ASPiON ■ G-Log 2
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Monitoring shocks and climate data

Wireless. Inexpensive. Long lasting.

Quick guide

The user manual and the ASPION G-Log Manager software are stored on the ASPION USB stick.

You can download the ASPION G-Log App for Android and iOS from the respective app stores at no cost.

Find software updates, FAQs, apps and more useful information in the ASPION customer portal at www.aspion.de.

Installing the ASPION G-Log App:
Scan the QR code with smartphone.

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Easily get started: Quick test

- Install the card reader and the PC software ASPION G-Log Manager [1].
- <u>Remove the battery pull tab labelled "Pull".</u> Place a data logger with the bottom side (label visible) on the card reader.
  Attention: Do not place the card reader on a metallic surface (e.g. PC).
- Activate a data logger with "Write sensor" and the "G-Log 2 low" profile [4].
- Create a shock: Drop the data logger from a height of approx. 25 cm.
  The data logger records a shock event as soon as a 4 g acceleration is exceeded on one axis for 10 milliseconds.
- Read out the data logger via a PC software (label visible) and/or app [5].
- Have a look at the data analysis, especially the shock details (PC software) with the shock course displayed in milliseconds on all 3 axes [6].
- Stop the data logger with the PC software to reduce battery consumption. Recorded events are deleted when activating the data logger again.

Important: What do I need to consider before using the data logger?

- **Where do I mount the data logger?**
  It is best you mount the data logger directly on the transported goods, at a sensitive point, preferably in the upper section: with screws, industrial adhesive tape or cable tie.
- **How sensitive is my transported good to shocks, which settings do I choose?**
  In general: The heavier the goods to be transported, the lower the threshold value, e.g.
  300 kg .. < 1 t   → G-Log 2 high profile - 8 g at 20 milliseconds shock duration
  > 1 t .. 8 t   → G-Log 2 medium profile - 6 g at 15 milliseconds shock duration
  > 8 t .. 15 t   → G-Log 2 low profile - 4 g at 10 milliseconds shock duration
  Select a higher or lower profile for lighter/heavier goods.
- **How critical are temperature and humidity values?**
  Interval-based and event-based recording: in a fixed interval with activity events, for example, every 4 hours. As an event with threshold values: The data logger records to 5 minutes precisely when the set threshold was left, including its course.
  Please note: with the total memory capacity, you can store 950 events in total for shock, climate and activity; if the circular buffer is full, events of a previous date will be overwritten (except for the first and further 8 peak shock details).
- **How can I retrieve the recorded sensor data?**
  You can easily read out the data logger via the Smartphone App and directly send the data from the app via e-mail and import it into PC software. Use the included template to explain the use to your colleagues and business partners. Alternatives: Time-controlled stop or stop with the Smartphone App and PIN (only for Android).
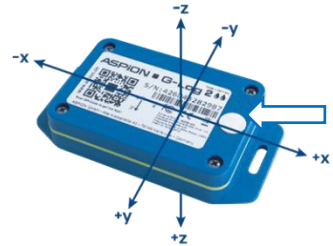
Mounting

Mounting orientation

To correctly assign the axes in case of shock events, the mounting orientation is critical.
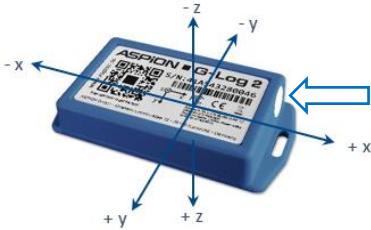
Don't shield the membrane while packaging!

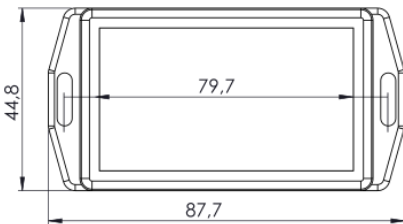ASPION G-Log 2   ASPION G-Log 2 Waterproof

