

# Recommendations

## Recommendations on batteries

### AGM/Gel Battery Important information & Axpert Inverter Settings

- ▶ To ensure optimal battery life, set the inverter / charge controller charge current not to exceed the maximum charge current. It is recommended to set it at 50% lower than the maximum charge current of the battery.
- ▶ For batteries connected in series, the maximum charge current will still be the same as for a single battery. Hence, for 4x 200AH batteries connected in series to obtain 48V, the maximum charge current is still 46.3A. The charge current can be increased if parallel (or more) sets is connected in series (ie. 8x, 12x, 16x etc batteries).
- ▶ The battery life expectancy is strongly dependant on the depth of discharge (DoD) of the battery. A DoD of 50% is recommended for the battery to obtain at least 1000 cycles. The 50% DoD voltage is 49.2 V
- ▶ Do not leave a battery at 50% state of charge for longer than 18 hours. If it is overcast, use utility power to recharge the battery. The electricity cost to recharge in this instance is much less than replacing all the batteries. If possible, set setting 01 to SOL and setting 16 to CSO. This will allow maximum life for AGM/Gel batteries.
- ▶ Utility/generator will only charge the batteries if the battery voltage is below setting 12 value.

The following settings can be used on the Axpert, M5000 and Victron inverters for AGM/Gel batteries:

Setting Description	Value	4kW /5kW – Menu Item No.	Sacolar / Growatt– Menu Item No.
Discharge Priority	SBU	1	1
Total Charge Current	[4x 100AH Batteries in series] - 10 Amp [4x 150AH Batteries in series] - 20 Amp [4x 200AH Batteries in series] - 20 Amp [8x 100AH Batteries; 2 parallel, 4 in series] - 20 Amp [8x 150AH Batteries; 2 parallel, 4 in series] - 40 Amp [8x 200AH Batteries; 2 parallel, 4 in series] - 50 Amp	2	2
Battery Type	USE	5	5
Back to Utility	49.0 V (if generator is used, set to 51V)	12	12
Back to Battery	54V (if generator is used, set to 52V)	13	13
Charge Priority	SnU	16	14
Charge Voltage	56.4V	26	19
Floating Voltage	55.2V	27	20
Battery Cut-off	48V (Alarm will sound from 49V)	29	21

The following settings can be used on the TSP 5.5 kVa / 5.5 kW high voltage inverter.

Setting Description	Value	TSP 4kW /5kW – Menu Item No.
Discharge and Charge priority	PUL or PAL	1
Battery Type	USE	4
Bulk Charge Voltage	56.4 V	5
Floating Charge Voltage	55.2 V	6
Low Voltage Alarm	49.1 V	7
Low Voltage Cut-off	48.0 V	8

#### \*NB:

Purchased back-up kits are pre-configured according to the technical specifications of the components offered. Any deviation from the original purchased kit void all or specific parts of implied warranties. Pictures are used for illustrative purposes only.