

## 150W, Universal Input UPS/Battery Charger with PFC input BCP 152 Series

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



The BCP 152 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 Low Battery Alarm (F/C) provides warning before the disconnect circuit disengages the output. A built-in charger fail alarm (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 at the battery. Low component count, large design headroom, 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

#### 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

Meets EN60950 and corresponding UL and CSA standards

#### EMI

EN55022 Class A with margins

#### Switching Frequency

50-150KHz Input section  
(dependent on the load)  
55 KHz +/-3KHz for the output section

#### Output Voltages/Currents

13.8V float voltage (12V battery) or  
27.6V float voltage (24V battery) or  
55.2V float voltage (48V battery)  
The output is isolated, either terminal can be grounded  
Other outputs available on request

#### 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 on request

#### Battery Temp. Compensation

Not included  
Available as an option

#### 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

130,000h at 45°C  
Demonstrated MTBF is significantly higher

#### Indicators

Charger ON LED visible through the cooling slots

#### Control input

None

#### Alarm Outputs

Charger/AC fail alarm, Fail Close  
Low Battery Alarm, Fail Close with common return

#### 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

12-pole terminal block with 7.62mm spacing for all connections, including alarm

#### RoHS Compliance

Fully compliant

#### Warranty

Two years subject to application within good engineering practice



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