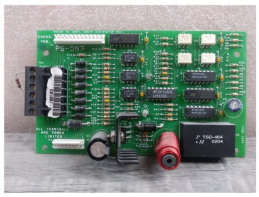

SIEMENS PS-5N7 Network Interface Module Instruction Manual

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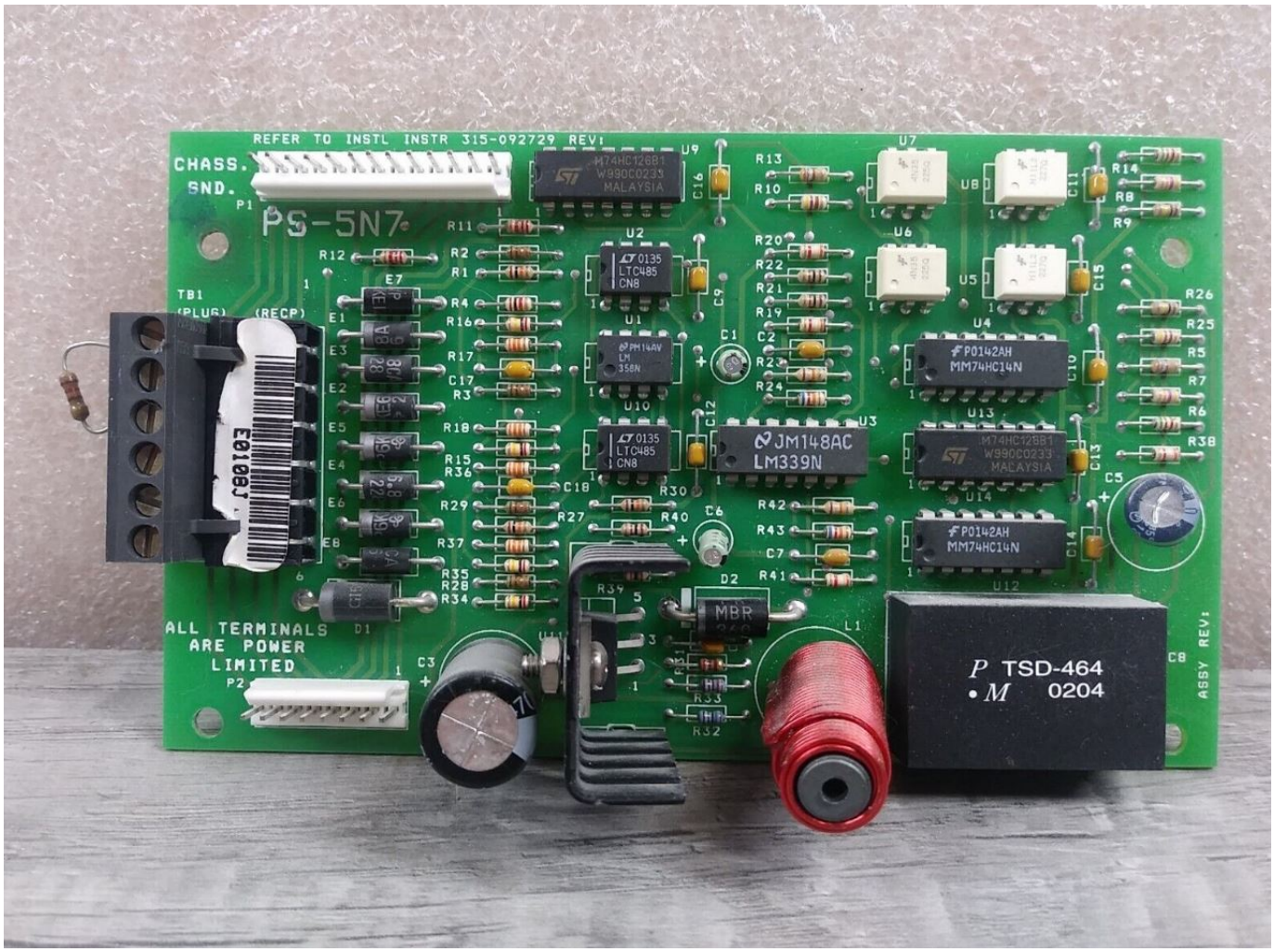


OPERATION

The Model PS-5N7 from Siemens Building Technologies, Inc. permits remote mounting of the MXL annunciator modules MKB-1, MKB-2, and RCC-1/-1F. In addition, when the PS-5N7 is used with a PIM-1, it provides an interface for a remote printer that can be supervised or unsupervised. Each PS-5N7 occupies one network node.

