

BVR Series

Battery Voltage Recorders

- Lightweight - from 0,5 to 0,6 kg (1.1 to 1.2 lbs)
- Voltage measurement range – up to ± 500 V
- Temperature measurements
- Current measurement using current clamps
- IR communication with external Density Meter
- Easy transfer of measured data to DV-B Win software for further analysis



Description

BVR series of devices contain two models:

BVR11 and **BVR20**.

Both Battery Voltage Recorders are handheld devices intended specifically for measuring string voltage (**BVR11**), single cell voltage (**BVR11** and **BVR 20**), ambient temperature and cell temperature using PT100 temperature indicator (**BVR20**).

BVR series of devices provides an efficient tool for capacity tests of large battery banks, where they serve as an efficient supplement with DV Power BLU series of Battery Load Unit devices.

BVR series of devices can be used for measuring voltage and temperature parameters,

while battery is either in online or offline mode. BVR series of devices records all measured data in its internal memory, with an ability of storing up to 1000 measurements. Measured data is displayed in the form of histograms on the 3.1 inch color display.

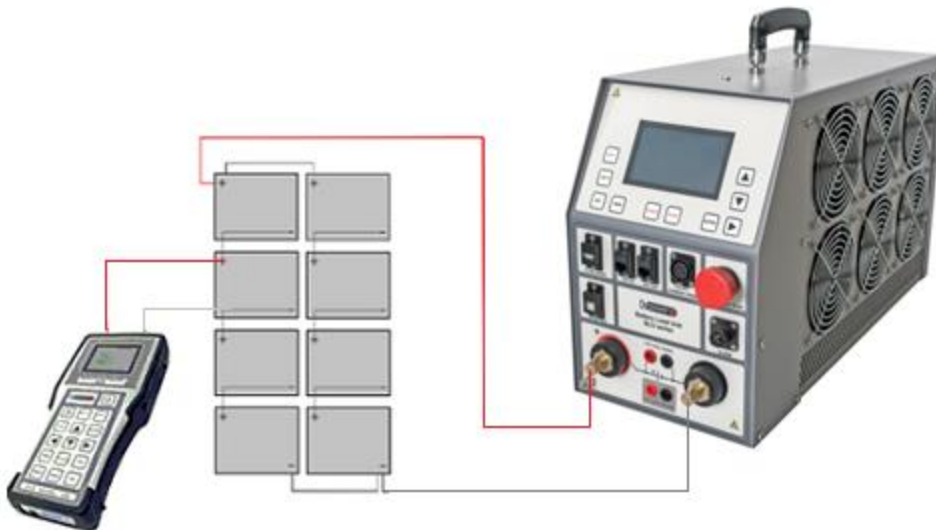
Download of collected data to an external computer is available via USB and Bluetooth communication. Detailed analysis and trending of battery banks and single batteries state of health is enabled by using DV – B Win software application set.

Application

The list of the instrument application includes:

- Efficient supplement to BLU series of Battery Load Units during extensive battery Discharge testing
- Single battery and string voltage measurements for large battery banks
- Ambient temperature measurement
- Current measurement using current clamps
- USB and Bluetooth communication with external computer
- String and battery voltage analysis provided with DV-B Win software application functions

