MONI LOG®

EnDaL smart
MADE IN GERMANY

COMPACT DATA LOGGER MONITORS LARGE TRANSPORTS

- · Extremely robust and compact transport data logger

- · Monitors compliance with transport specifications

- · Registers all mechanical shock events and stores the 500 largest with signal progress

- · Measures direction, strength, time, duration, minimum and maximum of the effect

- · Records GPS coordinates, temperature, air humidity and air pressure

- · Indicates limit value overruns with alarm LED

- · Integrated inclination sensor for the detection of tipping and swinging operations

- · Intuitive operation, extremely long and independent operating time

- · Easy to configure and evaluate with license-free software

- · Tamper-proof with multi-level password protection

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EnDaL smart

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The MONI LOG® EnDaL smart is a small, easy-to-use and versatile data logger. It monitors sensitive goods on long transport routes and in critical environments, such as transformers, generators, switchgear or fragile optics, medical or automotive components.

The sensor technology of the data logger measures impact events, temperature, air humidity, air pressure and inclination. The measurement data can be exported to external programs (e.g., Microsoft Excel), displayed and evaluated clearly. All measured values can also be displayed as an immediate overview at a glance.

Via an integrated GPS receiver, the respective location of the transport goods can be located both at critical events as well as at time intervals. Up to 10,000 recorded position records can be thus imported, clearly visualized and evaluated e.g. in Google Earth© or other programs.

Commercially available alkaline or lithium batteries ensure a mains-independent power supply. The minimum energy consumption and a long, maintenance-free operating time make the MONI LOG® EnDaL smart an autonomous measuring device, which also works extremely reliably under adverse environmental conditions.

The license-free software MONI LOG® Analyzer allows easy and intuitive operation of the data logger. A robust housing with an IP67 certification protects the device from dust and splash water.

Technische Daten

Housing:	Aluminium, powder-coated, degree of protection IP 67, weight 0.75 kg (incl. batteries) size 35 x 140 x 100 mm³ surface mounting (3-point screwed connection recommended), magnetic foot mountings optional
Operation and storage conditions:	-20 °C to +70 °C with alkaline batteries, -40 °C to +85 °C with lithium batteries
Data memory / time:	Data receipt for a minimum of 10 years, independent of battery status, 32 MB flash parameter and data storage, date/time as world time UTC independent of power supply supported by the internal battery
Voltage supply (internal):	2 batteries type C or R14 replaceable. Alkaline batteries (2 x 1.5 V; 8,000 mAh) / lithium batteries (2 x 3.6 V; 8,500 mAh) At least 1 year operating time (with synchronization interval of 10 min, all options active)
Operating elements:	1 green active LED, 1 red alarm LED, 1 red-green battery LED 1 on/off key (password-protected), 1 status key
Operating and indication elements:	USB 2.0 Client (Mini-USB AB) SMA socket for the connection of an external, active antenna 50 Ω 3-30 mA / 3 V (rod or cable antenna)
GPS position sensing:	32 satellite channels (GPS, SBAS, BeiDou, QZSS)
Conformity:	Device certification according to CE, IC, FCC shock evaluation according to DIN EN - 15433-6 RoHS, WEEE
Sensors and data measurement:	**Acceleration / Shock:** ±16 g (3-axes, tolerance ±0,32 g). Digital signal filtering with bandwidth of 1 to 512 Hz, configurable With crossover of a registration threshold, a shock-curve is recorded (2 kHz, 1 s) The 500 highest shock curves are stored (optional: 100 g; 1kHz, tolerances to ±2 g) **Temperature:** -40 °C to +85 °C, tolerance ±0.5 K, 200,000 data records **Relative humidity:** 0% – 100% RH, tolerance ±2% RH (on 20...80% RH), 200,000 data records **Air pressure:** 260 – 1,260 mbar ±2 mbar tolerance, (optional: 10 – 2,000 mbar ±4 mbar tolerance) 200,000 data records **Slope:** Slope calculation from static acceleration. With crossover of a slope threshold, a slope curve is recorded (12 Hz, 8s, tolerance ±3 °). Up to 640 slope curves are stored **GNSS position data:** GPS, SBAS, BeiDou, QZSS, tolerance 100 m, 10,000 data records
Programmable parameters:	Shock registration thresholds X, Y, Z; minimum shock duration, shock strength, limit for slope, temperature, humidity, pressure; LED Alarm indication; Intervals for continuous measurement of GPS, slope, temperature, humidity and pressure password for reading, configuring, On / Off switching, Start / Stop time for the data recording

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