

Installation Instructions

Model SIM-16

Supervised Input Module (500-034060 / S24235-B112-A2)

INTRODUCTION

The SIEMENS Model SIM-16 Supervised Input Module is a remotely located, general purpose input module. It provides sixteen input circuits for remote system monitoring. Each input can be individually programmed as supervised (dry contacts only) or unsupervised (general-purpose input). The SIM-16 has two Form C relays. The relays and the inputs are programmable using the Zeus Programming Tool.

OPERATION

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

Each SIM-16 has two 10-position rot ary switches that are used to set the board address on the CAN which is a sub-address of the NIC-C or the DAC-NET (in CE applications).

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

PRE-INSTALLATION

Rotary Address Switches - Set the board address for each SIM-16 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 the DAC-NET (in CE applications) and must be the same as the addresses assigned in the Zeus Programming Tool.

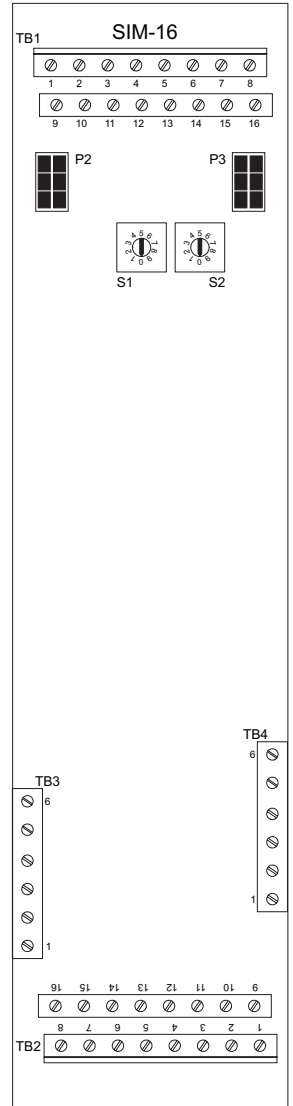


Figure 1
SIM-16 Supervised Input Module

INSTALLATION

A SIM-16 may be installed in a REMBOX or in an enclosure on mounting plate MP-OM (in CE applications). When using REMBOX 2 or 4, mount the SIM-16 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-16s will fit in a REMBOX2; up to 8 SIM-16s will fit in a REMBOX4.

WIRING

Refer to Figures 2-6.



Disconnect BATTERY and AC prior to working on equipment.

- Each SIM-16 module is a node in the CAN bus.
- The SIM-16 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 the CAN bus of the DAC-NET (in CE applications).
- Each SIM-16 module is shipped with one CCS cable.
- Cable connections for SIM-16 modules are shown in the following table:

SIM-16 CABLE CONNECTIONS

Cable	Description	Part Number	Connection
CCL	CAN-CABLE-Long 30 in. (100cm), 6-conductor	599-634214 C24235-A1-K6	Connects P4 on RNI to first SIM-16. Also connects from SIM-16 to FCM/LCM/SCM/CSB modules (on door).
CCS	CAN-CABLE-Short 5½ in. (14cm), 6-conductor	555-133539 C24235-A1-K4	Connects SIM-16 modules to SIM-16 or OCM-16 modules in a single row



The CAN bus requires a 120S termination at each end of the loop. Refer to the NIC-C Installation Instructions, P/N 315-033240 / A24205-A334-B824 or DAC-NET Installation Instructions P/N 315-035100 / A24205-A334-B839 for details about CAN termination.

