Interface Connections

Rear Panel Connections
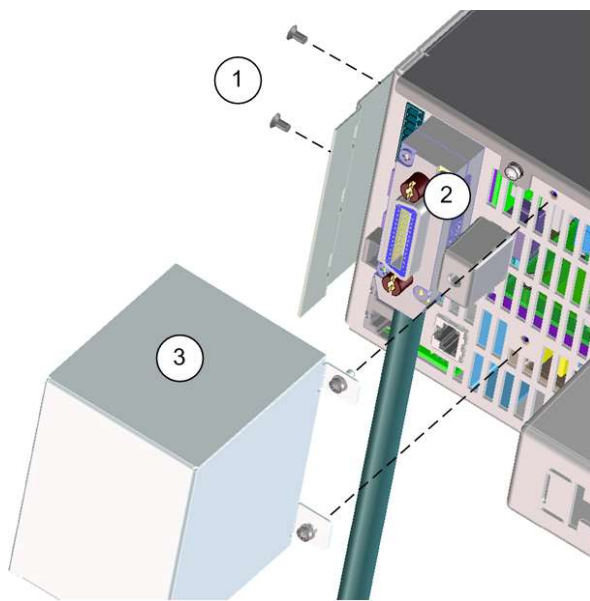
GPIB Connections

USB Connections

LAN Connections – site and private

Digital Port Connections

Rear Panel Connections

The ESD cover and hardware are shipped with the unit (see Items Supplied).

1. Connect the cover flange to the side of the instrument using the two screws provided.
   IMPORTANT – This must be done *before* rack mounting the unit.

2. Connect the LAN, USB, or GPIB cable (GPIB shown) to the appropriate rear panel connector.

3. Install the ESD cover to the back of the unit using the two screws. Make sure the cover is inserted into the flange.

Interface Connection Examples

This section describes how to connect to the various communication interfaces on your RPS. For further information about configuring the remote interfaces, refer to Remote Interface Configuration.

If you have not already done so, install the Keysight IO Libraries Suite from the Automation-Ready CD that is shipped with your instrument.

NOTE For detailed information about interface connections, refer to the Keysight Technologies USB/LAN/GPIB Interfaces Connectivity Guide, located on the Automation-Ready CD.

GPIB Connections

The following figure illustrates a typical GPIB interface system.
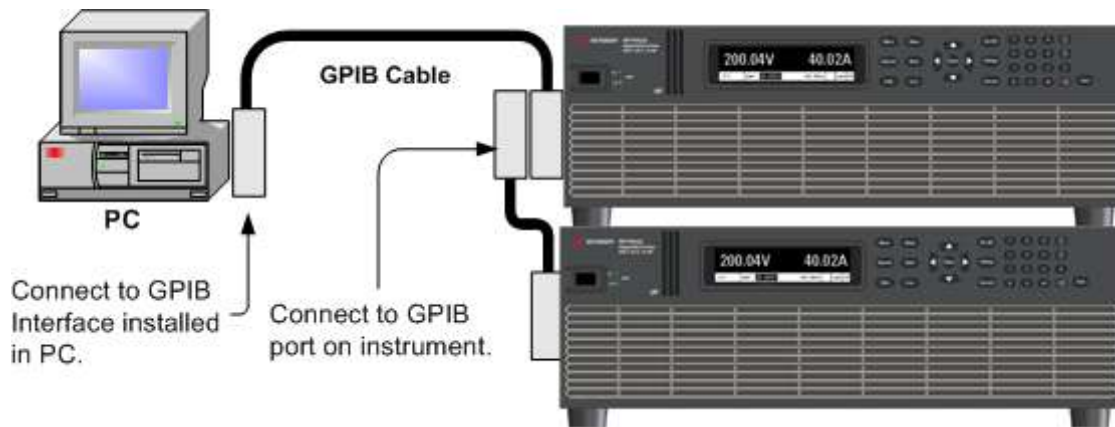
1. Connect your instrument to the GPIB interface card using a GPIB interface cable.

2. Use the Connection Expert utility of the Keysight IO Libraries Suite to configure the GPIB card's parameters.

3. You can now use Interactive IO within the Connection Expert to communicate with your instrument, or you can program your instrument using the various programming environments.

USB Connections

The following figure illustrates a typical USB interface system.

1. Connect your instrument to the USB port on your computer.

2. With the Connection Expert utility of the Keysight IO Libraries Suite running, the computer will automatically recognize the instrument. This may take several seconds. When the instrument is recognized, your computer will display the VISA alias, IDN string, and VISA address. This information is located in the USB folder.

3. You can now use Interactive IO within the Connection Expert to communicate with your instrument, or you can program your instrument using the various programming environments.

