

# SCXI Terminal Blocks

## SCXI Terminal Blocks

- Terminal blocks for quick, easy connections
- Strain-relief clamps for reliable wiring
- Connectivity options including BNC and thermocouple plugs
- Shielded front-mount terminal blocks
- Rack-mount and DIN-rail-mount options available
- Terminal block options for specific measurement types

- Onboard temperature sensor for cold-junction compensation
- Isothermal construction for high-accuracy thermocouple measurements
- High-voltage attenuation
- AC/DC coupling
- Bridge offset nulling, shunt calibration
- Current inputs



## Overview

National Instruments SCXI terminal blocks provide a convenient method for connecting and disconnecting signals to your system. The NI SCXI-13xx front-mount terminal blocks provide direct connections to transducers at the screw terminals located within a fully shielded enclosure or at front-mounted BNC connectors. Strain-relief clamps hold the signal wires safely in place. You can also choose either the TC-2095 or BNC-2095 rack-mount terminal blocks for minithermocouple connectors or BNC connectors. These terminal blocks are ideal solutions for large-channel-count temperature or voltage applications.

TBX DIN-rail mount terminal blocks are an alternative to the SCXI-13xx terminal blocks which, attach directly to the front of an SCXI module. The TBX system includes shielded cables that connect the front I/O connector of an SCXI module to a TBX terminal block.

Some terminal blocks are designed for specific input types, such as thermocouples, strain gauges, and high-voltage inputs. See Tables 2, 3, and 4 to determine which SCXI terminal blocks are compatible with your SCXI module.



Figure 1. Terminal Block Configuration

Terminal Block	Compatible SCXI Modules	Cabling	CJC	Special Features
TBX-1303	SCXI-1100, SCXI-1102, SCXI-1102B/C, SCXI-1181	SH96-96 or R96-96	✓	Open TC detection Isothermal construction, selectable ground referencing 200:1 attenuation (up to 1,000 VDC)
TBX-1316	SCXI-1120/D, SCXI-1125, SCXI-1126	SH32-32-A	-	High-voltage 250 VDC
TBX-1325	SCXI-1124	SH48-48-A	-	High-voltage 250 VDC
TBX-1326	SCXI-1162, SCXI-1162HV, SCXI-1163, SCXI-1163R	SH48-48-B	-	
TBX-1328	SCXI-1120, SCXI-1120D, SCXI-1121, SCXI-1125, SCXI-1126	SH32-32-A	✓	Sockets for current input resistors, Isothermal construction, high-voltage 250 VDC
TBX-1329	SCXI-1120, SCXI-1120D, SCXI-1121, SCXI-1125, SCXI-1126	SH32-32-A	-	Selectable AC coupling (rejects up to 250 VDC)
TBX-96	SCXI-1100, SCXI-1102, SCXI-1102B/C,	SH96-96 or R96-96	-	-
TBX-24F	All modules	User-supplied wiring	-	-
CB-50	SCXI-1180	NB1	-	-

\*The TBX-24F is a general-purpose feedthrough terminal block that you can use with any SCXI module or front mounting terminal blocks.

Table 1. TBX Terminal Block Selection Guide

# SCXI Terminal Blocks

## TBX Terminal Block

### Selection Guide

Use the following steps to select the correct combination of TBX terminal blocks and cables for your SCXI system:

#### 1. Select the required terminal blocks –

For each SCXI module, use Table 1 to select the proper TBX terminal block. If a TBX-13xx terminal block is not available for your SCXI module, select the appropriate number of general-purpose TBX-24F feedthrough terminal blocks.

#### 2. Select cabling – For each TBX terminal block, Table 1 lists the cable needed to connect the TBX terminal block to the SCXI module. Shielded cables are available in lengths of 1, 2, and 5 m. If using the TBX-1303, you also have the option to build a custom cable using the SBS-96F backshell kit. For each TBX-1303 for which you will build a custom cable, select two SBS-96F kits. If using the TBX-24F, you will use discrete wires to connect the TBX-24F to an SCXI front-mounting terminal block. Therefore, select the appropriate SCXI front-mounting terminal block for each SCXI module that will use the TBX-24F.

