SIEMENS

Installation Instructions
Model SIM-16RC

Supervised Input Module Ribbon Cable

INTRODUCTION

The Model SIM-16RC Supervised Input Module Ribbon Cable from Siemens Industry, Inc., is a remotely located, general purpose input module. It provides sixteen input circuits for remote system monitoring. Each input can only be unsupervised (general-purpose input). The SIM-16RC has two Form C relays. The relays and the inputs are programmed by inserting an SIM-16 in the Zeus Programming Tool.

NOTE **Inputs must be programmed as unsupervised.**

OPERATION

The SIM-16RC is mounted in an enclosure that is remotely located from the Main Panel. Communication between the SIM-16RC and the NIC-C (Network Interface Card) or DAC-NET is through the Control Area Network (CAN) bus. Up to 99 SIM-16RCs can be used with a single NIC-C or DAC-NET.

Each SIM-16RC has two 10-position rotary switches that are used to set the board address on the CAN which is a sub-address of the NIC-C or DAC-NET.

Every time a change of state of the input is detected, a unique CAN message is sent to the NIC-C or DAC-NET. A CAN message from the NIC-C or DAC-NET directed to the SIM-16RC controls the Form C relays.

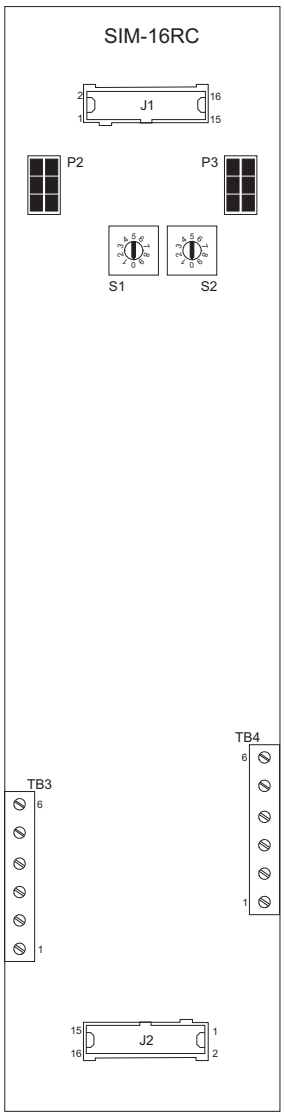

Figure 1
SIM-16RC Supervised Input Module Ribbon Cable

PRE-INSTALLATION

Rotary Address Switches - Set the board address for each SIM-16RC using both of the ten-position rotary switches located on the board (See Figure 1). Each of these addresses must be a sub-address of the NIC-C or DAC-NET and must be the same as the addresses assigned in the Zeus Programming Tool.

INSTALLATION

A SIM-16RC may be installed in a REMBOX. When using REMBOX 2 or 4, mount the SIM-16RC in one module space on a REMBOX2-MP, P/N 500-634211 or REMBOX4-MP, P/N 500-634212 using the four screws provided. (Refer to REMBOX2-MP/ REMBOX4-MP Installation Instructions, P/N 315-034211.) Up to 4 SIM-16RCs will fit in a REMBOX2; up to 8 SIM-16RCs will fit in a REMBOX4.

P/N 315-050715-AB

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WIRING

WARNING

Refer to Figures 2-5.

Remove all system power before installation, first battery then AC. (To power up, connect the AC first, then the battery.)

