (three dots). Tapping it gives you access to special control characters that might be needed for some terminal menus and might not be directly available via the smartphone keyboard:

- ESC (Escape)
- CTRL U
- CTRL W



5.3 Read Data

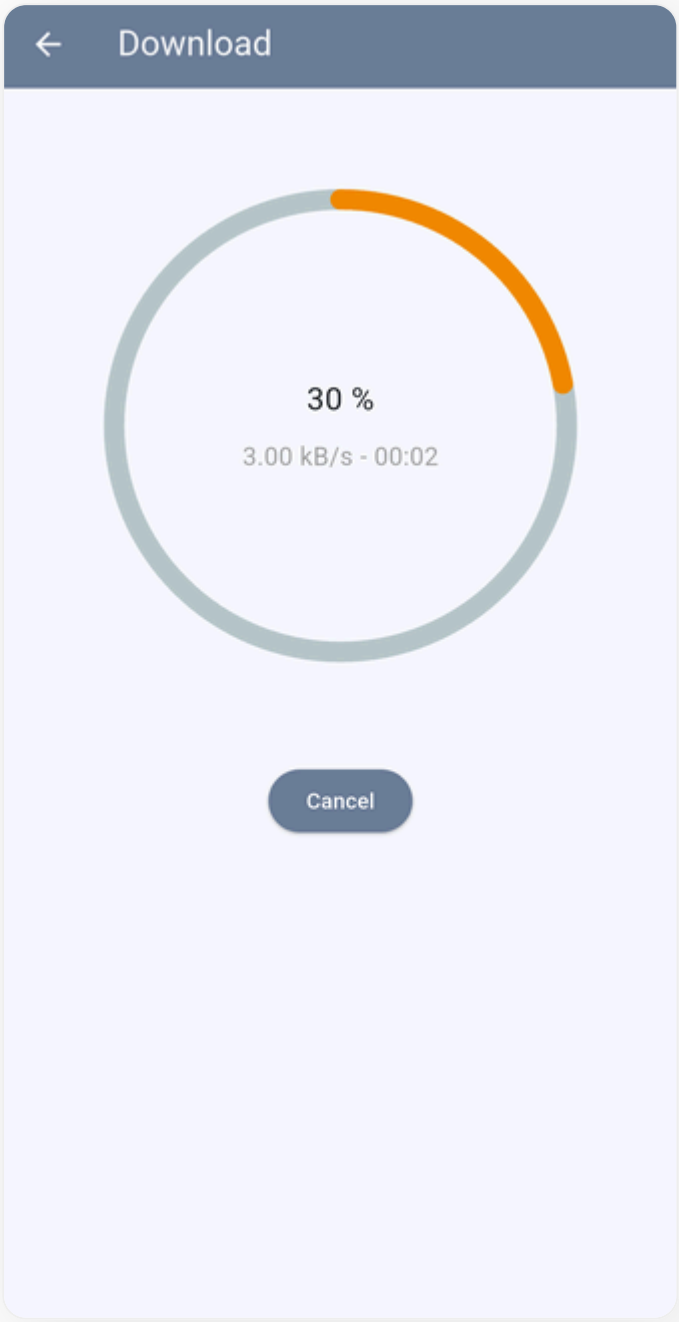
The main function of the **via**APP in connection with the viacount II is the readout of the collected traffic data.

1. **Start Read Data:** At the bottom of the terminal view of the viacount II, you will see a prominent "Read data" button. Tap it to start the download process.
    - Alternatively, you can also start the data download via the corresponding menu item in the terminal (e.g., by entering 1 for "Data download").

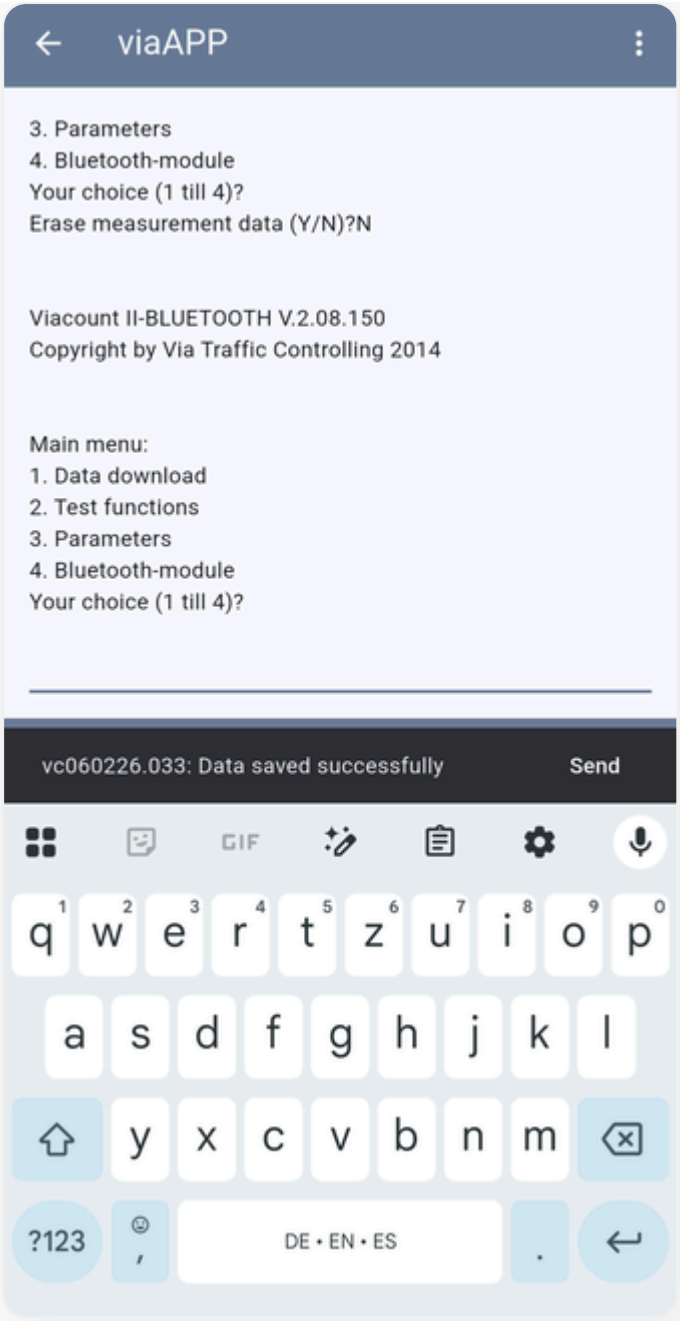
2. **Delete Data After Download?** The app will ask you if the measurement data on the viacount II should be deleted after the successful download ("Erase measurement data (Y/N)?").

- It is recommended to answer with Y (Yes) here to free up storage space on the device and to ensure that no old data is mixed during the next measurement at a new location.

3. **Download Progress:** A progress bar shows the download status.



4. **Data Saved and Send:** After a successful download, a confirmation that the data has been saved is displayed.



- You now have the option to directly send or share the downloaded data file (in .vtf format - **via** traffic file). Tap **Send**.
- The standard sharing menu of your smartphone/tablet opens. You can now send the file via email, back it up to cloud storage (online storage folder), or forward it via other installed apps.

The downloaded .vtf files can be used for basic evaluations not only with the PC software "viagraph", but also directly in the **via**APP (with limited functionality compared to viagraph). For detailed analysis and the creation of extensive charts, viagraph is recommended.

Chapter 6: Manage Downloaded Data and Prepare Evaluation

After you have downloaded traffic data from your viasis or viacount II devices (see Chapters 4.2 and 5.3), it is stored locally in the **via**APP. This chapter describes how you can access, manage, and prepare these downloaded files for evaluation in the app or external programs.

6.1 Accessing Downloaded Files

1. **App Start Screen:** Open the **via**APP and make sure you are logged in.
2. **Tap File Icon:** On the start screen of the **via**APP, you will find a file icon (similar to a folder or sheet of paper) at the top right (next to the gear icon for settings). Tap this icon.
3. **List of Downloaded Files:** You will now see a list of all data files that you have downloaded from your devices and stored in the app.

- The list shows the filenames and the file size.
- **File Types:**
  - For viasis devices, the files typically have the extension .VTF (**via** traffic file).
  - For viacount II devices, newer devices can also generate .VTF files. Older viacount II models may use filenames consisting of number combinations with a numerical extension.

