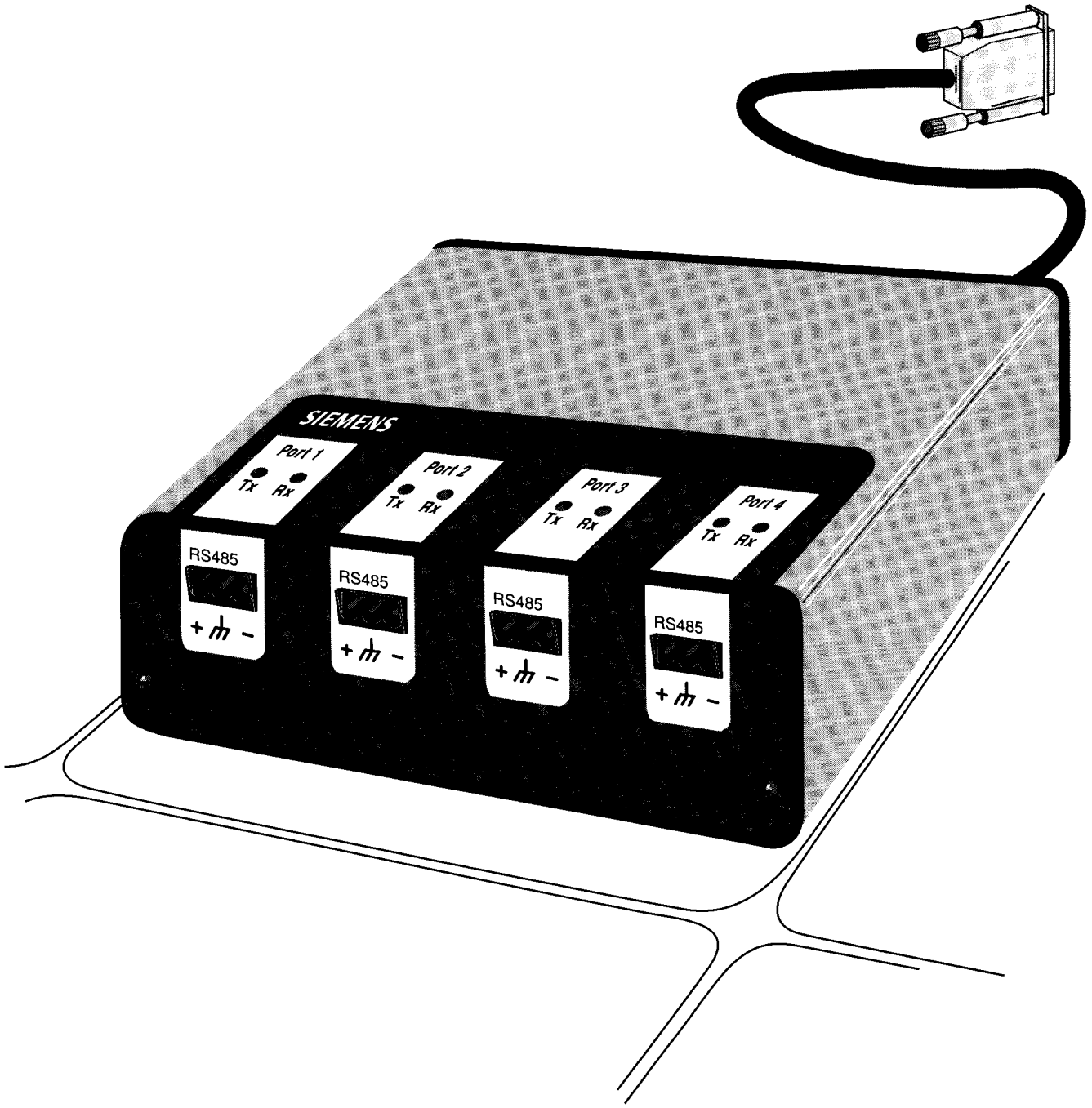
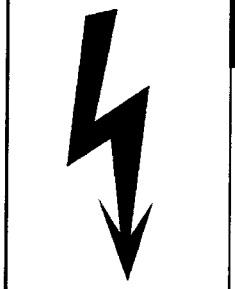
SIEMENS

Isolated Multi-Drop™ Converter

Operator's Manual



Manual No. SG-6048



⚠ DANGER

Hazardous voltages are present in the equipment that will cause severe personal injury and equipment damage. Always de-energize and ground the equipment before maintenance. Maintenance should be performed only by qualified personnel. The use of unauthorized parts in the repair of the equipment or tampering by unqualified personnel will result in dangerous conditions which can cause severe personal injury or equipment damage. Follow all safety instructions contained herein.

Circuit breaker indicators shown in this booklet are for illustration purposes only. Circuit breakers are to be installed in "Discharged" and "Open" positions only.

IMPORTANT

The information contained herein is general in nature and not intended for specific application purposes. It does not relieve the user of responsibility to use sound practices in application, installation, operation, and maintenance of the equipment purchased. Siemens reserves the right to make changes in the specifications shown herein or to make improvements at any time without notice or obligation. Should a conflict arise between the general information contained in this publication and the contents of drawings or supplementary material or both, the latter shall take precedence.

NOTE

***Authorized and qualified personnel—**
For the purpose of this manual a qualified person is one who is familiar with the installation, construction or operation of the equipment and the hazards involved. In addition, he has the following qualifications:

(a) **is trained and authorized** to de-energize, clear, ground, and tag circuits and equipment in accordance with established safety practices.
(b) **is trained** in the proper care and use of protective equipment such as rubber gloves, hard hat, safety glasses or face shields, flash clothing, etc., in accordance with established safety practices.
(c) **is trained** in rendering first aid.

SUMMARY

These instructions do not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to your local sales office.

The contents of this instruction manual should not become part of or modify any prior or existing agreement, commitment or relationship. The sales contract contains the entire obligation of Siemens Energy & Automation, Inc. The warranty contained in the contract between the parties is the sole warranty of Siemens Energy & Automation, Inc. Any statements contained herein do not create new warranties or modify the existing warranty.

Table of Contents

1 Introduction

The Siemens Isolated Multi-Drop™ converter is an electronic device that lets you connect your DOS-based PC to the Siemens SEAbus™ communications network for ACCESS™ devices on your power distribution system. (You can also use the converter to connect any other RS-485 devices, such as Multilin 169+ and 269+ relays, to your PC.) The Isolated Multi-Drop converter converts the RS-232 signal from your PC to the RS-485 signal used in an industrial network such as the ACCESS electrical distribution communications system. Once your PC is connected to the network, you can run Siemens Power Monitor PC™ communications and supervisory software, or Siemens SIEServe™ display and monitoring software for Microsoft™ Windows™, to communicate with every ACCESS device on your system.

