



victron energy

B L U E P O W E R

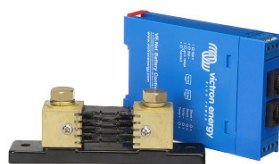
Precision Battery Monitoring



BMV 600



BMV 501



VE.Net Battery Controller

Precision Battery Monitoring

Precision monitoring

The essential function of a battery monitor is to calculate ampere-hours consumed and the state of charge of a battery. Ampere-hours consumed is calculated by integrating the current flowing in or out of the battery. In case of a constant current, this integration is equivalent to current multiplied by time. A discharge current of 10A during 2 hours, for example, amounts to 20Ah consumed. All our battery monitors are based on a powerful microprocessor, programmed with the algorithms needed for precision monitoring.

Standard information and alarms

- Battery voltage (V)
- Battery charge/discharge current (A)
- Ampere-hours consumed (Ah)
- State of charge (%)
- Time to go at the current rate of discharge
- Visual and audible alarm: over- and under voltage, and/or battery discharged

BMV 600: low cost ultra high resolution monitor

- Highest resolution: 10mA (0,01A) with 500A shunt.
- Lowest current consumption: 1mA.
- Easiest to wire: the BMV 601 comes with shunt, 10 meter RJ 12 UTP cable and 2 meter battery cable with fuse. No other components needed.
- Easiest to install: separate front bezel for square or round appearance; ring for rear mounting and screws for front mounting.

VE.Net Battery Controller: any number of batteries

- One VE.Net panel will connect to any number of battery controllers.
- Comes with 500A/50mV shunt and can be programmed for any other shunt.
- With use, abuse and data memory.
- Temperature sensor and connection kit included

BMV 501: data memory and computer link

- Includes an abuse counter and data memory.
- Optional Data Link allows readout and storing charge/discharge curves on a computer.
- Optional temperature sensor.

Learn more about batteries and battery charging

To learn more about batteries and charging batteries, please refer to our book 'Power Unlimited'. (Available free of charge from Victron Energy and downloadable from www.victronenergy.com).

Specifications

Battery Monitor	BMV 501	BMV 600	BMV600H	VE.Net Battery Controller	VE.Net Battery Controller 48V
Power supply voltage range	9 – 35 VDC	9 - 95 VDC	30 – 150 VDC	9 - 35 VDC	9 – 60 VDC
Current draw, back light off	6 mA	1 mA	1 mA	10 mA at 12VDC	3mA at 48VDC
Input voltage range (V DC)	9 – 35 VDC	9 - 95 VDC	30 - 150 VDC	9 - 35 VDC	39 – 60 VDC
Battery capacity (Ah)	20 - 2000 Ah	20 - 9999 Ah		20 - 60000 Ah	
Operating temperature range	-20 +50°C (0 - 120°F)				
RESOLUTION (with 500 A shunt)					
Current	± 0,1 A	± 0,01 A		± 0,1 A	
Voltage	± 0,01 V				
Amp hours	± 0,1 Ah				
State of charge (0 – 100 %)	± 0,1 %				
Time to go	± 1 min				
Temperature (0 - 50°C or 30 - 120°F)	± 1°C (± 1°F)	n. a.		± 1°C (± 1°F)	
Accuracy of current measurement	± 0,3 %				
Accuracy of voltage measurement	± 0,4 %				
Potential free contacts	60V/1A (N/O)				
INSTALLATION AND DIMENSIONS					
Installation	Flush mount	Flush mount		DIN rail	
Front	65 x 65 mm (2.6 x 2.6 inch)	63 mm diameter		22 X 75 mm (0.9 x 2.9 inch)	
Front bezel	n. a.	69 x 69 mm (2.7 x 2.7 inch)		n. a.	
Body diameter	52 mm (2.0 inch)	52mm (2.0 inch)		n. a.	
Body depth	72 mm (2.9 inch)	31mm (1.2 inch)		105 mm (4,1 inch)	
INCLUDED ACCESSORIES					
Shunt	500 A / 50 mV	500 A / 50 mV		500 A / 50 mV	
Cables	See accessories	10 meter 6 core UTP with RJ12 connectors		Supplied with 1 m cables	
Temperature sensor	See accessories	n. a.		Supplied with 3 m cable	

Optional accessories (BMV 501 only)



BMV Data-Link

Every BMV 501 is ready for data connection with an isolated RS-232 interface port. All you need to link to your PC is the Data-Link kit that consists of a communications cable, converter and the Data-Link software. With this facility you can download and process just about any aspect of battery and system performance, including charge/discharge curves.



Connection kit

To ensure that the BMV 501 functions at its optimum, it is essential that installation is carried out with the best materials. The connection kit consists of a multicore cable, in-line fuse cartridges and holders and a pack of cable end terminals. Everything you need for a professional installation.



Temperature sensor

Both the available capacity and the optimal charge voltage depend on temperature. With the temperature sensor battery Temperature can be monitored and temperature will be taken into account by the BMV 501 to calculate the available battery capacity.