

# NATIONAL INSTRUMENTS SCXI-1129 Matrix Switch Module Installation Guide

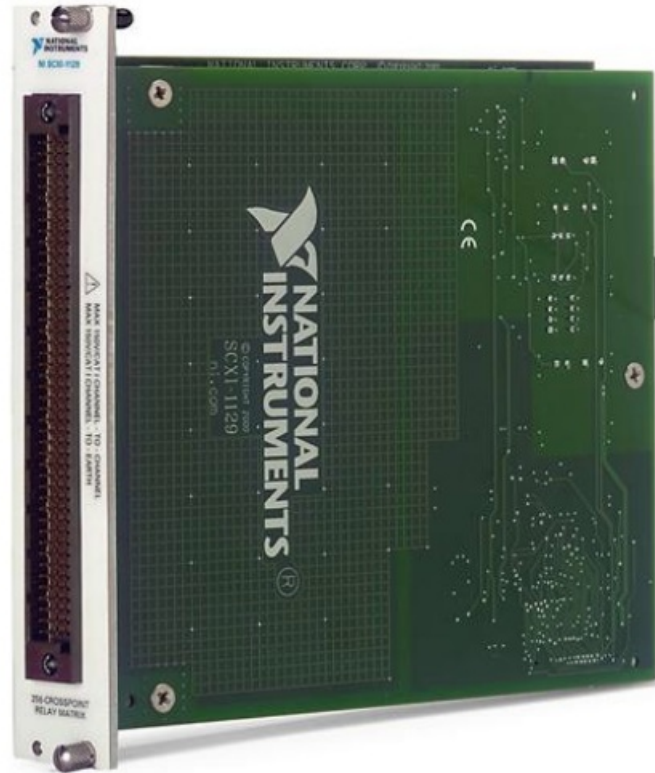
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**NATIONAL INSTRUMENTS SCXI-1129 Matrix Switch Module**



## Product Information

The product being referred to in the user manual is the SCXI-1129 Terminal Block for the NI SCXI-1337. It is a component used for connecting signals in a measurement system. The terminal block is designed to be used with the SCXI chassis and SCXI-1129 switch module. It is important to follow the provided instructions to ensure proper installation and usage of the terminal block.

## Product Usage Instructions

### Unpack the Terminal Block:

To avoid damage, follow these precautions:

- Never touch the exposed pins of connectors.
- Inspect the terminal block for loose components or any sign of damage. Notify NI if any damage is found.
- Store the SCXI-1337 in the antistatic envelope when not in use.

### Verify the Components:

Make sure you have the following items:

- SCXI-1337 terminal block
- SCXI chassis
- SCXI-1129 switch module
- 1/8 in. flathead screwdriver
- Numbers 1 and 2 Phillips screwdrivers

- Long-nose pliers
- Wire cutter
- Wire insulation stripper

## Connect Signals:

To connect signals to the terminal block, follow these steps:

- Ensure the module is not used for connection to signals or measurements within Categories II, III, or IV, or for MAINS supply circuits.
- Prepare the signal wire by stripping the insulation no more than 7 mm from the end of the wire.
- Remove the top cover screw and unsnap/remove the top cover.
- Loosen the two strain-relief screws on the strain-relief bar.
- Run the signal wires through the strain-relief opening.
- Insert the stripped end of the wire fully into the terminal and secure it.

Following these instructions will ensure proper installation and usage of the SCXI-1129 Terminal Block for the NI SCXI-1337.

## INSTALLATION INSTRUCTIONS

### Terminal Block for the NI SCXI-1129

This guide describes how to install and connect signals to the National Instruments SCXI-1337 terminal block to configure the SCXI-1129 switch module as a dual 8 × 16 matrix. Screw terminals on the SCXI-1337 allow you to access each 8 × 16 matrix. The SCXI-1337 also contains connections for scanner advanced output and external input trigger signals. Refer to the NI Switches Getting Started Guide to determine when to install the terminal block. Visit [ni.com/switches](http://ni.com/switches) for information on other switching solutions.

