



Installation Instructions

Tracer® TD7 Display

For the:

- Tracer UC600 Programmable Controller
- Tracer UC800 Controller
- Symbio 500 Programmable Controller
- Symbio 800 Programmable Controller

X39641191-01

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.

AVERTISSEMENT DE SÉCURITÉ

Seul le personnel qualifié doit installer et procéder à l'entretien des équipements. L'installation, le démarrage et la réparation des équipements de chauffage, de ventilation et de climatisation peuvent être dangereux et nécessitent une formation et des connaissances spécifiques. Un équipement mal installé, réglé ou modifié par un individu non qualifié peut entraîner des blessures graves, voire mortelles. Lors de toute intervention sur l'équipement, respectez toutes les précautions figurant dans la documentation et sur les étiquettes et autocollants fixés à l'équipement.

July 2023

BAS-SVN112J-EN

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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 against unsafe practices.

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.

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/national electrical codes.

WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.

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WARNING

Follow EHS Policies!

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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 service could result in death or serious injury.

WARNING

Risque d'électrocution!

Avant toute intervention, couper toutes les alimentations électriques, y compris des sectionneurs déportés. Respecter les procédures de verrouillage et/ou d'étiquetage appropriées pour éviter tout risque de remise sous tension accidentelle. Le non-respect de cette recommandation peut entraîner des blessures graves voire la mort.

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Packaged Contents

- One (1) Tracer TD7 display with permanently attached 3.3 ft (1 m.) power cable with plug (PN: X13760335-01)
- Four (4) M-4 screws
- Four (4) spacer washers
- Two (2) 2-pin terminal blocks (one spare)
- One (1) 7 ft. (2.24 m.) category 5E Ethernet cable for indoor use
- One (1) 3.3 ft. (1 m.) power cable with jack connector (PN: X19051625020)

Required Parts for Outdoor Installation

- One (1) 12.1 ft. (3.7 m.) sealed Ethernet cable (PN: X19070632020)

Note: Cable must be ordered separately.

Environmental Ratings Compliance

- UL 916PAZX: Open Energy Management Equipment
- UL954-5V: Flammability
- FCC CFR Title 47, Part 15.109: Class A Limit, (30 MHz—4 GHz)
- Environment Rating (enclosure): IP56 (dust and strong water protected) with use of an optional 3.7 m. Sealed Ethernet Cable (PN: X19070632020)
- 24 Vac +/- 15%, 50 or 60 Hz: 0.90 A maximum
- Operating Temperature Range: -40° to 158°F (-40° to 70°C)
- Humidity: Between 5% to 100% (Condensing)
- Mounting type: VESA (75mm x 75mm)
- Mounting weight: 1.625 lb (0.737 kg)

Installing the TD7 Display in a Trane Large Enclosure

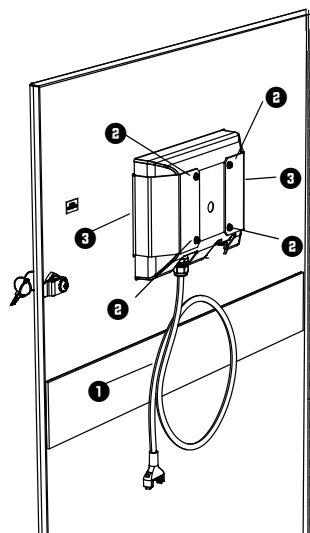
Note: The order number for the Trane Large enclosure (display-capable door) is X13651553-01. The enclosure door must be installed on the large enclosure prior to installing the TD7 display.

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For steps 1 through 6, refer to [Figure 1](#).

1. Disconnect power at the circuit breaker and perform lockout/tagout procedures.
2. Open the enclosure door and disconnect the 24 VAC power from the controller.
3. Holding the display, insert the power cable 1 (attached to the TD7) through the display opening on the front of the enclosure door.
4. Slightly tilt the TD7 display while inserting it into the door. When fully and properly positioned, the TD7 display will lay flush against the enclosure door.
5. While holding the TD7 display, insert and hand-tighten the four M-4 screws 2 onto the brackets 3.
6. Securely tighten the M-4 screws using a Phillips screwdriver.

