

BAC SERIES

Battery Charger

- Lightweight – only 10 kg / 22 lbs
- Instrument max power – up to 2,7 kW
- Voltage ranges up to 300 V DC
- Current range up to 50 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. BAC series devices are a portable battery charger used for charging Lead-Acid, Ni-Cd and Li-ion batteries. BAC series devices are 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.

BAC Series contains two models, depending of maximum charging current by different voltage levels:

- **BAC25A model** can generate currents up to 25 A, with a maximum output voltage of 300 V (the maximal current is 10 A at 300V)
- **BAC50L model** can generate currents up to 50 A (for voltages up to 50 V), with a maximum output voltage of 60 V (the maximal current is 30 A at 60 V)

In addition, BAC Series devices are 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) | Nominal Battery Voltage (V DC) | Maximum Current (A DC) | |
|-------------------------|-----------------------------------|------------------------|--------------|
| | | BAC25A* | BAC50L** |
| 230/115 | 1,2 | - | 50 |
| | 2 | - | 50 |
| | 6 | - | 50 |
| | 12 | 25 | 50 |
| | 24 | 25 | 50 |
| | 48 | 25 | 30 20 *** |
| | 60 | 25 | - |
| | 110/120 | 20 10 *** | - |
| | 220/240 | 10 5 *** | - |

* Maximum charging voltage for BAC25A is 300V

** Maximum charging voltage for BAC50L is 60V

*** Maximum currents at 115V Mains voltage

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.



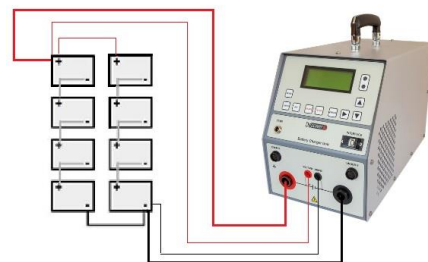
Application example

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 BAC series devices 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 BAC series devices 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

BAC Series - models

BAC25A

| | |
|---|--|
|  | <ul style="list-style-type: none"> • Applicable to 10 – 300 V DC battery voltages • Weight – 10 kg (22 lbs) • Instrument max power – up to 2,7 kW • Current range – up to 25 A |
|---|--|

BAC50L

| | |
|---|--|
|  | <ul style="list-style-type: none"> • Applicable to 1 V – 60 V DC battery voltages • Weight – 10 kg (22 lbs) • Instrument max power – up to 2,5 kW • Current range – up to 50 A |
|---|--|

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

- Max. Output current: 25 A DC (BAC25A)
50 A DC (BAC50L)
- Voltage: 10-300 V DC (BAC25A)
1-60 V DC (BAC50L)
- Typical voltage accuracy:
 $\pm (0,25 \% \text{ rdg} + 0,25 \% \text{ FS})$
- Full load currents at maximum voltages

| Model | @230 VAC | @115VAC |
|--------|---------------------|---------------------|
| BAC25A | 20 A (110/120V) | 10 A (110/120 V) |
| | 10 A (220/240 V) | 5 A (220/240 V) |
| BAC50A | 30 A | 20 A |

Environment conditions

- Temperature -20 °C to +55 °C / -4 °F to +131 °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.

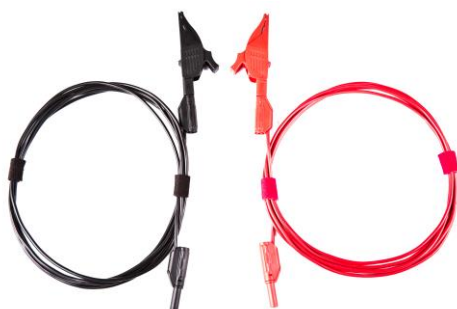
Warranty

- 3 years + additional 1 (one) year upon registration on DV Power official website (www.dv-power.com)

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 standard accessories. Specifications are subject to change without notice.



Voltage sense cables



Current cables



Cable Bag



Transport bag

Order Info

| Instrument | Article No |
|------------------------|--------------|
| Battery charger BAC25A | BAC25A-NN-01 |
| Battery charger BAC50L | BAC50L-NN-01 |

| Included Accessories | Article No |
|----------------------|--------------|
| Mains power cable | MPCxxA-xx-00 |
| Transport bag | TRBAG-M00-01 |
| Ground (PE) cable | CABLE-GND-00 |

| Standard Accessories | Article No |
|--|--------------|
| Current cables 2 x 3 m 6 mm ² (9.8 ft., 9 AWG) with alligator clamps (A2) isolated (<i>for BAC25A</i>) | C2-03-06BMA2 |
| Current cables 2 x 3 m 10 mm ² (9.8 ft., 8 AWG) with alligator clamps (A3) isolated (<i>for BAC50L</i>) | C2-03-10BMA3 |
| Cable bag | CABLE-BAG-00 |

| Optional Accessories | Article No |
|--|--------------|
| Current cables 2 x 5 m 6 mm ² (16.4 ft., 9 AWG) with alligator clamps (A2) isolated (<i>for BAC25A</i>) | C2-05-06BMA2 |
| Current cables 2 x 10 m 6 mm ² (32.8 ft., 9 AWG) with alligator clamps (A2) isolated (<i>for BAC25A</i>) | C2-10-06BMA2 |
| Current cables 2 x 15 m 6 mm ² (49.2 ft., 9 AWG) with alligator clamps (A2) isolated (<i>for BAC25A</i>) | C2-15-06BMA2 |
| Current cables 2 x 20 m 6 mm ² (65.6 ft., 9 AWG) with alligator clamps (A2) isolated (<i>for BAC25A</i>) | C2-20-06BMA2 |
| Current cables 2 x 5 m 10 mm ² (16.4 ft., 8 AWG) with alligator clamps (A3) isolated (<i>for BAC50L</i>) | C2-05-10BMA3 |
| Current cables 2 x 10 m 10 mm ² (32.8 ft., 8 AWG) with alligator clamps (A3) isolated (<i>for BAC50L</i>) | C2-10-10BMA3 |
| Current cables 2 x 15 m 10 mm ² (49.2 ft., 8 AWG) with alligator clamps (A3) isolated (<i>for BAC50L</i>) | C2-15-10BMA3 |
| Current cables 2 x 20 m 10 mm ² (65.6 ft., 8 AWG) with alligator clamps (A3) isolated (<i>for BAC50L</i>) | C2-20-10BMA3 |
| Sense cables 2 x 3 m 1,5 mm ² (9.8 ft., 13 AWG) with banana plugs + dolphin clip | S2-03-15BPDC |
| Sense cables 2 x 5 m 1,5 mm ² (16.4 ft., 13 AWG) with banana plugs + dolphin clip | S2-05-15BPDC |
| Sense cables 2 x 10 m 1,5 mm ² (32.8 ft., 13 AWG) with banana plugs + dolphin clip | S2-10-15BPDC |
| Sense cables 2 x 15 m 1,5 mm ² (49.2 ft., 13 AWG) with banana plugs + dolphin clip | S2-15-15BPDC |
| Sense cables 2 x 20 m 1,5 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 |