## Conventions

The following conventions are used in this guide: 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 symbol is marked on a product, refer to the Read Me First: Safety and Radio-Frequency Interference document for information about precautions to take.

**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** 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, and code excerpts.

## Unpack the Terminal Block

To avoid damage in handling the terminal block, take the following precautions:

**Caution** Never touch the exposed pins of connectors.

- Ground yourself using a grounding strap or by touching a grounded object.
- Touch the antistatic package to a metal part of your computer chassis before removing the terminal block from the package.

Remove the terminal block from the package and inspect the terminal block for loose components or any sign of damage. Notify NI if the terminal block appears damaged in any way. Do not install a damaged terminal block into your system. Store the SCXI-1337 in the antistatic envelope when not in use.

## Verify the Components

**Make sure that you have the following items:**

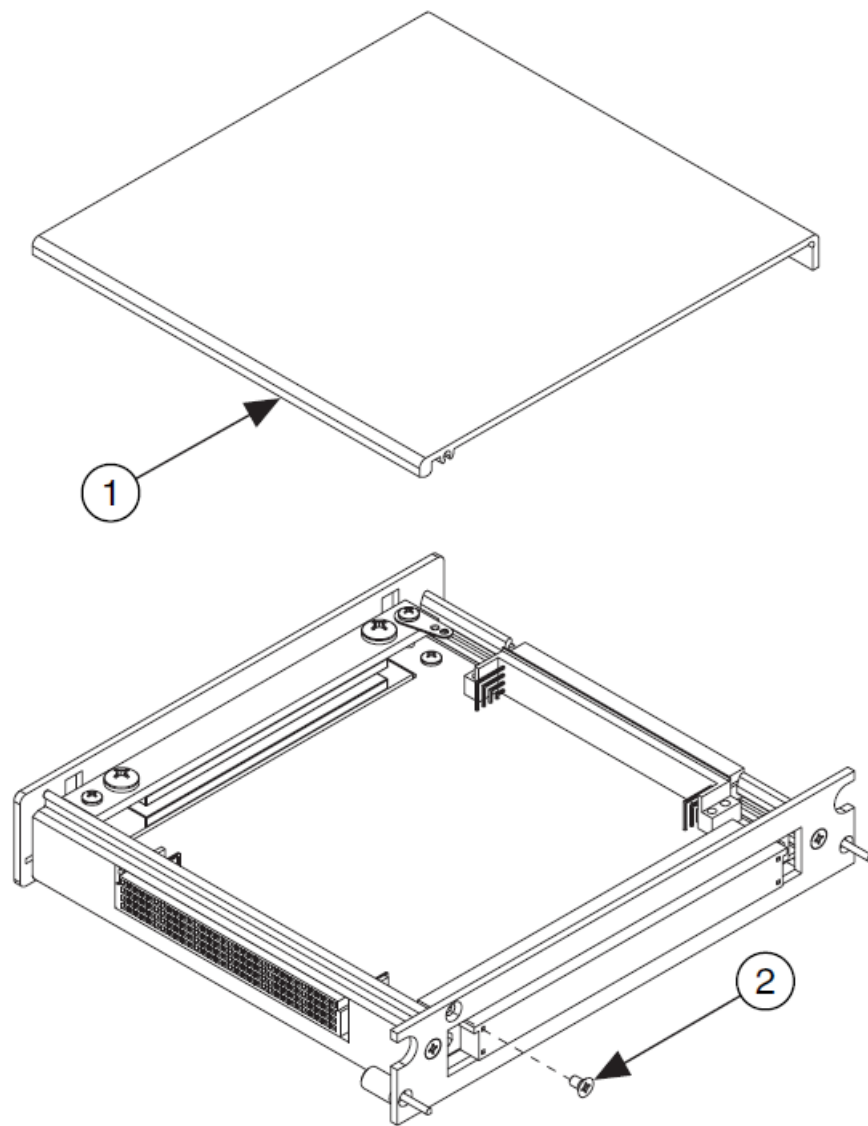
- SCXI-1337 terminal block
- SCXI chassis
- SCXI-1129 switch module
- 1/8 in. flathead screwdriver
- Numbers 1 and 2 Phillips screwdrivers
- Long-nose pliers
- Wire cutter
- Wire insulation stripper

