Manual backdating changes.
For "C" Instruments, 6218B, 6241B.

For reference, refer to Appendix A.

Change page may be included.

Model 6218C, 2715K-00101
Model 6216C, 2715K-00101
Model 6241C, 2715K-00101
Model 6212C, 2715K-00101

For serials:
OPERATING AND SERVICE MANUAL

6214C, 6216C, 6218C
MODELS 6212C
BENCH SERIES
DC POWER SUPPLY

Hewlett-Packard
MANUALS

ORDERING ADDITIONAL MANUALS

Described by this manual is the instrument and its associated accessories, which are shipped with the manual for the unit. The manual includes all necessary information for the operation and maintenance of the instrument, including instructions for setting up, adjusting, and troubleshooting. The manual is designed to be easily readable and user-friendly.

SPECIFICATIONS

The specifications for the instrument are given in Table 1.1.

1.7 OPTIONS

The options are listed in Table 1.2. Additional options for the instrument are available upon request.

1.8 OPTIONS

Options are listed in Table 1.3. Additional options for the instrument are available upon request.

1.9 ACCESSORIES

The accessories included with the instrument are listed in Table 1.4.

GENERAL INFORMATION

Section 1
### Power Cord

**4-3/4" x 5" (122 cm) power cord is provided with each unit.**

**Power Cord:**
- 1 ma
- 2 ma
- 6 ma
- 6.214 ma
- 0.5 ma

**Weight:**
- 4/16.75 kg, 6/16.75 kg, 3/16.75 kg, 7/16.9 kg, 9/16.75 kg, 11/6.9 kg, 15/6.9 kg, 17/6.9 kg, 20/6.9 kg

**EMC Test:**
- Conduction current - less than (see table) conduction current - less than 0.3% + 1.0 mm

**Temperature Coefficient:**
- Storage: -40° to +70° C
- Operating: 0° to 50° C

**Temperature Ranges:**
- 25°C to 0°C
- 0°C to 50°C

**Output Current:**
- Continuous - less than 150 mA rms/per A
- Continuous voltage - less than 200 V rms, 5 A

**Ripple and Noise:**
- Output voltage and current within limits:
  - For a 20% change in the nominal load voltage of any load, the output voltage is within 
  - Continuous Current - less than 500 mA for a load
  - Continuous Voltage - less than 4 MV for a load

**Line Regulation:**
- Less than 0.2% of the rated load of the supply

**Load Regulation:**
- Less than 0.5% of the rated load of the supply

### Output Voltages

<table>
<thead>
<tr>
<th>Output Voltage</th>
<th>0.4 A</th>
<th>0.1 A</th>
<th>0.2 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 ma</td>
<td>0.17 V</td>
<td>0.17 V</td>
<td>0.17 V</td>
</tr>
<tr>
<td>2 ma</td>
<td>0.17 V</td>
<td>0.17 V</td>
<td>0.17 V</td>
</tr>
<tr>
<td>6 ma</td>
<td>0.17 V</td>
<td>0.17 V</td>
<td>0.17 V</td>
</tr>
<tr>
<td>6.214 ma</td>
<td>0.17 V</td>
<td>0.17 V</td>
<td>0.17 V</td>
</tr>
<tr>
<td>0.5 ma</td>
<td>0.17 V</td>
<td>0.17 V</td>
<td>0.17 V</td>
</tr>
</tbody>
</table>

**Stability:**

- Conduction current - less than 0.1% + 0.5 mV

**Electrical Characteristics:**
- Input: 240 V ± 10%, 50 Hz ± 10%
Figure 2.1. Outline Diagram

2-1 INITIAL INSPECTION

2-2 Before shipment, the instrument was inspected and found to be free of mechanical and electrical defects.

2-3 Mechanical Check

2-4 This check should confirm that there are no

2-1 INSTALLATION DATA

2-2 Operation

2-3 Ensure that all connections are made as specified and that the screw heads are flush with the surface of the case.

2-4 Inspect the instrument for evidence of physical damage or corrosion.

2-5 Electrical Check

2-6 The instrument should be checked against the operation section and the electrical specifications.
2.19 Power cable

220 volt plug

2.22 Repackaging for Shipment

To insure safe shipment of the instrument, it is recommended that the packaging designed for the instrument is used.

