



T-40

INSTALLATION INSTRUCTIONS



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1 IMPORTANT SAFETY INSTRUCTIONS



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

When installing, operating, or maintaining this equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- ❑ Read and understand all instructions.
- ❑ Follow all warnings and instructions marked on this product.
- ❑ For information on proper mounting instructions, consult the User's Manual provided with this product.
- ❑ The telecommunications interface should not leave the building premises unless connected to telecommunication devices providing primary and secondary protection.
- ❑ This product should only be operated from the type of power source indicated in the User's Manual.
- ❑ This unit must be powered from a nominal –48 V DC voltage source.
- ❑ Do not use this product near water, for example, in a wet basement.
- ❑ Never touch non-insulated wiring or terminals carrying direct current or leave this wiring exposed. Protect and tape wiring and terminals to avoid risk of fire, electric shock, and injury to service personnel.
- ❑ To reduce the risk of electrical shock, do not disassemble this product. Only trained personnel should perform servicing. Opening or removing covers and/or circuit boards may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the unit is subsequently used.
- ❑ Read and understand the following:
 - ❑ This equipment must be provided with a readily accessible disconnect device as part of the building installation.
 - ❑ Ensure that there is no exposed wire when the input power cables are connected to the unit.
 - ❑ Installation must include an independent frame ground drop to building ground. Refer to User's Manual.



This symbol is marked on the **T-40** adjacent to the ground (earth) area for the connection of the ground (earth) conductor.

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- ❑ This Equipment is to be installed only in Restricted Access Areas on Business and Customer Premises Applications in Accordance with Articles 110-16, 110-17, and 110-18 of the National Electrical Code, ANSI/NFPA No. 70. Other Installations Exempt from the Enforcement of the National Electrical Code May Be Engineered According to the Accepted Practices of the Local Telecommunications Utility.
- ❑ The **T-40** is suitable for installation as part of the Common Bonding Network (CBN).
- ❑ The **T-40** is suitable for Network Telecommunication Facilities.
- ❑ Unplated connection surfaces that are to be intentionally joined to form a bonding or grounding path shall be brought to a bright finish and then coated with an antioxidant before they are joined.

SAVE THESE INSTRUCTIONS

2 INSTALLATION

This chapter contains the steps needed to install and cable the **T-40**. A #2 Phillips and medium-sized flathead screwdrivers are required.

2.1 REQUIRED EQUIPMENT

To install either a rack-mounted or stand-alone device, the following items are needed:

- One **T-40** unit
- A strain-relief clamp for wire stabilization

Cables – refer to the **T-40 Series Physical Capabilities and Cabling Guide**. The current revision of the document is **H**. **Note: Shielded cables must be used in order to maintain compliance with EMC requirements.**

Power Source – may be either DC Isolated or Common. The standard connector accepts wire sizes 12-24 AWG. Use AWG 12-18 for -48V and return leads. External fuse size is 1amp. The **T-40** is also internally fused. **Only copper cabling may be used.**

Ground – Ground is connected via the 3rd contact on the power connector. The connector is a screw down that accepts AWG 12-24. Use AWG 12 for the ground terminal. **Only copper cabling may be used.** Contact supplier if an alternate wire size is needed. Tighten all screws only until snug.

The **T-40** is to be used for rack-mount installations only:

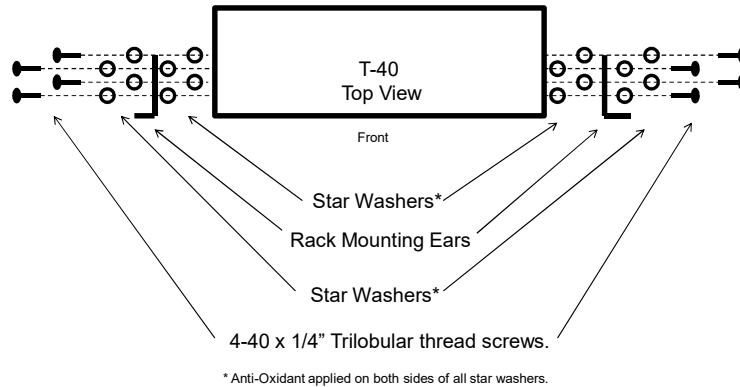
- An EIA standard 19-inch or 23-inch equipment rack with internal, vertical mounting rails. Hole spacing on the vertical-mounting rail must be 1.25 inches. Use the dimension specifications to calculate how high the rack needs to be to support the required number of units.
- A pair of mounting brackets for each **T-40**.
- Sixteen #4 paint piercing star washers.
- Eight #4-40 x 1/4" tri-lobular screws to attach mounting brackets to the T-40.
- Eight #10 paint piercing star washers.
- Four #10 tri-lobular screws to attach mounting brackets to the rack.
- The Environmental Operating Range of 5 to 40 degrees C (41 to 124 degrees F) is necessary.

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2.2 Procedure

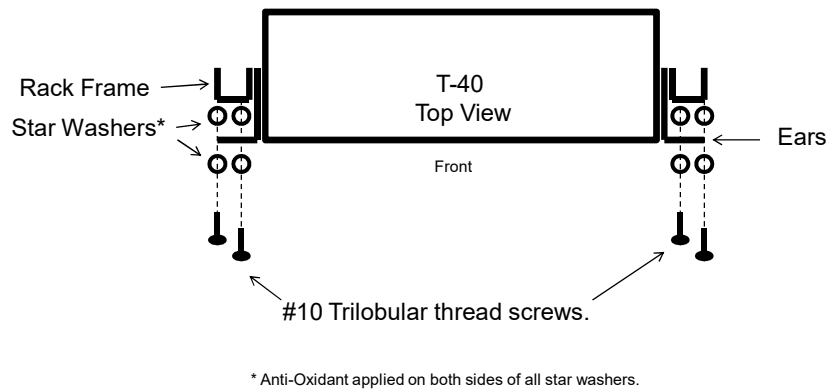
1. Attach the mounting brackets to each side of the unit per the following diagram.

Attach Rack Mounting Ears



2. Fasten the unit to a 19-inch or 23-inch equipment rack using the following diagram.

Mount to Rack Frame



3. Fasten the strain relief to the rack-mount bracket.
4. Attach data transport cables.

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5. Attach console cable by plugging one end of an RJ45-terminated twisted-pair data cable into the unit console interface and the other into the port of the asynchronous device that will be used to configure or manage the unit.
6. Run 48V DC (return, -48, and ground) wires from a central source through the strain relief clamp for DC wire stabilization. On the faceplate, attach the return, -48, and ground wires to the return, -48, and ground connections, respectively, on the terminal block labeled 48V DC. **Only Copper Cabling is to be used.** Both screw and spring tension connectors are supplied with the unit. If the screw connector is used, all screws only until snug. If the spring connection is used, push the wires into the connector. The wires will be retained unless the release button is depressed.
7. The Environmental Operating Range of 5 to 40 degrees C (41 to 124 degrees F) is necessary to maintain compliance with UL.

3 CONTACT INFORMATION



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