

150W, Universal Input UPS/Battery Charger with PFC-input BCP 150 Series

- Electronic Power Factor Correction (PFC)
- Rugged, industrial quality
- Field proven design
- Conduction/convection cooled - no fan
- Fully protected



The BCP 150 Series is a rugged, industrial quality DC output UPS system with external battery and PFC input. The built-in battery charger provides 150W total power for the output and for float charging the battery. The unit has a low battery disconnect circuit to prevent damage to the battery by low discharge during prolonged AC failure. A built-in charger fail alarm (F/O or F/C) indicates either failure of the charger circuit or loss of AC input power. The battery input is protected against accidental reverse battery connection by a crossbar diode and internal safety fuse. The battery must be fused externally directly to the battery. Low component count and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

Mains Input:

90Vac to 264Vac universal (47 -63Hz)
Power Factor is better than 0.97 at full load for the entire input range.
Meets EN61000-3-2

Battery Input:

12V, 24V or 48V battery
Consult factory for other voltages

Input Protection

AC Input

Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Battery Input:

Internal safety fuse and crossbar diode
Low battery disconnect circuit

Warning: Battery must be fused externally, directly at the battery

Input Isolation

2250VDC input to chassis
4300VDC input to output,
8mm spacing
500VDC output to chassis

Standards

Meet EN 60950 and corresponding UL and CSA standards

EMI

EN 55022 Class A with margins

Switching Frequency

50-150KHz input section
(load dependent)
55kHz +/-3kHz output section

Output Voltages/Currents

13.8V float voltage (12V battery),
27.6V float voltage (24V battery) or
55.2V float voltage (48V battery) as
a special version
Output is floating, either terminal
can be grounded
Consult factory for other voltages

Output Separation Diode

Installed internally

Line/Load Regulation

±1.5% combined from no load to
full load including built in separation
diode

Output Ripple/Noise

Better than 1% of output voltage
peak to peak or 0.2% RMS of the
output voltage (20MHz BW)

Overload Protection (without battery)

Rectangular current limiting with
hiccup mode short circuit protection
Thermal shut-down with automatic
recovery in case of insufficient cooling
Internal battery safety fuse on battery
In the case of an accidental shorting
of the output, the external battery
fuse shall blow.

Output Overvoltage Protection

Double regulator loop, stable
and independent of the main
feedback loop

Efficiency

Typically 80 - 90% at full load
depending on output

Operating Temperature

0°C to +50°C for full specification
Extended temperature range
available

Battery Temp. Compensation

Not available on this design.

Temperature Drift

0.03% per °C over operating
temperature range

Cooling

Conduction to customer heatsink
or chassis and natural convection

Environmental Protection

Basic ruggedizing
Additional ruggedizing and
conformal coating available

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000h at 45°C
Demonstrated MTBF is
significantly higher

Indicators

Charger ON LED visible through the
cooling slots

Control input

None

Alarm Outputs

Charger fail F/O or F/C only
(two terminals).

Package/Dimensions (W x H x L)

F2L package 114 x 58 x 310mm
(4.5" x 2.3" x 12.2") including
terminal block and flanges
Mounting holes are clear

Weight

1.5kg (3.3 lbs)

Connections

9-pole barrier type terminal block
with 3/8" spacing for all
connections

RoHS Compliance

Fully compliant

Warranty

Two years subject to application
within good engineering practice.



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