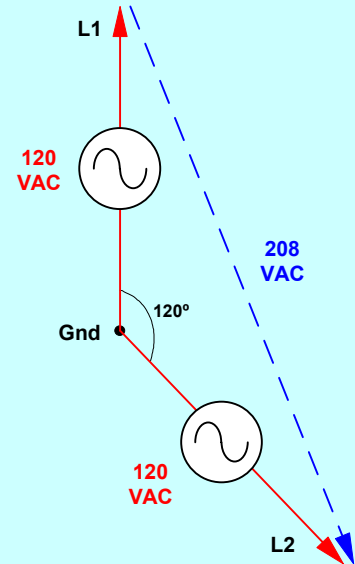
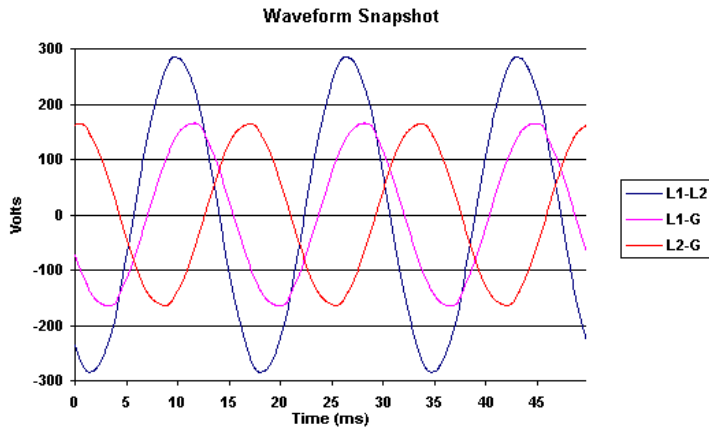


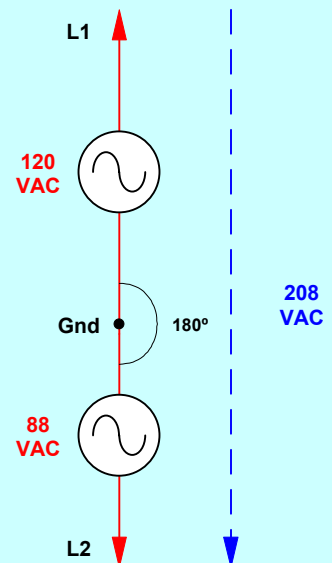
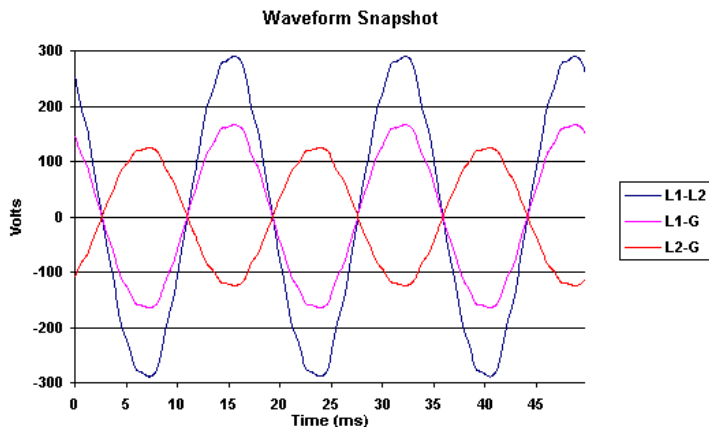


Do you have a piece of equipment that requires both 120 VAC and 208 VAC power, and might require power protection? Some things you need to know about how that voltage is derived!



**How the Utility Creates 208 VAC Single Phase**

Utility power derives 208 VAC from a Three Phase source – with two phases that deliver 120 VAC, separated by 120 Degrees. Here – the phase relationships of L1 and L2 to Ground are compared to the L1-L2 Voltage that is derived. Higher cost UPS systems, using two single-phase output inverters, will also derive 208 VAC in this manner.



**How Many UPS Systems Create 208 VAC**

Lower cost UPS systems, using a single inverter, derive 208 VAC with two outputs – separated by 180 degrees. The outputs are typically unbalanced (120 VAC and 88 VAC, referenced to Ground). This can be confusing - since 88 VAC is not a typical nominal AC voltage. This voltage arrangement is perfectly normal for many types of UPS or power conditioner. *Be careful, however! If a large number of 120 VAC loads are also supplied from this type of UPS, load imbalance and distortion can occur!*