

# 100 Watt, DRC-100 Series, Battery Backed DIN Rail Power

- Universal AC Input
- High Efficiency, High Reliability
- Wide Temperature Range to +70 °C
- Alarm Signal for AC OK & Battery Low
- Power On LED, Output Voltage Trim
- Short Circuit, Over Load, Over Voltage, Protected
- Battery Low & Battery Reverse Polarity Protection
- Full Approvals : UL/CUL/TUV/CE/CB
- 3 Year Warranty
- Very Competitive Prices / From Stock



Size: 90(H) x 55(W) x 100(D) mm

### Overview :

The DRC-100 is a 100W AC/DC DIN Rail mounting Battery Back-Up Power Supply series. In addition to the primary output to power the load, there is also a charger output with a smaller rated current, enabling a Lead Acid Battery to be float charged. The DRC-100 accepts the Universal AC Input between 90VAC and 264VAC, and supplies 13.8VDC or 27.6VDC output for 12 Volt or 24 Volt applications respectively. With the efficiency up to 89%, it can operate with air convection cooling from -30°C through to +70°C. In addition the units include key protection features such as overload protection, over voltage protection, battery low cut off, and battery reverse polarity protection (by fuse). The alarm signals for AC OK and Battery Low signalling are provided, via relay contact output for the ease of system design.

### Specification :

Input Voltage (Universal).....	90~264 VAC, (127~370 VDC)
Input Frequency.....	47~63 Hz
Inrush Current.....	Cold start, 30A @ 115V, 60A @ 230V
Output Voltage.....	See table below (plus adjustment range)
Over Load Protection.....	105~150% hiccup mode, auto recovery
Over Voltage Protection.....	Shuts down, re-power unit to reset
Set Up, Rise, Hold Up Time.....	2400 ms, 50 ms, 50 ms @ 230 VAC full load
Isolation Voltage.....	I/P-O/P: 3 kVAC, I/P-F/G: 2 kVAC
Operating Temperature.....	-30~+70 °C (derates above 45°C to 50% at +70°C)
Safety Standards.....	UL60950-1, TUV EN60950-1 approved
EMC Standards.....	EN55022 (CISPR22) Class B EN61000-3-2, 3. EN55024, EN61000-4-2,3,4,5,6,8,11, EN61204-3, light industrial level, criteria A
Dimensions.....	90(H) x 55(W) x 100 (depth from rail) mm
MTBF.....	410.1 khrs (MIL-HDBK-217F) @ 25 °C

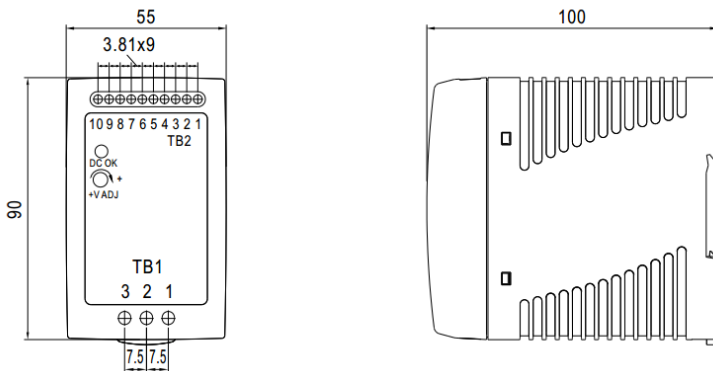
### Models and Ratings (12 Volt or 24 Volt Battery Systems)

Model	Output 1 to load	Battery Float Charger	Max Total Power	Efficiency
<b>DRC-100A</b>	13.8 Volts / 7 Amps	13.8 Volts / 2.5 Amps	96.6 Watts	87%
<b>DRC-100B</b>	27.6 Volts / 3.5 Amps	27.6 Volts / 1.25 Amps	96.6 Watts	89%

Please see next page for mechanical drawings, connections and derating.

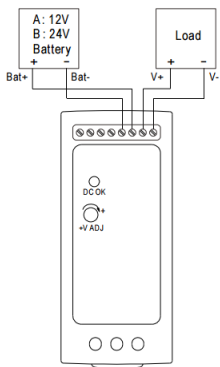
**ALL PSU Ltd, Unit D6 Laser Quay, Culpeper Close, Medway City Estate,  
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## Mechanical Details and Connections.



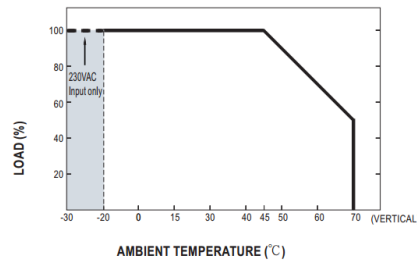
Terminal	Function (TB1)
1	AC Live
2	AC Neutral
3	Input Earth
Terminal	Function (TB2)
1 and 2	-V Output
3 and 4	+V Output
5	Battery +
6	Battery -
7 and 8	AC OK
9 and 10	Battery Low

## Suggested System Configuration :

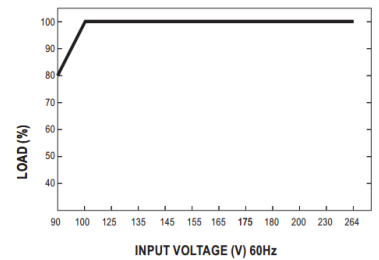


The power supply charges the battery and provides energy to the load at the same time when AC mains is OK. The battery starts to supply power to the load when AC mains fails.

Derating Curve



Static Characteristics

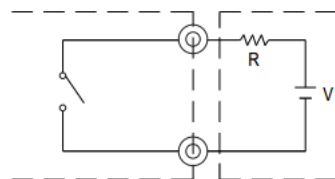


### Alarm signal for AC OK and Battery Low :

Alarm signal is sent out through "AC OK" & "Battery Low" pins via relay contact. An external voltage source is required for this option. The maximum applied voltage is 30 Volts and the maximum sink current is 1A, see below diagram. AC OK Signal will go into hiccup mode when the overload protection is activated

Function	Description	Output of Alarm
<b>AC OK</b>	The signal is "Low" when the power supply turns ON	Low or Short
	The signal turns to be "High" when the power supply turns OFF	High or Open (External applied voltage 30V Max)
<b>Battery Low</b>	The signal is "Low" when the voltage of battery is under A:11V, B:22V	Low or Short
	The signal is "High" when the voltage of the battery is above A:11V, B:22V	High or Open (External applied voltage 30V Max)

AC OK (Battery low)



External voltage source (V) and resistor (R)  
(The max. Sink is 1A and 30V)

Specifications can change without notice. E&OE. ALL PSU Terms & Conditions apply.

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