INSTALLATION

Mounting

The PS-5N7 can be used in an MME-3, MSE-2, or an RCC-1/-1F enclosure. Mount the PS-5N7 in the following enclosures as described below (See the Note at the top of page 2 if using a PIM-1):

1. MME-3—Install in the upper right-hand corner (See Figure 1).
2. MSE-2—Install in the upper right-hand corner (See Figure 1).
3. RCC-1/-1F—Install in the lower right-hand corner (See Figure 2).

   Note: In a special application which is described on page 7, the PS-5N7 can be used as a source of power in a remote extender enclosure used to house extra VSMs/VLMs/VFMs.

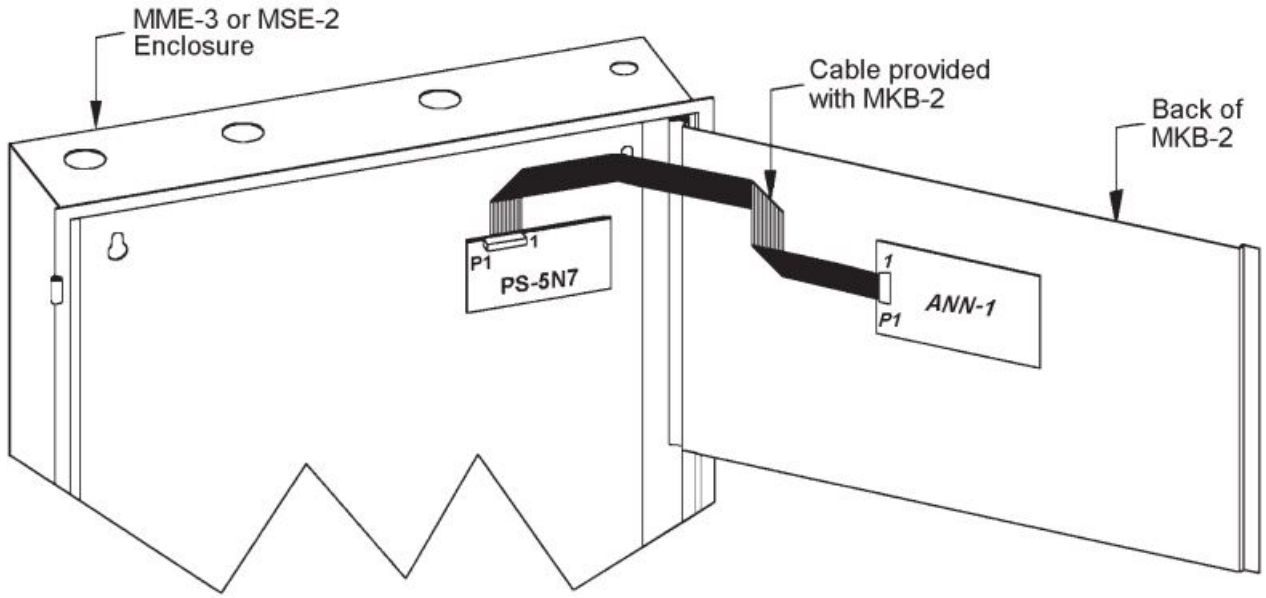


Figure 1

PS-5N7 Wiring Diagram in MME-3 or MSE-2 (Without a PIM-1)