#### 3. Rack-mount accessory (optional) – If

mounting for 19 in. rack enclosures is needed, use Table 2 to select the appropriate number of TBX-RM1 rack-mount kits.

#### 4. Calibration – Calibration of cold-junction sensors and attenuation terminal blocks is available for some devices. For more information, please visit [ni.com/calibration](http://ni.com/calibration)

Module	Terminal Blocks	CJC <sup>1</sup> Sensor	Other Terminal Block Functions
SCXI-1100	SCXI-1303 <sup>2</sup>	✓	Isothermal, signal ground referencing, and open thermocouple detection
SCXI-1102	SCXI-1300 <sup>3</sup>	✓	–
SCXI-1102B	SCXI-1308	–	Current Input, 249 Ω resistor across each input
SCXI-1102C	BNC-2095 TC-2095	– ✓	BNC connectors, signal ground referencing Thermocouple plugs, signal ground referencing, Isothermal
SCXI-1104/C	SCXI-1300	–	–
SCXI-1120	SCXI-1305	–	BNC connectors, AC/DC coupling and ground referencing
SCXI-1120D	SCXI-1320	✓	–
SCXI-1126	SCXI-1327 SCXI-1328 SCXI-1338	✓ ✓ ✓	Extends signal input range to 250 V <sub>rms</sub> , switch configurable per channel Isothermal, high-accuracy design for thermocouples Current Input, 249 Ω resistor across each input
SCXI-1125	SCXI-1304/5 SCXI-1313 SCXI-1320 SCXI-1327 SCXI-1328 SCXI-1338	– ✓ ✓ ✓ ✓ ✓	BNC connectors, AC/DC coupling and ground referencing Extends signal input range to 300 V <sub>rms</sub> , programmable per channel – Extends signal input range to 250 V <sub>rms</sub> , switch configurable per channel Isothermal, high-accuracy design for thermocouples Current Input, 249 Ω resistor across each input
SCXI-1121	SCXI-1320 SCXI-1321 SCXI-1327 SCXI-1328 SCXI-1305	✓ ✓ ✓ ✓ –	– Offset nulling and shunt calibration for strain gauges Extends signal input range to 250 V <sub>rms</sub> , switch configurable per channel Isothermal, high-accuracy design for thermocouples BNC connectors, AC/DC coupling and signal ground referencing
SCXI-1122	SCXI-1322	✓	–
SCXI-1124	SCXI-1325	–	–
SCXI-1127	SCXI-1331	✓	–
SCXI-1128	SCXI-1332	–	Set up an 8 column by 4 row matrix
SCXI-1129	SCXI-1333 SCXI-1334 SCXI-1335 SCXI-1336 SCXI-1337 SCXI-1339	– – – – – –	Configures SCXI-1129 as quad, 4 x 16 (2-wire) matrix Configures SCXI-1129 as 4 x 64 (2-wire) matrix Configures SCXI-1129 as 8 x 32 (2-wire) matrix Configures SCXI-1129 as 16 x 16 (2-wire) matrix Configures SCXI-1129 as a dual 8 x 16 (2-wire) matrix Configures SCXI-1129 as a dual 4 x 32 (2-wire) matrix
SCXI-1140	SCXI-1301 SCXI-1304 SCXI-1305	– – –	AC/DC coupling and signal ground referencing (configurable per channel) BNC connectors, AC/DC coupling and signal ground referencing
SCXI-1141	SCXI-1304	–	AC/DC coupling and signal ground referencing (configurable per channel)
SCXI-1142	SCXI-1305	–	BNC connectors, AC/DC coupling and signal ground referencing
SCXI-1143	SCXI-1301	–	–
SCXI-1160	SCXI-1324	–	–
SCXI-1161	–	–	Screw terminals located in module
SCXI-1162/HV	SCXI-1326	–	–
SCXI-1163/R	–	–	–
SCXI-1180	SCXI-1302	–	50-Pin terminal block
SCXI-1181	SCXI-1300	✓	–
SCXI-1181K	SCXI-1301	–	–
SCXI-1520	SCXI-1314	–	Quarter-bridge completion/shunt resistor
SCXI-1540	SCXI-1315	–	–
SCXI-1581	SCXI-1300	–	–

<sup>1</sup>Cold-junction compensation (CJC) sensor for thermocouple measurements. <sup>2</sup>Recommended for thermocouples; includes isothermal design and high-precision CJC sensor. <sup>3</sup>Recommended for RTDs when using both SCXI-1102 and SCXI-1581.