## Connect Signals

To connect the signal(s) to the terminal block, refer to Figures 1 and 2 while completing the following steps:

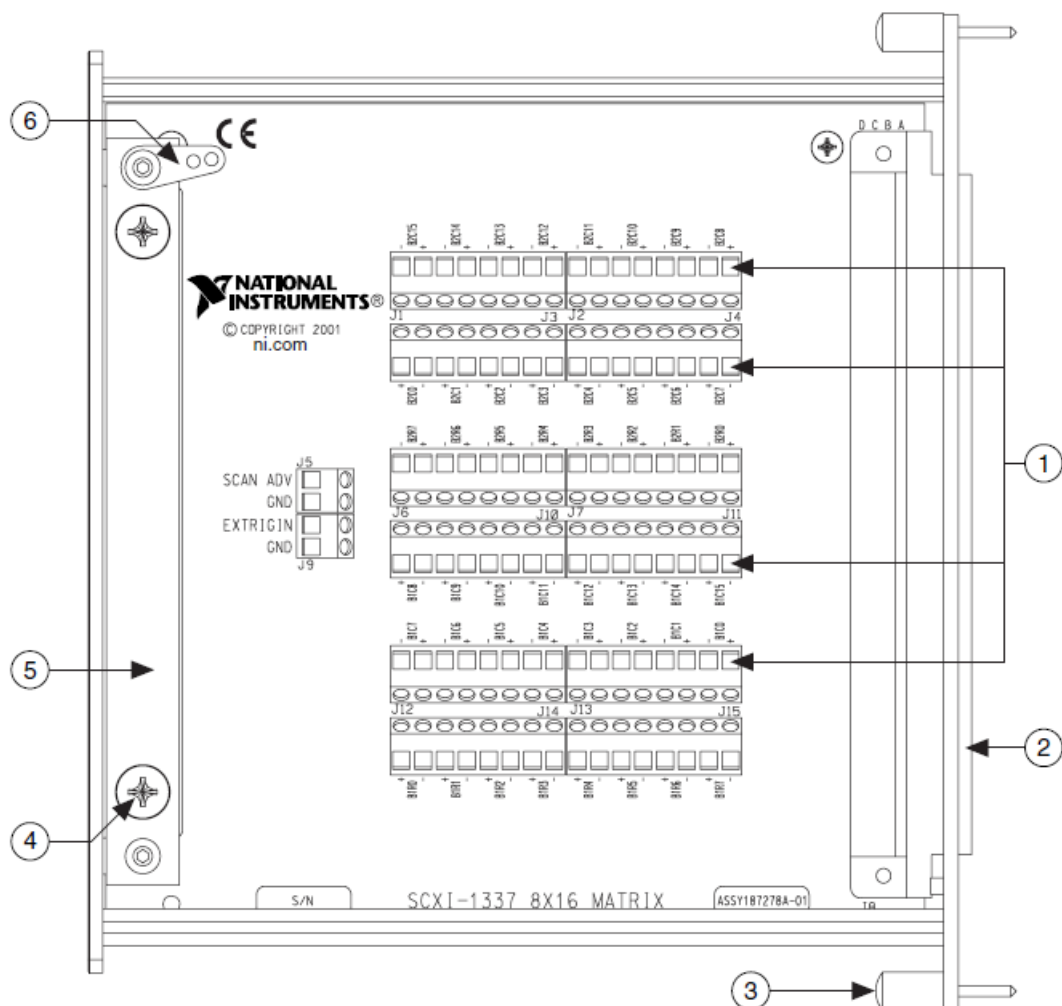
**Caution** This module is rated for Measurement Category I and intended to carry signal voltages no greater than 150 V. This module can withstand up to 800 V impulse voltage. Do not use this module for connection to signals or for measurements within Categories II, III, or IV. Do not connect to MAINS supply circuits (for example, wall outlets) of 115 or 230 VAC. Refer to the NI Switches Getting Started Guide for more information on measurement categories. When hazardous voltages ( $>42.4$  Vpk/60 VDC) are present on any relay terminal, safety low-voltage ( $\leq 42.4$  Vpk/60 VDC) cannot be connected to any other relay terminal.

