

# Advanced Test Equipment Corp.

www.atecorp.com800-404-ATEC (2832)

## 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

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/corosion 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)

#### **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



Model 470-5

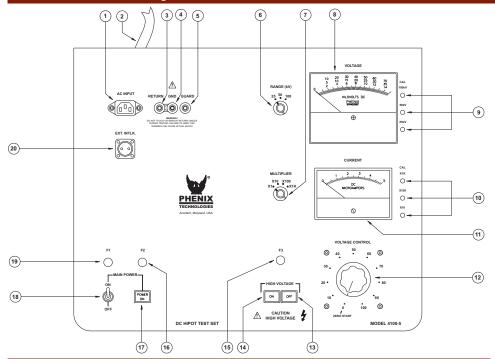
#### **Technical Data\***

| MODEL          | 430-5                     | 470-5                | 4100-5         |  |
|----------------|---------------------------|----------------------|----------------|--|
| INPUT          |                           |                      |                |  |
| Voltage        |                           | 120 or 220 VAC, 50/6 | 60 Hz          |  |
| Current        | 1.8/9A                    | 4.4/2.2 <b>A</b>     | 6/3A           |  |
| OUTPUT         |                           |                      |                |  |
| Voltage        | 0-30kV                    | 0-70 kV              | 0-100 kV       |  |
| Current        | 5 m <b>A</b>              | 5 m <b>A</b>         | 5 m <b>A</b>   |  |
| Ripple         |                           | < 2.5%               |                |  |
| Polarity       | negative, positive ground |                      |                |  |
| Duty Cycle     | 1 hour on/1 hour off      |                      |                |  |
| METERS         |                           |                      |                |  |
| Voltage ranges | 0-6/12/30 kV              | 0-14/35/70 KV        | 0-25/50/100 kV |  |
| Current ranges |                           | 0-5/50/500/5000 μΑ   |                |  |
| Туре           |                           | 4½ in, analog        |                |  |
| Accuracy       |                           | +/- 2% FS            |                |  |

| MODEL          | 4120-5                    |   | 4160-2   |  |
|----------------|---------------------------|---|--|--|
| INPUT          |                           |   |  |  |
| Voltage        |                           | 120 or 220 VAC, 50/60 Hz                |  |  |
| Current        | 6.6/3.3A                  |   | 6.6/3.3 A  |  |
| OUTPUT         |                           |   |  |  |
| Voltage        | 0-120 kV                  |   | 0-160 kV   |  |
| Current        | 5 mA                      |   | 2 mA/5 mA charging                                 |  |
| Ripple         | < 2.5% peak-to-peak       |   |  |  |
| Polarity       | negative, positive ground |   |  |  |
| Duty Cycle     | 1 hour on/1 hour off      |   | $2\mathrm{m}\mathbf{A}$ @ $1$ hour on $1$ hour off |  |
|                |                           |   | /5 m <b>A</b> @ 5 min. on                          |  |
|                |                           |   | /15 min off duty cycle                             |  |
| METERS         |                           |   |  |  |
| Voltage ranges | 0-30/60/120 kV            |   | 0 <b>-40/80</b> /160 kV                            |  |
| Current ranges | 0-5/50/500/5000 μΑ        |   | 0-5/50/500/5000 μ <b>A</b>                         |  |
| Туре           | 4½ in., analog            |   | 4½ in., analog                                     |  |
| Accuracy       | +/- 2% FS                 | *************************************** | +/- 2% FS  |  |

<sup>\*</sup>Based on our commitment to continual research and development PHENIX Technologies reserves the right to update product specifications without notice!

#### **Control Panel Layout**



## **Dimensions/Weights\***

| MODEL          | 430-5                     | 470-5                     | 4100-5                    |
|----------------|---------------------------|---------------------------|---------------------------|
| Dimensions     | 21" W x 17" D x 14" H     | 21" W x 17" D x 14" H     | 22.5" W x 20 " D x 16.5"H |
|                | (533mm) x (432mm) (355mm) | (533mm) x (432mm) (355mm) | (572mm) (508mm) (420mm)   |
| Weight*        | 53 lbs. (24kg)            | 80 lbs. (36kg)            | 106 lbs. (48kg)           |
| MODEL          | 4120-5                    | 4160-2                    |                           |
| Control Module | 21" W x 17" D x 14" H     | 21" W x 17" D x 14" H     |                           |
|                | (533mm) (432mm) (355mm)   | (535mm) (435mm) (355mm)   |                           |
|                | 33 lbs. (15kg)            | 33 lbs. (15kg)            |                           |
| HV Module      | 17.5" W x 12" D x 22" H   | 18" W x 12.75" D x 28" H  |                           |
|                | (440mm) (305mm) (560mm)   | (460mm) (325mm) (710mm)   |                           |
|                | 111 lbs. (50kg)           | 150 lbs. (68kg)           |                           |

<sup>\*</sup>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.

- 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
- $12. \ {\bf Output} \ {\bf voltage} \ {\bf control}$
- 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

## The PHENIX Technologies Product Line

- AC Dielectric Test Sets
- Resonant Test Sets
- DC Hipots and Insulation Test Sets
- Automatic Insulating Material Testers (Dl49)
- 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





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### Your local representative is