

## Capacitance measurements

The measurement ranges for capacitance measurements are 1 nF, 10 nF, 100 nF, 1  $\mu$ F, 10  $\mu$ F, 100  $\mu$ F, 1 mF, and 10 mF.

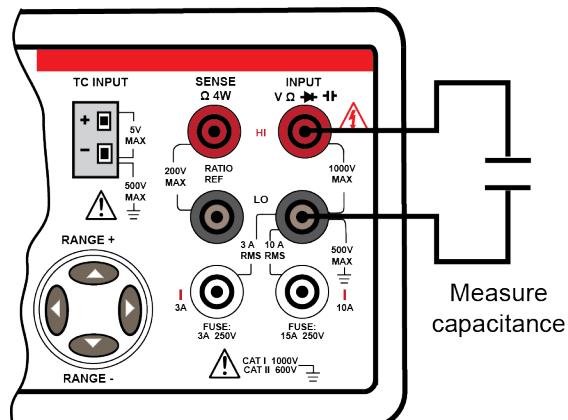
### Front-panel operation

***Perform the following steps to measure capacitance:***

1. Connect the capacitance to the Model 2110, as shown below.
2. Press the **SHIFT** and **FREQ (Hz)** keys.
3. Select a measurement range (auto or manual):
  - Autorange is the power-on default. If manual ranging is selected (MAN indicator on), press **SHIFT** and **ESC (AUTO)** to select autorange.
  - For manual ranging, press the **RANGE ▲** and **▼** keys to select a measurement range.
4. Observe the reading on the display.

## Connections to measure capacitance

**Figure 24: Connections for capacitance**



## Range selection

For best accuracy and resolution, always use an appropriate range to perform the measurement. With autorange enabled, the instrument will automatically select the optimum measurement range. Autorange is the power-on default setting.

You can select a measurement range (or autorange) in a couple of ways:

- Use the front-panel keys to select a range or control autorange.
- Use a configuration menu to select a range or control autorange.

The difference between autoranging and manual ranging is the settling time. Autorange is convenient, but a manually selected range can usually speed up the process.

If the input signal exceeds the allowable range, the **OVLD** message is displayed. The threshold for readings is 120 percent of the range for maximum and 10 percent of the range for minimum.

### NOTE

The measurement range for temperature, continuity, and diode testing is fixed and cannot be changed.

## Front-panel operation

**Perform the following steps to set measurement range using the front panel keys:**

1. Select a measurement function.
2. Select a measurement range or use autorange:
  - Use the **RANGE ▲** and **▼** keys to select a range. The **MAN** indicator turns on to indicate that manual ranging is being used.
  - Pressing **SHIFT** and then **ESC (AUTO)** toggles the instrument between manual ranging and autorange. When autorange is selected, the **MAN** indicator is off.