Installation Instructions

Tracer® MP581 Main Circuit Board

Order Number: 4020 1157

The circuit board for the Tracer MP581 programmable controller can be used to upgrade Tracer AH540/541 controllers to Tracer MP580/581 controllers. It also replaces inoperative Tracer MP580/581 circuit boards.

Note: *The replacement circuit board does not look exactly like the board you are replacing. The replacement board has eyelets on its bottom side and possible other small differences.*

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⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

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Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert

NOTICE Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

⚠ WARNING

Personal Protective Equipment Required!

Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards. Before installing/servicing this unit, technicians MUST put on all Personal Protective Equipment (PPE) recommended for the work being undertaken. ALWAYS refer to appropriate SDS sheets and OSHA guidelines for proper PPE. When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection and handling recommendations. If there is a risk of arc or flash, technicians MUST put on all necessary Personal Protective Equipment (PPE) in accordance with NFPA70E for arc/flash protection PRIOR to servicing the unit. Failure to follow recommendations could result in death or serious injury.

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Operating Environment

Ensure that the operating environment conforms to the specifications listed in the table below.

Temperature:	• Without display: From –40°F to 158°F (–40°C to 70°C) • With display: From 32°F to 122°F (0°C to 50°C)
Humidity:	10–90% non-condensing
Power Requirements:	98–132 Vac or 196–264 Vac, 1 A maximum, 1 phase, 50 or 60 Hz

Note: *The board shipped with these instructions (marked P/N 6400-2580-01 or higher) requires firmware revision 4.00.007 or newer to function correctly. Do not downgrade firmware version below 4.00.007.*

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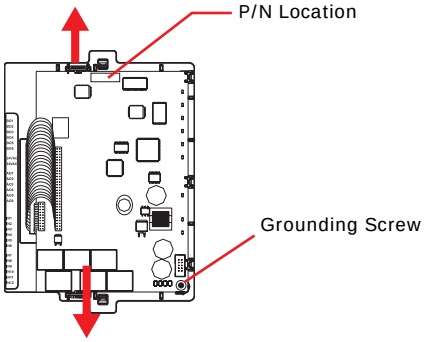
Removing Existing Circuit Board

⚠ WARNING

Hazardous Voltage!

Disconnect all electrical power, including remote disconnects, before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. Failure to disconnect power before servicing could result in death or serious injury.

1. Disconnect the 24 Vac power cable from the termination board.
2. Remove the grounding screw from the lower right-hand corner of the circuit board if it is installed.



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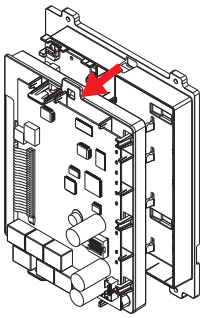
3. Unsnap the top plastic frame holding the circuit board from the bottom frame.



4. Disconnect the 20-pin cable from the 20-pin slot, then disconnect the 60-pin cable from the 60-pin slot.
5. On the top frame, push the two tall plastic pieces that hold the circuit board in place away from each other.
6. Remove the circuit board from the frame.

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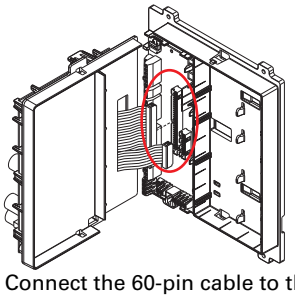
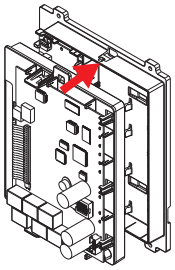
Installing New Circuit Board

1. Place the circuit board on the top plastic frame.
2. Push down on the circuit board until it snaps into place.
3. Disconnect the 24 Vac power cable from the termination board.
4. Hold the top frame at a 90° angle to the bottom frame as shown below.



5. Connect the 60-pin cable to the 60-pin slot, then connect the 20-pin cable to the 20-pin slot.The connectors are keyed to the slots. Ensure that the keys are lined up with the slots.
6. Align the snaps on the top frame with the mounting locks on the bottom frame and then push the two frames together until it clicks.



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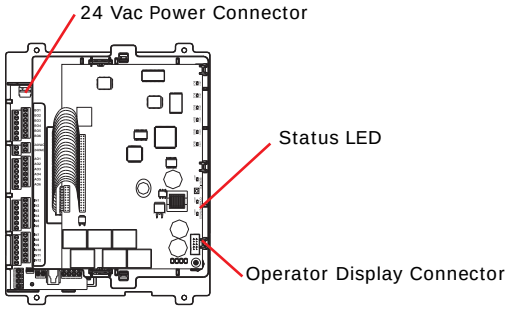
7. For controllers with an operator display, connect the operator-display cable to the circuit board.
8. Connect the 24 Vac power cable to the termination board. The green status LED lights up.



Agency Listings and Compliance

The European Union (EU) Declaration of Conformity is available from your local Trane® office.

Trane - by Trane Technologies (NYSE: TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

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