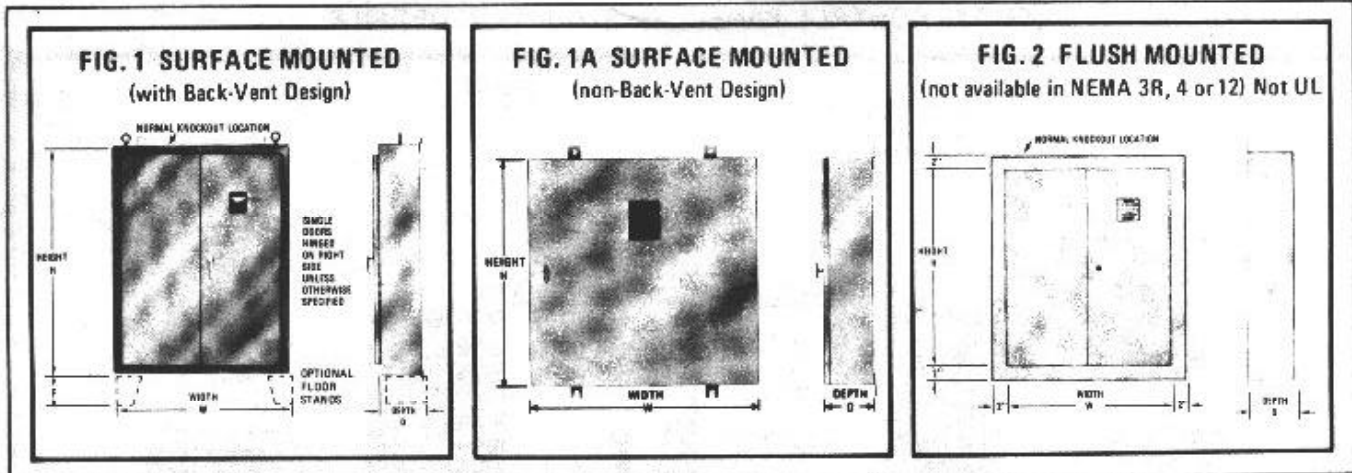


**SUBMITTAL DATA  
REMOTE CONTROL PANELS  
GENERAL DESCRIPTION AND BUILT-IN FEATURES**



**KEY TO OPTIONAL CONTROL FEATURES**

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| <p><b>2. Magnetic Contactor, Disconnecting</b><br/>A. Back-Up<br/>B. Safety<br/>E. Operating</p> <p><b>4. Mercury Contactor, Disconnecting</b><br/>A. Back-Up<br/>B. Safety<br/>C. Horizontal Airflow<br/>D. Vertical Airflow<br/>E. Operating</p> <p><b>5. Fuses, Main Supply (Applicable only to heaters with 48A or less total current)</b></p> <p><b>6. Fuses, One Set Per Step</b></p> <p><b>7. Fuses per NEC, 48A Maximum per Circuit</b></p> <p><b>8. Automatic Circuit Breakers, Main Supply (Applicable only to panels with 48A or less total current)</b><br/>B. Handle Protrudes Thru Cover<br/>C. Handle Concealed<br/>D. Interlocking Handle</p> <p><b>9. Automatic Circuit Breakers, One Per Step</b><br/>(Use Key 8 Options)</p> <p><b>10. Automatic Circuit Breakers per NEC, 48A Maximum per Circuit Breaker (Applicable to panels exceeding 48A total current)</b><br/>(Use Key 8 Options)</p> <p><b>11. Transformer</b><br/>A. With Primary Fusing<br/>B. With Secondary Fusing<br/>C1. Used as Fan Interlock-120V Primary<br/>C2. Used as Fan Interlock-208V Primary<br/>C3. Used as Fan Interlock-277V Primary<br/>C4. Used as Fan Interlock-480V Primary</p> | <p>C5. Used as Fan Interlock-240V Primary</p> <p><b>14. Fan Interlock Relay</b><br/>A. 24 Volts<br/>B. 120 Volts<br/>C. 208/240 Volts<br/>D. 277 Volts<br/>E. 480 Volts</p> <p><b>15. Disconnect Switch—Main</b><br/>A. Fused, Interlocking<br/>C. Nonfused, Interlocking</p> <p><b>16. Pilot Light(s)</b><br/>A. One Per Step<br/>B. Control Voltage On<br/>C. Power On (Line Volts)<br/>D. Normal Operation<br/>E. Airflow Switch Open<br/>F. Manual Reset Thermal Cutout On<br/>G. Push-To-Test Type<br/>H. Waterproof (Not UL)<br/>J. Overtemperature<br/>K. NEMA 12<br/>L. Heater On</p> <p><b>17. Toggle Switch(es)</b><br/>A. One Per Step<br/>B. Interrupts Control Voltage<br/>C. Momentary Test<br/>D. NEMA 12</p> <p><b>18. PE Switches</b><br/>A. Close on Pressure Rise (Reverse Acting)<br/>1. Fixed Differential<br/>2. Adjustable Differential<br/>B. Open on Pressure Rise (Direct Acting)<br/>(Use Key 18-A Options)<br/>C1. Furnished by Others, Installed, Wired, Piped and Calibrated by Brasch</p> | <p>C2. Furnished by Others, Installed and Wired by Brasch</p> <p>D1. Furnished, Installed, Wired, Piped and Calibrated by Brasch</p> <p>D2. Furnished, Installed and Wired by Brasch</p> <p><b>21. Step Controller(s)</b><br/>A1. Direct Acting Pneumatic Signal<br/>A2. Reverse Acting Pneumatic Signal<br/>C. Furnished by Others, Installed and Wired by