



Installation Instructions

Enclosure for Tracer® DIN-mounted Controllers

Order Number:

X13651559010 120 Vac with 1 outlet, X13651699001 120 Vac with 3 outlets and X13651560010 (230 Vac without outlet)

X39641180-01

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.

June 2020

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1 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-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.

2 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.

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.

Packaged Contents

- One (1) enclosure
- Four (4) #10 (5mm) screws with anchors

4 Table 2. Power Output

VA at 24 Vac	Temperature Range C°/F°
85	up to 35°C (95°F)
75	up to 45°C (113°F)
50	up to 50°C (122°F)

DIN Unit Width

The following table provides DIN unit width measurements for Trane and non-Trane devices.

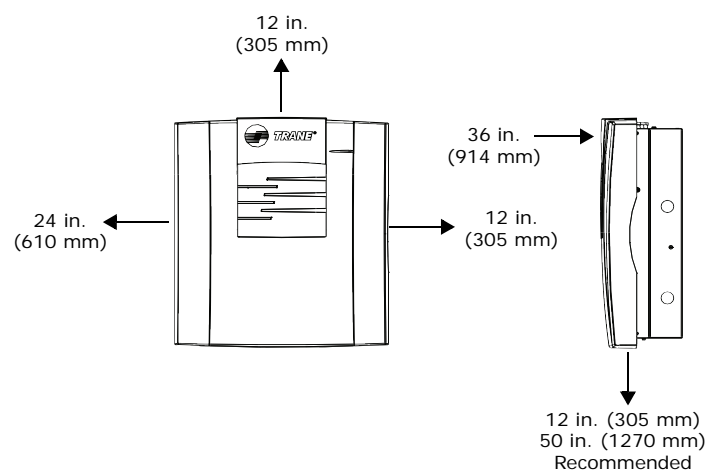
Table 3. DIN Unit Width Measurements

Device	Device Width (mm/in)	DIN Unit Width (1 unit = 18 mm)
Tracer SC+/Tracer Concierge controller	143.6 mm/5.6 in	8
Tracer UC400 controller	143.6 mm/5.6 in	8
Tracer UC600 controller	215.5 mm/8.5 in	12
Tracer UC800 controller	71.6 mm/2.8 in	4
Tracer XM30 expansion module	53.6 mm/2.1 in	3
Tracer XM32 expansion module	71.6 mm/2.8 in	4
PM014 power supply module	107.6 mm/4.2 in	6
Tracer BACnet® terminator	35.6 mm/1.4 in	2
IzoT U60 FT USB Network Interface Module*	35 mm/1.38 in	2

