Batteries and Accessories

▰ BatLogg® Battery Monitoring System for CPS and USV Systems

BAT-LOGG Sensor

BAT-LOGG Interface

Mobil Code

◢ BatLogg® Battery Monitoring System for CPS and USV Systems

◢ Schrack-Info

BAT-LOGG® is an automated monitoring system for batteries which monitors and logs the state of every single battery block in a system at short intervals. BAT-LOGG® therefore not only increases the safety and reliability of the system. It also reduces the maintenance effort and all associated costs. BAT-LOGG® has been specifically designed for easy installation in small rooms with narrow space. Thanks to its smart and minimalistic design it is also highly cost-efficient.

◢ Operating Principle

BAT-LOGG® sensor modules take care of voltage and temperature measurements at every single battery. Each module is simply connected to the poles of its battery and affixed to its container, so that reliably measuring the temperature is possible.

The power line is used to transfer the measurement data to a BAT-LOGG® interface module. This module evaluates all measured values and generates an error messages if even one of them lies outside the pre-defined limits. The occurrence of an error is also indicated via a floating relay contact (collective fault).

The BAT-LOGG firmware in the control unit of the CPS system retrieves all measurements and error messages from the BAT-LOGG® Interface via serial interface and stores them (firmware update required). All messages and data of every single battery, including the current measurements, reports and long-term data log can be inspected on the LC display and on the web interface of the system.

◢ The BAT-LOGG® Benefits

The automatic measurements of the quickly and economically installed BAT-LOGG® system saves valuable work time during regular inspection on site and guarantees complete and traceable measurement data over the entire operating life of each battery.

Additional benefits: Fewer on-site activities, no more manual routine measurements, low time requirements for travel and maintenance, reduced work risk (e.g. electric shock), favourable end customer pricing.

◢ Future-Proof with BAT-LOGG®

Requirements of the DIN EN 50171 standard (as per July 2013 draft standard)

- **6.11.3 b)** Error message if the voltage of a battery deviates by more than a previously set value from the average voltage of all other batteries.
- **6.11.3 c)** Remedy of this error within 2 weeks
- **6.11.3 f)** Logging of the voltage measurement values every 5 minutes during duration test
- **6.11.4** Monitoring and documentation of the battery temperature.

Batteries and Accessories

◼ BatLogg® Battery Monitoring System for CPS and USV Systems

◼ BAT-LOGG® Measurement Data Display

◼ Schematic Wiring Diagram

Schrack
TECHNIK
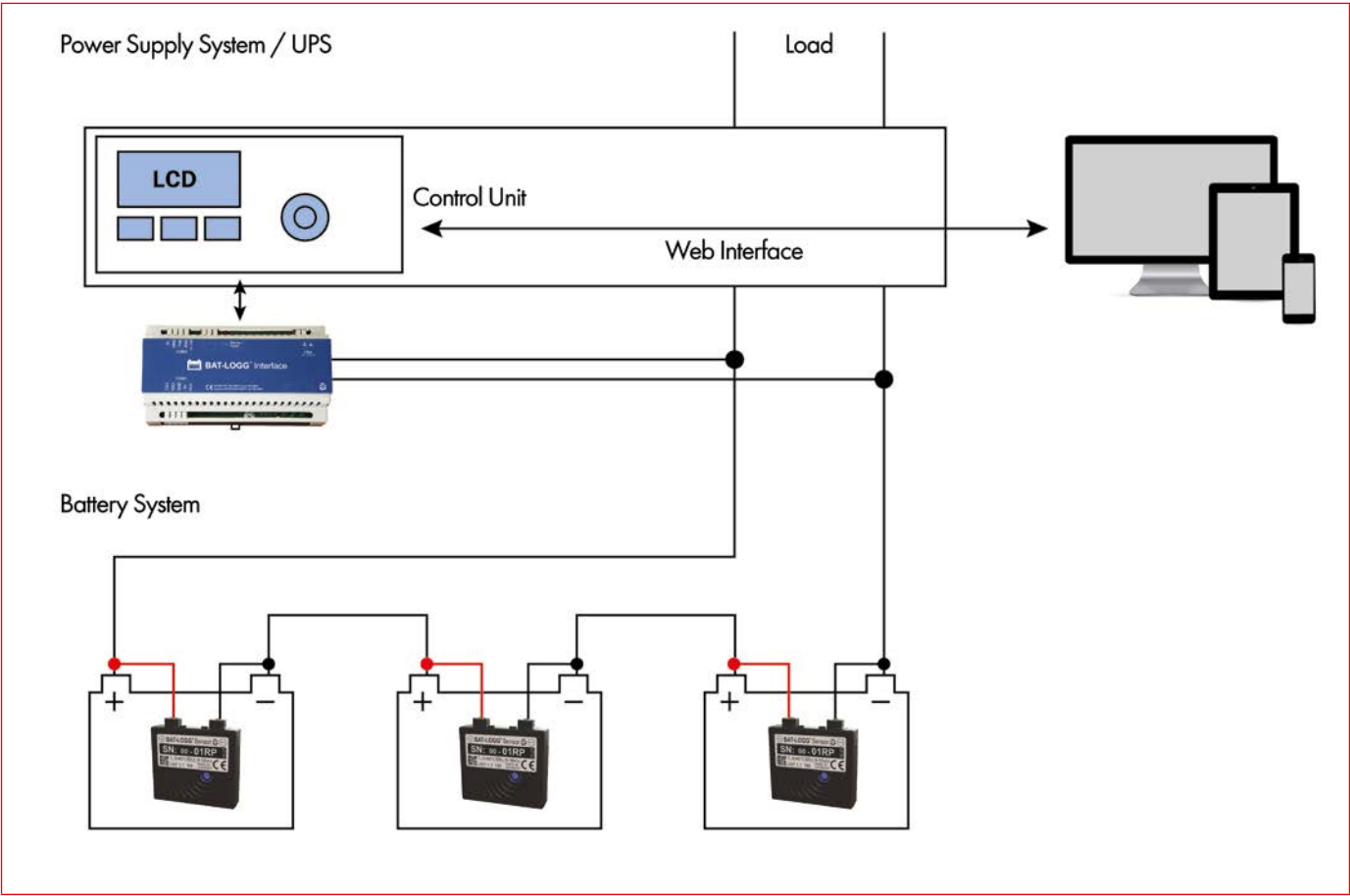
BatLogg® Battery Monitoring System for CPS and USV Systems

