

Keithley Instruments, Inc.
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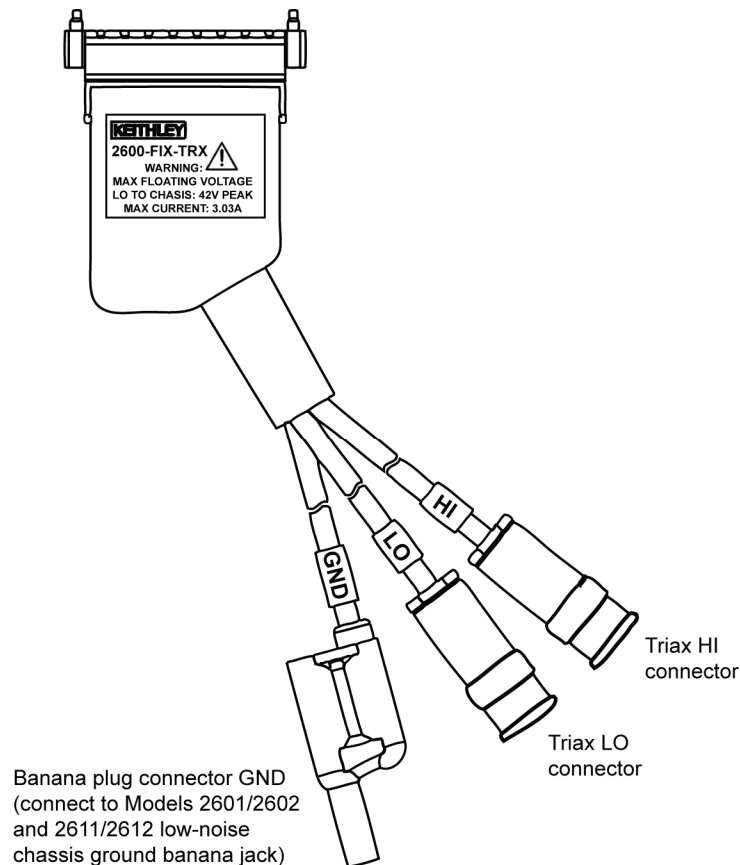
Grounded Phoenix-to-Triax Cable Adapter

Overview

WARNING *The procedures contained in this document are intended for use by qualified service personnel only. Do not perform these procedures unless qualified to do so. Failure to recognize and observe normal safety precautions could result in personal injury or death.*

The Keithley Instruments Model 2600-FIX-TRX Grounded Phoenix-to-Triax Cable Adapter (see [Figure 1](#)) is a combination dual triax connector and low-noise chassis ground banana plug connector that provides easy connection pathways between the rear-panel terminal blocks of Models 2601/2602/2611/2612 System SourceMeter® instruments (both Series 2600 and 2600A) and Models 8101-4TRX and LR-8028 test fixtures. These pathways are described in [Table 1](#).

Figure 1: Model 2600-FIX-TRX Grounded Phoenix-to-Triax Cable Adapter



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Connections

This section identifies the connections that are made within the cable adapter and how to connect it between the instruments and fixtures.

WARNING *Do not touch connectors when this assembly is connected; possible exposure to hazardous voltages could result in personal injury or death.*

You must provide an additional safety barrier to prevent the possibility of electrical shock if this cable adapter is used with an instrument capable of sourcing voltages greater the 42 V.

No interlock features are provided by this device; properly make all connections before turning on the power to any instrumentation connected to this assembly.

Table 1 describes the connection pathways between the rear-panel terminal blocks of the System SourceMeter instruments and Models 8101-4TRX and LR-8028 test fixtures.

Table 1: Connector pathway description

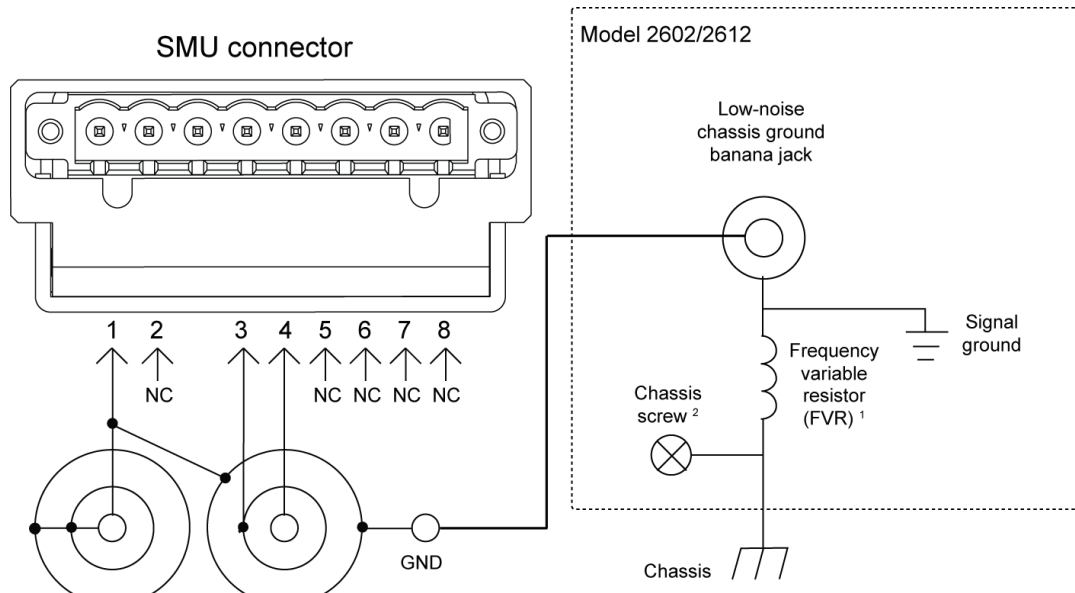
Connector	Outer shield	Inner shield	Center conductor
Triax HI	LO SMU Pin 1	Guard SMU Pin 3	HI SMU Pin 4
Triax LO	LO SMU Pin 1	LO SMU Pin 1	LO SMU Pin 1
Banana GND	N/A	N/A	LO SMU Pin 1