6.2 Manual Importing of Data Files

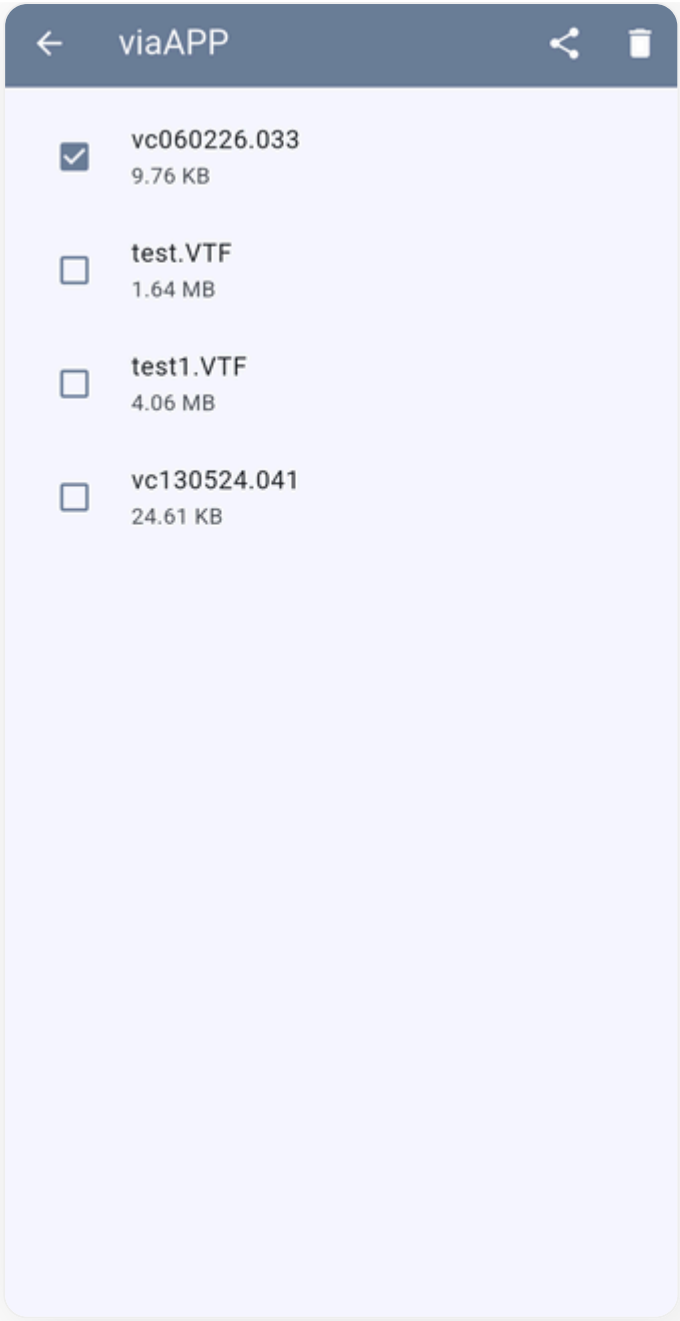
You can also manually import data files (.VTF or viacount format) that you have received by other means (e.g., via email or from a PC) into the **via**APP to manage or evaluate them there.

1. **Accessing Downloaded Files:** Open the list of downloaded files as described in Section 6.1.
2. **Tap Import Icon:** At the top right of the screen with the file list is an icon for data import (often a folder with an arrow pointing up). Tap this icon.
3. **Select File:** Your smartphone's/tablet's file explorer opens. Navigate to the location (e.g., your download folder) where the data file to be imported is located. Select the desired file.
4. **Import:** The selected file is imported into the **via**APP's storage area and then appears in the list of downloaded files.

6.3 Selecting and Managing Files (Delete, Share)

In the list of downloaded files, you can select individual or multiple files to perform actions such as deleting or sharing them again.

1. **Selecting File(s):**
    - **Long Press:** To select a single file or start the selection mode, press and hold your finger on a file in the list for a little longer.
    - **Multiple Selection:** As soon as the selection mode is active (recognisable, for example, by checkmarks next to the files), you can add or remove further files from the selection by simply tapping them.
2. **Available Actions (after selection):**
    - **Delete:** When one or more files are selected, a trash can icon often appears in the top action bar. Tap it to permanently delete the selected files from the **via**APP's memory.
    - **Share/Send:** When one or more files are selected, a share icon (usually three connected dots or an arrow pointing outwards) often appears in the top action bar. Tap it to share the selected files again.



- **Note on sending directly after download:** Immediately after downloading data from a device, a temporary "Send" button appears (see Chapters 4.2 and 5.3). If you miss this option, it's no problem. You can select and share the file(s) again at any time using the method described here.
- The standard sharing menu of your smartphone/tablet opens, via which you can send the file(s) via email, messenger, etc., or store them in cloud storage.

6.4 Opening a Single File for Evaluation

To open a single downloaded data file directly in the **via**APP for evaluation:

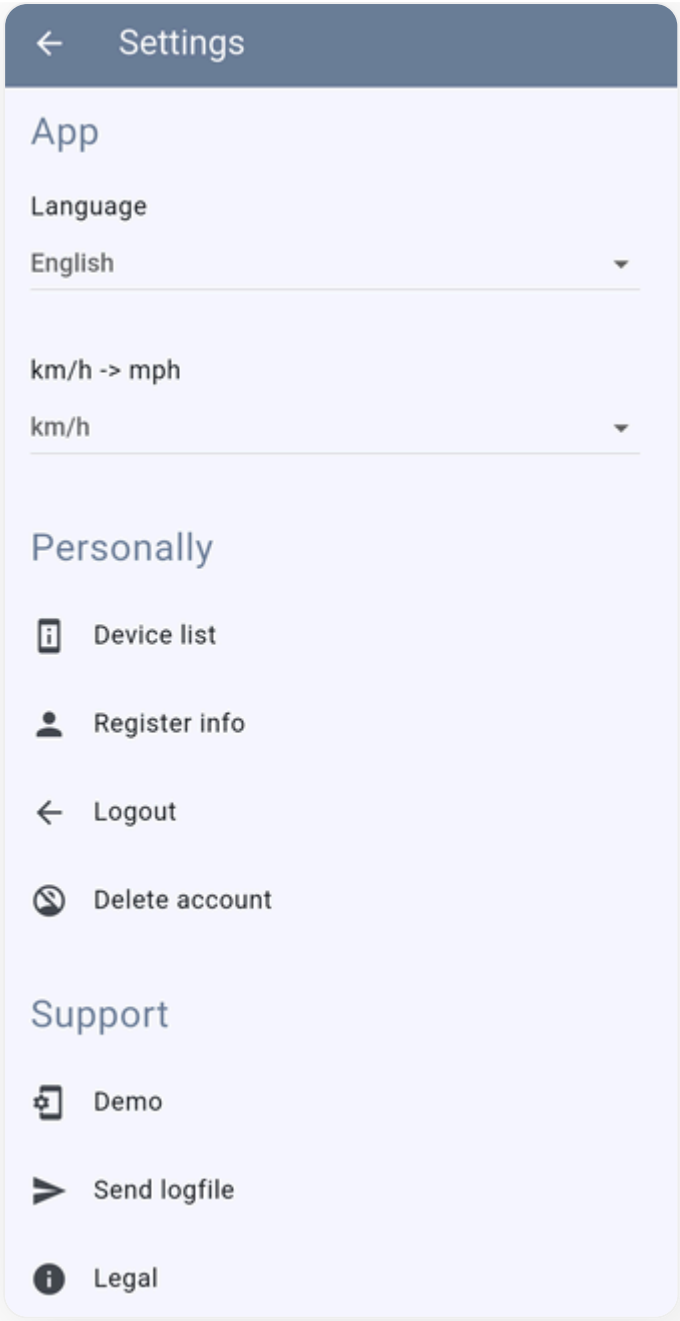
1. **Accessing Downloaded Files:** Open the list of downloaded files as described in Section 6.1.

2. **Tap File:** Simply tap the name of the desired data file in the list.
3. **Evaluation View:** The **via**APP now opens the selected file and displays the traffic data it contains in a graphical or tabular evaluation view (for details on evaluation, see Chapter 8).

Chapter 7: General App Settings

The **via**APP offers various general settings that you can reach via the gear icon (often at the top right of the main screen or in the device view).

7.1 App Settings



These settings affect the general behavior and appearance of the app.

1. **Language:**
   - Here you can manually change the display language of the **via**APP.
   - By default, the app tries to use the system language of your device. If this is not available, English is used as a fallback.
   - A list of available languages is displayed when you tap the current language setting.

2. **km/h <-> mph:**
   - With this option, you can switch the unit for speed displays and inputs within the app between kilometers per hour (km/h) and miles per hour (mph).
   - This setting affects all relevant areas where speed thresholds are configured.

