SIEMENS

TC Compact Series
Extended Temperature Range Option

Product Description

The TC Compact Series communicates with other field panels or workstations on a peer-to-peer Automation Level Network (ALN). The following communication options are supported:

- Native BACnet/IP communications over 10/100 MB Ethernet networks
- Native BACnet MS/TP on RS-485

The TC Compact is available in 16- or 24-point versions with optional support for FLN devices (requires additional license and TC Compact model with both an Ethernet and an RS-485 port). Selected models also include an extended temperature range for the control of rooftop devices.

> For information on the TC Compact Series with a standard temperature range for use in controlled spaces, see the *TC Compact Series Installation Instructions* (553-652).

Product Numbers

TC16.2-ERF.T	TC Compact, 16 point, BACnet/IP ALN, rooftop option, MS/TP FLN
TC16.2-MR.T	TC Compact, 16 point, BACnet MS/TP ALN, rooftop option
TC24.2-ERF.T	TC Compact, 24 point, BACnet/IP ALN, rooftop option, MS/TP FLN
TC24.2-MR.T	TC Compact, 24 point, BACnet MS/TP ALN, rooftop option
PXA-DIN16KIT	Accessory kit with four 16" (406 mm) DIN rails

Warning/Caution Notations

WARNING: Personal injury or property damage may occur if you do not follow a procedure as specified.

CAUTION: Equipment damage or loss of data may occur if you do not follow a procedure as specified.

Required Tools and Materials

- Wire stripper/side cutter
- Small flat-blade screwdriver
- Phillips screwdriver
- Electric drill and Phillips driver bit
- Level
- Tape measure
- Digital multimeter (DMM)
- Black marker
- Masonry drill bit (to mount on concrete or masonry)
- Four wall anchors (to mount on concrete or masonry)
- Optional DIN rail (1.38" W × 0.276" H × 0.04" D (35 mm W × 7 mm H × 1 mm D))

Included Materials

The following screws are included for mounting the TC Compact without a DIN rail:

- Four No. 8-18 × 3/8" self-tapping Phillips screws
- Four No. 8-18 × 3/4" self-drilling Phillips screws
- Two No. 8-18 × 1-3/4" self-drilling Phillips screws

Expected Installation Time

20 minutes

Prerequisites

CAUTION:

No power wiring is connected to the TC Compact at this time.

- If mounting in an enclosure:
    - Enclosure is installed.
    - The power source is installed, as applicable.
    - The power is OFF.

- All necessary wiring is pulled and terminated per the layout drawing.

- Power and communication wiring is terminated to the removable plugs supplied with the devices.

CE Compliance Requirements

Must be installed inside a metal enclosure rated at IP20 minimum.