1. Prepare the signal wire by stripping the insulation no more than 7 mm from the end of the wire.
2. Remove the top cover screw.
3. Unsnap and remove the top cover.
4. Loosen the two strain-relief screws on the strain-relief bar.
5. Run the signal wires through the strain-relief opening.
6. Insert the stripped end of the wire fully into the terminal. Secure the wire by tightening the screw of the terminal. No bare wire should extend past the screw terminal. Exposed wire increases the risk of a short-circuit causing a failure.
7. Connect the safety earth ground to the safety ground lug.
8. Tighten the two screws on the strain-relief assembly to secure the cables.
9. Reinstall the top cover.
10. Replace the top cover screw.



- 1. Top Cover
- 2. Top Cover Screw

**Figure 1.** SCXI-1337 Top Cover Diagram



1. Screw Terminals
2. Rear Connector
3. Thumbscrew
4. Strain-Relief Screw
5. Strain-Relief Bar
6. Safety Ground Lug

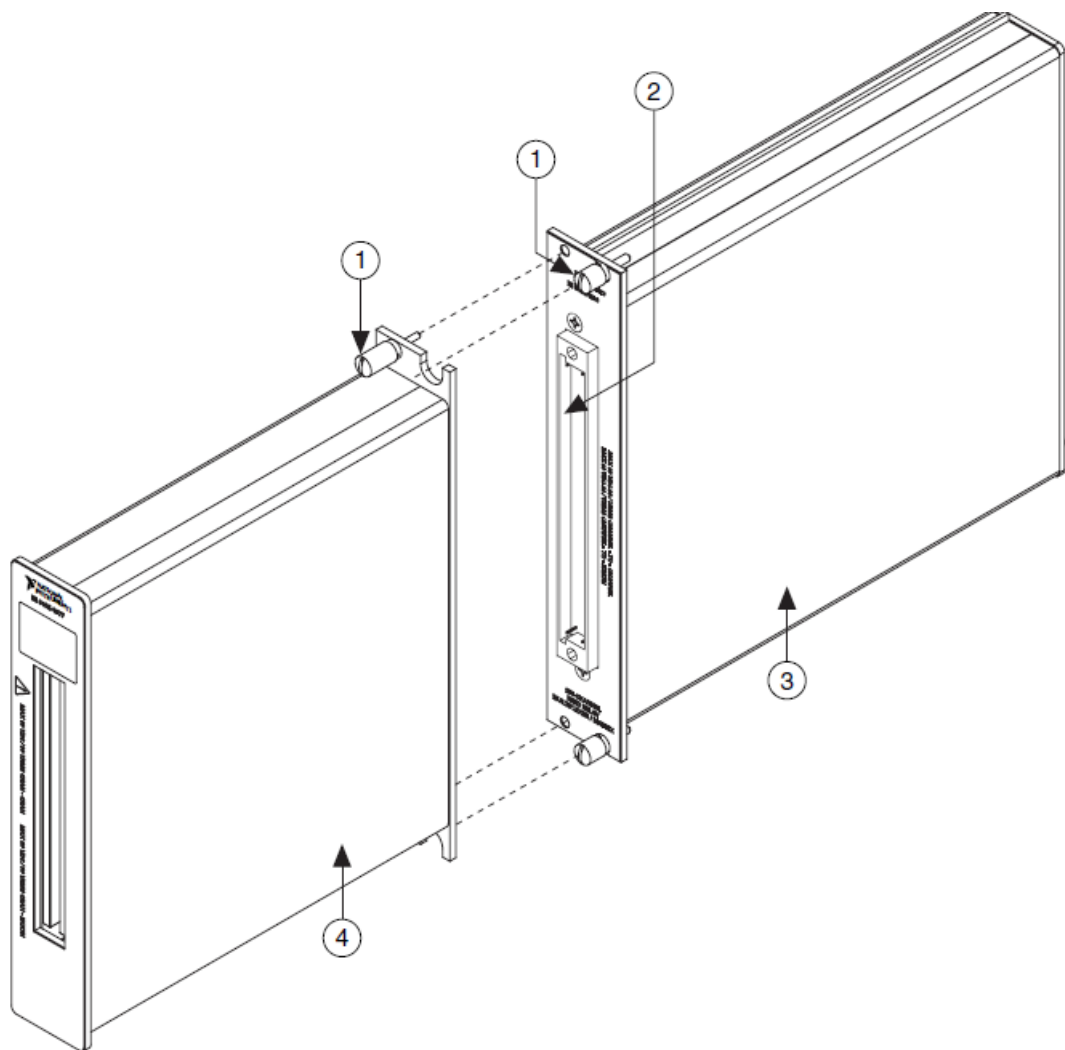
**Figure 2.** SCXI-1337 Parts Locator Diagram