The banana jack, which is connected to the chassis through a frequency variable resistor (FVR), can be used as a common signal ground point for input and output LO signals. *Figure 2* shows the connector schematic for both the triax connectors and the low-noise chassis ground banana jack.

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Figure 2: Connector schematic



Notes

1. Isolate SMUs from high frequencies on the chassis. For DC to 60 Hz, the FVR is a virtual short (zero ohms).
2. DO NOT use the chassis screw terminal to make signal connections to external circuitry. High frequency (>1 MHz) on the chassis may result in higher noise.

Proper use of these cable adapters and fixtures together ensures that the source-measure units used to test a device share a common ground connection, yielding accurate measurements.

NOTE The Model 2600-FIX-TRX should not be used for 4-wire measurements because the sense leads are not connected in these connector assemblies.

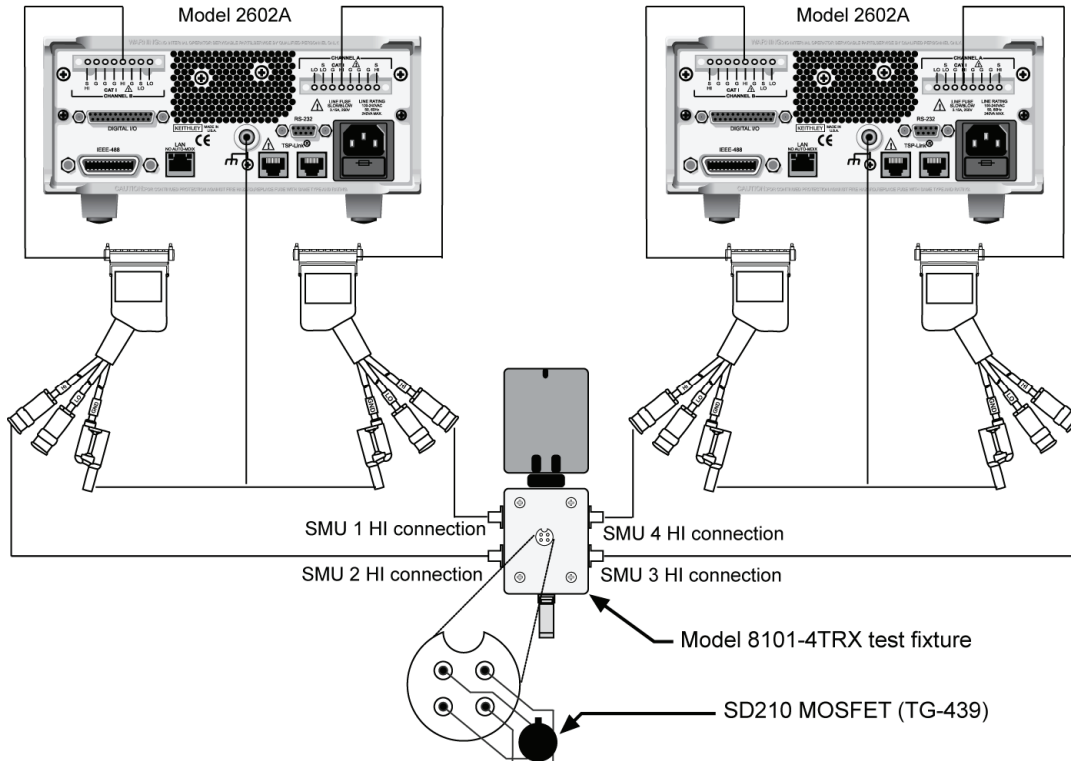
Example test connections

The example in [Figure 3](#) demonstrates how to connect two Model 2602A System SourceMeter Instruments to a Model 8101-4TRX test fixture.

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Figure 3: MOSFET testing example using four Model 2600-FIX-TRX cable adapters



For additional connection information, refer to the Series 2600A System SourceMeter® Instruments Reference Manual (document number 2600AS-901-01).

Handling and cleaning

CAUTION

Performance to current leakage specifications depends upon a clean fixture. Avoid contamination that could cause degraded performance and increase current leakages beyond specified limits.

Never use the Series 2600 chassis as a ground point for signal connections; it should only be used as a safety shield. Because high frequencies present on the chassis may result in higher noise, use the low-noise chassis ground banana jack instead. Use the chassis screw for connections to the Series 2600 chassis.

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Handling

Observe the following precautions when handling components:

- Wear cotton gloves.
- Avoid unnecessary physical contact with the connectors.

Cleaning

To clean connectors:

1. Swab the connector with methanol.
2. Quickly dry the test connector after cleaning by blowing dry nitrogen gas over it.
3. Allow the connector to dry in a 50° C, low-humidity environment for one hour.