Energy Management Applications

For energy management only (low voltage Class 2), the TC Compact may be mounted on a flat surface.
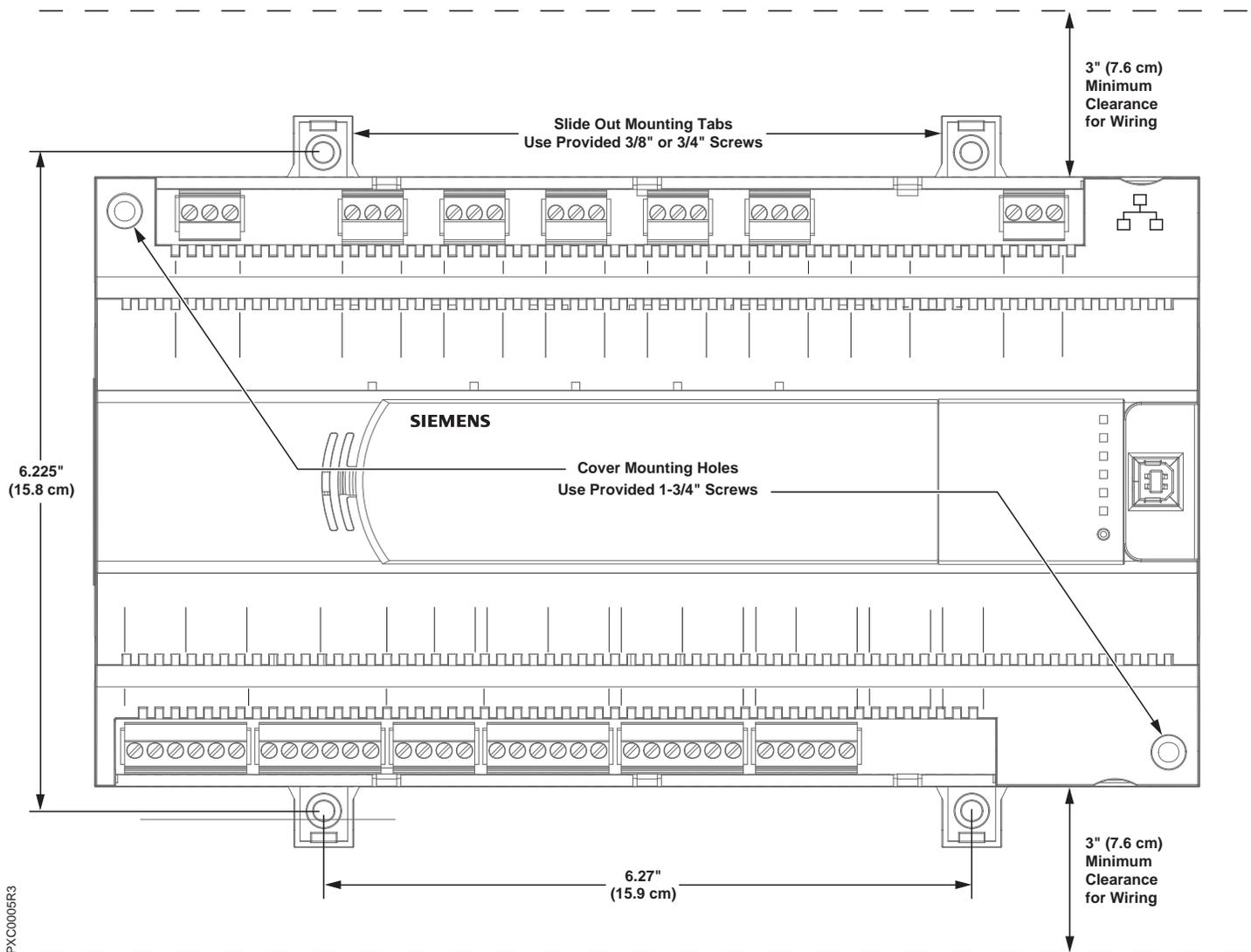
If required, use an enclosure that is suitable for the operating environment of the TC Compact. Operate in a dry location, which is protected from exposure to salt spray or other corrosive elements. Exposure to flammable or explosive vapors must be prevented.

Outdoor Applications

For outdoor applications, mount the rooftop TC Compact inside a NEMA-4 rated enclosure or a similarly protected environment.

Applications Requiring a Secure Enclosure

Mount the TC Compact inside a listed enclosure along with a Service Box and Sidewall Kit, if needed.

3" (7.6 cm) Minimum Clearance for Wiring

Slide Out Mounting Tabs
Use Provided 3/8" or 3/4" Screws

6.225" (15.8 cm)

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Cover Mounting Holes
Use Provided 1-3/4" Screws

6.27" (15.9 cm)

3" (7.6 cm) Minimum Clearance for Wiring

PXC0005R3

Installation Instructions

WARNING:

Turn OFF AC power at the circuit breaker panel.

CAUTION:

UL Listings require that NEC Class I and Class II wiring be kept separate from each other. Use separate conduit and cable tie bars to separate Class I Digital Output (DO) wires from all other Class II wiring.

Securely fasten the TC Compact so that it does not come loose when point connectors are removed.

If you need to reinsert one of the mounting tabs, see the *TC Compact Series Owner's Manual* (588-682) for instructions.

The TC Compact may be mounted either vertically (with 24 Vac and DOs on the right) or horizontally (with 24 Vac and DOs at the top).

