RISK LOGGER
for monitoring risk situations.

MONILOG®
RISK LOGGER



TRANSPORT RISK

STORAGE RISK

OPERATIONAL RISK

MONILOG®

Offshore alarm system

ShockDisplay curve plus

RUGGED SHOCK MONITORING FOR PLATFORMS

SHOCK · INCLINATION · VIBRATION · TEMPERATURE
HUMIDITY · PRESSURE · GPS TRACKING · LIGHT INCIDENCE

- *Registers mechanical influences during the installation and operation of offshore facilities*
- *Measures and analyses directions, strength, time and signal progressions of shock and vibration loads*
- *Highly sensitive and long term stable acceleration sensors*
- *Alarm and operating signalling contacts for the integration of the system in the control technology*
- *Combi-sensor for temperature, air humidity and pressure*
- *Robust and reliable even under extreme climatic conditions*
- *Easy operation, display, alarm function, long operating time*
- *Tamper-proof, multi-level password protection*
- *Internal batteries for automatic function maintenance in the event of power failure*
- *Powerful analysis software*

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Offshore alarm system *ShockDisplay curve plus*

RUGGED SHOCK MONITORING FOR PLATFORMS

Cold weather, storms, high waves, incoming and outgoing vessels are a great burden on the platforms and the electrical equipment of offshore wind parks. ✪ The transformer substation as the centrepiece of the wind park determines the efficiency and reliability of the entire system. ✪ To prevent damage, shocks, vibrations, humidity and temperature must be monitored continuously. ✪ The ***MONILOG® Offshore Alarm System*** is specifically designed for these tasks. ✪ For this purpose, the extremely robust data logger ***ShockDisplay curve plus*** is used. ✪ Its sensitive sensors monitor humidity and temperature and register real-time mechanical effects with time, duration, direction and strength with minimum and maximum values. ✪ The minimum shock duration is configurable and the registration and alarm thresholds can be set separately for each of the 3 spatial axes. ✪ The number of shocks and other extraordinary loads can be read directly on the data logger. ✪ In the case of limit value overrun, the measured values are transmitted to the control system of the wind park via alarm contacts and operating signalling contacts or life contacts (protection class III). ✪ The system is permanently installed and network-connected. ✪ Internal batteries guarantee the functions in the event of a power failure.

All stored values are retained for many years. ✪ The ***Offshore alarm system*** enables a safe operation sequence through a permanent monitoring and well-processed measurement data, both in the installation and operating phases of transformer substations and in the case of a fault or in the event of a limit value overrun, e.g. by switching off individual components. ✪ The electronics housed in stainless steel housings are installed at the junctions and shock-sensitive electrical equipment of the transformer substation platform. ✪ The measurement data show how a shock can spread from a specific location on the offshore platform and can influence the equipment of the system. ✪ With only 4 keys, the data logger is very easy to use. ✪ A USB interface allows fine configuration and data transfer to a PC or laptop. ✪ The measurement data are exactly reproducible, since every activity relevant for the measured value acquisition is registered. ✪ Tampering of the data logger is excluded with a password protection, an internal memory support, checksums and a log of all transactions. ✪ The convenient SYCUR software for preparing and analysing the data is included in the supply.

MONILOG® ShockDisplay curve plus

VIEW 360°

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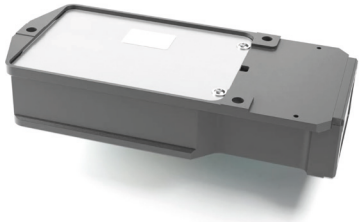

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Technical data of MONILOG® Offshore alarm system

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 ± (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 and 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 -40 to +85°C, resolution 0,1 K, Accuracy ± 1 K, 0,2 – 100% RH, resolution 0,1% RH, accuracy ± 3% RH (20 to 80% RH), ± 5% RH (0 to 100% RH), 260 to 1.260 mbar, resolution 1 mbar, Accuracy ± 1 mbar (T = 25°C), ± 2 mbar (0°C to + 80°C)
Display and operating elements:	illuminated display and four function keys, multilingual (DE, EN, FR), password-protected menu
Interfaces:	USB 1.1 and RS-232 to link the device to a PC for configuration and data evaluation
Housing:	Lockable stainless steel casing, degree of protection IP65, weight 11 kg, dimensions 300x300 x190 mm
Operation and storage conditions:	-20 to +40°C, max. 95% relative humidity, non-condensing, special versions for increased requirements
Connection requirements:	Voltage supply: 90 – 250 V AC or 120 – 250 V DC, 100 mA, 47 ... 63 Hz, fuse T 1A L 250 V connection to N and L polarity-independent Add. consumer: maximum permissible continuous current 8 A (loop through) Fusing: 6 A l.v.h.b.c. supply line fuse-protection required Relay contacts: Coil contact insulation voltage 2,5 kVrms. Switching capacities max. 300 VDC, 250 V AC, 6 A max. AC current rating. Connection cable: 0,25mm² to 4 mm²
Power supply internal:	2 cells of construction design D (R 20) of type alkaline or lithium, operating time up to 6.000 h
Fix parameters:	Measurement ranges 5, 10, 20, 50 g (special versions on request), filter characteristic of the digital frequency filter up to 512 Hz
Programmable parameters:	Registration threshold from 5% of the measuring-range end value, min. period of event from 1ms, alarm threshold for shock amplitude, registration threshold for inclination measurement, password, switch on/off protection, time
Software:	For operating systems Windows Vista/7/8/10, signal analysis graphic and tabular with export functions, frequency analysis according to DIN EN 13011, parametrization of the devices, indication of the status data and active time periods of the device, help function, multilingual (DE, EN, FR)
Conformity:	Device certification according to CE, UKCA, RoHS, WEEE Shock evaluation according to DIN EN 15433-6 Frequency analysis according to DIN EN 13011 Use according to IEEE C 57.150-2012

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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:

IMPACTS

INCLINATION

VIBRATION

TEMPERATURE

MOISTURE

PRESSURE

GPS TRACKING

LIGHT INCIDENCE

TRANSPORT RISK

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

STORAGE RISK

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

OPERATIONAL RISK

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. Product finder online: www.monilog.com/productfinder

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