Dantel

49008
CURRENT LOOP
INTERFACE

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About this Practice:

This practice has been reissued to:
• Eliminate duplicate Figures.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

Issue date: March 1998

UPDATED

CAUTION

• Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.

• Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).

• Keep circuit boards in their antistatic bags when they are not in use.

• Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.

• For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

ORDERING INFORMATION

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, **1-800-432-6835.**

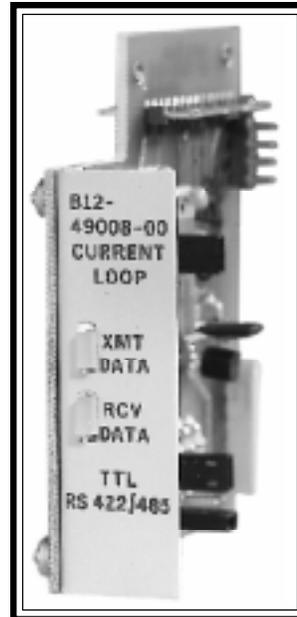| OPTION NUMBER	FEATURES
B12-49008-00	RS-422/485 Current Loop Interface Subassembly
A12-49008-01	RS-422/485 Current Loop Interface Subassembly

GENERAL DESCRIPTION

The 49008 Current Loop Interface Subassembly provides an EIA Standard RS-422/485 communications interface for use with the 460 Alarm and Control System (460 ACS).

This subassembly is available in two options: -00 and -01. The operation is the same for both options, but some pin designations are different (Refer to Fig. 1, in the ***Circuit Description*** section.). The -01 pin designations are for expansion shelf applications.

CIRCUIT DESCRIPTION

The 49008 Current Loop Interface Subassembly functional schematic is shown in Fig. 1.

Input

♦ The input to the subassembly occurs at pins 2 and 4 of connector P5.

♦ The Receive Data circuitry uses differential line receivers to convert incoming RS-422 or RS-485 data to TTL data for use by the host module.

♦ Additional outputs from the line receivers drive the RCV DATA LED and cause Q1 to conduct. This places a ground on the DCD output.

♦ When the J strap is installed, there is a 180-ohm termination across the input (see Table A).

♦ When the J strap is not installed, there is unterminated bridging on the input (see Table A).

