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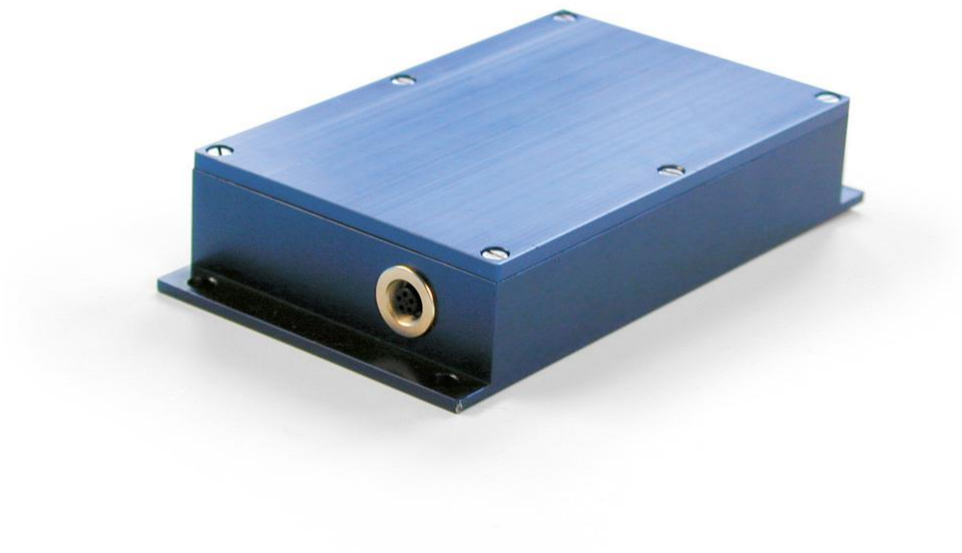
g-log data logger data sheet

g-log sth2 usb / sth2E usb



Shock measurement on all 3 axes

Detailed shock curve with time stamp

External temperature and humidity sensor

Dew Point calculation

Battery life 24 months

Tamper-proof - password protected

Stabile aluminum housing - easy mounting

Extremely simple evaluation with software provided

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g-log data loggers

The g-log series meets all requirements: large memory capacity, alarm messages, long battery life, simple operation and evaluation.

Features

With the g-log data logger, accelerations (impacts, jolts) and the temperature at the time of the impact can be recorded. The progress over time of the accelerations is recorded on all three axes for all events. Additionally, a combined temperature and humidity sensor allows to record climatic values. The sensor can be mounted directly at the housing of the g-log, or via cable at the ideal measurement site.
This makes the g-log data logger the ideal tool for detailed transport monitoring and packing checks.

The related LogView PC software for programming, graphical and numerical display of the measured values and print-outs enables easy data analysis and logger programming. LogView can be used with all g-log data loggers.

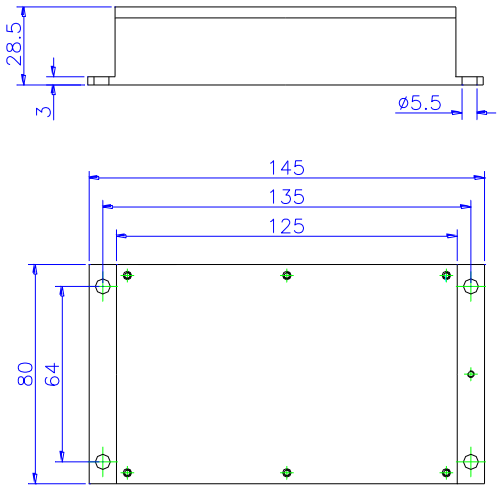
Security

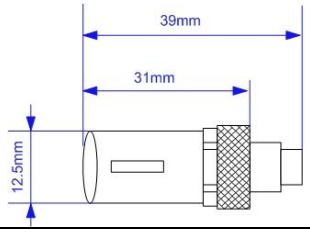
All data are stored in the logger in a non-volatile memory. This means the measured values are retained even in the case of a battery failure.
Any access to the programming of the unit requires a password, and all changes are logged. This ensures that measurements cannot be tampered with and any tampering attempts are detected immediately.

Housing

The g-log series was developed for use under difficult conditions. The measuring electronics is protected with a sturdy, splash-water resistant aluminium housing. (IP 65)

Mounting

Data Logger	**Mounting Guidelines**
	The data logger must be rigidly connected to the object to be monitored (screw connection with M5 bolts. When positioning the unit it should be ensured that no damping material is located between the object to be monitored and the data logger, as otherwise the measurements will be falsified. An inadequate mounting of the unit can cause excessively high measured values if vibrations result between the goods to be monitored and the data logger.

