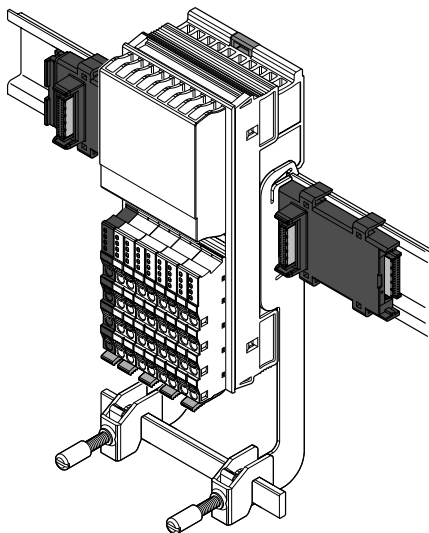


NI Remote I/O Shield Set

Shield Connection Set for Remote I/O Modules



This document explains how to install the NI Remote I/O Shield Set and how to prepare shielded cables.



Note The guidelines in this document are specific to the NI Remote I/O Shield Set. Refer to the documentation for each component in the system to determine the safety and EMC ratings for the entire system.

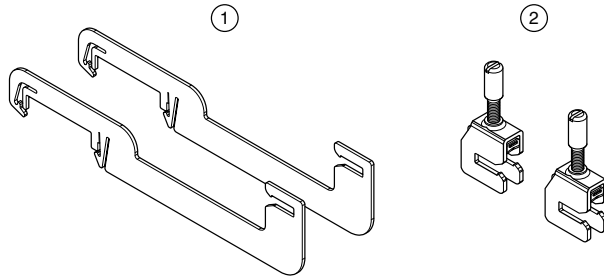


Caution Do not operate the NI Remote I/O Shield Set in a manner not specified in this document. Product misuse can result in a hazard. You can compromise the safety protection built into the product if the product is damaged in any way. If the product is damaged, return it to NI for repair.

Verifying the Kit Contents

Verify that the following items are included in the NI Remote I/O Shield Set kit.

Figure 1. NI Remote I/O Shield Set Kit Contents

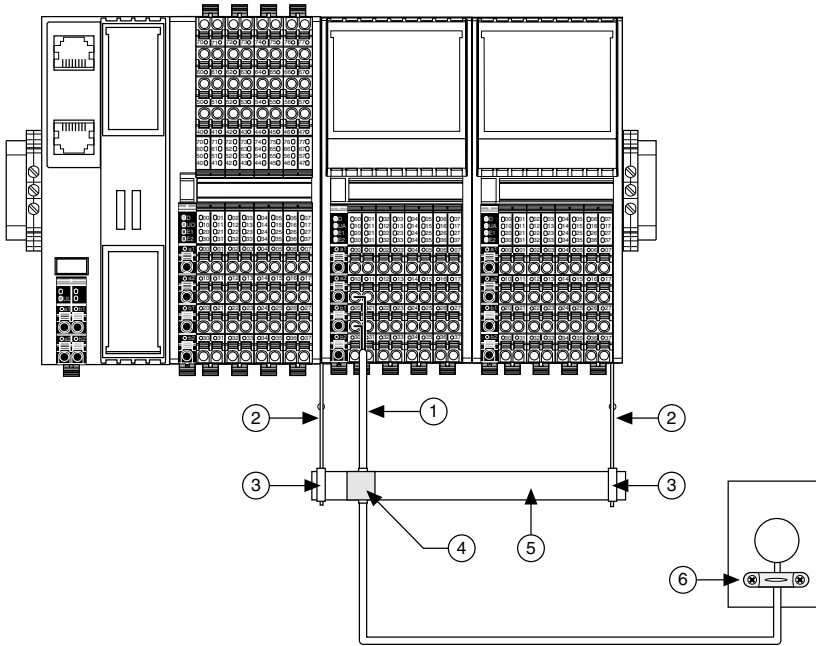


1. Shield bus holders (x2)
 2. Shield connection clamps (x2)
-

Installing the NI Remote I/O Shield Set

The NI Remote I/O Shield Set provides an earth ground connection for analog I/O cable shields.

Figure 2. NI Remote I/O System with Shield Set



1. Shielded twisted pair cable
2. Shield bus holders
3. Shield connection clamps
4. Shield connection terminal block
5. Busbar
6. Sensor/device

Shield Set Requirements

- Install the bus connectors before mounting the shield bus holders.
- The maximum distance between two adjacent shield bus holders should not exceed four bus connectors or 215.0 mm (8.46 in.).
- Connect analog signals with shielded, twisted pair cables.

