

TC Compact Series

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 an extended temperature range, see the *TC Compact Series Extended Temperature Range Option Installation Instructions* (553-653).

Product Numbers

TC16.2-EF.T	TC Compact, 16 point, BACnet/IP ALN, MS/TP FLN
TC16.2-EF32.T	TC Compact, 16 point, BACnet/IP ALN, RS-485 Enabled
TC24.2-EF.T	TC Compact, 24 point, BACnet/IP ALN, MS/TP FLN
TC24.2-EF32.T	TC Compact, 24 point, BACnet/IP ALN, RS-485 Enabled
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 x 0.276" H x 0.04" D (35 mm W x 7 mm H x 1 mm D))

Included Materials

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

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

Applications Requiring a Secure Enclosure

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

Smoke Control Application Requirements



CAUTION:

The 115V or 230V PX Series Service Box is required for UL864 and NFPA92A compliant installations. For more information, see the *PX Series Service Box Assemblies Installation Instructions* (553-131).

For non-UL864 and non-NFPA92A applications, any 24 Vac UL Listed Class 2 transformer may be used.



For smoke control applications, the TC Compact must be connected to the Automation Level Network (ALN) through an Ethernet switch that is UL Listed for Fire Signaling. ALN and FLN circuits are supervised.

For smoke control applications, mount the TC Compact inside a 19" or 34" PX Series enclosure (PXA-ENC19 or PXA-ENC34). For more information, see the *19" and 34" PX Series Enclosure Assemblies Installation Instructions* (553-130).

Service Modem Kit (538-915) is required for remote connection to the HMI of a TC Compact running smoke control applications. The modem, serial cable, and surge suppressor must be installed inside the 19" or 34" PX Series Enclosure with a Service Box.

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



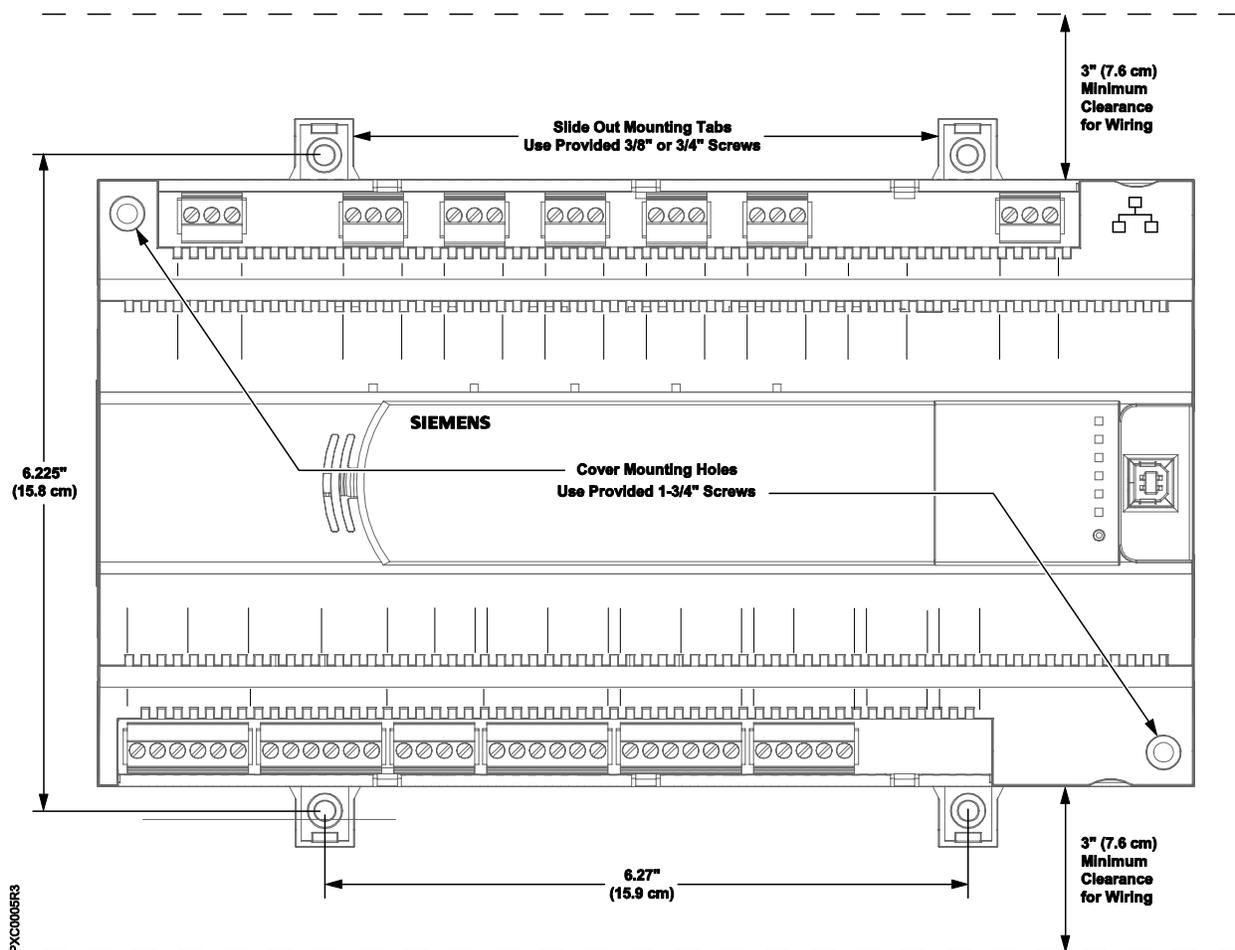
Allow a minimum clearance of 3 inches (7.6 cm) around the controller ports and connectors for terminating wires.

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. Using wall anchors if necessary secure the controller using the provided screws.
6. Continue with *Completing the Installation*.

Completing the Installation



CAUTION:

Do not connect the shield wire to the connector.

Terminate only one end of the shield wire on the enclosure earth ground.

↓ 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.

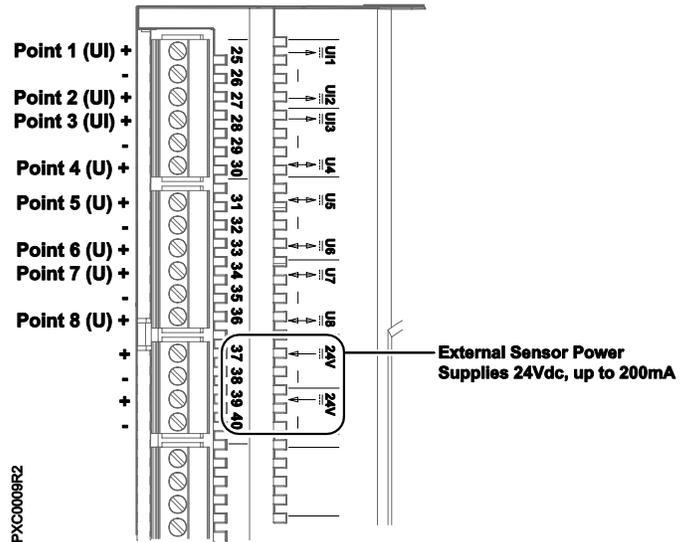


CAUTION:

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.



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

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