Table 3. SCXI-13xx, TC, and BNC Selection Guide

#### 5. Custom cabling –

Custom cabling is available for some SCXI modules. To select the appropriate custom cabling, refer to Table 4.

Module	Connector and Shell Assembly
SCXI-1100, SCXI-1102B/C, SCXI-1140, SCXI-1141, SCXI-1181 SCXI-1120, SCXI-1120D, SCXI-1121, SCXI-1126, and SCXI-1181	SCXI-1310 SCXI-1330

Table 2. Rack-Mount Widths of TBX Terminal Blocks

Terminal Block	Width Required (TBX-RM1 Rack-Mount)
TBX-1303	One-half
TBX-1325, TBX-1326, TBX-1328, TBX-1329, TBX-24F, CB-50	One-third

Table 4. Custom Cabling Accessories

# SCXI Terminal Blocks



Figure 1. SCXI-1303 Terminal Block



Figure 2. SCXI-1305 Terminal Block



Figure 3. SCXI-1310 Connector and Shell Assembly

**SCXI-1300** ..... 777687-00

The SCXI-1300 connects input signals to the SCXI-1100, SCXI-1102/B/C, and SCXI-1104/C modules. The SCXI-1300 is a general-purpose terminal block with an onboard temperature sensor for cold-junction compensation. Also works with SCXI-1181 and SCXI-1181K modules.

**SCXI-1301** ..... 777687-01

20-screw terminal block for the SCXI-1140, SCXI-1181, and SCXI-1181K modules.

**SCXI-1302** ..... 777687-02

50-screw terminal block for SCXI-1180 feedthrough panel.

**SCXI-1303 (See Figure 1)** ..... 777687-03

Terminal block for use with the SCXI-1100 and SCXI-1102/B/C modules. Designed especially for high-accuracy thermocouple measurements, the SCXI-1303 includes isothermal construction that minimizes errors caused by thermal gradients between terminals and the cold-junction sensor. The SCXI-1303 also includes circuitry for open-thermocouple detection as well as automatic ground referencing for floating (nongrounded) thermocouples.

**SCXI-1304** ..... 777687-04

The SCXI-1304, for the SCXI-114x modules, includes AC coupling circuitry, with switches on each channel. Each channel also includes a switchable connection to ground through a 100 k $\Omega$  bias resistor to provide a reference for floating input sources.

**SCXI-1305 (See Figure 2)** ..... 777687-05

Includes convenient BNC connectors for use with the SCXI-1120/D, SCXI-1121, SCXI-1125, SCXI-1126, and SCXI-114x. Functionally equivalent to the SCXI-1304 terminal block, the SCXI-1305 includes switchable AC coupling circuitry and ground referencing on each channel.

**SCXI-1308** ..... 777687-08

Current input terminal block for the SCXI-1100 and SCXI-1102/B/C analog input modules. Each input includes a 249 $\Omega$  precision resistor so you can read 0 to 20 mA and 4 to 20 mA current inputs.

**SCXI-1310 (See Figure 3)** ..... 777687-10

Connector and shell assembly used to create custom cabling solutions from the SCXI-1100, SCXI-1102/B/C, SCXI-1104/C, SCXI-114x, and SCXI-1181 to custom terminations. A low-cost alternative to SCXI terminal blocks, it consists of a hardened plastic enclosure and one connector with solder pins for signal connections.

**SCXI-1313** ..... 777687-13

Extends the input range of the SCXI-1125 to 300 V<sub>rms</sub> or 300 VDC, on a per-channel basis programmatically through software commands. The SCXI-1313 also includes an onboard temperature sensor for thermocouples cold-junction compensation.

