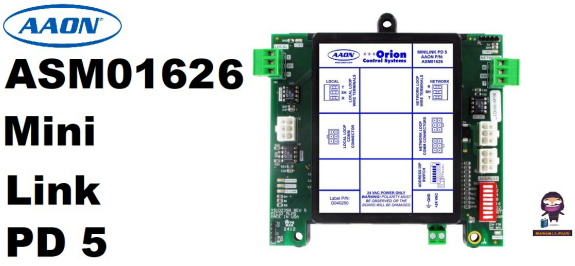
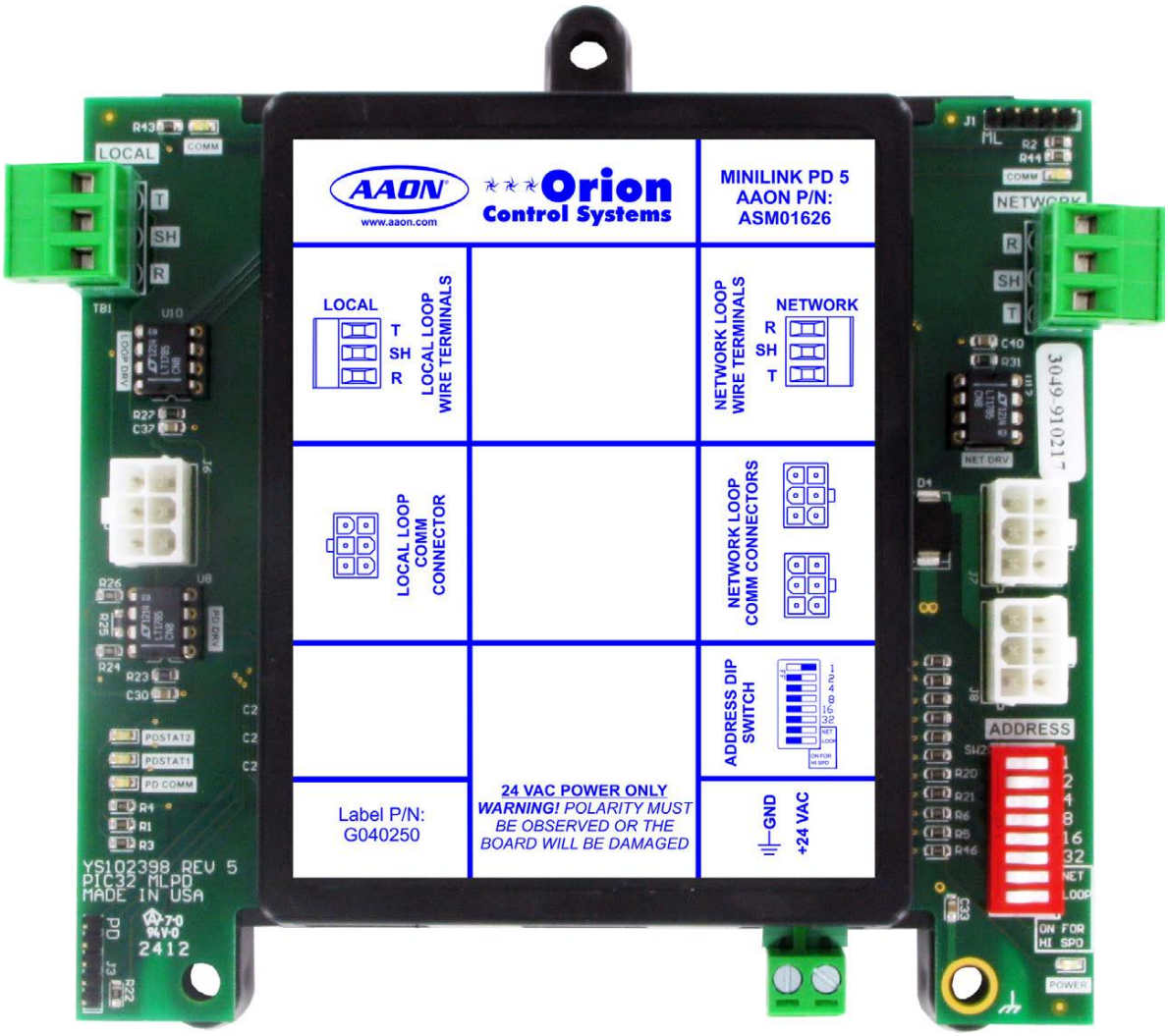


AAON ASM01626 Mini Link PD 5 User Guide

Contents

AAON ASM01626 Mini Link PD 5



Specifications

- **Product Name:** MiniLink PD 5
- **Part Number:** ASM01626
- **Compatibility:** VCCX-454 Series, VCCX/VCCX-IP Series
- **Communication:** RS-485
- **Architecture:** Token Passing
- **Power Requirement:** 24 VAC
- **Revision:** Rev. D, June 21, 2024

FAQs

- **Q: What should I do if I observe polarity issues with the board?**
  - **A:** Ensure correct polarity to prevent damage to the board. Refer to the manual for proper polarity orientation.
- **Q: How do I download the manual for the MiniLink PD 5?**
  - **A:** The manual is available for download on the manufacturer's website at www.aaon.com.

PRODUCT INFORMATION

PT-LINK II BACNET5 TECHNICAL GUIDE	
REVISION AND DATE	**CHANGE**
Rev. C, October 2, 2020	
Rev. D, June 21, 2024	updated wiring, updated board, updated compatibility notes, updated format

PRODUCT NAME PARTS REFERENCE	
PART DESCRIPTION	**PART NUMBER**
MiniLink PD 5	ASM01626
AAON Unit Controllers	Varies
Pressure Dependent VAV/Zone BACnet® Controller	ASM02426
®Pressure Independent VAV/Zone BACnet Controller	ASM02427
Power/Comm Board	ASM02224
VAV/Zone Power/Comm Modular Adapter	ASM02188
For Previous Generation VAV/Zone Controllers w/ Power/Comm Connections	Contact Factory

GENERAL INFORMATION

Overview and Features

The MiniLink PD 5 is an RS-485 communications device that is used to integrate multiple local RS-485 communication loops into an RS-485 network communications system. See Figure 1, for dimensions.

NOTE: Boards produced after 2024 will no longer have modular connections. Use either the terminal wiring diagram or the modular-to-terminal conversion wiring diagram for connecting these newer boards.

