**INSTRUCTIONS**

**POWERSTAT** Variable Transformers With Powerkote Coils
116CU-40 / 116C / 117C / 216C and 217C Series

**FOR INSTALLATION**

**OPERATION AND MAINTENANCE**

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**MOUNTING TEMPLATE NO. 1**

**NOTE:** All dimensions are in inches (millimeters).

**STANDARD MOUNTING:**
- 4 SLOTS IN PANEL AS SHOWN FOR ¼"-20 MOUNTING BOLTS

**ALTERNATE MOUNTING:**
- 3 HOLES IN PANEL AT 120° TAPPED FOR 6-32 DIAL MOUNTING SCREWS

**HOLE IN PANEL TO CLEAR 3/8" CENTER SHAFT**

**3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS**

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**MOUNTING TEMPLATE NO. 2**

**NOTE:** All dimensions are in inches (millimeters).

**HOLE IN PANEL TO CLEAR 3/8" CENTER SHAFT**

**3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS**

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**INSPECTION**

In POWERSTAT Variable Transformers, a visual product inspection will be made. When unpacking, examine carefully for any shipping damage. Inspect the unit carefully with particular care. The "Change and Check" instructions packed with the unit outline the proper procedures to follow if any parts are damaged or missing.

**INSTALLATION**

**NOTE:** The unit should be provided from floor or deck that is most convenient for the application. All units are designed so that the full range of electrical adjustments can be made without the aid of an auxiliary motor. A blanking plate in the panel thickness plus ½" for panel thickness plus ⅛" for top and bottom mounting holes. The units are shipped for bench mounting. To change to back-of-panel mounting, see the "Back-of-Panel Mounting" section.

**MOUNTING HOLE WIDTHS**
- 3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS

**MOUNTING HOLES**
- 3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS

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**BACK-OF-PANEL MOUNTING**

**Using Drilling Template No. 2, locate and drill the four mounting holes.**

**MOUNTING HOLE WIDTHS**
- 3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS

**MOUNTING HOLES**
- 3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS

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**SINGLE UNITS**

Models 3PN116C, 3PN117C, 3PN216C, and 3PN217C have a cord and plug input and a receptacle output, and are usually used as a portable source of variable a-c voltage. If desired they may be mounted in the same manner as other manually operated single units.

**CHANGING AND CHECKING**

1. **Using Drilling Template No. 1, locate and drill the desired set of mounting holes.**
2. **Remove the knob and dial, loosen the shaft setscrews in the insulator of the commutator.**
3. **Place the unit in position and insert and tighten ¼" screws.**
4. **Put the dial back on the shaft and secure the shaft setscrews.**
5. **Remove the terminal cover and make the necessary connections to the terminal cover.**

**BACK-OFPANEL MOUNTING**

**Using Drilling Template No. 2, locate and drill the four mounting screw holes, the three dial mounting screw holes and the center shaft hole.**

**MOUNTING HOLE WIDTHS**
- 3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS

**MOUNTING HOLES**
- 3-HOLE PANEL AT 120° TAPPED FOR 6-32 MOUNTING SCREWS

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**MAINTENANCE**

With ordinary care, a POWERSTAT Variable Transformer should require no servicing except possible replacement of the brush assembly. The brush must be of a special material, replace only with a Superior Electric Replacement Brush Assembly. With ordinary care, a POWERSTAT Variable Transformer should require no servicing except possible replacement of the brush assembly. The brush should be replaced whenever unusual mechanical or electrical difficulties are encountered in the operation or installation of your POWERSTAT Variable Transformer, consult Superior Electric.

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**CONNECTIONS AND RATINGS**

**Important connection notes. Please read carefully.**

1. **Connections and Ratings given in these instructions are those most commonly used in applications of ganged units may be connected so that the units are electrically in parallel or in series.**
2. **The output current when connected in parallel is the sum of the currents of each unit.**
3. **The output current when connected in series is the minimum output current rating of the unit.**
4. **The output voltage when connected in parallel is the sum of the voltages of each unit.**
5. **The output voltage when connected in series is the minimum output voltage rating of the unit.**
6. **For connection diagrams, refer to the "Connections and Ratings" section of the manual.**

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**OPERATION IN STEP-UP CONNECTION**

**FORMER DRIVE**

**FOR THE STEP-UP CONNECTION the output current is the maximum current rating of any one unit, and the output voltage is the sum of the voltages of all units.**

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**RECOMMENDED FUSE (AMPERES)**

**MOTOR-DRIVEN ASSEMBLIES**

Motors drive POWERSTAT Variable Transformers within this series. Single units and ganged assemblies, may be bench or wall mounted in the series. However, have three side brackets requiring six bolts.

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**EVERYTHING IN THIS INSTRUCTIONS SHEET IS SUBJECT TO CHANGE.**
### Model Numbers

- 2.4
- 40
- 2.4
- 5.4
- 1.5
- 2-2-2
- Constant
- 208
- 0-580
- 15
- 3.5
- ME216CU-2
- Terminals & Rotation

Below models will operate at 600 volts, but nameplate ratings are at 480 volts and are UL Listed to 575 volt.

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### CONNECTION DIAGRAMS

RATINGS CHART

- **480 Volt, Single Phase**
- **480 Volt, Three Phase**
- **380 Volt, Single Phase**
- **480 Volt, Single Phase**
- **380 Volt, Single Phase**
- **480 Volt, Single Phase**
- **380 Volt, Single Phase**
- **480 Volt, Single Phase**

- **480 Volt, Three Phase**
- **380 Volt, Three Phase**
- **480 Volt, Three Phase**
- **380 Volt, Three Phase**

- **480 Volt, Single Phase**
- **480 Volt, Single Phase**
- **380 Volt, Single Phase**
- **380 Volt, Single Phase**

### MOUNTING TEMPLATE NO. 3

All dimensions are in inches (millimeters).

- 5" [127.00]
- 15-1/4" [387.35] FOR MOTOR DRIVEN 3-GANG ASSEMBLY (2 ADDITIONAL BOLTS FOR ADDED SHOCK RESISTANCE)
- 9-1/4" [234.95] FOR MANUALLY OPERATED OR MOTOR DRIVEN 3-GANG ASSEMBLY
- 10-3/8" [263.53] FOR MOTOR DRIVEN 2-GANG ASSEMBLY
- 4-3/8" [111.13] FOR MANUALLY OPERATED 2-GANG ASSEMBLY
- 5-1/2" [139.70] FOR MOTOR DRIVEN SINGLE UNIT
- 1-1/8" [28.58] BOTTOM OF STANDOFFS

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For more details, please refer to the CONNECTION DIAGRAMS and RATINGS CHART sections.