

MEAN WELL DRC-100A

MEAN WELL DRC-100A 100W Single Output Power Supply Battery Charger User Manual

Model: DRC-100A | Brand: MEAN WELL

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of the MEAN WELL DRC-100A 100W Single Output Power Supply Battery Charger. Please read this manual thoroughly before installation and use, and retain it for future reference.

The DRC-100A is a 96-watt AC/DC DIN rail type security power supply series. It features a primary output and a charger output, designed for backup power supply applications in security access systems.

2. SAFETY INSTRUCTIONS

- Ensure proper grounding before connecting the unit.
- Do not operate the unit in environments with excessive moisture or extreme temperatures.
- Disconnect power before performing any maintenance or installation procedures.
- Only qualified personnel should perform installation and servicing.
- Verify input voltage and output load specifications before connecting.

3. PRODUCT OVERVIEW

The MEAN WELL DRC-100A is designed for reliable power delivery and battery charging with UPS functionality. Key features include:

- Universal AC input / Full range (90 to 264 VAC).
- Protections: Short circuit, overload, over voltage.
- Battery low protection / Battery reverse polarity protection by fuse.
- DIN rail mountable (TS-35/7.5 or 15).
- Alarm signal for AC OK and battery low (via relay).

- Cooling by free air convection.
- 100% full load burn-in test.



Figure 1: MEAN WELL DRC-100A Power Supply mounted on a DIN rail. The unit features a blue vented casing and a white front panel with terminal blocks and indicators.

4. SETUP AND INSTALLATION

4.1 Mounting

The DRC-100A is designed for DIN rail mounting. It can be installed on TS-35/7.5 or TS-35/15 DIN rails. Ensure the unit is securely fastened to prevent accidental dislodgement.

4.2 Wiring Connections

Refer to the terminal block labels for correct wiring. The unit has input terminals for AC power, output terminals for DC load, and terminals for battery connection and alarm signals.

- **Input (AC):** Connect the AC input (100-240VAC, 50/60Hz) to the 'N' (Neutral) and 'L' (Line) terminals.
- **DC Output:** Connect the DC load to the '+V' and '-V' terminals. The primary output is +13.8VDC, 4.5A.
- **Battery Charge:** Connect the backup battery to the 'Bat. +' and 'Bat. -' terminals. The battery charge output is +13.8VDC, 2.5A.
- **Alarm Signals:** The unit provides 'AC OK' and 'Bat. Low' alarm signals via relay contacts. Refer to the product label for specific pinouts.



Figure 2: Detail of the DRC-100A front panel showing input terminals (N, L), DC output terminals (+V, -V), battery terminals (Bat.+, Bat.-), alarm signal terminals (Bat. Low, AC OK, DC OK), and the '+V ADJ' potentiometer for voltage adjustment.

4.3 Voltage Adjustment

The output voltage can be adjusted using the '+V ADJ' potentiometer located on the front panel. Use a small screwdriver to carefully turn the potentiometer to set the desired output voltage within the specified range.

5. OPERATING INSTRUCTIONS

5.1 Power On

After all connections are securely made, apply AC power to the unit. The 'DC OK' LED indicator will illuminate, indicating normal operation. If a battery is connected, it will begin charging.

5.2 UPS Functionality

The DRC-100A provides an Uninterruptible Power Supply (UPS) function. In the event of an AC power failure, the unit will automatically switch to battery power to maintain the DC output to the load. When AC power is restored, the unit will seamlessly switch back to AC power and resume battery charging.

5.3 LED Indicators

- **DC OK:** Illuminates when the DC output is within the normal operating range.
- **AC OK:** Illuminates when AC input power is present and within acceptable limits.
- **Bat. Low:** Illuminates when the connected battery voltage drops below a predefined threshold, indicating a low battery condition.

6. MAINTENANCE

- **Cleaning:** Keep the unit clean and free from dust. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Ventilation:** Ensure adequate airflow around the unit for proper cooling. Do not obstruct the ventilation openings.
- **Connections:** Periodically check all wiring connections for tightness and signs of corrosion.
- **Battery Check:** Regularly inspect the connected battery for any signs of damage or leakage. Follow the battery manufacturer's maintenance guidelines.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No DC output / 'DC OK' LED off	No AC input power; Overload; Short circuit; Internal fault.	Check AC input connections and power source. Reduce load. Check for short circuits. If problem persists, contact support.
'Bat. Low' LED illuminated	Battery voltage is low; Battery faulty; Charging circuit issue.	Allow battery to charge. Check battery condition. Verify charging connections.
Unit is hot	Insufficient ventilation; Overload.	Ensure adequate clearance for airflow. Reduce load to within specifications.

8. SPECIFICATIONS

Parameter	Value
Model	DRC-100A
Input Voltage	90 to 264 VAC
Input Frequency	47 to 63 Hz
Primary Output Voltage	13.8 VDC
Primary Output Current	4.5 A

Parameter	Value
Battery Charge Output Voltage	13.8 VDC
Battery Charge Output Current	2.5 A
Maximum Output Power	96.6 W
Efficiency	87%
Operating Temperature	-30°C to 70°C
Dimensions (L x W x H)	2.17 x 3.54 x 3.94 inches
Weight	0.01 ounces
Agency Approvals	UL/cUL/TUV/CB/CE

9. WARRANTY AND SUPPORT

The MEAN WELL DRC-100A comes with a 3-year warranty. For technical support, warranty claims, or service inquiries, please contact your authorized MEAN WELL distributor or visit the official MEAN WELL website for contact information. Please have your product model number (DRC-100A) and purchase date available when contacting support.