The Isolated Multi-Drop converter has four RS-485 ports that can support 32 devices each, for a total of 128 devices on each of your PC's serial ports. If you are using SIEServe software, you can run one copy of the program for each serial port on your computer.

The Isolated Multi-Drop converter protects the PC from field-device potentials with opto-isolators between the RS-232 and RS-485 interfaces. To isolate the PC further, the converter is equipped with high-energy surge suppression that meets or exceeds ANSI C62.41 (IEEE 587) standards. The converter also incorporates isolated DC/DC converters that provide galvanic isolation between the PC and the RS-485 loop.

1.1 How to Use This Manual

This manual is intended to provide you with everything you need to install and troubleshoot the Isolated Multi-Drop converter on your ACCESS system. It tells you how to connect directly between your PC and ACCESS system and how to connect over longer distances using modems. For help in finding the information you need in this manual, consult the following table:

If you need information about...	Refer to
the features of the Isolated Multi-Drop converter	Section 2
how to install and set up the Isolated Multi-Drop converter	Section 3
how to connect Static Trip III trip units and SAMMS devices for testing	Section 3
troubleshooting	Section 4

2 Features of the Converter

The Isolated Multi-Drop converter is designed with features that enable you to install it and set it up to meet the specific requirements of your operation. This section describes each of the following features according to their functions:

- four RS-485 communications ports
- one RS-232 communications port
- a power module, including an ON/OFF switch, a power (PWR) LED, a 120 VAC power input, and a 15VDC power output
- three configuration switches for communications
- manual and automatic operating modes

2.1 RS-485 Communications Ports

The Isolated Multi-Drop converter is equipped with four RS-485 ports located on the converter's front panel, as illustrated in Figure 1.

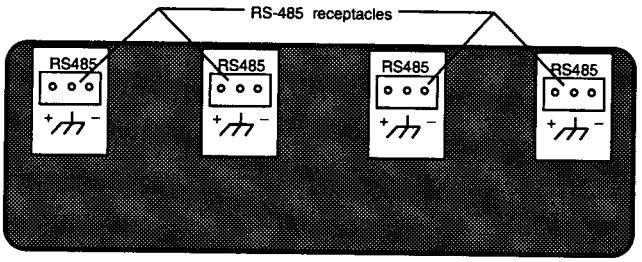


Figure 1. Front Panel of the Isolated Multi-Drop Converter

Each port allows you to connect as many as 32 field devices on a single RS-485 communications cable; however, your application software may limit the number of devices your system can accommodate. Each port has Data (+) and Data (-) terminals and a ground terminal for the cable shield. For diagnostics, each port is equipped with a yellow transmit (Tx) LED and a green receive (Rx) LED, located on top of the device. The Tx LEDs blink during the transmission of data, which occurs on all ports simultaneously; only one Rx LED blinks when data is received. The LEDs are illustrated in Figure 2.

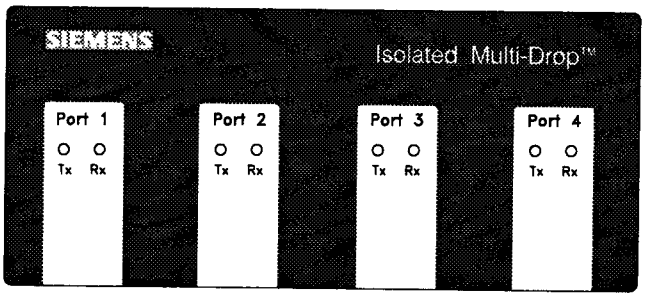


Figure 2. Communications LEDs on the Top Panel of the Converter

2.2 RS-232 Communications Port

The converter is equipped with one RS-232 communications port located on the rear panel, as illustrated in Figure 3 at the bottom of the page. This port lets you connect the converter to a PC for desktop operation, or to a short-haul or dial-up modem for remote operation.

2.3 Power Module

The interface of the converter's power module is located on the rear panel, as illustrated in Figure 3 below. The interface comprises two power connections—a 15VDC output and a 120 VAC/125 VDC filtered input—a two-position power switch, and an indicating (PWR) LED. The 15 VDC output is used to provide power to Static Trip III™ trip units and SAMMS™ motor control and protection relays during testing. The filtered input next to the power switch is for providing line power to the converter. The power switch turns the converter on and off, and the PWR LED illuminates when the converter is turned on.

2.4 Transmission (TX) Control Switches

Also on the rear panel (and illustrated in Figure 3) are the converter's three set-up switches, collectively labeled "TX CONTROL". These switches—two rocker switches, labeled DCD\RTS and MAN\AUTO, and one thumbwheel switch, labeled BAUD—are used for configuring the converter for operation. This section describes the uses of each Tx control switch in more detail.

The MAN\AUTO switch places the Isolated Multi-Drop converter in either manual or automatic mode, which are described below. Your software determines which mode you should use. The DCD\RTS switch is set according to the method of data transmission for your configuration. The Data Carrier Detect (DCD) circuit (pin 8 on the RS-232 cable) sends a message to the PC when a proper carrier signal is received. The Request To Send (RTS) circuit (pin 4 on the RS-232 cable) sends a message to the converter requesting permission to send data on the Tx Data circuit (pin 2 on the RS-232 cable). The BAUD switch selects the baud rate for the converter, which must be consistent with the baud rate on the SEAbus communications network.

2.4.1 Manual Operating Mode

When the converter is in manual mode, most Siemens application software uses RTS to enable the Isolated Multi-Drop converter's transmitter. (If your software does not use RTS to enable the transmitter, refer to your user's manual for more information.) When the Isolated Multi-Drop converter is connected directly to a PC, the MAN/AUTO switch must be set to MAN and the DCD/RTS switch must be set to RTS. When the Isolated Multi-Drop converter is installed at a remote location using short-haul modems, the MAN/AUTO switch must be set to MAN and the DCD/RTS switch must be set to DCD. Short-haul modems typically pass RTS through on the DCD pin at the remote modem.

2.4.2 Automatic Operating Mode

The converter operates in Automatic mode if you use application software that does not support hardware handshaking (that is, DCD/RTS) or that communicates to a remote location via a dial-up modem on a nondedicated telephone line. With the MAN/AUTO switch set to AUTO, the converter's transmitter is enabled by the data signal transmitted from the computer. To set up the Isolated Multi-Drop converter for Automatic mode, the MAN/AUTO switch is set to AUTO, and the BAUD thumbwheel switch is set to match the baud rate on the communications network.