- The MiniLink PD 5 is required on the Orion Control system to separate local loops. Up to 60 MiniLink loops can be on a system.
- Local loop terminals of the MiniLink PD 5 are designed to connect to controllers that are daisy-chained together on its RS-485 local communications loop.
- Network RS-485 loop terminals on the MiniLink PD 5 are used to daisy-chain multiple MiniLinks back to a CommLink 5 to form a network communications loop. This provides for a fully networked RS-485 communications system.
- The MiniLink PD 5 is required for VAV systems to allow information to be shared between the HVAC Unit

Controller and the VAV/ Zone BACnet® Controllers (VAVZB).

- It is also required for zoning systems to facilitate voting of the zones to determine the HVAC units heating and cooling mode of operation. It also provides tenant logging capabilities.

Features

- The MiniLink PD 5 utilizes token-passing communication architecture. The MiniLink PD 5 is designed to serve as the local communications loop master.
- This means that it is responsible for sending the token to all the controllers on the local communications loop.
- Network communications are RS-485 type operating at 19,200 or 115,200 baud. Local communications are also RS-485 type and operate at 9600 or 57,600 baud. See Figure 2.
- The MiniLink PD 5 is factory default set to low speed. The baud rate is set with dipswitches 7 & 8. See Figure 3.

Dimensions and Mounting

Environmental Requirements: The MiniLink PD 5 needs to be installed in an environment that can maintain a temperature range between -30°F and 150°F and a humidity range between 0% and 95% RH (non-condensing).

Mounting: The MiniLink PD 5 is housed in a plastic enclosure. It is designed to be mounted by using the 3 mounting holes in the enclosure base. It is important to mount the device in a location that is free from extremely high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the MiniLink PD 5. The printed circuit board plastic cover has a UL94V0 flame rating.

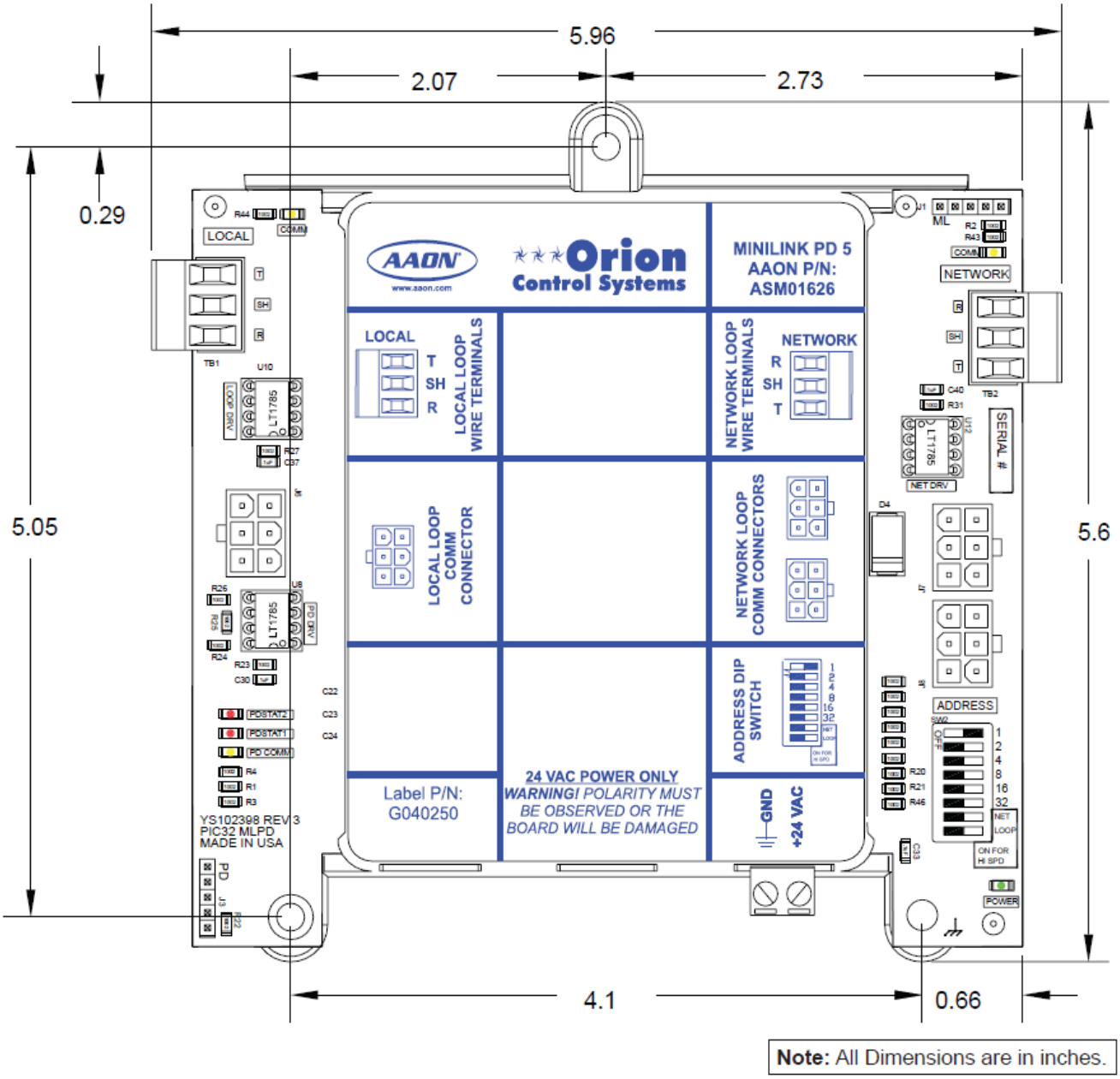


Figure 1: MiniLink PD 5 Dimensions

CONFIGURATION

Address Dipswitch Setting

Note: The power to the Minilink must be removed and reconnected after changing the address switch settings for any changes to take effect.

