

## INSTALLATION GUIDE

# TB-2725 Terminal Block

This guide describes how to install and use the National Instruments TB-2725 terminal block with the PXI-4224 modules. The TB-2725 has 16 screw terminals for easy connection of up to eight pairs of input signals, and one SMB connector for external triggering.

## Conventions

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The following conventions are used in this guide:

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The » symbol leads you through nested menu items and dialog box options to a final action. The sequence **File»Page Setup»Options** directs you to pull down the **File** menu, select the **Page Setup** item, and select **Options** from the last dialog box.



This icon denotes a note, which alerts you to important information.



This icon denotes a caution, which advises you of precautions to take to avoid injury, data loss, or a system crash. When this icon is marked on the product, refer to the *Read Me First: and Radio-Frequency Interference* document, shipped with the product, for precautions to take.



When symbol is marked on a product, it denotes a warning advising you to take precautions to avoid electrical shock.



When symbol is marked on a product, it denotes a component that may be hot. Touching this component may result in bodily injury.

**bold**

Bold text denotes items that you must select or click in the software, such as menu items and dialog box options. Bold text also denotes parameter names.

*italic*

Italic text denotes variables, emphasis, a cross reference, or an introduction to a key concept. This font also denotes text that is a placeholder for a word or value that you must supply.

monospace

Text in this font denotes text or characters that you should enter from the keyboard, sections of code, programming examples, and syntax examples. This font is also used for the proper names of disk drives, paths, directories, programs, subprograms, subroutines, device names, functions, operations, variables, filenames, and extensions.

## What You Need to Get Started

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To set up and use the TB-2725 terminal block, you need the following items:

- Hardware
  - TB-2725 terminal block
  - PXI-4224 module
  - PXI or PXI/SCXI combination chassis
  - Cabling and sensors as required for your application
- Documentation
  - *TB-2725 Terminal Block Installation Guide*
  - *Read Me First: Safety and Radio-Frequency Interference*
  - *DAQ Getting Started Guide*
  - *SCXI Quick Start Guide*
  - *NI PXI-4224 User Manual*
  - PXI or PXI/SCXI combination chassis user manual



**Note** You can download needed documents from [ni.com/manuals](http://ni.com/manuals).

- Tools
  - Number 1 and 2 Phillips screwdriver
  - 1/8 in. flathead screwdriver
  - Long-nose pliers
  - Wire cutter
  - Wire insulation stripper

# Connecting the Signals

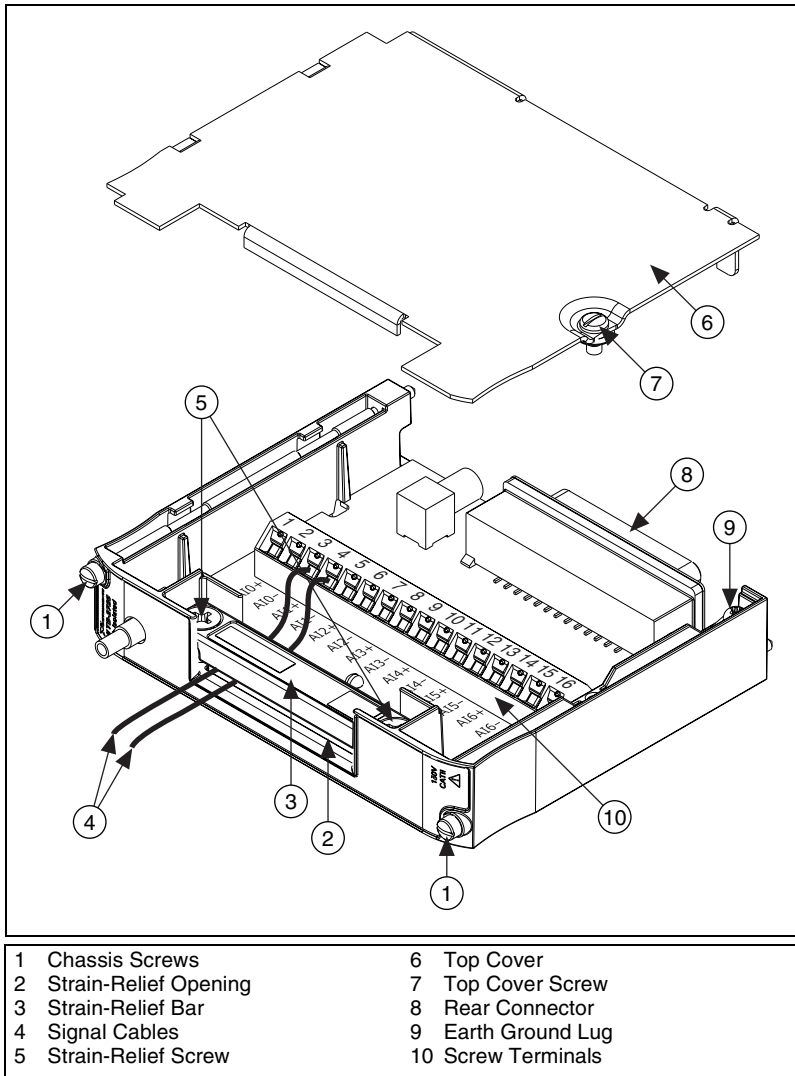
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**Note** Refer to the *Read Me First: Safety and Radio-Frequency Interference* document before removing equipment covers or connecting or disconnecting any signal wires.