In Automatic mode, the Isolated Multi-Drop converter enables the transmitter's Tx logic with data bit transitions contained in transmitted characters. Once data has been transmitted, the transmitter is disabled after approximately two character-times

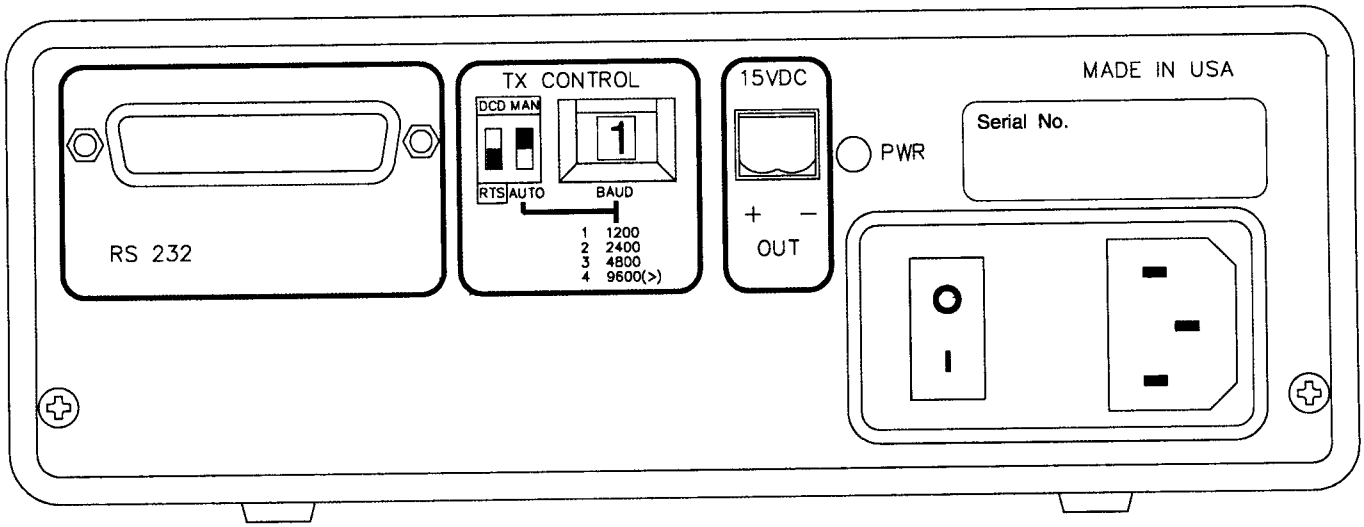


Figure 3. Rear Panel of the Isolated Multi-Drop Converter

have elapsed at the system's baud rate. To ensure that complete messages are sent, the application software must transmit at the selected baud rate with intercharacter gaps of two character-times or less. In addition, RS-485 devices must not respond before the transmitter is disabled (that is, before two character-times have elapsed, or before two milliseconds have elapsed when communicating at 9600 baud). If devices respond too quickly, the first few characters in the response message could be lost.

3 Installing the Converter

This section explains how to install and set up the Isolated Multi-Drop converter to meet the requirements of your operation. You can install the converter either directly to a PC or remotely within switchgear using short-haul or dial-up modems. This section also tells you how to connect Static Trip III trip units and SAMMS devices to the converter's power module, enabling you to test these devices in the field.

Before attempting to install the converter, check to see that you have the following parts in addition to the converter:

- one power cord
- one two-terminal connector
- four RS-485, three-terminal connectors

If you want to install the converter in a switchgear, you can order a mounting kit that contains the additional parts you need. Refer to Appendix C for ordering information.

Note: Each device attached to the communications network through the converter must have a unique address to prevent communications collisions. Device addressing is a process independent of installation. For instructions on how to program the address of a specific device, see the instruction manual for that device or refer to Siemens' *Installing the ACCESS System* (manual no. SG-6028).

3.1 Preparing the RS-485 Cable

The converter comes with four connectors that allow you to connect your system's RS-485 cable to the converter. Use these connectors to connect as many as four cable runs to the converter's four RS-485 ports. To install connectors on RS-485 cable, follow these instructions while refering to Figure 4 in the next column:

1. Strip the insulation off the black, white, and shield wires at both ends of the RS-485 communications cable, exposing approximately ½ inch of metal wire on each.
2. Loosen the three screws in the RS-485 connector.
3. Insert the black wire from *both* ends of the communications cable into the Data + slot on the connector, and tighten the screw to secure the wires.
4. Insert the white wire from *both* ends of the communications cable into the Data – slot on the connector, and tighten the screw to secure the wires.
5. Insert the shield wire from *only one* end of the communications cable into the center slot on the connector, and tighten the screw to secure the wire.

CAUTION: Insert *only one* end of the shield wire into the connector, and cut off the other end of the shield wire at the insulation. If you ground the cable shield at both ends, you could create a ground loop between components that induces interference and distorts the communications signal. Refer to *Installing the ACCESS System* (manual no. SG-6028) for further discussion of grounding the communications cable and other equipment.

6. Insert the connector into one of the RS-485 ports located on the front panel of the Isolated Multi-Drop converter.

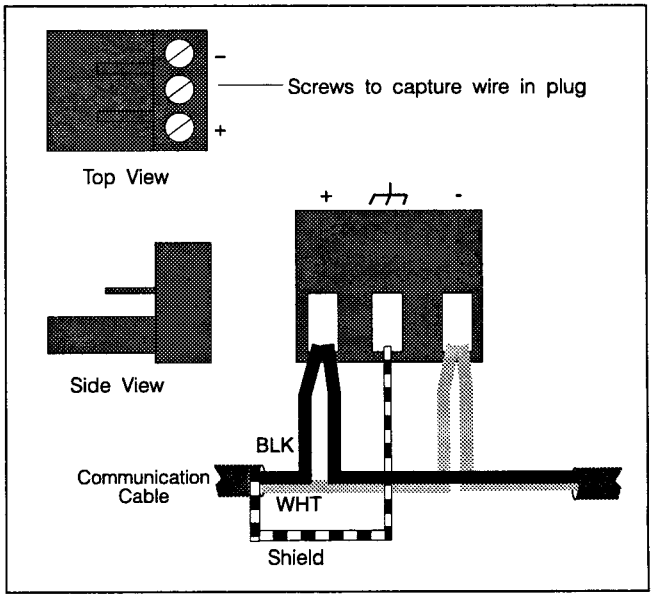


Figure 4. Three-Terminal Connector for Communications Cable

3.2 Connecting Directly to a PC

To connect the Isolated Multi-Drop converter directly to a PC, you need an RS-232 serial cable of not more than 50 feet in length. Make sure the cable is a DCE-DTE cable, not a null modem cable. The following table lists the minimum set of required signals and the pin assignments for DB-25 to DB-25 and DB-9 to DB-25 cable connectors:

Pin Number on Connector	Signal Name
2	TxD
3	RxD
4	RTS
7	GND
8	DCD

To connect the converter to a PC, follow these steps while refering to Figure 5 below:

1. Connect the plug end of an RS-232 serial cable to the RS-232 port on the Isolated Multi-Drop converter.
2. Connect the socket end of the serial cable to an RS-232 port on your computer.
3. If you're using application software that requires direct DCD/RTS control, set the DCD/RTS switch to RTS and the MAN/AUTO switch to MAN. If you are using application software that does not require direct DCD/RTS control, set the MAN/AUTO switch to AUTO, and use the BAUD thumbwheel to set the baud rate to match that of the application software and the ACCESS devices on the network. (In Automatic mode, the converter ignores the setting of the DCD/RTS switch.)
4. Insert the RS-485 connector(s) into the port(s) on the front of the converter. (Refer to section 3.1 for instructions on installing a connector on the RS-485 cable.)
5. Connect the supplied power cord to the 120 VAC connector on the converter, and plug the other end into any 120 VAC grounded power source.
6 Turn the converter's power switch on, and verify that the PWR LED is lit. (Refer to section 4, "Troubleshooting," if the PWR LED is not lit.)
7. Start your software.

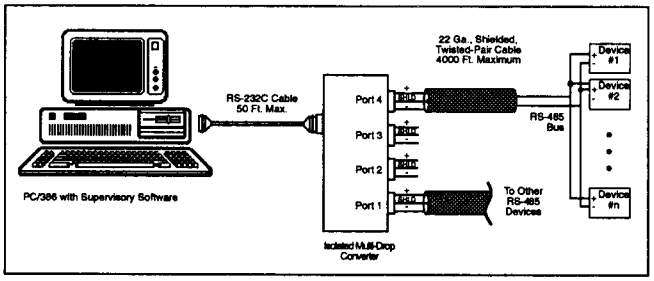


Figure 5. Connecting the Converter Directly to a PC

3.3 Connecting with Short-Haul Modems

If the distance between your PC and Isolated Multi-Drop converter is greater than 50 feet but less than 3.5 miles, you can connect them using short-haul modems and regular telephone cable. To install the Isolated Multi-Drop converter using short-haul modems, you need these items:

- two short-haul modems
- telephone cable that does not exceed 3.5 miles in length
- one Isolated Multi-Drop converter mounting kit (if you want to mount the converter in a switchgear panel)
- one or two RS-232 serial cables (Use these cables if you do not connect the modems directly to the converter or the PC. Use DCE-DTE cable with the pin assignments given in the preceding table.)

If you want to mount the Isolated Multi-Drop converter to a switchgear panel, do that first. (Refer to Appendix B for mounting dimensions.) Then follow these steps, referring to Figure 6 below.

1. Connect short-haul modems to the RS-232 port on the converter and to the RS-232 port on the PC. Plug them directly into the ports or use the RS-232 serial cables. (If you need help in connecting the modems and setting their switches, refer to the modem's manual.)
2. If you're using application software that requires direct DCD/RTS control, set the DCD/RTS switch to DCD and the MAN/AUTO switch to MAN. If you are using application software that does not require direct DCD/RTS control, set the MAN/AUTO switch to AUTO, and use the BAUD thumbwheel to set the baud rate to match that of the application software and the ACCESS devices on the network. (In Automatic mode, the converter ignores the setting of the DCD/RTS switch.)
3. Insert the RS-485 connector(s) into the port(s) on the front of the converter. (Refer to section 3.1 for instructions on installing a connector on the RS-485 cable.)
4. Connect the supplied power cord to the 120 VAC connection on the converter, and plug the other end into any 120 VAC grounded power source.
5. Turn the converter's power switch on, and verify that the PWR LED is lit. (Refer to section 4, "Troubleshooting," if the PWR LED is not lit.)
6. Start your software.

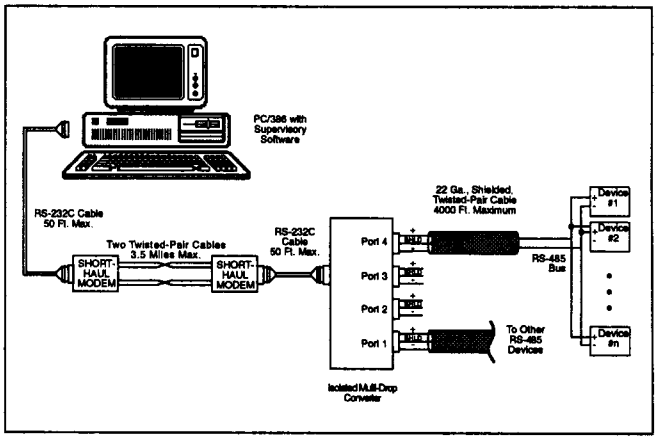


Figure 6. Connecting the Converter Using Short-Haul Modems

3.4 Connecting with Dial-Up Modems

If the distance between your PC and Isolated Multi-Drop converter is greater than 3.5 miles, you can connect them using dial-up modems. To install the Isolated Multi-Drop converter using dial-up modems, you need these items:

- two dial-up modems
- one RS-232 serial cable no more than 50 feet in length (unless your PC's modem is directly installed in the computer)
- one null modem cable no more than 50 feet in length
- a telephone line for each modem
- one Isolated Multi-Drop converter mounting kit (if you want to mount the converter to the switchgear panel)

If you want to mount the Isolated Multi-Drop converter to a switchgear panel, do that first. (Refer to Appendix B for mounting dimensions.) Then follow these steps, while referring to Figure 8 in the next column.

1. Connect one dial-up modem to your PC; use the RS-232 serial cable unless your modem is installed directly in the computer. (If you need help in connecting the modems and setting their switches, refer to the modem's manual.)
2. Using a null modem cable, connect one dial-up modem to the RS-232 port on the converter. The following diagram illustrates the pin assignments of a null modem cable:

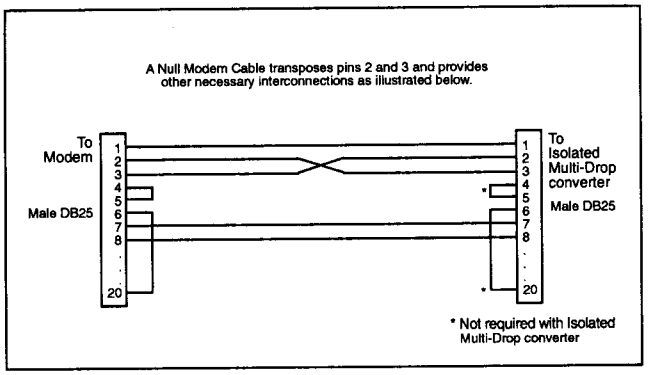


Figure 7. Pin Assignments of a Null Modem Cable

3. Set the MAN/AUTO switch to AUTO, and use the BAUD thumbwheel to set the baud rate to match that of the application software and the ACCESS devices on the network. (In Automatic mode, the converter ignores the setting of the DCD/RTS switch.)
4. Insert the RS-485 connector(s) into the port(s) on the front of the converter. (Refer to section 3.1 for instructions on installing the connector on the RS-485 cable.)
5. Plug one end of the converter's power cord into the 120 VAC connection on the converter, and plug the other end into any 120 VAC grounded power source.
6. Turn the converter's power switch on, and verify that the PWR LED is lit. (Refer to section 4, "Troubleshooting," if the PWR LED is not lit.)
7. Start your software.

