



MP2

Programmable Process Temperature Controller

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INSTALLATION GUIDE



⚠ WARNING

Inappropriate and/or improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

⚠ WARNING

Disconnect power before installation to prevent electrical shock or equipment damage.

FOR YOUR SAFETY

If you smell gas:

- 1 Open windows.
- 2 Do not touch electrical switches.
- 3 Extinguish any open flame.
- 4 Immediately call your gas supplier.

FOR YOUR SAFETY

The use and storage of gasoline or other flammable vapors and liquids in open containers in the vicinity of this control or other appliance is hazardous.

Please read these instructions fully prior to attempting to install, operate, and/or maintain the MP2 system. Failure to do so may result in improper operation and/or component damage.

⚠ WARNING

Installation shall conform with local codes, or in the absence of local codes, in accordance with the National Fuel Gas Code ANSI Z223.1/NFPA54 or CSA B149.1 as is applicable, and operated in accordance with the manufacturer's instructions. These instructions do not supersede OEM's installation or operating instructions. Installation, inspection, and replacement must be performed by a qualified installer or gas supplier.

This control must be electrically wired in accordance with local codes, or in the absence of local codes, with the National Electrical code, ANSI/NFPA 70 or the Canadian Electrical Code, CSA C22.1 as applicable.

General Statement

The MP2 system is intended for low temperature process applications, for example paint spray booths or other curing processes. It is ideal for temperature critical and time sensitive process applications requiring temperatures from 60°F to 240°F.

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Please refer to the MP2 User's / Programming for programming instructions.

NOTE:

The technical data listed in this manual does not include normal operating deviations that occur in the actual manufacturing process. The listed specifications may not meet the individual unit's actual specifications. Slight deviations in an individual unit's performance may be encountered due to possible changes in the controlled conditions in which the unit is tested and calibrated. Check ratings given in OEM instructions to assure the MP2 is suitable for the application.

Power Requirements	Independent 24 VAC, 40 VA capacity transformer	
Ambient Temperature Limits	TDM02	Operating: -40°F(-40°C) to 158°F(70°C) Non-operating: -40°F(-40°C) to 185°F(85°C)
	AM02 TM02	Operating, Non-operating: -40°F(-40°C) to 185°F(85°C)
Connections	AM02 to TDM02 = 6 Position 6 Conductor Straight Thru Cable (see fig. C, page 7) AM02 to TM02 = Ethernet Patch Cord	
Sensor	1,000 ohm RTD TS194Q use with mixing tube	
Valves	M411, M511, M611, MR212	

NOTE:

Please read safety warning instructions fully for Maxitrol Modulator Valves [MI2040] prior to attempting to install, operate, and/or maintain the MP2 system.

Components

- **AM02** Amplifier
- **TDM02** Remote Selector Display Interface
- **TM02** Auxiliary Multifunctional Timer Control (optional)
- 6 Position 6 Conductor Straight Thru Cable, 3 feet
- Ethernet Patch Cord, 3 feet

- TDM02** Display Interface
Std. - 1/4 DIN
Panel Mounted
Cover = 4.06" W x 4.06" D
Panel Cutout = 3.53" W x 3.53" H
Depth = 1.08" D
- AM02** 7.5" W x 3.38" H x 1.89" D
Mounts on supplied Snap Track
- TM02** 5.25" W x 3.75" H x 1.75" D
Mounts on supplied Snap Track

