SMARTLOGGER supplement

The SMARTLOGGER is a groundbreaking innovation in battery monitoring technology. With its ability to accurately measure battery data over the long term, it offers an independent and reliable solution that meets the requirements of the EU BattG 2024. The combination of SMARTLOGGER and SMARTBATTERY COMPANION APP provides detailed recording and analysis of charge and discharge cycles over a period of up to 10 years.

The integrated capacity test provides valuable data on the energy consumption of each individual battery, enabling a comprehensive assessment of the battery's condition. By using the SMARTBATTERY COMPANION APP, users can conveniently evaluate the collected data on their Android smartphone with NFC chip and thus gain clear insights into the performance and health of their batteries. This technology represents a significant advance and helps to optimize the service life and efficiency of battery systems.

The SMARTLOGGER is a versatile device that can not only be permanently installed on a battery, but can also be used as a temporary measuring instrument:

After use on one battery, it can be easily removed and reused for further measurements on other batteries. Once permanently installed, the SMARTLOGGER integrates seamlessly into the SMARTBATTERY system, with the only difference being visibility. The SMARTBATTERY COMPANION APP plays a central role in both cases by collecting all measurement data and making it available for detailed analysis. This data can then be used to create a comprehensive battery report. The handling of the data is particularly user-friendly: With the APP, the measurement data can be easily exported, automatically converted to EXCEL and used for further processing.

With the SMARTBATTERY COMPANION APP, you can define threshold values that are individually adapted to the location and contractual conditions, which can be used to immediately determine whether potential operation outside of the specifications has occurred during regular on-site maintenance.

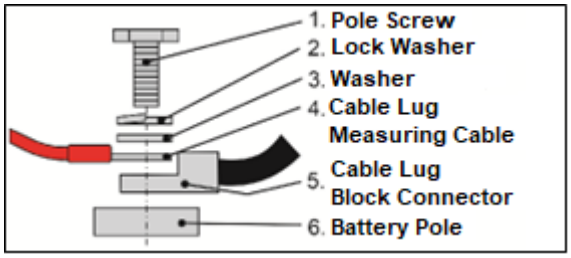
The clear traffic light system (green / yellow / red) allows you to read out a SMART-LOGGERs allow conclusions to be drawn about the current operating status of the respective battery. The measured values allow the immediate determination of potential violations of specifications during normal operation. The freely configurable parameterization via the COMPANION APP also enables the free definition of threshold values for your specific application and the setting of individual warranty limits, whereby warranty services can be communicated in a transparent, verifiable and traceable manner: The precise collection and evaluation of the measurement data from the SMARTLOGGER not only enables you to monitor and optimize the service life of your battery, but also to prove incorrect treatment and warranty violations. In addition, unnecessary downtime is minimized, as material and personnel-intensive measurements with special equipment on site are no longer necessary, as the SMARTLOGGER already collects all the required measurement data transparently in the background during runtime. The device is ideal for applications in automotive applications (e.g. vehicle and boat batteries), stationary energy storage systems and all batteries in industrial processes that require long-term monitoring or are subject to the requirements of the EU BATTG 2024.

The SMARTLOGGER's measurement method minimizes energy consumption to the point where it is equivalent to the natural discharge of a battery, which is particularly beneficial for stored batteries, but also for applications with low activity or in remote areas. The NFC interface is only activated by the reader, which further reduces energy loss. Since the SMARTLOGGER is also fully protected with a robust and sealed plastic housing thanks to a contactless design, it offers an ideal solution for a wide range of applications, from measuring stations to weather-dependent construction site lighting, and contributes to the development of sustainable industrial solutions.

Scope of delivery:

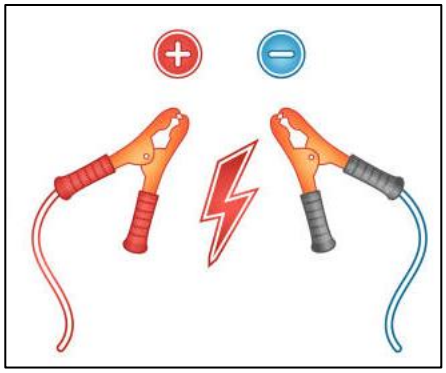
- ***SMARTLOGGER External 12V with connection cable in different lengths and terminals***
- ***SMARTLOGGER COMPANION APP APK (optional)***
- ***Supplement with link to SMARTLOGGER COMPANION APP***

1. SMARTLOGGER: Installation for continuous operation



In this operating mode, the SMARTLOGGER is permanently connected to the battery to be monitored. Therefore, the device is usually soldered to a ring cable lug or directly to the battery poles and the device starts as soon as you have started the initialization with the SMARTBATTER COMPANION APP. From this point on, the device begins recording temperatures and voltages at (default) intervals of 1 hour for a period of up to 10 years. It does not matter whether other sensors or a BMS have been connected to the BATTERY. The SMARTLOGGER data is collected transparently and stored separately. If the battery exceeds/falls below the predefined threshold values (configurable via SMARTBATTERY COMPANION APP), this is reported via a colour code in the display and the LOGFILE of the APP shows when and for how long the limit violation occurred. If the SMARTLOGGER is disconnected from the battery, this is recorded by the SMARTLOGGER and generates a red colour code as an indication of a warranty violation.