Recommended mounting

- On steel: M3 ISO 7380 FL (M4 ISO 7380 for Waterproof)
- On wood/sheet metal: flathead screws with a maximum thread diameter of 3.5 mm, for Waterproof 3.9 mm, (e.g. DIN 7981)
- Tightening torque: 0.4 - 0.5 Nm
- Alternatively, you can use industrial adhesive tape (e.g. 3M 5925F) or cable tie
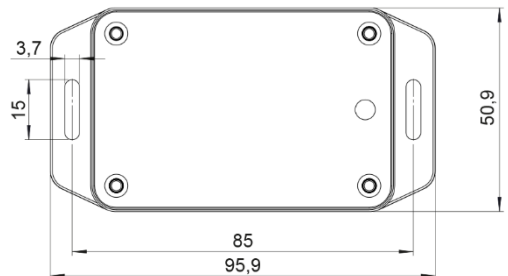
Housing dimensions (not to scale)

A 1:1 mounting template can be found in the technical data or in the manual.
Dimensions in millimeters.

ASPION G-Log 2   ASPION G-Log 2 Waterproof

1 Installing ASPION G-Log Manager and card reader

Please note: To install the software, you require administrator rights and write access to the program data directory. Please contact your IT if necessary.

- If the .NET framework is not set up on your computer, you must first install it:
  Execute the dotNET Framework\ndp48-x86-x64-allos-enu.exe
- Install the driver for the card reader:
  Execute the Smart Card Reader\Identiv uTrust V1.27.exe; then connect the card reader to the USB interface; place card reader on non-metallic surface
- Installing ASPION G-Log Manager:
  Execute ASPION_G-Log_Manager_Installer.msi

After you have successfully installed the software, ASPION G-Log Manager is displayed as link on your desktop. Start the ASPION G-Log Manager.

2 Setting the data logger type via the Global settings

You can operate all ASPION data logger with the software. Define the ASPION G-Log 2 data logger type. The program will support you with exactly the functions you need to operate the data logger type. You can adapt the selection anytime.

3 Editing profiles

Here you define the settings for the operation of a data logger. You can newly create, edit and delete profiles. Three default profiles are supplied to make orientation easier. With the settings, you can define the duration and threshold values for which an event is recorded if the values deviate from these defined thresholds. To obtain usable data, it is critical to define a profile suiting the characteristics of your transported goods.

Shock settings (see Important: What do I need to consider before the use?): Battery life determines the data rate at which the accelerometer operates. The data rate is the higher, the shorter you define the lifespan of the battery. A high data rate is useful especially for the recording of short shocks.

Activity events for orientation and climate: To monitor data logger activity, for orientation detection and for interval recording of climate data, a shock and climate event each is triggered at a selected interval, independent of threshold values.

Threshold values for temperature and humidity: the climate sensor measures temperature and humidity values every 5 minutes. For values outside the set thresholds, the sensor measures event-based detailed recordings to 5 minutes precisely and logs their courses until the permitted value range is entered again.
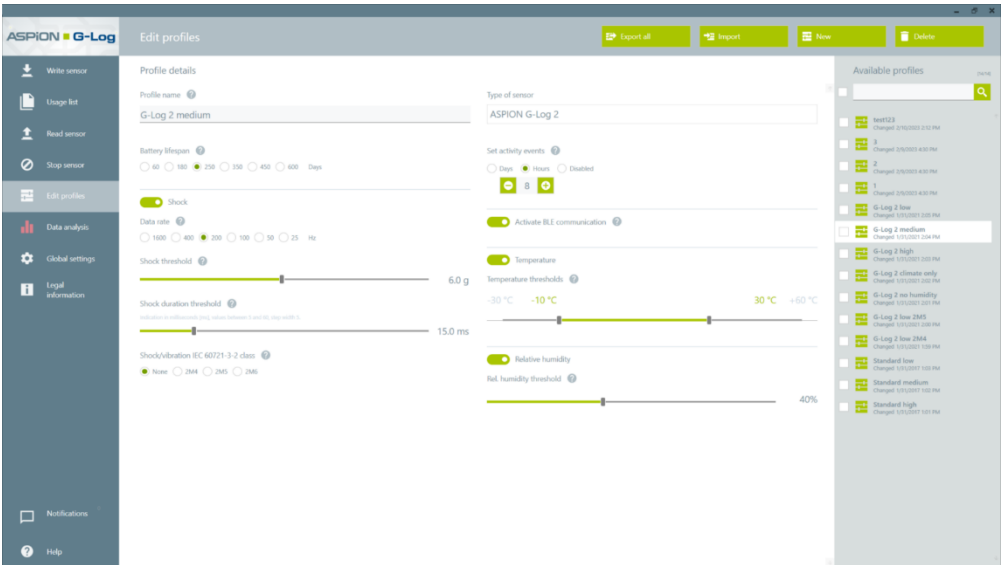
Memory capacity: The data logger stores a total of 950 events. Earlier events are overwritten in the circular buffer, but the first and the 8 peak shock values including details are permanently stored. This ensures that you can document the highest shock forces on your transported goods in detail.