Figure 1. Installing the TD7 display in an enclosure

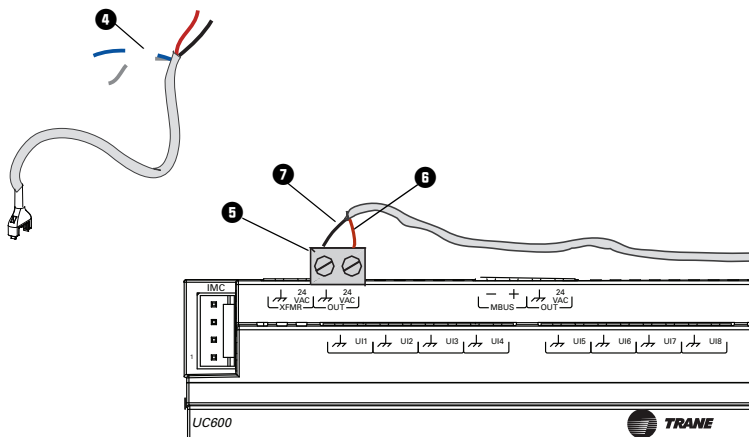


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For steps 7 through 13, refer to [Figure 2](#) and [Figure 3](#).

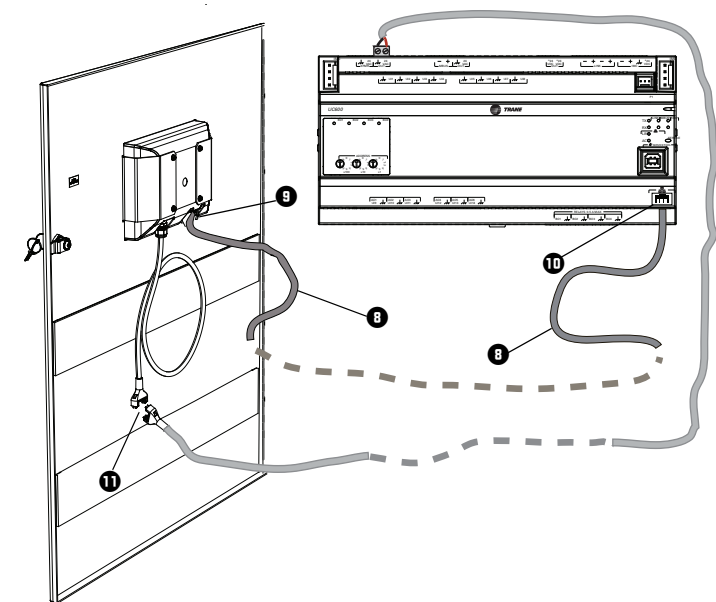
7. Snip off the blue and gray wires from the power cable with jack connector (PN: X19051625020) 4 so only the red and black wires remain.
8. Place one of the supplied terminal blocks 5 onto an available 24 VAC terminal connection on the controller.
9. Insert the red wire 6 through the 24 VAC connection, and the black wire 7 through the ground connection on the terminal block that was installed on the controller. Tighten the terminal block screws with a 1/8 in. (3 mm) slotted screw driver.
10. Connect the category 5E Ethernet cable 8 to the Ethernet port 9 on the TD7 display.
11. Route the Ethernet cable to the display port 10 on the controller.
12. Connect the ends 11 of both power cables together.
13. Reconnect the 24 VAC power to the controller, remove lockout/tagout, and apply power to the circuit.

Figure 2. Installing power wiring



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Figure 3. Connecting to the controller



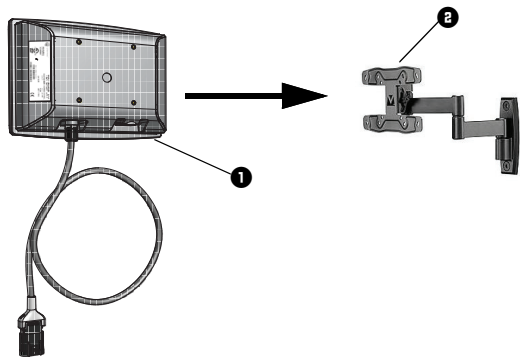
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Installing the TD7 Display onto a VESA Mounting Bracket

Required VESA mounting bracket size is 75 mm x 75 mm. Brand, tilt, swivel, and any other features are acceptable. The TD7 display can be remotely mounted up to 328 ft (100 m).

