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INSTALLATION INSTRUCTIONS
NI TBX-2809

Screw Terminal Accessory for the NI SwitchBlock

このドキュメントには、日本語ページも含まれています。

This installation guide describes how to install and connect signals to the NI TBX-2809 screw terminal accessory for use with NI SwitchBlock cards.

The NI TBX-2809 is an unshielded, DIN-rail mountable terminal breakout block that consists of a printed circuit board with screw terminals that provide connections to all channels of a single NI SwitchBlock card. The NI TBX-2809 includes a safety interlock resistor to engage the NI SwitchBlock card's safety relays, allowing connections to the NI SwitchBlock analog bus.

Specifications

Maximum voltage ..... 150 V, CAT I

Maximum current ..... 1 A

Caution The maximum voltage is limited to the lowest voltage of any component in the NI SwitchBlock system. Review the specifications of the NI SwitchBlock carrier and cards.

Caution The NI TBX-2809 must be installed inside a suitably rated enclosure with proper cable/wire strain relief(s) prior to use. There are no user serviceable parts inside. Do *not* change or alter this product in any way.

Caution NI products typically must be operated with shielded cables and accessories to ensure compliance with Electromagnetic Compatibility (EMC) requirements. To determine if shielded cables or accessories are required for the product that the NI TBX-2809 will be used with, refer to the EMC specifications in the product's user guide or manual. If shielded cables or accessories are required for EMC compliance, do not use unshielded cables or accessories unless they are installed in a shielded enclosure with properly designed and shielded input/output ports, and are connected to the NI product using a shielded cable. If unshielded cables or accessories are not properly installed and shielded, the EMC specifications for the product are no longer guaranteed.

Compatible DIN rails ..... DIN EN 50 022
DIN EN 50 035

NATIONAL INSTRUMENTS

Dimensions (L × W × H) ..... 12.5 × 12.8 × 8.5 cm
(4.9 × 5.0 × 3.4 in.)

Weight ..... 264 g (9.3 oz)

What You Need to Get Started

You need the following items to set up and use your screw terminal accessory:

- ❑ One NI SwitchBlock card
- ❑ NI TBX-2809 screw terminal accessory
- ❑ One of the following NI SwitchBlock cable assemblies:
  - SH96F-96M-NI SwitchBlock cable
  - SH96F-96M-RES-NI SwitchBlock cable
- ❑ 1/10 in. (2.5 mm) flathead screwdriver
- ❑ #1 Phillips-head screwdriver
- ❑ Wire cutters
- ❑ Wire insulation strippers

