MPC2 Multi-Point Digital PID Temperature Controller

Fully Configurable for enclosure type, sensors, number of zones, voltages, alarms, connections, communications, and protection

Advanced auto-tuning PID control

12-step temperature and ramp/soak programming control

Actual and Set-point programmable as °C or °F

Store up to 4 programs for easy repeatability

2 levels of password protection

Large 2-line, 3-color display simultaneously shows PV (actual) and SV (set) temperatures

Alarms as Audible, Dry Contact (remote), or both

Compatible with a broad range of heating blankets, tapes, and cables.

Specifications:

Maximum cure temperature: 999° F or 999° C

Operation: Automatic and manual control ability

Input/Output voltages: 120, 208, 220 - 240, 277, 380, 400 – 415, 480, and 575 - 600 (and 3-phase options)

Output overcurrent protection: up to 60 amps per zone with fuse or circuit breaker protection

Accuracy: 0.2% of temperature with sampling time of 60 milliseconds.

Sensor input connection options: Mini Type-J, Mini Type-K thermocouples, RTD or hardwire

Available safety options: Ground Fault Interruption; Door mounted disconnect; E-stop

Communications options: RS-485, RS-232 or Ethernet

Environmental exposure:

Operating range: 14° F to 104° F (-10° C to 40° C)

Storage range: -4° F to 158° F (-20° C to 70° C)

Relative humidity: 20 - 85% non-condensing temperatures

1 Do not exceed the maximum operating temperature of the heater.

2 Self-regulating cable requires use of circuit breakers for Zone Protection

Applications

Provides PID temperature control to cloth and silicone heating blankets, heating cable and tape, drum heaters and heating jackets for applications such as:

- Research laboratory experiments
- Food production
- Industrial heating and drying
- Freeze protection
- Condensation prevention
- Viscosity control

Industries

- Agriculture
- Petrochemical
- Laboratory
- General manufacturing
- Semiconductor
- Chemical
- Food and Beverage
- Oil and Gas
- Plastics
- Aerospace
## Ordering Information:

**Part Number Matrix**

<table>
<thead>
<tr>
<th>MPC2</th>
<th>1</th>
<th>1</th>
<th>3</th>
<th>A</th>
<th>W</th>
<th>R</th>
<th>-10</th>
<th>F</th>
<th>S</th>
<th>E</th>
<th>I</th>
<th>J</th>
<th>A</th>
<th>C</th>
</tr>
</thead>
</table>

### Input Voltage:
- 1: (120), 5: (208), 2: (220 to 240), 9: (277), G: (347), B: (380), C: (400 to 415), 4: (480), H: (575 to 600), 7: (208 or 3), 6: (240 or 3), D: (380 or 3), E: (400 to 415 or 3), 8: (480 or 3), K: (575 to 600 or 3)

### Output Voltage:
- 1: (120), 5: (208), 2: (220 to 240), 9: (277), G: (347), B: (380), C: (400 to 415), 4: (480), H: (575 to 600), 7: (208 or 3), 6: (240 or 3), D: (380 or 3), E: (400 to 415 or 3), 8: (480 or 3), K: (575 to 600 or 3)

### Number of Zones: (Specify Number)

### Alarm Options:
- A - (Audible), C - (Dry Contact (Remote)), B - (Audible and Dry Contact), N - (None), X - (Dry contact hardwire), Y - (Dry contact hardwire with audible)

### Output Connector Type:
- W - (Hardwire), C - (Harting connector)

### Communications:
- R - (RS-485), C - (RS-232), E - (Ethernet), N - (None), X - (RS-485 hardwire), Y - (RS-232 hardwire), Z - (Ethernet hardwire)

### Maximum Load (per zone):
- 10 - (10 AMP), 15 - (15 AMP), 20 - (20 AMP), 25 - (25 AMP), 30 - (30 AMP), 35 - (35 AMP), 40 - (40 AMP), 60 - (60 AMP)