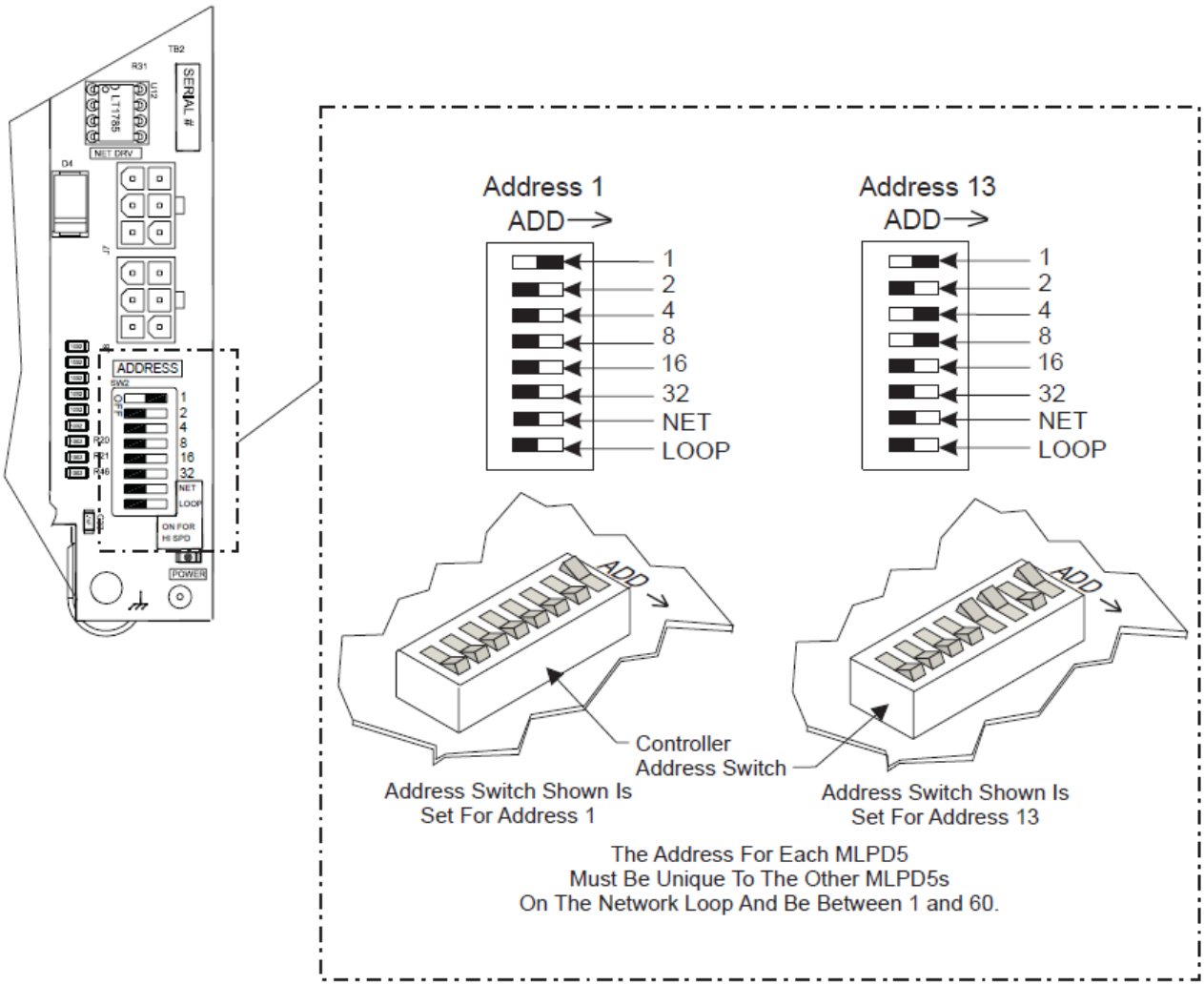


Figure 2: Address Dipswitch Setting

Network and Local Loop Baud Rate Settings

Note: The MiniLink PD 5 is factory set to low speed.
Note: The power to the MiniLink must be removed and reconnected in order for a Baud Rate change to take effect.

BAUD	**NETWORK LOOP SWITCH 7**	**SPEED**
115,200	ON	HIGH*
19,200	OFF	LOW**
BAUD	**LOCAL LOOP SWITCH 8**	**SPEED**
57,600	ON	HIGH***
9600	OFF	LOW****