1. Disconnect power at the circuit breaker and perform lockout/tagout procedures.
2. Disconnect the 24 VAC power from the UC800.
3. Mount the VESA mounting bracket according to manufacturer's instructions.
4. Position the TD7 display **1** onto the VESA mounting bracket **2** and align the four mounting holes with the bracket while inserting and hand tightening the four M-4 screws. (Some brands of VESA mounting brackets may require the use of the four spacer washers to allow the M-4 screws to tighten properly.)
5. Securely tighten the M-4 screws using a Phillips screwdriver.
6. Follow steps 7 through 13 of "Installing the TD7 Display in a Trane Large Enclosure" to complete this process.

Figure 4. Example VESA mounting



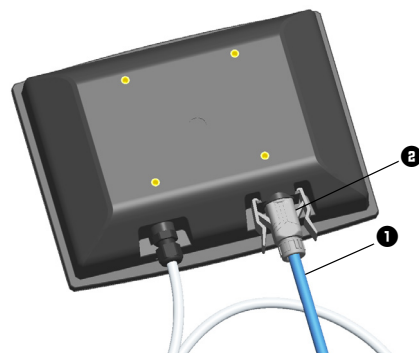
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Installing the TD7 onto a Chiller Panel for Use with the UC800 Controller

The following instructions require a sealed Ethernet cable for outdoor installation. See "Installing the TD7 Display in a Trane Large Enclosure" on panel 4.

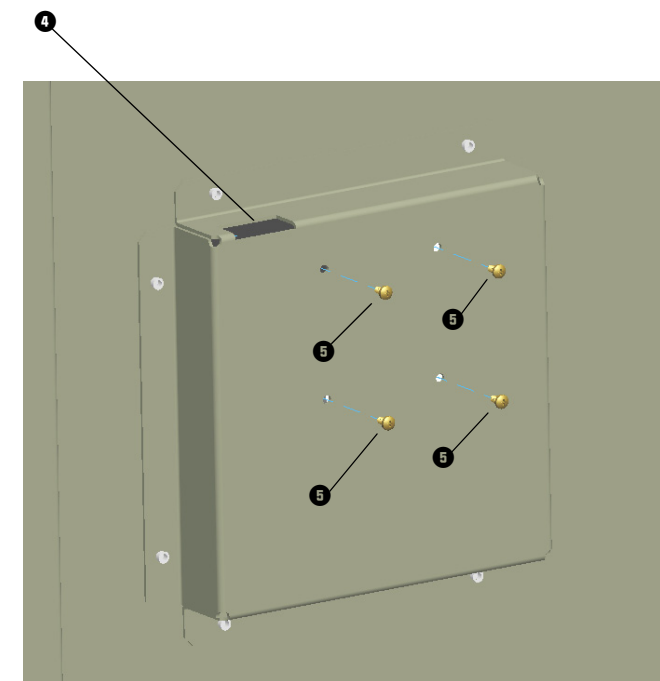
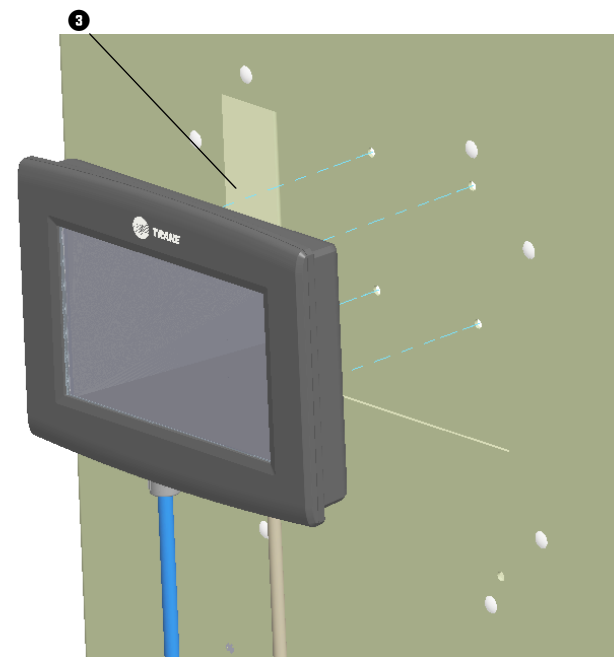
1. Disconnect power at the circuit breaker and perform lockout/tagout procedures.
2. Open the chiller panel door and disconnect power from the power supply.
3. Connect the sealed Ethernet cable **1** to the Ethernet port on the TD7 display **2** as shown in Figure 5.
4. Holding the display, insert the power cable and sealed Ethernet cable **3** through the display opening on the front of the chiller panel door, and out through the small opening **4** on the back of cover (Figure 6).
5. Slightly tilt the TD7 display while inserting it into the door. When fully and properly positioned, the TD7 display will lay flush against the panel door.
6. While holding the TD7 display, insert and hand-tighten the four M-4 screws **5** onto the back cover on the chiller panel door (Figure 6).
7. Securely tighten the M-4 screws using a Phillips screwdriver.

