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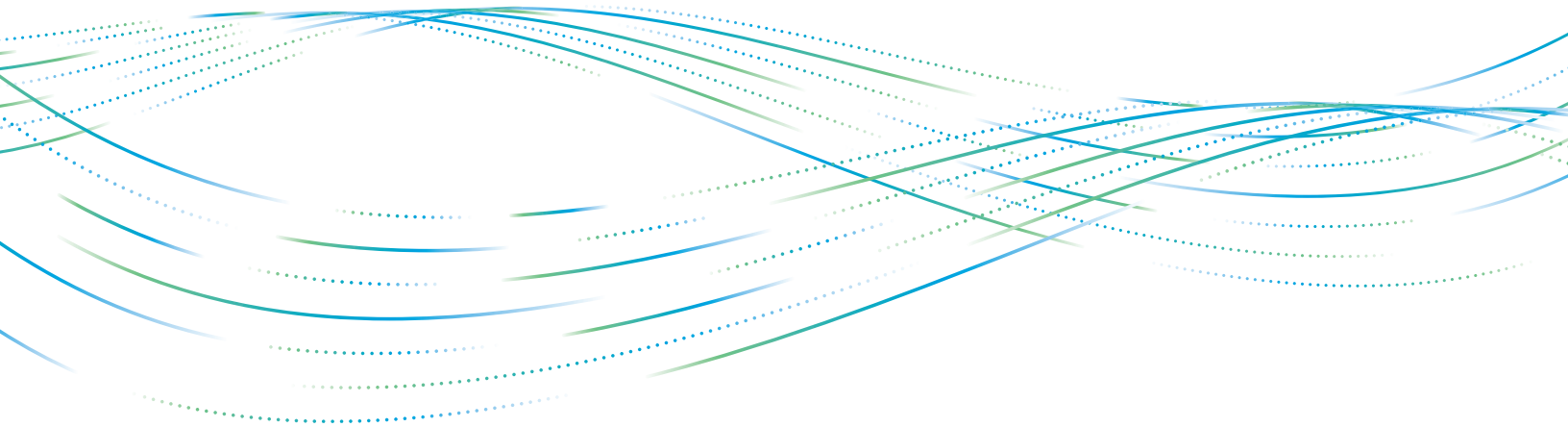
Chroma

APPLICATION NOTE

Using the 62000D with +/-400V Systems

Chroma 62000D Series

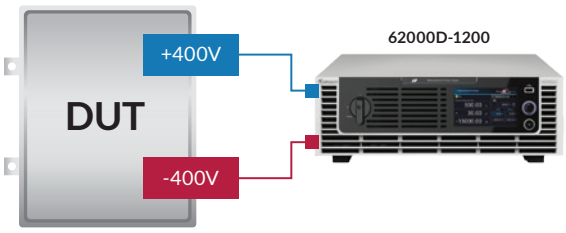


The 62000D is a Bi-Directional DC Power Supply. This is a two-quadrant operating device, +V +I and +V -I. As it is not a four-quadrant device, the unit can be damaged if a positive voltage is applied in reverse. Therefore, we must be careful when using these units to test +/- voltage systems. Below are two appropriate use cases for the 62000D Bi-Directional Power Supply:

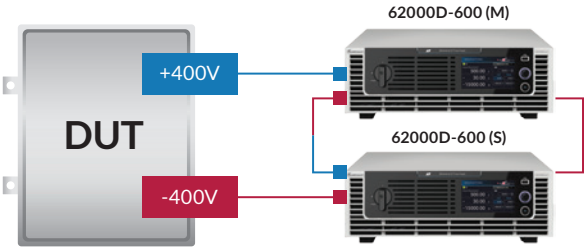
Case 1: No Neutral

In this case, the DUT does not have a neutral terminal and is applying +400V to the positive terminal and -400V to the negative terminal of the 62000Ds. Due to the floating nature of the 62000D output stage, the unit reads the total voltage as +800V. This setup can be done with a single unit connected to the DUT, or with two units in series for higher voltage/power.