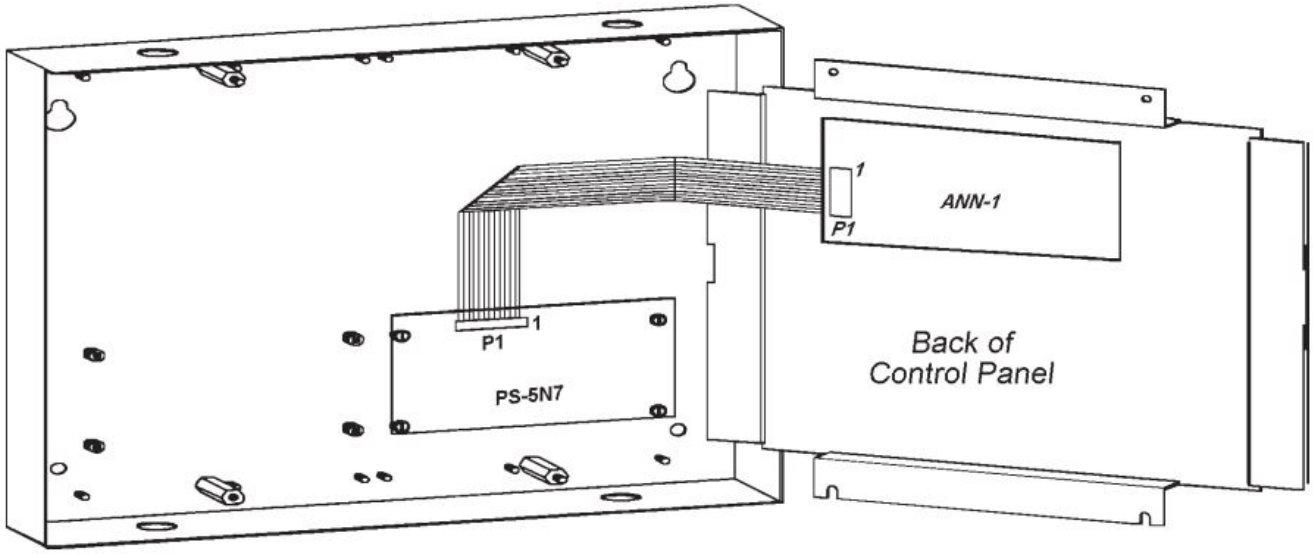


Figure 2

PS-5N7 Wiring Diagram in the RCC-1/-1F Enclosure (Without a PIM-1)

Four male/female standoffs are provided in each backbox in the correct location for installing the PS-5N7. Place the PS-5N7 over the existing female standoffs. Fasten it, using the threaded portion of the standoffs as screws. Use the cable provided (See Figures 1 and 2) to connect P1 on the PS-5N7 to P1 on the ANN-1.

Note: If a PIM-1 is used in the config- uration, refer to the instructions below.

Using the PS-5N7 with a PIM-1

To support a remote printer, use a PIM-1 with the PS-5N7.

Note: The PIM-1 and PS-5N7 have the same mounting holes.

When using a PIM-1 with the PS-5N7 in an MME-3 or MSE-2 backbox (See Figure 3):

1. Mount the PIM-1 first, as shown.
2. Use the four male/female standoffs provided with the PS-5N7 as screws.
3. Attach the PIM-1 to the female standoffs.
4. Connect the cable from P1 of the ANN-1 board to P1 on the PIM-1.
5. Next, mount the PS-5N7 on the same standoffs, using the four screws from the PIM-1 kit.

6. Attach the cable supplied with the PIM to P2 on the PIM-1.
7. Plug the cable from P2 of the PIM-1 into P1 of the PS-5N7; see Figure 3.