7.2 Personal Settings

These settings concern your user account and device-specific information.

1. **Device List:** Shows a list of all **via** traffic devices with which you have already successfully connected via the app. This serves as an overview of your used devices.

2. **Register Info:**
    - Here you can view and edit your personal data (name, company, address) provided during registration.
    - **Exception:** The email address used during registration cannot be changed here, as it is permanently linked to your account and was used for verification.

3. **Logout:**
    - Logs you out of your current **via**APP user account.

4. **Delete Account:**
    - Allows you to permanently delete your **via**APP user account. Note that all associated data may be lost in the process.

7.3 Support Settings

These options are for support and troubleshooting.

1. **Demo:**
    - Starts the demo mode of the app, in which you can explore the configuration interfaces of different **via** traffic devices without an active Bluetooth connection. This is useful to familiarize yourself with the functions.

2. **Send Logfile:**
    - This function is primarily intended for support purposes.
    - When you tap "Send Logfile", the app creates a logfile with technical information about the app's behavior and any errors that have occurred.
    - The standard sharing menu of your smartphone/tablet then opens, which you can use to send the logfile to support via email or messenger (e.g., WhatsApp), for example.

- The logfile can help support diagnose problems (e.g., the log shows which device was last connected).

3. **Legal:**
    - Under this item, you will find important legal information about the **via**APP.
    - This typically includes:
        - Legal Notice
        - Licenses (software licenses used)
        - Terms of Use
        - Privacy Policy

Chapter 8: Data Evaluation in the App

After you have downloaded a measurement file from one of your viasis or viacount devices and selected it in the file list (see Chapter 6: Manage Downloaded Data and Prepare Evaluation), you will reach the evaluation view. This chapter describes the steps and options for analyzing the collected traffic data directly in the **via**APP.

8.1 Initial Evaluation Settings

Before the charts and detailed data are displayed, the app presents a settings mask. This is identical for both viasis and viacount files.

Here you see and configure the following points:

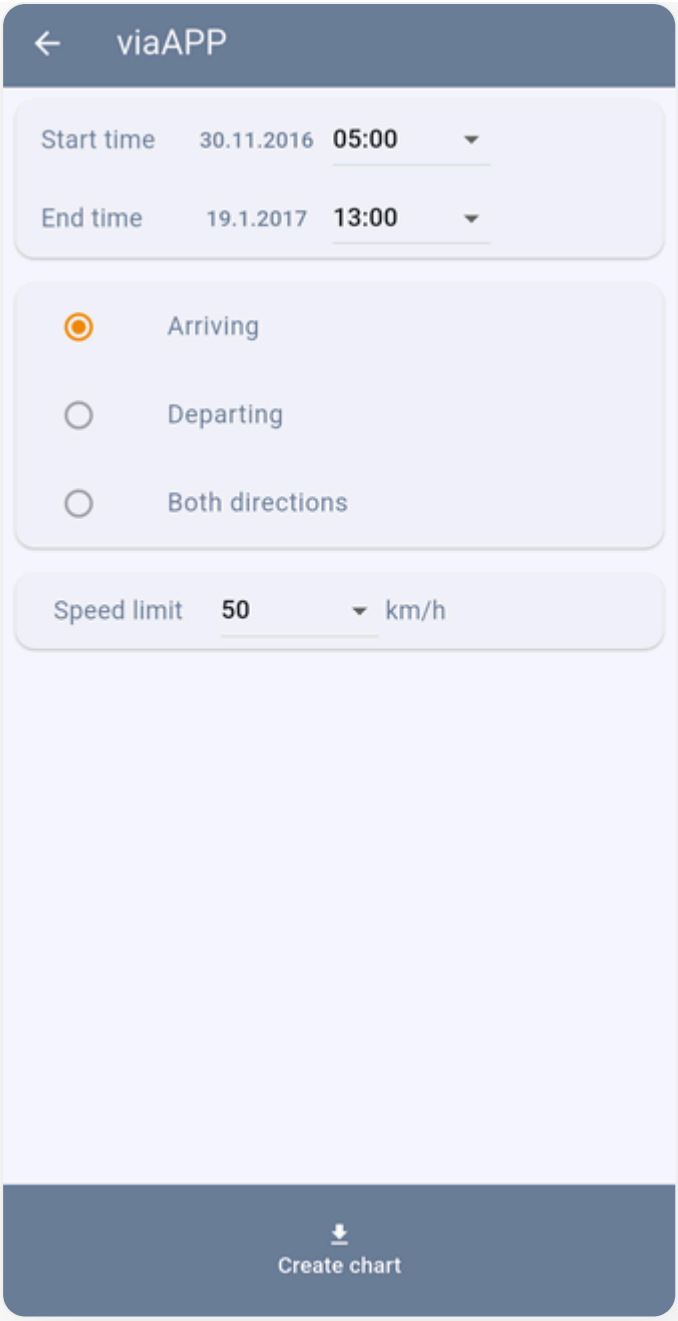
- **Start Time and End Time:**
  - Shows the beginning and end of the measurement period of the selected file. This data is automatically taken from the downloaded file.

- **Direction of Travel:**
  - Here you select which direction(s) of travel should be included in the evaluation:
    - Incoming
    - Departing
    - Both directions

  - **Note:** The Departing and Both directions options are only active (selectable) if bidirectional tracking was activated during the device configuration. Otherwise, these options are grayed out.

- **Speed Limit:**
  - Enter the valid speed limit in km/h for the measurement location here. The default value is often 50 km/h.
  - This input affects the calculation of speed violations.

- **Create Charts:**
  - Tap the **Create Charts** button to load the detailed evaluation view with the graphics and tables.



8.2 Detailed Evaluation View

After you have tapped **Create Charts**, the app shows an overview of the evaluated data. The structure and the information displayed differ between viasis and viacount files.

8.2.1 Header and General Measurement Data (viasis and viacount)

Regardless of the device type, general parameters and statistical figures are displayed in the upper part of the evaluation:

- **Measurement Period:** Start and end date/time of the selected data.
- **Direction of Travel:** The previously selected direction of travel.

- **Speed Limit Symbol:** The speed limit you entered.
- **Speed Violation:** Percentage of vehicles that exceeded the speed limit.
- **Number of Vehicles:**
    - For viasis: The number of vehicles calculated from the speed values via an internal algorithm.
    - For viacount: The number of vehicles directly determined by the device (viacount can recognize vehicles and vehicle classes directly).
- **ADT (Average Daily Traffic):** The average number of vehicles per day.
- **Vd (Average Speed):** The average speed of all recorded vehicles.
- **V85 (85th Percentile Speed):** The speed that was not exceeded by 85% of the vehicles.
- **Vmax (Maximum Speed):** The highest speed recorded during the measurement period.

