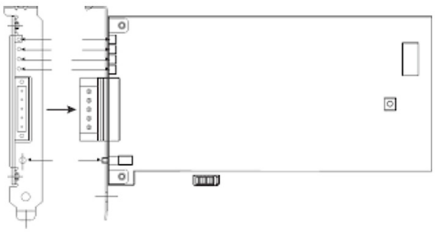
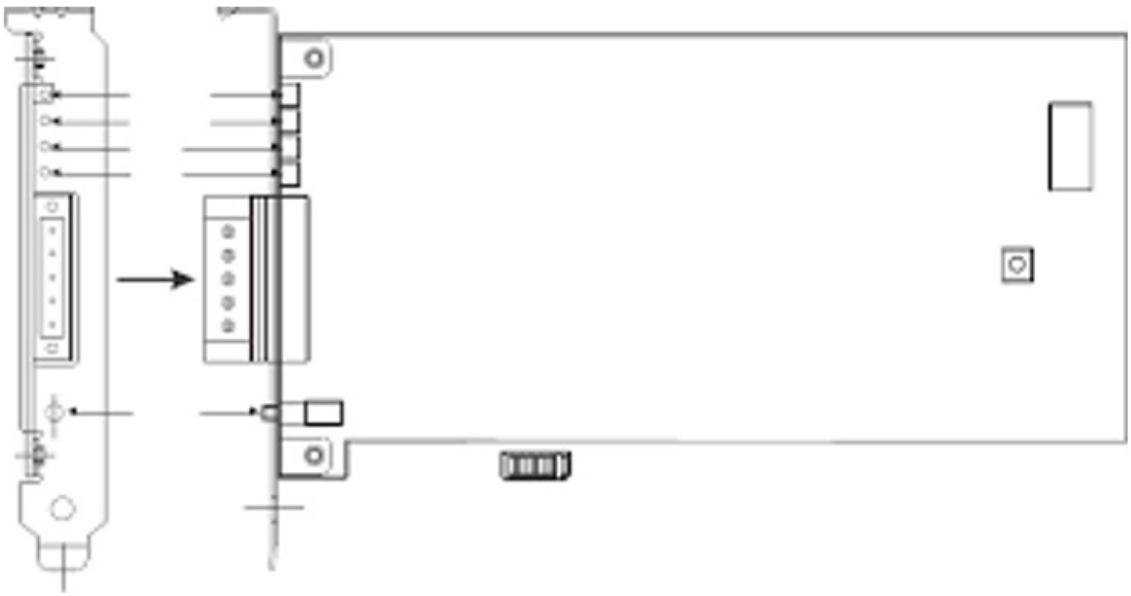


SIEMENS SNC Serial Network Card for USB Application with Window Instruction Manual

SIEMENS

SNC Serial Network Card for USB Application with Window Instruction Manual



Installation Instructions
Model SNC
Serial Network Card for USB Application with Windows

Contents

OPERATION

The Model SNC from Siemens Industry, Inc. (as shown in Figure 1) is a USB-compliant network card used with the Siemens Management Stations. The SNC provides a supervised RS-485 network connection. The SNC operates in both Class B and Class X. The SNC allows the user to interface networked MXL and/or XLS/Design Fire Safety Modular/Cerberus PRO Modular fire panels to Design CCs/Cerberus DMS' and/or NCCs on XNET.
The SNC can also provide an interface to WAN components in NCC WAN and Design CC/Cerberus DMS WAN configurations. On the NCC, one SNC may be used for GNet, and one may be used for HDNet connection to WAN components.
On Design CC/Cerberus DMS, depending on the computer model, up to two or four SNC cards may be installed for support of multiple GNet networks and/or WAN enclosures.
The module fits in any available PCI or PCI Express compliant slot. The card is NOT dependent on the slot connection and the tab is only used for additional support. The tab can be scored off if connectivity problems are encountered. Depending on the model, either one or two SNC modules comes pre-installed in Management Station computers. Hardware installation instructions for the SNC, when it is not factory installed, can be found in the Physical Installation section of this document.

Controls and Indicators

The LEDs are located above X1 and are, in top to bottom order. See Figure 1 for more details.