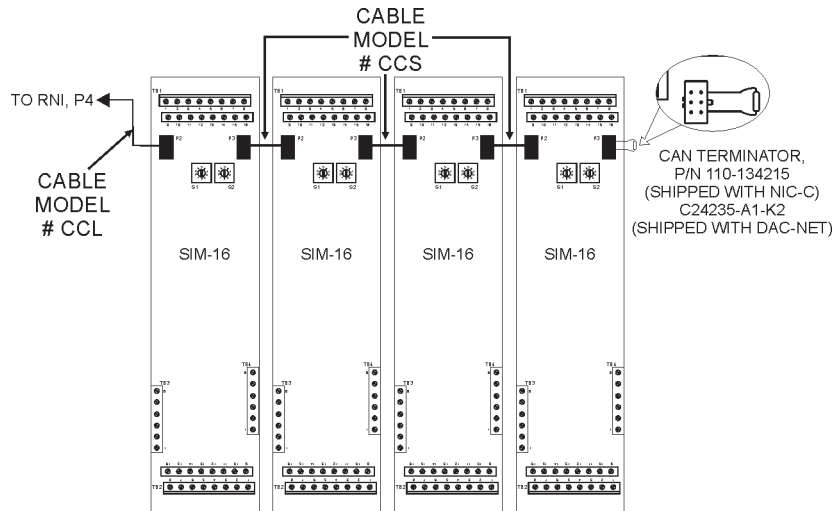


Figure 2
SIM-16 CAN Bus Connections With An RNI

NOTES

1. All wiring supervised.
2. All wiring power limited to NFPA 70 per NEC 760.
3. Wiring for TB1 and TB2 is 18 AWG (1.0mm²) min., 12 AWG (4mm²) max.
4. Wiring for TB3 and TB4 is 26 AWG (∅ 0.25mm) min., 16 AWG (1.5mm²) max.
5. CAN network max. line resistance 16S.
6. Refer to the NIC-C Installation Instructions, P/N 315-033240 / A24205-A334-B824 for CAN network termination instructions.

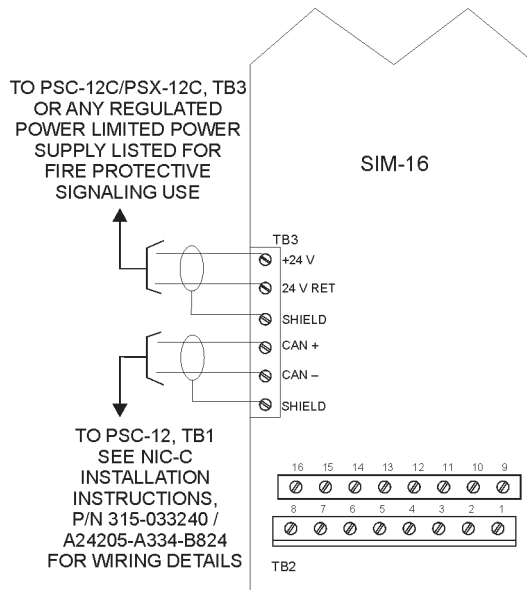


Figure 3
SIM-16 Wiring Without An RNI

NOTES

1. Contacts are unsupervised.
2. 1A max @ 24VDC resistive.
3. All wiring must remain inside the enclosure or within 20 feet (6.5m) in rigid conduit.
4. Wiring for TB1 and TB2 is 18 AWG (1.0mm²) min., 12 AWG (4mm²) max.
5. Wiring for TB3 and TB4 is 26 AWG (∅ 0.25mm) min., 16 AWG (1.5mm²) max.

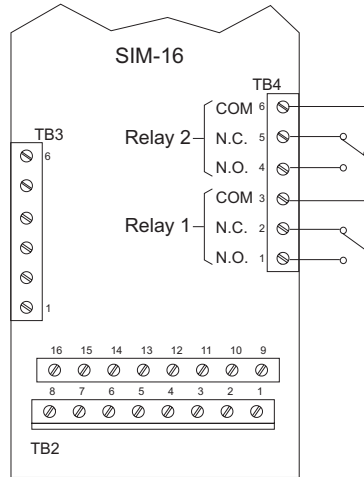


Figure 4
SIM-16 Relay Connections

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

NOTES

1. All inputs supervised.
2. All inputs power limited to NFPA 70 per NEC 760.
3. Wiring for TB1 and TB2 is 18 AWG (1.0mm²) min., 12 AWG (4mm²) max.
4. Maximum distance 500 feet (165m) from SIM-16 to supervised input.
5. In the Zeus Programming Tool, select supervised for each supervised input.
6. Supervised and unsupervised inputs may be mixed on a single SIM-16.

