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Silver 24V + 48V Installation Instructions

	<u>24V</u>	<u>48V</u>
Max Bulk Charge Voltage	29.2V	58.4V
Recommended Bulk Charge Voltage (95% SoC)	28.8V	57.6V
Float Voltage	27.2V	54.4V
Recommended Discharge Cut Off (10% SoC)	24V	48V
Min Discharge Cut Off (0% SoC)	20V	40V
Max Charge/Discharge	100A	100A
Recommended Charge/Discharge	50A	50A
Parallel Support	16	16
Series Support	NO	NO

Departure from these values may result in degraded performance or longevity and large departures may result in warranty being voided.

Maximum values above are supported but for greatest life expectancy recommended values should be used.

All battery equalisation programs must be disabled.

Float Voltage may be set to 0V or disabled; float charge is not required for lithium batteries.

We do not recommend setting discharge cut off too close to the minimum 0% SoC, this is where the BMS goes into protection mode and can result in unexpected behaviour.

If the inverter does not allow precise voltage settings use the Gel/AGM charging behaviour.

Ensure the correct sized cables are used as is required by the inverter.

Installation by a professional is highly recommended to ensure safety and stability.

Best practices for installation should always be followed along with adherence to local regulations.

LiFePO₄WER accepts no liability whatsoever for any direct or indirect losses, damages, injuries, or deaths occurred by the purchase or use of its products.

LiFePO₄WER reserves the right to update these instructions from time to time, the update will apply to all products past and present and shall be communicated by publishing on the official website:

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Single Battery Installation

Ensure both inverter and battery are switched off.

Slip protective covers off, use a 6mm Allen Key to remove terminal bolts, set lug under the flat and spring washer, screw in the terminal bolts until the spring washer bottoms out. This will ensure correct pressure is applied to the lug. Connect positive and negative terminals to each.

Configure dip switches (refer to Communication Protocol and Address Assignment below)

Connect the inverter to the battery via the "Comm B" port if using comms (refer to Cable Construction below)

Turn battery on.

Turn inverter on.

Parallel Installation

Charge individual batteries to the same voltage separately before connecting in parallel. Failure to do so could result in large current discharge when connecting.

Do not mix models, brands, or types of batteries.

Batteries should all be connected to the same busbar and inverter/s.

RS485/CAN communication is **REQUIRED** for all parallel set ups.

RS485/CAN Communication

Communication is not required for single battery operation but can provide useful information and control over the battery and is therefore recommended.

The LiFePO₄WER Silver Range incorporates RS485 or CAN communication protocols via an RJ45 (ethernet/LAN) cable.

RS232 is for manufacturer use only.

In order for correct communication to occur the battery and inverter pinouts need to be correctly connected.

This is the **MAIN PROBLEM** with many set ups if not configured correctly.

Please ensure the below instructions are carefully followed.

Cable Construction

As there are many different pinouts a standard ethernet cable will NOT work.

The pin-out of the inverter must match the pin-out of the battery.

This will require a custom crossover cable be made that connects each pin correctly.

Your inverter manual or specifications will have the relevant information to match pins.

CAT5 or higher may be used.

PIN	COMM B
1	RS485-B
2	RS485-A
3	GND
4	CANH
5	CANL
6	GND
7	RS485-A
8	RS485-B

Connect the inverter to the battery via the "COMM B" port; Using EITHER RS485 OR CAN, make sure the unused pins for your chosen connection are disconnected.

Communication Protocol

Many inverters offer a choice between protocols/brands, please match the communication protocol of the battery to the one used by your inverter.