Temperature and Humidity Sensor (sth2)	**Mounting Guidelines**
	Make sure there is adequate air circulation, to ensure the sensor measures the climate of the goods to be monitored.

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Technical Data

General Information	3-axis curve recorder for acceleration
Housing	Aluminum anodized, splash-water protected IP 65
Dimensions	145x80x29 mm
Weight	Approx. 470g
Battery	2x UM3 lithium thyonilchloride 3.6 V
Current drain standby mode	Approx. 60µA
Current drain measurement	Typ. <30mA, 50mA max.
Battery life	> 15'000 hr
Memory	Non-volatile, SRAM with buffer battery
Memory capacity	4MByte (appr. 9000 shock events and 400'000 temperature/humidity values)
Memory mode	When memory is full, smallest values are overwritten
Internal sensors	Acceleration (shock, vibration), temperature
External sensors	Temperature and humidity
Digital IO	None
Control Buttons	Start/stop internal, E-Versions with external buttons
Indicators	2 LED red/green (alarm status, unit status, measurement active)
Programming/evaluation	With LogView PC software
Measurement start/end	Programmable or with start/stop button
Connection to PC	RS-232, 57600 Baud, USB 203400 Baud
Operating range	-30°C to 85°C (sth2-5: -20°C to 70°C)

Acceleration sensor	
Unit of measure	g
Measuring sensor	Internal micro-mechanical sensor, static acceleration measurement
Measuring range	sth2-5: -5g to 5g sth2-35: -35g to 35g sth2-70: -70g to 70g
Measuring interval	Continuously ready for measurement, adjustable trigger threshold
Wake-up time	Typ. 1ms, max. 2ms (from reaching of trigger threshold to recording)
Trigger threshold	sth2-5: 0.2g to 2g sth2-35: 0.4g to 5g sth2-70: 2g to 20g
Sensor resolution	0.3% (of MR)
Sensor accuracy	sth2-5: Full temp. range: 2% (of MR) sth2-35: Full temp. range: 2% (of MR), -10°C to 60°C : 1% (of MR) sth2-70: Full temp. range: 2% (of MR), -10°C to 60°C : 1% (of MR)
Measuring axes	Tri-axial (X, Y, Z)
Event length	Automatic
Sampling rate	2 kHz (scan rate = 0.5ms)
Frequency range	1.5 Hz to 500 Hz

Temperature sensor (internal, during shock measurement only)	
Unit of measure	ºC or ºF
Measuring sensor	Internal temperature sensor
Measuring range	-40°C to 85°C
Measuring interval	Temperature measurement during shock event
Sensor resolution	1 ºC
Sensor accuracy	3 ºC
Sensor positioning	Internal

Temperature and humidity sensor (external)	
Unit of measure	ºC or ºF / %rH
Measuring sensor	Combined external sensor (Sensirion, CMOSens® - SHT75)
Measuring interval	Adjustable, 10s to 10h
Measuring range temperature	-40ºC to 120ºC
Sensor resolution temperature	0.01ºC
Sensor accuracy temperature	±0.3ºC
Measuring range humidity	0%rH to 100%rH
Sensor resolution humidity	0.05%rF
Sensor accuracy humidity	±1.8%rF
Max. cable length	Max. 2m

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Compliance

The device is conform to all requirements of the following standard : EN 15433-6: Transportation loads - Measurement and evaluation of dynamic mechanical loads - Part 6: Automatic recording systems for measuring random shock while monitoring transports

EMC Compliance

The device is conform to all requirements of the following standards:
EN 61326-1: 2006 (IEC 61326-1: 2005)

Calibration and certification

All units of the g-log series are shipped with a calibration record.
EN 15433-6 requires a re-calibration of the units every two years. Our calibration service covers all requirements of these normative documents.

Products and Services

Data logger
sth2-XX /sth2-XX E (acceleration and temperature internal, temperature and humidity external)

Software
LogView / LogView Professional Software to program, analyze data and report generation
LogView Lite: free of charge viewer für LogView data files

Accessories
PC data cable (RS-232C or USB)
External sth2 climate sensor
Cable for external sth2 climate sensor, 2m

Services
Basic test, electrical test of the device, battery replacement and acceleration sensor adjustment with factory certification (3 point)
Certificate of Calibration for external sth2 climate sensor

CE