

Battery Charger **BAC25A**

- Lightweight – only 10 kg / 22 lbs
- Instrument max power – up to 2,7 kW
- Voltage range: 10-300 V DC
- Current range up to 25 A DC
- Measurement resolution – current 0,1 A, voltage 0,1 V
- Two charging modes available:
 - IU - constant current + constant voltage,
 - UU - constant voltage + constant voltage, with current limit
- Adjustable alarm and shutdown parameters for preventing excessive charge



Powerful and Portable Battery Charger Description

Following a power outage, various power engineering objects such as power plants should be kept operating on batteries. It is necessary batteries to be charged in order to compensate its energy loss and keep their voltage within the predefined limits. Battery charger BAC25A is a portable battery charger used for charging primarily Lead-Acid and Ni-Cd batteries. BAC25A is intended to support the main charger in order to charge battery much faster or to quickly recharge a battery following a discharge

test. Using two charging modes it provides the possibility of maintaining and recharging the batteries either with a constant current or a constant voltage. The output voltages are selectable in the range of 10 V to 300 V DC. This device generates current up to 25 A. In addition, it is equipped with thermal, overcurrent, and over-voltage or under voltage protection. Provided display enables users to read all relevant information during a charging process and to adjust the charging current, charging time, etc.

Mains Voltage (V AC)	Voltage (V DC)	Current (A DC)	Boost voltage (V DC)		Float voltage (V DC)	
			Lead-Acid	Ni-Cd	Lead-Acid	Ni-Cd
230/115	12	Up to 25	14	15	13	14
	24	Up to 25	29	30	27	28
	48	Up to 25	57	60	54	56
	60	Up to 25	72	75	68	70
	110/120	Up to 20 (230 V) Up to 10 (115 V)	133/145	140/150	125/135	130/140
	220/240	Up to 10 (230 V) Up to 5 (115 V)	263/290	275/300	148/270	250/280

Benefits and Features

1. **Display** - Values of output voltage, current and other working status information are displayed on the LCD screen.
2. **Keyboard** - used for controlling and operating the instrument.
3. Status indicating **LED diodes**
4. **PT100 probe connector** for ambient temperature measurement.
5. **USB PC Interface.**
6. **Overvoltage alarm terminal** - used for triggering external alarm.
7. **Undervoltage alarm terminal** - used for triggering external alarm.
8. **Current and voltage sense terminals** - connecting the current and voltage sense cables.



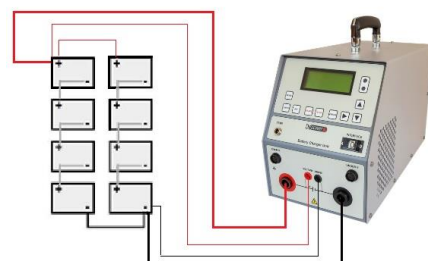
Application example

Typical application is charging batteries that serve as a backup power supply in:

- Power plants
- Generator excitation systems
- Substations
- Protection and control systems
- UPS battery strings

The BAC25A instrument is connected to a test battery using the current cables. The voltage sense cables may be used optionally. Next step is to set the current and the voltage alarm levels. After starting the charging process BAC25A keeps the current or voltage level constant depending on the selected charging mode. When applying the IU charging mode the battery is charged with a constant current. The voltage increases to a level close to the final voltage (boost voltage), the device switches to a constant voltage (float voltage) mode and the current begins to decrease. Cut off occurs when a predetermined minimum current value, which indicates a full charge, has been reached. When opting for the UU charging mode the battery will be charged under a constant voltage. If the battery current becomes larger than the defined

current limit, the charger will switch into a constant current mode and continue charging with constant current that is equal to specified current limit.



Otherwise, the charger keeps charging under the selected constant voltage, the current will decrease over time until it reaches a predetermined minimum value. At this point of time the charger will switch to a float charge stage and decrease to a selected float voltage.

Technical Data

Mains Power Supply

- Connection according to IEC/EN60320-1; C320
- Voltage 90 V – 264 V AC, 50 / 60 Hz, single-phase
- Power consumption: up to 3 300 VA

Output data

- Output current: up to 25 A DC
- Voltage: 10-300 V DC
- Typical voltage accuracy: $\pm (0,25 \% \text{ rdg} + 0,25 \% \text{ FS})$

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 45 °C
- Pollution degree 2

Electromagnetic Compatibility (EMC)

- Directive 2014/30/EU (CE conform)
Applicable standard: EN 61326-1

Dimensions and Weight

- Dimensions:
(D x W x H) without handle:
407 mm x 198 mm x 275 mm
16 in x 7.8 in x 10.8 in
- Weight:
10 kg / 22 lbs.

Warranty

- Three year warranty applies to the instrument ordered with its transport case
- 15 months warranty applies to the instrument ordered without the transport case

Safety Standards

- Safety
 - Low Voltage Directive: Directive 2014/35/EU (CE conform)
Applicable standards, for a class I instrument, pollution degree 2, Installation category II: IEC EN 61010-1
- CAN/CSA-C22.2 No. 61010-1

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

Transport case

Order Info

Device with included accessories	Article No
Battery charger BAC25A	BAC25A-NN-00
Mains power cable	MPCxxA-xx-00
Ground (PE) cable	CABLE-GND-00

Recommended	Article No
Current cables 2 x 5 m 6 mm ² (16.4 ft., 9 AWG) with alligator clamps (A2) isolated	C2-05-06LMA2
Transport case	HARD-CASE-ME

Optional	Article No
Current cables 2 x 10 m 6 mm ² (32.8 ft., 9 AWG) with alligator clamps (A2) isolated	C2-10-06LMA2
Current cables 2 x 15 m 6 mm ² (49.2 ft., 9 AWG) with alligator clamps (A2) isolated	C2-15-06LMA2
Current cables 2 x 20 m 6 mm ² (65.6 ft., 9 AWG) with alligator clamps (A2) isolated	C2-20-06LMA2
Sense cables 2 x 5 m 2,5 mm ² (16.4 ft., 13 AWG) with banana plugs + dolphin clip	S2-05-15BPDC
Sense cables 2 x 10 m 2,5 mm ² (32.8 ft., 13 AWG) with banana plugs + dolphin clip	S2-10-15BPDC
Sense cables 2 x 15 m 2,5 mm ² (49.2 ft., 13 AWG) with banana plugs + dolphin clip	S2-15-15BPDC
Sense cables 2 x 20 m 2,5 mm ² (65.6 ft., 13 AWG) with banana plugs + dolphin clip	S2-20-15BPDC
Cable for external alarm 2 x 5 m (16.4 ft.)	CA-EXABAC-05
Extension cable for external alarm 2 x 5 m (16.4 ft.,)	E1-EXABAC-05
PT100 temperature indicator	TI-000-PT100
Device bag	DEVIC-BAG-00
Cable bag	CABLE-BAG-00