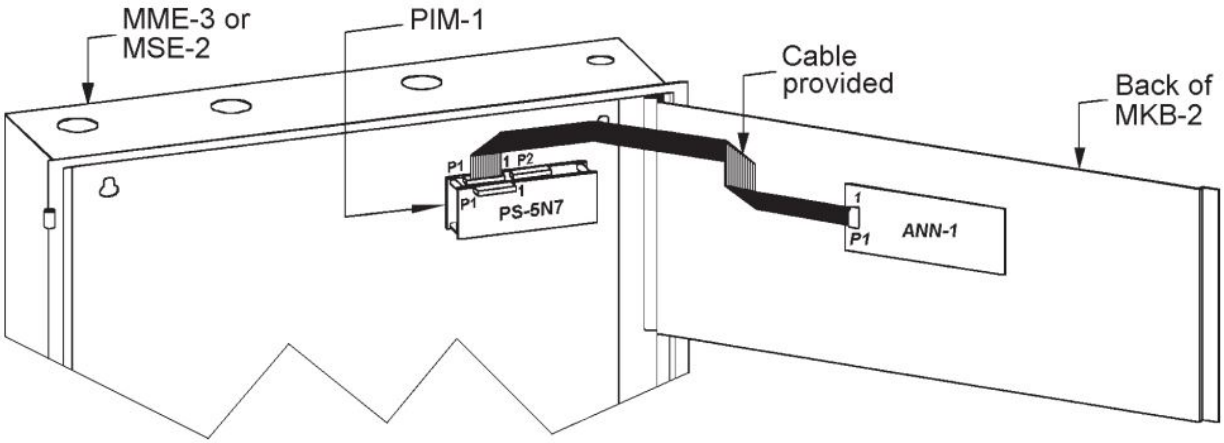


Figure 3

PS-5N7 Wiring Diagram in MME-3 or MSE-2 (With a PIM-1)

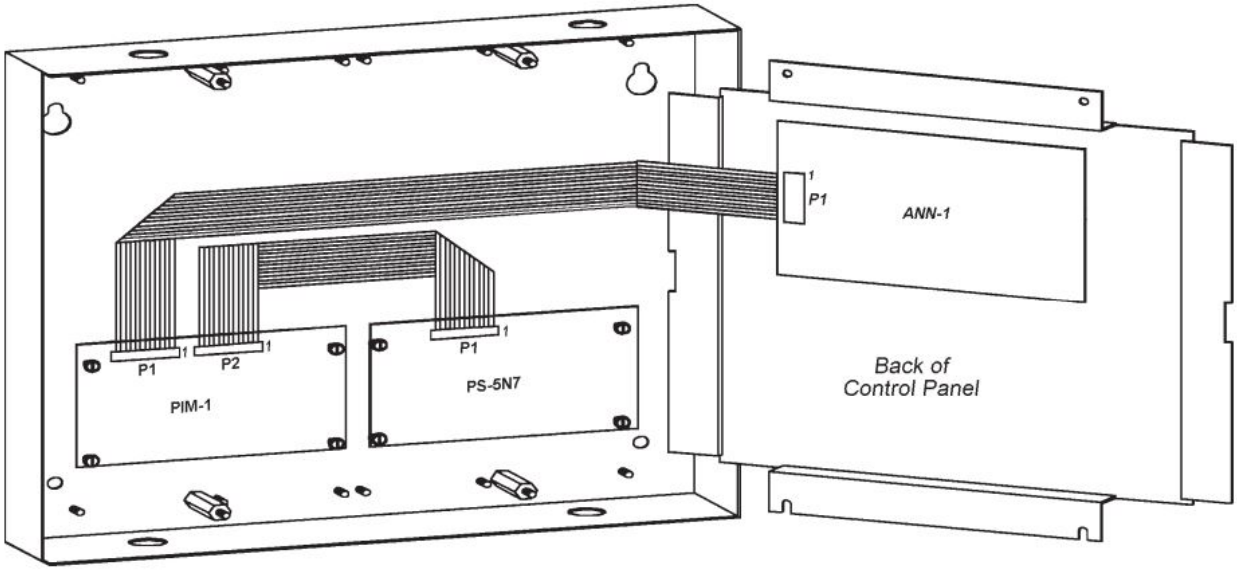


Figure 4
PS-5N7 Cabling Diagram in the RCC-1/-1F Enclosure (With a PIM-1)
When using a PIM-1 Module with the PS-5N7 in an RCC-1/-1F Enclosure (See Figures 4 and 5):

1. Mount the PS-5N7 to the right of the PIM-1 in the bottom of the enclosure.
2. Refer to the RCC-1/-1F Installation Instructions, P/N 315-095364, for instructions on the cabling connections.

For additional information refer to the PIM-1 Instructions, P/N 315-091462.

Power Connection
The PS-5N7 requires a DC input of 14-31 VDC. This input is available from the MMB or the PSR-1. Refer to Figure 5 for the correct wiring instructions.

