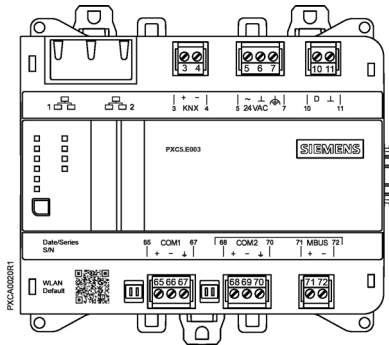


SIEMENS

Document ID: A6V13376032



Design
PXC5 Installation Instructions
Product Number(s):
PXC5.E003

Primary Automation station with increased functionality and flexibility to integrate BACnet MS/TP.

Installation

⚠ CAUTION



Ensure power to the automation station is OFF.


Prerequisites

- Mounting in an enclosure:
 - Indoor dry use only.
 - Enclosure is installed, DIN rail included.
 - The power source is installed, as applicable.
 - The power is OFF.
- All necessary wiring is pulled and terminated per the layout drawing.
 - Wire Management within enclosure must separate Class 2 wiring (6.4 mm, 0.25 inch) from any Class 1 Power Limited wiring or Class 1 wiring or Class 3 wiring.
- DIN rail installed.
- Power requirements met.
- Only Install following manufacturer's part numbers in Lithium Coin Cell Battery holder located under removable top housing cover:
 - Panasonic CR2032, Duracell CR 2032, and Murata CR2032.
- Common Ground requirements met.

Energy Management Applications

For Energy Management Applications Install Open Energy Management Automation Station Type EM as follows:

- Install only in an industrial control enclosure constructed to NEMA Type 1 or better or enclosure rated for Type F or EM.
- Within enclosure mount either horizontal or vertical orientation directly on backplane or on installed DIN rail.
- Class 2 wiring and Class 1 Power Limited wiring must have same insulation rating as highest Class voltage rating within enclosure.
- Source of 24VAC or 24VDC power must be supplied.


⚠ WARNING	
	<ul style="list-style-type: none"> • Equipment damage may occur if system neutral (⊥) is not connected to building approved earth ground at the transformer. • Relay outputs connected to mains voltage <p>Injuries caused by electric shock when touching the device</p> <ul style="list-style-type: none"> - Install the device in a lockable cabinet or use terminal covers. - Install the device in locations where no children are present. - Conductors with a cross-section of 0.5 mm² (AWG24) or greater must comply with requirements as per IEC 60332-1-3 or IEC TS 60695-11-21.

Smoke Control Compliance

Smoke Control product numbers

Type	Order number	Description
PXA-ENC19	PXA-ENC19	PX Series 19 inch Enclosure
PXA-ENC34	PXA-ENC34	PX Series 34 inch Enclosure
PXA-SB115V192VA	PXA-SB115V192VA	Smoke Control Listed PX Series 115V to 24V 192VA Service Box
PXA-SB115V384VA	PXA-SB115V384VA	Smoke Control Listed PX Series 115V to 24V 384VA Service Box
PXA-SB230V192VA	PXA-SB230V192VA	Smoke Control Listed PX Series 230V to 24V 192VA Service Box
PXA-SB230V384VA	PXA-SB230V384VA	Smoke Control Listed PX Series 230V to 24V 384VA Service Box



Smoke Control Requirements

⚠ CAUTION	
	A PX Series Service Box and a PX Series Enclosure are required for Smoke Control, NFPA92 and ULC-524 compliant installations.

For smoke control applications:

- mount inside a 19-inch or 34-inch PX Series enclosure (PXA-ENC19 or PXA-ENC34)
- may be oriented either horizontally or vertically
- A PXA Series Service Box (PXA-SB115V192VA, PXA-SB115V384VA, PXA-230V192VA, PXA-230V384VA) is installed in the enclosure.
- BACnet ethernet and BACnet MSTP terminals are supervised communication Class C for UL and DCLN (Endpoint connected via single pathway) for ULC
 - All other terminals are non-supervised
 - See *Terminal Designations* table for more information

For more information, see the *19" and 34" PX Series Enclosure Assemblies Installation Instructions (553-130)* and *PXA Series Service Box Assemblies Installation Instructions (553-131)*.

