

BLU-A

Battery dischargers



Batteries up to 500 V DC and 240 A, from 12.8 kg

BLU-A

Battery discharge and capacity test unit

amperis

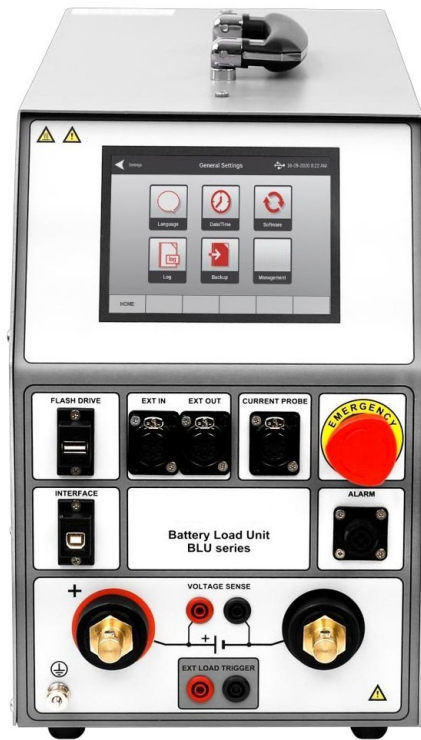
www.amperis.com

🌐 C/ María Barbeito, 14
27003, Lugo, Spain

✉ **Contact**
T [+34] 982 20 99 20
info@amperis.com | www.amperis.com

Capacity testing of stationary batteries in accordance with IEEE 450, IEEE 1188, IEEE 1106 and IEC 60896.

Product description



Front panel: 5.7-inch touch screen, current terminals and voltage sense inputs

Five models up to 500 V

From the BLU100L to the BLU360V, the series discharges batteries from 3 to 500 V DC with up to 240 A and 28.4 kW, in units from 12.8 kg with built-in forced-air cooling. It works stand-alone or controlled from a PC and resumes the test after a power interruption.

Three modes and load profiles

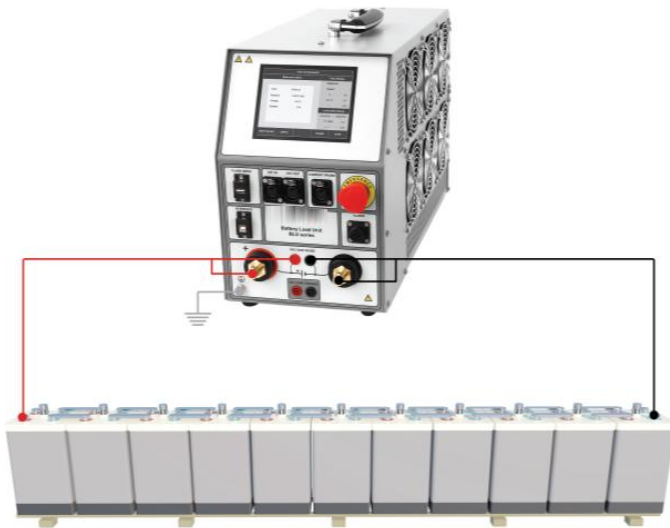
Constant current, power or resistance, plus current, power or resistance load profiles that reproduce real load variation. The unit holds the set value throughout the test with no manual corrections, and settings can be changed while the test is running.

Key features

- Full discharge down to 0 V with the ZVD module, at constant current up to 60 A.
- Parallel operation of up to 10 units in master-slave mode over Ethernet and RS485 (BLU200A, BLU340A and BLU360V).
- Current probe mode: testing with the battery connected to its load or with external BXL load units.
- Discharge of single lead-acid, Li-ion and Ni-based cells.
- Adjustable alarm and shutdown parameters against excessive discharge.
- Stop by end voltage (total or per cell), capacity or time.
- Internal memory with export to USB flash drive and external alarm output.

Capacity testing with the battery in service and full discharge before recycling.

Applications and software



Direct connection of the BLU-A to a stationary battery bank

Applications

- Power plants and substations.
- Telecommunication systems.
- Generator excitation systems.
- Protection and control systems.
- Full battery discharge before recycling (with ZVD).

PC software included

Included in the price, with free updates. It controls and monitors the test from a PC over USB with real-time curves and values of current, power, resistance, capacity, voltage and time, adds alarm and end-of-test conditions for cell voltage, string voltage, capacity and time, and produces reports in XLS, PDF, Word or RTF with image import.

A complete discharge system

The BVS/BVS-4 supervisor adds voltage and temperature of every cell, the BVR22 handheld recorder measures cell voltage, temperature and density (via Bluetooth), the external BXL load units increase power and the ZVD module short-circuits the remaining energy after discharging to 0 V, preventing voltage rebound.

BLU-A — MEASUREMENT DATA

Internal voltage	0 – 300 V DC (BLU100L, BLU100A, BLU200A, BLU340A); 0 – 500 V DC (BLU360V); resolution 0.1 V or better (optional)
Voltage accuracy	±0.5 % of reading ±0.1 V
Internal current	0 – 300 A DC; resolution 0.1 A; ±(0.5 % of reading + 0.1 A)
Constant current	±(0.5 % + 0.2 A); ripple max. 0.4 A peak; resolution 0.1 A
Constant power	±1 %; ripple max. 0.2 kW; resolution 0.01 kW
Constant resistance	0.1 – 300 Ω to ≤ 0.2 – 500 Ω depending on model; ±1 %; resolution down to 0.01 Ω
Current probe input	0 – 1 V DC; ratio 0.3 – 100 mV/A settable; input impedance > 1 MΩ
Current clamp 30/300 A	10 mV/A (30 A) and 1 mV/A (300 A); powered from the instrument; 1000 A clamps on request
Time	±0.01 % of reading ±1 digit; from 00:00:00 to 23:59:59, resolution 1 s
Display ranges	0 – 999.9 V; 0 – 2999.9 A; 0 – 9999.9999 Ah
Sampling	10 Hz; result refresh rate 1 Hz

Stop conditions: end voltage (total battery or per cell), capacity and test time.