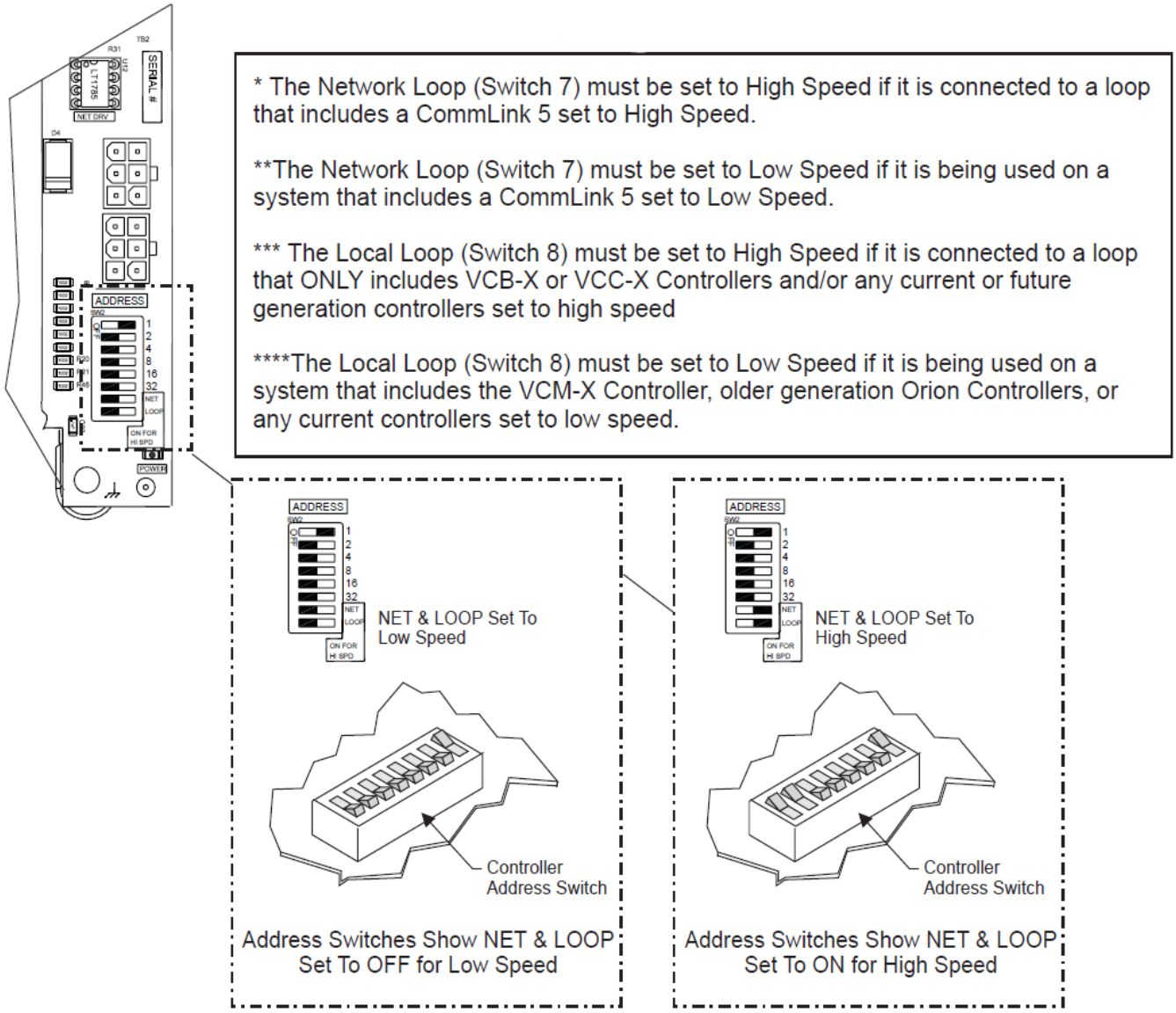


Figure 3: Network and Local Loop Baud Rate Settings

APPENDIX A: TERMINAL WIRING
Terminal Wiring

Note: For MiniLink modules produced on or after 2024, this is the only method for wiring local or network loops.

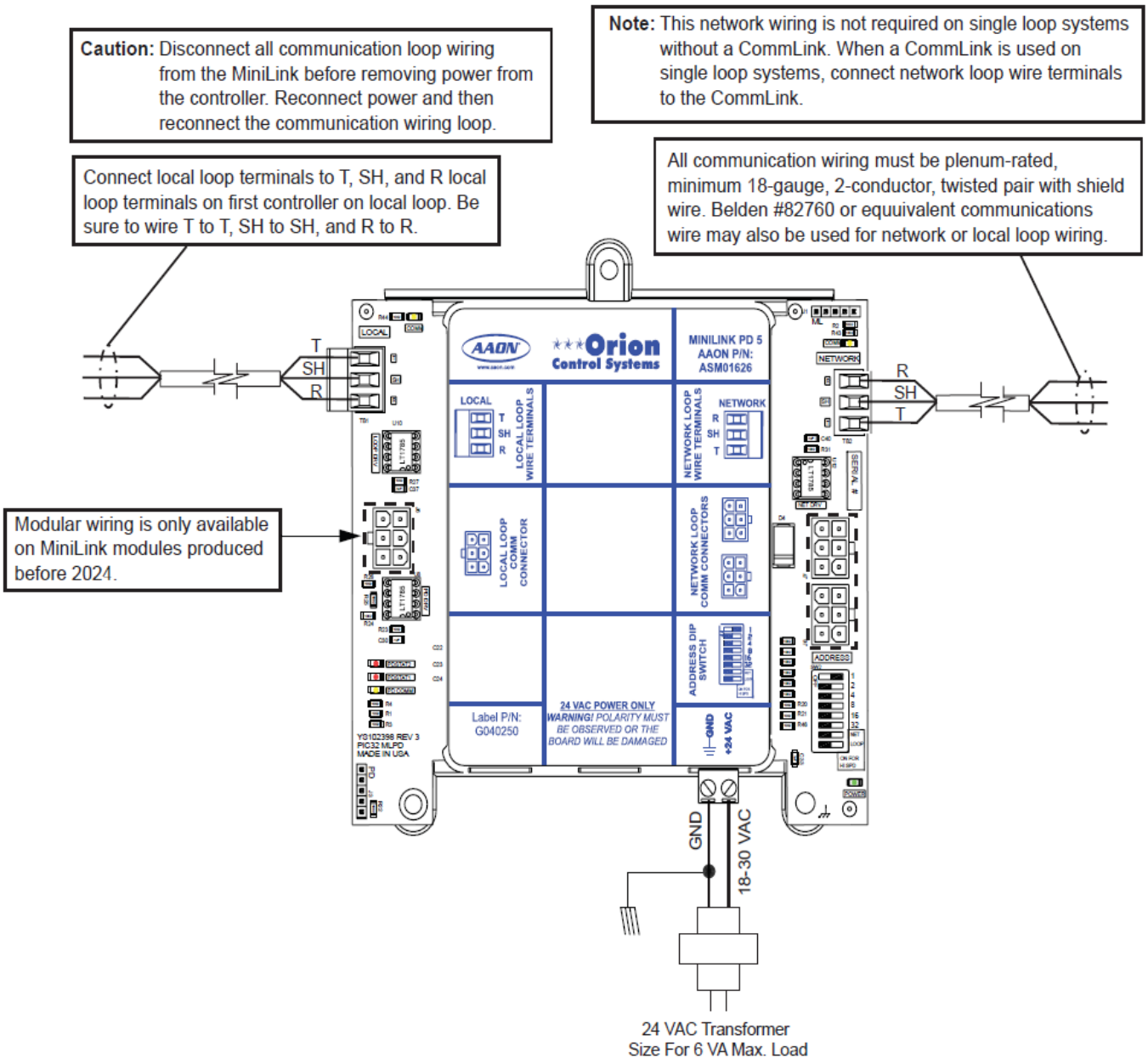


Figure 4: Terminal Wiring (Legacy MiniLink shown)

APPENDIX A: TERMINAL WIRING

Networked Single RS-485 Loop Wiring (VCCX2 and VCCX-IP Series Controllers) Typical Single Loop Networked System With MiniLink Polling Device & VAV/Zone BACnet (VAVZB) Controllers