viaAPP

30.11.2016 05:00 - 19.1.2017 13:00

Evaluation direction: Arriving

Speed limit: 50 km/h

Speed violations: 0.02 %

Number of speedvalues: 425012

Number of vehicles: 33499

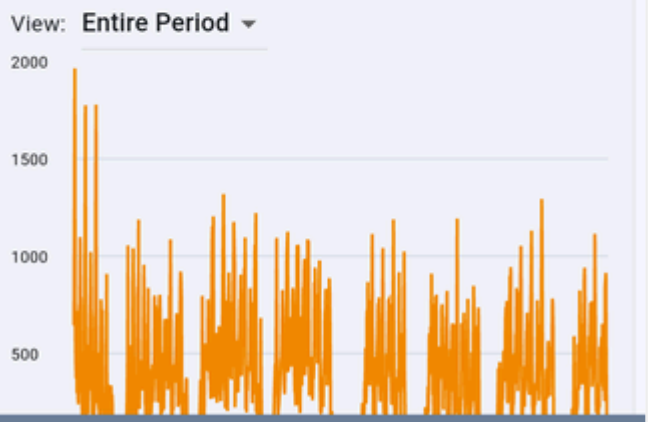
ADT: 665

Vd: 18 km/h

V85: 25 km/h

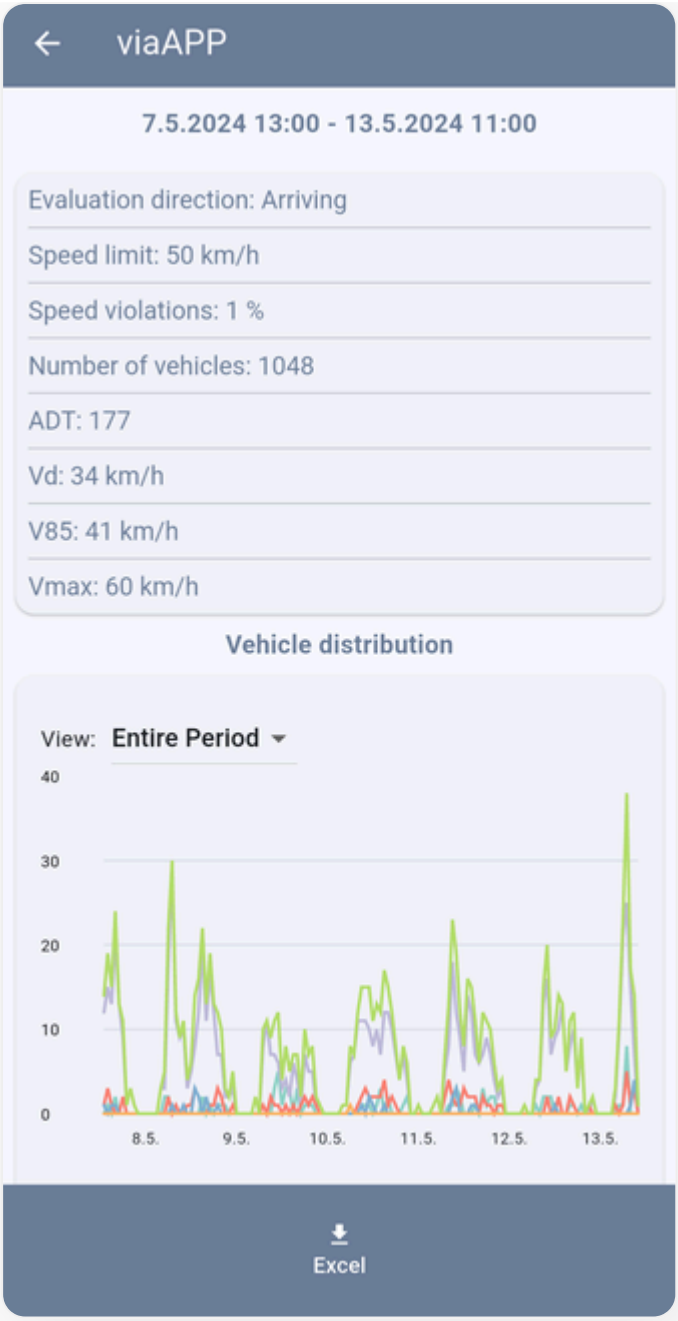
Vmax: 89 km/h

SequenceNumber of speedvalues



Excel

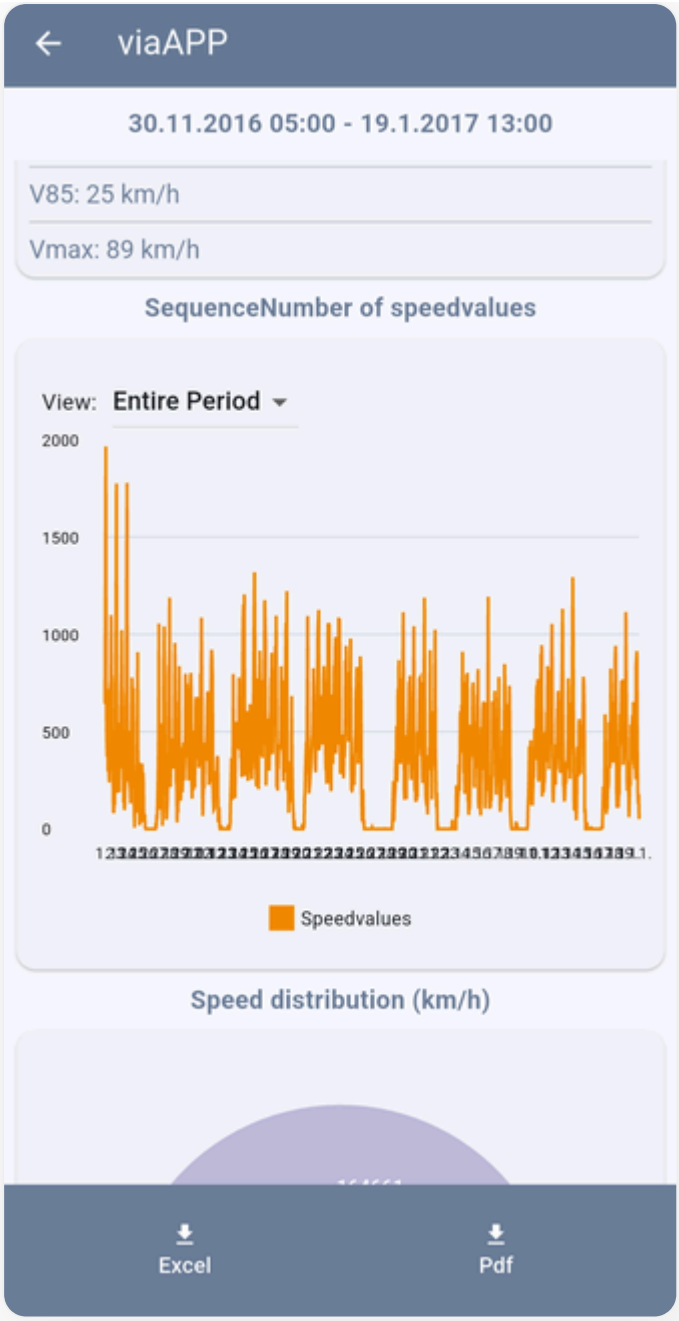
Pdf



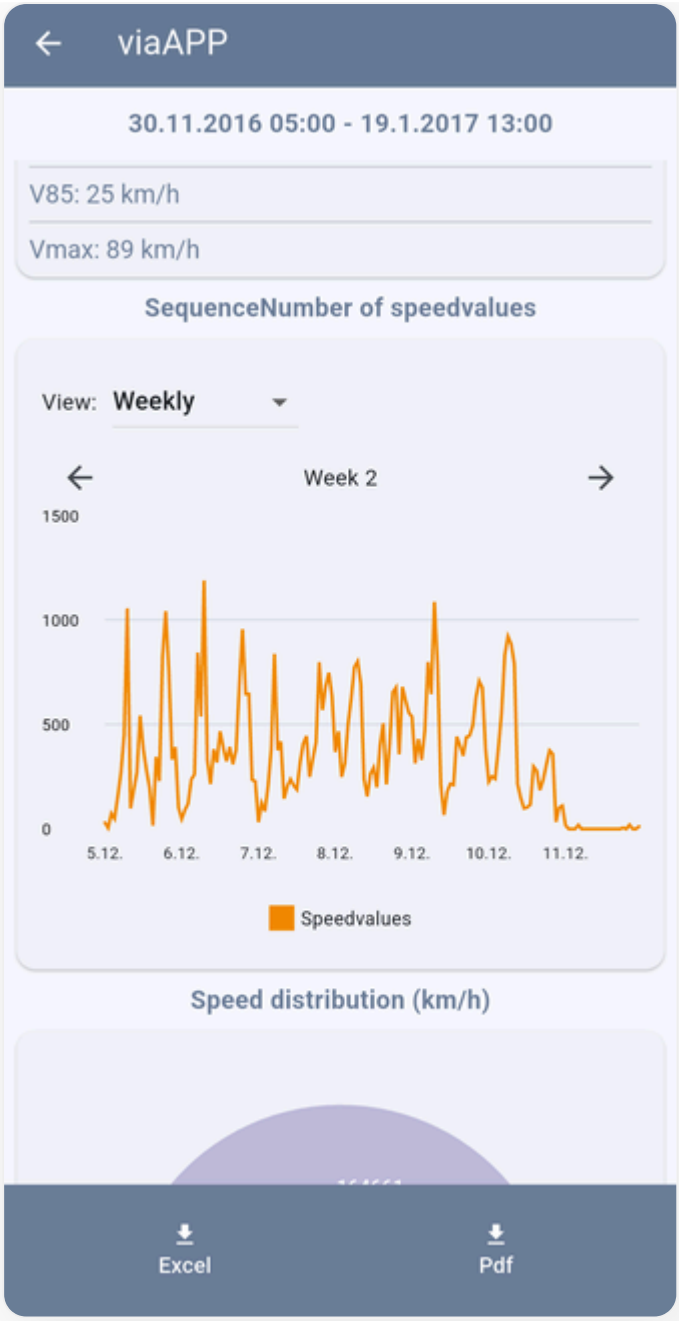
8.2.2 Evaluation Details for viasis Devices

The following charts and tables are specific to the evaluation of viasis files, which primarily record speed data:

- **Trend Number of Speed Values:**
    - This area shows a bar chart representing the temporal progression of the number of speed values.