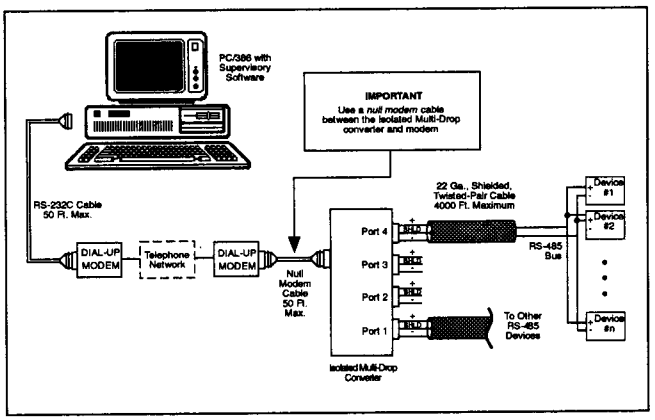


Figure 8. Connecting the Converter Using Dial-up Modems

3.5 Using the Converter for Testing ACCESS Devices

You can use the Isolated Multi-Drop converter's 15 VDC power output to provide power for testing Static Trip III trip units or SAMMS devices. According to the steps in this section, first prepare a cable for connecting the devices to the converter. Then follow the appropriate procedure for the specific device(s) you want to connect to the converter.

To prepare the cable, follow these steps while referring to Figure 9 on the next page:

1. Select a two-conductor cable of sufficient length to reach between the converter and the device(s) you want to connect.
2. Strip the insulation from both wires at both ends of the cable, exposing approximately ½ inch of metal wire on each.
3. Loosen the screws in the two-terminal connector that comes with the converter. Insert one wire into each slot on the connector, making sure to take note of polarity.

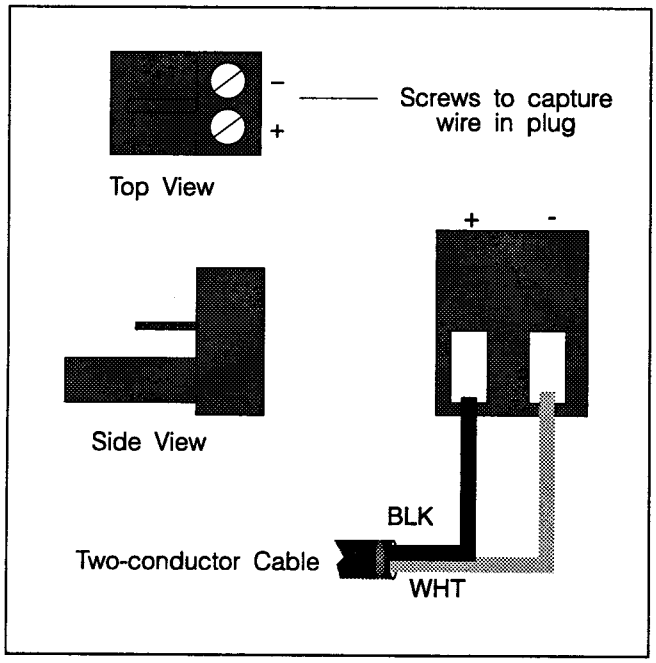


Figure 9. Two-Terminal Connector for Test Connection

Use this cable to connect devices to the converter according to the procedures in the remainder of this section.

If you are testing a Static Trip III trip unit in a Type RL circuit breaker, follow these steps to connect the trip unit to the converter for 15VDC power, while referring to Figure 10 in the next column:

1. Plug the connector of the two-conductor cable into the 15 VDC output port.
2. Making sure to observe the polarity of the cable, connect the other end to terminals 2 and 3 on the terminal block for cubicle disconnect. (This terminal block is located on the inside left panel of the Type RL circuit breaker compartment.)
3. Connect an RS-485 cable between the terminal block in the circuit breaker and the converter. (You may need to prepare a length of communications cable as described in section 3.1 above.) Plug the cable's three-terminal connector into an RS-485 port on the front of the converter. Connect the black wire from the other end of the cable to Data + (terminal 4) on the terminal block, and connect the white wire to Data – (terminal 5) on the terminal block.
4. Plug one end of the converter's power cord into the 120 VAC connection on the converter, and plug the other end into any 120 VAC grounded power source.
5. Turn the power switch on.
6. Using testing software supplied by Siemens, verify that the attached trip unit communicates properly.

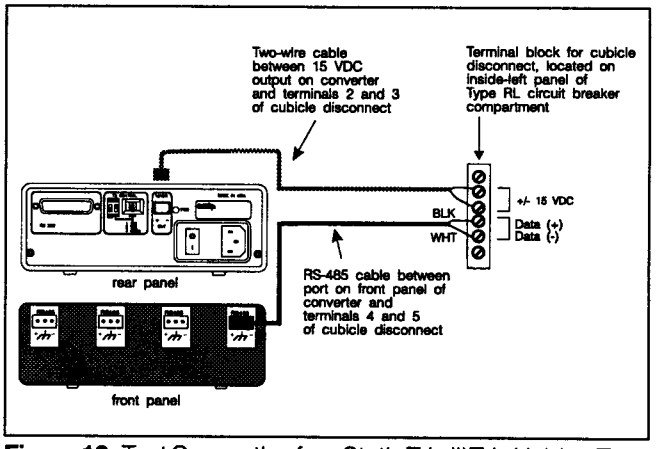


Figure 10. Test Connection for a Static Trip III Trip Unit in a Type RL Circuit Breaker

If you are testing a Static Trip III trip unit on a desktop, follow these steps to connect the trip unit to the converter for 15VDC power, while referring to Figure 11 on the next page:

1. Plug the connector of the two-conductor cable into the 15 VDC output port.
2. Making sure to observe the polarity of the cable, connect the other end to terminals 2 and 3 on the 10-pin connector supplied with the Static Trip III C trip unit.
3. Connect an RS-485 cable between the 10-pin connector and the converter. (You may need to prepare a length of RS-485 cable as described in section 3.1 above.) Plug the cable's three-terminal connector into an RS-485 port on the front of the converter. Connect the black wire from the other end of the cable to Data + (terminal 4) on the 10-pin connector, and connect the white wire to Data –(terminal 5) on the 10-pin connector.
4. Plug the 10-pin connector into the 10-pin connector port located on the back panel of the Static Trip III C trip unit.
5. Plug one end of the converter's power cord into the 120 VAC connection on the converter, and plug the other end into any 120 VAC grounded power source.
6. Turn the power switch on.
7. Using testing software supplied by Siemens, verify that the attached trip unit communicates properly.