Figure 5. Connecting the ethernet cable to the TD7 Ethernet port



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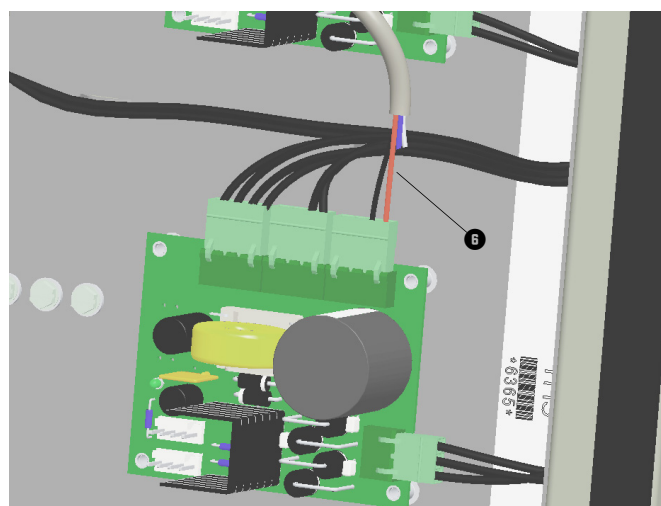
Figure 6. Connecting the Ethernet cable to the TD7 ethernet port



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8. Connect one end of the chiller power supply cable to the TD7 global connector.
9. Connect the other end of the TD7 global connector to the chiller power supply **6**.

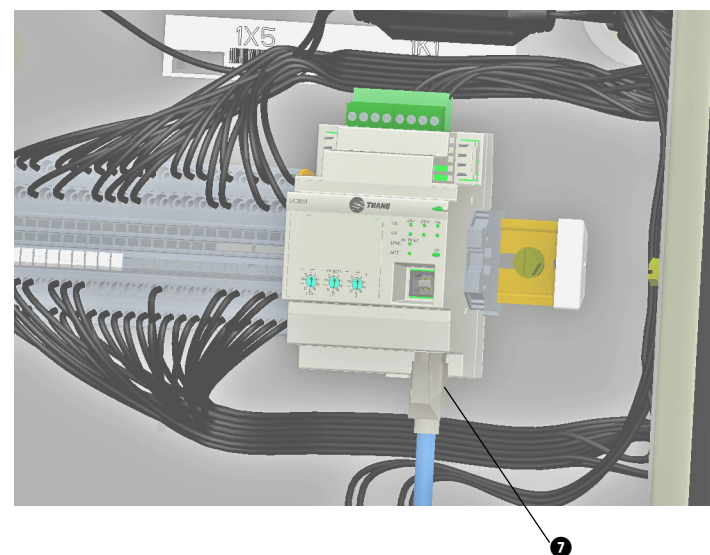
Figure 7. Connecting the TD7 to the chiller power supply



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10. Connect the other end of sealed Ethernet cable to the UC800 **7**.
11. Connect the both ends of the power cables together.
12. Reconnect the 24VDC power to the power supply, remove lockout/tagout, and apply power to the circuit.

Figure 8. Connecting the sealed ethernet cable to the UC800



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Symbio Installation

To install a Symbio™ Controller, follow Step 7 through Step 11 in Panel 6. Refer to Figure 2 and Figure 3.

Notes:

- The Symbio 500 has output terminals for 24 VAC.
- The Symbio 800 has no 24 VAC output terminals. In this application, 24 VAC must be obtained through the PM014 module.
- Either Ethernet port on the Symbio 500 can be used.
- Ethernet port #2 on the Symbio 800 should be used.

Agency Listings and Compliance

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

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