

# BW54 SERIES

Battery Chargers 12 & 24V: 70 ~ 140 watts



## Specifications

<b>Input Voltage</b>	240Vac ( 200~264 )
<b>Input Frequency</b>	47 ~ 63Hz
<b>Input Fuse</b>	Yes
<b>Hold Up Time</b>	30ms @ 230Vac input, full load and no battery connected
<b>Power Factor</b>	0.42 @ 230Vac and full load
<b>No load Power</b>	<5W
<b>Start up Time</b>	Typically 1.5 seconds
<b>Output Voltage</b>	13.8V / 27.6V Refer to table
<b>Output Current</b>	Refer to table
<b>Power Limit</b>	Typically at 115%
<b>Efficiency</b>	80-85% @ 230Vac and full load
<b>OVP</b>	105-125% latching. Recycle input after 30 seconds to restart
<b>Short Circuit Protection</b>	Hiccup mode
<b>Current Limit</b>	Primary side power limited
<b>Thermal Protection</b>	Primary side ( non-latching )
<b>Operating Temp.</b>	-10°C to +70°C (Derate 2.5% / °C above 50°C)
<b>Cooling</b>	Convection cooled
<b>Humidity</b>	10-95% non-condensing
<b>Load Regulation</b>	±0.8%
<b>Line Regulation</b>	±0.7%
<b>Ripple &amp; Noise</b>	0.5% @ 230Vac , full load ( BW =DC-10Hz)
<b>Safety</b>	EN60950, Class I
<b>Isolation</b>	Input – Output / Case: 2200Vdc
<b>EMC</b>	EN55022 Class B Conducted EN55022 Class A Radiated
<b>Immunity</b>	EN61000-3-2 Class A Harmonics EN61000-4-4 Fast Transients EN61000-4-5 Surge EN61000-4-11 Voltage Dips

## Features

- Three power levels 70, 100 and 140 watts
- Separate load and battery charging output
- 12V & 24V systems
- Convection cooled – No fans
- Power Fail & Battery Fail alarms.
- Short circuit protection & Battery Fuse protection
- Deep discharge battery protection ( Low Volt Disconnect )
- DC OK Led's for various alarms
- MTBF > 210,000hrs
- IEC Input inlet for AC power
- Key lock
- **Optional – Distribution board**
- **Optional Batteries:** ( LCR12V.2P 12V 7AH )

## Description

The **BW54 Series** is a new generation / smart Power Supply that is designed to provide battery backed-up power in the event of either the PSU or the battery being disconnected or short circuited. When the AC supply fails, the battery will automatically be connected and will provide power until the ac supply is restored. If the battery has reached it's disconnect voltage, it will automatically be disconnected to prevent deep discharge damage.

Designed for powering critical loads with battery back-up, in a wide range of Industrial applications and in particular Security installations and Access Control, with separate Load and Battery Charging circuits.

A wide range of Signals, Led's and Alarms, all aimed at a providing the optimum solution for powering critical DC Loads.

An isolated **Common Fault relay** has been provided which will operate if any fault is found (This is a fail-safe signal so will signal a fault even if no power sources are on/connected).

## Battery & Signals:

<b>Temp Compensation</b>	Yes
<b>Deep Discharge</b>	Protection at 21V ± 0.3V ( for 24V systems ) Protection at 10V ± 0.3V ( for 12V systems )
<b>Signals</b>	<ul style="list-style-type: none"><li>• Mains Fail, Battery O/C, Charger Loss, Battery Low</li><li>• LED's &amp; open collector – 100mA sink, Status LED Green = Flashing = OK</li><li>• Common Fault (Volt free) relay 2x Customer options – open collector – 30mA sink HiZ indication =1J</li><li>• Battery Powerfail signal = 100mS</li></ul>
<b>Alarm</b>	Common Fault relay via voltage free contacts
<b>LED'S</b>	<ul style="list-style-type: none"><li>• Mains Fail</li><li>• Battery Low</li><li>• Batter Open Circuit</li><li>• Charger Loss</li><li>• Status ON</li></ul>
<b>Connector-Input</b>	Input: ICE320 C14
<b>Connector-Output</b>	Load & Battery: Barrier Strip / Screw terminal
<b>Connector-Signals</b>	Molex 6410 vertical
<b>Dimensions</b>	320 x 300 x 90mm ( W*H*D )

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Model	Nom V	Output			Power W
		Float V	Load A	Charger A	
BW5475-12	12V	13.8V	4.0A	1.0A	75W
BW54100-12	12V	13.8V	5.6A	1.4A	100W
BW54140-12	12V	13.8V	8.0A	2.0A	140W
BW5475-24	24V	27.6V	2.4A	0.6A	75W
BW54140-24	24V	27.6V	4.0A	1.0A	140W

The **optional** distribution board provides:

- Eight 1.6A fused protected outputs
- Fuse LED indicator
- Battery Circuit Breaker 15A
- For unit with distribution board add... / D to model ( BW5475-12/D )



Fig 1: Optional Distribution board

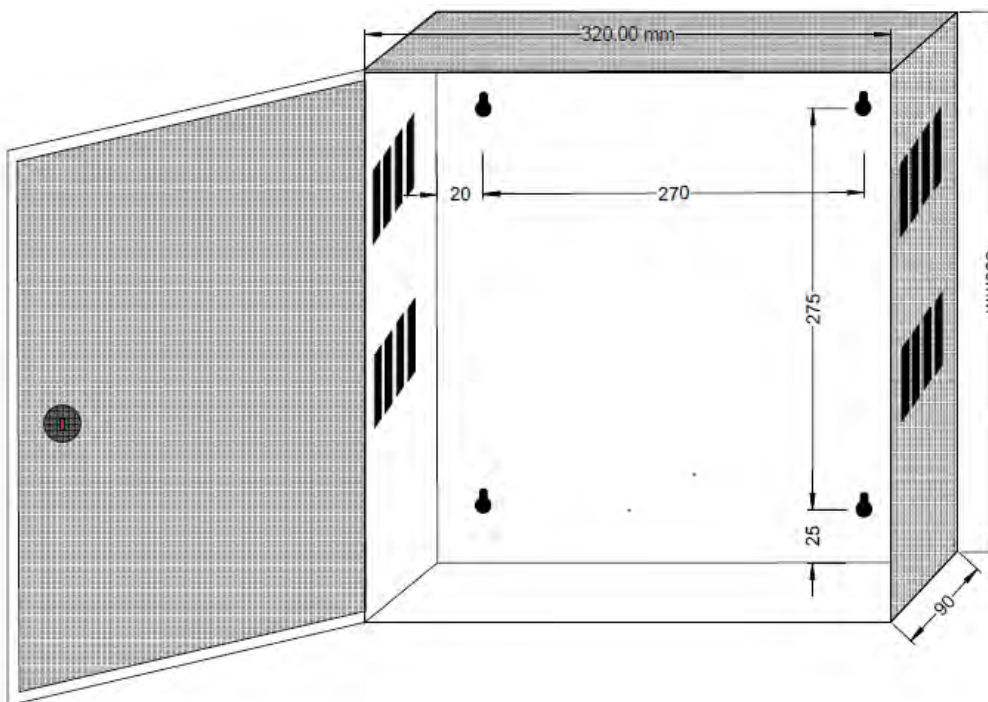


Fig 2: Mechanical