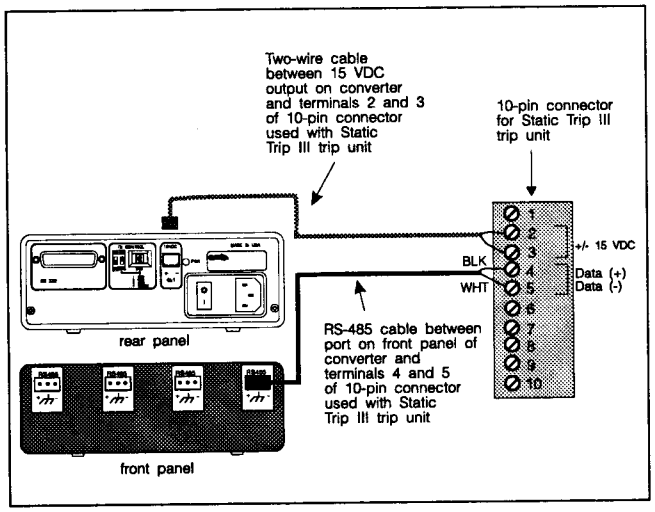


Figure 11. Connecting a Static Trip III Trip Unit for Desktop Testing

If you are testing a SAMMS device on a desktop, follow these steps to connect the device to the converter, while referring to Figures 12 and 13 in the next column:

1. Prepare 2 two-conductor cables by connecting them to one two-terminal connector, as described at the beginning of this section and illustrated in Figure 8.
2. Plug the connector of the two-conductor cables into the 15 VDC output port.
3. Making sure to observe the polarity, connect the other end of one of the two-conductor cables to terminals 5 and 6 of the terminal block on top of the SAMMS device.
4. Again making sure to observe polarity, connect the other end of the second two-conductor cable to the PWR (+) and PWR (–) terminals on the five-terminal connector supplied with the SAMMS Communication Module CM-1.
5. Connect an RS-485 cable between the SAMMS five-terminal connector and the converter. (You may need to prepare a length of RS-485 cable as described in section 3.1 above.) Plug the cable's three-terminal connector into an RS-485 port on the front of the converter. Connect the black wire from the other end of the cable to the (+) terminal on the five-terminal connector, and connect the white wire to the (–) terminal on the connector.
6. Plug the five-terminal connector into the SAMMS Communication Module CM-1.
7. Connect the CM-1 to the SAMMS device using the supplied ribbon cable as illustrated in Figures 12 and 13.
8. Plug one end of the converter's power cord into the 120 VAC connection on the converter, and plug the other end into any 120 VAC grounded power source.
9. Turn the power switch on.
10. Using testing software supplied by Siemens, verify that the attached SAMMS device communicates properly.

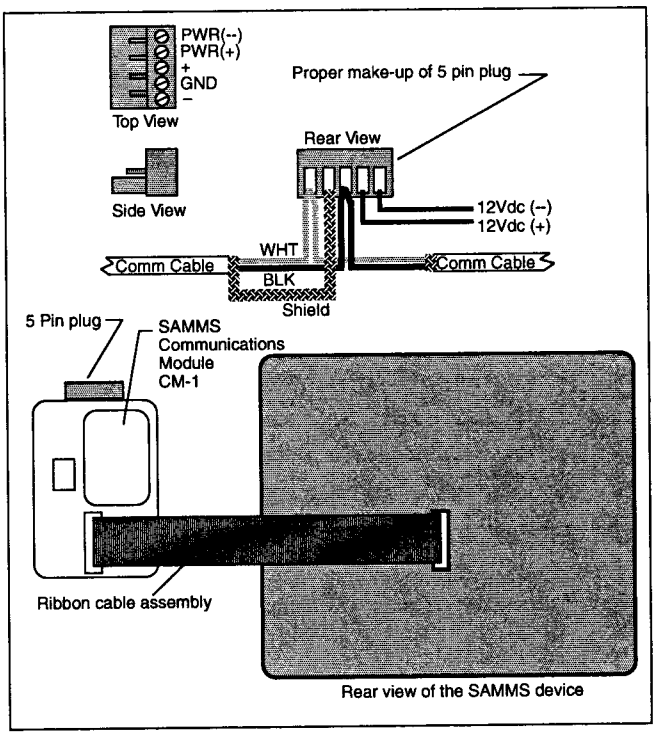


Figure 12. Connecting RS-485 Cable to a SAMMS Device

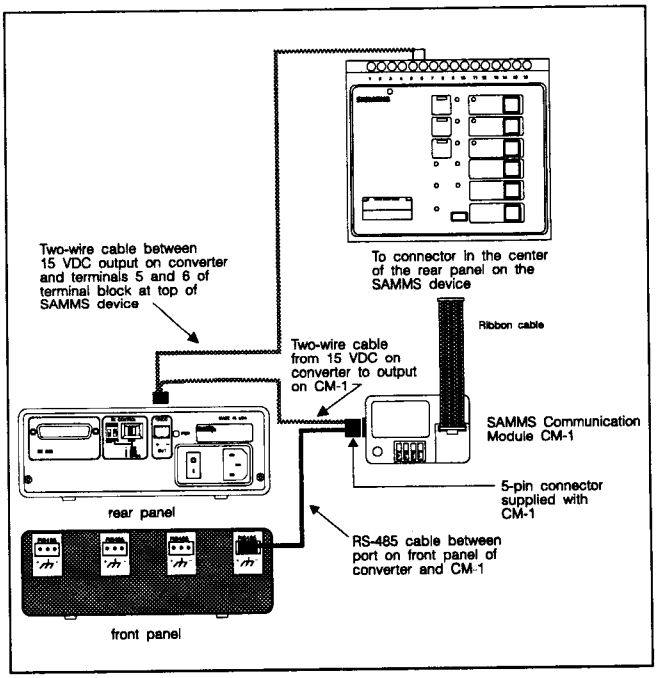


Figure 13. Connecting to the SAMMS Device for Testing

4 Troubleshooting

This section explains what to do if you experience communications errors and suspect the Isolated Multi-Drop converter is at fault. Before performing these checks, verify that your application software is properly set up and that the cables between the components are correct according to the installation instructions in section 3 of this manual.