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**SCXI-1314** ..... 777687-14

Front-mounting terminal block for the SCXI-1520 module. With factory-installed and socketed 350  $\Omega$  quarter-bridge completion resistors for each channel. Eight 120  $\Omega$  resistors for use with 120  $\Omega$  quarter-bridge strain gauges are included, but not installed. It also includes two factory-installed, socketed 100 k shunt calibration resistors per channel.



Figure 4. SCXI-1320 Terminal Block

**SCXI-1315** ..... 777687-15

8-channel front-mounting terminal block for the SCXI-1540 LVDT with six terminals for each LVDT channel – CH+, CH-, EX+, EX-, Synch, and GND.



Figure 5. SCXI-1321 Terminal Block

**SCXI-1320 (See Figure 4)** ..... 777687-20

General-purpose terminal block for connecting signals to the SCXI-1120/D, SCXI-1121, SCXI-1125, and SCXI-1126 modules. It includes an onboard temperature sensor for cold-junction compensation using thermocouples, but the SCXI-1328 is recommended for precision thermocouple measurements.



Figure 6. SCXI-1327 Terminal Block

**SCXI-1321 (See Figure 5)** ..... 777687-21

Adds nulling and shunt calibration to SCXI-1121 strain gauge applications. With a front-panel trimming potentiometer, you can manually null out the offset voltage of bridge transducers. Each channel includes shunt calibration circuits. When activated, a switch connects a 301 k shunt resistor in parallel with the strain gauge. Both the nulling resistor and the shunt resistor are socketed for easy customization.

**SCXI-1322** ..... 777687-22

Terminal block required to connect signals to the SCXI-1122 module that includes an onboard temperature sensor for cold-junction compensation.



Figure 7. SCXI-1328 Terminal Block

**SCXI-1324** ..... 777687-24

High-voltage terminal block with 48 screw terminals for the SCXI-1160 relay module.

**SCXI-1325** ..... 777687-25

26-screw terminal block for the SCXI-1124 module.

**SCXI-1326** ..... 777687-26

High-voltage terminal block with 48 screw terminals for the SCXI-1162 Series and SCXI-1163 Series modules.

**SCXI-1327 (See Figure 6)** ..... 777687-27

With the SCXI-1327 you can extend the input range of the SCXI-1120/D and SCXI-1121 to  $\pm 250$  V, and extend the threshold level of the SCXI-1126 module from 5 V up to 300 V. The extended input voltage range is enabled or disabled on a per-channel basis using switches located within the SCXI-1327. The SCXI-1327 also includes an onboard temperature sensor for cold-junction compensation with thermocouples. Using the SCXI-1327 reduces the input impedance of your SCXI module to 1 M $\Omega$ .

**SCXI-1328 (See Figure 7)** ..... 777687-28

Isothermal terminal block with a high-precision cold-junction sensor for high-accuracy thermocouple applications with the SCXI-1120/D, SCXI-1121, or SCXI-1125.

**SCXI-1330** ..... 777687-30

# SCXI Terminal Blocks



Figure 8. SCXI-1331 Terminal Block



Figure 9. SCXI-1332 Terminal Block



Figure 10. BNC-2095

Connector and shell assembly (hardened plastic enclosure and solder pins) used to create custom cabling solutions from the SCXI-1120/D, SCXI-1121, SCXI-1125, SCXI-1126, and SCXI-1181 to custom terminations.

**SCXI-1331 (See Figure 8)** ..... 777687-31

General-purpose terminal block for the SCXI-1127 multiplexer/matrix module with 64 generic screw terminals and a cold-junction compensation sensor. For SCXI-1127 multiplexer applications or matrix configurations other than a multiple of eight columns by four rows. Includes sockets for matrix expansion cables.

**SCXI-1332 (See Figure 9)** ..... 777687-32

Multiplexer/matrix terminal block for the SCXI-1127 configures the SCXI-1127 as an eight column by four row switching matrix. You can connect signals to both the columns and rows using screw terminals.

