

MPC2 MULTI-POINT DIGITAL PID TEMPERATURE CONTROL PANEL

Features & Benefits

- ▶ Fully configurable for enclosure material, sensor type, voltages, alarms, communication, and safety options
- ▶ Configure with one to dozens of zones
- ▶ Advanced Autotuning PID or on/off control (also available)
- ▶ Indoor or outdoor use¹
- ▶ Compatible with a broad range of heating blankets, tapes, and cables
- ▶ Stores up to 4 programs, 12 steps per control zone for easy repeatability in ramp/soak mode
- ▶ Large 2-line, 3-color display simultaneously shows PV (actual) and SV (set) temperatures
- ▶ 2 levels of password protection

Specifications

Voltages: Input/output configurations of 120, 208, 220-240, 277, 380, 400-415, 480, and 575-600 (and 3-phase options)

Overcurrent Protection Device²: Up to 60 amps per zone with fuse or circuit breaker protection

Temperature Control Range³: 0°F to 1922°F (0°C to 1050°C)

Temperature Units: Programming and display in °F or °C

Sensor Input: Mini Type-J or Mini Type-K thermocouples, PT100-RTD or hardwire

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

Alarms: Audible and dry contact available

Power Cords/Connections: Input Power - hardwire; Output Power - Harting 2.0 receptacle, Twist Lock⁴ or hardwire

Safety Options: Ground fault interruption, door-mounted disconnect, and emergency stop available

Communications: RS-485, RS-232 or ethernet available

Environmental Exposures:

- 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% at non-condensing temperatures

Enclosure Dimensions: Determined by number of zones. Materials - mild steel, fiberglass reinforced plastic or 304 stainless steel available

¹ Outdoor use requires special options

² Self-regulating cable requires use of circuit breakers for zone protection

³ Do not exceed the maximum operating temperature of the heater

⁴ Twist Lock connectors are NOT CE Approved



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 & gas
- Plastics
- Aerospace



MPC2 MULTI-POINT DIGITAL PID TEMPERATURE CONTROL PANEL

Ordering Information

Part Number Matrix

MPC2	1	1	3	A	W	R	-10	F	S	E	I	J	A	C
------	---	---	---	---	---	---	-----	---	---	---	---	---	---	---

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 φ3), 6- (240 φ3), D- (380 φ3),
E- (400 to 415 φ3), 8- (480 φ3), K- (575 to 600 φ3)

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 φ3), 6- (240 φ3), D- (380 φ3),
E- (400 to 415 φ3), 8- (480 φ3), K- (575 to 600 φ3)

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), T - (Twist Lock)⁶

Communications:

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

Overcurrent Protection Device (per zone)⁴:

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 - (Circuit breaker)

Power Disconnect:

S - (Door switch), F - (Door switch with fuse), I - (Breaker)
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)

Contact BriskHeat or your local distributor for ordering information.

MPC2 MULTI-POINT DIGITAL PID TEMPERATURE CONTROL PANEL

Configuration Notes

1. Supply power (inlet voltage) to be hardwired into MPC2 panel
2. Construction per NEMA 4 and 4X, as well as to CE standards, may limit options. NEMA 4X construction meets IP65 rating. Standard Construction is NEMA 1 and meets IP40 rating
3. Ensure voltage 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 for more information
6. Straight blade and twist lock output connectors ARE NOT CE approved connections
7. When voltage is above 240, and amps are greater than 40 per zone, fused zone protection is required



MPC2 Multi-Point Digital PID Temperature Controller Accessories

Heater Adapter Cords, "XX" feet long

Part No.	Male Plug/Female Receptacle	Voltage	Amp Rating
PB12XX-BA11	Q 2/0 to NEMA 5-15R straight blade	120	15
PB12XX-CA11	Q 2/0 to NEMA ML-2R midget lock	125	15
PB14XX-HA13	Q 2/0 to NEMA L5-30R twist lock	120	30
PB42XX-EA11	Q 2/0 to NEMA 6-15R straight blade	240	15
PB42XX-LA11	Q 2/0 to Mate-in-Lok 3 position	240	15
PB43XX-A7A13	Q 2/0 to NEMA L6-20R twist lock	240	20
PB44XX-7A13	Q 2/0 to NEMA L6-30R twist lock	240	30
PB63XX-A7A13	Q 2/0 to NEMA L8-20R twist lock	480	20
PB82XX-9A7	Q 2/0 to 4 Pin CPC connector	300	15

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

Heater Plugs

Part No.	Description	Wire Gauge	Amp Rating
20978-03M ^A	Harting Q2/0 male plug	14	15
20978-04M ^A	Harting Q2/0 male plug	12	20
20978-05M ^B	Harting Q2/0 male plug	10	30
20978-06M ^B	Harting Q2/0 male plug	8	40

^A Requires Harting Crimping Tool 03 99 000 0001

^B Requires Harting Crimping Tool 03 99 000 0377

Miscellaneous Accessories

Part No.	Description
41330-06	Temperature Control Module Communication Cable

For temperature sensors, see page 181.