

BriPower ZGX Series Function Introduction: Bipolar DC Power Supply

Bipolar DC power supply is an important tool for various applications that require positive and negative voltages. Bipolar DC power supplies typically have three output terminals: positive output (+V), providing a positive voltage relative to ground; Negative output (- V), providing a negative voltage relative to ground; Common ground (0V) serves as a reference point for both outputs. The power supply can smoothly transition between positive and negative voltages.



Bipolar DC power supplies are indispensable in many fields, from electronic testing to industry and scientific research.

The ZGX series of BriPower is a compact modular AC/DC source carrier integrated machine that uses SiC as the main circuit power device. The maximum output power of a single machine is 20KW, and it adopts a 4U chassis design, which can expand power through master-slave parallel connection.

ZGX provides bipolar DC output function, which includes two port and three port connection methods to meet different application requirements.

Two port mode: Select any two phases of ABC as the output terminals, for example, set phase A as positive voltage and phase B as negative voltage; When polarity reversal is required, set phase A as negative voltage and phase B as positive voltage. In dual port bipolar DC output mode, ZGX15 has an output power of 10KW, a voltage range of $\pm 1272\text{V}$, and a current range of $\pm 30\text{A}$. The connection diagram is shown in Figure 1.

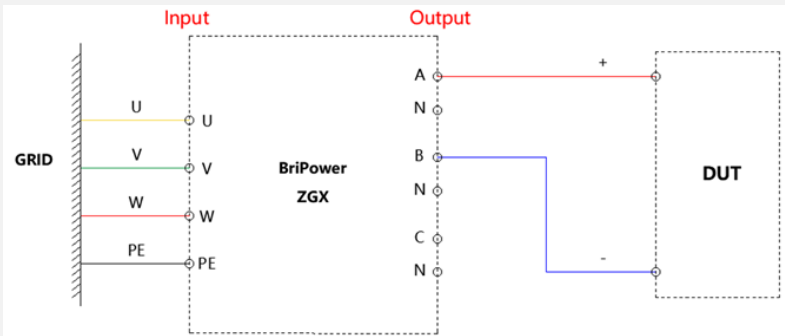


Figure 1 Output connection of ZGX series dual port bipolar DC mode

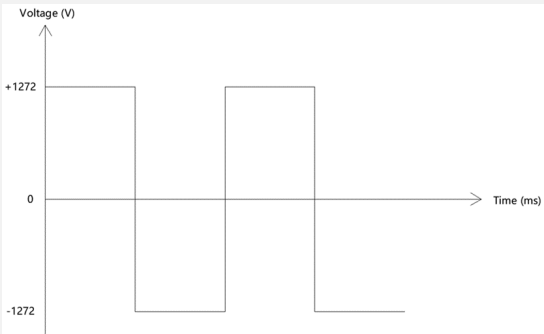


Figure 2 Example of ZGX Dual Port Bipolar DC Mode Output Voltage Curve

Three port mode, in which phase A is used as the positive voltage output terminal, phase B is used as the negative voltage output terminal, and the neutral terminals of phase A and phase B are short circuited as PE. In the three port bipolar DC output mode, ZGX15 has an output power of 10KW, a voltage range of $\pm 636\text{V}$, and a current range of $\pm 30\text{A}$. The voltage values of positive and negative voltages can be the same or different. The connection diagram is shown in Figure 3.

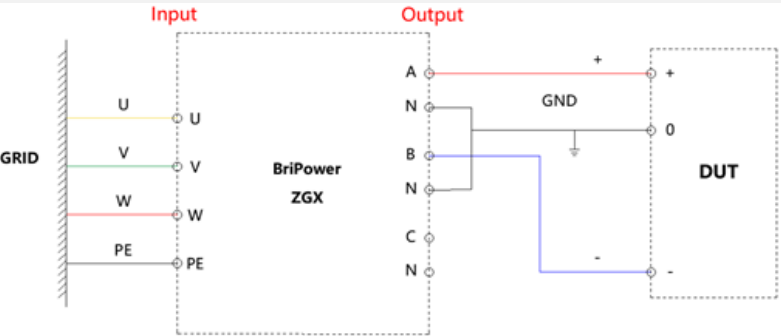


Figure 3 Output connection of ZGX series three port bipolar DC mode

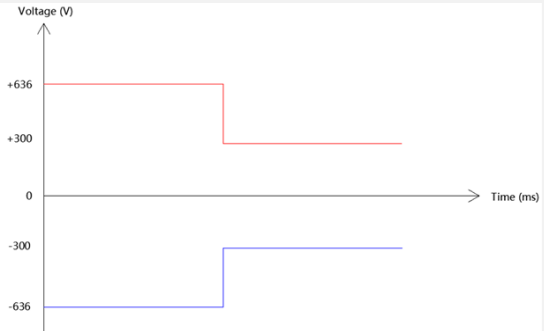


Figure 4 Example of output voltage curve for three port bipolar DC mode