Using the PS-5N7 with Style 4 (2-Wire) Network Connections

Use screw terminals 1 and 2 for Network A. DO NOT USE wire terminals 3 and 4 in this configuration. See Figure 5 for additional wiring information. Refer to the PSR-1 Instal-lation Instructions (P/N 315-090911) for more details

on Style 4 networks.

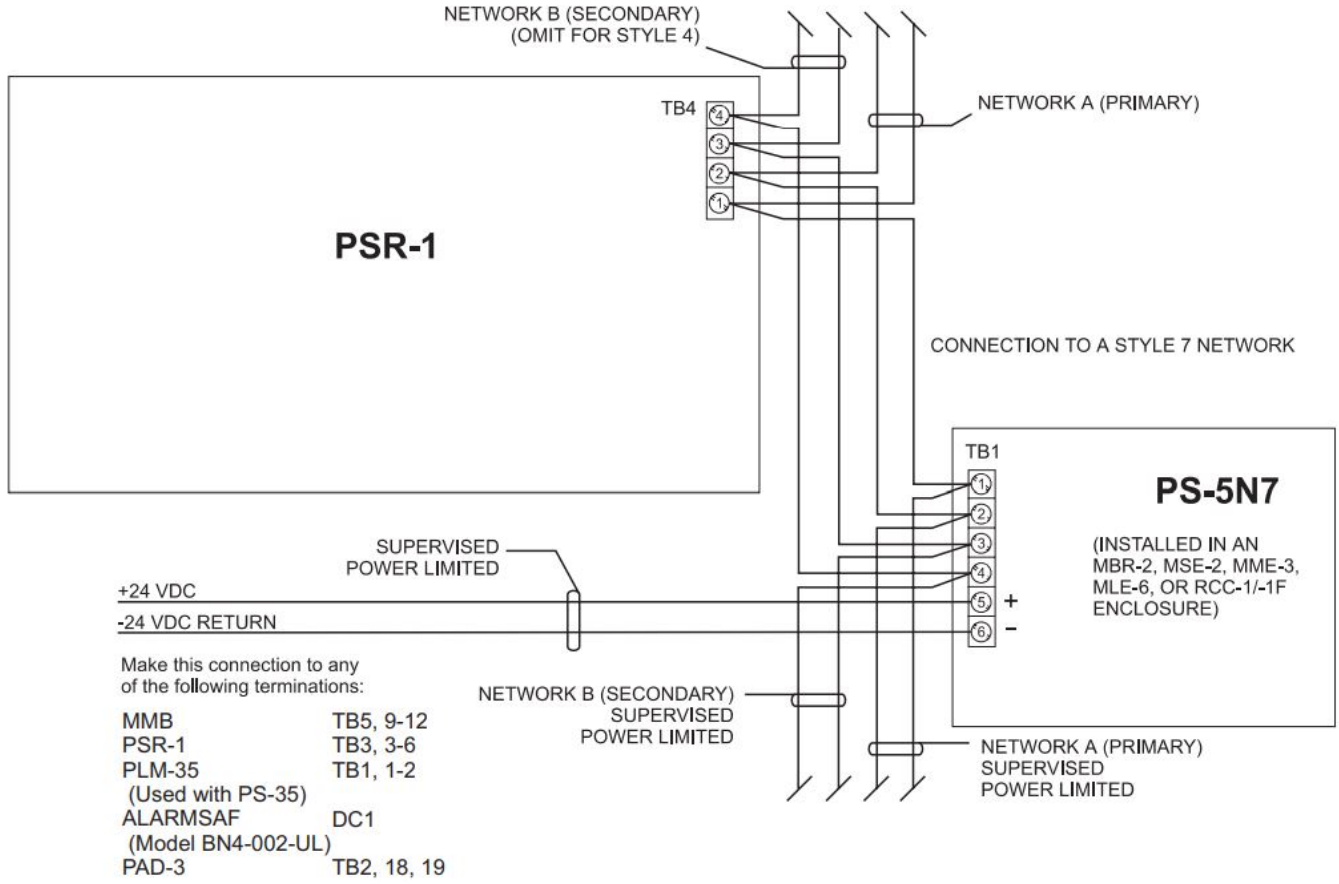
Using PS-5N7 with Style 7 (4- Wire) Network Connections
Do not place the PS-5N7 module in the last position on a Style 7 Network. Use a NET-7 at each end of the network to provide proper supervision.
Use screw terminals 1 and 2 for Network A, terminals 3 and 4 for Network B. Refer to Figure 5 for wiring instructions.