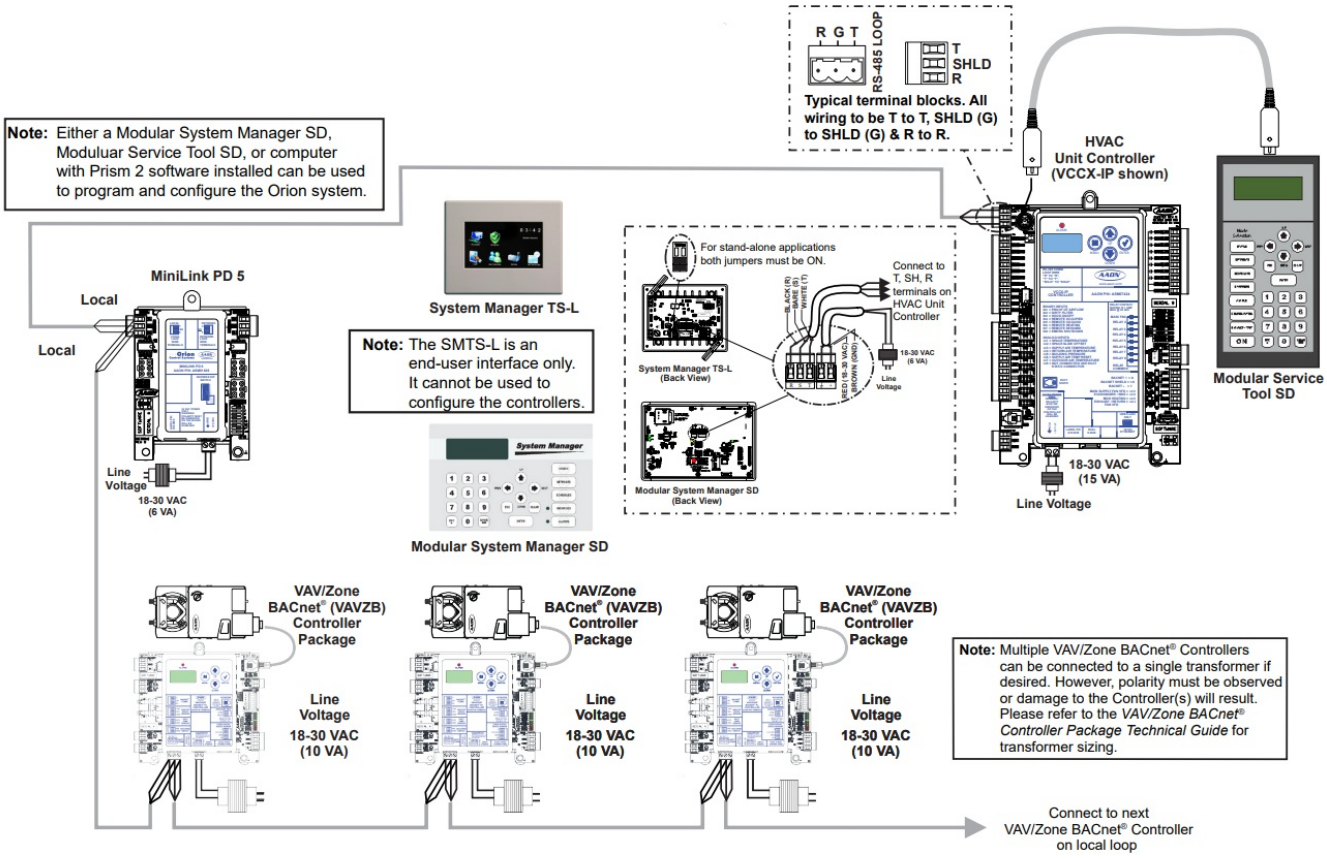


Figure 5: Network Single RS-485 Loop Wiring (VCCX2 and VCCX-IP series controllers)

APPENDIX A – TERMINAL WIRING

Networked Multiple RS-485 Loop Wiring

Typical Multiple Loop Networked System With MiniLink Polling Device & VAV/Zone BACnet (VAVZB) Controllers