LED	Color	Description
NET OK (DS2)	Green	Blinks to indicate network is receiving data.
HOST OK (DS1)	Green	Blinks to indicate data to transmit.
CH A (DS4)	Yellow	Blinks* to indicate individual Channel A select.
CH B (DS5)	Yellow	Blinks* to indicate individual Channel B select.

* If LED is steady, indicates a Class X fault on that channel.

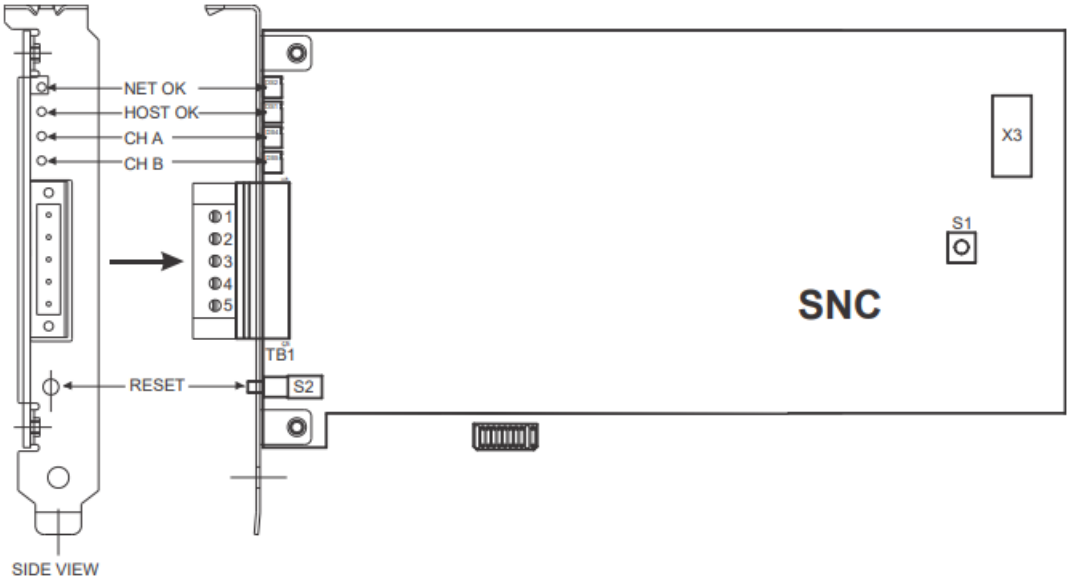


Figure 1
SNC Module Board

CONFIGURATION

The SNC is assigned to a standard COM port by Windows when the drivers are installed. The drivers usually come pre-installed in NCC/Design CC/Cerberus DMS. The SNC driver installations are covered in the Driver Installation section of this document.
The COM port assigned to the SNC can be viewed in the Windows Device Manager. One SNC card occupies one COM port. On Windows XP systems, the used COM port will be the first (or lower) numbered port assigned for the SNC card. On Windows 7 or Windows 10 systems, the used COM port is the USB serial port assigned with the FTDI driver available.
The Device Manager is accessible in Windows as follows:

WINDOWS 7 or 10
Open the Start menu, and then click **Control Panel;** this will open a new window on the Desktop, showing the Control Panel options.
The Address bar of the Control Panel window should end with the **Control Panel** location, followed by a right-arrow.
Click the **right-arrow** to display the available additional locations, and then select and click All Control Panel Item.
On the updated screen, select and click **Device Manager.**
Figure 2 shows a sample Windows 7 or 10 Device Manager view and a typical assignment of COM ports on a PC with two SNC boards installed (COM13 and COM14). The port assignments for the SNC are labeled **USB Serial Port**, once installed and under **Properties,** the FTDI driver is identified.