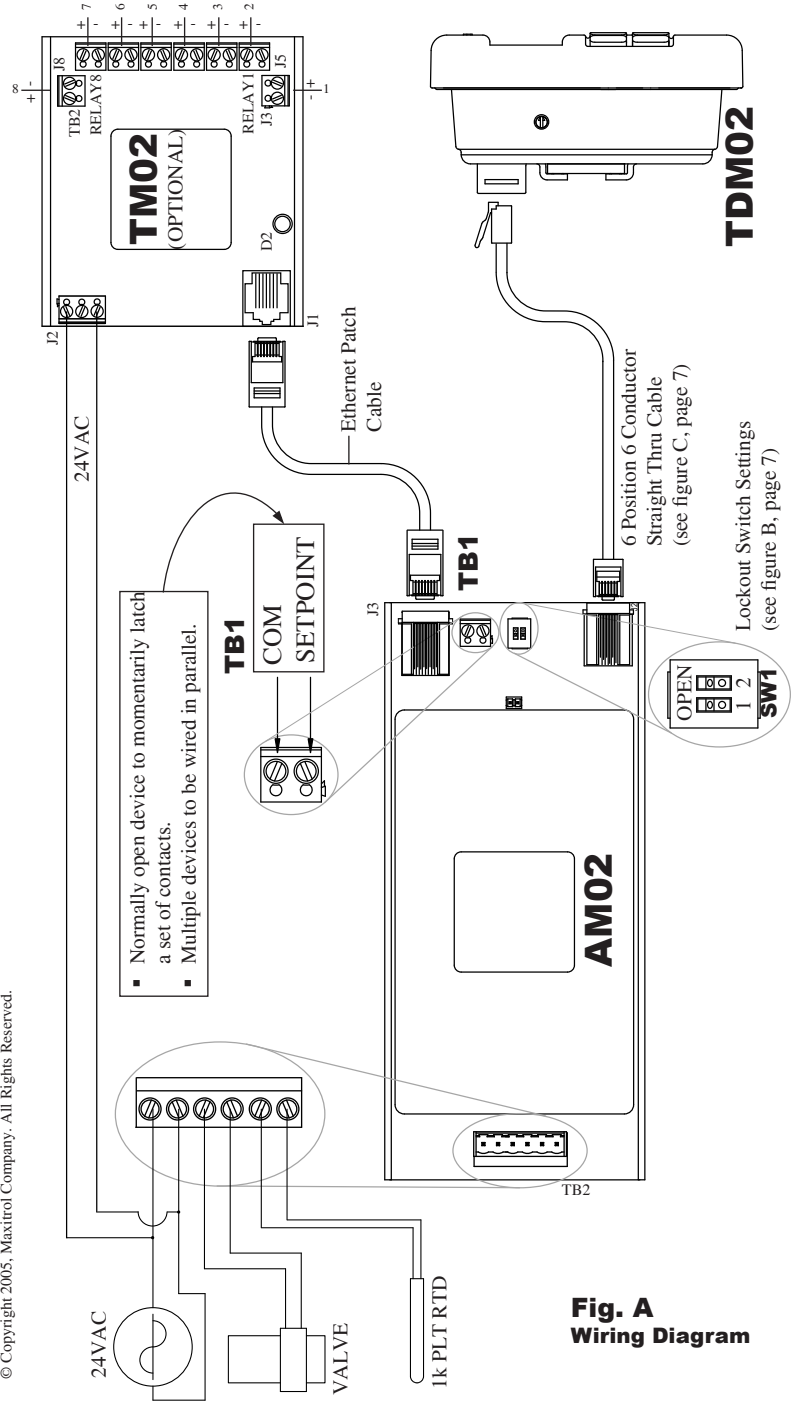


Fig. A
Wiring Diagram

Fig. B
Lockout Switch Settings, SW1

Level	SW1 Dipswitch position	Accessible Menus
0	1-closed, 2-closed	None
1	1-open, 2-closed	Process
2	1-closed, 2-open	Process and Operation
3	1-open, 2-open	Process, Operation and Diagnostic

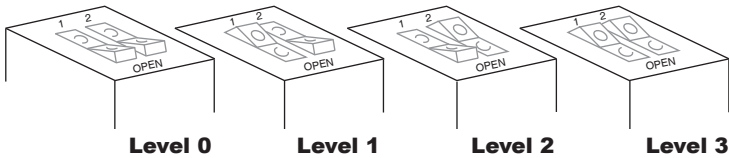
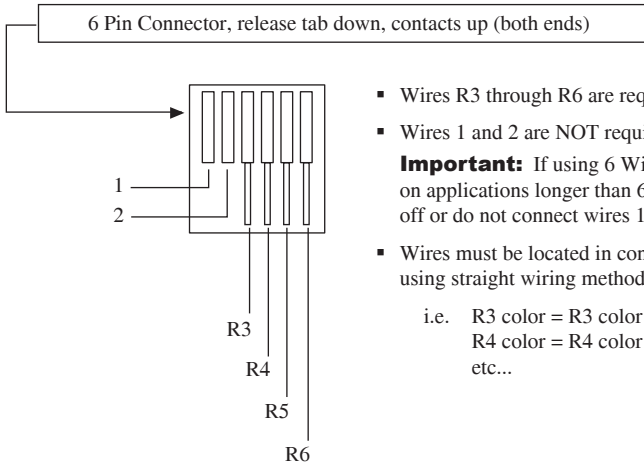


Fig. C
6 Position 6 Conductor Straight Thru Cable



- Wires R3 through R6 are required.
- Wires 1 and 2 are NOT required.
- **Important:** If using 6 Wire Cords on applications longer than 6 ft, clip off or do not connect wires 1 and 2.
- Wires must be located in connector using straight wiring method.
 - i.e. R3 color = R3 color
 - R4 color = R4 color
 - etc...

MP2 Process Control System

Getting Started

- 1 Install Components. For the dimensions of components see **Dimensions**, page 5.
- 2 Wire the MP2 System as shown in figure A, page 6.
- 3 Apply 24 VAC power to AM02.

- MP2 System will default to Process 1.

NOTE: Any power interruption to the AM02, will cause the MP2 System to default to the Process 1 position regardless of the Process position prior to the power interruption.

- 4 Enter into the Program Mode and program the MP2 System as needed (see the MP2 **User's / Programming Guide**).
 - After programming, the MP2 System will default to Process 1.
- 5 Set the Programming Lockout feature to the appropriate user access (see figure B, page 7).

MP2 Process Control System w/ TM02 Multifunctional Timer Control

Getting Started

- 1 Install Components. For the dimensions of components see **Dimensions**, page 5.
- 2 Wire the MP2 System and TM02 together as shown in fig. A, page 6.
- 3 Apply 24 VAC power to AM02 and TM02.
 - MP2 System will default to the “READY” program start position.

NOTE: Any future power interruption to the AM02, will cause the MP2 System to default to the selected program start position (“READY” or First Process).

- 4 Enter into the Program Mode and program the MP2 System as needed (see the MP2 **User's / Programming Guide**).
 - After programming, the MP2 System will default to the selected program start position “READY” or First Process.

“READY”:

Start Process 1 of the program by momentary latching (make) a set of contacts wired to the TB1 terminal (i.e. typically accomplished by a momentary ON (normally open) switch).

- 5 Set the Programming Lockout feature to the appropriate user access (see figure B, page 7).

Process

A single programmed temperature, or single programmed temperature and time.

Program

The combination or series of Processes.

“Ready”

Screen display. When selected, it appears prior to the start of a program involving timed processes. A momentary switch closure moves the controller from the “Ready” position to the First Process.

Programming Lockout Switch

When set, this feature can limit user access to programming menus (see figure B, page 7).

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