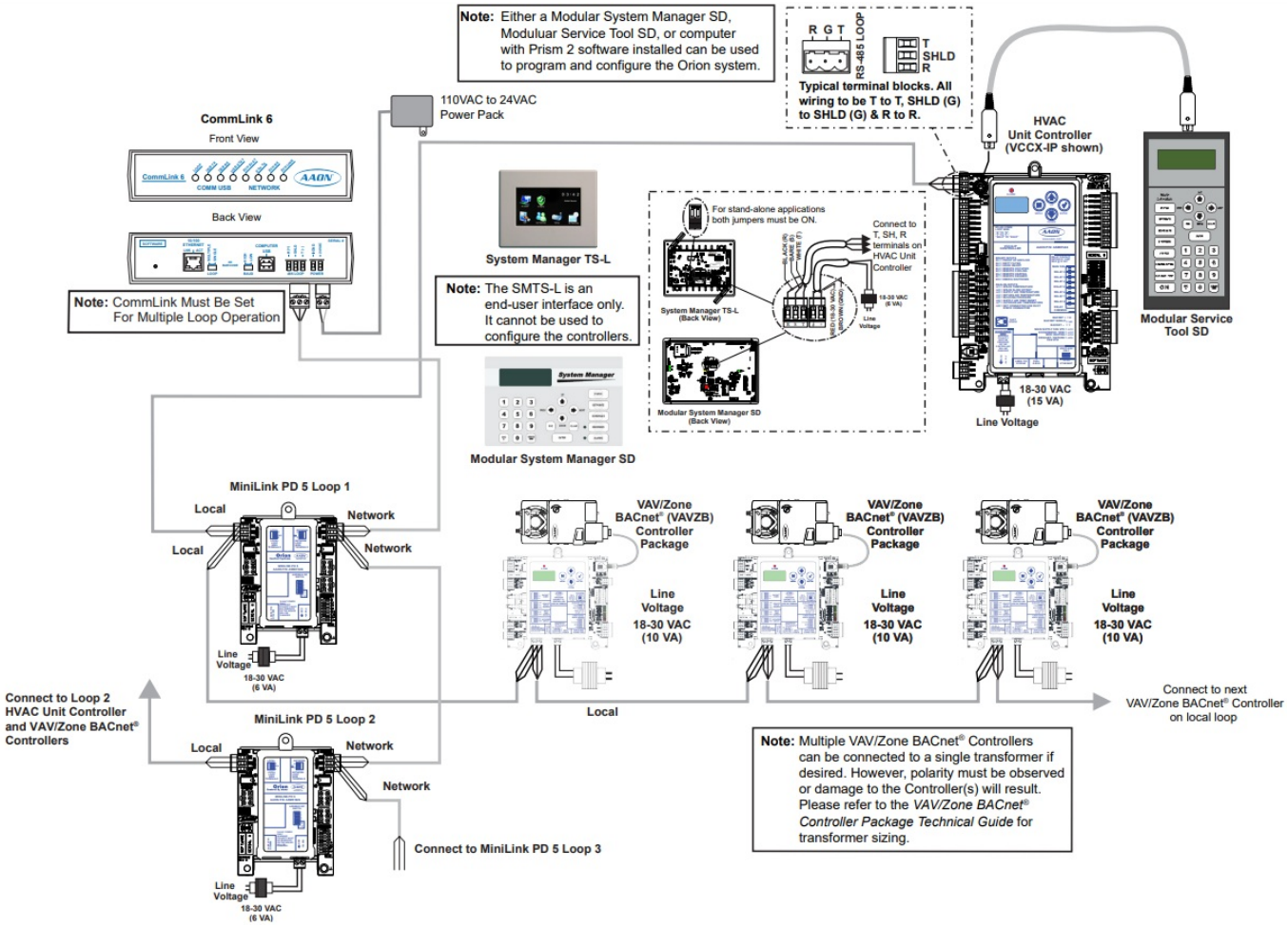


Figure 6: Network Multiple RS-485 Loop Wiring

APPENDIX B – MODULAR WIRING

Power/Comm Board Wiring

NOTE: The MiniLink PD 5 will connect to a Power/Comm Board Only If Power/Comm Cables are Used to Daisy-Chain Between VAV/Zone Controllers.