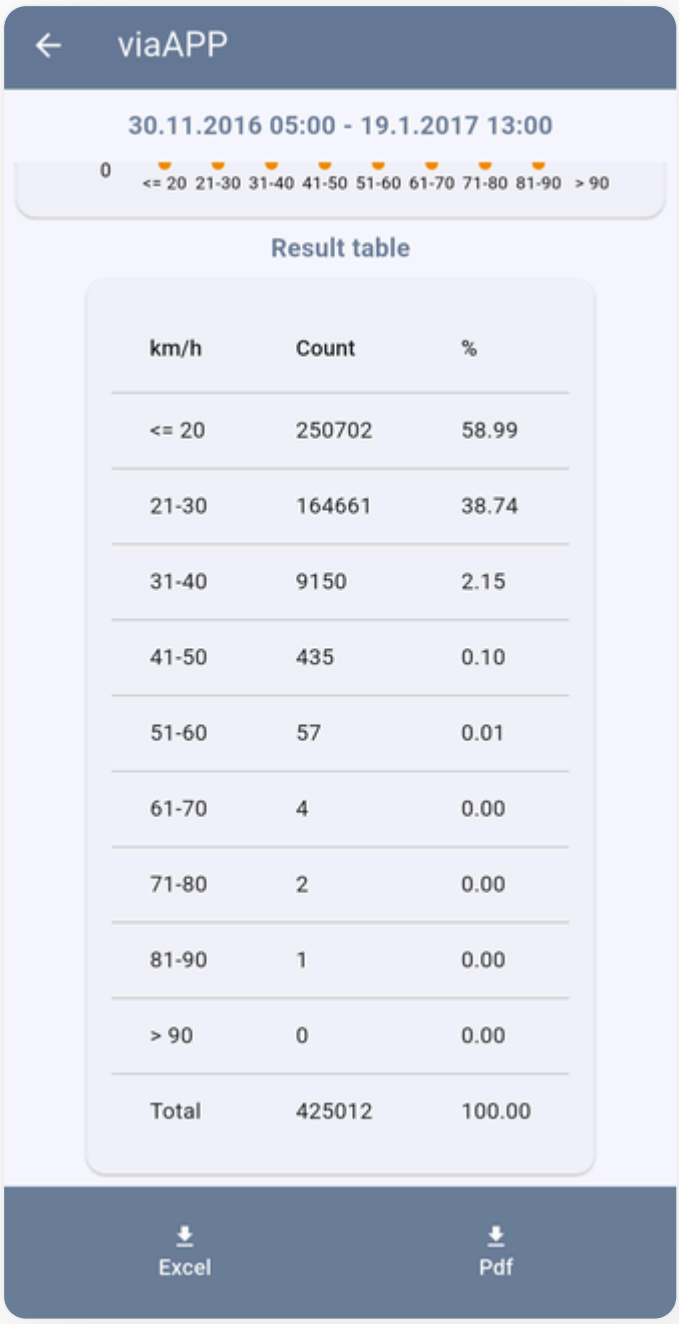


- **View:** Via a dropdown menu, you can change the representation of the chart:
  - **Total period:** Shows the distribution over the entire measurement period.
  - **Weekly:** Shows the distribution week by week. You can navigate between the individual weeks with arrow buttons (< >). This view allowed a more precise consideration of specific time segments.



- **Speed Distribution (km/h):**
  - Here, the distribution of the driven speeds is shown in different formats.
  - **Pie Chart:**
    - Visualizes the percentage distribution of speed values into predefined speed classes (e.g., <= 20 km/h, 21-30 km/h, etc.). The size of each segment represents the proportion of the respective class in the total amount of speed values.
    - A legend below the chart explains the color coding of the individual speed classes.
  - **Bar Chart ("Number of Speed Values"):**
    - Represents the absolute number of speed values per defined speed class as bars. This gives a direct overview of the speed ranges in which the most values were recorded.

- **Tabular Overview:**
    - At the very bottom of the evaluation view, you will find a tabular summary of the speed distribution.

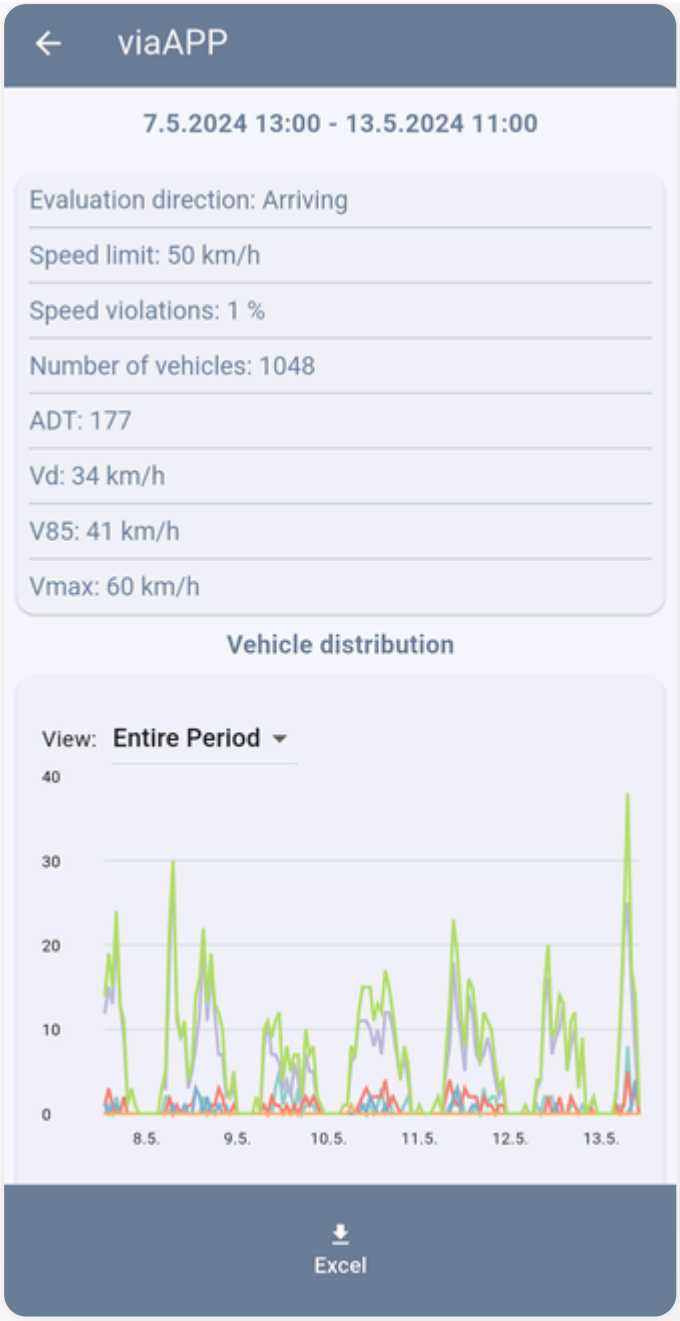


    - The table lists the following values for each speed class (col km/h):
        - **Number:** The absolute number of speed values falling into this class.
        - **%:** The percentage share of this class in the total number of speed values.
        - **Total:** The total number of speed values and 100%.

