



Advanced Battery Simulator

Critical Safety Notice

8700-00076 revA

The following safety precautions must be observed before using this product and any associated instrumentation. While the instrument inherently outputs nonhazardous voltages, there are intended use situations where hazardous conditions may be present. Failure to comply with safety standards and intended use of the system may result in injury or equipment failure, and product warranty may be voided.

CAUTION

The following safety precautions must be observed during all phases of operation, service, and repair of this equipment. Failure to comply with the safety precautions or warnings in this document violates safety standards of design, manufacture and intended use of this equipment and may impair the product's built-in protections.

Bloomy will not be liable for a user's failure to comply with these requirements.

SAFETY SYMBOLS



Caution is necessary when operating the device, close to where the symbol is placed. The above symbols are present at the rear panel of the unit, along with the back shell, and mass cover.



High voltage up to 1000V may be present based on certain applications. Read the user manual to ensure safe operation.

ON (|): Symbol on rocker switch that indicates power is ON.

OFF (0): Symbol on rocker switch that indicates power is OFF.

USERS

This equipment must be operated only by qualified persons who understand the safety instructions provided with the equipment manual, and who recognize shock hazards and the safety precautions required to avoid possible injury. Usage by any unqualified individuals shall be supervised by a qualified person.

SYSTEM USAGE

The ABS800-5-5 Advanced Battery Simulator is designed to be used as an instrument for the simulation of stacked cells associated with the testing of Battery Management Systems and associated electrical components in a laboratory environment. Use the ABS800-5-5 only for its designed purpose. Observe all operating conditions stated in the user manual and data sheet.

The product is to be operated by qualified persons only.

The product is designed for indoor use only in a laboratory, non-residential environment.

The product is designed for use with electrical signals that are electrical measurement, control, and data IO signals, and must not be connected directly to mains or high transient overvoltages.

ENVIRONMENT

The ABS800-5-5 has been designed to be used indoors, within a laboratory environment (not for general home or consumer use) with the following conditions:

- Pollution degree 2 (Normally only nonconductive pollution occurs. Temporary conductivity caused by condensation is to be expected.)
- Air temperature, humidity, and altitude as specified in the data sheet.

GROUNDING

This product is a Safety Class 1 instrument. To minimize shock hazard, the instrument chassis must be connected to an electrical ground. The instrument must be connected to the AC power supply mains through a three-conductor power cable with the ground wire firmly connected to an electrical ground (safety ground) at the power outlet.

INPUT RATINGS

Do not use an AC supply which exceeds the input voltage and frequency rating of this instrument. The input voltage and frequency rating of the system is: 100-240V, 50/60Hz. For safety reasons, the mains supply voltage fluctuations should not exceed +/-10% of nominal voltage.

INPUT/OUTPUT PARAMETERS

The inputs and outputs from the system must not exceed the individual rating for each type of input or output stated in the user manual. Exceeding input ratings will potentially damage the system.

The insulation of wire connected to the outputs should be in accordance with the output load current and voltage.

External loading and sourcing must not exceed the ratings stated in the user manual and data sheet.

VENTILATION

The ventilation openings on the front, rear, and sides of the system must not be covered or obstructed. See user manual for detailed ventilation requirements.

SOUND

Appropriate hearing protection is recommended if multiple units are stacked inside a rack. The unit is designed to vary fan speed with power utilization/power dissipation in the unit. There may be a scenario if multiple units are dissipating high power, all at once, that the sound may exceed 85 dB, and hearing protection would be necessary.

INSTALLATION

Installation of the equipment must be in accordance with the installation instructions provided within the user manual. The safety of any system incorporating the equipment is the responsibility of the system assembly personnel.

Pay special attention to the following parameters, defined in the user manual:

- Enclosure clearances and spacing
- Back shell or mass cover installation
- Earth ground connection: The Ground Earth connection to the unit is via the AC input cord.
- Orientation: The unit shall be installed on a horizontal plane, to prevent foreign objects from falling through enclosure openings.
- AC power connections
- High voltage cell connections

CONNECTIONS

All connections made to the ABS800-5-5 must be done while the unit, and any series-connected instrumentation, is powered down. Hot swaps of connectors may cause serious injury if high voltages are present.

The Bloomy high voltage individual back shell(s) or mass cover is to be installed on the ABS when being operated to output any stacked voltage above 120V, up to 1000V.

- Less than 120V: Back shell Optional
- Above 120V: Back shell/Mass Cover Required
- Maximum Designed Voltage 1000V

Cell connectors supplied with the system have undergone rigorous validation for high voltage insulation performance. Only the use of the specified cell connector part numbers (see user manual) is condoned for use with the system. While other connectors may properly mate, they cannot be guaranteed safe at voltages greater than 120VDC.

All cables connected to the unit must be less than 30 meters long.

INSTRUMENT HANDLING

Do not drop or impact the instrument. It is recommended to always transport the unit flat and face up. The instrument has an IP20 rating. Water, solvents, chemicals, and other cleaning agents must not be used.

RISK OF ELECTRIC SHOCK

Usage of the unit such that a cell outputs a ground-referenced voltage greater than 120V requires the installation of a mass cover, or individual back shell, without which the user is susceptible to electric shock.

CRITICAL COMPONENTS

The ABS800-5-5 is not authorized for use as critical components in nuclear control systems, life support systems, or safety control systems.

ACCESSORIES

Only accessories which meet Bloomy's specifications, as defined in the user manual and data sheet, are suitable for use with the product.

SERVICING

The ABS800-5-5 is not user serviceable. All maintenance and repairs to the unit shall be performed by Bloomy. Removing the lid of the ABS may result in the unit losing its isolation rating at 1000 VDC, cooling capabilities, and safety rating, causing loss of warranty.