

# Battery Load Unit BLU360V

- Lightweight – only 19,7 kg / 43 lbs
- Instrument max discharge power – up to 29 kW
- Voltage measurement range: 6 – 480 V DC
- Current measurement range using Current Clamp 0-1000 A DC
- Measurement resolution – current 0.1 A, voltage 0.1 V
- Discharge current step – up to 250 A (in 0.1 A steps)
- Parallel operation applied for higher discharge current needed
- Adjustable alarm and shutdown parameters to prevent excessive discharge.
- Detailed test analysis using DV-Win software



## Powerful and Portable Capacity Tester

### Description

It is known that the leading indicator of the battery health is its capacity. The BLU360V is a Battery Load Unit for measuring battery capacity, based on a state-of-the-art technology, using the most advanced power electronics solutions with coolers and fans integrated into device. Discharging can be performed according to constant current, constant power, constant resistance and selected load profile. The BLU360V provides the discharge current with the values of up to 250 A, for 6 V – 480 V battery systems. Overview of the maximal currents for several battery voltage ranges with the minimum achievable cell voltage of 1,75V is shown in the table below.

Battery voltage	6 V		12 V		24 V		48 V		60 V		110/120 V		220/240 V		480V	
Min-Max voltage (V)	5.25	7.05	10.5	14.1	21.0	28.2	42.0	56.4	52.5	70.5	91.0	144	182.0	288	350	480
Maximum current (A)	80		150		250		250		200		150		100		50	

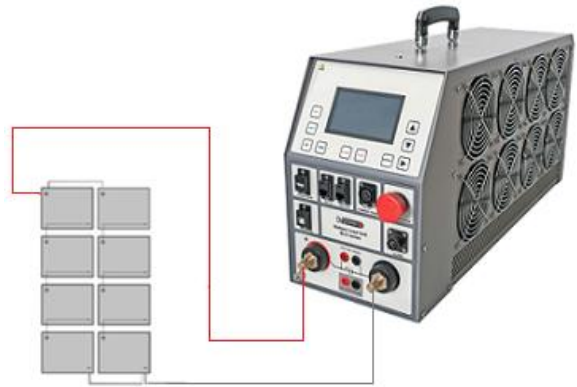
## Applications

- Measuring the capacity and full voltage of batteries that serve as a backup power supply
- Constant I /Constant P/ Constant R as well as (I, P, R) Load Profile operation modes.
- Parallel operation applied if higher discharge current required.
- Current probe mode which can be used in case the battery has to remain connected to the load.
- Adjustable alarm and shutdown parameters for preventing excessive discharge.

## Connecting BLU360V to battery

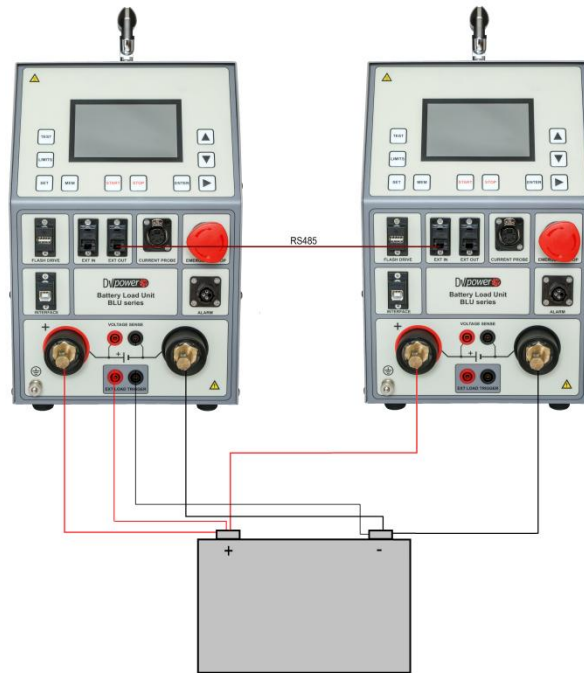
### Single mode

Using two sets of cables, the device can be connected to any battery test object. Connection to the battery is made using the current cables. After connecting the battery, the current and the voltage alarm levels are set. After starting the discharge, BLU360V keeps the current, resistance, or power constant. When the voltage drops to a level close to final voltage, BLU360V generates alarm. All the readings taken at the end of the test are stored in the BLU360V memory. Using the DV-B Win software these readings can be transferred to a PC for storage, printout or additional analysis. If the PC is connected to BLU360V a test can be performed and controlled from a user's PC and the results can be provided directly on the PC.