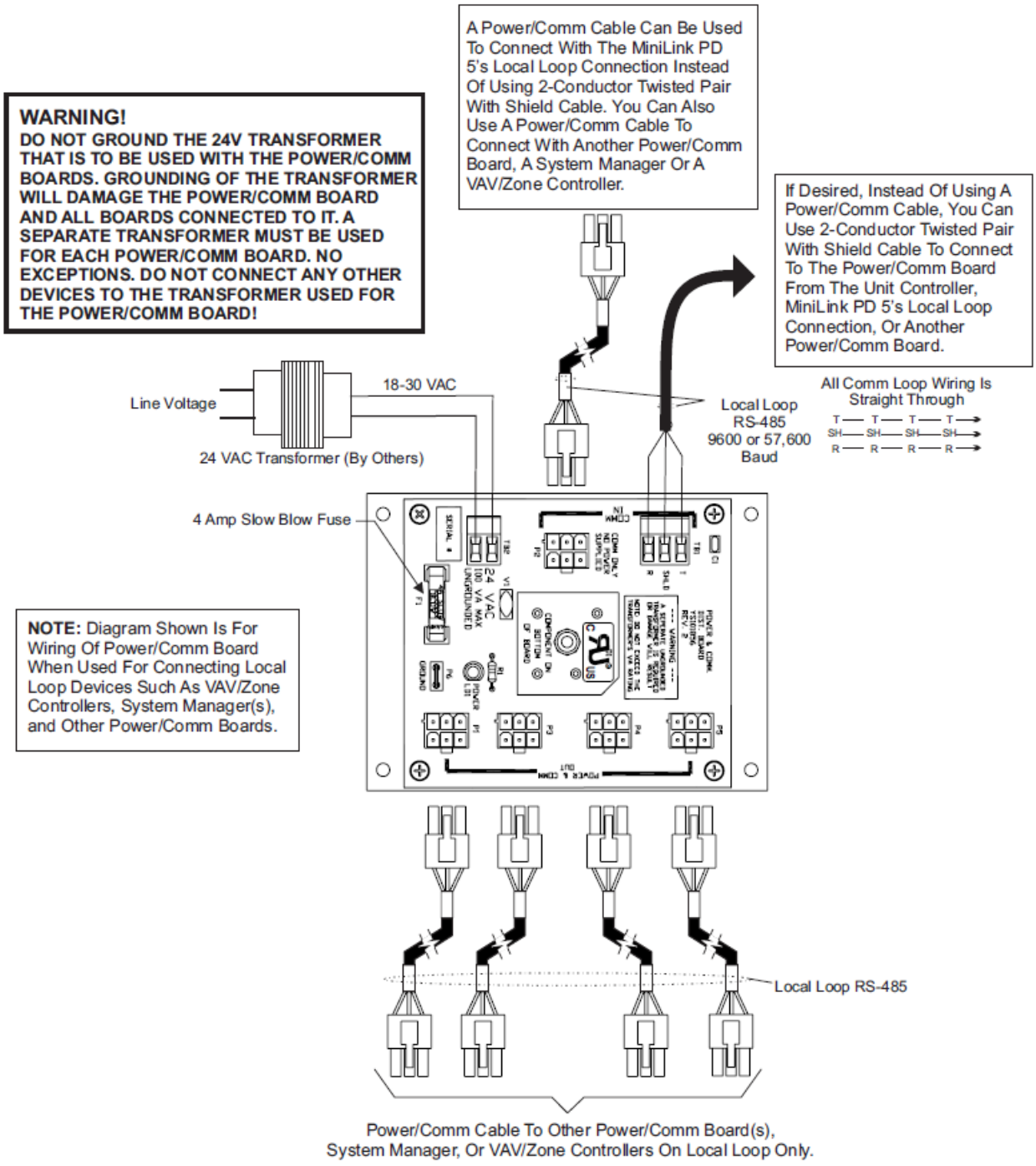


Figure 7: Power Comm Board Wiring

APPENDIX B – MODULAR WIRING

Modular Wiring – Legacy MiniLink PD 5

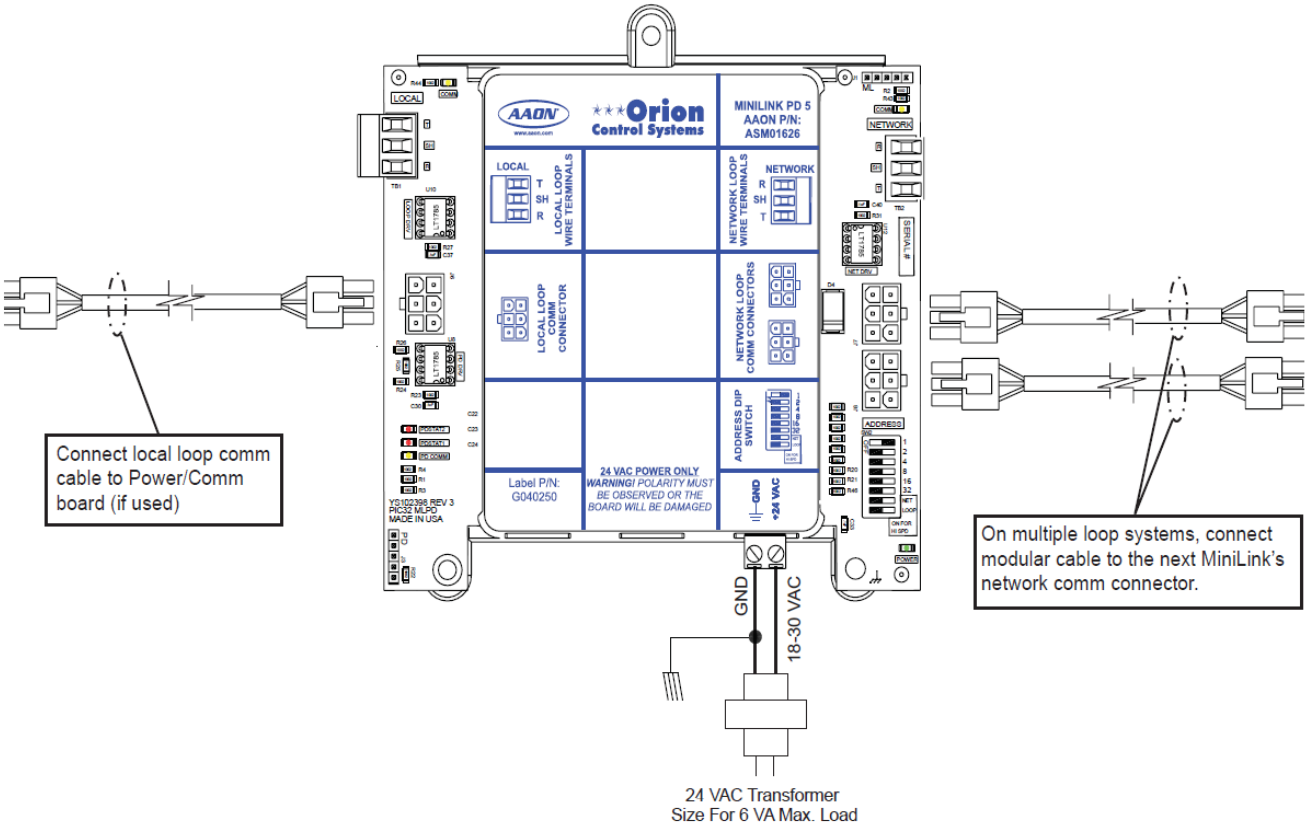


Figure 8: Modular Wiring – Legacy MiniLink PD 5

APPENDIX B – MODULAR WIRING

Networked Multiple RS-485 Loop Modular System Wiring

Typical Networked Multiple Loop Modular System with MiniLink Polling Devices & VAV/Zone Controllers

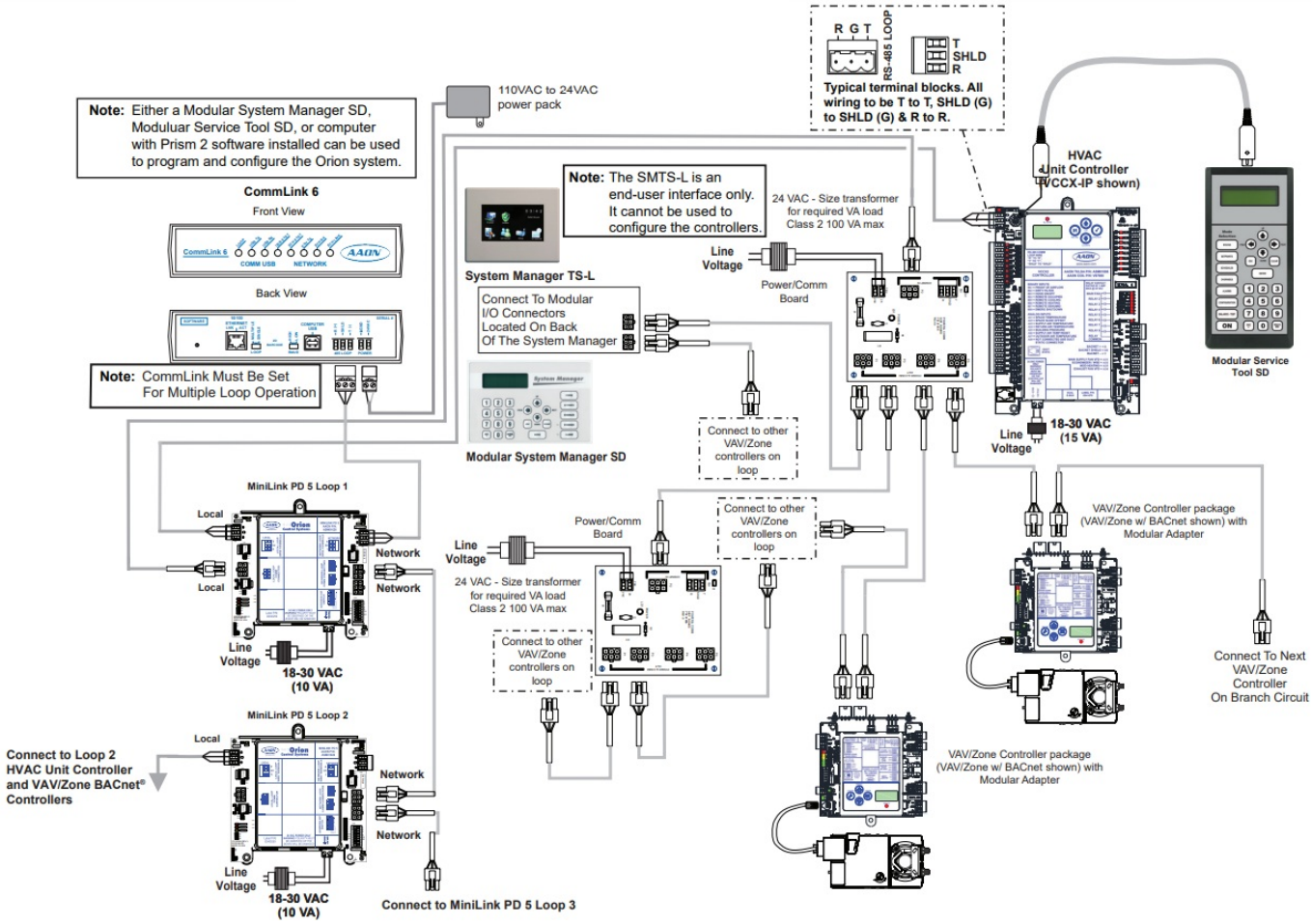
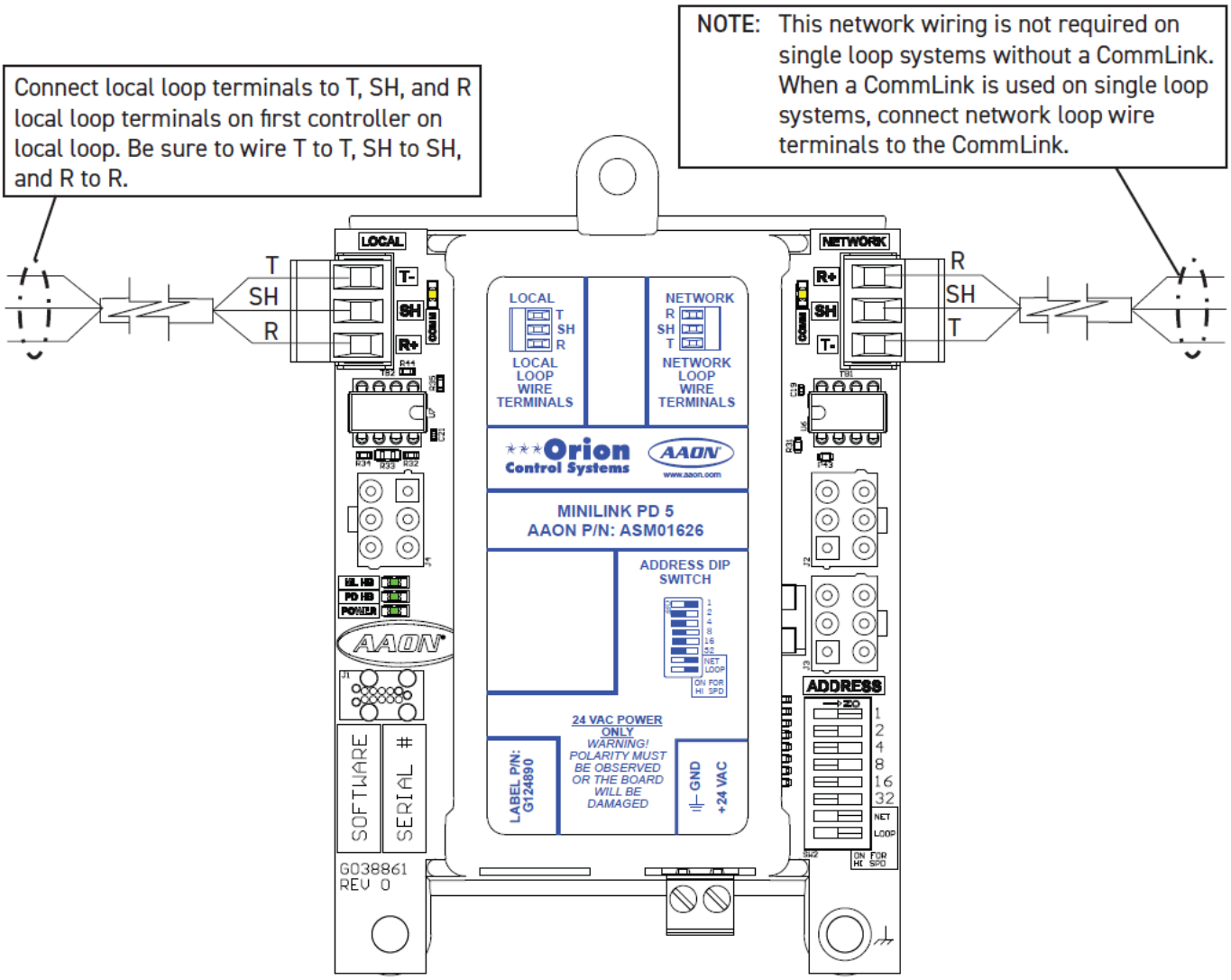


