CB-50 Connector Block Installation

2024-11-29

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CB-50 Overview

The CB-50 is designed to enable connection of analog and digital signals to certain NI data acquisition boards. The CB-50 comprises an optional 0.5 m or 1.0 m ribbon cable and a connector block with 50 screw terminals.

At each end, the ribbon cable has a keyed connector with a centered tab that you must align with the slot on the mating header on the connector block or board.

You can use the CB-50 with the following data acquisition boards[1]:

Table 1. CB-50 Compatibility

Architecture	Boards Compatible with CB-50
PC/XT, PC AT	• AT-MIO-16 • AT-MIO-16F-5 • AT-MIO-16X • AT-AO-6 • AT-AO-10 • AT-DIO-32F • AT-DIO-24 • Lab-PC • Lab-PC+ • PC-LPM-16 • PC-DIO-24 • PC-TIO-10
PS/2	• MC-MIO-16 • MC-DIO-32F • MC-DIO-24
Macintosh	• NB-MIO-16 • NB-MIO-16X

1. Product and company names are trademarks or trade names of their respective companies.

Architecture	Boards Compatible with CB-50
	• NB-DIO-32F • NB-DIO-24 • NB-AO-6 • NB-TIO-10 • Lab-NB • Lab-SE

Connector pinout information is available in the user manual for each data acquisition board.

CB-50 Kit Contents

The CB-50 connector block kit is available in three versions, depending on your requirements:

- CB-50 with 0.5 m cable assembly (NI part number 776164-01)
- CB-50 with 1 m cable assembly (NI part number 776164-02)
- CB-50 without cable assembly (NI part number 776164-90)

Each version of the kit includes the CB-50 interface assembly: the connector block, ejector ears, and flush-mount and rack-mount brackets.

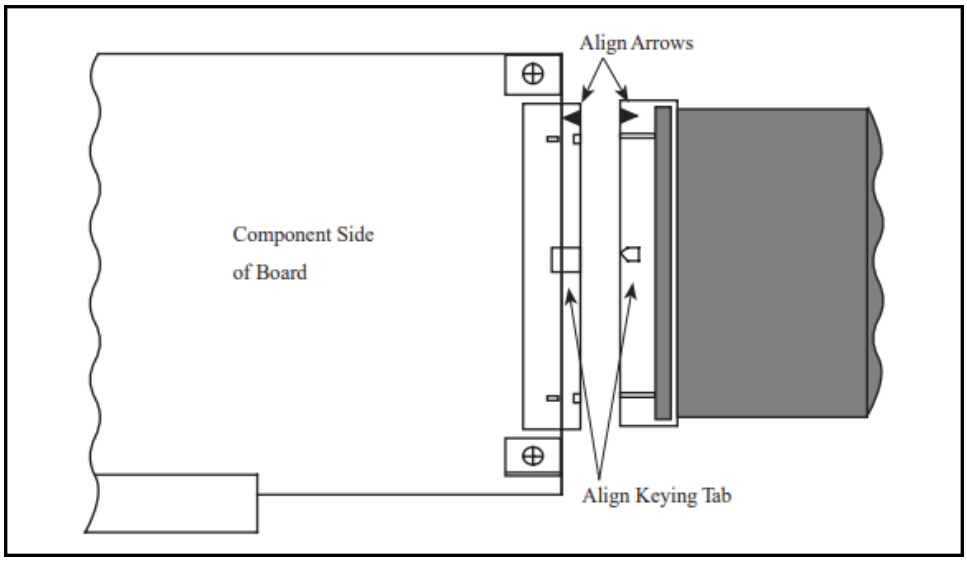
Installing the CB-50

Notice Although the connectors are keyed, it is possible to force the connectors into the header the wrong way. You must be absolutely certain that the connectors are correctly aligned. Failure to do so could cause signals to be connected to the wrong pins, which could damage the data acquisition board and the computer. NI is not liable for damage resulting from such connections.

Complete the following steps to install the CB-50:

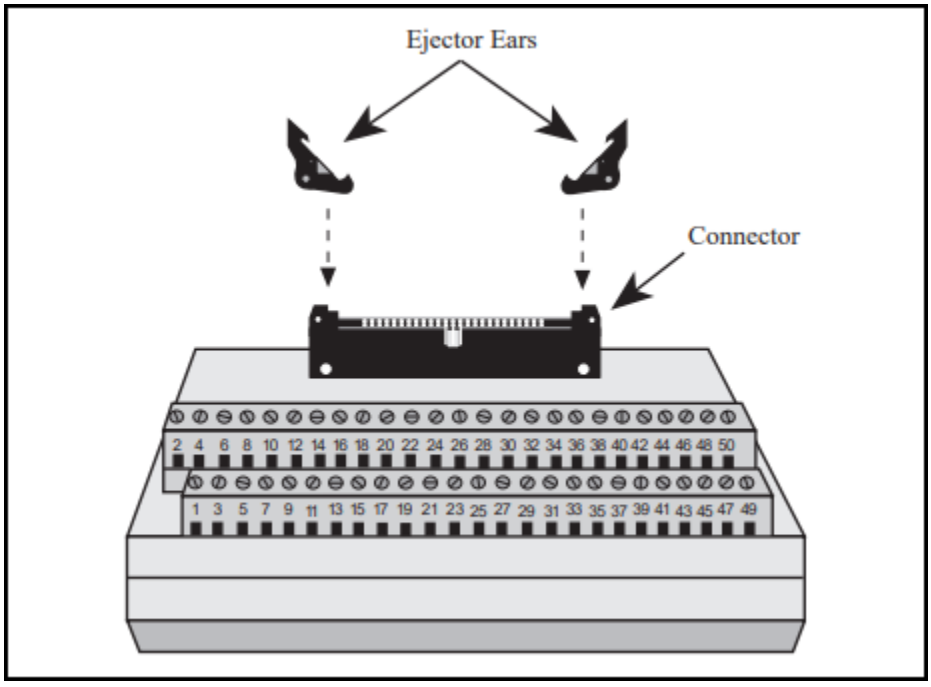
1. Plug either end of the ribbon cable into the 50-pin rear panel connector on the board, aligning the tabls and arrows as shown.

   Figure 1. Connecting the 50-pin Connector to Your Data Acquisition Board

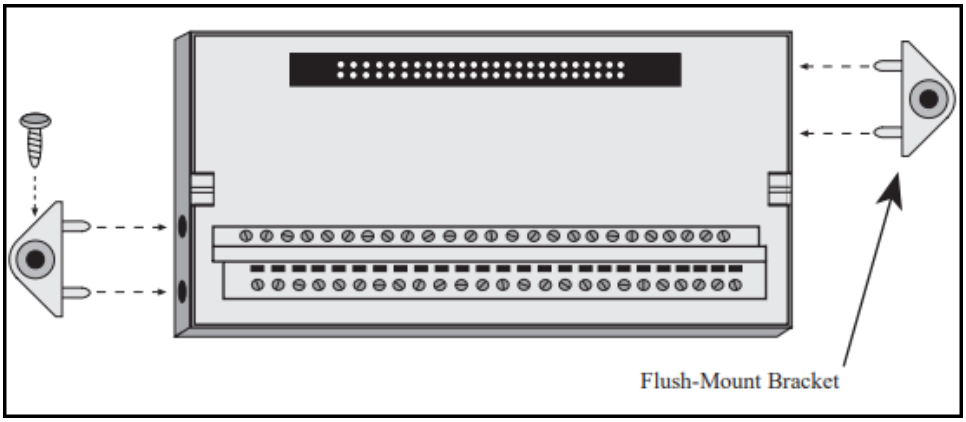


2. Firmly push in the connector for proper contact.
3. Insert the ejector ears into the connector block as shown.

Figure 2. Inserting the Ejector Ears into the Connector Block

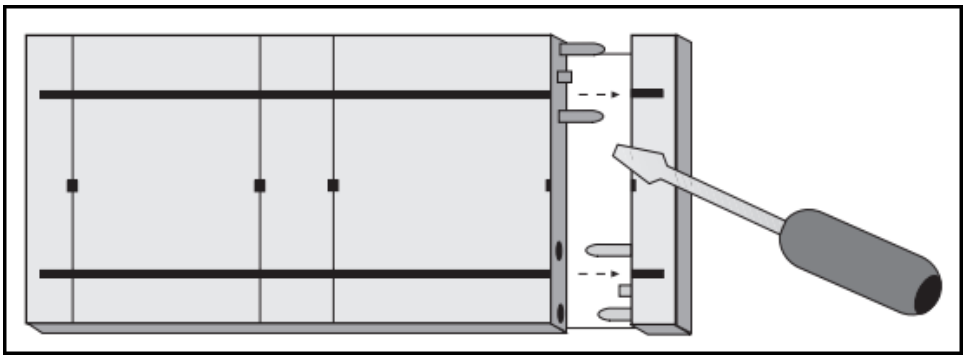


4. If you plan to mount your connector block for stability, either flush mount or rail mount the CB-50 as follows; if you do not want to mount the connector block, proceed to step 5.

Mount Type	Procedure
Flush mounting	a. Insert the flush-mount brackets into the connector block base as shown. **Figure 3.** Inserting the Flush-Mount Brackets  b. Place the connector block where you want to mount it and screw it into place.
Rail mounting	a. Pry off the right and left ends of the connector block with a screwdriver as shown.