Wiring Restrictions

Network
The MXL supports a maximum of 64 network nodes. Each module in the list below repre-sents one node. Do not plan a system with more than 64 of these modules.*

MMB (one allowed per system)
MOI-1 MOI-7
NET-4 NET-7
NET-7M PS-5N7

The total wire resistance in both wires of the network pair cannot be more than 80 ohms.
*If the system has more than 32 nodes, an REP-1 module must be used.



Notes:

1. Use a minimum wire gauge of 18 AWG.
2. Use a maximum of 80 ohms per pair of wires for the network connections.
3. Use twisted pair or shielded twisted pair for network connections.
4. Terminate the shield ONLY at the MMB enclosure.
5. Eliminate all Network B wiring for Style 4.

6. DO NOT place the PS-5N7 at the end of the network (Style 7 only).
7. This configuration is power limited to NFPA 70 according to NEC 760.
8. Refer to Wiring Specification for MXL, MXLIQ and MXLV Systems, P/N 315-092772 revision 6 or higher, for additional wiring information.

Figure 5
PS-5N7 Power Supply and Network Wiring Diagram

ELECTRICAL RATINGS*

Active 5VDC Module Current	0mA
Active 24VDC Module Current	45mA
Standby 24VDC Module Current	45mA

*Does not include any current drawn by
modules or devices powered by the PS-5N7.

VDC Power
You may connect multiple PS-5N7s to the same 24V power supply as long as the total line loss is within specified limits. Follow the information given below to calculate the allowable line losses.

CAUTION
Failure to follow these guidelines may result in excessive voltage drops that cause improper or no operation of the system.

To determine the total line loss, and therefore, the maximum cable length permitted, use the following values and limits.
Vmax—The maximum allowable voltage loss due to wire resistance. Vmax must not be more than 4V. (See Table 2.)
Imax—The total alarm current drawn by all PS-5N7 modules connected to the 24 VDC supply. If a PIM-1 is used in the system, include its current. (See the Imax values for the approved power supplies at the bottom of this column. See Table 1 also.)
Rmax—The value of wire resistance
that results in a 4 volt drop due to Imax.
To calculate the total line loss, use the following equation:
Rmax = Vmax ÷ Imax
(Where Vmax = 4V in all cases)
The Rmax result obtained with this equation is the total of all wire resistance in ohms in the 24 VDC supply lines.
The following power supplies are compatible with the PS-5N7. They are listed with their maximum output current (Imax):

- MMB 1 amp
- PSR-1 2 amps
- PLM-35 1.5 amps
- ALARMSAF 4 amps
- PAD-3 3 amps

The maximum module current is shown in Table 1 below.

Table 1

Maximum Module Current

Model	Imax
PS-5N7	**300mA**
PIM-1	**20mA**

Once the wire resistance is calculated, use Table 2 below to determine the maximum allowable cable length. (See Figure 5.)

Table 2
Wire Resistance

AWG	Ohms/1000 Feet
10	1
12	1.6
14	2.6
16	4.1
18	6.5

Using the PS-5N7 to Drive an OMM-1 In order to add Voice hardware to a remote enclosure, use a PS-5N7 module to drive an OMM-1 if the following conditions apply:

1. The remote enclosure is not connected to the MMB, and
2. There are multiple MXLs that are not networked.

Adding a PS-5N7 and an OMM-1 under these conditions provides power as well as communication with the MXLV. Refer to Figure 6 for the correct wiring information for this configuration