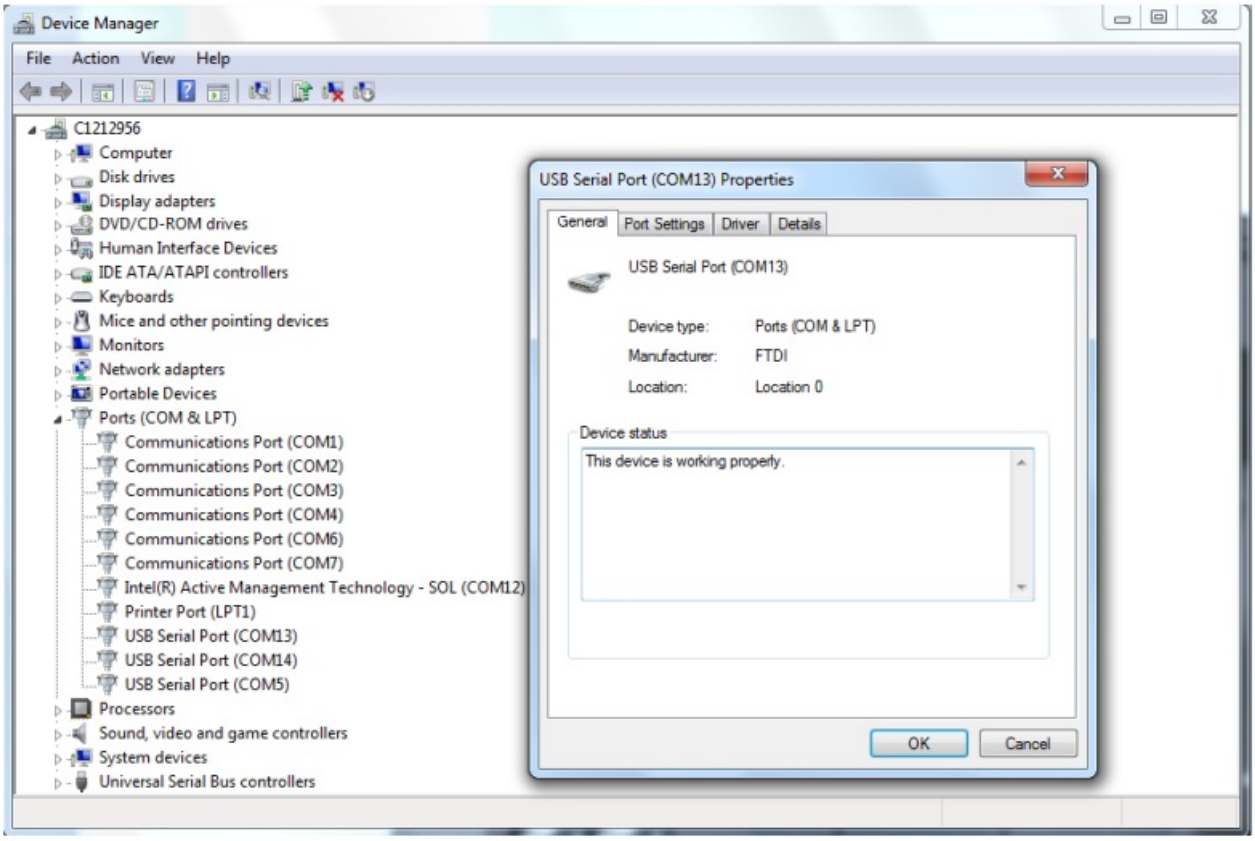
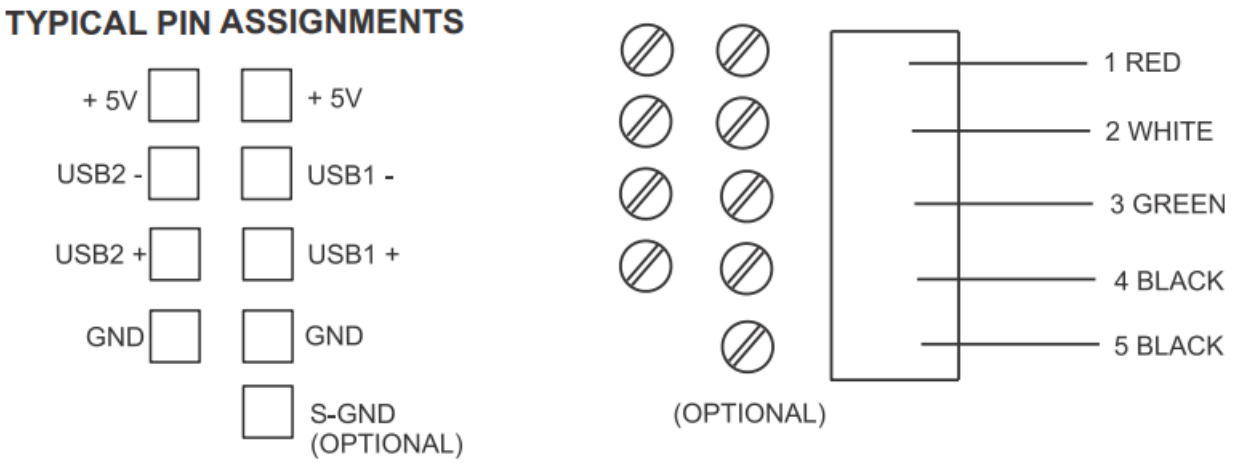


