USER GUIDE AND SPECIFICATIONS
NI 9923
37-Pin DSUB to Screw-Terminal Connector Block

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This user guide describes the features of the National Instruments 9923 DSUB to Screw-Terminal Connector Block. You can use the NI 9923 to create custom cables for C Series modules that use 37-pin DSUB connectors.

**Note**  The NI 9923 is compatible with NI Compact FieldPoint devices.

**Caution**  Do not remove the NI 9923 circuit board from the enclosure.

**Caution**  Do not supply hazardous voltages (\( >30 \text{ V}_{\text{rms}} /42 \text{ V}_{\text{pk}}/60 \text{ VDC} \)) to the NI 9923.

**Caution**  Before using the NI 9923, read the *Operating Instructions and Specifications* for the C Series module to ensure compliance with safety, EMC, and environmental regulations.
Connecting the NI 9923

The NI 9923 provides connections for C Series 37-pin DSUB modules.

Figure 1. NI 9923 Terminal Assignments
Connecting the Signals
To wire the NI 9923, complete the following steps while referring to Figure 2.

Note When using shielded wires or cable, use the SH terminal on the NI 9923 to terminate the shields.

1. Loosen the captive screws and remove the top cover.
2. Prepare the screw-terminal wire by stripping the insulation. Refer to the Specifications section for more information on screw-terminal wiring.
3. Insert the stripped end of the wire fully into the appropriate terminal. Make sure no exposed wire extends past the screw terminal.
4. Secure the connection by tightening the screw for the terminal. Refer to the Specifications section for information on screw-terminal torque.
5. Route the wire to the NI 9923 opening.
6. Remove slack in the NI 9923 wiring and secure the wires or cable by threading a zip tie through the two strain relief holes on the NI 9923 opening.
7. Reinstall the top cover on the NI 9923 and tighten the four captive screws.

**Figure 2. NI 9923 Parts Locator Diagram**

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<tr>
<td>Captive Screws</td>
<td>Top Cover</td>
<td>Terminals</td>
<td>Strain Relief Holes</td>
<td>Jackscrews</td>
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Installing the NI 9923

Connect the NI 9923 to the 37-pin DSUB connector on the module as shown in Figure 3. Tighten the two jackscrews on the NI 9923 to hold it securely in place. Do not overtighten the jackscrews. Refer to Figure 2 for the location of the jackscrews.

*Figure 3. Installing the NI 9923*
Specifications

The following specifications are typical unless otherwise noted.

Maximum voltage................. 30 Vrms/42 Vpk/60 VDC

Operating temperature .......... –40 °C to 70 °C

Maximum current rating by temperature

- Pins 9, 10, 19, 28, & 29
  - –40 °C to 55 °C .................. ≤5 A
  - 56 °C to 70 °C .................. ≤4 A

- Pins 1–8, 11–18, 20–27, & 30–37
  - –40 °C to 55 °C ................. ≤1 A
  - 56 °C to 70 °C .................. ≤1 A per channel,
    ≤16 A aggregate

Screw-terminal wiring .......... 16 AWG to 26 AWG copper conductor wire with 4.5 mm (0.18 in.) of insulation stripped from the end

Torque for screw terminals ...... 0.4 N · m max
                                      (3.4 lb · in. max)

Weight............................... 82 g (2.9 oz)
Where to Go for Support

The National Instruments Web site 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.

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