- Each SIM-16RC module is a node in the CAN bus.
- The SIM-16RC can be installed with or without an RNI. Connect the CAN bus and 24V as shown in Figures 2 and 3.
- Up to 99 CAN modules, in any combination, can be connected to the CAN bus of each NIC-C or DAC-NET.
- Each SIM-16RC module is shipped with one CCS cable.
- Cable connections for SIM-16RC modules are shown in the following table:

SIM-16RC CABLE CONNECTIONS

Cable	Description	Part Number	Connection
CCL	CAN-CABLE-Long 30 in., 6-conductor	599-634214	Connects P4 on RNI to first SIM-16RC. Also connects from SIM-16RC to FCM/ LCM/SCM/CSB modules (on door).
CCS	CAN-CABLE-Short 5½ in., 6-conductor	555-133539	Connects SIM-16RC modules to SIM-16RC, SIM-16, OCM-16RC or OCM-16 modules in a single row

NOTE The CAN bus requires a 120Ω termination at each end of the loop. Refer to the NIC-C Installation Instructions, P/N 315-033240 for details about CAN termination.

NOTE The ribbon cable for J1 and J2 is to be provided with the external unit.

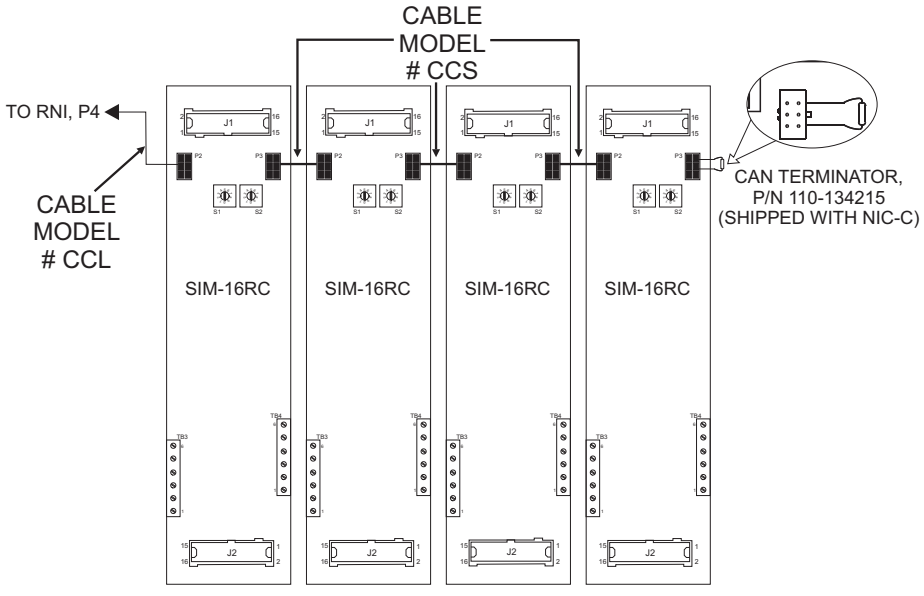

Figure 2
SIM-16RC CAN Bus Connections With An RNI

NOTES
1. All wiring supervised.
2. All circuits are power limited per article 760 of NEC.
3. The ribbon cables for J1 and J2 must be:
   - within the same room
   - within 20 ft.
   - in rigid conduit.
4. Wiring for TB3 and TB4 is 18AWG min., 16 AWG max.
5. CAN network max. line resistance 15Ω.
6. Refer to the NIC-C Installation Instructions, P/N 315-033240 for CAN network termination instructions.