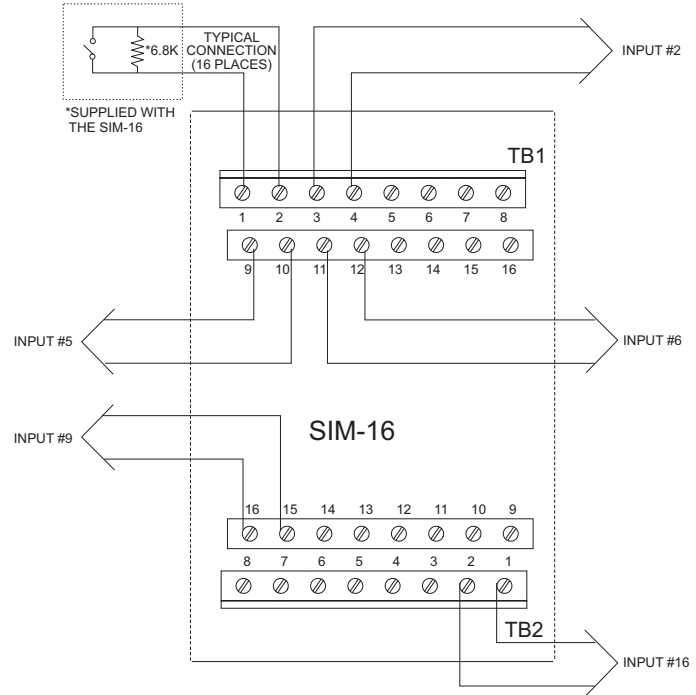


Figure 5
SIM-16 Supervised Input Wiring

NOTES

1. All inputs unsupervised.
2. All inputs power limited to NFPA 70 per NEC 760.
3. Wiring for TB1 and TB2 is 18 AWG (1.0mm²) min., 12 AWG (4mm²) max.
4. All inputs must remain inside the enclosure or within 20 feet (6.5m) in rigid conduit.
5. In the Zeus Programming Tool, select unsupervised for each unsupervised input.
6. Supervised and unsupervised inputs may be mixed on a single SIM-16.

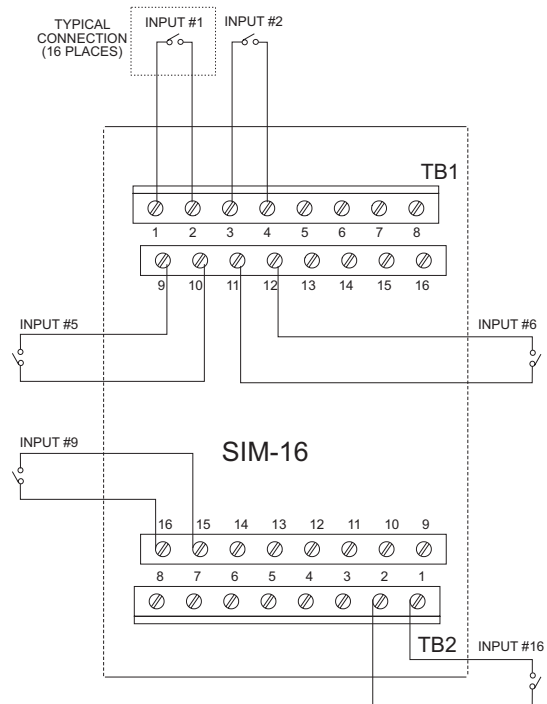


Figure 6
SIM-16 Unsupervised Input Wiring

For CE applications in Cerberus E100 systems refer to
Installation Instruction A24205-A334-B844 (English) or A24205-A334-A844 (German).

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