**SCXI-1333** ..... 777687-33

**SCXI-1334** ..... 777687-34

**SCXI-1335** ..... 777687-35

**SCXI-1336** ..... 777687-36

**SCXI-1337** ..... 777687-37

**SCXI-1339** ..... 777687-39

These terminal blocks are designed for use with the SCXI-1129 high-density matrix switching module. Each of these terminal blocks gives the high-density matrix a different configuration. See page 484 for more information on how to choose the appropriate series of terminal blocks for the SCXI-1129.

**SCXI-1338** ..... 777687-38

Current input terminal block for the SCXI-1120/D, SCXI-1125, and SCXI-1126. Each input includes a 249  $\Omega$  precision resistor for reading 0 to 20 mA or 4 to 20 mA current inputs.

**BNC-2095 (See Figure 10)** ..... 777508-01

The BNC-2095 has 32 labeled BNC connectors, one for each input channel of the SCXI-1100, or SCXI-1104/C. The BNC-2095 also includes circuitry for configurable signal referencing. You can enable or disable both the pull-up and pull-down resistors on a per-channel basis using switches.

**TC-2095** ..... 777509-01

The TC-2095 has 32 miniature uncompensated thermocouple plugs, one for each input channel of the SCXI-1100 or SCXI-1102/B/C and a thermistor for accurate cold-junction compensation. In addition, the TC-2095 includes circuitry for configurable signal referencing. You can enable or disable both the pull-up and pull-down resistors on a per-channel basis using switches located on the rear of the TC-2095. The TC-2095 is not recommended for use with the SCXI-1104/C. The TC-2095 requires the SH96-96 or R96-96 for connection to a SCXI module.

# SCXI TBX Terminal Blocks

**TBX-1303 (See Figure 11) .....** 777207-03

Designed for thermocouples, with cold-junction compensation sensor, isothermal construction with a plastic cover to minimize thermal gradients, open-thermocouple detection circuitry, and automatic ground-referencing circuitry. With the SCXI-1102B/C, the TBX-1303 provides a high-impedance path to ground so that systems work reliably with either floating or ground-referenced thermocouples. For applications with the SCXI-1100, you can configure the channels as ground-referenced or floating in blocks of eight channels. The TBX-1303 also works with the SCXI-1181 breadboard module.

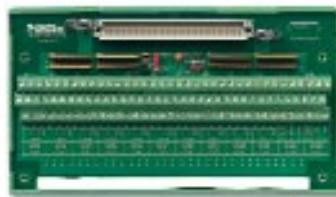


Figure 11. TBX-1303

**TBX-96 .....** 777264-01

Mass termination terminal block that provides a generic solution for the SCXI-1100, SCXI-1102B/C, SCXI-1104/C, and the SCXI-1140 Series.



Figure 12. TBX-1316

**TBX-1316 (See Figure 12) .....** 777207-16

High-voltage terminal block, for extending the input range of the SCXI-1120/D, SCXI-1125, or SCXI-1126 modules to  $\pm 1000$  VDC ( $680$  V<sub>rms</sub>) Each input channel includes a 200:1 attenuation circuit, and offers a positive, negative, and ground terminal for up to 12 AWG wire. You can panel mount this enclosure or simply place it on a desktop. The hinged lid makes accessing the signals easier and key locked for safety. The TBX-1316 is rated for Category III installations.

**TBX-1325 .....** 777207-25

Terminal block with 30 screw terminals for signal connections to the SCXI-1124 module. You cable the TBX-1325 to the SCXI-1124 with the SH48-48-A shielded cable.



Figure 13. TBX-1326

**TBX-1326 (See Figure 13) .....** 777207-26

High-voltage terminal block with 48 screw terminals for signal connections to the SCXI-1162, SCXI-1162HV, SCXI-1163, and SCXI-1163R modules. You can cable the TBX-1326 to the SCXI module with the SH48-48-B shielded cable. Warning: The TBX-1326 and SH48-48-B limit the maximum working common-mode voltage between banks or between banks and earth ground to 250 V<sub>rms</sub> maximum.

