



- **Rated power 110 kW, 330 kW, 500 kW**
- **Supply voltage 400 V 3 ~ 50/60 Hz**
- **Output Voltages 24 V, 125 V, 360V (consult other versions)**
- **Intensity up to 1250 A.**
- **Output Voltage Selection and Configurable Maximum Intensity.**
- **Interface with customer's SCADA, control by MODBUS, ETHERNET, etc.**
- **User software with all processes controlled from a PLC**
- **Local and remote Control.**

### General description

Battery Emulators developed by SUPSONIK, S.L. allow full testing of equipment designed to work with this type of electric accumulators, such as battery chargers, inverters in electric substations, electronic systems of electric vehicles and any other converter powered by batteries.

These emulators allow the construction of test benches that replace real installations (battery banks) and provide great advantages:

- Immediate energy availability at all times since you do not have to wait until the battery bank is charged.
- They allow carrying out tests in repeatable and controlled conditions.
- Returning of energy to the mains supply, which allows great savings in the carrying out of equipment tests.

- They allow you to quickly simulate variable battery conditions, from discharged to full charge battery, without having to wait for the time necessary to charge a real battery.

Battery emulators are made up of an AC / DC converter that provides a clean and stable DC voltage capable of supplying and absorbing current, just like a real battery.

The voltage provided by the equipment can be varied during emulator operation to simulate changes in test conditions. Likewise, the control system allows to select the maximum current provided or absorbed by the emulator, stopping its operation if that level is reached. This provides an additional security level compared to the use of an actual battery.

Another advantage of using an Emulator system is the energy saving. In case the equipment to be tested is connected to the distribution network - as it is the usual case, the power taken from the network by the equipment being tested is returned to the network by the Battery Emulator. Due to this recovery of energy, it is possible to test high power S.A.P. with a reduced input power, typically between 10 and 15% of the total power, reducing energy costs up to 85-90%.

SUPSONIK offers the possibility of adapting each equipment to the specific needs of the customer.

The wide variety of combinations of input voltages and output currents of these Emulators makes it necessary to adapt their design to requested requirements. The Technical Office department of SUPSONIK, S.L. - in close collaboration with the Client, performs all necessary analyses so that the characteristics of these equipments satisfy all demanded requirements and adapt to specific customer needs.

### AC / DC converter BATTERY EMULATOR

Rated power	330 kW
DC output rated voltage (rated battery voltage)	360 V
Minimum / maximum battery voltage	270 V / 500 V
Number of battery branches	1
Input power per rated / maximum branch	300 kW / 330 kW
Rated / maximum input DC current by branch	830 A / 1250 A
Maximum voltage variation by branch	± 1%
Maximum voltage ripple by branch	2%
Rated AC supply voltage	400 V 3~ 50/60 Hz ± 10%
Galvanic isolation	Yes. Line transformer
Regenerative capacity	Yes. Bidirectional converter
Output Power Factor Typical/ minimum full load	0.99 / 0.97
Typical / maximum harmonic distortion	3% / 5%

### ENVIRONMENTAL CHARACTERISTICS

Protection degree	IP20 (optional IP54)
Working temperature	-15°C to 50°C
Storage temperature	-25°C to 65°C
Relative humidity	15% to 95% with no condensation
Altitude	1000 m.

### DIMENSIONS AND WEIGHT

Dimensions (Width x Depth x Height)	6000 x 1000 x 2100 (mm)
Weight PLC Control Panel	3300 Kg
Colour	RAL 7035
Refrigeration	AF

### USER INTERFACE

- Graphic touch screen with performance mimics
- Communications via wired signals, MODBUS, PROFIBUS, TCP / IP via RS485 and ethernet.
- Local / Remote Control.
- Integration with customer's SCADA