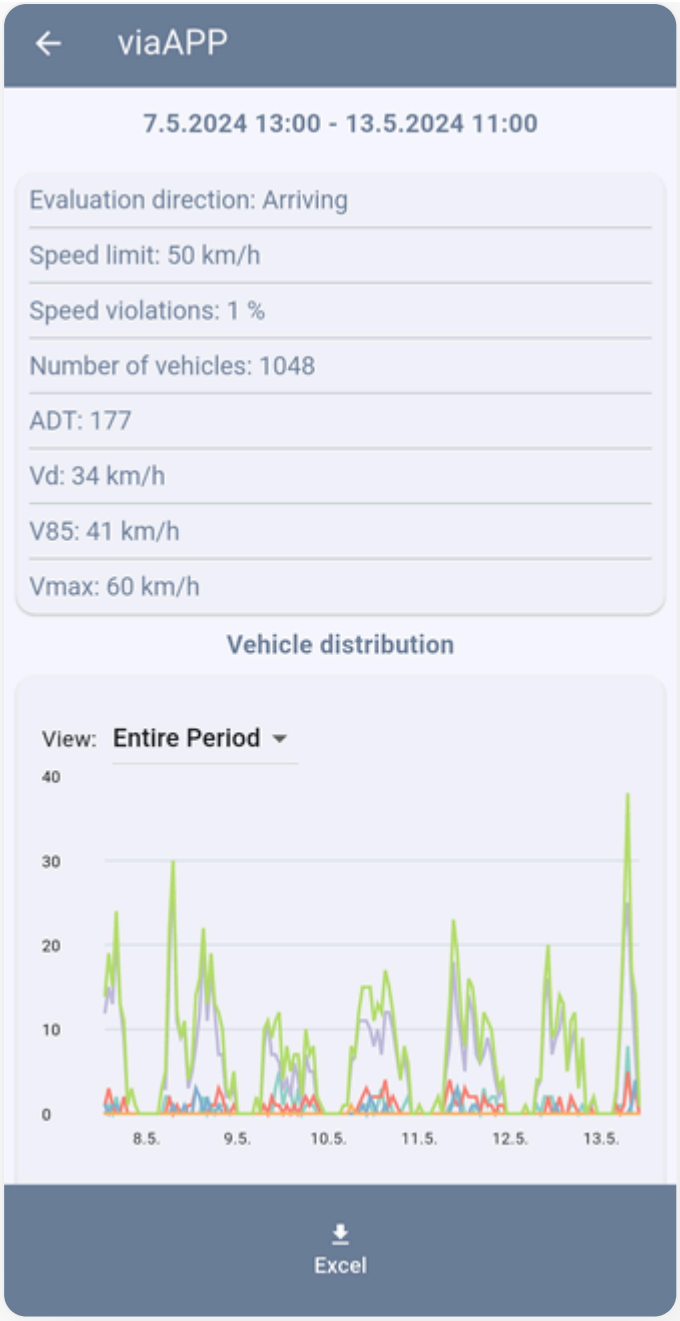
8.2.3 Evaluation Details for viacount Devices

The following charts and tables are specific to the evaluation of viacount files, which can record vehicle classes in addition to speeds:

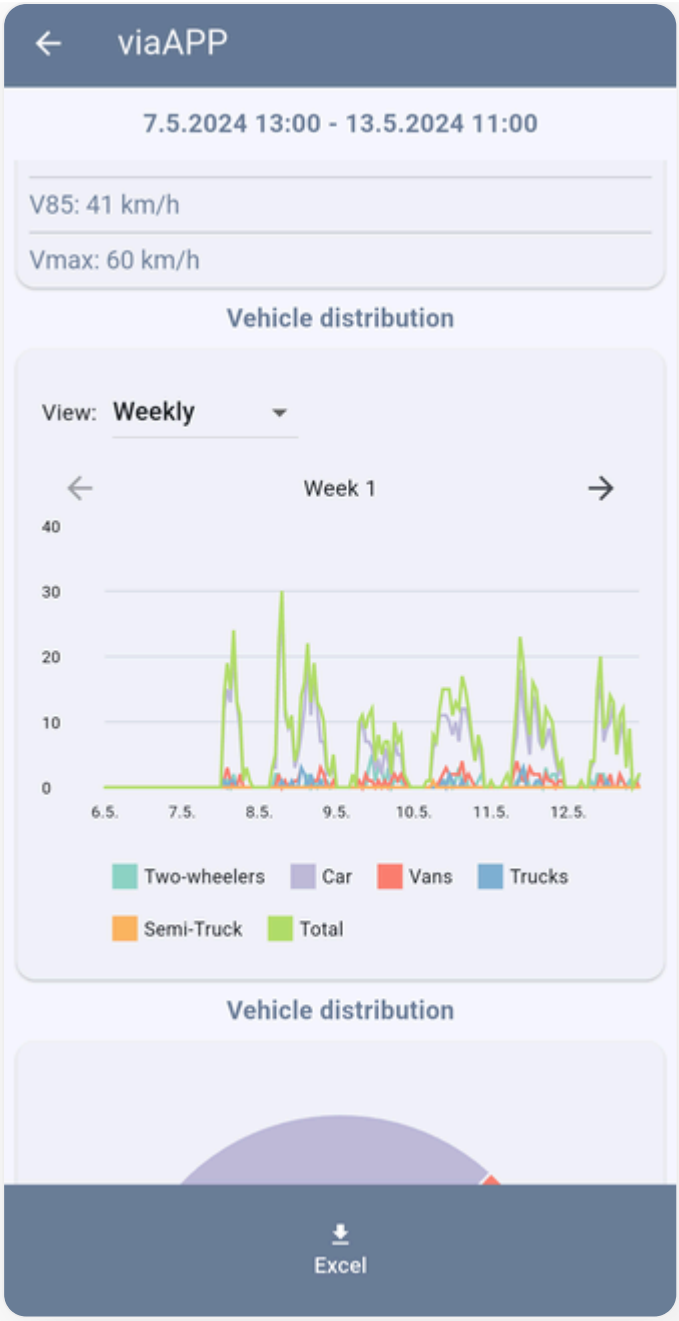
- **Vehicle Class Distribution (Line Chart):**
    - This chart is the primary and central element in the viacount evaluation. It shows the temporal progression of the number of vehicles, broken down by various vehicle classes.
    - Typical vehicle classes are:
        - Two-wheeler
        - Car
        - Van
        - Truck
        - Articulated Truck
        - Total (total number of all recorded vehicles)
    - The X-axis shows the time course, the Y-axis the number of vehicles. Each vehicle class is represented by a differently colored line.
    - **View:** Via a dropdown menu, you can change the representation of the chart:
        - **Total period:** Shows the distribution over the entire measurement period.



- **Weekly:** Shows the distribution week by week. You can navigate between the individual weeks with arrow buttons (< >).

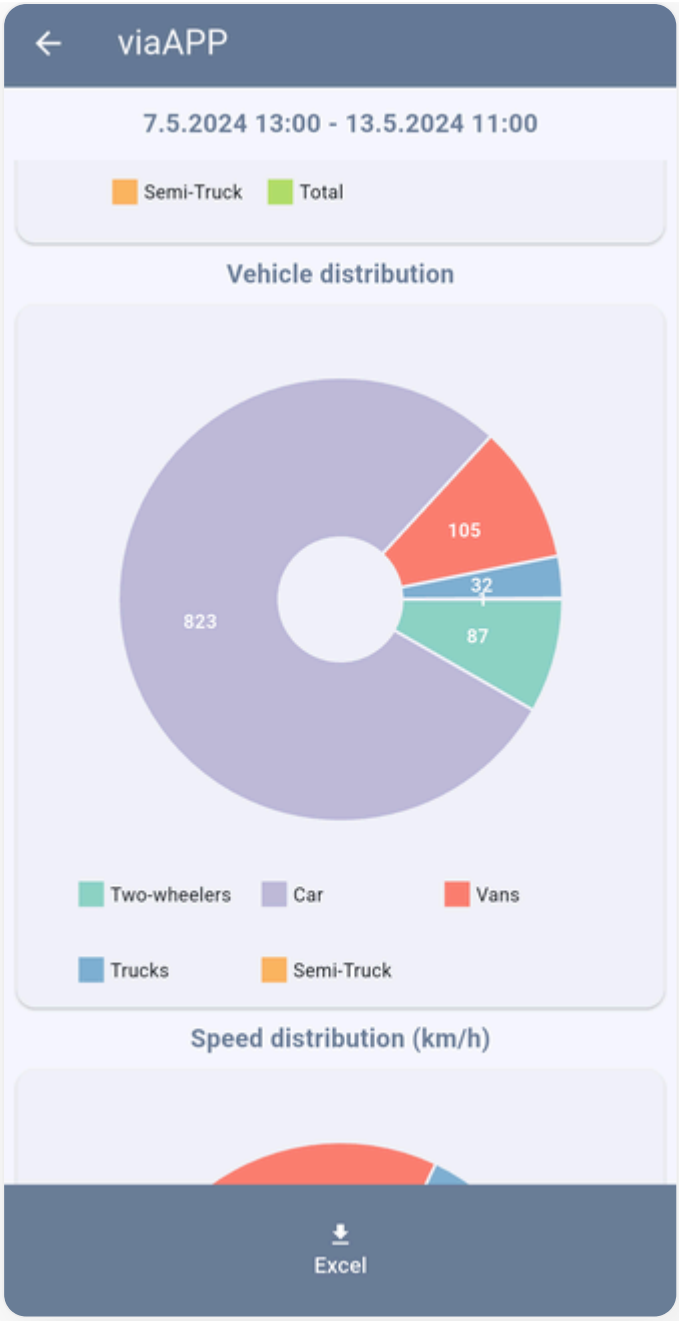


- **Vehicle Class Distribution (Pie Chart):**
    - Visualizes the percentage distribution of the total number of vehicles onto the different vehicle classes over the entire measurement period.
    - Each segment of the pie chart represents a vehicle class, and the size of the segment corresponds to its share of the total amount. The absolute number of vehicles per class is often displayed directly in the segment or next to it.