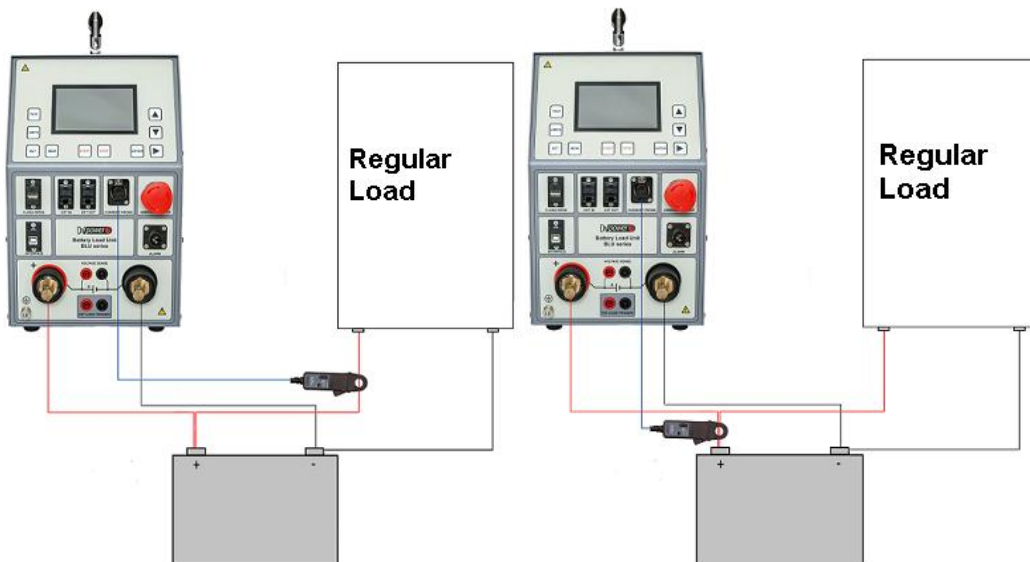
### Parallel discharge test mode

In case the required discharge current or power exceeds the capacity of a single BLU360V device, several devices can be connected in parallel. Connection between BLU360V devices is established using Ethernet ports and RS485 communication. The communication is based on a MASTER-SLAVE principle with one device being always MASTER and all the others as SLAVE units. The following figure presents a connection of the two BLU360V devices for a parallel discharge test mode.



### Current Probe mode

In case the battery has to remain connected to the load, the test needs to be carried out using the Current Probe mode. In this mode the measurement will be based either on the total battery current or a load current being measured by the DC current clamp. The current clamp positions for both modes are illustrated in the figures below.



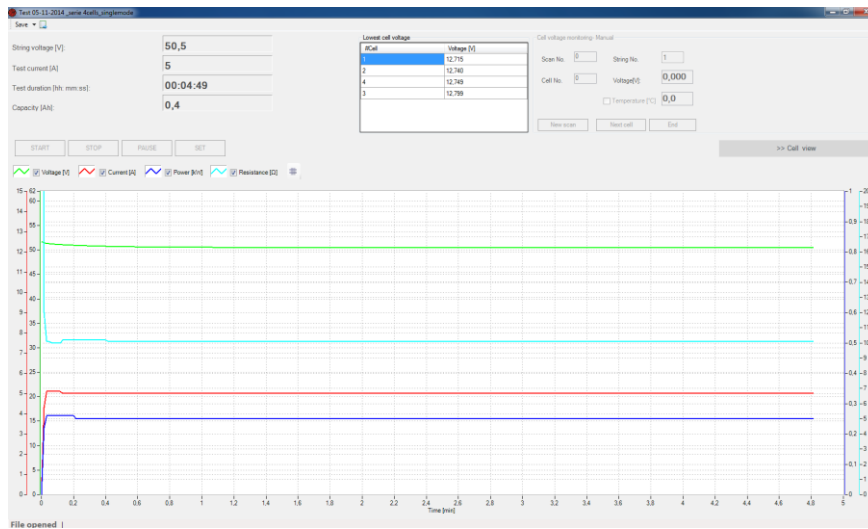
## Features and benefits

1. 5.7 color display.
2. Keyboard – used for controlling and operating the instrument.
3. Flash drive - used for transferring BLU260V memory data into an external memory stick.
4. External input (EXT IN) and external output (EXT OUT).
5. Current probe –measuring load current using the external current clamp.
6. Emergency STOP button – used if unexpected or unwanted action occurs.
7. Interface – used to connect an external computer if required.
8. Alarm output – used for triggering external alarm buzzer.
9. Current and Voltage sense terminals – used for connecting the current test cables and voltage sense test cables.
10. External Load trigger used for triggering external load.
11. Protective Earth Connector.