Connecting BVR to a battery



DV-B Win Software

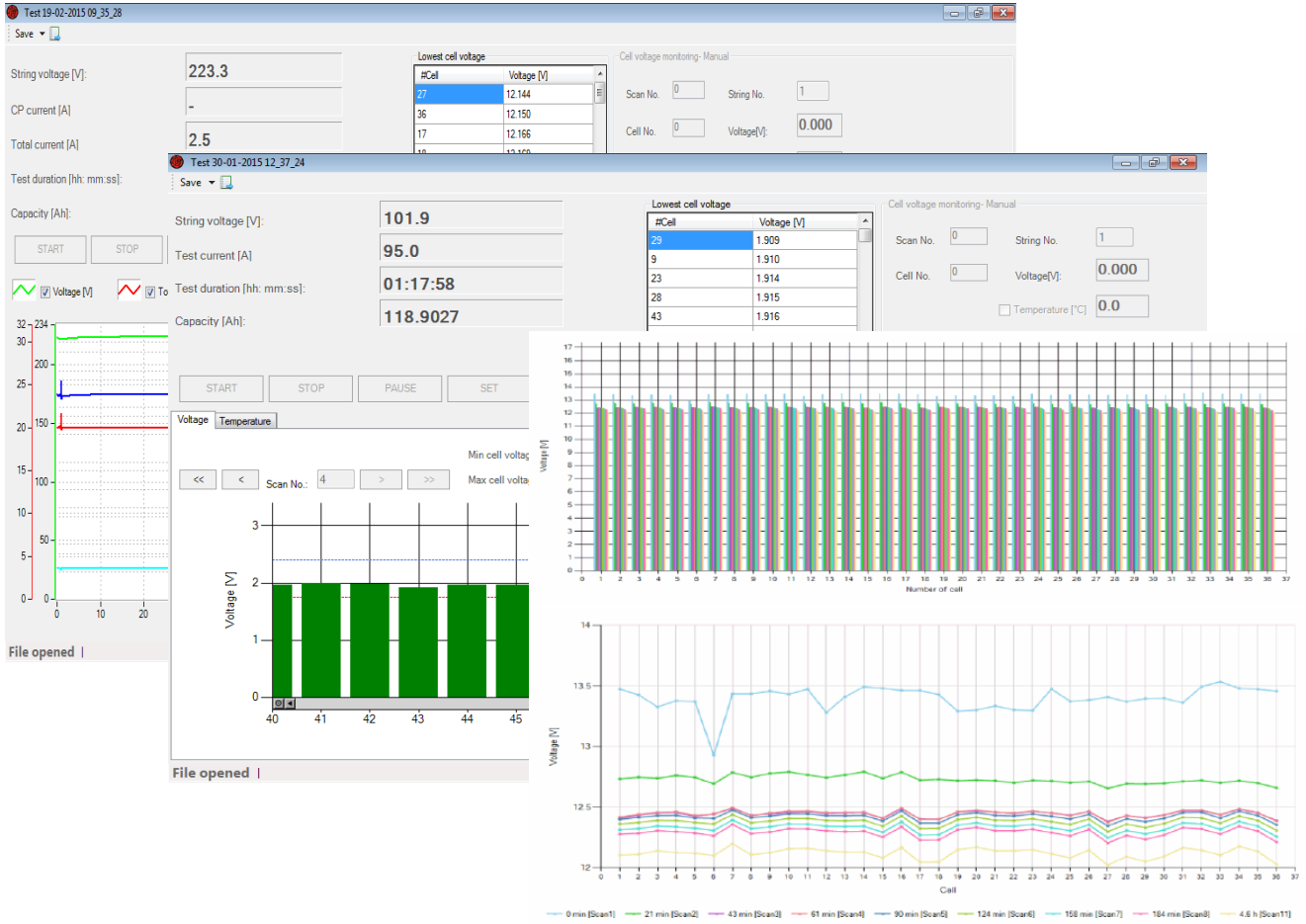
Using DV-B Win software package all results can be presented in several forms. Single battery voltages can be shown in Table and Scan Graph, as well as Line view.

In order to perform detailed comparisons and analysis of measured data, user defined limits for battery, and string voltage as well as temperature, are displayed in the scan graph view along with measured results.

A test report of collected data can be generated and user customized for a comprehensive battery state of health assessment.

Numerical and graphical results may be exported from DV-B Win in selectable formats such as Excel spreadsheet, PDF, Word or Rich Text Format. Additionally, importing other types of data formats (.jpeg, .png, .doc) into standardized DV-B Win report is provided as well.

DV-B Win software provides an alarm notification when detecting cells with voltage levels lower or higher than defined thresholds.



