Galaxis GmbH

UPS MASTER GUARD (UPS MG)

Battery module C1 for 7-12Ah batteries

Battery module C5/ C7 for 24 -300 Ah batteries

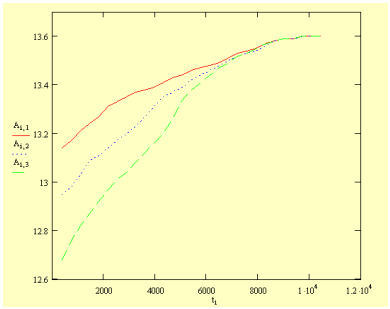
The BLMG WEBMANAGER manages up to 190 batteries, a UPS and 8 additional environmental sensors simultaneously

Description

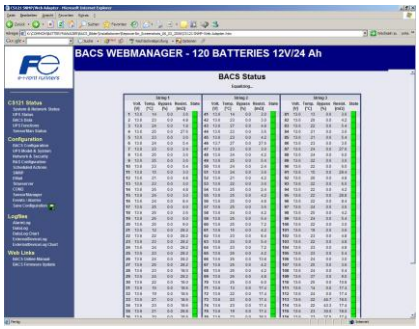
BLMG® (Pat.Pending) battery monitoring and care system is the only device on the market to date that checks periodically that batteries have the correct internal resistance and simultaneously and constantly leads the accumulators into their optimal range of operation using equalizing charges. The constant monitoring and equalizing charges guarantee the availability of the batteries at all times – making the so called Achilles Heel of UPS systems (or any other battery powered device) a thing of the past !

The auto-adaptive regulating mechanism („Equalizing“) has the task of distributing the charging current from the charging unit / UPS evenly amongst all accumulators. The BLMG WEBMANAGER (central control unit) collects the voltage data of each individual battery from the attached battery modules (C1, C5, C7) via a bus communications system and constantly calculates the optimal charging voltage level for each individual battery in relation to the actual overall voltage.

Equalizing: An accumulator with higher impedance (internal resistance) tries to raise its voltage under the actual charging current. As soon as the targeted voltage value is reached, the battery module activates the bypass of the charging current to the battery. This serves to keep the block voltage constant. The bypassed portion of the current can then be made available for the other blocks so that they can obtain the same voltage as the blocks that are not as good. Using the optimized charging of the BLMG-Equalizing-Principlea 20% increase in overall capacity is obtained because for the first time, ALL of the batteries in combination are in fact, fully charged. Furthermore, the overcharging of batteries (gasses) is prevented and with that as well, drying out and/or total discharging is also avoided. Due to the charging care of the accumulators by BLMG as described above, much longer battery life and greater reliability are achieved. If the auto-adaptive regulating mechanism is for some reason unable to successfully reach optimal capacity for one or more of the accumulators or an accumulator has very high impedance or a short circuit is detected, then the defective battery can be exchanged before it has a negative influence on its neighboring batteries. The compulsory charging difference resulting from the battery exchange will be fully balanced out by the BLMG-Equalizing-Principle.Theprecautionary replacement of complete battery systems is no longer necessary; merely the defective blocks must be exchanged.



BLMG loading curves for 3 different charged batteries. BLMG takes care that all of the batteries reach homogenous voltage capacities after a short time.



BLMG web browser status-screen with impedance, temperature, voltage and bypass of 120 24 Ah batteries.

Technical data and dimension

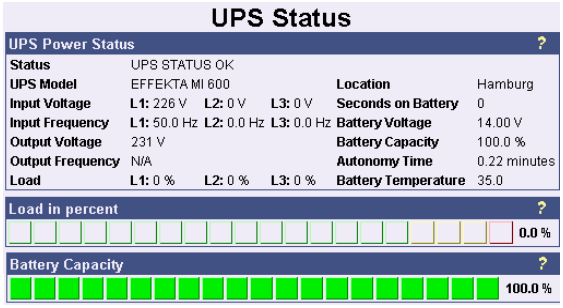
	BLMG™ WEBMANAGER
Processor and memory	32-Bit RISC-Processor, 4MB Flash, 8MB RAM 128MB CompactFlash Card (or higher)
Display	double spaced display with 16 characters per line
Operating controls	1 push button (reset)
Interfaces	RJ12, battery bus-interface, RJ45, 10/100Mbit Ethernet interface,
Case	Aluminium, RAL 7035 (Light grey)
Dimensions	126 x 40 x 70mm (w. x h. x d.)
Weight	240g
Temperature Range	0 - 45°C, max. humidity 90%, non condensing