LAN Connections - site and private

A site LAN is a local area network in which LAN-enabled instruments and computers are connected to the network through routers, hubs, and/or switches. They are typically large, centrally-managed networks with services such as DHCP and DNS servers. The following figure illustrates a typical site LAN system.
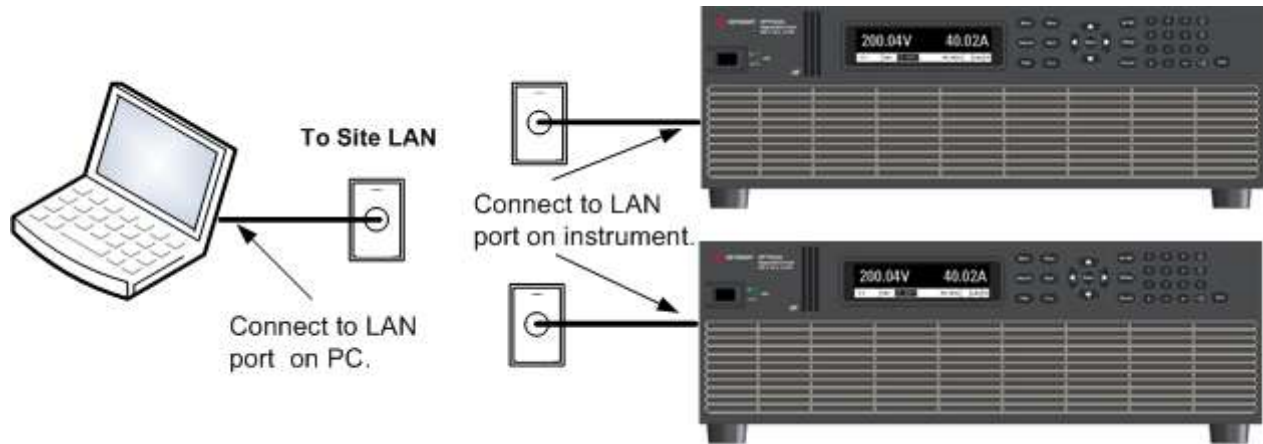
A private LAN is a network in which LAN-enabled instruments and computers are directly connected, and not connected to a site LAN. They are typically small, with no centrally-managed resources. The following figure illustrates a typical private LAN system.
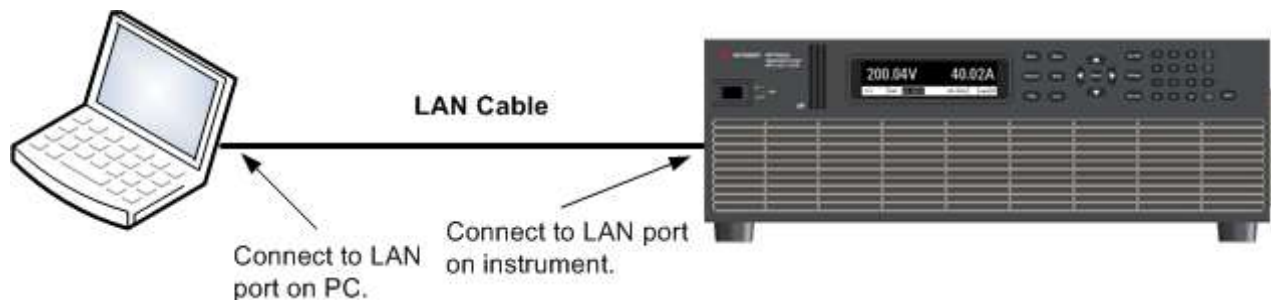
1. Connect the instrument to the site LAN or to your computer using a LAN cable. The as-shipped instrument LAN settings are configured to automatically obtain an IP address from the network using a DHCP server (DHCP is set On). The DHCP server will register the instrument's hostname with the dynamic DNS server. The hostname as well as the IP address can then be used to communicate with the instrument. If you are using a private LAN, you can leave all LAN settings as they are. Most Keysight products and most computers will automatically choose an IP address using auto-IP if a DHCP server is not present. Each assigns itself an IP address from the block 169.254.nnn. The front panel **Lan** indicator will come on when the LAN port has been configured.

2. Use the Connection Expert utility of the Keysight IO Libraries Suite to add the RPS models and verify a connection. To add the instrument, you can request the Connection Expert to discover the instrument. If the instrument cannot be found, add the instrument using the instrument's hostname or IP address.

3. You can now use Interactive IO within the Connection Expert to communicate with your instrument, or you can program your instrument using the various programming environments. You can also use the Web browser on your computer to communicate with the instrument as described under Using the Web Interface.

Digital Port Connections

NOTE	It is good engineering practice to twist and shield all signal wires to and from the digital connector. If shielded wire is used, connect only one end of the shield to chassis ground to prevent ground loops.

An 8-pin connector and a quick-disconnect connector plug are provided for accessing the digital port functions. Disconnect the connector plug to make your wire connections. The connector plug accepts wires sizes from AWG 14 (1.5 mm^2) to AWG 28 (0.14 mm^2). Wire sizes smaller than AWG 24 (0.25 mm^2) are not recommended. Strip wire insulation back 7 mm.

1. Insert wires

2. Tighten screws

3. Fault/Inhibit configurable pins (observe INH polarity)

4. Output Couple configurable pins

5. Digital IO-configurable pins

6. Signal common
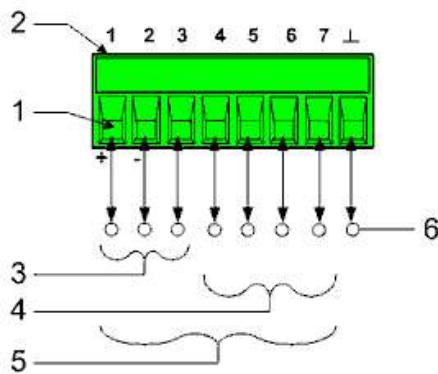
Information on using the digital port is found under Programming the Digital Port. The electrical characteristics are described under Common Characteristics.