

TC Compact Unitary Equipment Controller (UEC)

Product Description


The TC Unitary Equipment Controller (UEC) is an MS/TP device that can be configured as a programmable, stand-alone device when FLN connectivity is not present. When a TALON View workstation or BACnet Web Server is connected through a TC Modular or Compact with MS/TP capability, the UEC can operate as an FLN device.


Selected models also include an extended temperature range for the control of rooftop devices.

Product Number

TC16.3-UCM.T	TC Unitary Equipment Controller, 16 point, BACnet MS/TP
TC24.3-UCM.T	TC Unitary Equipment Controller, 24 point, BACnet MS/TP
TC16.3-UCMR.T	TC Unitary Equipment Controller, 16 point, BACnet MS/TP FLN, Rooftop Model
TC24.3-UCMR.T	TC Unitary Equipment Controller, 24 point, BACnet MS/TP FLN, Rooftop Model

Warning/Caution Notations

	<p>⚠ WARNING</p>
	<p>Personal injury or property damage may occur if you do not follow a procedure as specified.</p>

	<p>⚠ CAUTION</p>
	<p>Equipment damage or loss of data may occur if you do not follow a procedure as specified.</p>

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" x 0.3" x 0.04" ((35 mm x 7.5 mm x 1 mm)))

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 field panel controller at this time.
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- 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.

Power Requirements

One of the following power sources is pulled to the enclosure:

- 120 Vac, 60 Hz and terminated at the 115V PX Series Service Box.
- 230 Vac, 50/60 Hz and terminated at the 230V PX Series Service Box.
- 24 Vac, 50/60 Hz Class 1 power limited from a third-party transformer and connected to a terminal block.

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.


Outdoor Applications


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

Applications Requiring a Secure Enclosure

For any application requiring a secure enclosure, mount the TC Compact inside a listed enclosure along with a Service Box and Sidewall Kit, if needed.

Installation

	WARNING Turn OFF AC power at the circuit breaker panel.
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	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.
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NOTE:

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



NOTE:

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 Compact Series

- 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 Compact Series on a DIN Rail

Installing the DIN Rail

**NOTE:**

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

**NOTE:**

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

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.
 - Continue with Completing the Installation.

Option 2: Fastening the Controller with Screws

**NOTE:**

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


1. Select one of the following options for fastening the TC Compact:
 - ⇒ 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.

**NOTE:**

- For installation on 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. See the Figure *Dimensions for Installation*.
5. Using wall anchors if necessary, secure the controller using the provided screws.
6. Continue with Completing the Installation.

Completing the Installation


	⚠ CAUTION
<p>If FLN is being used, do not connect the shield wire to the connector.</p> <p>Terminate only one end of the shield wire on the enclosure earth ground.</p> <p>↓ Terminal is connected to reference wire. Protective ground terminal may be connected to earth ground.</p>	



NOTE:

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 FLN connectivity is required, remove the RS-485 plug and terminate the communication wiring. If running stand-alone, do not terminate the plug
3. Terminate point wiring to the appropriate connectors.

	⚠ CAUTION
<p>Adjacent point connections on the TC Compact Series share a Common connection. See Figure 2, <i>Common and Sensor Power Connections</i>.</p>	

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

The installation is now complete.

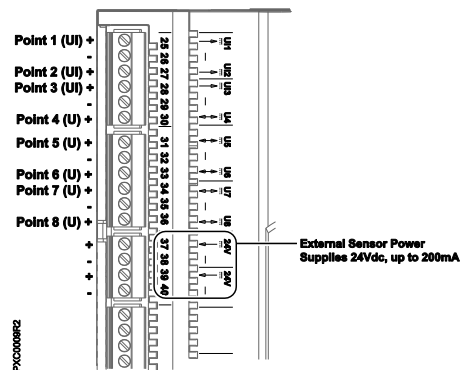


Figure 2: Common and Sensor Power Connections.

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