Brasch<br/>D. Furnished, Installed and Wired by Brasch<br/>Q. Vernier<br/>S1. Single Input-1000 Ohm Balco Sensor<br/>S2. Single Input-135 Ohm Signal<br/>S3. Single Input-4-20 MA Signal<br/>S4. Single Input-0-16 VDC<br/>S5. Single Input-6-9 VDC<br/>S6. Single Input-0-10 VDC<br/>T. Dual Input-1000 Ohm Balco Sensor<br/>V. Step Controller Carries Load<br/>P. Pilot Duty Application</p> <p><b>22. SCR Controller(s)</b><br/>A. Horizontal Airflow<br/>B. Vertical Airflow<br/>H. 1K-50K Thermistor Input<br/>J1. Pneumatic Input-Direct Acting<br/>J2. Pneumatic Input-Reverse Acting<br/>K. 0-135 Ohm Input<br/>L. 0-16 VDC Input<br/>M. 0-10 VDC<br/>Q. Vernier<br/>S. 1000 Ohm Nickel or Balco Sensor Input<br/>T. 4-20 ma, DC Input<br/>U. 6-9 VDC Input<br/>V. Other Input (Specify)<br/>W. Disconnecting Contractors</p> | <p><b>23. Door Interlock Switch</b><br/>A. Defeatable Door Switch<br/>B. Nondefeatable Door Switch<br/>C. Interrupting Relay</p> <p><b>24. Time Delay Relay</b></p> <p><b>31. 1 Phase Circuits from 3 Phase, 3 Wire Supply</b></p> <p><b>32. 1 Phase Circuits from 3 Phase, 4 Wire Supply</b></p> <p><b>35. Other (see Certified Print or Order Acknowledgment for details)</b></p> <p><b>38. Pressure Transducer (Pneumatic to 135 Ohm)</b><br/>A. Direct Acting<br/>B. Reverse Acting<br/>C. Furnished by Others, Installed and Wired by Brasch<br/>D. Furnished, Installed, and Wired by Brasch</p> <p><b>52. Special Line Blocks for Single Supply Circuit (over 285 amps total current)</b></p> <p><b>53. Motor Starter (Not UL)</b><br/>A. With Hand-Off-Auto Button<br/>B. With Start-Stop Button<br/>C. Furnished by Others, Installed, Wired and Tested by Brasch<br/>D. Furnished, Installed, Wired, and Tested by Brasch<br/>E. With Motor Branch Circuit Fusing</p> |
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**KEY TO ENCLOSURE CONSTRUCTION**

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| <p>300. Standard (UL Listed for Indoor Use)<br/>A. Back-Vent (Fig. 1)<br/>B. Nonback-Vent (Fig. 1A)<br/>C. NEMA 1</p> <p>301. Flush Mounted (Figure 2; not UL 30"x30" and over)</p> <p>302. NEMA 3R Panel (Water Resistant for Outdoor Use, Not UL)</p> <p>303. NEMA 4 Panel (Water Resistant for Outdoor Use, Not UL)</p> <p>304. NEMA 12 Panel (Dusttight for Indoor Use)</p> <p>305. Lifting Eyes</p> | <p>306. Floor Stands<br/>A. Height F = 6"<br/>B. Height F = 12"<br/>C. Height F = 18"<br/>D. Height F = 24"</p> <p>307. Ventilation Grilles</p> <p>308. Forced Ventilation (not UL)</p> <p>316. Non-UL Due to Special Construction</p> <p>317. Knockout Location<br/>A. Top<br/>B. Bottom<br/>C. Right Side<br/>D. Left Side</p> |
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# BRASCH

MANUFACTURING COMPANY, INC.