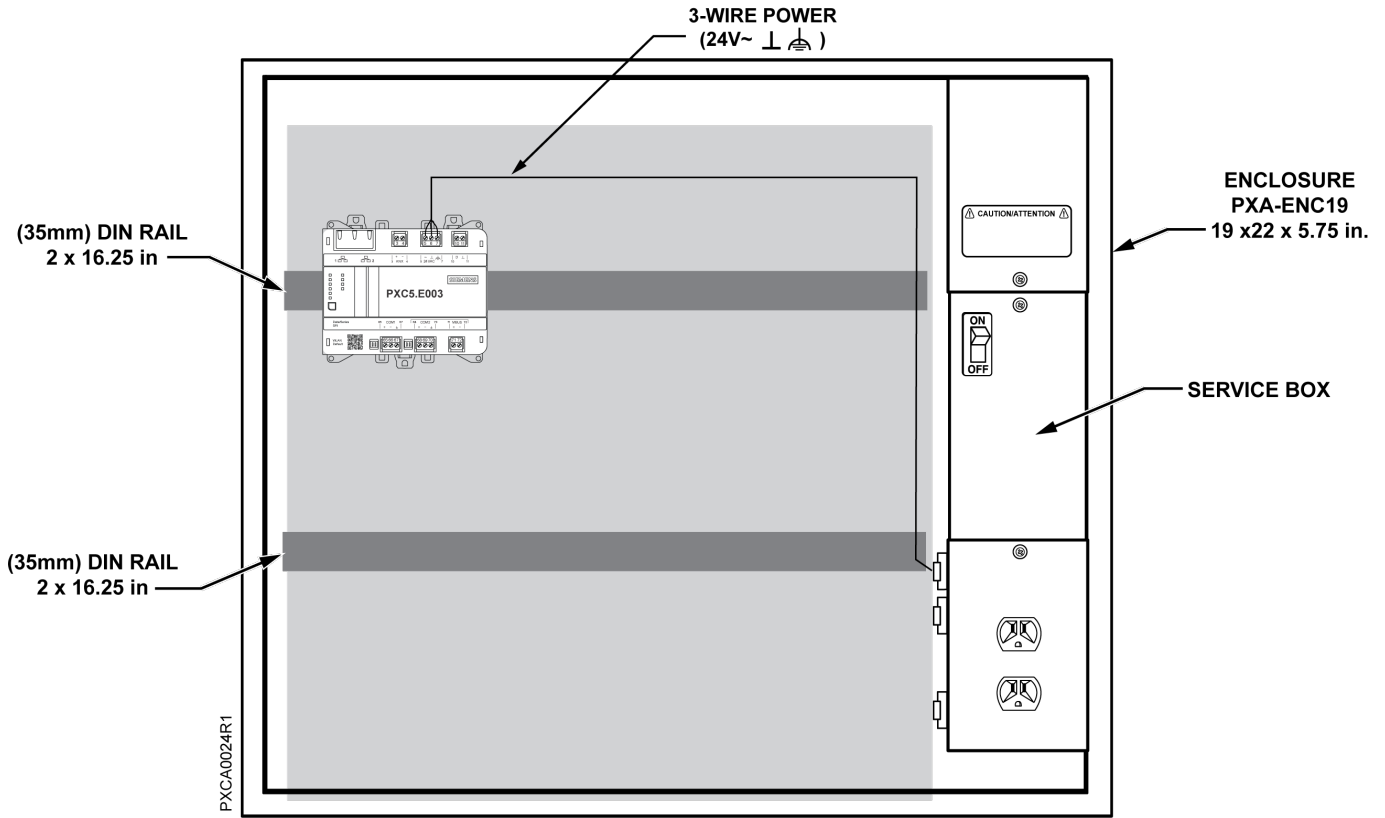
 CAUTION	
	Do not use DC power for Smoke Control Applications. Equipment damage will occur.

Smoke Control Instructions/Information

1. Install Smoke Control Listed products, enclosure and service box. See the *Smoke Control product numbers* sections for more information.
2. Input Rating:
 - ⇒ PXC5.E003: PELV, Class 2, AC 24V~, 88 VA / 3.7 A, 50/60 Hz, -5 T 50, IP20 Indoor dry use only
 - ⇒ DC24V is not used for smoke control applications

All circuits are power limited; FLN (Field Level Network) is RS-485 or Ethernet.

PXC5... Example Layout for Smoke Control



Dimensions

All dimensions in mm and inches.