BAT-LOGG® System Properties

Monitored battery type	Lead acid batteries with 12 V block voltage (nominal)
Max. system voltage	800 V DC
Voltage measurement range / accuracy	9.0 V...16.0 V (±0.1 V)
Temperature measurement range / accuracy	0°C...60°C (±3°C)
Supported number of sensors	Max. 160 BAT-LOGG® sensor modules
Measured values	Battery voltage Battery temperature [1] End of discharge voltage [2]
Measurement interval	Approx. every 15-20 seconds
Measurement data logging [3]	Minimum and maximum voltage daily, minimum and maximum temperature of the last 24 hours and status of each battery During every test: current measurement values before and after the test and end of discharge voltage of each battery
Monitoring functions	Display of all measurement values [3] Display of the daily data log and of test related data [3] Notification in case of - Error during measurement data transfer or communication error - Over/undervoltage at a single battery - Deviation of a battery from the average voltage exceeding a defined threshold - Over/undertemperature at a single battery - Deviation of a battery from the average temperature exceeding a defined threshold
Additional features	Operating hour counter for each battery Histogram analysis of operating conditions for each battery [4]

Notes:

[1] Measured on the battery outside.

[2] Lowest voltage measured in a discharge cycle.

[3] Only in combination with a CPS emergency lighting system of type midiControl plus or multiControl plus with firmware version 1.7.9 or higher. Full functional range in the system's web interface; some features not available in the LCD menu for technical reasons.

[4] Count of operating hours during which voltage and temperature were within certain ranges (six voltage and temperature ranges each). These values allow the analysis of the thermal conditions and of the charging/discharging or each battery.

BAT-LOGG® Sensor

Operating voltage	12 V nominal on lead acid battery
LED indicator	Measuring activity + battery voltage [5]
Dimensions: (WxHxD mm)	54x54x15 mm
Protection type according to DIN EN 60529	IP40
Appliance class according to DIN EN 61140	II
Enclosure material flammability according to UL94	V-0
Connection / mounting	Connection to battery poles with 6 mm Faston tab connectors [6] Affixed on battery enclosure [7]
Connection cable	Double insulated, short-circuit proof cable, length approx. 28 cm [8]
Average current consumption	< 0.2 mA (1.76 Ah/year)
Requirements for installation site:	Contamination level 1 or 2 according to EN 50178

Notes:

[5] LED indicates measurement in progress and transfer of measurement data. Flashing twice: Battery voltage >10.8 V; flashing once: Battery voltage ≤10.8 V

[6] Insert terminals M5/6/8 for connection to the battery poles included.

[7] Double side adhesive tape included.

[8] Cable with crimped-on Faston tab connector, fixed to the module.

BAT-LOGG® Interface

Operating voltage:	216 V DC or 230 V AC (nominal)
Supported number of batteries:	Max. 160 BAT-LOGG® sensor modules
Interfaces:	2 serial communication interfaces for data exchange 1-pole CO for collective fault indication
LED indicators:	Collective fault (red) Communication (green) Incoming measurement data (green) Operation indicator (green)
Dimensions: (WxHxD mm):	157x85x60 mm (DIN rail module, 31 HP)
Requirements for installation site:	Contamination level 1 according to EN 50178 An additional protective cover is required for system voltages > 216 V DC (nominal)

Batteries and Accessories

◢ BatLogg® Battery Monitoring System for CPS and USV Systems

DESCRIPTION	AVAILABLE	ORDER NO.
Block-by-block battery monitoring in new CPS system MidiControl for 18 batteries 17 Ah to 55 Ah, Bat-Logg® Interface integrated in system		NLBTLMD184
Block-by-block battery monitoring in new CPS system Maxi-/MultiControl for 18 batteries 65 Ah to 260 Ah, Bat-Logg® Interface integrated in system, batteries max. 2.5 m distant from battery connection terminal		NLBTLMC181
Block-by-block battery monitoring in new CPS system Maxi-/MultiControl for 18 batteries 65 Ah to 260 Ah, Bat-Logg® Interface in external battery-side enclosure, batteries max. 8 m distant from battery connection terminal		NLBTSMC181
Block-by-block battery monitoring in new CPS system Maxi-/MultiControl for 18 batteries 17 Ah to 60 Ah, Bat-Logg® Interface integrated in system, batteries max. 5 m distant from battery connection terminal		NLBTLMC184
Block-by-block battery monitoring in new CPS system Maxi-/MultiControl for 18 batteries 17 Ah to 60 Ah, Bat-Logg® Interface in external battery-side enclosure, batteries max. 8 m distant from battery connection terminal		NLBTSMC184
Replacement sensor for block-by-block battery monitoring Bat-Logg® for replacement battery with NLBT.MC181		NLBTLSENS1
Replacement sensor for block-by-block battery monitoring Bat-Logg® for replacement battery with NLBT.M.184		NLBTLSENS4