

46099

RS-232/RS-422

CONVERTER MODULE

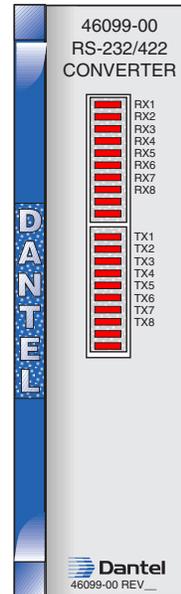


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About this Practice:

This practice has been reissued to:

- Document B11 version.
- Update Fig. 1 and Technical Specifications table.

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

Issue date: January 1999

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

UPDATED

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
B11-46099-00	RS-232/RS-422/423 Converter Module w/ Failsafe Receiver Inputs

GENERAL DESCRIPTION

The 46099 RS-232/RS-422/423 Converter Module (46099) provides RS-232 to RS-422/423 and RS-422/423 to RS-232 data interface conversion.

The 46099 is a plug-in PC board module that fits into any 400-type or similar housing and has front panel indicating LEDs.

The 46099 is not equipped to accept subassemblies.

The B11 version of this module includes circuitry on the RS-422/423 input that places an unused input into an inactive logic state.

CIRCUIT DESCRIPTION

The 46099 consists of:

- ◆ Eight RS-232 to RS-422/423 converter circuits.
- ◆ Eight RS-422/423 to RS-232 converter circuits.
- ◆ A regulated power supply.

Refer to Fig. 1 for a functional schematic of this module.

NOTE: Both data interface conversions, RS-232 to RS-422/423 and RS-422/423 to RS-232, are independent of each other.

RS-232 to RS-422/423

Each of the eight RS-232 to RS-422/423 converter circuits consists of an unbalanced line receiver at the RS-232 side coupled to a balanced line driver on the RS-422/423 side. Each line receiver also drives a red LED that indicates when the circuit is active (data being transmitted).