Set all dip switches according to connection (RS485 or CAN) and protocols using dip switches 5 and 6 according to the table below:

RS485		
Protocol	Switch 5	Switch 6
SRNE	OFF	OFF
Voltronic	OFF	ON
Growatt	ON	ON

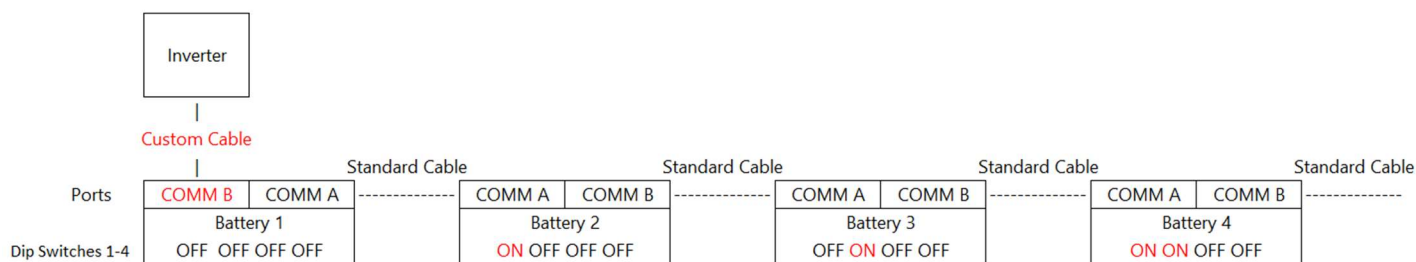
CAN		
Protocol	Switch 5	Switch 6
Luxpower	OFF	OFF
Pylontech/Deye/Goodwe	OFF	ON
Victron/SMA/Sofar	ON	OFF
Growatt	ON	ON

If the pinouts and protocol are matched the LiFePO₄WER Silver Range will be compatible with all major brands of inverters.

Address Assignment

In order for the inverter to differentiate between multiple batteries an address needs to be assigned via the dip switches 1-4.

In order for the inverter to communicate with all the batteries they should be connected as per the diagram below.



NOTE: Only the Inverter to Battery 1 connection is required to be customised. Battery to battery cables should be standard ethernet/LAN cables, CAT5 or higher.

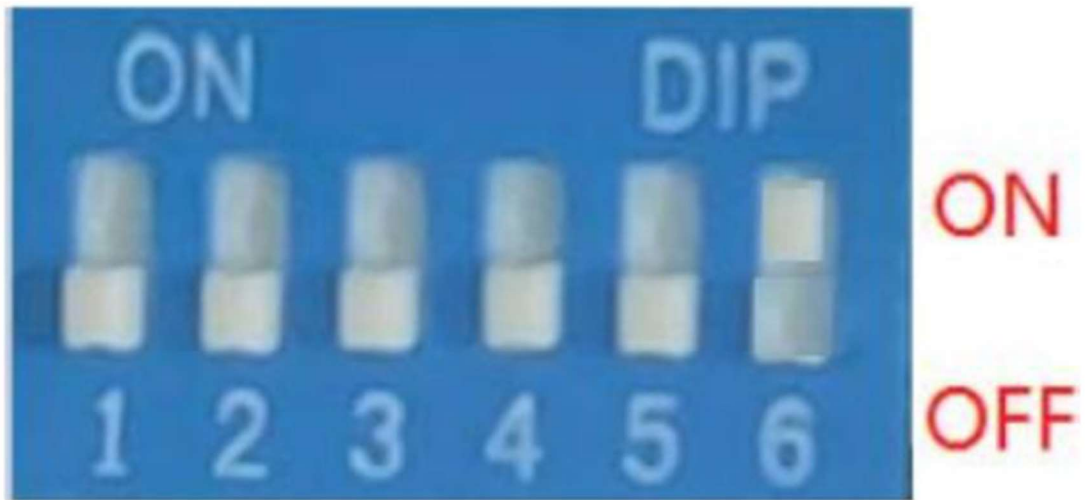
Dip switches must be set exactly as shown.

For strings of more than 4 batteries please contact us for the address settings, up to 16 batteries can be connected.

Turn each battery on in sequence, waiting for each unit to boot (green power light and state of charge lights) before moving to the next.

Once all batteries are on then turn the inverter on.

Dip Switch



LAN Cable Pin Outs