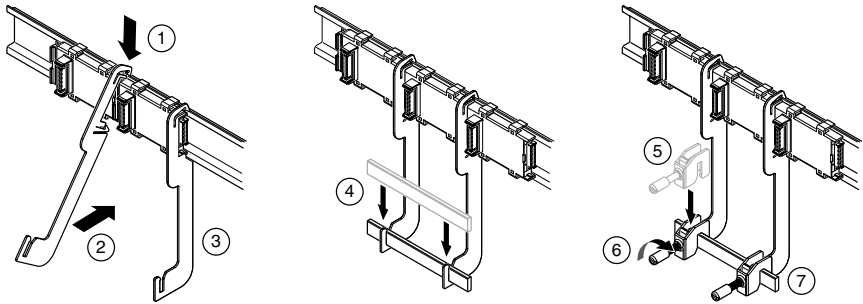
Mounting the Shield

What to Use

- NI Remote I/O Shield Set
 - Shield bus holders (x2)
 - Shield connection clamps (x2)
- 3.0 mm × 10.0 mm (0.12 in. × 0.39 in.) busbar (user-provided)
- DIN rail end bracket (optional)

What to do

Complete the following steps to mount the NI Remote I/O Shield Set.



1. Hook the shield bus holder on the top of the DIN rail.
2. Snap the shield bus holder into place.
3. Repeat steps 1 and 2 to install additional shield bus holders.



Note If you use more than two bus holders to secure a busbar, distribute the bus holders evenly along the length of the busbar.

4. Slide the busbar into the bus holder slots.
5. Position the connection clamp over the busbar on the bus holder.
6. Tighten the thumb screw to secure the clamp.
7. Repeat steps 5 and 6 to install additional connection clamps.



Note If you mount a shield bus holder at the end of an NI Remote I/O System, secure the shield bus holder using an end bracket.

8. Mount the I/O module(s).

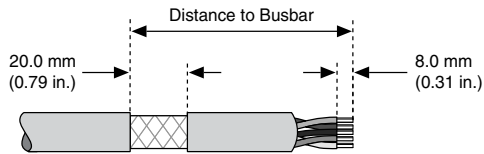
Preparing and Connecting Shielded Cables

What to Use

- Shielded, twisted pair cables
- Wire stripping tool
- Shield connection terminal block

What to Do

Complete the following steps to prep shielded cables for use with the NI Remote I/O Shield Set.



1. Strip 8.0 mm (0.31 in.) of insulation from the end of the cable.
2. Strip 20.0 mm (0.79 in.) from the outer sheath of the cable.
3. Remove the protective foil, if present.
4. Secure the stripped section to the busbar with a shield connection terminal block.
5. Connect the cable to the spring-terminal.

Removing the Shield

What to Use

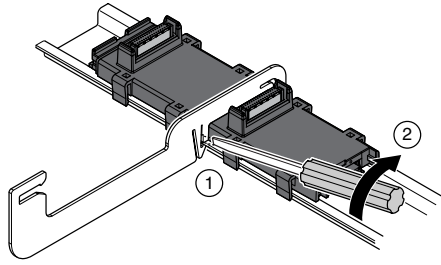
- Flathead screwdriver with a 4 mm (0.16 in.) blade

What to do

Complete the following steps to remove the shield bus holders.



Note Remove the I/O modules to the right and left of each shield bus holder before removal.

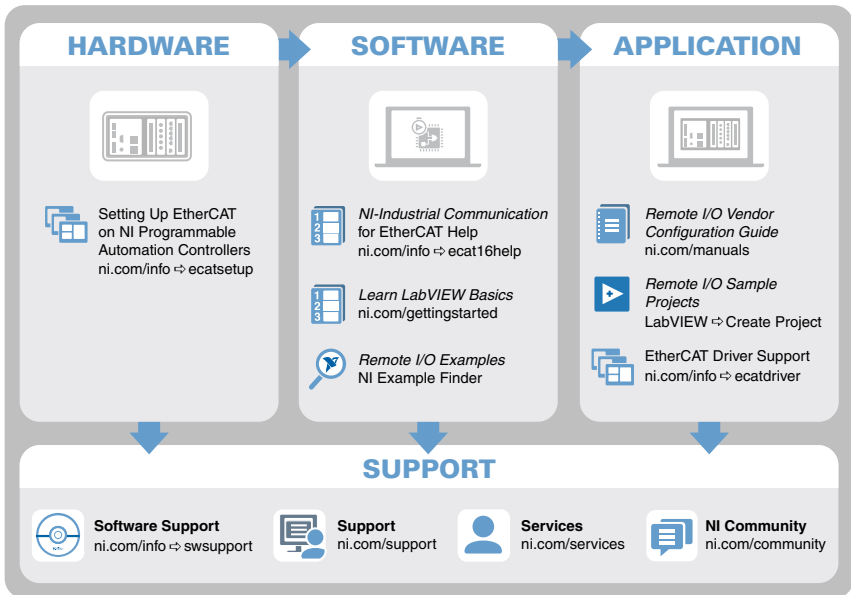


1. Insert the screwdriver into the release slot.
2. Rotate the screwdriver to release the locking clip from the DIN rail.
3. Remove the shield bus holder from the DIN rail.



Note Removing the bus holder may deform the locking clip. Bend it back into shape before reuse.

Where to Go Next



Worldwide Support and Services

The NI website is your complete resource for technical support. At ni.com/support, you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

Visit ni.com/services for NI Factory Installation Services, repairs, extended warranty, and other services.

Visit ni.com/register to register your NI product. Product registration facilitates technical support and ensures that you receive important information updates from NI.

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