

MX Hot Runner Controls



MX HOT RUNNER

Injection Molding Temperature Control Systems

Improve your injection molding output...switch to Tempco's MX Hot Runner Temperature Control System

The MX System includes:

- ▶ Mainframes
- ▶ 2 types of Temperature Control Modules
- ▶ Cables—Heater Power and Thermocouple
- ▶ Wiring Junction Boxes
- ▶ Input Connectors
- ▶ Floor Stands
- ▶ Accessories

Temperature Control Modules



Tempco's **IMP Series Module** provides one of the most technically advanced temperature controls available today. IMP modules use state-of-the-art microprocessor-based circuitry to perform all required PID functions. Units have built-in diagnostics and are fully self-tuning. Setpoint temperatures are maintained without the need to manually preset or adjust the control temperature. Merely set the desired temperature and turn the power on. The module will automatically sense the heat-up rate and control any setpoint temperature deviation.

Design Features

- * PID Control
- * CompuStep® Soft Start
- * CompuCycle®
- * Manual Control

Part Number: TKA20001

Specifications

Temperature Range: Ambient to 999°F (535°C)

Sensor Input: Type J thermocouple

Control Accuracy: ±1.0°F (±0.5°C), dependent on total thermal system

Calibration Accuracy: Better than 0.2% of full scale

Voltage: 240 VAC standard, 120 VAC available

Power Output: 15A @ 240 or 120 VAC 50/60 Hz

Output Switch: Internal zero cross triac

Fusing: High speed fuses on both sides of line

Setpoint Control: Precision 3-digit pushbutton

Manual Power Control: Single turn potentiometer

Mode Control:

3 Positions: Top—Manual mode; Middle—Auto mode; Bottom—Auto mode with soft start



Tempco's **RMB Temperature Control Module** represents the state of the art in Hot Runner temperature control technology. Virtually every feature a mold designer could want is contained in the module. The RMB's flexible microprocessor-based programming allows the user to modify 17 parameters via the front panel. Once entered, the non-volatile memory automatically saves the parameter modifications.

Design Features

- * CompuStep®
- * CompuCycle® Soft Start
- * Easy Start-Up Procedure
- * High and Low Deviation Alarms
- * Open Thermocouple Error Programming
- * Dual Digital Display
- * Advanced Diagnostics
- * Current Monitor

Part Number: TKA20005

Specifications

Temperature Range: 32 to 999°F (0 to 535°C)

Sensor Input: Type J or K thermocouple, switch selectable

Control Accuracy: ±0.1°F (±0.1°C) dependent on total thermal system

Calibration Accuracy: Better than 0.2% of full scale

Voltage: 115 to 230 VAC, ±10%

Power Output: 15A @ 240 or 120 VAC 50/60 Hz

Output Switch: Internal zero cross triac

Fusing: High speed fuses on both sides of line

Setpoint Control: two buttons—up and down

Manual Power Control: two buttons—up and down

Mode Control:

3 LEDs: Top/Manual mode

Middle—Auto mode

Bottom—Auto mode with soft start

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Mainframes

The configurations illustrated below provide a wide selection of zone capacities to suit almost any control application. The 5, 8 and 12 zone frames use individual frame sections. The 16 through 48 zone frames use 2, 3 or 4 frame sections rigidly fastened together into one prewired integral unit which requires only one main AC power input connection.



Ordering Information

The following mainframes are set up for 15 Amp per zone IMP or RMB control modules, 240 VAC 3-phase 60 Hz power input. Other power configurations are available; consult Tempco for more information.

Standard lead time is 3 to 4 weeks.

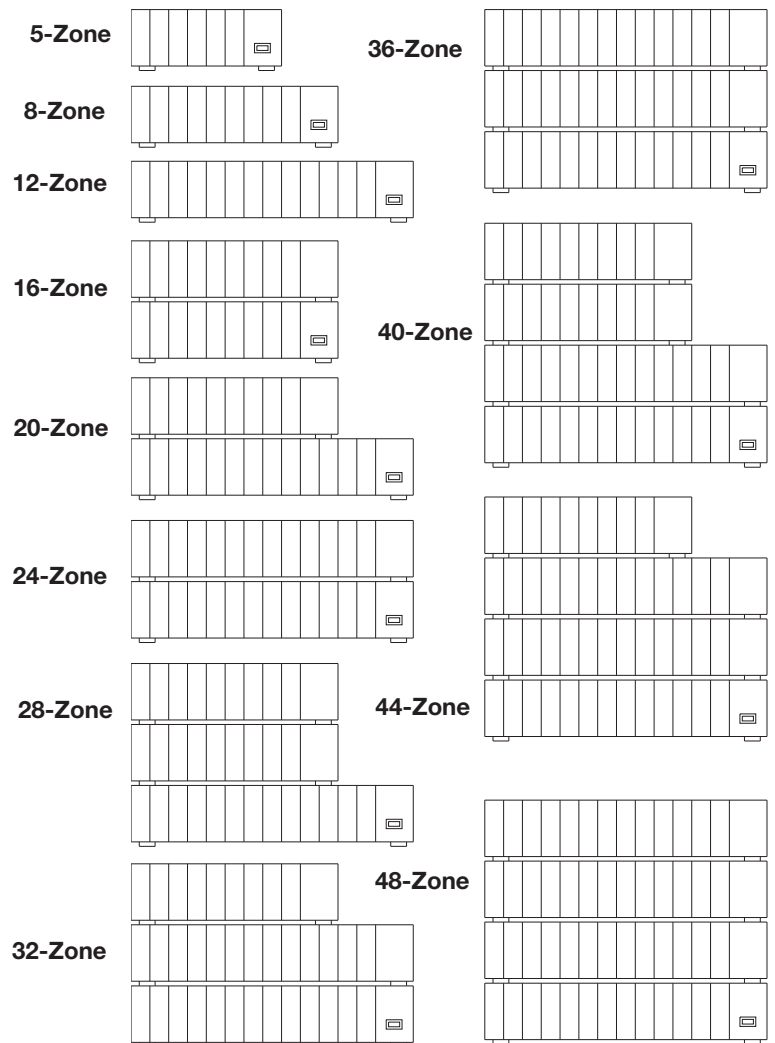
| Description | Standard |
|-------------|----------|
| 5-Zone | TKA21005 |
| 8-Zone | TKA21008 |
| 12-Zone | TKA21012 |
| 16-Zone | TKA21016 |
| 20-Zone | TKA21020 |
| 24-Zone | TKA21024 |
| 28-Zone | TKA21028 |
| 32-Zone | TKA21032 |
| 36-Zone | TKA21036 |
| 40-Zone | TKA21040 |
| 44-Zone | TKA21044 |
| 48-Zone | TKA21048 |



