

# **Installation Guide**

## **Agilent E5252A 10×12 Matrix Switch**



**Agilent Technologies**

**Agilent Part No. E5252-90000**

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**Edition 2**

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Instruction manual symbol: the product will be marked with this symbol when it is necessary for the user to refer to the instruction manual in order to protect against damage to the instrument.



Indicates dangerous voltage and potential for electrical shock. Do not touch terminals that have this symbol when instrument is on.



Protective conductor terminal. For protection against electrical shock in case of a fault. Used with field wiring terminals to indicate the terminal which must be connected to ground before operating equipment.



Frame or chassis terminal. A connection to the frame (chassis) of the equipment which normally includes all exposed metal structures.



Indicates earth (ground) terminal.



Alternating current.



Direct current.



ON (Supply).



OFF (Supply).



STANDBY (Supply).

CAT 1

Means INSTALLATION CATEGORY I. Measurement terminals on the rear panel comply with INSTALLATION CATEGORY I.

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**WARNING**

The warning sign denotes a hazard. It calls attention to a procedure, practice, condition or the like, which, if not correctly performed or adhered to, could result in injury or death to personal.

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**CAUTION**

The caution sign denotes a hazard. It calls attention to an operating procedure, practice, condition or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the product.

## **Printing History**

**Edition 1:** November 1995

**Edition 2:** January 2000

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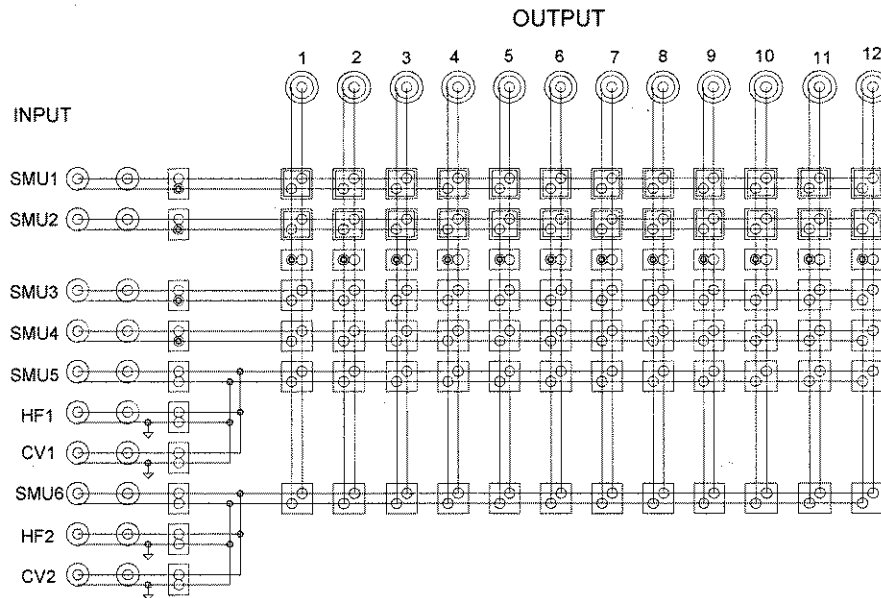
## Product Description

Agilent E5252A 10×12 Matrix Switch is a 10-input to 12-output switching matrix card for Agilent E5250A Low Leakage Switch Mainframe. The E5252A is designed for semiconductor dc parametric measurement applications that need to switch some instruments connected to Device Under Test (DUT), or need to scan instrument input/output for many DUTs, automatically.

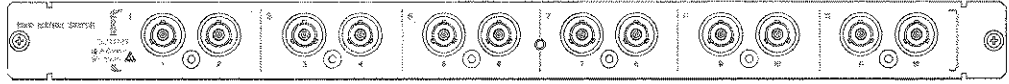
The E5250A can be installed with maximum four E5252As. And the input terminals of the E5252As are connected together inside the E5250A. So, the E5250A can also configure a 10×24 matrix (two E5252As), 10×36 matrix (three E5252As), and 10×48 matrix (four E5252As).

The E5252A block diagram and output connectors are shown below:

### Agilent E5252A Block Diagram



### Agilent E5252A Output Ports



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**WARNING**

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Do not touch the force and guard terminals of the output connectors while the E5250A is turned on. Dangerous voltages up to the maximum input voltage may be present at the output connectors.

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## Installation

This section describes how to install the E5252A card into the E5250A Mainframe. You can install the card in card slots 1 to 4 of the E5250A easily. The following procedure explains the card installation and removal.