Calculation table as orientation aid for the setting of **activity events** (Interval recording):

Set Interval	Memory capacity duration of approx. – without any further events
hourly	20 days
every 3 hours	59 days
every 6 hours (4 x day)	17 weeks
every 8 hours (3 x day)	22 weeks
every 12 hours (2 x day)	34 weeks

Tips for using profiles

If your transport is only on the road for a few days and you want to record the position of the goods and also the climate data constantly, select a shorter interval for activity events, for example every 2 hours. For longer transports of several weeks, select a longer interval, for example, every 8 hours.

If you only want to record temperature and humidity values, deactivate the recording of shock in the profile. This provides 950 events for the protocolling of climate values. Battery life is at least 600 days.

Please note: You can make further global settings such as the extended display of shocks up to ± 24 g per axis, the control of the app, and other, in the **Global settings** area.

4 Operating the data logger

Make sure to remove the battery pull tab first.

You define the details for your shipment when writing the data logger. Enter a shipment name, the start and stop times for recording events, and the transport duration if required. This function checks whether the data logger has sufficient battery capacity for the planned use. Select a profile to define the threshold values and the activity events. After data is written to the sender, you will receive a confirmation. The information is stored in the usage list to ensure traceability. The data logger is now ready to be mounted (see Mounting).

5 a) Reading the data logger with PC software

You receive analyzed data by reading out the data logger: Place the data logger with the bottom side (label visible) on the card reader and follow the instructions of the program. Traffic light symbols immediately show whether shock or climate events have occurred. You receive all information about the data in the data analysis area.

5 b) Reading the data logger with the Smartphone App

In addition to the brief instructions, you will find instructions for reading out the data loggers via app, on the USB stick or for downloading in the customer portal. Follow these instructions. This is a customizable template to share with colleagues, customers and service providers.

Please note: When reading out data via NFC technology, hold the data logger directly and very close to your smartphone. When reading out data via BLE, the range is several meters and you can read out data through packaging or sea containers (details see ASPION customer portal).

iOS App   **Android App**

Reading out data via NFC: Hold data logger closely to smartphone – for all ASPION G-Log data logger.

Reading out data via BLE: Start scanning – only for ASPION G-Log 2 data logger (Precondition: BLE must be activated).
Please note: For Android devices, the operating system requires that GPS is activated, otherwise reading via BLE will not work.
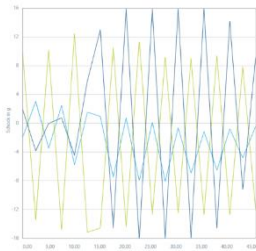
6 Data analysis

