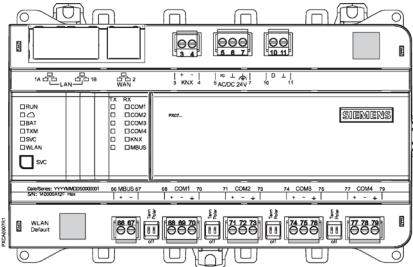




SIEMENS

Document ID: A6V13315067



PXC.A
PXC7 Installation Instructions
Product Number(s):
PXC7.E400.A

High Performance, Expandable Primary Automation Station providing maximum scalability and system management capabilities for the most demanding control applications.

Installation

CAUTION



Ensure power to the automation station or any other TX-I/O component 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 BR2032
- 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.



⚠ CAUTION	
	<ul style="list-style-type: none"> • All devices not isolated by an Island Bus Expansion module (TXA1.IBE) must be connected to the same grounding point. • TX-I/O components require a system neutral with single point earth ground. Do not connect these components to a floating system neutral.

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 *PX Series Service Box Assemblies Installation Instructions (553-131)*.

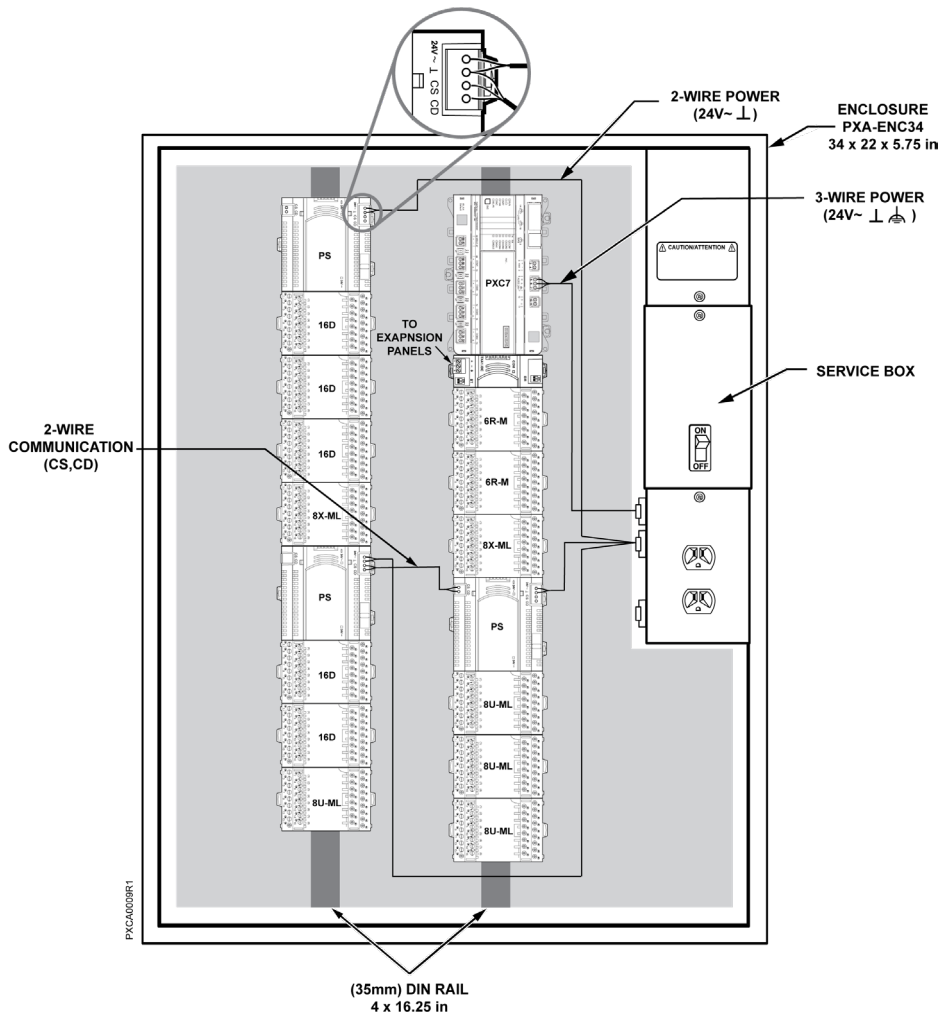
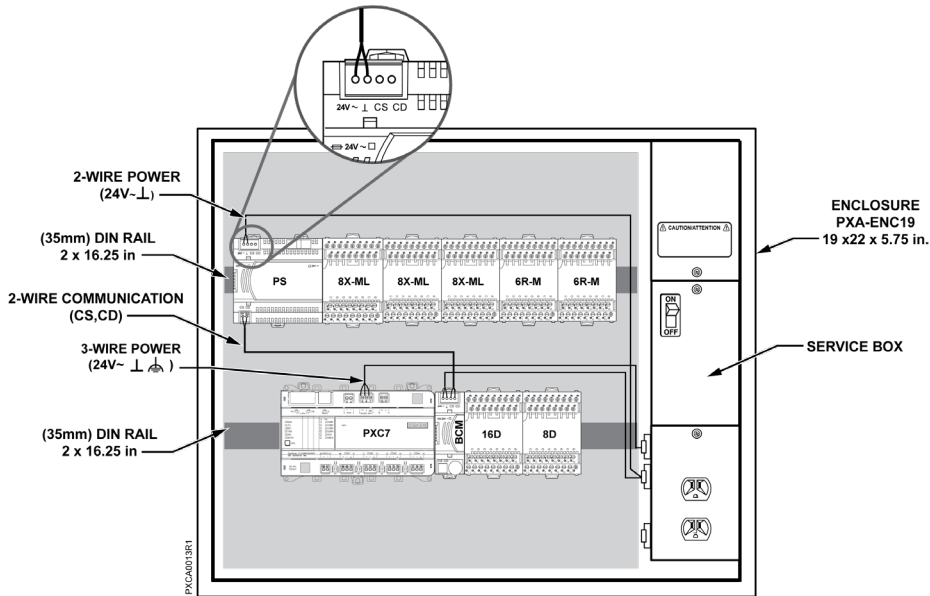
 CAUTION	
	Do not use DC power for Smoke Control Applications. Equipment damage will occur.