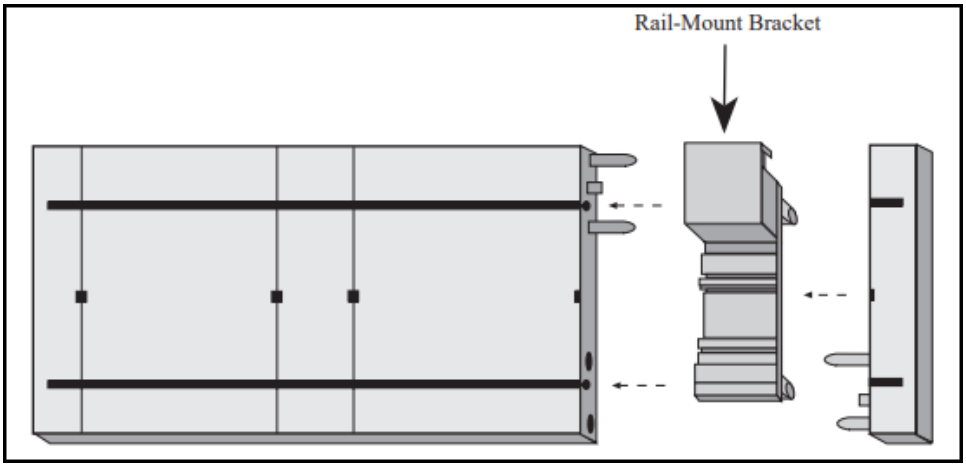
Mount Type	Procedure

Figure 4. Removing the Connector Block Ends



b. Insert the rail-mount bracket into the slots on the bottom of the connector block as shown.

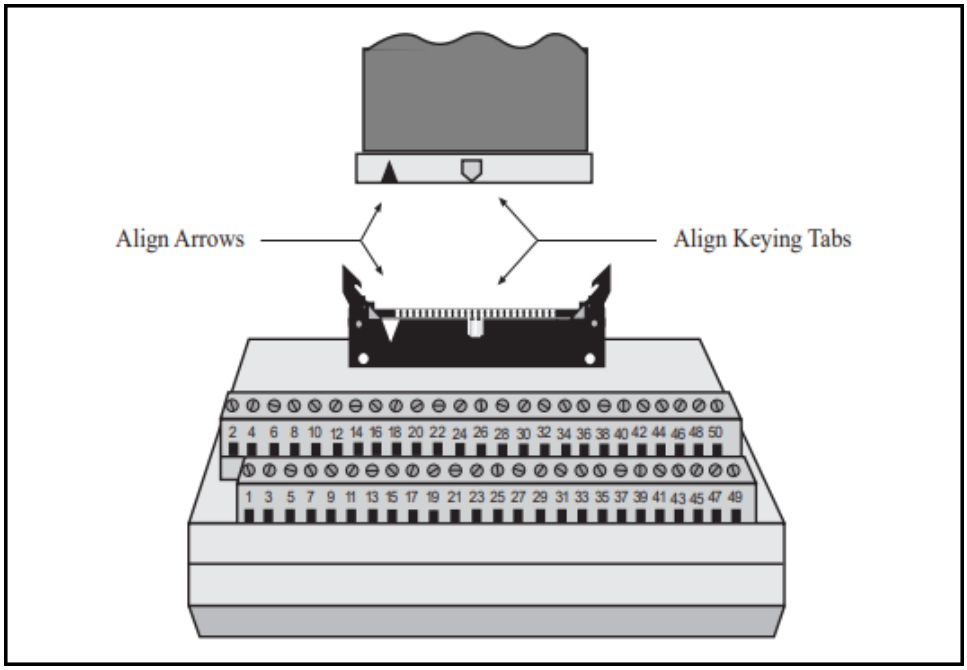
Figure 5. Inserting the Rail-Mount Bracket



c. Replace the end of the connector block and push very firmly until it snaps into place; repeat for the other side, making sure that both rail-mount brackets are facing the same direction.
d. Slide the rail-mount brackets of the connector block onto your rails.

5. Plug the free end of the ribbon cable into the connector block, aligning the tabs and arrows as shown.

Figure 6. Cable Connections to the CB-50



6. Firmly push in the connector until the ejector ears on the block header connector snap into position.
   The numbers on the connector block correspond to the pin numbers of the rear panel I/O connector on the board.

Uninstalling the CB-50

Complete the following steps to remove the ribbon cable from the CB-50.

1. Press down on the ejector ears of the connector block.
   The connector will pop out.
2. At the other end, grasp the ribbon cable near the connector end and pull it away from the board with a rocking motion.

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