2.23 To ensure safe shipment of the instrument, it is recommended that the packaging designed for the instrument is used.

2.15 Input Power Requirements

When connected to 115 volt power source at full load, the power cable is plugged into an appropriate 230 volt 50 Hz power source.

By connecting a 240 volt 50 Hz power source, the input power required for 115 volt operation is reduced to half. The input power required for 230 volt 50 Hz power source is approximately the same as for 115 volt operation.

The power supply may be operated continuously.

2.16 Connections for 220 Volt

Model Input Current Input Power

<table>
<thead>
<tr>
<th>Model</th>
<th>Input Current</th>
<th>Input Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>6180</td>
<td>0.25A</td>
<td>26W</td>
</tr>
<tr>
<td>6170</td>
<td>0.25A</td>
<td>26W</td>
</tr>
<tr>
<td>6140</td>
<td>0.25A</td>
<td>28W</td>
</tr>
<tr>
<td>6120</td>
<td>0.25A</td>
<td>28W</td>
</tr>
</tbody>
</table>

2.17 Connections for 230 Volt

Model Input Current Input Power

<table>
<thead>
<tr>
<th>Model</th>
<th>Input Current</th>
<th>Input Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>6180</td>
<td>0.25A</td>
<td>26W</td>
</tr>
<tr>
<td>6170</td>
<td>0.25A</td>
<td>26W</td>
</tr>
<tr>
<td>6140</td>
<td>0.25A</td>
<td>28W</td>
</tr>
<tr>
<td>6120</td>
<td>0.25A</td>
<td>28W</td>
</tr>
</tbody>
</table>

2.18 Transformer connections

**Figure 2.3:** Input Power Transformer Connections
OPERATING INSTRUCTIONS

Section III

3.1 Turn on Check-out

3.2 The following check-out procedure describes the use of input panel controls and indicators illustrated in Figure 3-1 and ensures that the supply is operational.

3.3 Operations

3.3.1 Remove short and connect load to output.

3.3.2 Output current reaches zero and maximum rated value and then slowly decrease to zero

3.3.3 Turn off and turn the CURRENT control fully to the left.

3.3.4 Set METER SELECTION switch (2) to VOLT.

3.3.5 Push AC switch (1) into position.

3.4 The power supply cannot be closed up to 130 volts off ground (normal operation) in parallel, or in series. The output voltage of a series unit is the sum of the individual output voltages of each unit.

3.5 Connecting Leads

3.5.1 Connect input leads to the power supply terminals. Each lead should be connected to the power supply terminals with a number of turns of wire wrapped around the terminals. Then wrap the leads and metal covering the leads of the low output terminals using tape and tighten the connections with screws.

3.5.2 All current leads should be made for high peak voltages when using ungrounded equipment. Allowances must be made for high peak. Output current, in the output circuit will drop out in the event of a short circuit at the power supply terminals. Always connect all leads to the power supply terminals, always observe that the equipment is off before making the connections to the power supply terminals.

3.6 Constant Current

3.6.1 Unwound constant current coils can cause the current to rise above the setting of the control, therefore allowances must be made for both peak and constant current in coils that are to be used in parallel.

3.6.2 The constant current coil will drop in proportion as the output voltage will drop out in the event of a short circuit at the power supply terminals. Always connect all leads to the power supply terminals, always observe that the equipment is off before making the connections to the power supply terminals.
to initially the total current drawn by the load. However, if the power supply is connected across the source terminals, the load current will flow through the source terminals and the power supply will need to be capable of delivering the required current. If the power supply is not capable of delivering the required current, it will not be able to operate properly.

3-19 Special Operating Modes

3-11 If load considerations require that the output power be limited, the output voltage can be adjusted by a trimmer capacitor across the output terminals. This can be done to limit the power output or to maintain a constant voltage across the load.

3-20 Pure Loading

3-12 Operation of Supply beyond Normal Conditions

Separately connected to the remote distribution terminals, a separate power supply may be used to provide a steady source of power to the load. This power supply can be connected to the remote distribution terminals to provide a constant voltage source for the load. The power supply can be adjusted to maintain a constant voltage across the load, even when the load conditions change.