Specifications valid at +25 °C with standard accessories.

BLU-A – TECHNICAL SPECIFICATIONS

	BLU100L	BLU100A	BLU200A	BLU340A	BLU360V
Battery voltage	3.0 – 300 V	5.55 – 300 V	5.55 – 300 V	5.55 – 300 V	5.55 – 500 V
Max. current	160 A	160 A	240 A	160 A	160 A
Max. power	14.2 kW	14.2 kW	19.7 kW	28.4 kW	28.4 kW
Constant resistance	0.1 – 300 Ω	0.2 – 300 Ω	0.2 – 300 Ω^*	0.2 – 300 Ω	≤ 0.2 – 500 Ω
Parallel operation	—	—	Yes	Yes	Yes
Dimensions (mm)	440 × 221 × 355	440 × 221 × 355	560 × 221 × 355	730 × 221 × 355	730 × 221 × 355
Weight	12.8 kg	12.8 kg	14.5 kg	20.6 kg	20.6 kg
Transport case (weight)	6.9 kg	6.9 kg	8.5 kg	10.1 kg	10.1 kg

With the ZVD module discharge reaches 0 V. * Up to 3000 Ω on request. On the BLU200A and BLU360V the maximum power derates above +35 °C.

Supply 90 – 264 V AC, 50/60 Hz, single-phase (IEC/EN 60320-1 C320 inlet); BLU200A, on request, from the battery under test at 110 – 240 V DC. 5.7" colour touch screen; USB communication (RS232 optional); languages: English, German, French and Spanish.

IP20 protection; operating 0 to +50 °C, storage –40 to +70 °C, humidity up to 95 % non-condensing. Test standards: IEEE 450-2010, IEEE 1188-2005, IEEE 1106-2015, IEC 60896-11/22. Safety IEC EN 61010-1 (Directive 2014/35/EU), EMC EN 61326-1 (Directive 2014/30/EU), CAN/CSA-C22.2 No. 61010-1.

Warranty: 3 years. Specifications valid at +25 °C.

🌐 C/ María Barbeito, 14
27003, Lugo, Spain

✉ Contact

T [+34] 982 20 99 20
info@amperis.com | www.amperis.com

BLU-A — MAXIMUM DISCHARGE CURRENT BY BATTERY VOLTAGE RANGE (A)

Battery voltage (V)	BLU100L	BLU100A	BLU200A	BLU340A	BLU360V
3 – 5	50	—	—	—	—
5 – 10	50	40	55	50	50
10 – 20	85	85	110	100	100
20 – 30	160	160	225	160	160
30 – 40	160	160	240	160	160
40 – 60	160	160	240	160	160
60 – 72	160	160	240	160	160
72 – 90	160	160	140	160	160
90 – 105	120	120	140	160	160
105 – 130	115	115	140	160	160
130 – 142	105	105	140	160	160
142 – 200	75	75	100	150	150
200 – 260	55	55	75	115	115
260 – 300	50	50	65	100	100
300 – 410	—	—	—	—	70
410 – 500	—	—	—	—	60

Current maintainable throughout the whole voltage range, with a minimum cell voltage of 1.75 V, at ambient temperature below +50 °C.

For higher currents or power: BLU-A units in parallel (BLU200A, BLU340A, BLU360V) or external BXL-A, BXL-T and BXL-V load units controlled by the instrument.

BLU-A — SCOPE OF SUPPLY AND ACCESSORIES

INCLUDED WITH THE INSTRUMENT		STANDARD ACCESSORIES		OPTIONAL	
PC software with USB cable		Current cables 2 × 3 m, 35 mm ² , insulated alligator clamps (BLU100L, BLU100A, BLU340A, BLU360V)		Zero Voltage Discharge module ZVD	BLU-ZVDMxx-0
Mains power cable	MPCXXA-XX-00	Current cables 2 × 3 m, 50 mm ² , insulated alligator clamps (BLU200A)		External load units BXL-A / BXL-T / BXL-V	BXL400X-...-00
Ground (PE) cable	CABLE-GND-00	Cable bag		Battery voltage recorders BVR11 / BVR22	BVR11X / BVR22X
Transport case, small (BLU100L, BLU100A)	HARD-CASE-B0			Current clamp 30/300 A with 5 m extension	CACL-0300-06
Transport case, medium (BLU200A)	HARD-CASE-BL			Sense cables 2 × 3 m / 2 × 5 m	S2-03 / S2-05-00BPDC
Transport case, large (BLU340A, BLU360V)	HARD-CASE-B1			5 m current cables (35, 50 or 70 mm ²)	C2-05-...
				Cable for BLU-BLU parallel operation, 3 m	CP-0003N6-00
				External alarm cable and 5 m extension	CABLE-EXA-05
				Canvas transport cases (BLU100L/100A, BLU200A)	HARD-CASE-B2/B3

Example: 2 × BLU360V in parallel with standard accessories and BLU-BLU parallel cable CP-0003N6-00. Ask Amperis for the right configuration for your battery.

🌐 C/ María Barbeito, 14
27003, Lugo, Spain

✉ **Contact**
T [+34] 982 20 99 20
info@amperis.com | www.amperis.com