The data analysis view shows all information of a read-out data logger at a glance. Activity events are used to check the functionality during runtime. With the export function, you receive data analysis in Excel, PDF or native G-Log format displayed in the ASPION G-Log Manager.
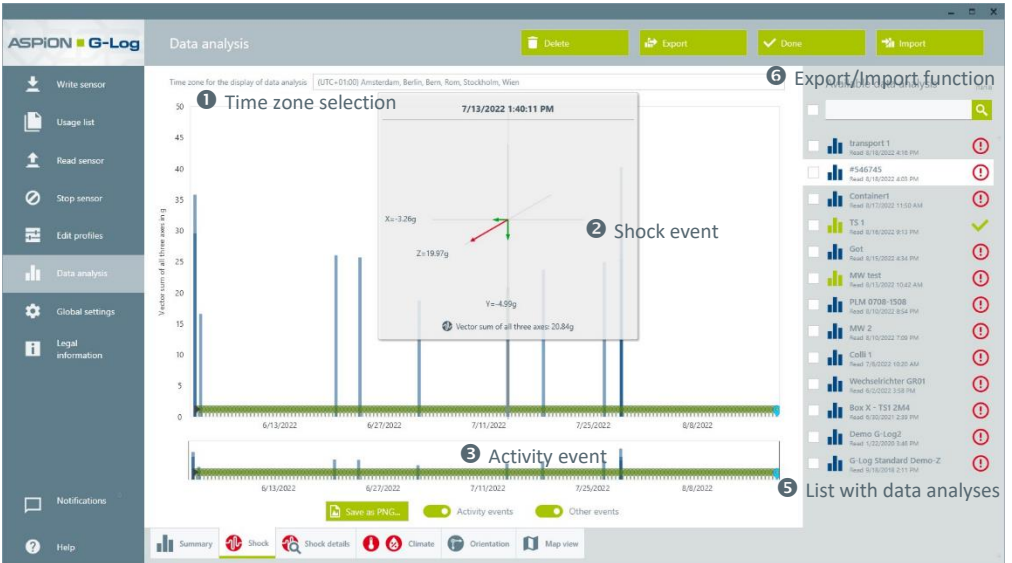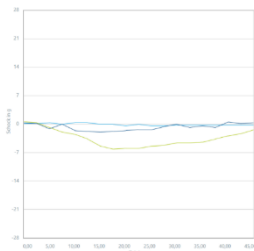

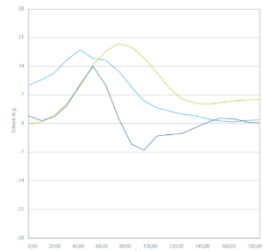❹ Select: Summary/Shock/Shock details/Climate/Orientation/Map view

Critical details to judge shock courses are deliverd by shock details in milliseconds, e.g.

Vibration course   Air freight transport   longer lasting shock

You will find detailed explanations of the data analyses, in particular of shock details and climate recordings, in the user manual. We will be happy to help you to correctly interpret the data.

Further information on the analysis is available online at www.aspion.de!

Battery replacement

If the battery is empty, all data remains in the memory store, the data logger can no longer be read out. To read out your data and to further use the data logger, replace the battery on a clean, dry and non-conductive work surface:

- Unscrew the housing on the bottom side.
- Remove the battery using a blunt, non-metallic object.
- Avoid contact with electronic devices.
- Insert a new battery, **type CR2032 from Panasonic**, 3 V/220 mAh into the holder, mind the polarity. **Functionality is only assured for batteries of type CR2032 from Panasonic**.
- Screw on the housing. Important: For the ASPION G-Log 2 Waterproof, use a torque screwdriver with 26cNm. Only then is the housing waterproof.
- Wait 10 seconds before reading out the data logger. Check the battery capacity.

When exchanging the battery, the data logger keeps its previously set state and this state is also adopted after the battery has been replaced. As soon as the battery is empty, the internal timer also stops. Thus, please replace the battery quickly when a data logger is working. You can reset the time after battery replacement by reactivating the data logger.
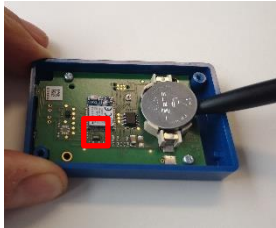
Left: ASPION G-Log 2 is unscrewed from bottom.
(ASPION G-Log 2 Waterproof is unscrewed from the top)

brief blinking of LEDs when inserting the battery

Important to note

- You will find detailed explanations in the user manual.
- ASPION data logger are not designed for safety-relevant applications.
- Do not operate sensors which are visibly damaged.
- Do prevent penetration of fluids to prevent corrosion damage or a short circuit.
- Never use a data logger with leaking battery; avoid skin contact.
- The manufacturer does not assume any liability for damages which were caused due to inappropriate use or wrong operation.

Never dispose of the data logger together with domestic waste. Send the data logger back to the manufacturer or dispose of them properly as waste electrical equipment.

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