### Zone Protection:
- F - (Fuse), B - (Current breaker)

### Power Disconnect:
- S - (Door switch), F - (Door switch with fuse), B - (Door switch with breaker), N - (None)

### Heater E-Stop:
- E - (Door mounted button), N - (None)

### Ground Fault Protection:
- I - (Inlet power), Z - (One per zone), N - (None)

### Sensor Connections:
- J - (Type J mini-connector), K - (Type K mini-connector), R - (RTD Connector), X - (Type J hardwire), Y - (Type K hardwire), Z - (RTD hardwire)

### Zone Controller Switch:
- A - (One for all zones), Z - (One per zone), B - (Both), N - (None)

### Enclosure:
- C - (Mild Steel), F - (FRP with swing panel, (Nema 4X)), S - (Stainless steel)

For configuration notes, see page 148.
Configuration Notes:
1. Supply power (inlet voltage) must be hardwired into MPC2 panel.
3. Ensure voltages for heating elements match output voltages.
4. If output current exceeds 40 AMPS, the heating elements MUST be hardwired.
5. Not all voltage and feature options are compatible. Contact your local distributor or BriskHeat of more information.

MPC2 Multi-Point Digital PID Temperature Controller Accessories

### Temperature Sensors:
- **TAJN05-AA**: 5’ Type-J T/C, mini
- **TAJN10-AA**: 10’ Type-J T/C, mini
- **TAJN25-AA**: 25’ Type-J T/C, mini
- **TAKN05-DA**: 5’ Type-K T/C, mini
- **TAKN10-DA**: 10’ Type-K T/C, mini
- **TAKN25-DA**: 25’ Type-K T/C, mini
- **THRN05-HA**: 5’ RTD, mini
- **THRN10-HA**: 10’ RTD, mini
- **THRN25-HA**: 25’ RTD, mini

### Heater plugs:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Wire Gauge</th>
<th>Amp Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>20978-03a</td>
<td>Harting Q2/0 Male Plug</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>20978-04a</td>
<td>Harting Q2/0 Male Plug</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>20978-05a</td>
<td>Harting Q2/0 Male Plug</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>20978-06a</td>
<td>Harting Q2/0 Male Plug</td>
<td>8</td>
<td>40</td>
</tr>
</tbody>
</table>

a Requires Harting Crimping Tool 03 99 000 0001;
a Requires Harting Crimping Tool 03 99 000 0377

### Heater Adapter Cords, “XX” feet long:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Male Plug / Female Receptacle</th>
<th>Voltage</th>
<th>Amp Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB12XX-BA11</td>
<td>Q 2/0 TO NEMA 5-15R STRAIGHT BLADE</td>
<td>120</td>
<td>15</td>
</tr>
<tr>
<td>PB42XX-EA11</td>
<td>Q 2/0 TO NEMA 6-15R STRAIGHT BLADE</td>
<td>240</td>
<td>15</td>
</tr>
<tr>
<td>PB14XX-HA13</td>
<td>Q 2/0 TO NEMA L5-30R TWIST LOCK</td>
<td>120</td>
<td>30</td>
</tr>
<tr>
<td>PB44XX-7A13</td>
<td>Q 2/0 TO NEMA L6-30R TWIST LOCK</td>
<td>240</td>
<td>30</td>
</tr>
<tr>
<td>PB34XX-A7A13</td>
<td>Q 2/0 TO NEMA L8-30R TWIST LOCK</td>
<td>480</td>
<td>20</td>
</tr>
<tr>
<td>PB12XX-A_A11</td>
<td>Q 2/0 TO CEE 7/7</td>
<td>240</td>
<td>15</td>
</tr>
<tr>
<td>PB12XX-CA11</td>
<td>Q 2/0 TO NEMA ML-2R MIDGET LOCK</td>
<td>125</td>
<td>15</td>
</tr>
</tbody>
</table>

“XX” represents cord length: 01 = 1 ft (0.3 m); 10 = 10 ft (3.0 m); 25 ft (7.6 m)