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Models STP-36

Packing List

Figure 1
Model STP-36



Introduction

This document contains information necessary to successfully install your hardware.

WARNING **The STP-36 is not intended for use in circuits carrying voltages in excess of 30V RMS, 42.4V peak, or 60VDC.**

General definitions

The types of product users are:

Responsible body is the individual or group responsible for the use and maintenance of equipment, and for ensuring that operators are adequately trained.

Operators use the product for its intended function. They must be trained in electrical safety procedures and proper use of the instrument. They must be protected from electric shock and contact with hazardous live circuits.

Maintenance personnel perform routine procedures on the product to keep it operating, for example, setting the line voltage or replacing consumable materials. Maintenance procedures are described in the manual. The procedures explicitly state if the operator may perform them. Otherwise, they should be performed only by service personnel.

Service personnel are trained to work on live circuits, and perform safe installations and repairs of products. Only properly trained service personnel may perform installation and service procedures.

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The ⚠ symbol on an instrument indicates that the user should refer to the operating instructions located in the manual.

The ⚠ symbol on an instrument shows that it can source or measure 1000 volts or more, including the combined effect of normal and common mode voltages. Use standard safety precautions to avoid personal contact with these voltages.

The **WARNING** heading in a manual explains dangers that might result in personal injury or death. Always read the associated information very carefully before performing the indicated procedure.

The **CAUTION** heading in a manual explains hazards that could damage the instrument. Such damage may invalidate the warranty.

Descriptions

The screw terminals on the STP-36 screw terminal connector let you connect field wiring to another board such as a KPCI-3108 board using a CAB-1284 CC cable. The screw terminals are labeled from 1 to 36 and correspond directly to the functions of the pins on the main I/O connector on the KPCI-3108/7 board. For example, if pin 24 is assigned to the analog function OP0, use screw terminal 24 to attach hardware to output 0. Refer to the User's Guide for the board to which you are connecting the STP-36 for detailed wiring information.

The STP-36 panel has rubber feet and mounting holes.

WARNING **When using the STP-36, the maximum voltage allowed is 30V RMS, 42.4V peak, or 60VDC. Exceeding this limit could cause an insulation failure and shock hazard.**

CAUTION **Although the STP-36 is rated for 60 volts peak-to-peak, the board to which it is connected may be rated for a much lower voltage. For example, the KPCI-3108 analog inputs can only tolerate 35 volts peak without damage, and digital I/O will be damaged by voltages above +5V.**

Specifications

Voltage: 30V RMS, 42.4V peak, or 60VDC
Current: 1 amp maximum
Environment: –30°C to +85°C

Safety precautions

Observe the following safety precautions before using this product and any associated instrumentation. Although some instruments and accessories would normally be used with non-hazardous voltages, there are situations where hazardous conditions may be present.

This product is intended for use by qualified personnel who recognize shock hazards and are familiar with the safety precautions required to avoid possible injury. Read the operating information carefully before using the product.

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Installation

As described in the International Electrotechnical Commission (IEC) Standard IEC 664, the signal terminals are Installation Category I and must not be connected to mains.

Do not connect switching cards directly to unlimited power circuits. They are intended to be used with impedance limited sources. NEVER connect switching cards directly to AC mains. When connecting sources to switching cards, install protective devices to limit fault current and voltage to the card.

Operators and maintainers of this product must be protected from electric shock at all times. The responsible body must ensure that users are prevented access and/or insulated from every connection point. In some cases, connections must be exposed to potential human contact. Product users in these circumstances must be trained to protect themselves from the risk of electric shock. If the circuit is capable of operating at or above 1000 volts, **no conductive part of the circuit may be exposed.**

Operation

Exercise extreme caution when a shock hazard is present. Lethal voltage may be present on cable connector jacks or test fixtures. The American National Standards Institute (ANSI) states that a shock hazard exists when voltage levels greater than 30V RMS, 42.4V peak, or 60VDC are present. **A good safety practice is to expect that hazardous voltage is present in any unknown circuit before measuring.**

For maximum safety, do not touch the product, test cables, or any other instruments while power is applied to the circuit under test. ALWAYS remove power from the entire test system and discharge any capacitors before: connecting or disconnecting cables or jumpers, installing or removing switching cards, or making internal changes, such as installing or removing jumpers.