If transmission through the Isolated Multi-Drop converter fails (one or more of the Tx LEDs fails to blink), perform the following checks in the order given:

1. If some (but not all four) of the Tx LEDs blink simultaneously, the Isolated Multi-Drop converter is faulty and should be replaced.
2. If none of the Tx LEDs flash, perform the following steps in order:
   a. Check the power connection and verify that the PWR LED is lit.
   b. Verify that the Tx Control switches are set according to the specifications of your application software.
   c. Verify that the PC's serial port is working properly. If it is, try replacing the cable to the converter.

If data errors occur or if there is no response from the field devices (Rx LED fails to flash), perform the following checks in the order given:

1. If correct data is transmitted from a field device but communication errors occur or no Rx LED flashes, check the following:
   a. Verify that the field device is receiving power.
   b. Verify that the cable from the converter to the field device is correct.
   c. Verify that the device's communications address matches the address assigned by the software for that device.
   d. Verify that the device's baud rate matches that of the software.
2. Verify proper operation of the attached field device's RS-485 communication interface. For more detailed troubleshooting information on field devices, refer to troubleshooting guidelines in *Installing the ACCESS System* (manual no. SG-6028).
3. Verify that the Data(+) and Data(-) port of each device is connected to the corresponding ports of the converter.

Appendix A: Block Diagram

The illustration below is a block diagram showing how the Isolated Multi-Drop converter operates. This diagram identifies the internal components that make up the converter.

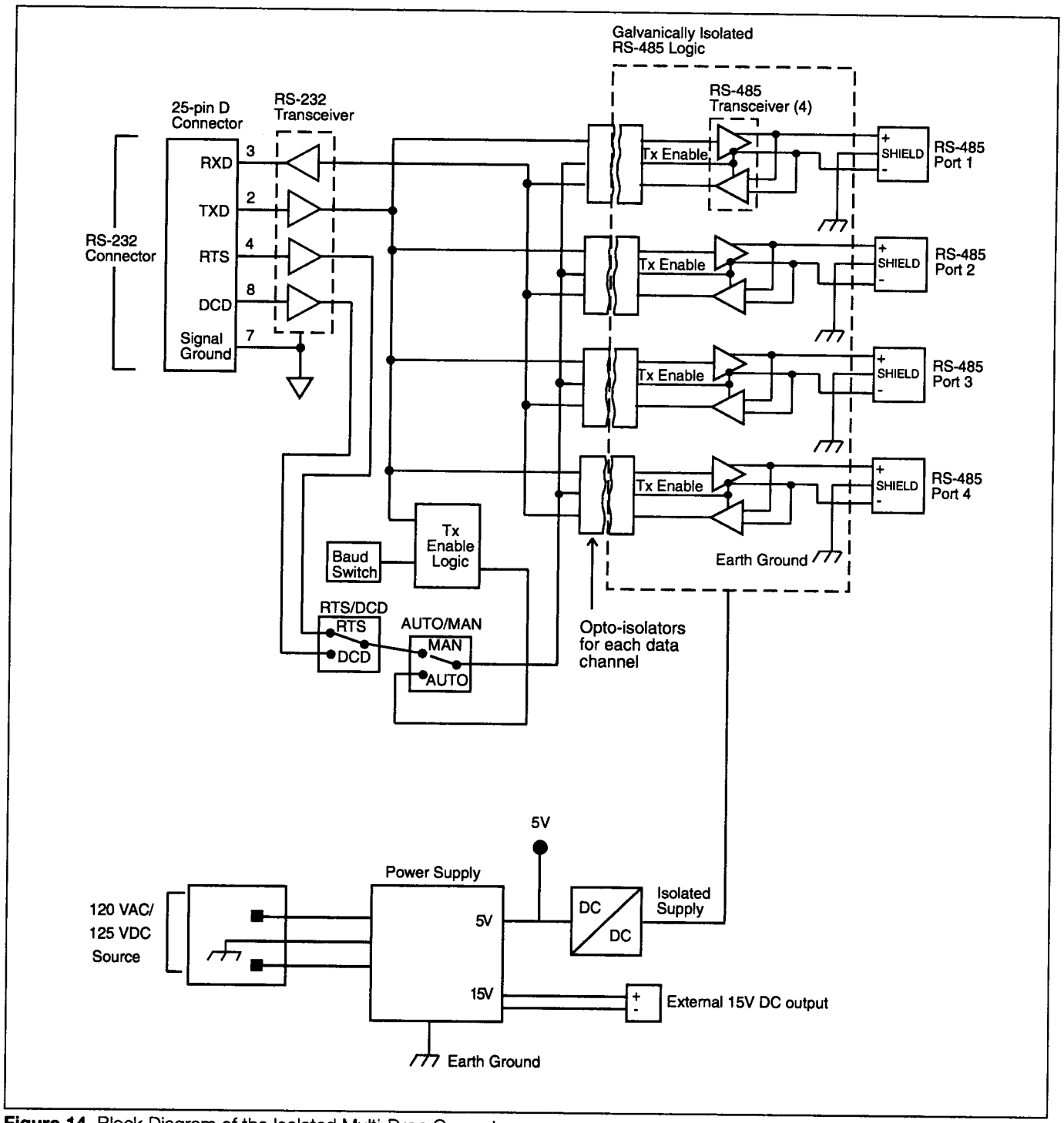


Figure 14. Block Diagram of the Isolated Multi-Drop Converter

Appendix B: Mounting Instructions

The illustration below shows the mounting dimensions for the Isolated Multi-Drop converter. Use these dimensions to mount the converter to a switchgear panel or to some other location. For more information on installation, refer to section 3 of this manual.