CIRCUIT DESCRIPTION

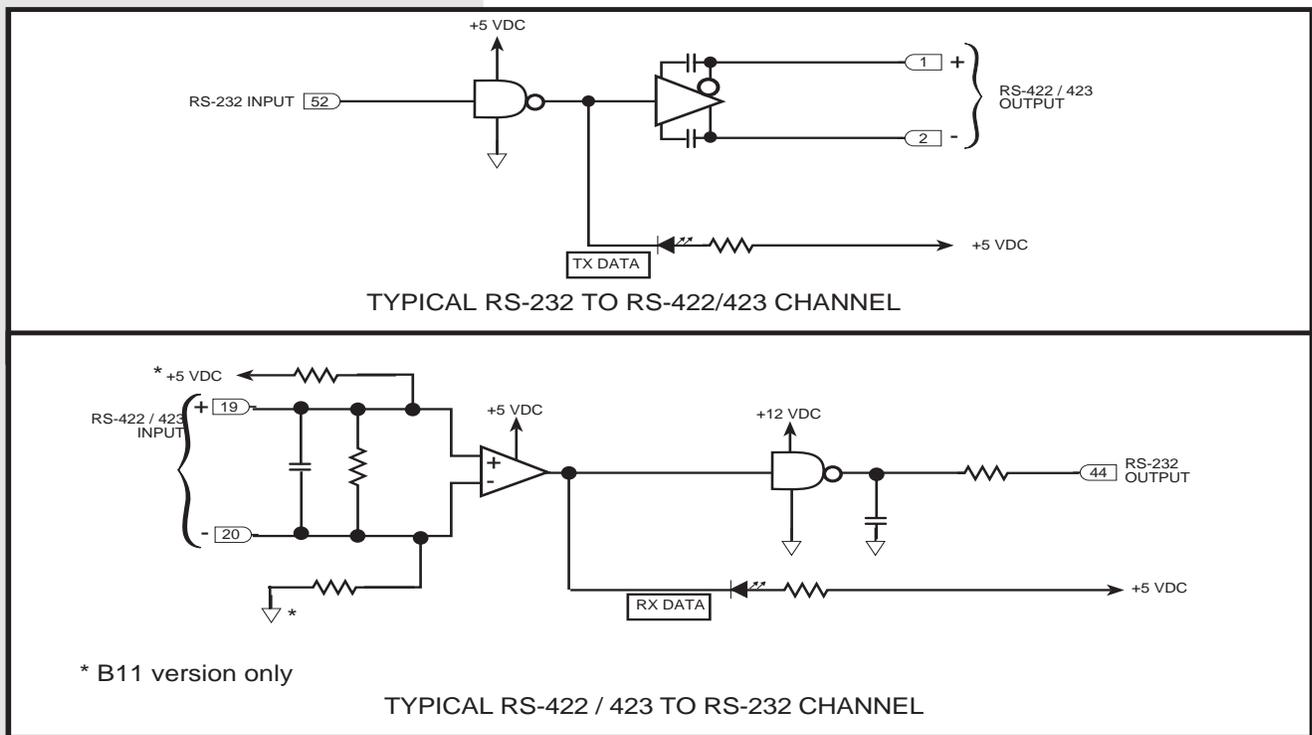
RS-422/423 to RS-232

Each of the eight RS-422/423 to RS-232 converter circuits consists of a balanced line receiver on the RS-422/423 side coupled to an unbalanced line driver on the RS-232 side. Each line receiver also drives a red LED that indicates when the circuit is active (data is being received).

Power Regulator

The power supply provides a regulated +5, +12, and -12 VDC from -21 to -56 VDC input power.

Fig. 1 - FUNCTIONAL SCHEMATIC, 46099



APPLICATION INFORMATION

Applications for the 46099 consist of converting RS-232 data to RS-422/423 and converting RS-422/423 data to RS-232. The module also provides data transmit and receive indicating LEDs that show circuit activity.

Most commonly, the 46099 is used to interface data between an RS-232 device and the RS-422/423 ports of a 46022-1X Multiple Alarm Combiner. It can also be used to interface RS-422/423 devices to the RS-232 ports of Dantel's X.25 NexCon module.