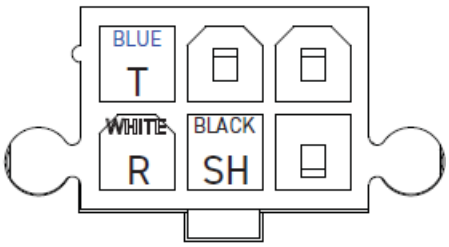
Figure 9: RS-485 Networked Multiple Loop Modular System Wiring (Legacy MiniLink Module)

APPENDIX C – CONVERSION WIRING

Modular to Terminal Wiring Conversion



NOTE: Models manufactured on/after 2024 are not configured for modular wiring Refer to the following diagram to convert modular wiring to terminal wiring.



WARNING: Disconnect power and communications at both ends . Cutting a live cable could lead to injury or damage to the equipment.

Figure 10: RS-485 Networked Multiple Loop Modular System Wiring (Legacy MiniLink Module)

CONTACT INFROMATION

- MiniLink PD 5 Technical Guide
- G042660 · Rev. D · 240621
- **AAON Controls Support:** 866-918-1100
- Monday through Friday, 7:00 AM to 5:00 PM Central Time
- **Controls Support website:** www.aaon.com/aaon-controls-technical-support
- **AAON Factory Technical Support:** 918-382-6450

- techsupport@aaon.com
- **NOTE:** Before calling Technical Support, please have the model and serial number of the unit available.
- **PARTS:** For replacement parts, please contact your local AAON Representative.
- 2425 So. Yukon Ave
- Tulsa, OK • 74107-2728
- **Ph:** 918-583-2266
- **Fax:** 918-583-6094
- Rev. D
-
- This manual is available for download from www.aaon.com.
- AAON, Inc.
- 2425 South Yukon Ave.
- Tulsa, OK 74107-2728
- www.aaon.com

Factory Technical Support Phone: 918-382-6450 Controls Support Phone: 866-918-1100 AAON intends to provide accurate and current product information. However, in the interest of product improvement, AAON reserves the right to change the pricing, specifications, and/or design of its product without notice, obligation, or liability. AAON P/N: G042660, Rev. D AAON, Inc. assumes no responsibility for errors or omissions. This document is subject to change without notice. Windows® 10 is a registered trademark of Microsoft Corporation. BACnet® is a registered trademark of ASHRAE, Inc., Atlanta, GA.

Documents / Resources

	AAON ASM01626 Mini Link PD 5 [pdf] User Guide ASM01626, ASM02426, ASM02427, ASM02224, ASM02188, ASM01626 Mini Link PD 5, ASM01626, Mini Link PD 5, Link PD 5, PD 5

References

- User Manual