

SPS PAVAN –25[®]

SPS-PAVAN 25[®]

Unique Single phase 25KW Bi-directional grid Tie Wind Inverter makes net metering possible for farm & industrial customers.

Small and community-wind farms (25 kW to 100KW) are fast growing markets in North America for wind energy application. But this great opportunity has its draw backs. Farms are mostly supplied with split single phase power. Though single phase inverters are available for small wind turbines, such products are not practically usable at such power levels. Larger wind turbines at such power levels typically work on three phase power systems which are not readily available in the rural areas therefore such available products are also not practical for this application.

Though available Wind inverters have lot of advanced features, these inverter systems can only supply power in to a grid. Power can't be taken from the grid for critical functions such as electrical breaking under high wind conditions or starting a turbine & overcoming its inertia under light wind conditions. This is an issue that forces turbine manufactures to design around the drawback by adding larger resistor & mechanical brake systems. This drives the product cost up.

A third issue is safety. To our knowledge, there are no UL 1741 certified bi-directional single phase 25KW -100KW systems commercially available to the small and community-wind-turbine manufactures at this time.

Smart Power Systems Inc. has developed a solution to such problems by introducing a 25kw single phase bi-directional inverter. The **SPS-Pavan 25** features minimum harmonic point tracking to reduce the harmonic distortion and a unity power factor operation while drawing or supplying power into a single phase grid.

This inverter has passed UL 1741 certification tests at METLABs Inc and is certified for production. The 25-kW model can be paralleled to make 50 or 100 kW systems. Three such inverters can also be used to make 3-phase high power systems. The **SPS PAVAN-25** inverter is said to be a versatile unit that with minor modifications can be used for solar farms as well.

SPS PAVAN -25 features include:

- Single phase grid tie in for generated power
- Bi-directional power conversion
- Net metering made possible for single phase farm lines and small businesses.
- Useful where three phase power is unavailable or prohibitively expensive
- Helps energy production under light wind conditions by starting a wind turbine from rest.
- Provides assistance in shutting down the wind turbine under high wind conditions.
- Low harmonic distortions, less than 5 %
- Possible to add power generation capacity through modular approach. (up to 100kw)
- UL 1741 certified

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