Note: To order a complete Hot Runner Control System the following must be ordered separately:

- Control Modules
- Mainframe
- Power Mold Cable
- Thermocouple Mold Cable
- Mold Wiring Junction Box (if required)

Mainframe Zone Configurations



⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Temperature Controllers

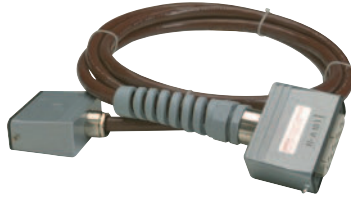


MX Hot Runner Control Accessories



Injection Mold Temperature Control Systems

Mold Cables



Power Cables

Used to connect the mainframe to the hot runner injection mold for heater power.

| Number of control zones | 10 ft. | 20 ft. |
|-------------------------|----------|----------|
| 5-Zone | TKA22105 | TKA22205 |
| 8-Zone | TKA22108 | TKA22208 |
| 12-Zone | TKA22112 | TKA22212 |

Thermocouple Cables

Used to connect the mainframe to the hot runner injection mold for thermocouple signal.

| Number of control zones | 10 ft. | 20 ft. |
|-------------------------|----------|----------|
| 5-Zone | TKA23105 | TKA23205 |
| 8-Zone | TKA23108 | TKA23208 |
| 12-Zone | TKA23112 | TKA23212 |

Mold Connectors



Power Connector

Used to connect the heater wiring to the power mold cable. Mounts directly on the mold or a wiring junction box.

| Part Number | |
|-------------|----------|
| 5-Zone | TKA24005 |
| 8-Zone | TKA24008 |
| 12-Zone | TKA24012 |

Thermocouple Connector

Used to connect the thermocouples to the thermocouple mold cable. Mounts directly on the mold or a wiring junction box.

| Part Number | |
|-------------|----------|
| 5-Zone | TKA24105 |
| 8-Zone | TKA24108 |
| 12-Zone | TKA24112 |

Mold Wiring Junction Boxes

Mold Wiring Junction Boxes are mounted directly on the injection mold. The heaters and thermocouples are wired to the connectors and are ordered separately.

Mold Wiring Junction Box for Power Input Connectors

(for 5-, 8- or 12-zone connectors)

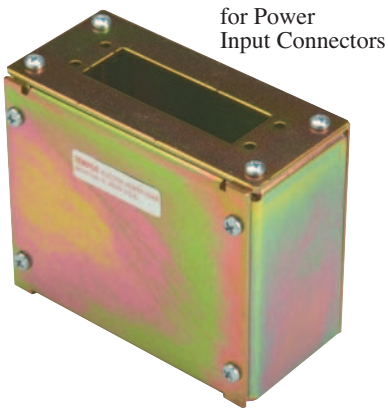
| Part Number | "X" | "Y" |
|-------------|--------|--------|
| TKA25001 | 4.250" | 4.875" |

Mold Wiring Junction Box for Thermocouple Input Connectors

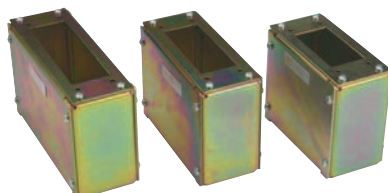
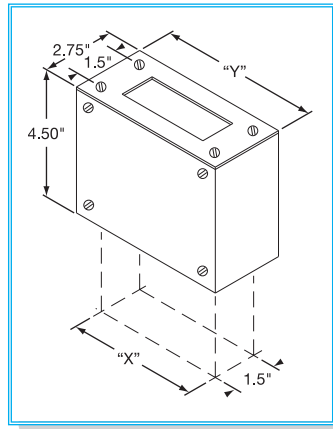
| Zones | Part Number | "X" | "Y" |
|-------|-------------|--------|--------|
| 5 | TKA25005 | 4.250" | 4.875" |
| 8 | TKA25008 | 4.990" | 5.614" |
| 12 | TKA25012 | 6.052" | 6.676" |

Combination Mold Wiring Junction Box for Thermocouple and Power Input Connectors

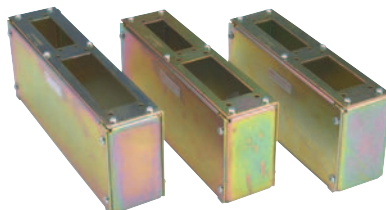
| Zones | Part Number | "X" | "Y" |
|-------|-------------|--------|---------|
| 5 | TKA25105 | 8.031" | 8.655" |
| 8 | TKA25108 | 8.843" | 9.467" |
| 12 | TKA25112 | 9.906" | 10.530" |



for Power Input Connectors



for Thermocouple Input Connectors



for Thermocouple and Power Input Connectors