2. SMARTLOGGER with crocodile clips for mobile short-term monitoring and capacity tests



For use as a measuring device in a capacity test, a fast temporary connection is useful.

1. Install the SMARTLOGGER with alligator clips on all batteries that you want to monitor during your capacity test.
2. Position the NFC chip of your ANDROID device on the SMARTLOGGER housing and initialize the device with OK. After about 10 seconds, the device is accessible again and reports back with the correct time settings and shows a green battery. The device is now in the normal 10-year recording mode, identical to the SMARTLOGGER for continuous operation. Perform this process on all devices that you want to use in your capacity test.
3. To start the capacity test, place your ANDROID phone with the NFC chip directly on the SMARTLOGGER again and click on "Capacity test" in the APP and then on START. This will start the recording at a faster interval and will continue automatically until you click STOP or the battery has reached less than 10.5 volts during discharge. (The limit values for the capacity test can be set in the APP. New limit values can be easily transferred to the next SMARTLOGGER using the "WRITE/COPY TO NEXT BATTERY" function in order to set the same limit values for all devices and now all start recording at the same rate as soon as you press START - or when the START VOLTAGE you set in your configuration for discharge is reached. When the STOP VOLTAGE is reached, the capacity test is automatically ended and the device records again at the normal rate. In addition, the capacity test can also be ended manually by clicking on STOP. For the evaluation of the capacity test, please read the instructions for the SMARTBATTERY COMPANION APP

To install and operate the device you need:

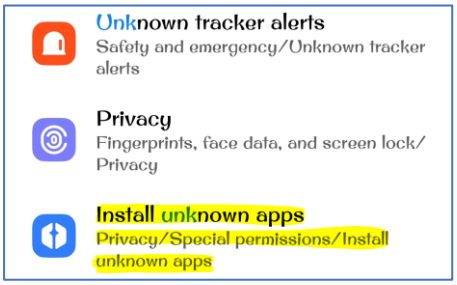
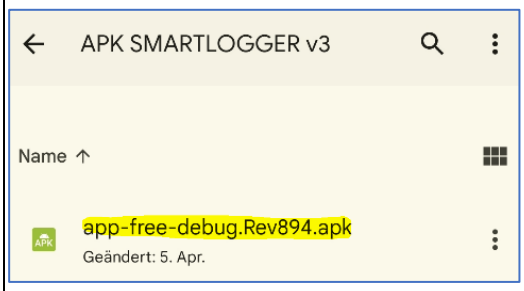
1. Tool for connecting the positive cable (RED) and negative cable (BLACK) to the battery terminals.
2. SMARTBATTERY COMPANION APP and the user manual (GENEREX WEBSITE SUPPORT/DOWNLOAD CENTER/BATTERYMANAGEMENT/SMARTLOGGER/User Manual)
3. Furthermore, for delivery to the SMARTBATTERY EXPORTER(GENEREX WEBSITE SUPPORT/SMARTBATTERY EXPORTER) and a Windows PC with MS EXCEL is required to evaluate and edit the BatteryLog.

The SMARTBATTERY COMPANION APP

The Companion App is used for initialization, configuration and data collection. Two different versions are available:

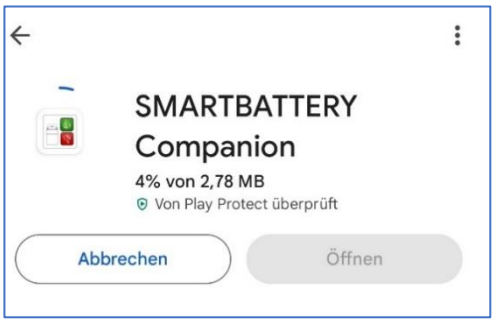
1. System Builder / OEM Partner

This version of the app has an expanded range of functions. The functions include the option to reset a SMARTLOGGER, define an installation time for batteries and further diagnostic and configuration options. This version of the app is delivered to you as an APK file and is not available from the GOOGLE PLAYSTORE!