## DV B-Win Software

Using the DV-B Win software a test can be performed and observed from a user's PC, and the results can be saved directly on the PC. Communication between the BLU360V and the PC is normally achieved through a USB cable. Ethernet is an optional interface. Using DV-B Win the results can be arranged and printed for a report in a selectable format as an Excel spreadsheet, PDF, Word or ASCII format. Also, the possibility of importing other types of data format (jpg, png, doc) into standardized DV-B Win report is provided, as well as exporting the numerical and graphical results from DV B-Win into customizable report. Additionally, the software provides a possibility of setting extra parameters (cell, capacity, time) for alarming and terminating the test.



## Technical Data

### 1 - Mains Power Supply

- Connection	according to IEC/EN60320-1; C320
- Voltage	90 V – 264 V AC, 50 / 60 Hz, single-phase
- Input power	250 VA
- Fuse	2 A / 250 V, type F

### 2 - Output data

- Test current	up to 250 A DC	
	Measuring range:	Resolution:
- Voltage	6-480 V DC	0.1 V
- Internal current	0-250 A DC	0.1 A
- Current with Current Clamp <sup>1</sup>	0-1000 A DC	0.1 A
- Typical accuracy	Current: $\pm 0.5$ % of reading $\pm 0.2$ A	
Voltage: $\pm 0.5$ % of reading $\pm 1$ V		

### 3 - Environment conditions

- Temperature -10 °C to +45 °C / 14 °F to +113 °F
- Maximum relative humidity 95 % for temperatures up to 31 °C/88 °F , decreasing linearly to 40 % relative humidity at 55 °C/130 °F
- Pollution degree 2

### 4 - Dimensions and Weight

- Dimensions	680 mm x 221 mm x 355 mm 22 in x 9 in x 14 in (D x W x H) without handle
- Weight	19, 7 kg/43 lbs

<b>5 - Warranty</b>	three years
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### 6 - Applicable Standards

- Installation/overvoltage: category II
- 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, 2<sup>nd</sup> edition,  
Including Amendment1

### 7 - Electromagnetic Compatibility (EMC)

- CE conformity	EMC standard 89/336/EEC EMC directive 2004/108/EC
- Emission	EN 61326-1
- Interference Immunity	EN 61326-1

All specifications herein are valid at ambient temperature of + 25 °C/77° F and recommended accessories. Specifications are subject to change without notice.



Voltage sense cables



Current cables



Extension cable



Transport case

### Order Info

Instrument with included accessories	Article No
DV-B Win PC software including USB cable	BLU360V-NN-00
Battery Load Unit BLU360V	
Transport case	
Mains Power cable	
Ground (PE) cable	

Recommended	Article No
Current cables 2 x 3 m 2 AWG with alligator clamps (A4) isolated	C2-03-35VA4I
Cable bag	CABLE-BAG-00

Optional	Article No
Current cables 2 x 5 m 2 AWG with alligator clamps (A4) isolated	C2-05-35VA4I
Current cables 2 x 10 m 2 AWG with alligator clamps (A4) isolated	C2-10-35VA4I
Current cables 2 x 15 m 2 AWG with alligator clamps (A4) isolated	C2-15-35VA4I
Sense cables 2 x 3 m with banana plugs + dolphin clip	S2-03-00BPDC
Sense cables 2 x 5 m with banana plugs + dolphin clip	S2-05-00BPDC
Sense cables 2 x 10 m with banana plugs + dolphin clip	S2-10-00BPDC
Sense cables 2 x 15 m with banana plugs + dolphin clip	S2-15-00BPDC
Extension cables 2 x 5 m 2 AWG	E2-05-35VA3I
Extension cables 2 x 10 m 2 AWG	E2-10-35VA3I
Extension cables 2 x 15 m 2 AWG	E2-15-35VA3I
Cable for parallel operation	CABLE-PRL-00
Current clamp	CACL-0300-04
Cable for external alarm	CABLE-EXA-05