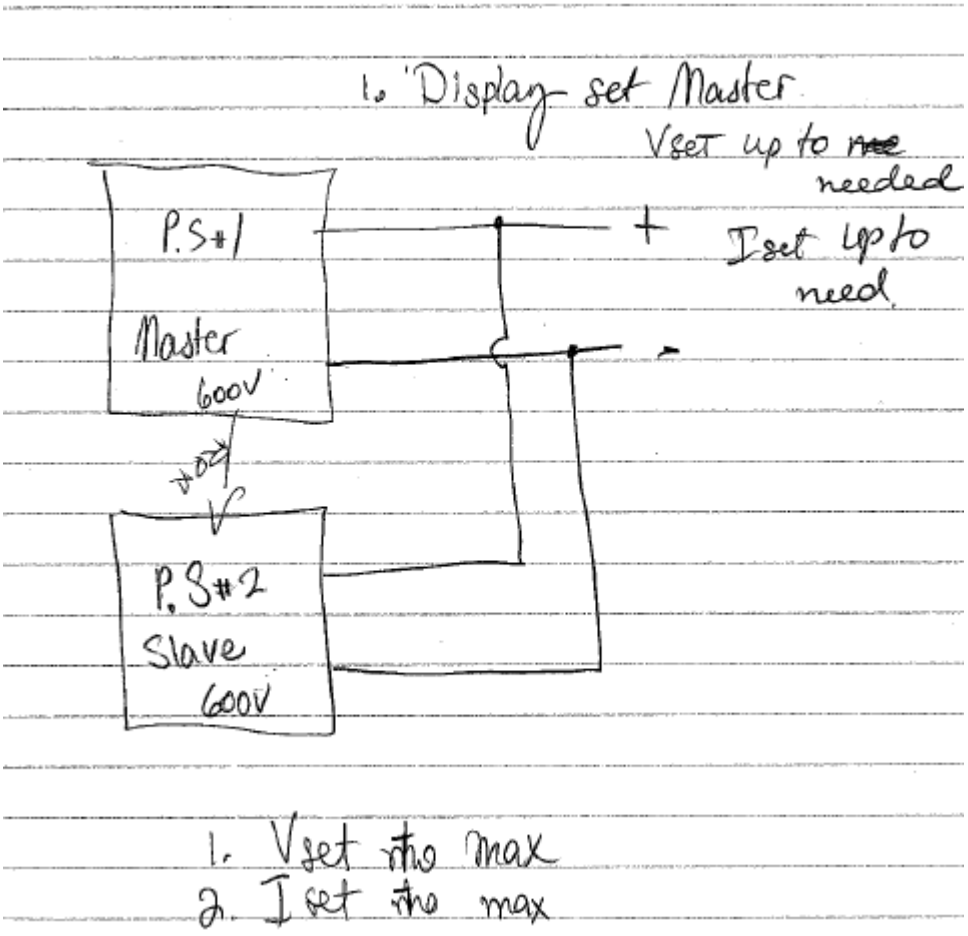
IMPORTANT INFORMATION ABOUT THE SETTING OF CURRENT SHARING ON XG

The slaves will need to be set to max on the voltage and current limit.

On the master you will set the voltage and current limit to what it is actually needed to.

You will need to enable the output on both units.



Configuring Multiple Supplies for Current Sharing Operation (APG Method)

Up to four power supplies can be connected in parallel to increase the output current. One of the units will operate as the master unit and the remaining units will operate as slave units controlled by the master unit. The master unit uses the analog programming lines to set the output voltages and currents of the slave units to match its output.

In remote digital operation, only the master unit can be programmed remotely while the slave units that are connected remotely will only provide voltage, current and status readback information.

In APG current sharing topologies, only the master unit can be programmed using any of the input methods (front panel, remote digital, or analog programming control). The slave unit(s) voltage and current output(s) are determined by the master unit through the REF_I input to each slave unit. The readback using any of the monitoring methods (front panel display, user monitor lines or SCPI measure commands) of each unit (master or slave) will provide individual unit status, not system status.

Important: If current sharing is not being used, the unit must be configured as a controller. Failure to do so will result in unpredictable operation.

Setting up the Controller Unit

Set the output voltage of the master unit to the desired voltage. Program the current set point of the master unit to the desired load current set point divided by the number of parallel units. During operation, the master unit operates in Constant Voltage mode, regulating the load voltage at the programmed output voltage. Send the Current share SCPI command or use the following instructions to program front panel current share setup:

1. With the 9-position mode control at the PGM position, press the rotary Adjust/Enter control.

   rE is displayed on the output voltage display.