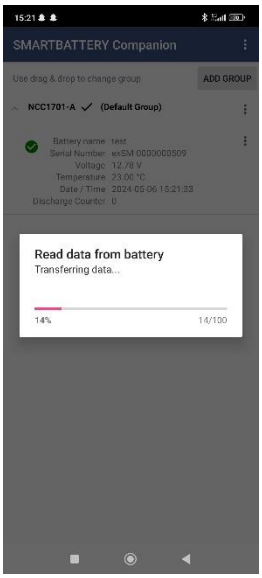
		
Temporarily allow the installation of unknown apps on your ANDROID device.	Install the APP directly via the FILEMANAGER on your ANDROID device.	After successful installation, you can start the app directly from your device's menu.

2. End user / customer

The consumer version of the Companion App is available free of charge in the Google Playstore.

		
Scan the QR code and click "Open in browser". Download the SMARTBATTERY Companion app for Android. Alternatively, open the Google Playstore and search for the SMARTBATTERY Companion app from GENEREX.	The app will be automatically downloaded and made available on your device.	The SMARTLOGGER Companion app appears in your program menu and can be started directly.

Make sure that the NFC function of your mobile device is activated and that the Companion App is also allowed to access this interface, otherwise the SMARTBATTERY Companion App will inform you that operation is not possible under these conditions.



Click START to start the first READING process. Place the NFC interface of your device directly on the SMARTLOGGER or the NFC symbol on the SMARTBATTERY. Please note that the exact location of the interface in the device can vary greatly depending on the manufacturer and model.

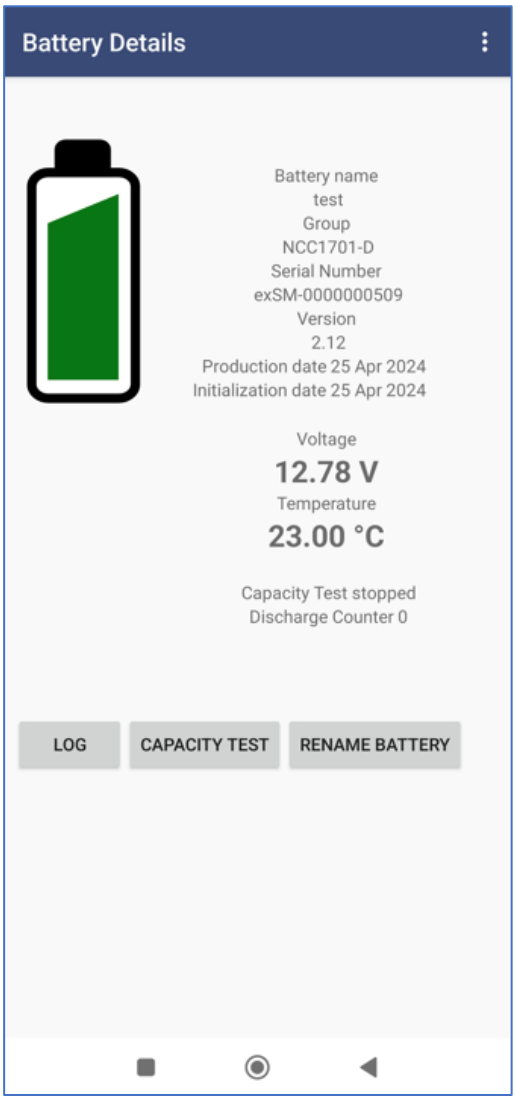
Scan with automatic default group

If you have not defined any groups, the Companion App will automatically create the battery group “SMARTBATTERY” during the first scan and sort all newly recorded SMARTBATTERY devices into it until revoked.

Place your mobile device over the SMARTLOGGER interface so that the NFC interface can make contact. As soon as the signal is strong enough, the data will be transferred. Make sure to pay attention to the alignment and position of the NFC interfaces in relation to each other! After a successful scan, you can tap the entry in the battery list to call up the respective detail screen.

health

The colour of the battery provides an immediate overview of whether the battery needs further attention or is functioning as expected.



Function menu

Advanced system functions

Overview field

The overview shows the last battery scanned or the one you selected from the history list:

- **Battery name**
- **Assigned group**
- **Serial number**
- **Version of the logger**
- **Production date**
- **Initialization date**
- **Current voltage**
- **Current temperature**

LOG and CAPACITY TEST

Detailed information about the battery displayed in the overview field as well as additional functions and

RENAME

Depending on the hardware revision, you can customize battery names and transfer them to the SMARTLOGGER

Further information and a detailed user manual for the SMARTLOGGER and the Companion App can be found in our download area at wwww.generex.de.