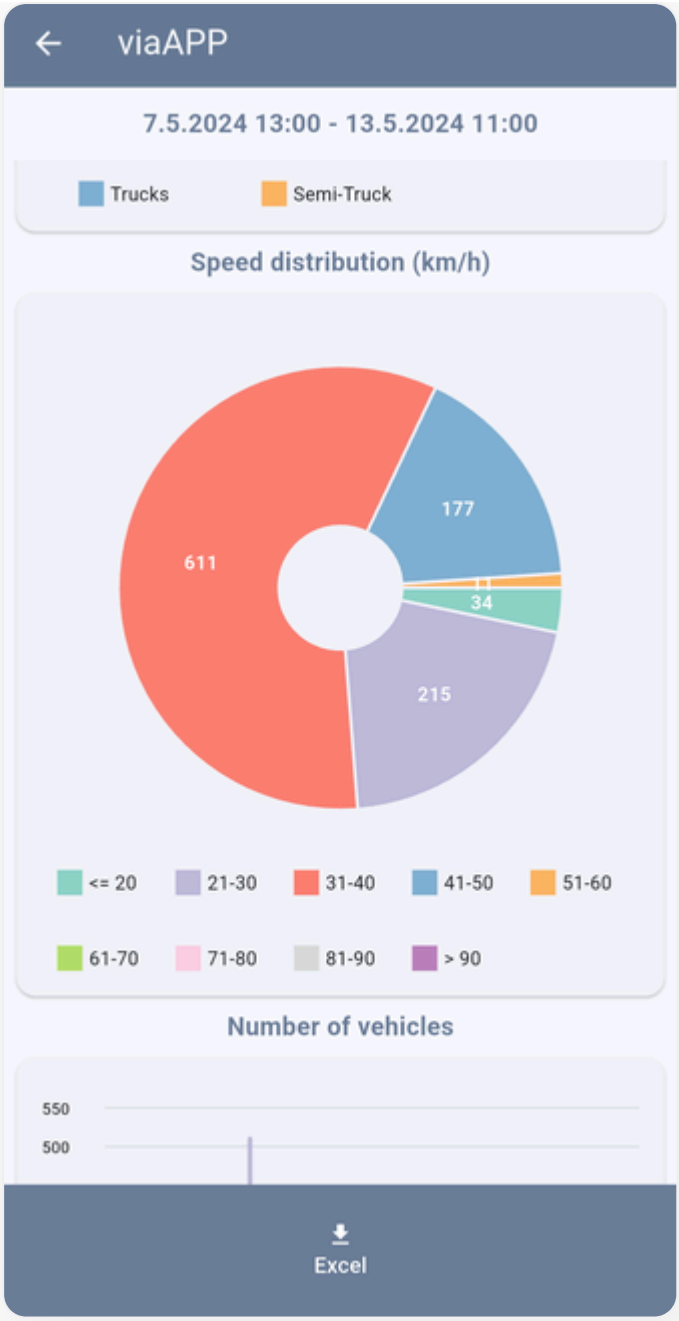


- A legend explains the color coding. Typically, cars represent the largest share.

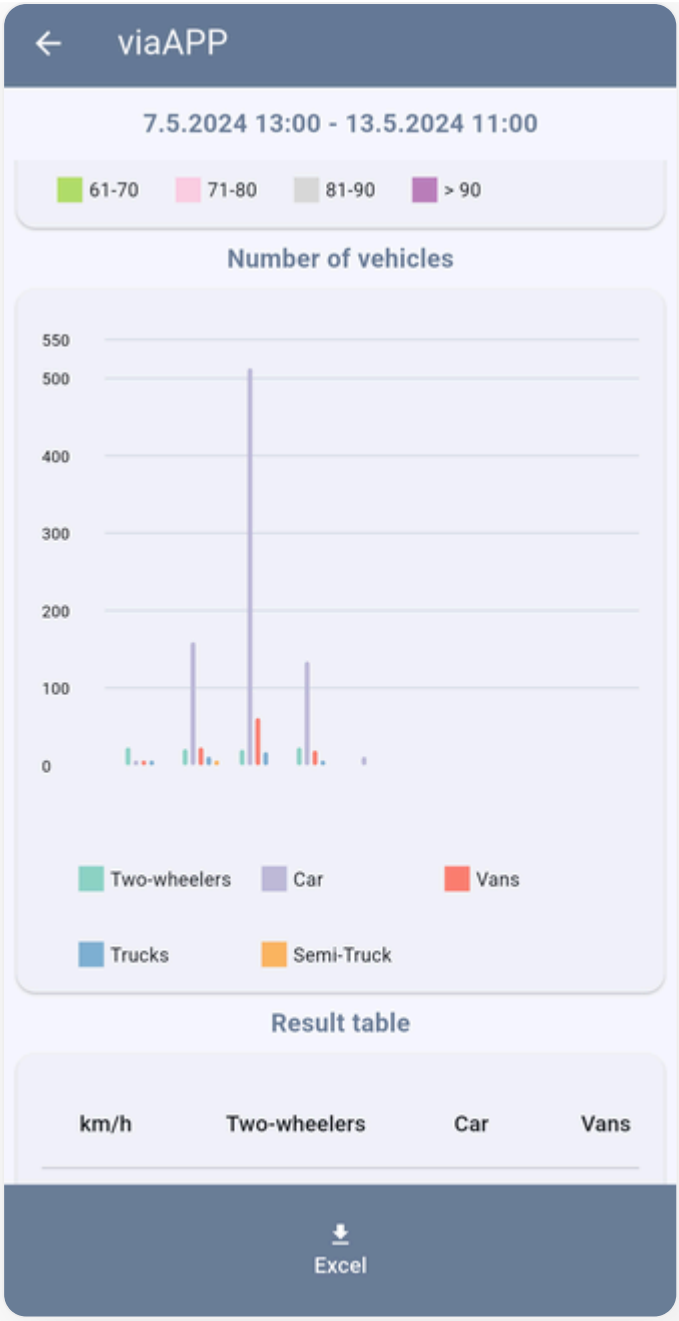
- **Speed Distribution (km/h) (Pie Chart):**
  - This pie chart shows how all recorded vehicles (regardless of class) are distributed across different speed classes.
  - The representation is analogous to the speed pie chart in viasis evaluations.



- **Number of Vehicles (Bar Chart by Vehicle Class and Speed):**
    - This bar chart represents the number of vehicles broken down both by speed classes (X-axis) and by vehicle class (differently colored bar segments or grouped bars per speed class).
    - This allows for a detailed analysis of how speeds are distributed within the individual vehicle classes.



- **Tabular Overview (Vehicles per Speed Class and Vehicle Class):**
    - This table provides the detailed numerical values for the distribution of vehicles.
    - The rows represent the speed classes (e.g., <= 20 km/h, 21-30 km/h, etc.).
    - The columns represent the different vehicle classes (e.g., "Two-wheeler", "Car", "Van", "Truck", "Articulated Truck") as well as a "Total" column per speed class.
    - The cells contain the number of vehicles of the respective class in the corresponding speed class.



8.3 Exporting Evaluation Data

At the bottom of the detailed evaluation view, there are buttons to export the raw data and the summarized evaluation:

- **For viasis evaluations:**
  - **Excel:** Exports detailed data as a .XLSX file.
  - **Pdf:** Generates a summarized PDF evaluation.
- **For viacount evaluations:**
  - **Excel:** Exports detailed data as a .XLSX file.
  - **Note:** For viacount evaluations, at the time of writing this manual, no PDF file is created directly from the app. The PDF export is only available for viasis data.

Note on the detailed description of export files: The exact structure and content of the exported Excel files (both for viasis and viacount) and the viasis PDF file are very detailed. A comprehensive description of these formats can be found in Chapter 9: Detailed Data Exports (Excel and PDF).

Chapter 9: Detailed Data Exports (Excel and PDF)

As described in Section 8.3, you can export the evaluation data as an Excel file (.XLSX) or – in the case of viasis data – as a PDF file. This chapter describes the typical content and structure of these export files.

9.1 Excel Export (.XLSX) – viasis

The Excel export for viasis data is very extensive and serves for a detailed analysis and further processing of the raw data. The file consists of several worksheets. Each worksheet containing a graphic is typically accompanied by another worksheet with the underlying raw data.