## REMOTE CONTROL PANEL CONSTRUCTION DETAILS

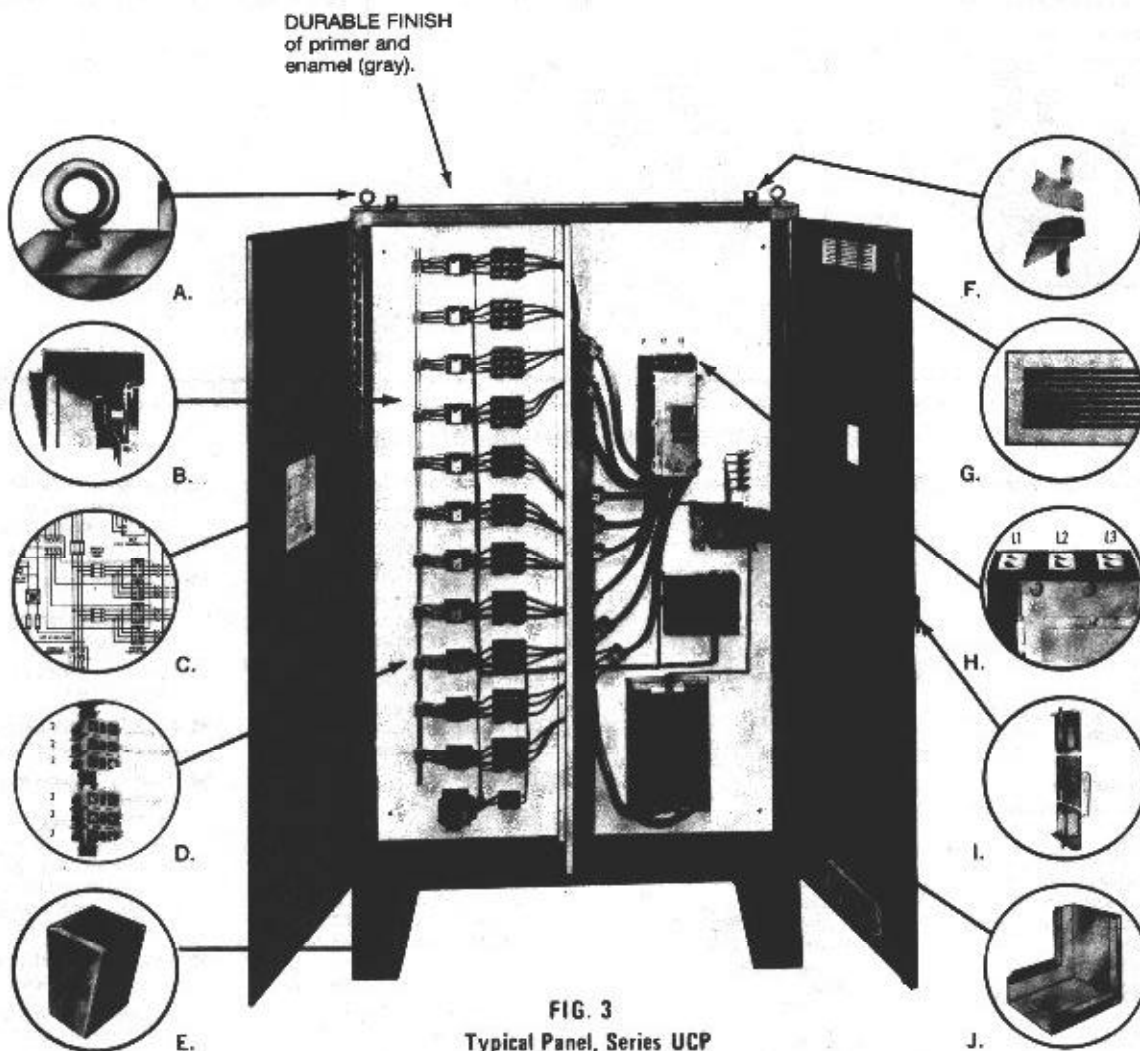


FIG. 3  
Typical Panel, Series UCP

### CONSTRUCTION DETAILS

All panels are UL Listed Under File No. E 46202 unless otherwise noted on Certified Print or Order Acknowledgment.

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| <p>A. Lifting Eyes are standard on panels exceeding 72" in width or height; optional on smaller sizes.</p> <p>B. Back-Vent Design (US Patent No. 3,681,663) allows air circulation between removable component panel board and frame channel.*</p> <p>C. Wiring Diagram shows detailed internal and external connections to panel and recommended supply wire gauges.</p> <p>D. Load Terminals, properly sized and clearly marked, are coordinated for connection to heater terminals.</p> <p>E. Floor Stands (optional) facilitate installation and allow panel to be free standing if desired.</p> | <p>F. Wall Mounting Brackets are offset to allow air to recirculate behind panel; not supplied on nonback-vent panels (Fig. 1A) which have internal mounting holes.</p> <p>G. Ventilation Grilles are standard on panels containing components requiring extra cooling.</p> <p>H. Line Terminals, properly sized and clearly marked. Wiring diagram indicates whether terminals are suitable for copper or aluminum wire.</p> <p>I. All panels have lock and key as standard; NEMA 3R and 4 panels have provisions for locking.</p> <p>J. Unique Frame Design using multiple angle forming produces exceptional rigidity.</p> <p>K. Hinged Doors are standard; one door furnished on panels up to 42" wide (hinged on the right-hand side). Two doors are furnished on all panels over 42" wide.</p> |
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\*Available only on Standard UL Listed panels per Fig. 1, Key No. 300A.

See reverse side for mounting information and Key to Built In Features.