Figure 2
Device Manager View

The port assignment can be changed to agree with any port assignment at the time of install or update. Either board can handle XNET and either board can handle HNET. There is no difference in the boards. However, XNET and HNET are different protocols, so HNET wiring should go to the board with the COM port assigned to HNET and, likewise, XNET wiring should go to the board with the COM port assigned to XNET. On the Design CC/Cerberus DMS, the wiring to the cards should match the card ID assignments in the GNet/WAN Driver configuration.

PHYSICAL INSTALLATION

NOTE 1: Remove all Windows PC power before installation.
NOTE 2: The SNC connects to the motherboard internal USB2.0 connector via a cable harness provided (see Step 7 below). On most motherboards, the USB2.0 header/pin-out consists of nine pins arranged in two rows which allows for two USB connections. Normally, but NOT always, the pins for USB1 and USB2 are in separate rows as shown below.



Pin 5 S-GND is also colored black and it is NOT required. When the cable assembly provided is connected to the 4-pins row, simply leave the S-GND position unplugged. On some motherboards, 10 pins (2 x 5) or 8 pins (2 x 4) headers may be present. Connect as shown above.
NOTE: USB2.0 connectivity verified for Comarca 2nd and 4 the generation motherboards.
WARNING: The SNC only interfaces with motherboards that use the internal USB2.0 connector as shown above. Other motherboard's connections are NOT compatible. Verify its pin assignments before use.
To install the SNC in a computer in which it is not factory installed, follow the steps listed below:

1. Unscrew the two knurled knobs on the rear of the computer (computer enclosure may have different physical characteristics).
2. Slide the cover back an inch or so and lift it off.
3. The SNC installs into any free PCI or PCI Express compliant slot in the computer. Select a slot and remove the blank cover, keeping the screw.

   NOTE: The card is NOT dependent on the slot connection and the tab is only used for additional support. The tab can be scored off if connectivity problems are encountered.
4. Remove the terminal block from the SNC by removing the two screws that hold it to the bracket.
5. Place the SNC into the open slot so that the SNC card edge extends through the opening in the back of the PC.
6. Align the SNC with the card edge connector in the computer and press it firmly into place.
7. Connect the SNC (via X3 connector) to the mother board internal USB connection with the cable harness, P/N A5Q00070675, provided.
8. Secure the SNC by installing the screw that held the blank cover (Refer to Step 3).
9. Replace the computer cover and tighten the knurled knobs (or equivalent).
10. Reattach the terminal block by sliding it onto the SNC card edge and install the two screws. This is a keyed connection and will only install one way.
11. After the SNC is installed, install the SNC drivers following the instructions in the **Driver Installation** section of this document.

ELECTRICAL CONNECTIONS

The HNET/XNET connections are made on terminals 1-4 of the terminal block on the front of the SNC (see Step 4 in **Physical Installation**). The primary pair (or network A) is on terminals 1 and 2. The secondary pair (or network B) is on terminals 3 and 4. Install a 120 ohm EOLR, P/N 140-820350, on terminals 1 and 2, as well as terminals 3 and 4.
For Class B networks, connect only the primary pairs (Network A).
For Class X networks, connect to both the primary (Network A) and secondary (Network B) pairs.
Network (XNET)
See Figure 3 for wiring details.
WAN Network (HNET)
See Figure 4 for wiring details.