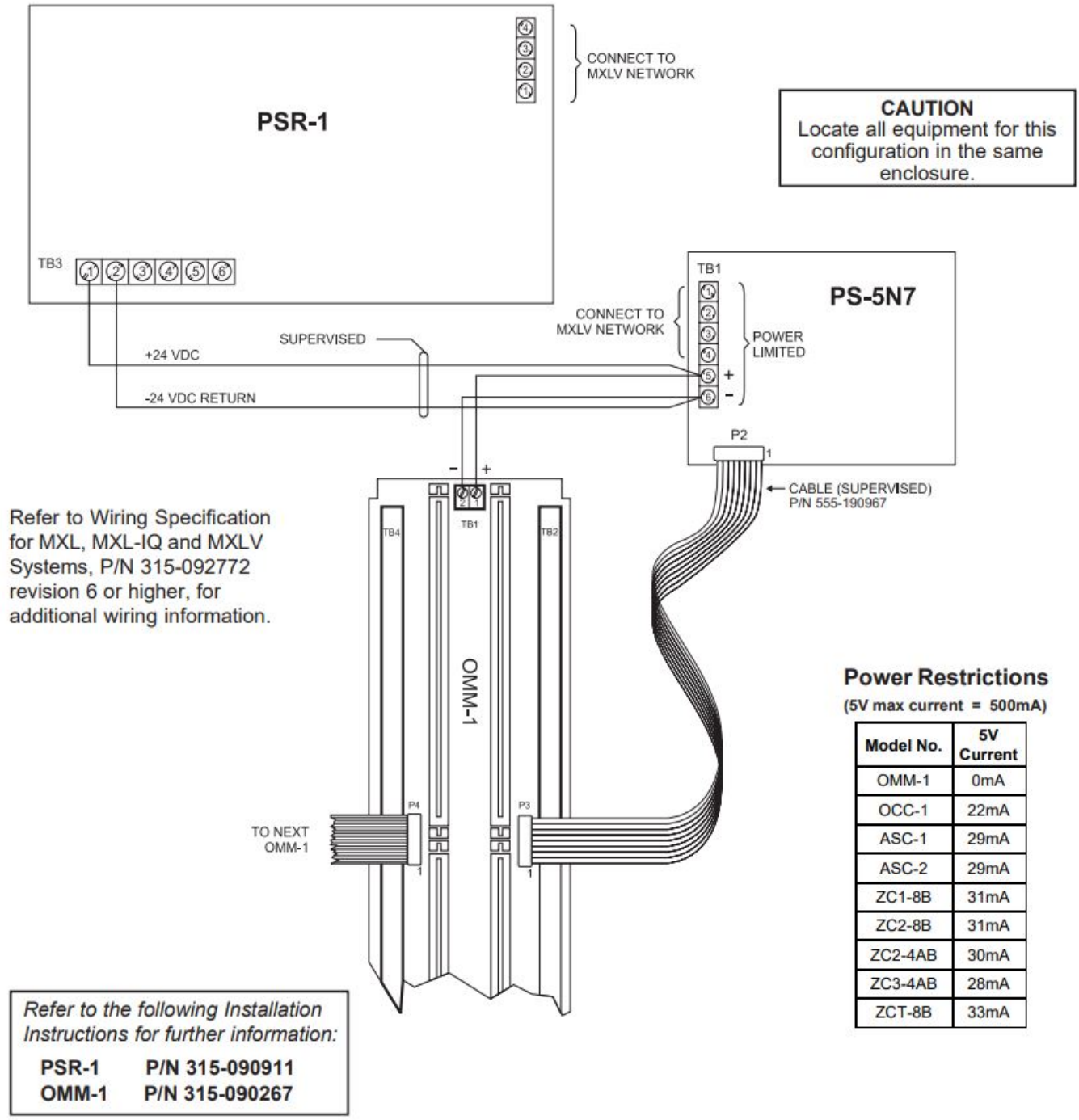


Figure 6
PS-5N7 Connection to an OMM-1

To Use the PS-5N7 Module in a Remote Extender Enclosure:

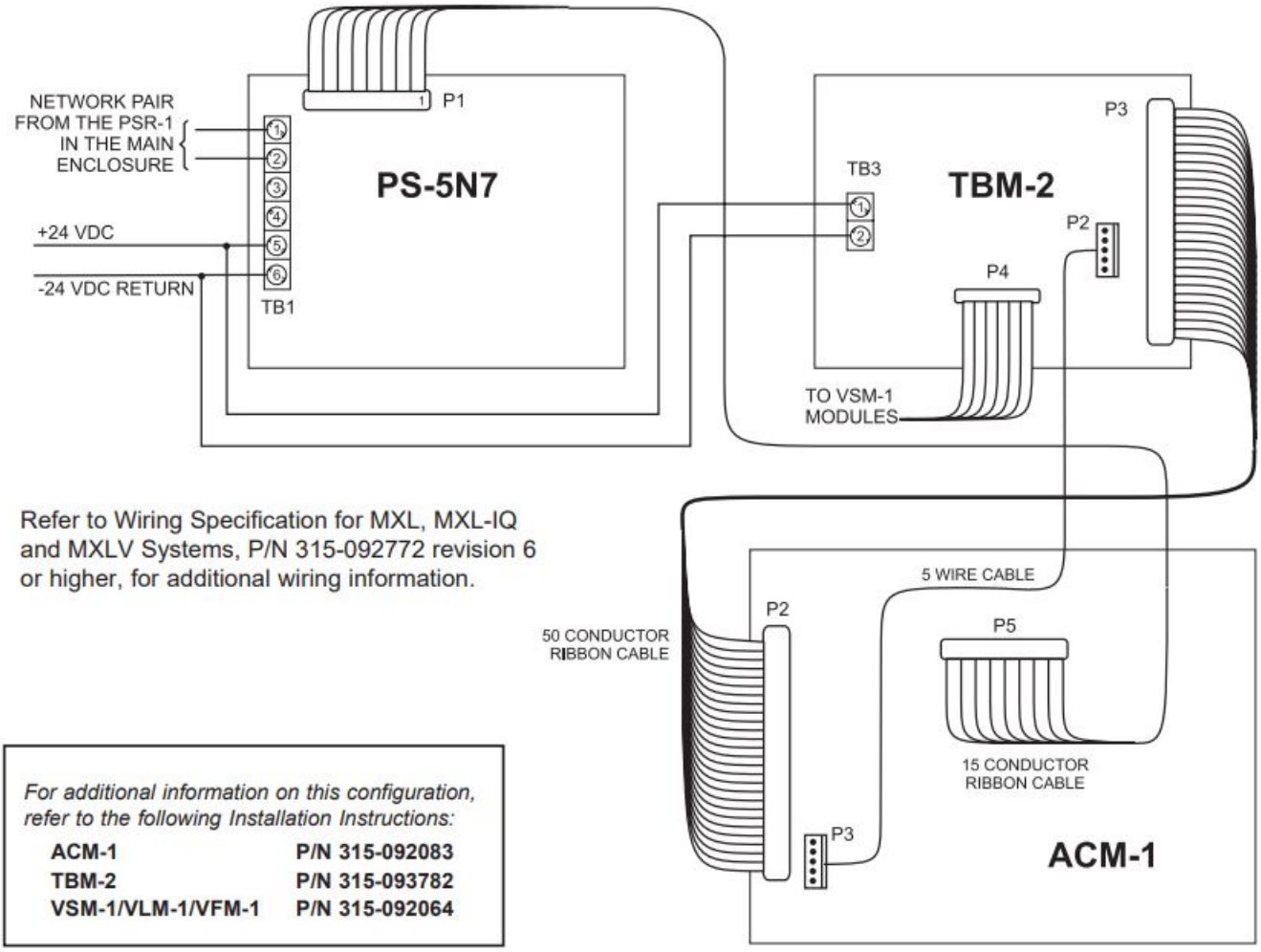


Figure 7
Using the PS-5N7 in a Remote Extender Enclosure

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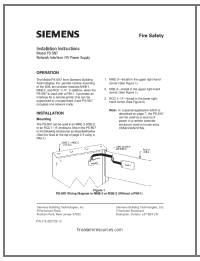
Siemens Building Technologies, Ltd.
2 Kenview Boulevard
Brampton, Ontario L6T 5E4 CN
P/N 315-092729-13

Documents / Resources

	SIEMENS PS-5N7 Network Interface Module [pdf] Instruction Manual PS-5N7, PS-5N7 Network Interface Module, Network Interface Module, Interface Module, Module

References

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