Do not touch any object that could provide a current path to the common side of the circuit under test or power line (earth) ground. Always make measurements with dry hands while standing on a dry, insulated surface capable of withstanding the voltage being measured.

Do not exceed the maximum signal levels of the instruments and accessories as defined in the specifications and operating information, and as shown on the instrument or test fixture panels, or switching card.

Chassis connections must only be used as shield connections for measuring circuits, NOT as safety earth ground connections.

If you are using a test fixture, keep the lid closed while power is applied to the device under test. Safe operation requires the use of a lid interlock.

Instrumentation and accessories shall not be connected to humans.

Maintenance and service

Inspect the connecting cables, test leads, and jumpers for possible wear, cracks, or breaks before each use.

Before performing any maintenance, disconnect the line cord and all test cables.

Cleaning

Keep the connections free of contaminants (such as dirt, oil, etc.) in order to maintain maximum insulation resistance. If the connections become contaminated, clean them thoroughly with methanol and allow them to dry completely before use.

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Before you install your STP-36

CAUTION **Before you make any connections from an STP-36 to a board in your computer, make sure that power to your computer and any accessories is OFF.**

Remember the following precautions when connecting any hardware to your system:

- Do NOT connect the STP-36 to voltages above those tolerated by other boards in the system. Although the STP-36 is rated for 60 volts peak-to-peak, the board to which it is connected may be rated for a much lower voltage. For example, KPCI-3108 analog inputs can only tolerate 35 volts peak without damage, and digital I/O will be damaged by voltages above +5V.
- Do NOT mix your data acquisition inputs with the AC line, or you risk damaging the computer. Data acquisition systems give users access to inputs of the computer. An inadvertent short between data and power lines can cause extensive and costly damage to your computer. The manufacturer can accept no liability for this type of accident. To prevent this problem, use the following precautions:
  - Avoid direct connections to the AC line.
  - Make sure all connections are tight and sound so that signal wires are not likely to come loose and short to high voltages.
  - Use isolation amplifiers and transformers where necessary.

Figure 2
Pin connections

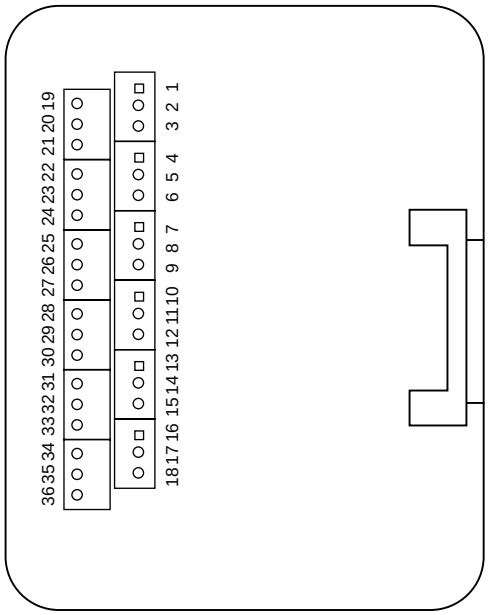


Table 1
Pin to terminal connections

Pin	Terminal	Pin	Terminal	Pin	Terminal
1	1	13	13	25	25
2	2	14	14	26	26
3	3	15	15	27	27
4	4	16	16	28	28
5	5	17	17	29	29
6	6	18	18	30	30
7	7	19	19	31	31
8	8	20	20	32	32
9	9	21	21	33	33
10	10	22	22	34	34
11	11	23	23	35	35
12	12	24	24	36	36

Wiring the STP-36

1. Before installing I/O cables and connecting I/O circuits to the STP-36, refer to the User's Guide for the board(s) to which you are connecting the STP-36.
2. Attach the CAB-1284 CC cable to the 36-pin D connector.

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