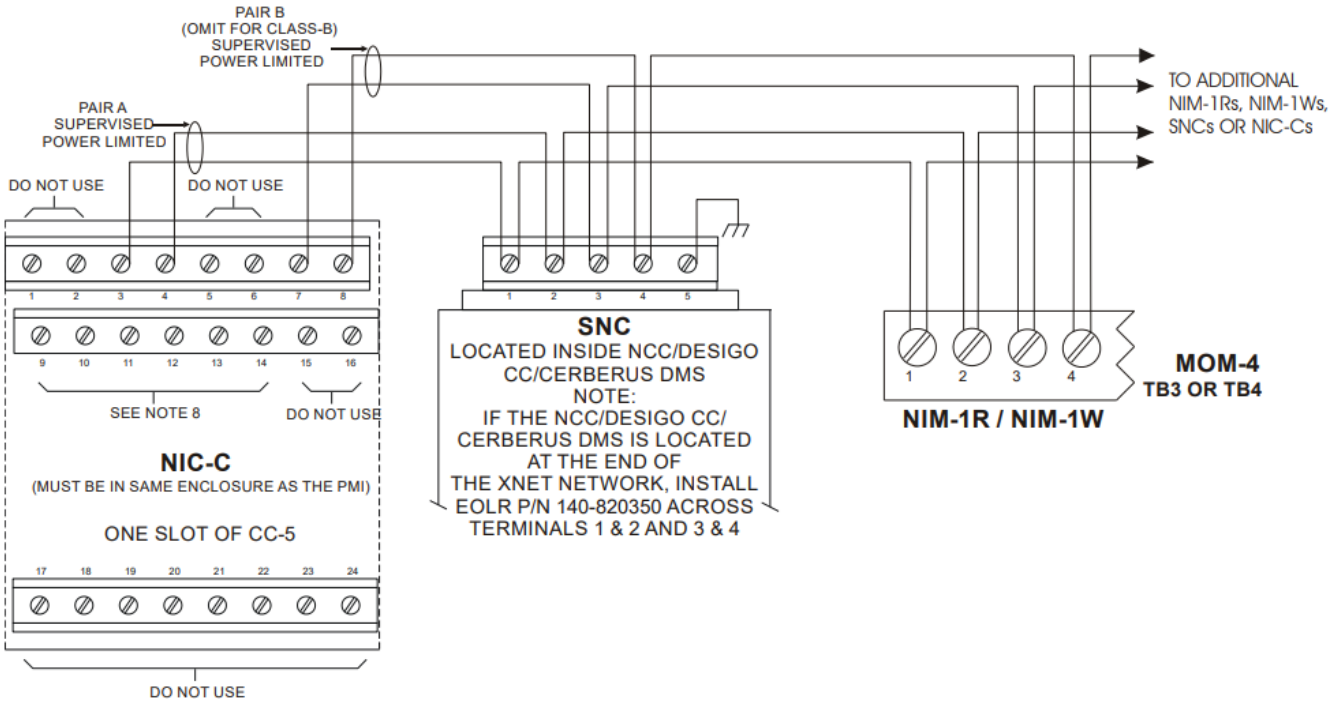


Figure 3
SNC XNET Connections

Refer to the Wiring Specification for MXL, MXL-IQ and MXLV Systems, P/N 315-092772 revision 6 or higher, for additional wiring information.

NOTES:

1. No EOLR required for NIC-C.
2. The screw terminals can accommodate one 12-24AWG or two 16-24AWG.
3. From the SNC to NIM-1R, NIM-1W or SNC:

   80 Ohms max. per pair.

   Unshielded twisted pair – .5µF line to line

   Shielded twisted pair – .3µF line to line, .4µF line to shield
4. From the SNC to NIC-C:

   2000 feet (33.8 ohms) max. per pair between CC-5s/CC-2s.

   Unshielded twisted pair

   .25µF max. line to line

   Shielded twisted pair

   .15µF max. line to line

   .2µF max. line to shield
5. Use twisted pair or twisted shielded pair.
6. Terminate shields at one end only.
7. Power limited to NFPA 70 per NEC 760.
8. CC-5 terminals 9 – 14 are not connected and can be used to tie shields together.
9. Positive or negative ground fault detected at <10K ohms on pins 3-4, 7-8 of the NIC-C.
10. Each pair independently supervised.
11. Maximum voltage 8V P-P.
12. Maximum current 75mA during message transmission.