CIRCUIT DESCRIPTION

Fig. 1 - Functional Schematic

Fig. 1 - Functional Schematic
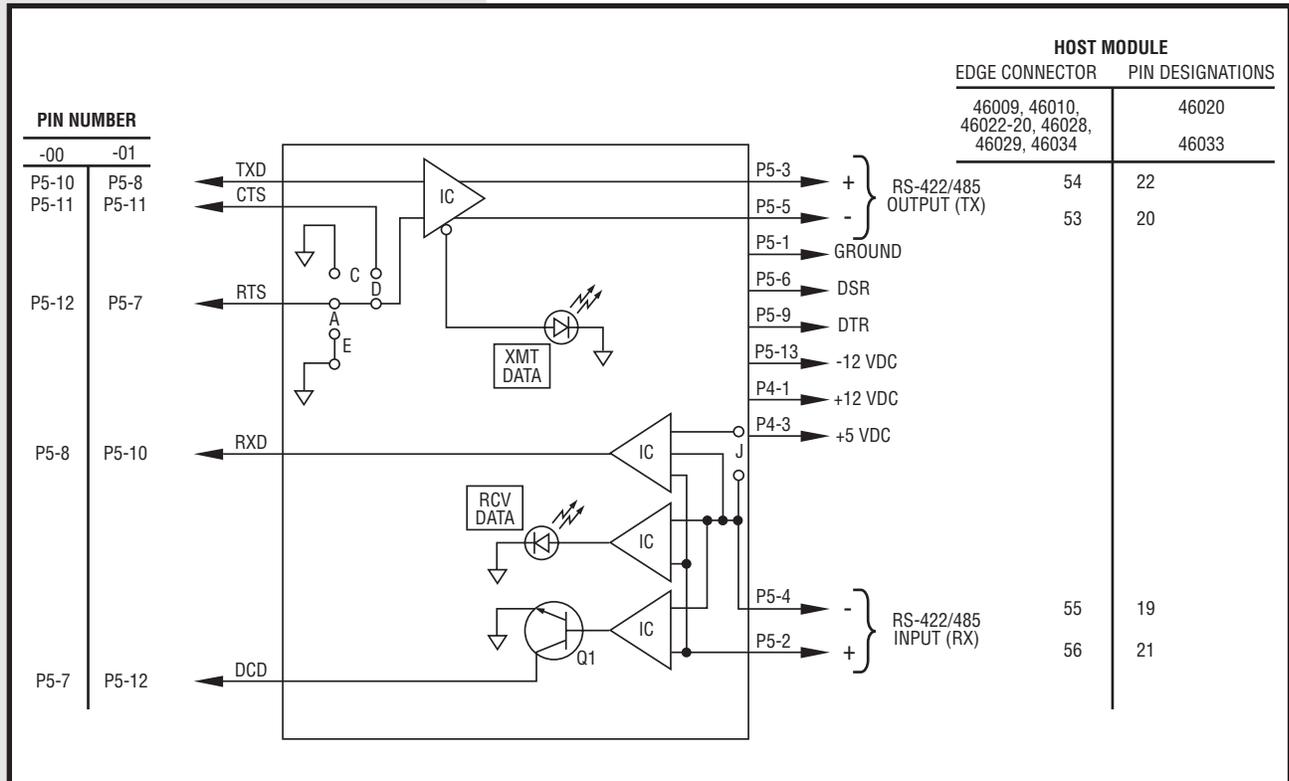
Output

♦ The output from the subassembly occurs at pins 3 and 5 of connector P5.

♦ Mini-jumpers on the input to the line drivers control the operation of the subassembly. There are two choices: They can provide a constant RTS, or the RTS can be controlled by the host module.

♦ The circuitry can also be configured to offer these choices: There can be a constant CTS, or the circuitry can be strapped to give RTS control over CTS and the resulting output data.

♦ When the 49008 is transmitting data, an additional signal from the line driver causes a green LED on the front panel (labeled XMT DATA) to light.

INSTALLATION

Installation consists of setting the straps, installing the subassembly into the host module and wiring.

1. INSTALL THE MINI-JUMPERS.

Place the mini-jumpers correctly for your application (see Table A and Fig. 2 for setting information). Use this guide to determine which settings you need:

Only One 49008 Subassembly

Select the RS-422 interface and terminate the input.

Multiple 49008s Connected in Parallel (Bridging Application)

♦ Select the RS-485 interface and terminate the last subassembly on the line.

♦ Strap all other subassemblies for an unterminated input.

TABLE A - STRAP OPTIONS

| OPTION	STRAP
Input	
Terminated	J Strap installed.
Unterminated	J Strap removed.
Interface	
RS-422	Straps A and C installed.
RS-485	Straps C and E installed.

2. INSTALL THE SUBASSEMBLY.

To install the subassembly on the host module, refer to the host module instruction manual for the location of the subassembly, and follow these steps:

1. Remove the hole plug from the host module's front panel.

2. Remove the screws from the three standoffs for the subassembly (see Fig. 2).

3. If a subassembly is already installed, remove it.

4. To place the 49008 subassembly, insert P4 and P5 into the connectors on the host module (see Fig. 1).

5. Make sure each connector pin goes straight into the socket.

6. Make sure the subassembly fits tightly on the standoffs and the front panel is straight in the host module's front panel opening.

7. Replace the three screws in the standoffs.

CONTINUED . . .

INSTALLATION
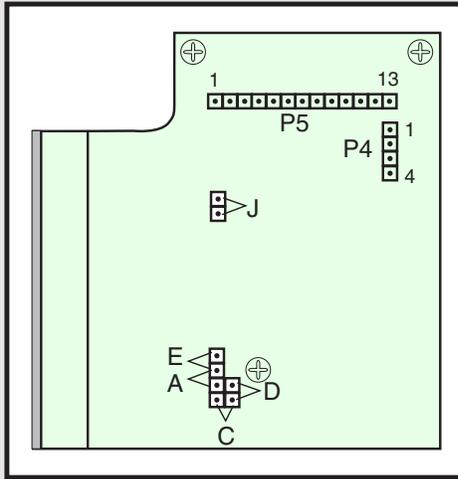
3. Check the polarity of the wiring.

The polarity of the transmit and receive wiring must be the same on both ends of the communications link.

OPERATION

The 49008 Current Loop Interface starts to operate as soon as you apply power to it. There is nothing more you need to do.

The front panel of the 49008 has two green LEDs:

♦ When the one labeled XMT DATA lights, data is being transmitted.

♦ When the one labeled RCV DATA lights, data is being received.

TECHNICAL SPECIFICATIONS

DESCRIPTION	VALUE
Input Voltage	±12 and +5 VDC from host module
Input Current (add to input current of host module)	
@ -24 VDC	11 mA
@ -48 VDC	6 mA
Heat Dissipation (add to heat dissipation of host module)	
@ -24 VDC	0.90 Btu/Hr
@ -48 VDC	0.98 Btu/Hr
Operating Temperature Range	0° to 55° C.
Physical Dimensions	2.6" x 2.8" x 0.8"
Weight	1.2 ounces

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

1. **Switch settings**
2. **Signal levels**
3. **Software configuration**
4. **Connections between Dantel's equipment and your equipment.**

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL** (1-800-432-6835).

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc.   •   2991 North Argyle Avenue   •   Fresno, California 93727-1388

Dantel

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