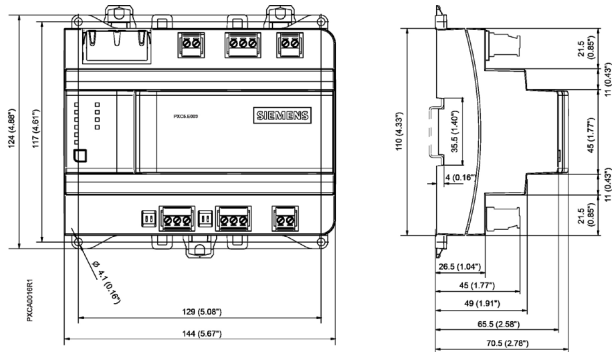


Fig. 1: PXC5.E003 dimensions.

Wiring Requirements

Wire Type Requirements.				
Circuit Type	Class	Wire Type	Maximum Distance ¹⁾	Conduit Sharing ²⁾
AC Line Power (120V or greater) to transformer	2	No. 15A / 14 AWG or 20A / 12 AWG	See NEC ³⁾	Check local codes




Wire Type Requirements.				
Circuit Type	Class	Wire Type	Maximum Distance ¹⁾	Conduit Sharing ²⁾
Universal Input/Output	2	No.18 to No.22 AWG, TP ⁴⁾ or TSP ⁵⁾ CM (FT4) or CMP (FT6) ⁴⁾	1000 ft (305 m)	Check local codes
RS485 Automation Level Network (ALN) / Field Level Network (FLN)	2	No. 24 AWG, 3-wire cable, shielded (shield must be connected to building earth in the mounting panel)	3300 ft (1000 m)	
Dual Port Ethernet	2	10 Mbps: Min. CAT3, shielded cable 100 Mbps: Min. CAT5, shielded cable	330 ft (100 m)	
Dedicated Digital Input	2	No.14 to No.22 AWG. TP not required ⁵⁾ ; check job specifications and local codes.	1000 ft (305 m)	Check local codes
Digital Output	1, 2	No.14 to No.22 AWG. TP not required; check job specifications and local codes.	Check local codes	Check local codes
TX-I/O Island Bus Cable	2	20-12 AWG Solid 20-14 AWG Stranded	200ft (61 m)	

1) Wire length affects point intercept entry. Adjust intercept accordingly.

2) Conduit sharing rules: No Class 2 point wiring can share conduit with any Class 1 wiring except where local codes permit. (Both Class 1 and Class 2 wiring can be run in the field panel providing the Class 2 wire is UL listed 300V 75°C (167°F) or higher, or the Class 2 wire is NEC type CM (FT4) (75°C or higher) or CMP (FT6) (75°C or higher). NEC type CL2 and CL2P is not acceptable unless UL listed and marked 300V 75°C (167°F) or higher.

3) National Electric Code (NEC) and National Fire Alarm and Signaling Code (NFPA72), a standard from the National Fire Protection Association (NFPA).

Terminal Designations

Terminal	Symbol	Description
1, 2		2 x RJ45 interface for Ethernet with switch
3, 4	KNX	KNX PL-Link
5, 6		Operating voltage AC 24 V or DC 24 V
7		Functional ground (must be connected on the installation side with the building grounding system (PE)).
10, 11	D, ⊥	Digital input
Term	on, off	Switch for bus termination
Polar	on, off	Switch for polarization
65, 66, 67	COM1	Interface EIA-485 (M-bus, Modbus RTU, BACnet MS/TP)
68, 69, 70	COM2 ¹⁾	
71, 72	MBUS ¹⁾	M-bus interface

Reference Information

- Desigo Automation Smoke Control Systems Application and Engineering (A6V15135920)
- Wiring Guidelines for Field Panels and Equipment Controllers (125-3002)
- Automation Station Configuration and Sizing (A6V15135911)
- Compact Automation Station, PXC4.E16.A (A6V12957862)
- Compact Automation Station, PXC4.E16-2 (A6V15239325)
- Compact Automation Station, PXC4.M16-2 (A6V15239315)
- Compact Automation Station, PXC5.E003 (A6V11646020)
- Compact Automation Station, PXC5.E24.A (A6V14319960)
- Compact Automation Station, PXC5.E24 (A6V15239329)
- Modular Automation Station, PXC7.E400.A (A6V12957866)
- Modular Automation Station, PXC7.E400 (A6V15239345)

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