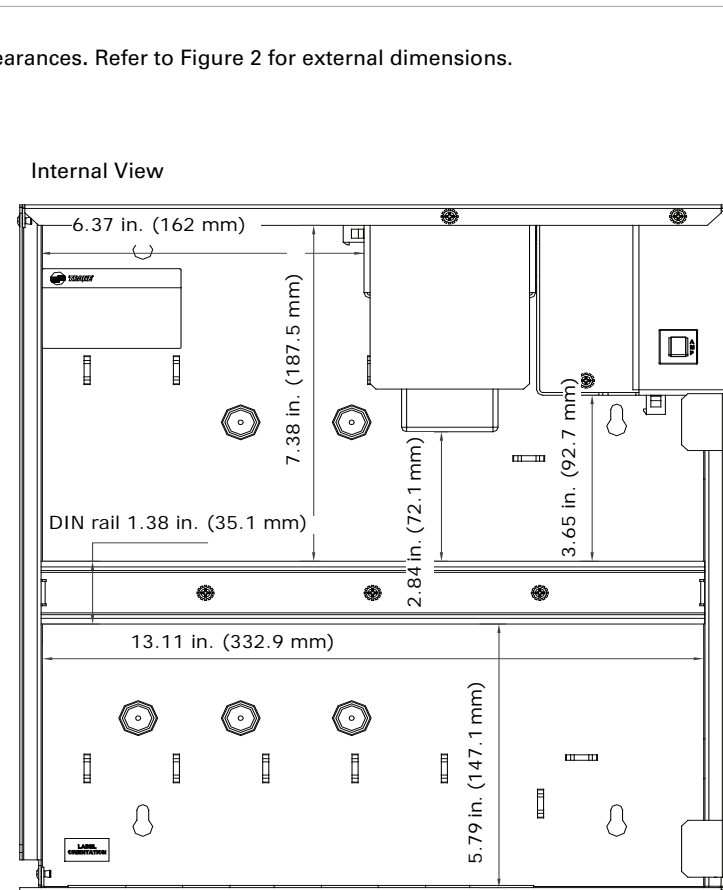
*LON interface

5 Figure 1. Minimum Clearances and Internal Dimensions

Ensure that the selected location provides enough space for the minimum clearances. Refer to Figure 2 for external dimensions.



Note: Length of DIN rail is equivalent to 18 DIN units.



3 Model Numbers

Before installing the controller, verify the correct model for local power requirements. The model number is on the shipping label or on the product label inside the enclosure.

Specifications and Dimensions

Operating Environment Specifications

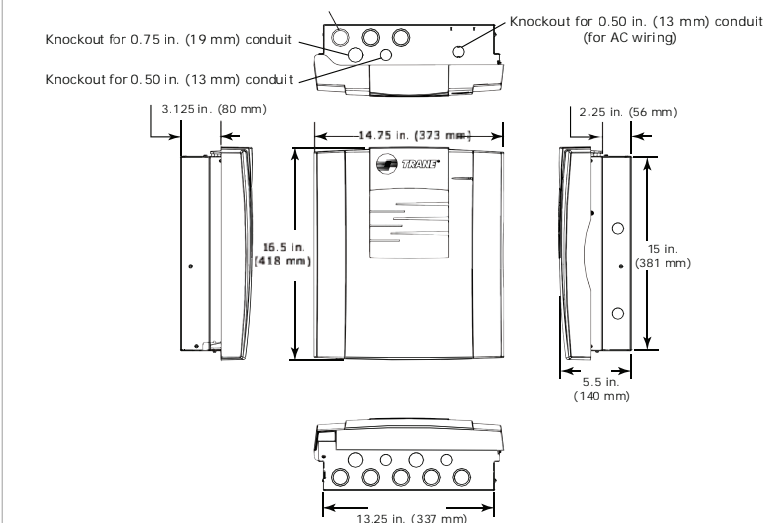
Ensure that the operating environment conforms to the specifications listed in Table 1.

Table 1. Specifications

Temperature:	From 32°F to 122°F (0°C to 50°C)
Humidity:	5–95% non-condensing
Power Requirements:	<ul style="list-style-type: none"> • X13651559001 120 Vac: 6A maximum, 1 phase, 60 Hz • X13651699001 120 Vac: 9A maximum, 1 phase, 60 Hz • X13651560010 230 Vac: 1A maximum, 1 phase, 50/60 Hz
Weight:	Mounting surface must be able to support 60 lb. (28 kg)
Dimensions:	16 ½ in. × 14 ¾ in. × 5 ½ in. (418 mm × 373 mm × 140 mm)
Installation:	U.L. 840: Category 3
Pollution:	U.L. 840: Degree 2

The power output of the panel is de-rated at higher ambient temperatures to account for the heat rise in the panel. Table 2 shows the ratings.

6 Figure 2. External Dimensions



Mounting and Wiring

Location

Ensure that the location meets the operating environment requirements and clearance requirements described in the previous sections. The controller must be installed indoors. Trane recommends locating the controller:

- Near the controlled equipment to reduce wiring.
- Where service personnel have easy access.
- Where public access is restricted to minimize possible tampering or vandalism.

Mounting Instructions

- Using the enclosure as a template, mark the location of the four (4) mounting holes on the mounting surface.
- Set aside the enclosure and drill the holes for the screws at the marked locations.

Note: Drill holes for #10 (5 mm) screws or #10 wall anchors. Use wall anchors if the mounting surface is dry wall or masonry.

