

INSTALLATION DOCUMENT PACKAGE

Installation Instructions

LANDIS GYR

PXC24.2-E.A

24-POINT BACNET AUTOMATION CONTROLLER

Applicable product family: APOGEE building automation systems

OFFICIAL SOURCE

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The following pages are selected from the supplied manufacturer document and retain their original page content.

PXC Compact Series

Product Description

The PXC compact is a series of high-performance, Direct Digital Control (DDC) programmable controllers, which are an integral part of the APOGEE® Automation System.

Selected models of the PXC compact series include an extended temperature range for the control of rooftop devices, such as air handlers.

Product Numbers

PXC Compact, RS-485 Automation Level Network (ALN)

PXC16-P.A PXC Compact, 16 points
(3 UI, 5 U, 3 AOV, 2 DI, 3 DO)

PXC24-P.A PXC Compact, 24 points
(3 UI, 13 U, 3 AOV, 5 DO)

PXC Compact, Ethernet Automation Level Network (ALN)

PXC16-PE.A PXC Compact, 16 points
(3 UI, 5 U, 3 AOV, 2 DI, 3 DO)

PXC24-PE.A PXC Compact, 24 points
(3 UI, 13 U, 3 AOV, 5 DO)

PXC Compact, BACnet/IP Ethernet Automation Level Network (ALN)

PXC16-E.A PXC Compact, 16 points
(3 UI, 5 U, 3 AOV, 2 DI, 3 DO)

PXC24-E.A PXC Compact, 24 points
(3 UI, 13 U, 3 AOV, 5 DO)

Warning/Caution Notations

WARNING:		Personal injury or property damage may occur if you do not perform the procedure as specified.
CAUTION:		Equipment damage or loss of data may occur if you do not follow the procedure as specified.

Required Tools and Materials

- Wire stripper/side cutters
- 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 lead wall anchors (to mount on concrete or masonry)

Included Materials

The following screws are included for mounting the PXC 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

- All necessary wiring is pulled.
- No power wiring is connected to the PXC Compact.
- If mounting in an enclosure:
 - Enclosure is installed.
 - The power source is installed, as applicable.
 - The power is OFF.



CAUTION:

The 115V or 230V MEC Service Box is required for UL864 and NFPA92A compliant installations. For more information on the service box, see the *MEC Service Box Installation Instructions* (586-135).

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

CE Compliance Requirements

For installations requiring CE compliance, the PXC Compact must be installed inside a metal enclosure rated at IP20 minimum.

See the *APOGEE Wiring Guidelines for Field Panels and Equipment Controllers* (125-3002) for CE compliance wiring requirements.

Energy Management Applications

For energy management only (low voltage (Class 2) and non-smoke control applications), you may mount the PXC Compact on a flat surface.

Smoke Control Applications

For smoke control applications, mount the non-rooftop PXC Compact inside an MEC enclosure.

NOTE: For smoke control applications over Ethernet, the PXC Compact must be connected to the Ethernet Automation Level Network (ALN) through an Ethernet switch that is UL Listed for Fire Signaling. The panel and the switch must be installed in the same room.

Applications Requiring a Secure Enclosure

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



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 inside the enclosure to separate Class I DO wires from all other Class II wiring.

Installation

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

NOTE: Always fasten the PXC Compact at four points so that the controller remains securely fastened when point connectors are removed.

1. Select one of the following options for fastening the PXC Compact:
 - Connect the controller to a DIN rail by using the four slide-out mounting tabs (see Figure 1).
 - Drive screws through the four slide-out mounting tabs (see Figure 2).
 - Drive screws through the two mounting holes in the controller cover and through two mounting tabs at the opposite corners (see Figure 2).
2. Gently slide out the mounting tabs (see Figure 1).

NOTE: Do not force the tabs to extend beyond the screw holes! If you need to reinsert one of the mounting tabs, see the *PXC Owner's Manual* (553-104) for instructions.

