PORTABLE DC HIPOTS

**Description**

PHENIX Technologies offers a line of conservatively designed and ruggedly built portable DC Hipots for use in testing electrical switchgear, cables, motors, generators, and protective equipment. DC testing is popular because the equipment is more compact and lighter in weight than comparable AC equipment and is also generally less expensive.

The DC Hipots offered by PHENIX Technologies are suitable for lab or field use and are especially helpful when it is needed to determine the adequacy of newly installed insulation or to determine when corrective steps are necessary to return equipment to a safe operating condition. The results of DC tests will help predict the useful life of insulation. Establishing a consistent maintenance testing program reduces failures and extends equipment life.

**Design & Safety Features**

- Continuously adjustable output
- Negative output, positive ground
- Guard circuit for stray leakage current bypass
- Three range voltmeters
- Zero start interlock
- CONTROL POWER ON switch with indicator
- HV ON/OFF pushbuttons with indicators
- External interlock provision
- Surge and transient protection
- Rugged impact/corrosion resistant rotomolded cases with carrying handles and cable storage
- 6-foot input cord (three wire)
- 20-foot test leads (3) with clips and boots
- 25-foot interconnect cable (4120-5, 4160-2)
- Adjustable overcurrent trip on selected models—please inquire
- Grounding stick
- Other output voltages
- Discharge Stick
- Digital meters
- Output and return lead lengths can be specified

**Technical Data**

<table>
<thead>
<tr>
<th>Feature</th>
<th>4160-5</th>
<th>478-5</th>
<th>4100-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODEL</strong></td>
<td>4160-5</td>
<td>478-5</td>
<td>4100-5</td>
</tr>
<tr>
<td><strong>INPUT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>120 or 220 VAC, 50/60 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>1.86A</td>
<td>4.425A</td>
<td>8.5A</td>
</tr>
<tr>
<td><strong>OUTPUT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>0-300 V</td>
<td>0-700 V</td>
<td>0-1000 V</td>
</tr>
<tr>
<td>Current</td>
<td>5 mA</td>
<td>5 mA</td>
<td>5 mA</td>
</tr>
<tr>
<td>Ripple</td>
<td>&lt;2.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polarity</td>
<td>Negative, positive ground</td>
<td>Positive, negative ground</td>
<td>Positive, negative ground</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>1 hour on/1 hour off</td>
<td>1 hour on/1 hour off</td>
<td>1 hour on/1 hour off</td>
</tr>
<tr>
<td><strong>METERS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage range</td>
<td>0-300V/1000V</td>
<td>0-300V/1000V</td>
<td>0-300V/1000V</td>
</tr>
<tr>
<td>Current range</td>
<td>5 mA</td>
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<tr>
<td><strong>Accuracy</strong></td>
<td>+/- 2% FS</td>
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</tr>
</tbody>
</table>

*Based on our commitment to continual research and development, PHENIX Technologies reserves the right to update product specifications without notice!*

**Options**

- Adjustable overcurrent trip on selected models—please inquire
- Grounding stick
- Other output voltages
- Discharge Stick
- Digital meters
- Output and return lead lengths can be specified
Control Panel Layout

Dimensions/Weights*

<table>
<thead>
<tr>
<th>MODEL</th>
<th>430-5</th>
<th>470-5</th>
<th>4100-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>21” W x 17” D x 14” H</td>
<td>21” W x 17” D x 14” H</td>
<td>22.5” W x 20” D x 16.5” H</td>
</tr>
<tr>
<td>(533mm) x (432mm) x (355mm)</td>
<td>(533mm) x (432mm) x (355mm)</td>
<td>(572mm) x (508mm) x (420mm)</td>
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</tr>
<tr>
<td>Weight</td>
<td>53 lbs. (24kg)</td>
<td>80 lbs. (36kg)</td>
<td>196 lbs. (88kg)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODEL</th>
<th>4120-5</th>
<th>4160-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Module</td>
<td>21” W x 17” D x 14” H</td>
<td>21” W x 17” D x 14” H</td>
</tr>
<tr>
<td>(533mm) x (432mm) x (355mm)</td>
<td>(533mm) x (432mm) x (355mm)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>35 lbs. (15kg)</td>
<td>33 lbs. (15kg)</td>
</tr>
</tbody>
</table>

| HV Module | 17.5” W x 12” D x 22” H | 18” W x 12.75” D x 28” H |
| (440mm) x (305mm) x (560mm) | (460mm) x (325mm) x (710mm) |
| Weight | 111 lbs. (50kg) | 150 lbs. (68kg) |
| 430-5 | 470-5 | 4100-5 |

*Note: for 220 VAC, add 10 lbs. (4.5kg) to 470-5, 4100-5, 4120-5 and 4160-2 controls; 4 lbs. (1.8kg) to 430-5.

The PHENIX Technologies Product Line

- AC Dielectric Test Sets
- Resonant Test Sets
- DC Hipots and Insulation Test Sets
- Automatic Insulating Material Testers (DI49)
- Liquid Dielectric Test Sets
- Megohmmeters
- Vacuum/Oil Interrupter Testers
- Bucket Truck Testers
- High-Frequency Cable Aging Test Sets
- Heat Cycling Test Sets
- Rubber Goods—Protective Equipment Testers
- Core Loss Testers
- AC, DC and AC/DC Motor Test Sets
- Transformer Test Systems
- Computerized Circuit Breaker Test Sets
- Computerized Recloser Test Sets
- DC Power Supplies
- High Voltage DC Cable Thumpers
- High Voltage Terminations
- High Power Column-Type Variable Transformers
- High Power Thoma-Type Variable Transformers
- Voltage and Current Stabilizers

Your local representative is

1. AC power cord
2. Output lead
3. Return terminal
4. Ground terminal
5. Guard terminal
6. Voltmeter range selector
7. Currentmeter range selector
8. Three-range voltmeter
9. Voltmeter calibration potentiometers
10. Currentmeter calibration potentiometers
11. Four-range currentmeter
12. Output voltage control
13. High Voltage OFF
14. High Voltage ON
15. Backup fuse
16. Main fuse
17. Control power indicator
18. Control power switch
19. Main fuse
20. External interlock