Options for Mounting the TC Compact

➤ Select one of the following options for installation:

- Mount the controller on a DIN rail by using the four slide-out mounting tabs.
- Fasten the controller to a surface or enclosure backplane with screws

Option 1: Mounting the Controller on a DIN Rail

To provide a minimum clearance for wiring, allow 6 inches (15 cm) from the center of the DIN rail to obstructions on either side.

Installing the DIN Rail

Do the following if the DIN rail is not already installed.

1. Align and level the DIN rail on the mounting surface or the backplane of the enclosure.

2. Mark the position of the mounting holes at either end of the DIN rail.

3. Using wall anchors, if necessary, attach the DIN rail to the surface or the backplane.

   For longer DIN rails, use one mounting screw per running foot of DIN rail.

Installing the TC Compact

1. Slide out the mounting tabs.

2. Align the channel on the back of the device with the DIN rail.

3. Using a flat-blade screwdriver, push in each mounting tab until it clips onto the DIN rail.

4. Continue with *Completing the Installation*.

Option 2: Fastening the Controller with Screws

Allow a minimum clearance of 3 inches (7.6 cm) around the controller ports and connectors for terminating wires.

1. Select one of the following options for fastening the controller:

   - Drive screws through the four slide-out mounting tabs.
   - Drive screws through the two mounting holes in the controller cover and through two mounting tabs at the opposite corners.

2. Slide out the required mounting tabs.

   For installation in an enclosure backplane, use the 3/8" self-tapping screws and, if necessary, the 1-3/4" self-drilling screws.

   For mounting on a surface, use the 3/4" self-drilling screws and, if necessary, the 1-3/4" self-drilling screws.

3. Align the TC Compact on the mounting surface and mark the position of the mounting holes.

4. For installation in an enclosure, align the mounting holes of the TC Compact with holes in the perforated backplane.

5. If necessary, drill the mounting holes and insert wall anchors.

6. Secure the controller using the provided screws.

7. Continue with *Completing the Installation*.

Completing the Installation

⚠️ **CAUTION:**

▽ terminal is connected to reference wire. Protective ground terminal may be connected to earth ground.

📌 Do not connect the power or network communication cable until instructed to do so during start-up.

1. Terminate power wiring to the 24 Vac removable plug.

2. If required, remove the RS-485 plug and terminate the communication wiring.

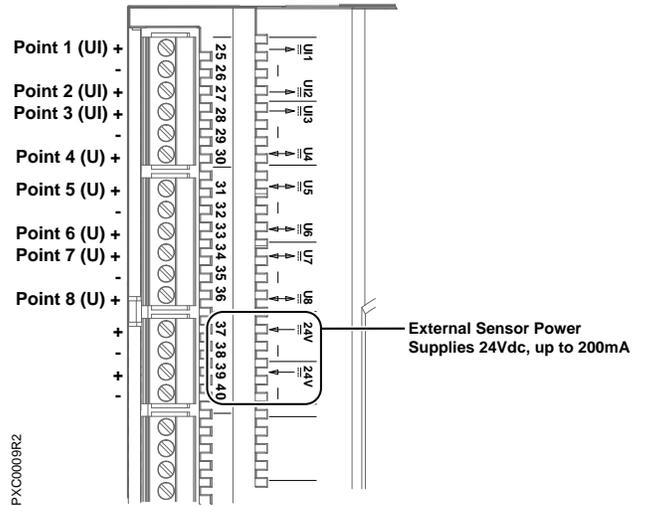3. Terminate point wiring to the appropriate connectors.

⚠️ **CAUTION:**

Adjacent point connections on the TC Compact share a Common termination.

For specific wiring diagrams, see the *TALON Wiring Guidelines for Field Panels and Equipment Controllers* (588-581).

The installation is now complete.

Point 1 (UI) +
-
Point 2 (UI) +
Point 3 (UI) +
-
Point 4 (U) +
-
Point 5 (U) +
-
Point 6 (U) +
Point 7 (U) +
-
Point 8 (U) +
+
-
+
-

External Sensor Power Supplies 24Vdc, up to 200mA

PXC0009R2

📌 The combined total of the external sensor power outputs cannot exceed 200 mA.

Your feedback is important to us. If you have comments about this document, please send them to sbt_technical.editor.us.sbt@siemens.com.