**TBX-1328 (See Figure 14) .....** 777207-28

Terminal block for the SCXI-1120/D, SCXI-1121, SCXI-1125, and SCXI-1126 modules. The TBX-1328 includes a total of 24 screw terminals, including three terminals (CH+, CH-, and chassis ground) for each input channel and sockets for the installation of resistors for 4 to 20 mA inputs. When used with thermocouples, the TBX-1328 maximizes measurement accuracy with an isothermal construction and a plastic cover that minimizes thermal gradients across the terminal block and the resulting errors.



Figure 14. TBX-1328

**TBX-1329 (See Figure 15) .....** 777207-29

Provides selectable AC coupling for the SCXI-1120/D, SCXI-1121, SCXI-1125, and SCXI-1126 modules.



Figure 15. TBX-1329

**TBX-24F .....** 777276-01

The TBX-24F is a general-purpose screw terminal block with feedthrough connections for 24 signal lines. You connect the TBX-24F to the SCXI module with discrete wires connected to a standard SCXI terminal block.

# SCXI-13xx, TBX, and BNC/TC Terminal Block Specifications

## Specifications

Typical for 25 °C unless otherwise noted.

### SCXI-13xx

Cold-Junction Sensor

Accuracy and repeatability<sup>1</sup>

Terminal Block	Accuracy		
	15 to 35 °C	0 to 15 °C and 35 to 55 °C	Repeatability
SCXI-1300	1.3 °C	1.3 °C	0.5 °C
SCXI-1303 <sup>2</sup>	0.5 °C	0.85 °C	0.35 °C
SCXI-1320	1.3 °C	1.3 °C	0.5 °C
SCXI-1321	1.3 °C	1.3 °C	0.5 °C
SCXI-1322	0.8 °C	1.2 °C	0.4 °C
SCXI-1327	0.9 °C	1.3 °C	0.5 °C
SCXI-1328	0.5 °C	0.9 °C	0.2 °C

Sensor output for SCXI-1300,

SCXI-1320, SCXI-1321 .....	±10 mV/°C
SCXI-1303/1322/1327/1328 .....	1.91 V (at 0 °C) to 0.58 V (at 55 °C) (thermistor)

Maximum field wire gauge for SCXI-1300/

1302/1303/1314/1322/1324 .....	26-16 AWG
1301/1304/1313/1315/1320/1321/	
1325/1327/1328/1331/1332 .....	26-14 AWG

AC coupling (SCXI-1304 and SCXI-1305).....

The AC coupling circuitry on each channel has a corner frequency of 0.16 Hz, rejection capacity of ±50 VDC, and input impedance of 2 MΩ differential, 1 MΩ common mode.

Corner frequency .....	0.16 Hz 1-pole RC
DC rejection capacity .....	±50 VDC
Current Input SCXI-1308/1338 .....	0 to 20 mA

### BNC-2095, TC-2095

Input connectors

BNC-2095 .....	32 BNC connectors
TC-2095 .....	32 thermocouple plugs, uncompensated

Output (to SCXI module).....

96-pin DIN

Cold-junction sensor (TC-2095)

Output .....	1.91 V (0 °C) to 0.58 V (55 °C)
Accuracy (15 to 35 °C) <sup>3</sup> .....	0.5 °C for SCXI-1102/B/C 0.65 °C for SCXI-1100
Repeatability (15 to 35 °C) <sup>3</sup> .....	0.35 °C for SCXI 1102/B/C 0.5 °C for SCXI-1100

Signal referencing

CH+ input .....	10 MΩ to +5 V, user switchable
CH- input .....	10 MΩ or +10 V to ground, user switchable 1-pole RC

### Physical

Dimensions.....

49.3 by 4.3 by 18.8 cm  
(19.0 by 1.7 by 7.4 in.)

### TBX Series

Typical for 25 °C unless otherwise noted.