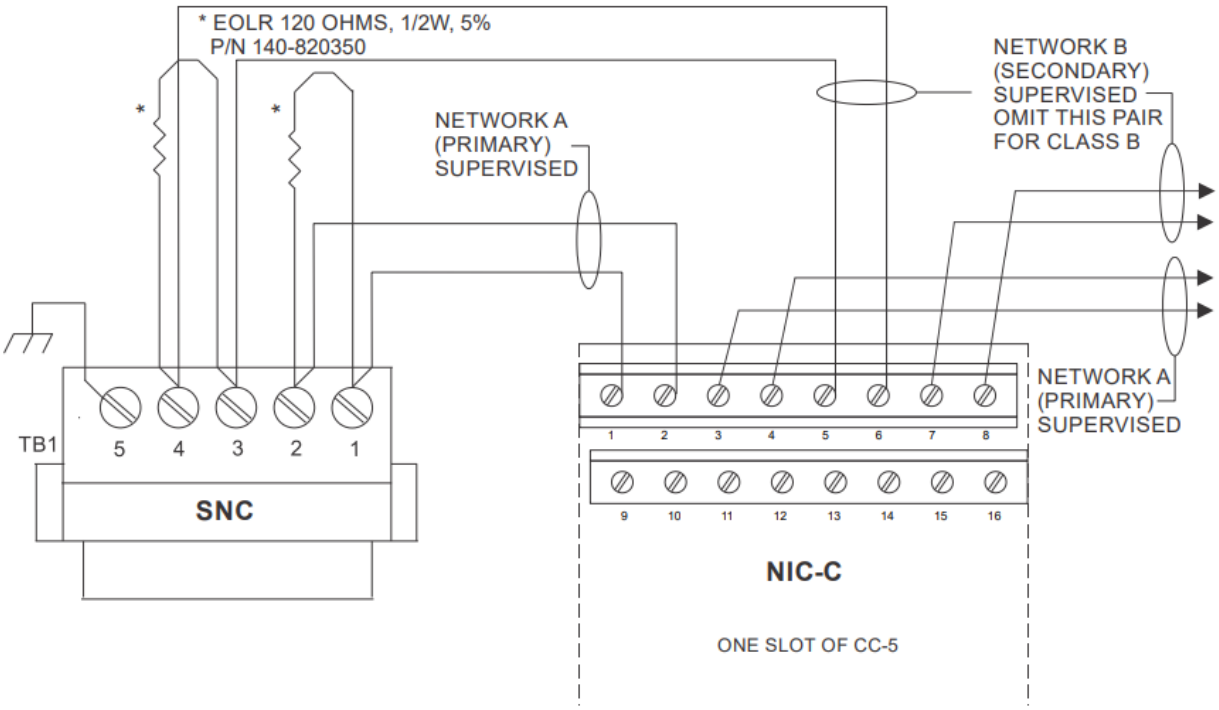


Figure 4
SNC HNET (WAN) Connections

NOTES:

1. The screw terminals can accommodate one 12-24AWG or two16-24AWG.
2. From the SNC to NIC-C:

   2000 feet (33.8 ohms) max. per pair between CC-5s/CC-2s.

   Unshielded twisted pair

   .25µF max. line to line

   Shielded twisted pair

   .15µF max. line to line

   .2µF max. line to shield
3. Use twisted pair or twisted shielded pair.
4. Terminate shields at one and only one NIC-C.
5. Power limited to NFPA 70 per NEC 760.
6. Maximum voltage 8V P-P.
7. Maximum current 75mA during message transmission.
8. Each pair independently supervised.
9. Positive or negative ground fault detected at <10K ohms on pins 1-2, 3-4, 5-6, 7-8 of the NIC-C.

Shields
Shields for the XNET/HNET must be connected at ONE end of the network.
Earth Ground
A good earth ground must be provided for proper transient protection of the SNC and the computer.
Connect a separate ground to terminal 5 on the SNC. See Figures 3 or 4 as applicable.
Ground Fault Detection
The SNC provides electrical isolation between the NCC or Design CC/Cerberus DMS computer and the XNET. This allows for ground fault detection to be enabled on the XNET. Ground fault detection is only possible if ALL NCC or Desi go CC/Cerberus DMS computers in the system are connected to XNET with a SNC (or NCC-1F and NCC-2F for existing NCC systems).