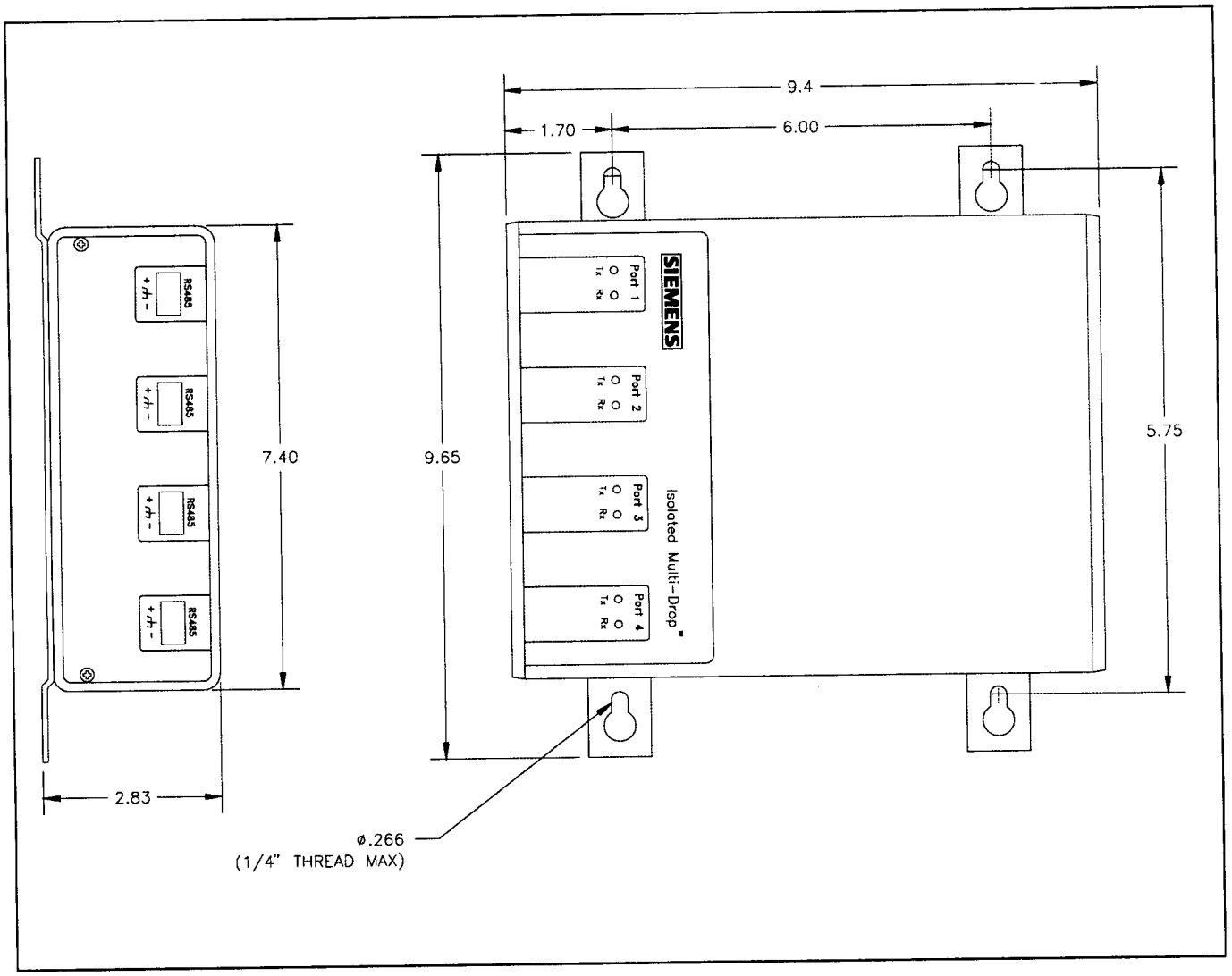


Figure 15. Mounting Dimensions for the Isolated Multi-Drop Converter

Appendix C: Ordering Information

Use the information in the tables below to order any parts you need to install the Isolated Multi-Drop converter.

Isolated Multi-Drop Converter			
Quantity	**Name**		**Part Number**
1	Isolated Multi-Drop converter (includes mounting kit)		18-658-582-537
1	Mounting Kit includes:		18-658-582-880
	Qty.	**Name**	**Part Number**
	2	bracket	18-748-002-002
	4	8-32 x 3/8 FH slotted	00-615-333-172
	1	Power cord	15-172-451-191

Cables		
Manufacturer	**Name**	**Part Number**
Alpha Wire Corp. (201) 925-8000 (201) 925-7938 FAX	RS-485 network cable	55121

Short-Haul Modems		
Manufacturer	**Name**	**Part Number**
RAD Data Communications (201) 587-8822 (201) 368-2102 FAX	RAD SRM-6AC Short-Haul Modem	SRM-6AC/M/RJ11 SRM-6AC/F/RJ11

Problem Report for ACCESS Systems and Devices

If you have a problem with Siemens ACCESS systems or devices, please make a copy of this two-page form and fill it out. Then contact your Siemens representative to report the problem. (If you have an emergency, call 1-800-241-4453.)

Customer Information

Job-site contact _____
Company's name _____
Job site or location where equipment is installed _____
Siemens sales order number _____
Siemens manufacturing order number (from manufacturing drawing) _____
Date problem occurred _____
Contact's phone number _____
Contact's fax number _____

Device Information

If you are experiencing a problem with a specific device, please provide the following information from the device's label(s):

Device type _____
Model (or catalog number) number _____
Part number _____
Serial number _____
Hardware version _____
Software version _____
Device options _____

Problem-Specific Information

1. Please provide a brief, general description of any performance problems with the system or any devices. _____

2. Does the system have any of the following supervisory and monitoring devices? How many?

   - ❑ ACCESS Host PC _____
   - ❑ Power Monitor unit _____
   - ❑ Power Monitor PC units _____
   - ❑ Other (please specify) _____

3. How many of the following ACCESS devices are on the system?

   - ❑ 3600 power meter _____
   - ❑ 4300 power meter _____
   - ❑ 4700 power meter _____
   - ❑ Static Trip IIIC trip unit _____
   - ❑ Static Trip IIICP trip unit _____
   - ❑ SCOR relay _____
   - ❑ SB breaker trip unit _____
   - ❑ Sensitrip III trip unit _____
   - ❑ SAMMS device _____
   - ❑ Isolated Multi-Drop converter _____
   - ❑ Multiplexer Translator _____
   - ❑ Other (please specify) _____

4. What type of electrical equipment is the system or device installed on (switchgear, motor control center, switchboard, etc.)? _____

5. If the problem is with a specific device, describe its configuration; that is, describe its particular operational settings and parameters. (Attach additional sheet if necessary.) _____

6. List any error codes, error messages, or targets that have been generated by the system or by individual devices. _____

7. If the device is installed on an ACCESS system, please provide a summary (or a copy) of any Event Logs and System Diagnostic Logs. ____

8. Please provide any other information that you think might help Siemens correct the problem (such as information about the wiring, system application, system load, operating environment, or about the physical condition of the system or devices). _____

To be completed by Siemens personnel

Initial Problem Report completed by _____

Division or department name _____
Phone number _____
Problem report reviewed by _____
Review date _____
Sales engineer _____
Problem referred to _____
Date problem referred _____
Problem Report tracking number _____
Problem classification code _____

Corrective action taken _____

Upon completing this form, please forward a copy to:

Siemens Energy & Automation, Inc.
Electrical Apparatus Division
Customer Service Department
P. O. Box 29503
Raleigh, North Carolina 27626-0503

Fax Number 919-365-2598

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Siemens Energy
& Automation, Inc.
Electrical Apparatus
Division
P.O. Box 29503
Raleigh, NC 27626-0503

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