Maximum working voltage (signal + common mode)

TBX-1316 .....	1000 VDC, 680 V <sub>rms</sub>
TBX-1325 .....	250 V <sub>rms</sub>
TBX-1326/1328/1329/24F .....	300 V <sub>rms</sub>

Signal referencing on TBX-1303

CH+ input .....	10 MΩ to +5 V (socketed)
CH- input .....	10 MΩ or 10 V to ground (user configurable, socketed)

Input impedance for TBX-1316

Differential.....	40 MΩ
Single-Ended.....	20 MΩ

Absolute accuracy for TBX-1316

Gain error .....	1%
Temperature drift .....	20 ppm/°C

AC Coupling (TBX-1329 only)

Corner frequency .....	0.072 Hz 1-pole RC
DC rejection capacity .....	250 VDC

Wire resistance of cables .....

0.21 Ω/m per conductor

### Cold-Junction Sensor (TBX-1303 and TBX-1328)

Accuracy and repeatability<sup>1</sup>

Terminal Block	Accuracy		
	15 to 35 °C	0 to 15 °C and 35 to 55 °C	Repeatability
TBX-1303	0.5 °C	0.85 °C	0.35 °C
TBX-1328	0.5 °C	0.9 °C	0.2 °C

Sensor output .....

1.91 V (at 0 °C) to 0.58 V (at 55 °C) (thermistor)

## General

### Physical

Compatible DIN rails<sup>5</sup> .....

DIN EN 50 022, DIN 50 035

Screw terminal size

TBX-1316 .....

26-12 AWG

Others .....

26-14 AWG

### Dimensions

TBX-1303<sup>6</sup> .....

19.7 by 11.2 by 7.62 cm

(7.8 by 4.4 by 3.0 in.)

TBX-1316 .....

30 by 20 by 8.1 cm

(11.8 by 7.9 by 3.2 in.)

TBX-1325/1326/1328/1329<sup>6</sup> .....

12.7 by 11.2 by 7.62 cm

(5.0 by 4.4 by 3.0 in.)

TBX-24F .....

12.4 by 4.3 by 5.1 cm

(4.9 by 1.7 by 2.0 in.)

TBX-96 .....

19.8 by 12.6 by 6.3 cm

(7.8 by 4.9 by 2.5 in.)

### Certification and Compliance

SCXI-1320/1321/1326/1327/1328/1338 .....

300 V, Cat II working voltage

SCXI-1322/1324/1325 .....

250 V, Cat II working voltage

TBX-1316 .....

1000 V, Cat III working voltage

TBX-1328/1329 .....

300 V, Cat II working voltage

TBX-1325/1326 .....

250 V, Cat II working voltage

### European Compliance

EMC .....

EN 61326 Group I Class A, 10 m, Table 1 Immunity

Safety .....

EN 61010-1

### North American Compliance

EMC .....

FCC Part 15 Class A using CISPR

Safety (SCXI-1320/1321/1326/1327/1328/

1338/SCXI-1322/1324/1325) .....

UL Listed to UL 3111-1

CAN/CSA C22.2 No. 1010.1

Safety (TBX-1325/1326/1328/1329) .....

UL Listed to UL 3111-1

CAN/CSA C22.2 No. 1010.1

Australia and New Zealand Compliance

EMC (except TBX-1316) .....

AS/NZS 2064.1/2 (CISPR-11)

1 Accuracy and repeatability include combined effects of sensor, circuitry, and thermal gradients between the sensor and any screw terminal. Thermal gradients for nonisothermal terminal blocks (SCXI-1300, SCXI-1320, SCXI-1321, SCXI-1322, and SCXI-1327) are assumed to be 0.4 °C.

2 With SCXI-1102 module. With SCXI-1100 module, add error of 0.15 °C.

3 Accuracy and repeatability include combined effects of sensor, circuitry, and thermal gradients between the sensor and thermocouple connection.

4 Accuracy and repeatability include combined effects of sensor, circuitry, and thermal gradients between the sensor and any screw terminal.

5 TBX-1316 is not DIN-rail mountable

6 Height dimension (7.62 cm) includes DIN-rail mounting and plastic cover.

For a definition of specific terms, please visit [ni.com/glossary](http://ni.com/glossary)