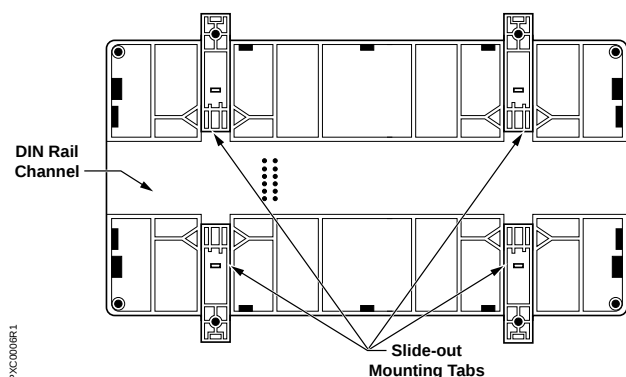


Figure 1. Back View of the PXC Compact.

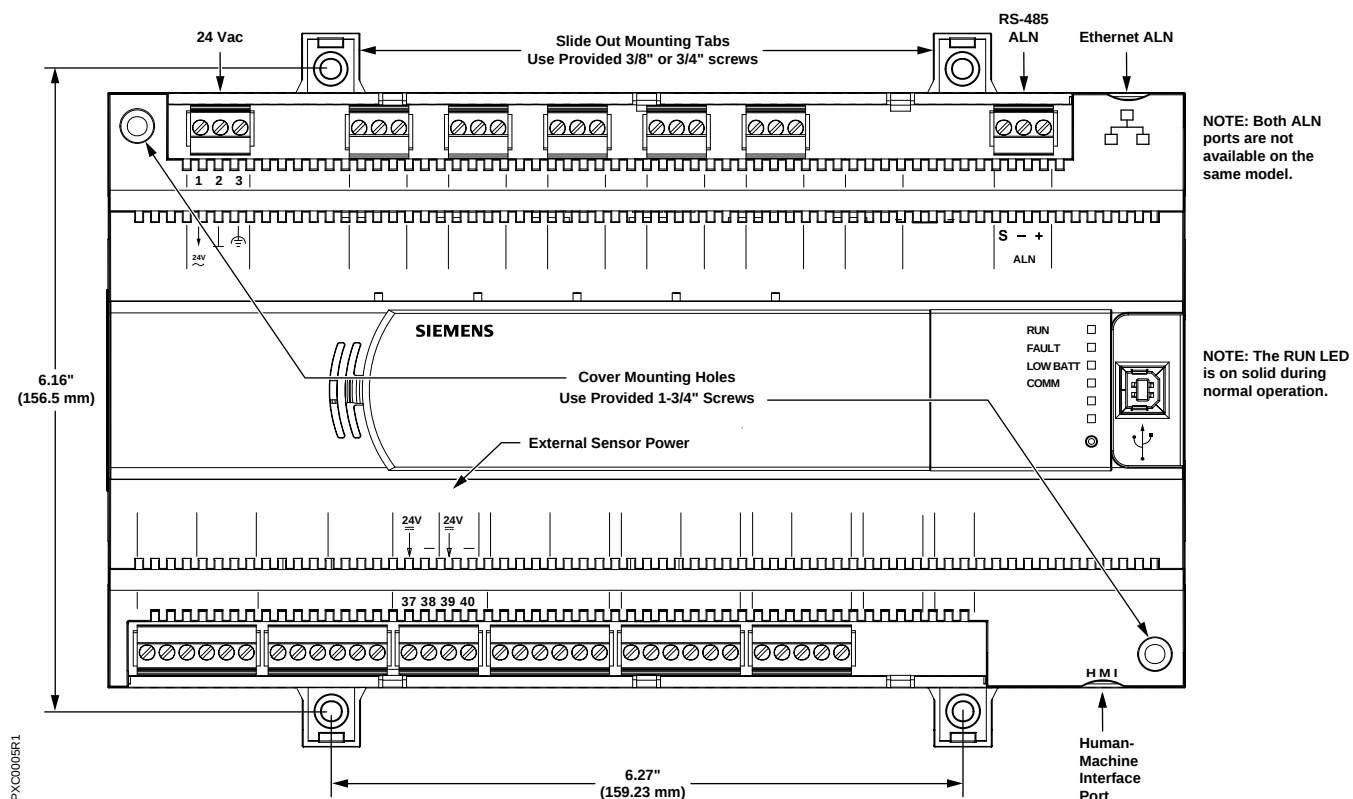


Figure 2. Front View of the PXC Compact Controller (PXC24 shown).