## Install the Terminal Block

To connect the SCXI-1337 to the SCXI-1129 front panel, refer to Figure 3 and complete the following steps:

**Note** Install the SCXI-1129 if you have not already done so. Refer to the NI Switches Getting Started Guide for more information.

1. Plug the SCXI-1337 onto the front connector of the SCXI-1129.
2. Tighten the top and bottom thumbscrews on the back of the terminal block rear panel to hold it securely in place.



1. Thumbscrews
2. Front Connector
3. SCXI-1129
4. SCXI-1337

## Specifications

### Maximum Working Voltage

- Maximum working voltage refers to the signal voltage plus the common-mode voltage.
- Channel-to-earth..... 150 V, Installation Category I
- Channel-to-channel ..... 150 V

### Maximum Current

- Maximum current (per channel) ..... 2 ADC, 2 AAC

### Environmental

- Operating temperature..... 0 to 50 °C
- Storage temperature ..... –20 to 70 °C
- Humidity ..... 10 to 90% RH, non-condensing

- Pollution Degree ..... 2
- Approved at altitudes up to 2,000 m
- Indoor use only

## Safety

This product is designed to meet the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 3111-1, UL 61010B-1
- CAN/CSA C22.2 No. 1010.1

**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, you must operate this device with shielded cabling.

## CE Compliance

This product 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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## Documents / Resources



	<a href="#">NATIONAL INSTRUMENTS SCXI-1129 Matrix Switch Module</a> [pdf] Installation Guide SCXI-1129, SCXI-1129 Matrix Switch Module, Matrix Switch Module, Switch Module, Module
	<a href="#">NATIONAL INSTRUMENTS SCXI-1129 Matrix Switch Module</a> [pdf] Instruction Manual SCXI-1129, SCXI-1129 Matrix Switch Module, Matrix Switch Module, Switch Module, Module

## References

- [NI Engineer Ambitiously - NI](#)
- [NI Engineer Ambitiously - NI](#)
- [NI Product Certifications - NI](#)
- [NI Engineering a Healthy Planet - NI](#)
- [NI Managing Critical Substances - NI](#)
- [NI Product Take-Back Program and Recycling - NI](#)
- [NI Legal Information - NI](#)
- [NI Trade Compliance - NI](#)
- [NI National Instruments Patents - NI](#)
- [NI Switches - NI](#)
- [NI NI Trademarks and Logo Guidelines - NI](#)
- [NI Product Certifications - NI](#)
- [NI Product Take-Back Program and Recycling - NI](#)
- [NI Engineering a Healthy Planet - NI](#)
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