Ground fault detection must be enabled at a NIM-1R/-1W or NIC-C. Select one NIM-1R/ -1W or NIC-C in the system where the ground fault is to be detected. You must locate the NIM-1R/-1W in a cabinet with either an MMB, SMB or a PSR-1. See Figure 5 for the wiring diagram.
If the XNET is divided into multiple sections of copper wire using fiber optic segments, ground fault detection can be enabled at one NIM-1R/-1W or NIC-C for each section of copper wire. Refer to the NICC Installation Instructions, P/N 315-033240, if you wish to use the NIC-C to provide ground fault detection.
For ground fault detection on HNET systems, refer to the NIC-C Installation Instructions, P/N 315-033240.

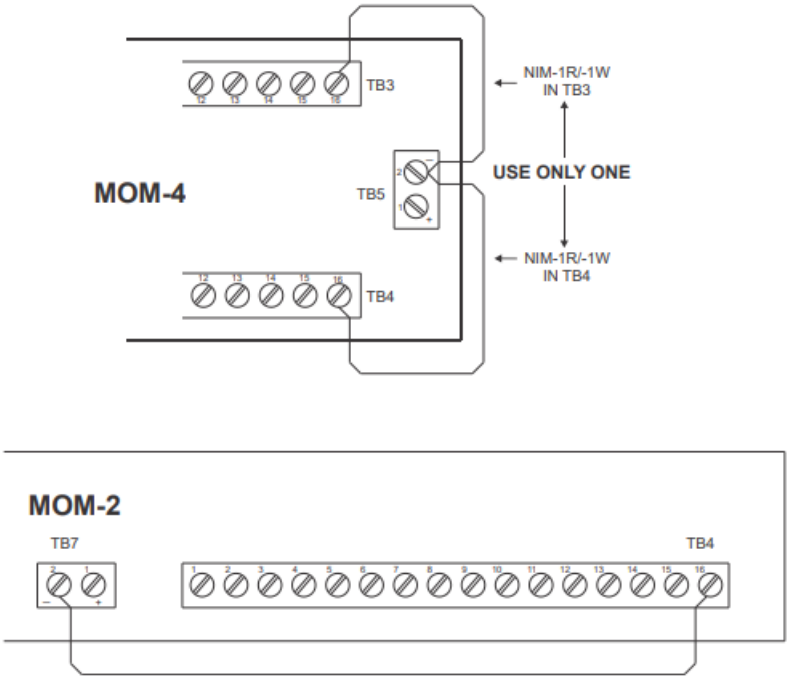


Figure 5
Wiring for Ground Fault Detection (XNET)

DRIVER INSTALLATION

The drivers usually come pre-installed in NCC/Design CC/Cerberus DMS computers. In case the drivers need to be installed in another computer, follow the instructions below.
The products which utilize the SNC cards run on Microsoft Windows 7 or 10 operating systems (OS).
When a PC with an SNC card is first started, the card is detected by Windows.

Windows Installation

The installation of SNC drivers begins by properly installing the SNC into the computer as indicated previously in the Physical Installation section. Afterwards, follow the procedure below:

1. Go to your authorized Siemens website, **https://iknow.ww004.siemens.net/infolink/fire%20safety/fire%20safety.htm** (Branch), or **https://extranet.w3.siemens.com/buildingtechnologies/partner/FSUSEN/techs/TechSupport** (VAPs), and download the file: CDM20828_setup.exe (Driver provided by FTDI Chip Limited)
2. Double click the CDM20828_setup.exe file to install the driver.
3. Go to PC Start Menu > Settings > Control Panel > System > Hardware > Device Manager > Ports. Listed is the USB Serial Port. Write down the COM port number for future reference.

NRC BASED XNET CONNECTION

For connections of SNCs to NRC based GNet networks, see section NRC Based GNet Connections in the NRC Installation Instructions, Document ID A6V10322639.

ELECTRICAL RATINGS
All connections are supervised and power limited unless stated otherwise.
Input Voltage: 5V (from USB)
Input Current: 80mA Max

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Documents / Resources

	**SIEMENS SNC Serial Network Card for USB Application with Window** [pdf] Instruction Manual SNC, SNC Serial Network Card for USB Application with Window, Serial Network Card for USB Application with Window, Network Card for USB Application with Window, Card for USB Application with Window, USB Application with Window

References

- **Fire Alarm Resources | Download fire alarm documents**

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