To connect signals to the TB-2725 terminal block, refer to Figure 1 while performing the following steps:

1. Unscrew the top cover screw, and remove the top cover.
2. Loosen the strain-relief screws, and remove the strain-relief bar.
3. Prepare the signal wire (16 to 26 AWG) by stripping the insulation no more than 6.0 mm (0.24 in.).
4. Run the signal wires through the strain-relief opening. If necessary, add insulation or padding.
5. Insert the stripped ends of the signal wires into the terminals. Make sure no bare wire extends from the terminal.
6. Tighten the screws to a torque of 0.5 to 0.6 N · m (4.4 to 5.3 lb - in.).
7. Solder a ground wire to the Earth ground lug, as needed.
8. Reinstall the strain-relief bar, and tighten the strain-relief screws.
9. Reinstall the top cover, and tighten the top cover screws.
10. Refer to the *SCXI Quick Start Guide* for TB-2725 installation instructions.



**Figure 1.** PXI-2725 Parts Locator Diagram

# Specifications

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All specifications are typical at 25 °C unless otherwise specified.

## Electrical

Coupling.....	DC <sup>1</sup>
Terminal wire size.....	16 to 26 AWG
Field-wiring connectors	
Number of screw terminals.....	16
Earth ground lugs.....	1
Strain relief .....	Strain relief at terminal-block entrance

## Mechanical

Dimensions.....	10.4 × 8.9 × 1.8 cm (4.1 × 3.5 × 0.7 in.)
Weight.....	285 gm (10 oz)

## Maximum Working Voltage

Maximum working voltage refers to the signal voltage plus the common-mode voltage.

Channel-to-earth.....	42.4 V <sub>peak</sub> , 60 VDC, Measurement Category I
Channel-to-channel .....	42.4 V <sub>peak</sub> , 60 VDC, Measurement Category I

## Environmental

Operating temperature.....	0 to 50 °C
Storage temperature .....	-20 to 70 °C
Humidity .....	10 to 90% RH, noncondensing
Maximum altitude .....	2,000 meters
Pollution Degree (indoor use only).....	2

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<sup>1</sup> In instrumentation terminology, *DC coupling* means that both DC and AC signals are passed.

## Safety

The TB-2725 terminal block meets the requirements of the following standards for safety and electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1
- CAN/CSA C22.2 No. 61010-1



**Note** For UL and other safety certifications, refer to the product label or visit [ni.com/certification](http://ni.com/certification), search by model number or product line, and click the appropriate link in the Certification column.

## Electromagnetic Compatibility

Emissions .....	EN 55011 Class A at 10 m FCC Part 15A above 1 GHz
Immunity .....	EN 61326:1997 + A2:2001, Table 1
EMC/EMI .....	CE, C-Tick, and FCC Part 15 (Class A) Compliant



**Note** For EMC compliance, operate this device with shielded cabling.

## CE Compliance

The TB-2725 meets the essential requirements of applicable European Directives, as amended for CE marking, as follows:

Low-Voltage Directive (safety).....73/23/EEC

Electromagnetic Compatibility  
Directive (EMC).....89/336/EEC



**Note** Refer to the Declaration of Conformity (DoC) for this product for any additional regulatory compliance information. To obtain the DoC for this product, visit [ni.com/certification](http://ni.com/certification), search by model number or product line, and click the appropriate link in the Certification column.

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