General Information Block: Many graphical representations and tables in the Excel export are accompanied by a standardized information block. This block summarizes the most important parameters of the evaluation and is typically placed below the respective graphic or table. It contains:

- Evaluation period: Start and end date/time of the measurement.
- Speed limit: The speed limit set in the app.
- Speed violation: Percentage share.
- ADT (Average Daily Traffic): Average number of vehicles per day.
- AYT (Average Yearly Traffic): Projection of ADT to one year (ADT * 365).
- Direction of travel: Selected travel direction(s).
- Values: Total number of speed values.
- Vehicles: Calculated total number of vehicles.
- Vd: Average speed.

- Vmax: Maximum speed.
- V85: 85th percentile speed.

The following sections describe the typical contents of the individual worksheets or sections:

9.1.1 Trend Number of Speed Values

- **Graphic Worksheet:**
  - Contains a bar chart representing the temporal progression of the number of speed values per hour over the entire evaluation period.
  - Below it is the general information block described above.
- **Raw Data Worksheet:**
  - Contains the tabular raw data for the chart. Each row represents one hour of the measurement period with date/time and the corresponding number of speed values.

9.1.2 Trend Average and Maximum Speed

- **Graphic Worksheet:**
  - Shows a line chart with the progression of the average speed (Mid) and the maximum speed (Max) for each hour of the evaluation period.
  - Below it is the general information block.
- **Raw Data Worksheet:**
  - Tabularly lists the date/time, average speed ("Mid"), and maximum speed ("Max") for each hour of the measurement period.

9.1.3 Trend V85, V50, V30 and V10

- **Graphic Worksheet:**
  - Represents the temporal progression of the percentile speeds V85, V50 (median), V30 and V10 as a line chart. Each line represents one of these speed metrics per hour.
  - The general information block is also present here.
- **Raw Data Worksheet:**
  - Contains the hourly raw data for V85, V50, V30 and V10.
  - **Note on zero values:** If no speed values were recorded in an hour (e.g., at night), the fields for these speed metrics remain empty because no calculation is possible (not 0 km/h).

9.1.4 Trend Number of Vehicles

- **Graphic Worksheet:**
  - Shows a bar chart with the temporal progression of the calculated number of vehicles per hour.
  - The progression often resembles that of the speed values, but with absolutely lower numbers. As a rough approximation, about 8-10 speed values correspond to one vehicle.
  - The general information block is present.
- **Raw Data Worksheet:**
  - Tabularly lists the calculated number of vehicles for each hour of the measurement period.

9.1.5 Hourly Summary of All Figures

- **Worksheet:**
  - This sheet summarizes the most important figures for each hour of the evaluation period in a single table:
    - Date/Time
    - Number of speed values
    - Number of vehicles
    - Average speed (Vd)
    - Maximum speed (Vmax)
    - V85, V50, V30, V10
  - This detailed hourly breakdown is required by some users for specific analysis.

9.1.6 Speed Distribution (Bar and Pie Chart)

- **Graphic Worksheets:**
  - **Bar Chart:** Visualizes the absolute number of speed values per predefined speed class (e.g., <= 20 km/h, 21-30 km/h, etc.).
  - **Pie Chart:** Represents the percentage distribution of speed values onto the same speed classes.
  - Both charts are accompanied by the general information block.
- **Raw Data Worksheet:**

- Contains the underlying data for the two charts: the speed classes and the respective number/percentage of values.

9.1.7 Speed Distribution (Line Chart with Peaks)

- **Graphic Worksheet:**
  - This chart shows the distribution of speed values as a line chart, with each individual km/h level represented on the X-axis and the number of measurements on the Y-axis. This allows for a detailed consideration of speed peaks and the general distribution curve.
  - The general information block is present.
- **Raw Data Worksheet:**
  - Lists the number of associated speed values for each recorded km/h level.

9.1.8 Time-Related Evaluations (Tables for Specific Time Windows)

- **Worksheet(s):**
  - This section contains tables summarizing various speed metrics (number, Vmin, Vd, Vmax, V85, V10 etc.) for specific time windows of the day.
  - Typical time windows are: 00:00 - 09:00, 06:00 - 20:00, 15:00 - 19:00, 19:00 - 00:00, 00:00 - 00:00 (entire day).
  - For each speed class, the corresponding metrics for the periods mentioned above are displayed.

9.2 PDF Export (Directly From the App – Only viasis)

The PDF export generated directly via the Pdf button in the app's evaluation view is only available for viasis data. It is designed to provide a compact, one-page summary of the most important measurement results.

The typical structure of such a one-page PDF evaluation is as follows:

- **Header / General Information:**
  - Start time, end time, travel direction, V85, Vd, Vmax, ADT, speed violation, speed limit symbol.
- **Graphics (Right Side of PDF):**
  - Top graphic: Bar chart of speed percentiles V30, V50, V85 per day.
  - Middle graphic: Bar chart of vehicle count per day.

    - Bottom graphic: Bar chart of the distribution of speed values onto speed classes (entire period).

- **Tables (Left Side of PDF):**
    - Top table (Daily values): Date, symbols, V85, Vd, Vmax per day.
    - Bottom table (Time segments): symbols, V85, Vd, Vmax for predefined time windows (e.g., "00:00-09:00") over the entire period.

The goal of this PDF export is to provide a clear summary on one page.

9.3 Excel Export (.XLSX) – viacount

The Excel export for viacount data is also very detailed and tailored to the specific capabilities of the viacount device, in particular the collection and classification of vehicle types.

General Information Block (viacount): Contains, in addition to the viasis information:

- Measurement location, comment, processor (fields for manual entry).
- Incoming/Departing vehicles direction (fields for manual entry).
- Average distance, convoy traffic. [NEW for viacount]
- Heavy load traffic share.
- Statistics per vehicle class (Two-wheeler, Car, Van, Truck, Articulated Truck, Total): Number, Vd, Vmax, V85.

The following sections describe the typical contents of the individual worksheets or sections of a viacount Excel export:

9.3.1 Trend Average Speed (By Vehicle Classes)

- **Graphic Worksheet:** Line chart of the temporal progression of the average speed (Vd), separate lines for each vehicle class and total.
- **Raw Data Worksheet:** Hourly average speed per vehicle class and total.

9.3.2 Trend Maximum Speed (By Vehicle Classes)

- **Graphic Worksheet:** Line chart of the progression of the maximum speed (Vmax) per hour, separate lines per vehicle class and total.
- **Raw Data Worksheet:** Hourly maximum speed per vehicle class and total.

9.3.3 Trend V85, V50, V30 (Total Vehicles)

- **Graphic Worksheet:** Line chart of the temporal progression of the percentile speeds V85, V50, V30 for all vehicles.
- **Raw Data Worksheet:** Hourly V85, V50, V30 for all vehicles.

9.3.4 Trend Number of Vehicles (By Vehicle Classes)

- **Graphic Worksheet:** Line chart of the temporal progression of the vehicle count per hour, separate lines per vehicle class and total.
- **Raw Data Worksheet:** Hourly vehicle count per vehicle class and total.

9.3.5 Detailed Time Segment Analysis (Table)

- **Worksheet:** Very detailed table with aggregated data (number of vehicles, Vd, Vmax, percentiles) for predefined time segments (00-09h, 06-20h etc.) over the entire measurement period, broken down by each vehicle class and total.

9.3.6 Speed Distribution (Bar Chart by Vehicle Class)

- **Graphic Worksheet:** Bar chart of vehicle distribution onto speed classes. For each speed class, there are bars for each vehicle class and total.
- **Raw Data Worksheet:** Numerical values (absolute and percentage) per speed class and vehicle class.

9.3.7 Speed Distribution (Pie Chart – Total Vehicles)

- **Graphic Worksheet:** Percentage distribution of all vehicles onto speed classes.
- **Raw Data Worksheet:** Absolute and percentage numbers of all vehicles per speed class.

9.3.8 Speed Distribution (Cumulative Curve – Total Vehicles)

- **Graphic Worksheet:** Two curves for all vehicles:
  - **Single:** Percentage of vehicles with exactly this speed.
  - **Cumulative:** Percentage of vehicles with this speed or less.
- **Raw Data Worksheet:** Data points for speed, share "Single" and share "Cumulative".

9.3.9 Vehicle Class Distribution (Pie Chart)

- **Graphic Worksheet:** Percentage distribution of vehicle classes (Two-wheeler, Car, etc.) in the total number. Absolute numbers often in the chart/legend.
- **Raw Data Worksheet:** Absolute numbers and percentage shares per vehicle class and total.