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:
 - ⇒ PXC7.E400.A: PELV, Class 2, AC 24V~, 71 VA / 3.0 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.

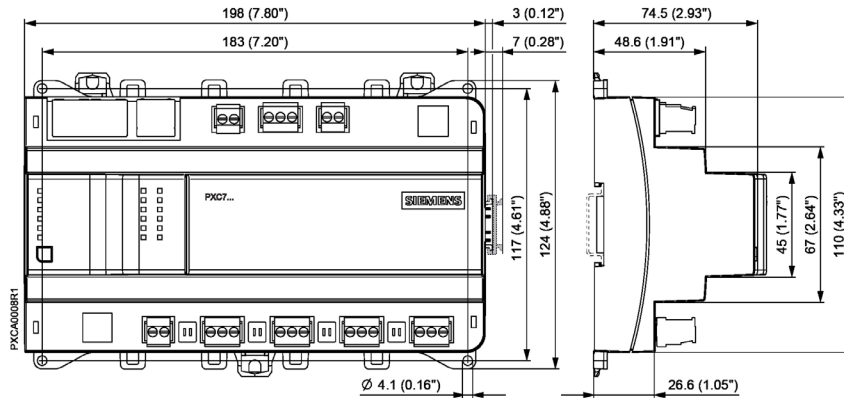
PXC7... Example Layout for Smoke Control



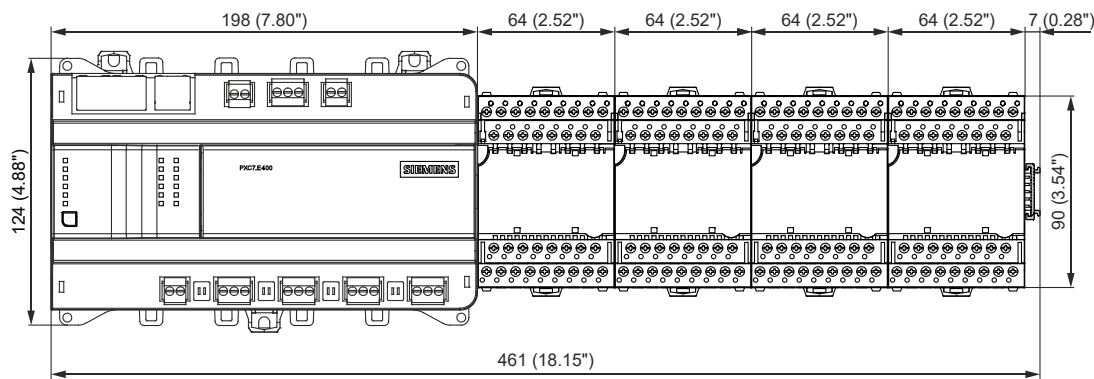
Dimensions

All dimensions in mm and inches.

PXC7



PXC7 with four TX-I/O modules



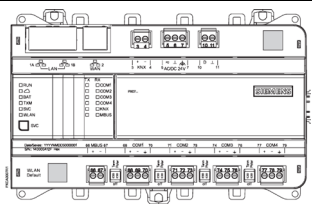


Wiring Requirements

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
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

Wire Type Requirements.				
Circuit Type	Class	Wire Type	Maximum Distance ¹⁾	Conduit Sharing ²⁾
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
	1a, 1b		LAN: 2 x RJ45 interface for Ethernet with switch
	2		WAN: 1 x RJ45 interface, local service/tool port (Not for smoke control use)
	3, 4	KNX	For future use / Not for Smoke Control use
	5, 6	\approx, \perp	Operating voltage AC/DC 24 V
	7		Functional ground (must be connected on the installation side with the building grounding system (PE).
	10, 11	D, \perp	Digital input (Not for Smoke Control use)
	Term	On, off	Switch for bus termination
	Polar	On, off	Switch for polarization
	66, 67	MBUS	For future use / Not for Smoke Control use
	68, 69, 70	COM1	Interface EIA-485 (BACnet MS/TP or P1) NOTE: P1 is supported on COM1, COM2, or COM3. MS/TP is supported on COM4.
	71, 72, 73	COM2	
	74, 75, 79	COM3	
	77, 78, 79	COM4	
	TX-I/O Bus 1, 2, 4, 5	CD, CS CS, \perp \perp, \approx	Interface for connecting TXM input/output modules; Right side of controller from top: Comm module and sensor (DC power) Field device AC/DC power (same as operating voltage)



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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Technical specifications and availability subject to change without notice.