

Transformer-less grid connected inverter with two separate pv arrays while minimizing leakage current

Current invention presents a transformer-less grid connected inverter, capable of extracting maximum power from two PV arrays while ensuring minimum leakage current flow.

The Technology

The grid connected inverter comprises

- A first photo voltaic (PV) array and a second PV array.
- A first set of switches and first inductor and second set of switches and second inductor.
- Both PV arrays are operated simultaneously to fed positive sinusoidal current and negative sinusoidal current to grid.
- The first PV generates positive sinusoidal current in positive half cycle by operating first set of switches.
- The first PV array generates negative sinusoidal current in negative half cycle by operating second set of switches.
- The second PV array generates positive sinusoidal current in positive half cycle by operating second set of switches.
- The second PV array generates negative sinusoidal current in negative half cycle by operating first set of switches.

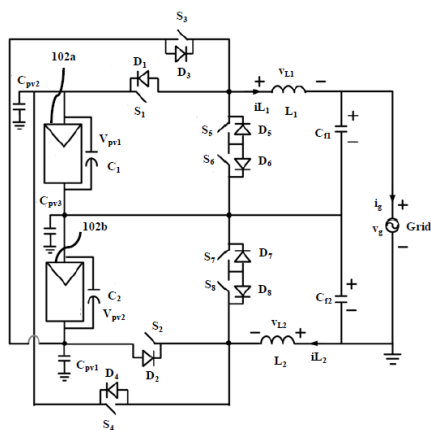


Fig -1: Grid Connected Inverter minimizing leakage of current in Grid connected Inverter

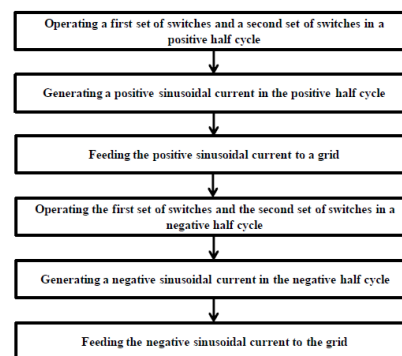


Fig - 2: Method for