- Secure the enclosure to the mounting surface with the enclosed #10 (5 mm) screws or #10 wall anchors.

Wiring High-voltage AC Power

⚠ 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.

⚠ WARNING

Proper Field Wiring and Grounding Required!
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. Failure to follow code could result in death or serious injury.

NOTICE

Use Copper Conductors Only!
Unit terminals are designed to accept copper conductors only. Other conductors could cause equipment damage.

To ensure proper operation of the controller, install the power supply circuit

in accordance with the following guidelines:

- The panel must receive power from a dedicated power circuit. Failure to comply could cause panel malfunctions.
- 230 Vac:** The power circuit must be protected by a 13 A or 16 A circuit breaker or fuse.
- A disconnect switch for the dedicated power circuit must be near the panel, within easy reach of the operator, and marked as the disconnecting device for the panel.
- 24 Vac or higher power-wire conduits or wire bundles must not contain input/output wires. Failure to comply could cause the controller to malfunction due to electrical noise.
- Power wiring must comply with the National Electrical Code™ (NEC) and applicable local electrical codes.
- Both 120/230 Vac wiring requires three-wire service (line, neutral, ground).
- 120 Vac Nominal:** Transformer Voltage Utilization Range; 98-132 Vac.
- 230 Vac Nominal:** Transformer Voltage Utilization Range; 196-264 Vac. The panel automatically detects whether the current is 50 or 60 cycle.

To connect either 120 or 230 Vac power wires:

- Lock open the supply-power disconnect switch.
- At the top-right corner of the enclosure, remove the knockout for .50 inch (13 mm) conduit.
- Open or remove the enclosure door if it is already installed.
- Inside of the enclosure at the top-right corner, remove the line voltage area cover plate.
- Feed the 120/230 Vac power wire into the enclosure.
- Using Figure 3, connect the line wire to the 'L' terminal.
- Connect the neutral wire to the 'N' terminal.
- Connect the green ground wire to the chassis ground screw.

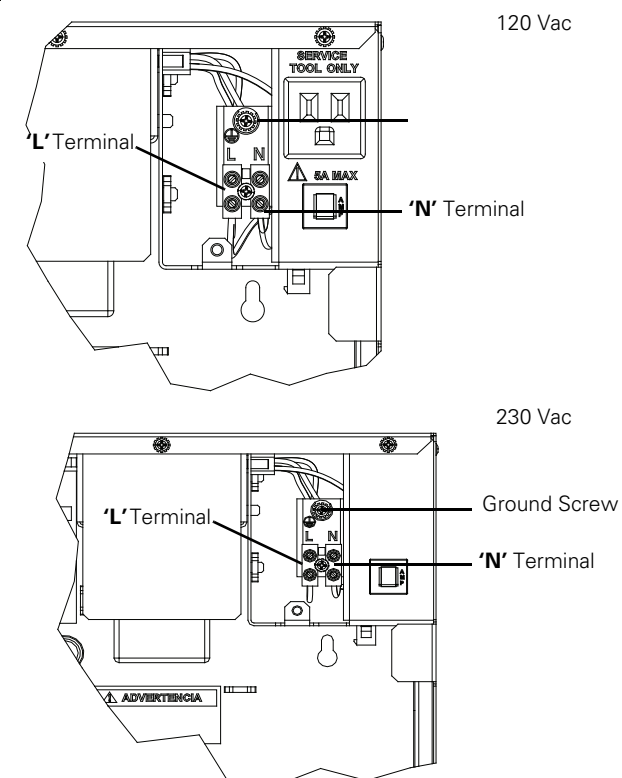
Note: The ground wire should be continuous back to the circuit breaker panel.

⚠ WARNING

Hazardous Voltage!
The cover plate must be in place when the controller is operating. Failure to replace the cover plate could result in death or serious injury.

- Replace the cover plate.
- On a field-supplied label, record the location of the circuit breaker panel and the electrical circuit. Attach the label to the cover plate.