2. Turn the rotary Adjust/Enter control to select CUrrShAr and press the Adjust/Enter control.

   CShr is displayed on the output voltage display.

3. Turn the rotary Adjust/Enter control to select Con1 in the output current display.

4. Press the rotary Adjust/Enter control to commit the setting.

The SCPI command (s) for these instructions are:

```
[[:]SOURce[<channel>]]:COMBine:CSHare[:MODE]
```

Setting up the Slave Units

The output voltage and current of the slave units should be programmed to maximum value. During parallel operation, the slave units operate as a controlled current source following the controller unit's output current.

All slave units must be configured with the SCPI command to enable current sharing, or use the following instructions to program front panel current share setup:

1. With the 9-position mode control at the PGM position, press the rotary Adjust/Enter control.

   rE is displayed on the output voltage display.

2. Turn the Adjust/Enter conrol to select "CUrrShAr" and press the Adjust/Enter control.

   CShr is displayed on the output voltage display.

3. Turn the rotary Adjust/Enter control to select SLA in the output current display.

4. Press the rotary Adjust/Enter control to commit the setting.

The SCPI command (s) for these instructions are:

```
[[:]SOURce[<channel>]]:COMBine:CSHare[:MODE]
```

Important: The slave unit discussed here is not the same as the remote interface slave described in chapter 5.

Setting Over Voltage Protection (OVP)

The master unit's OVP should be programmed to the desired OVP level. The OVP of the slave units should be programmed to a higher value than the master OVP. When the controller unit shuts down, it will program the outputs of the slave units to zero volts. If a slave unit shuts down, only that unit would shut down and the remaining slave units would supply all the load current if possible.

Setting Foldback Protection

Foldback protection is only available on the master units as the slaves operate in constant current mode. They should never crossover into constant voltage mode. If foldback is triggered on the master unit, when its output shuts down, it will program the slave unit's output to zero volts.

Connecting to the Load in Local Sensing Mode (Parallel Control Method)

Connect the power supplies in parallel to obtain a single output supply with a higher output current set point. Set all of the outputs to the same voltage before connecting the positive (+) and negative (-) terminals in parallel. The total current available is the sum of the maximum currents of each power supply.

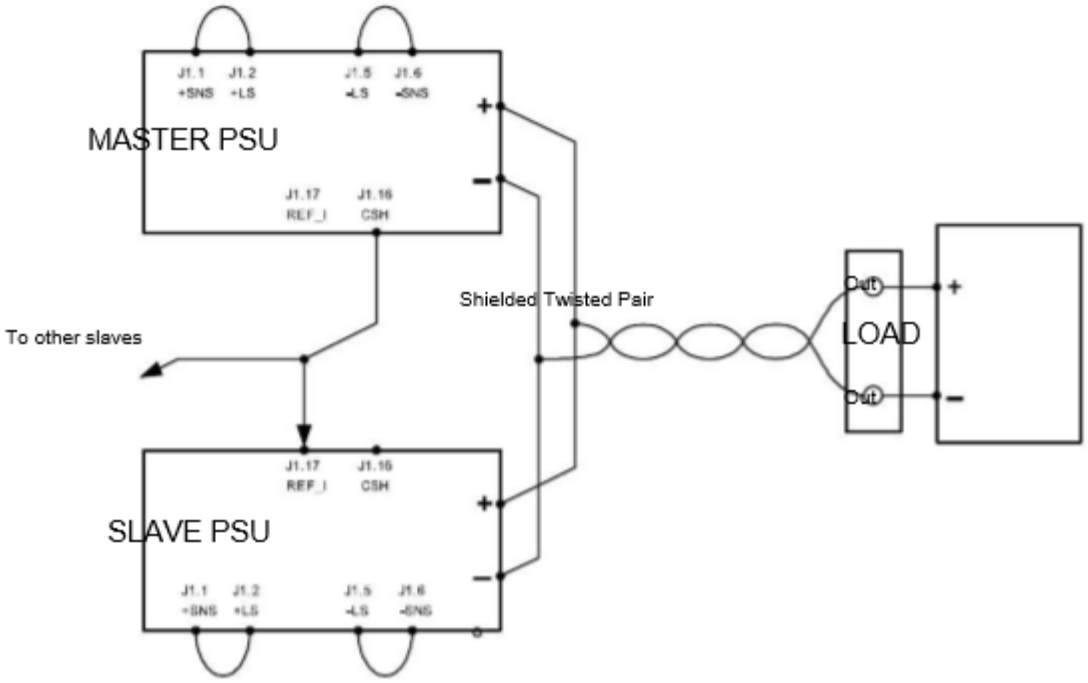


Figure 3-7 Load Connections in Local Sensing Mode