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**WARNING**

Only qualified service personnel should install the E5252A. Before removing or installing the cards, disconnect the following from the rear side of the E5250A:

1. Disconnect the power cable.
2. Disconnect all cables from input/output terminals.

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**CAUTION**

When the E5252A is shipped from factory, it has been confirmed that the E5252A satisfies its specifications.

But after you install the E5252A into your E5250A, the specifications of your E5250A with the card are not guaranteed.

For verifying the specifications, contact your nearest Agilent Technologies Service Center.

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**CAUTION**

Use clean handling and anti-static procedures when removing, configuring, and installing the plug-in cards. The cards contain components that can be damaged by static electricity.

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**CAUTION**

Be careful about the module pins used for internal connection to the E5250A. The pins can be damaged easily.

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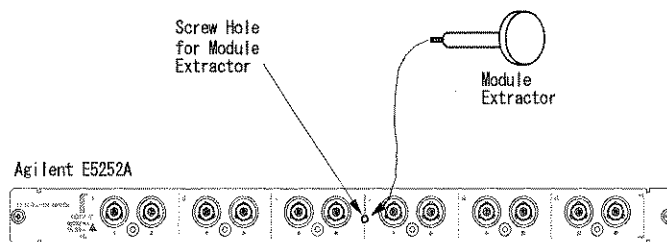


## Procedure:

1. Turn off the E5250A, then wait at least 10 seconds before you remove or install a card.
2. Remove blank panel or card from the slot where you want to install the new card as follows:
  - To remove blank panel, do as follows:

Loosen the screws on both the left and right edges of the blank panel by using the wrench furnished with the E5252A, then remove the blank panel.
  - To remove a card, do as follows:
    - a. Screw the Module Extractor into the screw hole for the extractor. See figure below. Module Extractor is furnished with the E5250A.
    - b. Loosen the screws on left and right edges of the card by using the wrench furnished with the E5252A.
    - c. Gently pull the Module Extractor to extract the card from the card slot.

### Module Extractor and Location of the Screw Hole



3. Install the card as follows:
  - a. Align the card with the left and right slot guide rails. The component side should be facing up.
  - b. Push the card into the slot until you feel it seat firmly into the connector at the back of the card slot.
  - c. Screw in the screws on the left and right edges of the card by using the wrench furnished with the E5252A.

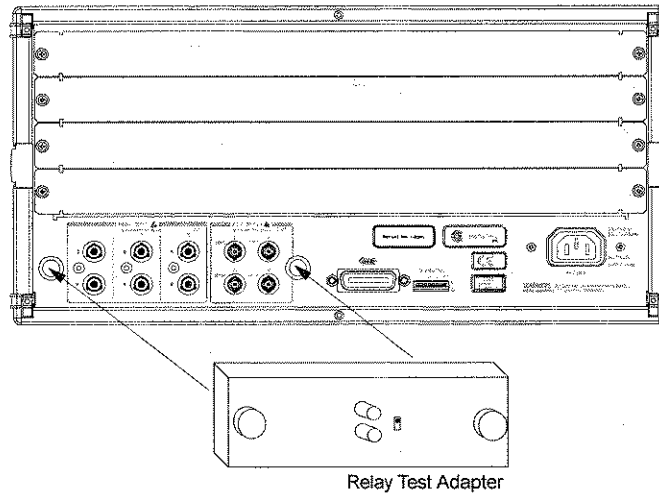
4. Execute the Relay Test as follows:

**NOTE**

To execute the relay test, you need the Relay Test Adapter (Agilent E5250A Option 301). Prepare the Relay Test Adapter.

- a. Attach the Relay Test Adapter to the E5250A input connectors as shown in the following figure.
- b. Set switch on the Relay Test Adapter to Relay Test position.
- c. Make sure no output cables are connected to any cards in the E5250A mainframe.
- d. Turn on the E5250A.
- e. Press the Local/Self Test key on the E5250A front panel. The Relay Test executes.
- f. Wait until the LED in Local/Self Test key turns off.

**Relay Test Adapter Connection**



**NOTE**

After executing the relay test, if the Fail LED turns on, the cause is one of the following:

- a. The Relay Test Adapter is not connected.
- b. A plug-in card may be defective. Contact your nearest Agilent Technologies Service Center.

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**NOTE**

The Relay Test *cannot* be used to verify the specifications of the E5250A with the E5252A.

To verify the specifications, return the E5250A with the cards installed to your nearest Agilent Technologies Service Center. The performance verification should be done by service personnel who are trained to service the E5250A, and should be performed once a year.

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