Figure 3. AC Wiring

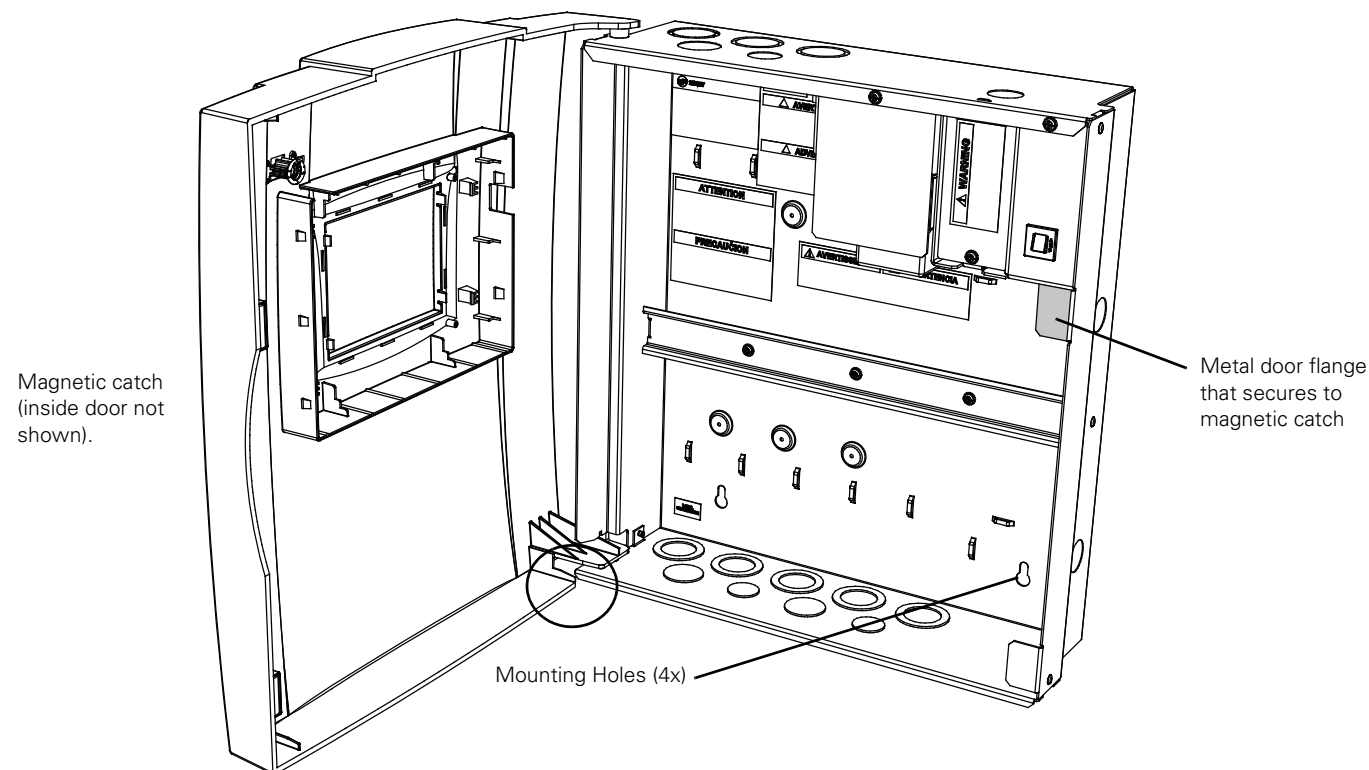


Installing the Enclosure Door

Note: Before installing the enclosure door, unpack the door and check for missing or damaged parts and any cracks in the plastic. Ensure that the magnetic catch is installed.

- Hold the door at a 90° angle from the enclosure as shown in Figure 4.
- Align the hinge pegs on the door with the hinge holes on the enclosure.
- Lower the door until it rests securely in the hinge holes.
- Verify that the door swings freely on the hinges and that the magnetic catch holds the door securely when it is closed.

Figure 4. Door Alignment



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.

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