TB-12395 Specifications





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The following specifications are typical at 25 °C unless otherwise noted.

Physical Connectors

The following figure shows the connections on the TB-12395 board assembly.



Figure 1. TB-12395 Top View

- 1. Mounting screw
- 2. Enclosure base
- 3. Metal bracket
- 4. 48-pin DIN 41612 connector
- 5. Ground lug
- 6. I/O channel name
- 7. 16-pos screw terminal
- 8. DIN 41612 pin name



Note Terminal J4 can be used for Chassis Ground, which is tied to the metal

case standoffs, metal bracket, jack-sockets, and the enclosure base.



Note The I/O channels are routed in differential pairs. For example, 0 is paired with COM 0. Each screw terminal consists of 8 I/O channels grouped into one port, while J2 is assigned as Port 0 or Port 2, and while J3 is assigned as Port 1 or Port 3.



Note DIN 41612 connector and screw terminals are isolated from Chassis Ground.

Pinout



Note K indicates pins removed for connector keying.

Note Unmapped pins to the screw terminals are left unconnected.

Panel Mounting the TB-12395 Terminal Block

The terminal block comes pre-equipped with a removable DIN rail clip for mounting to a standard DIN rail.

Figure 2. Terminal Block with DIN Rail Clip



The terminal block can also be rear panel mounted using the pattern provided below for M4 × 0.7 threaded holes.





Caution If you are using the TB-12395 with voltage greater than 30 Vrms, 42.4 Vpk, 60 Vdc, the terminal block must be mounted in a closed rack to prevent user access to the rear end of the device.

Physical Characteristics

Dimensions	105.6 mm x 59.4 mm x 137.4mm (4.16 in. x 2.34 in. x 5.41 in.)

Weight	280 g (9.9 oz)
Connectors	1x male 48-pin DIN 41612 Connector, 2x 16-pos Sauro MSBH16045-0N Screw Terminals
Screw-terminal wiring	16 AWG to 30 AWG copper conductor wire with minimum temperature rating of 80 °C and minimum voltage rating of 100 V
Torque for screw terminals	0.5 N·m to 0.6 N·m (4.42 lb·in to 5.31 lb·in)

Safety Voltages

Connect only voltages that are below these limits.

Maximum input voltage 100 V) V peak		
Isolation				
Channel-to-channel	None			
Channel-to-earth				
Continuous working voltage 100) V peak		
Transient overvoltage ^[1]		920 V peak		

Caution If you are using the TB-12395 with voltages greater than 30 V RMS,

42.4 V peak, or 60 V DC, the SLSC chassis must be panel mounted in a closed rack to prevent user access to the rear of the device.

Attention Si vous utilisez le TB-12395 avec des tensions supérieures à 30 V RMS, 42.4 V peak, ou 60 V DC, le châssis SLSC doit être sécurisé contre les contacts. Pour cela, il est nécessaire de le monter sur panneau dans un rack fermé pour empêcher l'utilisateur d'accéder à l'arrière de l'appareil.

These test and measurement circuits are rated for measurements performed on circuits not directly connected to the electrical distribution system referred to as MAINS.

MAINS is a hazardous live electrical supply system to which equipment is designed to be connected to for the purpose of powering equipment. This product is rated for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special equipment, limited-energy parts of equipment, circuits powered by regulated low-voltage sources, and electronics.

Safety Compliance Standards

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

- IEC 61010-1, EN 61010-1
- Conforms to UL Standard 61010-1 and UL Standard 61010-2-030
- Certified to CSA Standard C22.2 # 61010-1 and CSA Standard C22.2 # 61010-2-030



Note For safety certifications, refer to the product label or the <u>Product</u> <u>Certifications and Declarations</u> section.

Electromagnetic Compatibility Standards

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use:

- EN 61326-1 (IEC 61326-1): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions
- AS/NZS CISPR 11: Group 1, Class A emissions

Note Group 1 equipment (per CISPR 11) is any industrial, scientific, or medical equipment that does not intentionally generate radio frequency energy for the treatment of material or inspection/analysis purposes.

CE Compliance 🤇 🧲

This product meets the essential requirements of applicable European Directives, as follows:

- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)
- 2011/863/EU; Restriction of Hazardous Substances (RoHS)
- 2014/35/EU; Low-Voltage Directive (Safety)

Product Certifications and Declarations

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for NI products, visit <u>ni.com/product-certifications</u>, search by model number, and click the appropriate link.

NI Services

Visit <u>ni.com/support</u> to find support resources including documentation, downloads, and troubleshooting and application development self-help such as tutorials and examples.

Visit <u>ni.com/services</u> to learn about NI service offerings such as calibration options,

repair, and replacement.

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

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