INSTALLATION INSTRUCTIONS
NI TB-2644

8 × 32 2-Wire or Dual 8 × 32 1-Wire Matrix Terminal Block for the NI PXI-2532

Introduction

The NI TB-2644 terminal block configures your NI PXI-2532 as an 8×32 2-wire matrix or dual 8×32 1-wire matrix. The TB-2644 has ribbon cable headers to connect signals to the switch, and it provides optional isolation resistors to protect the reed relays from capacitive loads.

Refer to the *NI Switches Getting Started Guide* to determine when to install the terminal block.

Make sure you have the following:

- NI TB-2644 terminal block
- 1/8 in. flathead and #1 Phillips screwdrivers
- Two, 34 conductor, 28 AWG, .050 in. pitch ribbon cable assemblies (not included)
- One, 16 conductor, 28 AWG, .050 in. pitch ribbon cable assembly (not included)

📝 **Note** Refer to the *Accessories* section for information about ordering the appropriate cable assemblies.

Connecting Ribbon Cables

To connect ribbon cables to the terminal block, refer to Figures 1 and 2 while completing the following steps:

1. Remove the top cover screw.
2. Gently remove the top cover from the terminal block.
3. Loosen the two screws on the strain-relief assembly and remove the strain-relief bar.

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4. Remove the two screws from the column connection board and retain the plastic spacer.

5. Disconnect the column connection board from the module interface board by sliding it toward the front of the terminal block housing.

6. Connect each ribbon cable to the appropriate headers on the column connection board and the module interface board.

7. Reassemble the terminal block.

Note For information about protection resistance and matrix expansion, refer to the *NI Switches Help*.
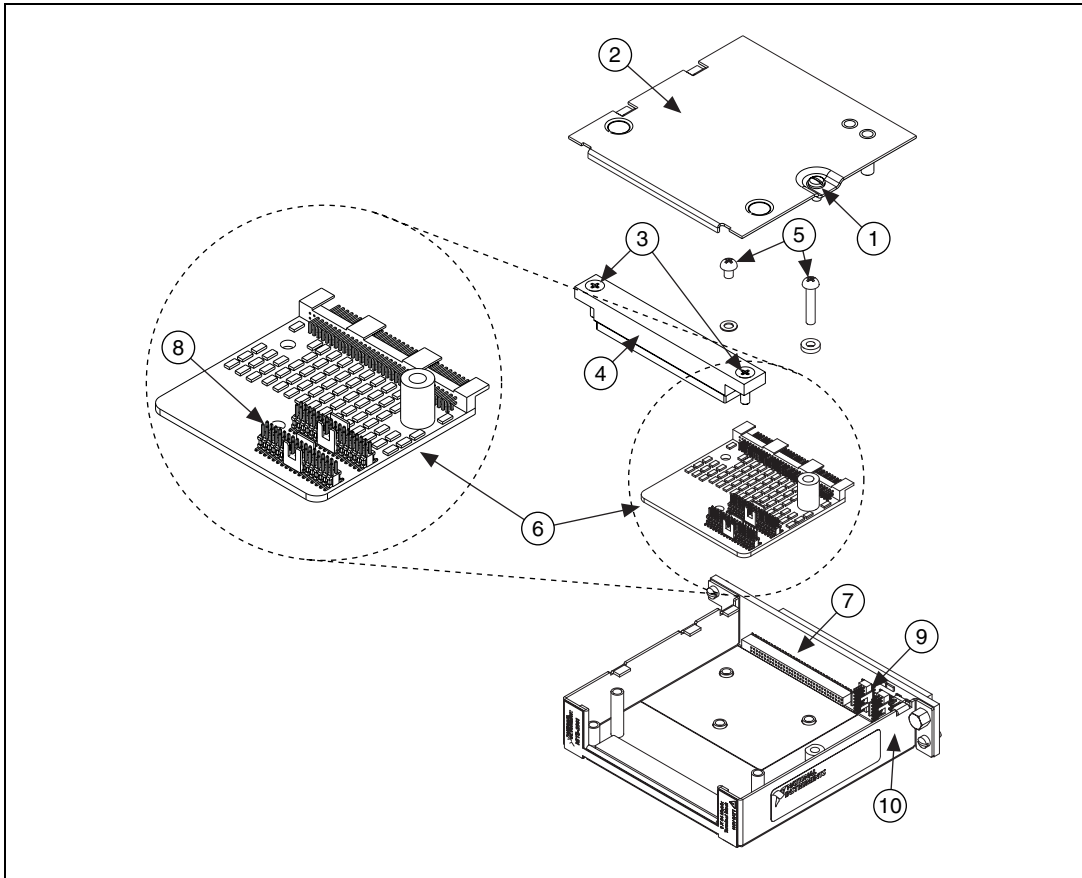
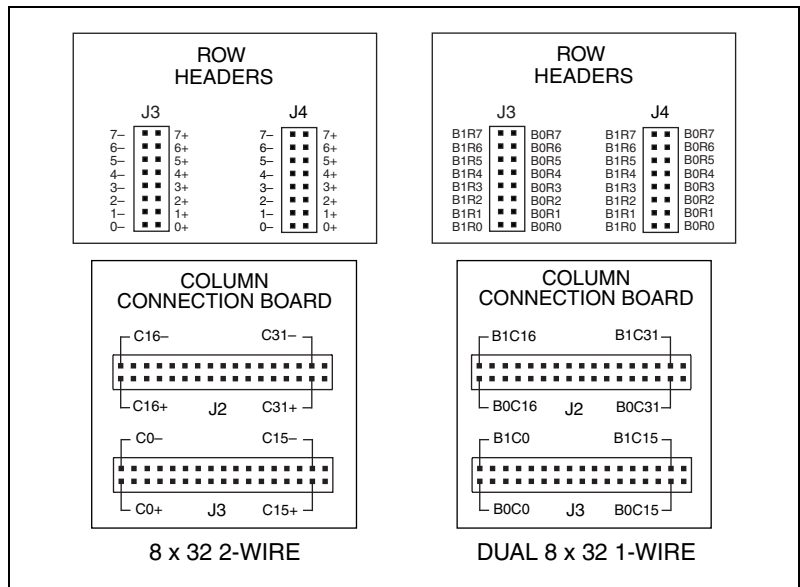|			
1	Top Cover Screw	6	Column Connection Board
2	Top Cover	7	Module Interface Board
3	Strain Relief Screws	8	Column Headers
4	Strain Relief Bar	9	Row Headers
5	Column Connection Board Screws	10	Housing