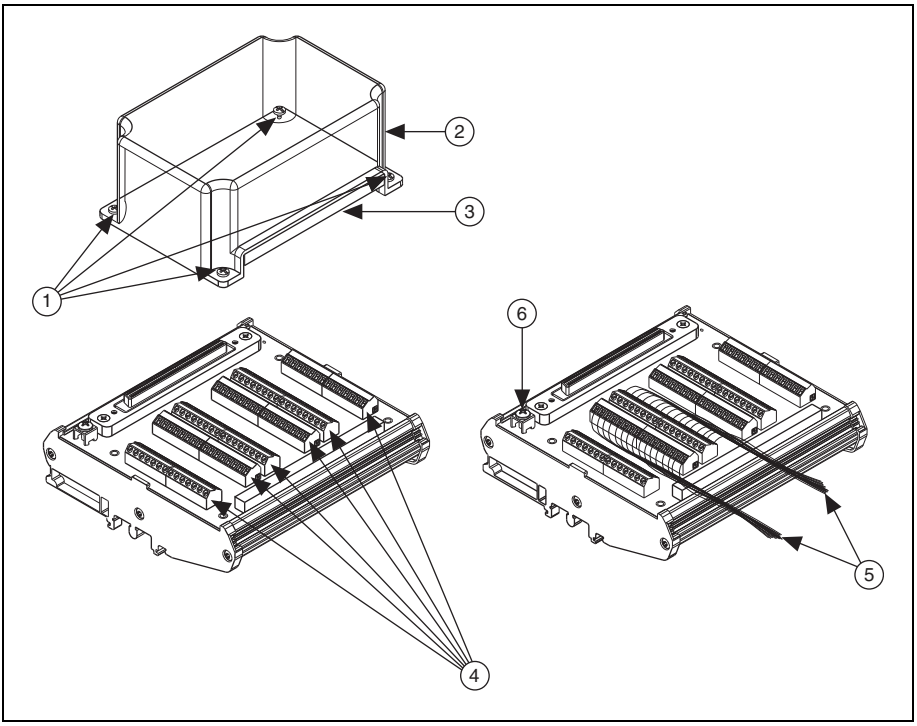
Signal Connection

Refer to Figure 1 and perform the following steps to connect your signals to your screw terminal accessory:

1. Unscrew the four cover screws with a Phillips-head screwdriver to remove the cover.
2. Use wire cutters and wire insulation strippers to strip the wire ends as necessary to connect them to screw terminals.
3. Loosen the screws in the screw terminals with a 1/10 in. (2.5 mm) flathead screwdriver.
4. Insert the stripped wires into the screw terminals, and tighten the screws with a 1/10 in. (2.5 mm) flathead screwdriver.
5. Allow the signal wires to exit through the cover opening.

Note The NI TBX-2809 screw terminal accessory does not provide strain relief for signal wires. Add strain relief and insulation for your signal wires, if necessary.

6. Replace the cover and tighten the cover screws.
7. If using a shielded cable, connect the cable shield to the earth ground terminal.



1	Cover Screws	3	Cover Opening	5	Signal Wires
2	Cover	4	Screw Terminals	6	Ground terminal

Figure 1. NI TBX-2809 Parts Locator Diagram

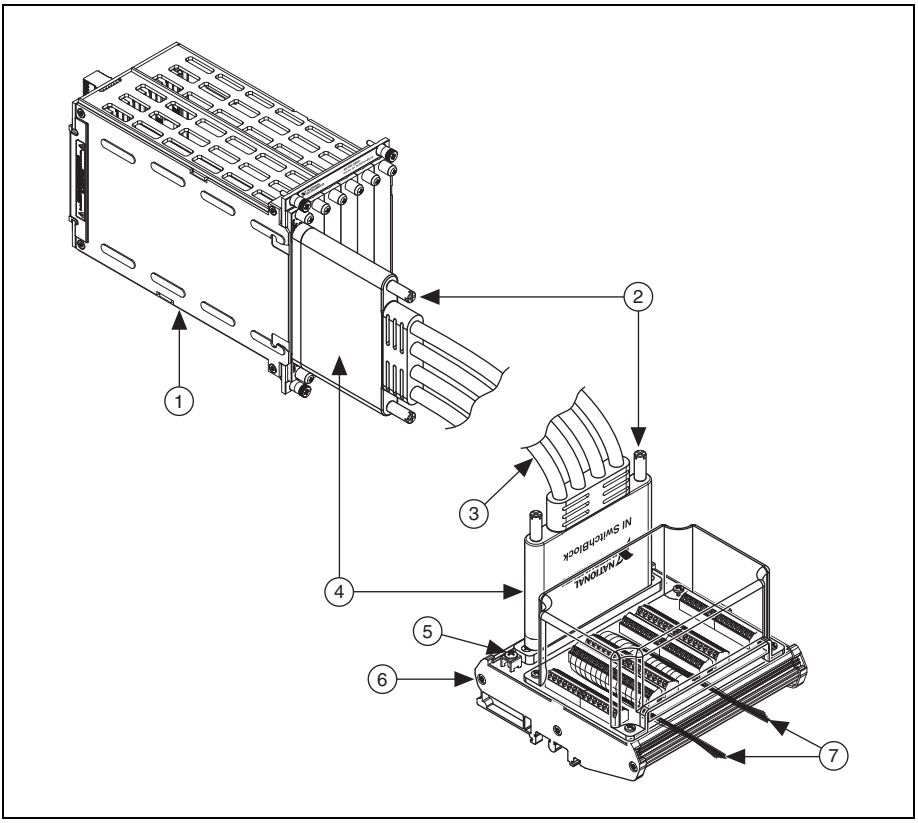
Installing Your Screw Terminal Accessory