Mounting the PXC Compact on a Surface



WARNING:

Turn OFF AC power at the circuit breaker panel.

NOTE: This option is for energy management only (low voltage (Class 2) and non-smoke control applications).

Steps for Installing with a DIN Rail

1. Using wall anchors, if necessary, attach the DIN rail to the surface.

NOTE: The PXC Compact must be positioned to provide a 3-inch minimum clearance for terminating wires to the ports and connectors.

2. Align the channel on the back of the PXC Compact with the DIN rail (see Figure 1).
3. Push in each mounting tab until it clips onto the DIN rail.
4. Continue with *Completing the Installation*.

Steps for Installing without a DIN Rail

NOTE: Use the 3/4" self-drilling screws and, if necessary, the 1-3/4" self-drilling screws for this installation.

1. Align the PXC Compact on the mounting surface.
NOTE: The PXC Compact must be positioned to provide a 3-inch minimum clearance for terminating wires to the ports and connectors.
2. Mark the position of the mounting tab holes on the surface.
3. If necessary, mark the position of the mounting holes in the PXC Compact cover.
4. Drill the mounting holes and, if necessary, insert wall anchors.
5. Secure the controller using the provided 3/4" screws and, if necessary, the 1-3/4" screws.
6. Continue with *Completing the Installation*.

Mounting the PXC Compact in an Enclosure



WARNING:

Turn OFF AC power to the enclosure at the circuit breaker panel.

NOTE: The MEC enclosure is required for smoke control applications.

Steps for Installing with a DIN Rail

1. Attach the DIN rail to the backplane of the enclosure.
2. Align the channel on the back of the PXC Compact with the DIN rail (see Figure 1).
3. Push in each mounting tab until it clips onto the DIN rail.
4. Continue with *Completing the Installation*.

Steps for Installing without a DIN Rail

NOTE: Use the 3/8" self-tapping screws and, if necessary, the 1-3/4" self-drilling screws for this installation.

1. Carefully align the mounting holes of the PXC Compact with holes in the perforated backplane of the enclosure.
2. If necessary, drill holes to match the PXC Compact mounting holes with the backplane.
3. Secure the controller using the provided 3/8" screws and, if necessary, the 1-3/4" screws.
4. Continue with *Completing the Installation*.

Completing the Installation

- Terminate wires to both the 24 Vac connector and the appropriate point connectors (see Figure 2 and Figure 3).

NOTE: Do not connect power to the PXC Compact at this time.



CAUTION:

Adjacent point connections on the PXC Compact share a Common termination (see Figure 3).

For specific wiring diagrams, see the *APOGEE Wiring Guidelines for Field Panels and Equipment Controllers* (125-3002).

The installation is now complete.

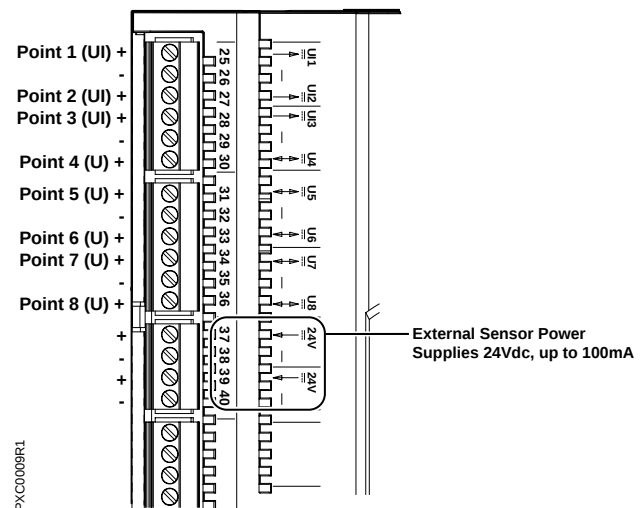


Figure 3. Polarity for Point Connections.

NOTE: The combined total of the external sensor power outputs cannot exceed 100 mA.

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