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DV-B Win application functions – String view, Battery Scan view and Line voltage chart

Technical Data

Mains Power Supply

Battery

- Type 1 Cell – 2600 mAh Li-Ion
- Voltage 3,7 V
- Charge time 6 hours

AC Adapter

- Input voltage 90 to 264 V AC, 50/60 Hz
- Output voltage 12 V DC
- Output current 0,5 A

Measurement

- Cell voltage measuring range: 0 – 30 V DC
- String voltage measuring range: 0 – 500 V DC

Measuring range	Typical accuracy	Resolution
±2,35 V DC	± (0,05% rdg + 0,05% FS)	1 mV
±7 V DC	± (0,05% rdg + 0,05% FS)	1 mV
±30 V DC	± (0,05% rdg + 0,05% FS)	1 mV
±500 V DC	± (0,05% rdg + 0,1% FS)	100 mV

Model	Temperature:
BVR11	-10 °C to +55 °C / 14 °F to +131 °F
BVR20	50 °C to +260 °C / -58 °F to +500 °F

- Typical accuracy:
± 30 V DC; ± 500 V DC:
± (0,05% rdg + 0,05% FS)

Display

- Type: TFT LCD 2.8 in
- Viewing Area:
43, 2 mm x 57, 6 mm / 1.8 in x 2.3 in

- Resolution: 320 x 240 pixels

Communication

- USB and Bluetooth: Device to PC connection

Memory

- Internal: 2 GB Micro SD Card

Real time clock

- Precision: ±5 seconds per month
- Calendar: 100 year with leap year detection

Environment conditions

- Temperature:
-10 °C to +45 °C / 14 °F to +113 °F
- Maximum relative humidity 95 % for temperatures up to 31 °C, decreasing linearly to 40 % relative humidity at 55 °C

Dimensions and Weight

Model	Dimensions (L x W x D):
BVR11	223 mm x 98 mm x 46 mm 8.77 in x 3.85 in x 1.81 in
BVR20	253 mm x 116/89/96 mm x 46/36 mm, 10 in x 4.6/3.5/3.8 in x 1.8/1.4 in,

- Weight: 0,5 kg / 1.1 lbs

Warranty

- Three years

Applicable Standards

- Installation/overvoltage: category II
- Pollution: degree 2
- Safety: LVD 2006/95/EC (CE Confirm)
EN61010-1
- EMC: Directive 2004/108/EC (CE Confirm)
Standard EN 61326-1:2006
- CAN/CSA-C22.2 No. 61010-1, 2nd edition,
including Amendment1

All specifications herein are valid at ambient temperature of + 25 °C and recommended accessories. Specifications are subject to change without notice.

Accessories



Voltage sense cables

Current clamp 30/300 A with internal battery supply and extension 5m

PT 100 temperature indikator

Order Info:

Instrument	Article No
Battery Voltage Recorder BVR11	BVR11X-NN-00
Battery Voltage Recorder BVR20	BVR20X-NN-00


Included accessories
DV-B Win software including mini USB cable
Transport bag and carrying belts
Power supply adapter

Recommended	Article No
Sense cables	S2-0122-BPBP
PT100 temperature indicator <i>(for BVR20 model)</i>	TI-000-PT100
Current clamp 30/300 A with internal battery supply and extension 5 m	CACL-0300-08


Optional	Article No
RFID tags 20 pcs <i>(for BVR20 model)</i>	RFIDB-020-00
Bluetooth communication module <i>(for BVR11 model)</i>	BLUET-MOD-00

BVR Series – models

BVR11

	<p>Measured parameters:</p> <p>Voltage, ambient temperature, current measurement using current clamps</p> <p>Measurement range:</p> <p>String Voltage: ± 500 V DC Cell Voltage: ± 30 V DC</p> <p>Data Transfer:</p> <p>Bluetooth and USB to PC</p>
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BVR20

	<p>Parameters Measured:</p> <p>Voltage, cell temperature, Electrolyte density measurement (communicating with external density meter), current measurement using current clamps.</p> <p>Measurement range:</p> <p>Cell Voltage: $\pm 2,35$ V DC ± 7 V DC ± 30 V DC</p> <p>Data Transfer:</p> <p>USB to PC</p>
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*The above cables are also available in several lengths and terminations. Please contact DV Power for more information

IBEKO Power AB
Stockholmsvägen 18
181 50 Lidingö, Sweden

Contact
Phone: +46 70 0925 000
E-mail: sales@dv-power.com