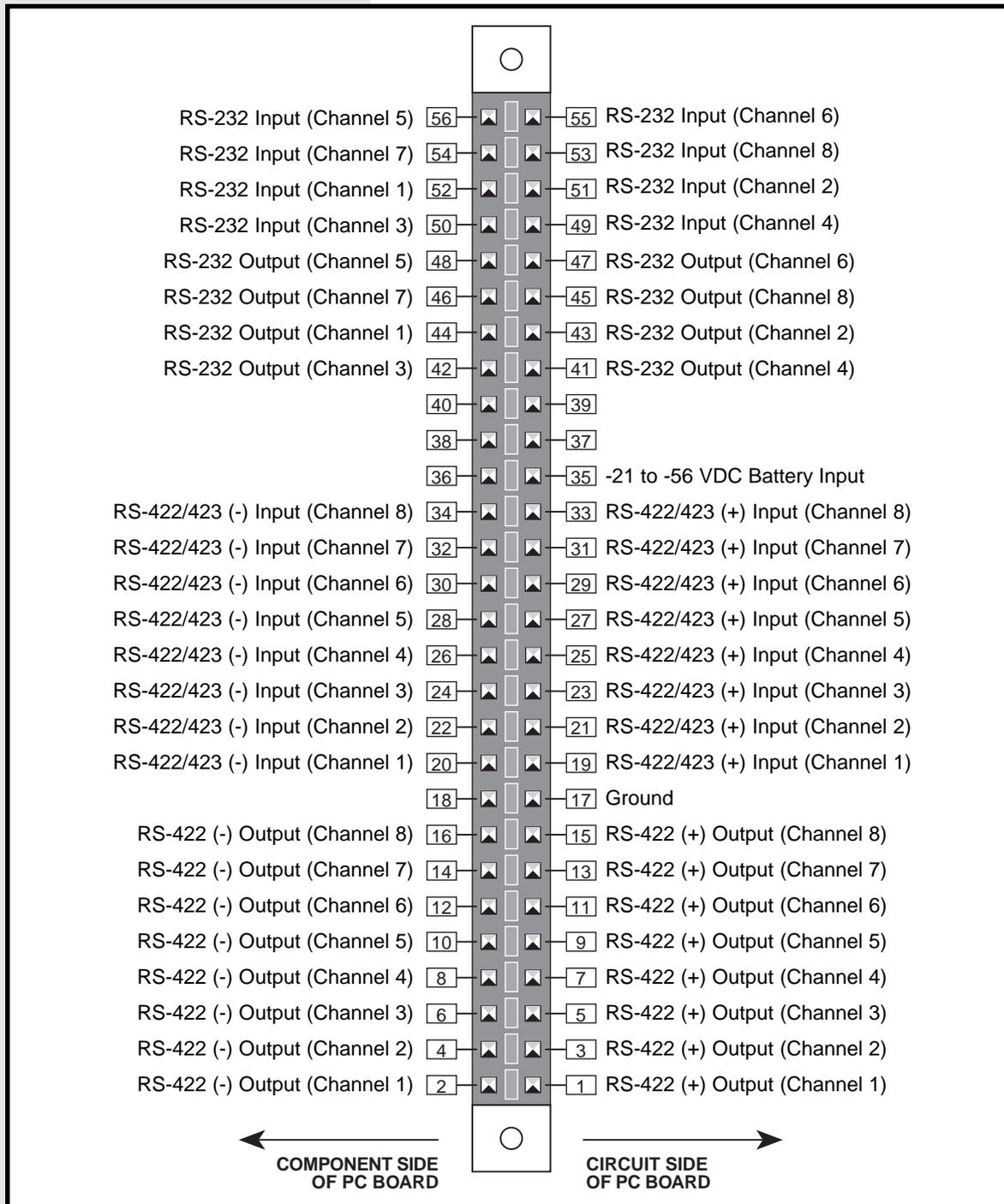
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INSTALLATION

Installation consists of wiring the connector, if necessary, and mounting the module in the shelf.

1. Refer to Fig. 2 for edge connector pin designations.

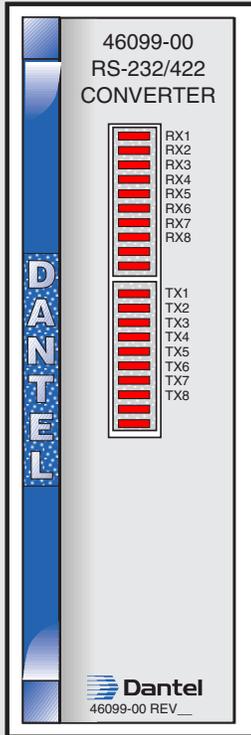
FIG. 2 - PIN DESIGNATIONS, 46099



2. Remove power to the shelf. Install the module in the proper slot. Reapply power.

OPERATION

FIG. 3 - FRONT PANEL VIEW, 46099



There are no operating instructions for the 46099 Converter Module. The unit begins operation when power is applied.

Red front panel LEDs labeled “TX” indicate data transmit and others labeled “RX” indicate data receive for each of the 16 converter circuits.

Checkout of the module is done by applying power to the unit and monitoring the front panel LEDs to verify data activity at each port that is being used. Refer to Fig. 3 for a view of the front panel.

TECHNICAL SPECIFICATIONS

DESCRIPTION	VALUE
Input Supply Voltage	-21 to -56 VDC
Current	
@ -24 VDC	125 mA (idle); 180 mA (active)
@ -48 VDC	75 mA (idle); 95 mA (active)
Heat Dissipation	
@ -24 VDC	10.3 Btu/Hr (idle); 14.7 Btu/Hr (active)
@ -48 VDC	12.3 Btu/Hr (idle); 15.6 Btu/Hr (active)
Physical Dimensions	1.4" x 6.0" x 5.6"
Weight	7.25 ounces
Operating Temperature Range	0° to 55° C.

UPDATED

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

