

6060-00 48V DC Power Supply

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1. General

1.01 The Westell 6060-00 is a 100 watt DC power supply which provides 48V DC at 2 Amps of DC power when plugged into any standard 115V AC 60Hz wall outlet. The unit is enclosed in a self-contained case designed for mounting in customer premise apparatus cases such as the Westell 914 or 915 Station Mounting. The unit is designed for use in various configurations of the Westell 43 System Private Line Station Package or any application requiring 48V DC power.

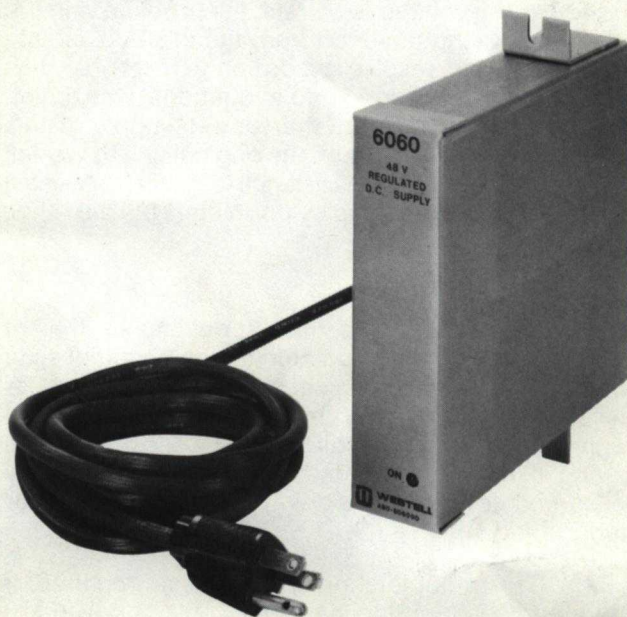
1.02 The Westell 6060-00 supply provides a floating source of 48V DC at 2 Amps. Either the positive or negative terminal may be strapped to a ground terminal located on the unit's rear panel barrier strip. The 6060-00 features an LED-type indicator located on the front panel of the unit, indicating the presence of 48V at the output. The unit is internally protected against output short-circuit and over-voltage conditions.

2. Operating Description

2.01 The 6060-00 Power Supply uses a switched mode design for optimum efficiency and reliability. The input 60Hz AC signal is routed through an internal fuse to a rectifier circuit. The fuse prevents excessive loads on the power line in the event of a component failure within the 6060-00's primary side circuit. The rectified signal is used to power the unit's chopper circuit and provides the input to the converter circuit. The converter circuit runs at a frequency of approximately 100K Hz, allowing for the use of small lightweight components and eliminating noise problems within the voice band.

2.02 The converter's output is an AC signal which is rectified to produce the DC output. Regulation is obtained through the use of a circuit which monitors the output and controls the converter driver circuitry to maintain an essentially constant voltage output. This circuit is also used to protect the unit against output short-circuit conditions.

2.03 The output is sensed and used as the control for the front-mounted LED indicator. If the output is within 48V limits, the red 48V indicator lights.



3. Inspection

3.01 Inspect the equipment thoroughly as soon as possible after delivery. Any damage should be reported immediately to the transportation company.

3.02 The 6060-00 module is identified by a model number and issue letter imprinted on the front. Each time a change is made to the equipment which changes the form, fit or function of the module, the issue letter is advanced. Therefore, be sure to include the issue letter and the model number when making inquiries about the equipment.

4. Installer Connections

4.01 Connections are made to the 6060-00 unit via a barrier strip located on the rear of the unit. The barrier strip has three screw terminals: negative, positive and common. Use of 20 gauge or heavier wire is recommended for power connections.

4.02 The output between the positive and negative terminals is a floating DC voltage source. Either terminal may be strapped to the ground terminal as required. The positive terminal can be connected to a different -48V DC source to produce -96V DC at the negative terminal. Either terminal may be biased with up to $\pm 200V$ DC relative to earth ground.

5. Testing

5.01 The unit can be checked by examining the front mounted indicator light. The red lamp "ON" indicates proper 48V output. The DC voltage at the output terminals can be tested with a Simpson 260

VOM or equivalent. The DC voltage between the positive and negative terminals should be $48 \pm 2.4V$ DC.

5.02 If trouble is encountered with the unit, check for the correct output voltage per Section 5.01 above. If output is not correct, verify that the unit is plugged in the wall and outlet is functional. If so, disconnect the connections to the 6060-00 barrier strip and check for 48V. If the voltage is correct, the problem is in the equipment being powered from the 6060-00. Isolate the trouble and resolve accordingly. If trouble persists and unit is plugged into a functional wall outlet, replace the unit with another power supply. If this corrects the problem, return the original unit to Westell for repair. For technical assistance, contact the Westell Technical Services group by phoning (312) 789-0888.

6. Warranty

6.01 Westell warrants this product to be free of defects and to be fully functional for a period of sixty months from date of original shipment, given proper installation and regular maintenance. Westell will repair or replace any unit without cost during this period if the unit is found to be defective for any reason other than abuse or improper use or installation.

6.02 This module should not be field repaired. If the module is found to be faulty, replace it with another unit and return the faulty unit to Westell for repair. Any modifications of the unit by anyone other than an authorized Westell representative will cause the warranty to be void.

6.03 If a replacement unit is required, it will be shipped in the fastest manner consistent with the urgency of the situation. Contact Westell for instructions regarding exchange of modules at the following location.

Westell, Inc.
7630 Quincy Street
Willowbrook, IL 60521
(312) 789-0888
(800) 323-6883
Telex 280626

6.04 Westell will continue to repair or replace faulty modules beyond the warranty program at a nominal charge. Contact your Westell sales representative for details and pricing.

7. Specifications

- 7.01 Input Voltage:
90 to 135V rms 60Hz
- 7.02 Output Voltage:
 $48 \pm 2.4V$ DC
- 7.03 Output Current:
2A max at 48V DC
- 7.04 Input Current:
1A AC max at nominal line
- 7.05 Efficiency:
80% minimum
- 7.06 Hold-Up Time (to +20V):
50msec min at full load and nominal line
- 7.07 Output Ripple:
Less than 10mV rms from DC to 10KHz
- 7.08 EMI/Safety:
Per UL-478, CSA 22.2 #154-1975
EDP equipment and FCC Docket 20780/Class B
- 7.09 Operating Temperature Range:
0°C to +50°C
- 7.10 Weight: 1 lb., 8 oz.
- 7.11 Mounting:
Standard Apparatus Case — Single Slot
- 7.12 Step Response:
+25% load change, V out changes $\pm 0.002\%$, with less than 40msec settling time to within 1% of initial reading. No overshoot on start-up or shutdown.
- 7.13 Line/Load Regulation:
.05% min to max load, 90 to 130V AC line
- 7.14 Minimum Load:
50mA for full regulation. No-load will not damage.