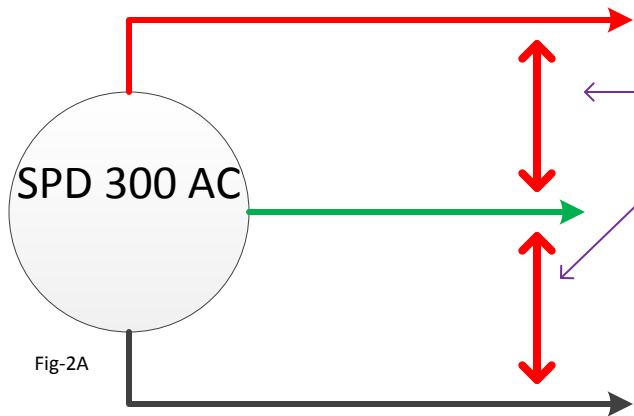
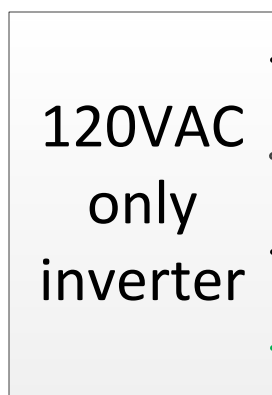


The SPD 115, SPD 300 DC and SPD 600 must have a voltage present between Red and Black and Red must be positive if DC in order to Light the LEDs. Both LEDs will always be lit. The SPD300 DC can be used for 120/240 AC as there is a voltage differential between L1 and L2 as shown below in Fig-4A.



The SPD 300 AC needs a voltage differential between red and green and also between black and green. When used on DC the Black side LED will not illuminate because it is hooked to negative and as seen below (Fig-5A) there is no voltage differential between negative and ground. The Negative is still protected from surges it simply has no voltage under normal conditions thus the LED would not light. This SPD is basically designed for specific use on 120vac circuits.



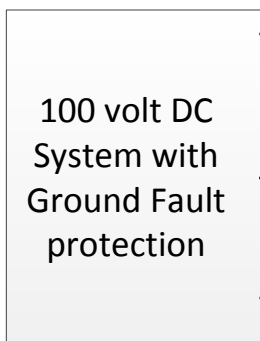
120VAC only (USE SPD 300 AC)
 AC Hot Out to AC Hot In will be 0 volts
 AC hot Out to ground will be 120 volts
 AC Hot In to ground will be 120 volts

Fig-3A



Use SPD300 AC or DC for this inverter
 AC Hot Out L1 to L2 = 240 volts
 AC Hot Out L1 to AC Hot In L1 = 0 volts
 AC Hot Out L1 to Ground = 120 volts
 AC Hot Out L2 to AC Hot In L2 = 0 volts
 AC Hot Out L2 to Ground = 120 volts
 AC Hot In L1 to L2 = 240 volts
 AC Hot Out L1 to Ground = 120 volts
 AC Hot Out L2 to Ground = 120 volts

Fig-4A



For this system lets assume a 100 volt DC PV array
 PV + tp PV - 100 volts
 PV + to Earth Ground 100 volts
 PV - to Earth Ground 0 volts

Fig-5A