Figure 1. TB-2644 Terminal Block

Figure 2. TB-2644 Terminal Block Signal Connections

Accessories

Table 1. Accessories for the TB-2644

Accessory	Manufacturer	Part Number
Row Expansion Cable	National Instruments	763592-01
16 Conductor, 28 AWG, .05 in. pitch unshielded ribbon cable assembly	Samtec	FFSD-08
34 Conductor, 28 AWG, .05 in. pitch unshielded ribbon cable assembly	Samtec	FFSD-17
16 Conductor, 28 AWG, .025 in. pitch shielded ribbon cable	Amphenol	151-3033-016
34 Conductor, 28 AWG, .025 in. pitch shielded ribbon cable	Amphenol	151-3033-034
16 Conductor, .05 in. pitch ribbon cable connectors	Samtec	FFSD-08-01-N
34 Conductor, .05 in. pitch ribbon cable connectors	Samtec	FFSD-17-01-N
192 Pin Receiver Module for NI PXI-2532	Virginia Panel	510 150 141

Note For information about the use of shielded cabling, refer to the PXI-2532 Declaration of Conformity (DoC). To obtain the DoC, visit ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

Specifications

This section lists additional specifications for the TB-2644 used with the PXI-2532. All specifications are subject to change without notice. Visit ni.com/manuals for the most current specifications.

Input Characteristics

All input characteristics are DC, AC_{pk}, or a combination unless otherwise specified.

Maximum switching voltage

    Channel-to-channel..........................100 V

    Channel-to-ground...........................100 V, CAT I

Caution This module is rated for Measurement Category I and intended to carry signal voltages no greater than 100 V. This module can withstand up to 500 V impulse voltage. Do *not* use this module for connections to signals or for measurements within Categories II, III, or IV. Do *not* connect to MAINs supply circuits (for example, wall outlets) of 115 or 230 VAC. Refer to the *Read Me First: Safety and Radio-Frequency Interface* document for more information on measurement categories.

When hazardous voltages (>42.4 V_{pk}/60 VDC) are present on any relay terminal, safety low-voltage (<42.4 V_{pk}/60 VDC) cannot be connected to any other relay terminal.

    Maximum current (per channel) ....0.5 A

    DC path resistance ....<1.4 Ω

    Bandwidth (–3 dB, 50 Ω Termination)

        Typical ....≥13 MHz

    Crosstalk (50 Ω termination)

    Channel-to-channel

        10 kHz ....<−75 dB

        100 kHz ....< −60 dB

        1 MHz......................................< −40 dB