Refer to Figure 2 and perform the following steps to connect the screw terminal accessory to the NI SwitchBlock card connector:

1. Securely fasten the connector on one end of the cable to the NI SwitchBlock card connector using the thumbscrews.
2. Securely fasten the connector on the other end of the cable to the screw terminal accessory connector using the thumbscrews.

To disconnect the cable, unscrew the cable and gently pull on the backshell. Do *not* pull the cable.

Caution The connectors of both the NI SwitchBlock card and the cable are polarized. You can attach them in only one way. Tie the ground terminal to an earth ground to ground the screw terminal end of the cable shield. Do not force the cable when inserting it into or removing it from the NI SwitchBlock card connector.



1	NI SwitchBlock Card	4	Cable Connectors	7	Signal Wires
2	Thumbscrews	5	Ground terminal		
3	SH96F-96M-NI SwitchBlock Cable	6	NI TBX-2809		

Figure 2. Connecting the Cable Assembly

Refer to Figure 3 for NI TBX-2809 pinouts.

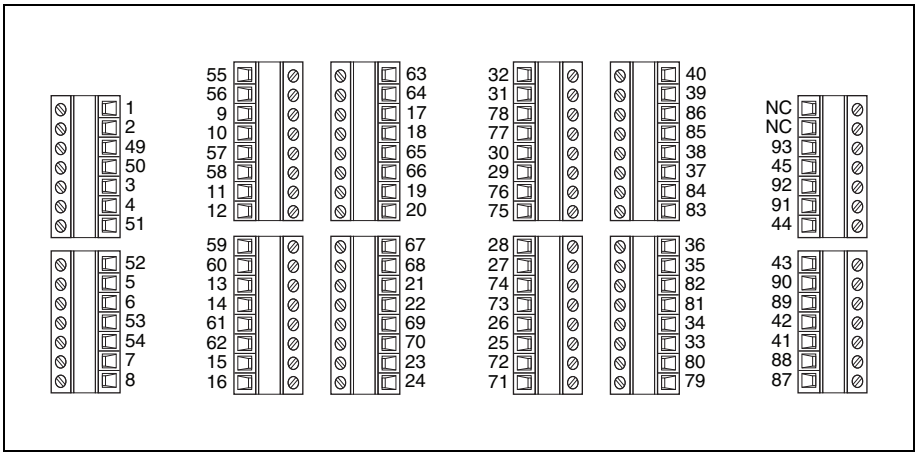


Figure 3. NI TBX-2809 Pinouts

Mounting the NI TBX-2809

When you have completed signal connections and terminal block installation, you can directly mount the NI TBX-2809 assembly onto a DIN rail with a firm push.

To unmount the NI TBX-2809 from the DIN rail, place a flathead screwdriver into the slot above the terminal block base and pry it away from the rail.

Compliance and Certifications

Safety

This product is UL Recognized as a component and meets the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA 61010-1

Note For UL and other safety certifications, refer to the product label or the *Online Product Certification* section.

Electromagnetic Compatibility

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use:

- EN 61326-1 (IEC 61326-1): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions

- AS/NZS CISPR 11: Group 1, Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions

Caution When operating this product, use shielded cables measuring less than 3 meters and shielded accessories.

Note For EMC declarations and certifications, refer to the *Online Product Certification* section.

CE Compliance CE

This product meets the essential requirements of applicable European Directives as follows:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)

Online Product Certification

To obtain product certifications for this product, visit `ni.com/certification`, search by model number or product line, and click the appropriate link in the Certification column.

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