Description

Each battery module is equipped with instruments for taking precise measurements of battery internal resistance in order to obtain an exact analysis of each battery block. The battery module sends out an alarm if battery internal resistance rises due to corrosive sulfate deposits. The alarm values can be adjusted to match the type of battery. Using this innovative measuring principle, users are warned in advanced about weak batteries long before it becomes too late. For example, if sulfation is the cause of increased internal resistance, the user will be informed and can for example enact a discharging cycle to reduce the corrosion. In addition to *internal resistance*, the following values are also monitored and evaluated: *voltage*, *temperature*, *bypass activities* and number of *discharging* cycles. Alarms made for the individual threshold values of each measurement are sent when critical conditions are detected.
All of the data and information coming from the battery modules will be processed and saved by the central control unit, the BLMG WEBMANAGER. Each BLMG WEBMANAGER can be used to administrate up to 192 battery modules. The battery modules can be grouped in up to 10 parallel rows. In the display, the actual status of the accumulators (in the UPS for example) is shown. The BLMG WEBMANAGER is equipped with 128 MB (expandable) internal memory that can record the data for time, voltage, internal resistance, temperature and bypass values for all of the blocks for approximately up to three years.
Alarms of the batteries or UPS are written into the log file with the date and time of the occurrence and are shown in the display as well. A sounding buzzer warns users in the local vicinity of the alarm. The BLMG WEBMANAGER is equipped with a real-time clock for providing all data and alarms with a time stamp and in addition, the system time is automatically synchronized with a network time server. The BLMG WEBMANAGER has an easy to use web browser interface for comfortably making configurations and displaying all system values. Using the network connection or and optional modem, alarms can be automatically relayed to other parties and computers via Email, SMS, SNMP or RCCMD.

The use of an insulated bus system makes the installation of the BLMG-System simple and fast. During the assembly, the battery modules are fastened to the batteries with a special attachment strap and are connected to the battery poles. After the battery modules are connecting to the bus system, the individual modules are given identifying addresses and the system is ready for operation.

BLMG installation with a total of 540 batteries (6 V 150 Ah)



UPS status screen in the BLMG WEBMANAGER

BLMG battery analysis for 4 accumulators in the BLMG VIEWER. Each change in impedance, temperature, voltage and bypass is recorded every 30 seconds.

Technical Data

for the C1, C5 and C7 BLMG Modules for 12Volt batteries

- Battery modules for individual block monitoring and auto-adaptive regulating of the charging current („Equalizing“) for an optimized utilization of battery capacity and the lengthening of battery life for 7 - 250Ah lead batteries (low maintenance and maintenance free)

- Active internal resistance measurement, voltage and temperature measurement, charging cycle counter for each accumulator and data archiving for up to 3 years

- Easy and simple bus system installation ideally suited for retrofitting

- Monitor up to 190 single blocks in 1 – 10 parallel rows per BLMG WEBMANAGER

- BLMG WEBMANAGER with network interface and alarm notification over the LC-Display, Email, SNMP, RCCMD and alarm contact

- Connection possibilities for further sensors (temperature, humidity, electricity, hydrogen levels)

- The only system on the market that can monitor practically every type of UPS in addition to the battery blocks. With full support for the native protocols of almost all UPS devices, the BLMG WEBMANAGER can monitor and control the UPS at the same time. Completely replaces a UPS SNMP adapter.

Options : Analog Modems for integration into the RASCONTROL Telephone Assistance System, SMG Network Management Software