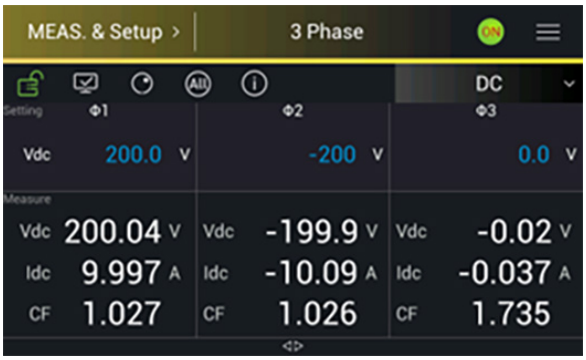
Single Unit

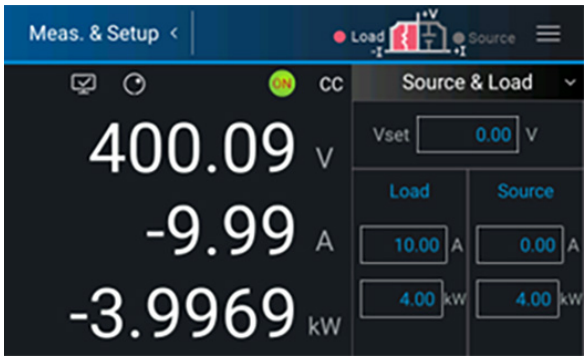


Two Units in Series

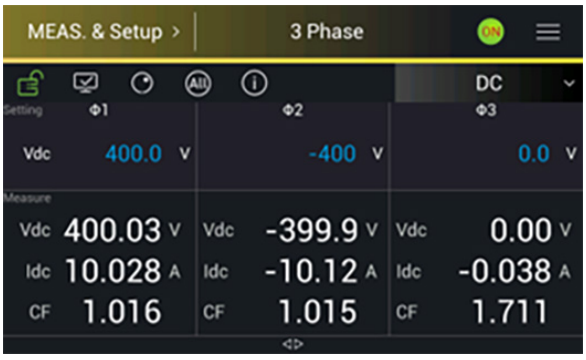


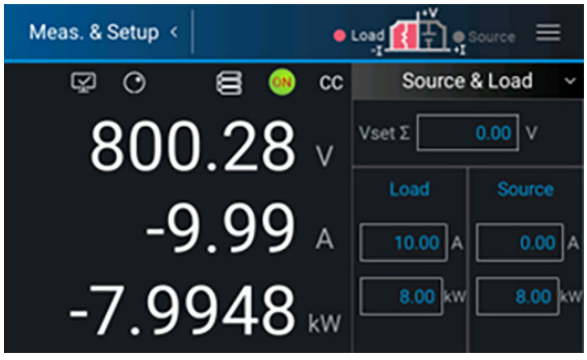
Single Unit (62060D-600 used so voltage limited)





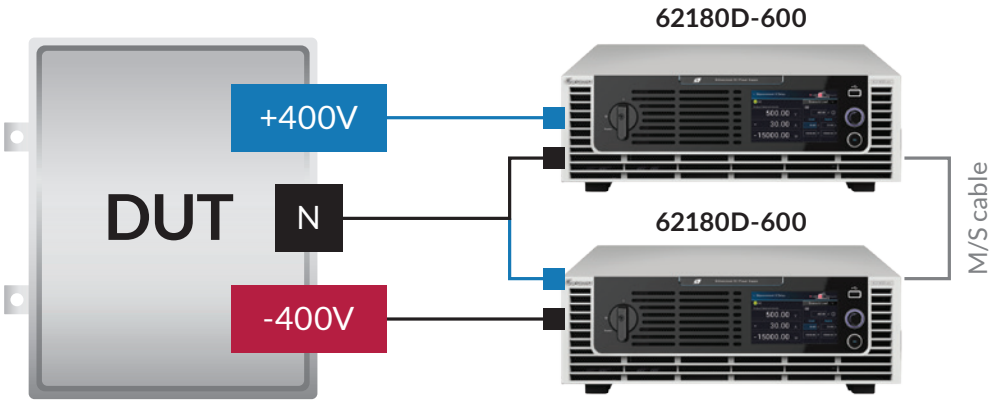
Two Units in Series



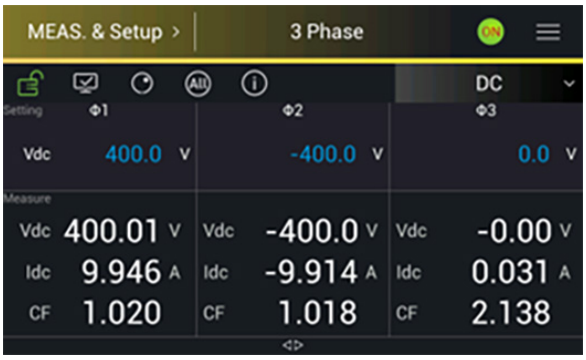


Case 2: With Neutral

In this case, the DUT does have a neutral terminal while applying the +/-400V to the respective terminals. For this testing, two units will be used to load each of the 400V blocks with the connections below. These units can be controlled independently or in M/S Series. Operating independently allows for each unit to be set on their own which allows for unbalanced systems. M/S mode is recommended for bidirectional applications.



62000Ds Operating Independently



62000Ds Operating M/S Series