www TheSunPays co.za	Inverters 5.5 kW / 5.5 kVA (**Single**) Installation & start-up checklist	
Checklist prior to start-up		✓
AC	AC input circuit breaker	40A double pole	
	AC output circuit breaker	20A / 25A double pole	
	3 core copper wire	Cable size to be specified by electrician, recommend 4mm^2 minimum	
	Inverter AC supply	From main supply, before earth leakage	
	Inverter AC output	Supplies the earth leakage in the DB board	
	Neutral / Earth wires on AC output	Needs to be bonded, before the earth leakage device	
	AC surge arrestor / AVS / AVR (for generators)	Recommended.	
Battery	Lead acid battery	Any type, minimum 4x 200AH. Recommend 8x **200AH to achieve the inverter rated capacity**.	
	Lithium battery	Battery BMS need to supply at least 100A continuously.	
		If more than one battery, connect battery no 1 positive to the inverter and last battery negative to inverter.	
	Battery cable	25mm^2 or 35mm^2 copper cable, max 2m length, equal length for + and - wires	
	DC battery circuit breaker / fuse	125A	
	Battery balancer	Connected to each 12V battery to ensure balance between batteries. Not applicable if 48V Lithium battery is used.	
Solar	Solar panels in series	Open circuit voltage (Voc) < 450V. Check with multi-meter on a sunny day	
		120V < Max. power voltage (Vmp) < 450V. Calculate this value: Vmp x # of panels in series	
	Solar panels	Total panel power < 5500W$_p$	
	Solar strings	Max 2 strings / max 20A from panels to inverter	
	Fuse / DC circuit breaker	15A per parallel string	
	DC surge arrestor	Recommended	
	Solar cable	Recommend 6mm^2 cable rated for 1500V, max 3 strings per cable	
	Solar panel array grounding	All solar panels frames are connected to copper wire and is grounded properly. **NB – For this inverter, ensure that the grounded wire is not connected to the inverter directly or indirectly. Special care should be taken for houses with metal roofs since the roof is usually connected with utility earth.**	
	Caution	This is inverter is non-isolated. Do not work on the PV wires while utility is connected and/or the inverter is switched on.	
		This is a high PV voltage inverter. Care should be taken when connecting many panels in series to prevent injury at high voltages.	
	Aux. fittings	MC4 connectors single/parallel, PV solar panel mounting rails, anti-theft clips, roof brackets, etc.	
General notes:			
Do not make live connections. Switch off AC supply when connecting AC wires. Disconnect Solar panels when connecting solar wires. Switch off battery circuit breakers when connecting battery wires.			
Prior to switching on circuit breakers / fuses / inverter, double and triple check that the wires are in the correct places and positions. Having 2 wires switched will cause damage to the inverter. It takes a few moments to double check all connections.			
When your electrician issues a CoC, please ensure that the inverter is disconnected from AC wires when a "Megger" or any other high voltage testing device is used.			
Start-up			
Ensure all circuit breakers / fuses are switched off. This includes AC supply, AC output, battery and solar panels.			
Switch on the battery circuit breaker / fuse.			
Switch on the inverter by means of "stand-by" button below / on the side the inverter.			
Enter the settings menu and set the correct settings for the inverter. This will affect how the inverter will behave (ie UPS / hybrid / offgrid) and will determine how long the batteries will last. The inverter user manual has a detailed description of each setting and it's purpose. Ask the battery supplier of charge settings for the batteries (charge voltage / float voltage / charge current / cut-off voltage).			
After all settings was changed to the desired values, switch off the inverter by means of the "Stand-by" switch and battery circuit breaker.			
The system is now ready to be used. Power the system up by starting with batteries, inverter, AC in, AC out and finally solar panels.			

Full warranty terms and conditions: https://shop.thesunpays.co.za/pages/product-warranty
User manual: https://shop.thesunpays.co.za/pages/technical-support