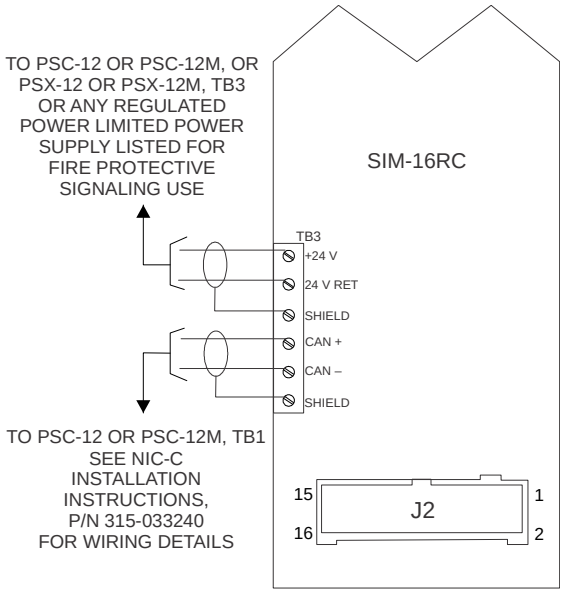

Figure 3
SIM-16RC Wiring Without An RNI

NOTES
1. Contacts are unsupervised.
2. 1A max @ 24VDC resistive.
3. All wiring must remain inside the enclosure or within 20 feet in rigid conduit.
4. The ribbon cables for J1 and J2 must be:
   - within the same room
   - within 20 ft.
   - in rigid conduit.
5. Wiring for TB3 and TB4 is 18AWG min., 16 AWG max.

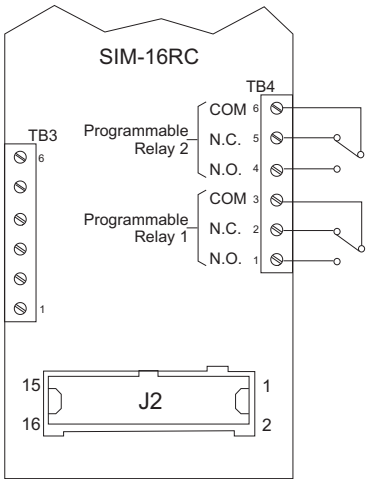

Figure 4
SIM-16RC Relay Connections

NOTES
1. All inputs unsupervised.
2. All inputs are power limited per article 760 of NEC.
3. The ribbon cables for J1 and J2 must be:
   - within the same room
   - within 20 ft.
   - in rigid conduit.
4. All inputs must remain inside the enclosure or within 20 feet in rigid conduit.
5. In the Zeus Programming Tool, select unsupervised for each unsupervised input.
6. Inputs #1 - 16 are programmable.

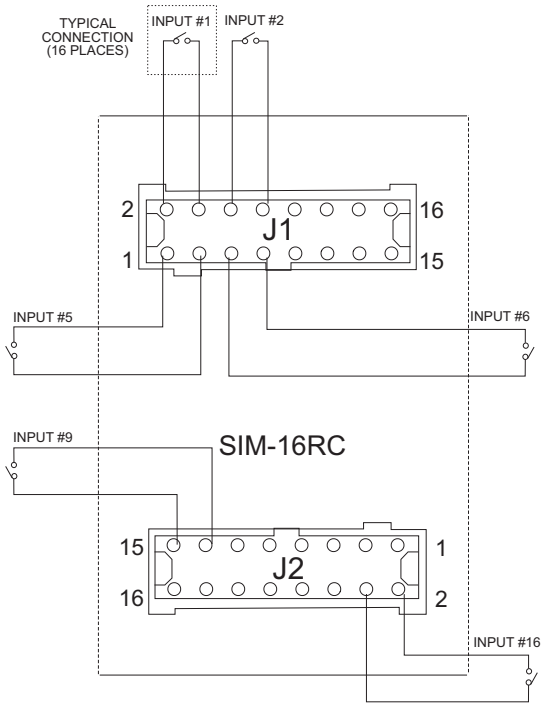

Figure 5
SIM-16RC Unsupervised Input Wiring

ELECTRICAL RATINGS

24V Back Plane Current	0
Screw Terminal 24V Current	20mA +1.2mA / supervised input +20mA / active relay
6.2V Back Plane Current	0
24V Standby Current	20mA +1.2mA / supervised input +20mA / active relay
Output Power	
CAN Network Pair	8V peak to peak max.
	75mA max. (during msg transmission)

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Siemens Industry, Inc.
Smart Infrastructure
8 Fernwood Road
Florham Park, NJ

Siemens Canada, Ltd.
1577 North Service Road East
Oakville, Ontario
L6H 0H6 Canada

P/N 315-050715-AB

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