



TRANSPORT
RISK



STORAGE
RISK



OPERATIONAL
RISK



MONILOG®

ShockDisplay curve plus

EXACT PROOF OF
TRANSPORT QUALITY



SHOCK



INCLINATION



VIBRATION



TEMPERATURE



HUMIDITY



PRESSURE



GPS
TRACKING



LIGHT
INCIDENCE

- + Extremely robust shock recorder
- + Registers all mechanical shock events and stores the 100 largest with signal progress
- + Measures direction, strength, time, duration, minimum and maximum of the effect
- + Conformity with all relevant norms and standards for measurement of transport shocks
- + GPS receiver for precise positioning
- + Inclination measurement on board
- + Easy operation, display, alarm function, long operating time
- + Combi-sensor for temperature, air humidity and pressure
- + Tamper-proof, multi-level password protection
- + Powerful analysis software



ShockDisplay curve plus

EXACT PROOF OF TRANSPORT QUALITY

Power transformers, generators, turbines or switchgear have a highly precise manufactured and sensitive inner life. + The extremely robust data logger itself monitors the slightest influences in the special transport of such power generation and distribution systems.

+ Highly sensitive shock sensors record all mechanical shock events and store the 100 largest with the direction, strength, time, duration, mini-mum and maximum of the effect. + Also inclinations, such as the rolling of a ship, are measured. + A complete signal progression is documented for each shock and inclination event.

+ The ShockDisplay curve plus determines the exact position via an integrated GPS receiver. + With an external sensor, further data such

as temperature, relative humidity and absolute air pressure can be recorded in parallel – important for transport under protective gas or for temperature-sensitive and moisture-sensitive transport goods.

+ The powerful SYCUR analysis software is included. + Tampering is excluded by means of a multi-level password protection, internal memory support, checksums and logging of all processes relevant for the measurement data acquisition.

+ With the device, the causes of transport damage can be precisely determined over very long periods of time. + The ShockDisplay curve plus meets all standards and guidelines for shock measurement and transport monitoring.



MONILOG® ShockDisplay curve plus



www.monilog.com/products



Technical data of MONILOC® ShockDisplay curve plus

Shock measurement: 100 shock events with the largest amplitude, three-dimensional, also stored as signal characteristic with 1.024 ms duration at 2 kHz sampling rate, measurement range 5, 10, 20 or 50 g, Accuracy \pm (2% measuring range and 5% measured value) as well as special versions, frequency range 1 ... 512 Hz (3 dB, digital frequency filter, Bessel 4th order), minimum shock duration recording level adjustable for each shock direction.

Inclination measurement: -1 g to +1 g corresponds to -90° to +90° inclination angle, additionally 64 acceleration curves in 3 spatial axes, dynamic range from 0 to 1 Hz, measuring interval adjustable in minutes, recording duration up to 16.000 measuring intervals, self-calibrating in relation to the earth axis

Temperature, humidity, pressure measurement: Factory-calibrated combination sensor
Temperature -40 to +85°C, 0,1 K resolution, \pm 1K accuracy, air humidity 0,2 to 100% RH, 0,1% RH resolution, accuracy \pm 3% RH (20 - 80%RH), \pm 5%RH (0 - 100%RH), pressure 260 - 1260 mbar, 1 mbar resolution, accuracy \pm 1 mbar (T=25°C), \pm 2 mbar (0°C to + 80°C)

Display and operating elements: illuminated display and four function buttons, multilingual and password-protected menu navigation

GPS receiver: integrated, 22 channels

Connections: USB 1.1 and RS-232 for linking to a PC for configuration and evaluation
SMA socket for connection of an external active antenna 50 Ω (3 to 30 mA, 3 V, rod or cable antenna)

Housing: Painted aluminium, protection degree IP65 (special versions for increased requirements)
Weight 1,1 kg with batteries, dimensions 218x100x44 mm

Operation and storage conditions: -20°C to +75°C with alkaline batteries, -40°C to +80°C with lithium batteries, -20°C to +65°C with accumulators, max. 98% relative humidity, non-condensing, special versions for increased requirements

Power supply: 2 Alkaline batteries of size D (R20), NiMH, Li (on request) or connection of external batteries
with 2 to 10 V possible, operating time up to 6000 h with alkaline batteries

Fix parameters: Measurement ranges 5, 10, 20 and 50 g (special versions on request), filter characteristic of the digital frequency filter up to 512 Hz

Programmable parameters: recording level from 5% of the measuring range end value, min. event duration 1 ms, alarm thresholds for shock amplitude, recording level to inclination measurement, password and on/off protection, time, language DE, EN, FR

Software: for WIN Vista/7/8/10 operating systems, graphic and tabular signal analysis with export functions, frequency analysis to EN 13011, device parametrisation, display of the device's status data and active periods, help function, multilingual DE, EN, FR

Conformity: Device approval according to CE
shock evaluation according to DIN EN 15433-6, RoHS, WEEE
Frequency analysis according to DIN EN 13011
use according to IEEE C 57:150-2012

WHAT ARE YOU LOGGING FOR?

MONILOG[®] Risk Loggers measure, signal and document the external influences that threaten the value and functional capability of your damageable items.

We offer the ideal product design, software and sensor system for each and every customer requirement:



SHOCK



INCLINATION



VIBRATION



TEMPERATURE



HUMIDITY



PRESSURE



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LIGHT
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Where are your freight items located? Which levels of stress are and have the items been exposed to?

Are the ambient conditions correct for your stored items? Were they and will they remain stable?

Do mechanical factors put operation of your offshore plant at risk? When do you, as the operator, need to intervene?



Which device maps your particular risk profile? Our product finder provides the answer and sets the course for specific modifications or for new developments. [Productfinder online: www.monilog.com/productfinder](http://www.monilog.com/productfinder)