



Class I Division II Battery Charger

Precision low voltage battery charger designed to operate in hazardous locations



FEATURES

- > Class I Div II enclosure
- High efficiency, high frequency operation
- Seamless transition from voltage mode to current mode operation
- Complete Fault Detection and Diagnostics
- > Full Bridge IGBT Output Stage
- Factory Settable Output Voltage
 Wide Input Voltage Range –
 400VAC 550VAC

The APS BC-6964 Battery Charger is designed for hazardous location applications requiring Class I Div II equipment.

The BC-6964 accepts 3-phase 60 Hz AC input and generates 24 VDC 50A nominal output. The charger provides seamless transition from a voltage source to current limit operation for optimum battery charging. In voltage mode, the Charger regulates to a factory set DC voltage. While operating as a voltage source, the Charger regulates its output voltage to provide optimum charging of the battery. If the output current demand exceeds a maximum setpoint, the Charger seamlessly transitions from voltage source to current limit, where the Charger folds back the output voltage to limit the current to the maximum charge current (Alimit). As the battery load decreases to less than Alimit, the BC-6964 will seamlessly return to voltage mode operation.

The BC-6494 AC input voltage is EMI filtered and rectified to a high voltage of approximately 650 VDC, filtered and stored in a DC link capacitor bank. A high frequency IGBT full-bridge output inverter is pulse width modulated into the primary of a high frequency step down transformer. The transformer secondary is rectified, filtered and regulated to produce the precision Battery Charger output voltage.

Input power is provided by 3-phase AC input connections to an internal fuse block. Output charging power connections consist of two wire 24VDC connection terminals. Two 3/4" NPT conduit openings are provided to accommodate customer wiring.

Optional USB and RS485 communication ports are available to provide remote monitoring of the Battery Charger operation.



SPECIFICATIONS

<u>INPUT</u>

voltage Range	Operating range: 432 to 530VAC
Frequency	60 Hz +/- 5%
OUTPUT (TBAT @ Voltage Output Current R Output Voltage R Efficiency	25°C) 24VDC Nominal (28.2V max) ange 0 to 50ADC ipple < 1% F.S.

400140

ENVIRONMENTAL

Operating Temp. Range	40 ℃ to 55 ℃
Storage Temp. Range	40 ℃ to +85 ℃
Humidity 0 to 95%	%, Non-Condensing
Hazard	Class I Division II

PHYSICAL SPECIFICATIONS

Dimensions, Inches	18"W X 30"H X 8.25"D
Case Material	Copper free Aluminum
Finish	Natural
Color	Grey

Consult factory for connection options.

3-Phase 480 VAC

PROTECTION FEATURES

- Safe shutdown in the event of input phase loss or under voltage conditions
- Safe shutdown for internal overtemperature
- > Output current limiting
- Output over-voltage, over-current and over-temperature protection
- > Input and Output Soft-Start Circuits

An optional internal display and discrete LEDs and are available to provide indication of the battery charger status of the following:

NORMAL OPERATING STATUS 480 VAC ON CHARGER FAULT CURRENT LIMIT

An optional communication port is available to provide remote monitoring of the Battery Charger operation.





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