UNINTERRUPTIBLE POWER SUPPLY

## PBAT

### **Intelligent Battery Monitoring System**

- On Line 24/7/365 continuous monitoring
- Real-time alarms
- Registration and analysis of work parameters
- Balancing work parameters
- APPLICATIONS
  - UPS and Data Center
  - BTS telecommunications
- CHARACTERISTICS

The biggest problem associated with the operation of batteries is to guarantee their full availability and reliability. To achieve this, it is required to perform periodic load tests of such a system and time-consuming handling related to measurements of individual components. In the case of a system consisting of a large number of batteries, the service is time-consuming, costly and at the same time can interfere with the normal operation of the system. What's more, even properly performed operation and service does not guarantee the avoidance of failure in the event of a short circuit of one or several links.

To eliminate the risk of battery breakdown, use the PBAT Battery Monitoring System, which performs real-time measurements of battery parameters such as:

- voltage,
- charging and discharging current,
- internal resistance,
- internal temperature on the "-" battery clamp,
- state of charge (SOC),
- current lifetime (SOH).



Measurements are made independently on each single battery, and the sensor placed on it signals the battery status. This is especially useful in the



case of a large number of batteries, where we can very quickly assess the condition of the system and at the same time locate any defective links.



#### Central Battery Systems

Energy storage



The system can also monitor the currents in individual battery chains, and a special sensor is also a visual signaling device informing about the efficiency of a given chain.

The built-in MODBUS TCP protocol enables direct integration with the BMS monitoring system.

By means of the Ethernet LAN connection, in the window of any browser it is possible to remotely monitor and read the work parameters, and visualize them for each cell.



It is also possible to display historical data and trends of changes for individual parameters, which gives a full, current picture of the system status and allows forecasting the expected life time of individual batteries.

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## **Intelligent Battery Monitoring System**

# PBAT

Туре	РВ	AT
Module	PBAT-Gate	
CPU / Operating system	ARM Cortex A8 800MHz / built-in Linux	
RAM / operational memory	512 MB / 512 MB Flash + 8 GB TF memory card	
Screen	LCD	
Power supply: voltage / power	18 ÷ 36 VDC / <5 W	
Communication	4x RS485, 2x Ethernet (10/100M)	
Temperature / humidity range	-15°C ÷ 55°C / 10% ÷ 95% without condensation	
Dimensions WxDxH / weight	90 mm x 94 mm x 68 mm / 650 g	
Module	PBAT-600	
Screen	A colored chain status indicator	
Power supply: voltage / power	12 ÷ 36 VDC / 1 W	
Range of measured voltages	20 ÷ 800 VDC	
Range of measured currents	-1000 ÷ 1000 ADC (Hall Sensor)	
Communication	2x RJ11, connector Hall Sensor	
Temperature / humidity range	-15 ÷ 55°C / 10 ÷ 95% without condensation	
Dimensions WxDxH / weight	85 mm x 104,5 mm x 39 mm / 65 g	
Module	PBAT61-02	PBAT61-12
Screen	Color battery status indicator	
Nominal voltage / power range	2 VDC / 1,6 ÷ 2,6 VDC	12 VDC / 7,5 ÷ 15,6 VDC
Power of work / standby	170 mW / 12 mW	120 mW / 10 mW
Measurement range of internal resist.	0,1 ÷ 100 mΩ	
Temperature measurement range	-20°C ÷ 85°C	
Communication	2x RJ11, voltage and temperature probe	
Dimensions WxDxH / weight	65 mm x 65 mm x 29 mm / 50 g	

The publication lists the parameters of standard models. Due to continuous improvement of the product, we reserve the right to change parameters without prior information.

