

L I F E P O W E R 4 V 2 U P G R A D E S

A P P N O T E

UPGRADED COMMUNICATION TECHNOLOGY

The LifePower4 battery will now be equipped with an upgraded communication board. This upgrade comes with many ease-of-use benefits that speed up commissioning times, reduce learning curves, and improve user-interface.

- **No DIP switches – Auto-Identification:** The system automatically assigns battery IDs for closed-loop communication. Ensure the master battery is powered on first; secondary batteries will receive their IDs upon activation after the master.
- **Automatic Protocol Selection – Auto-Match:** The battery automatically detects and configures the correct protocol for any inverter supported in EG4's protocol list.

MODEL CHANGES

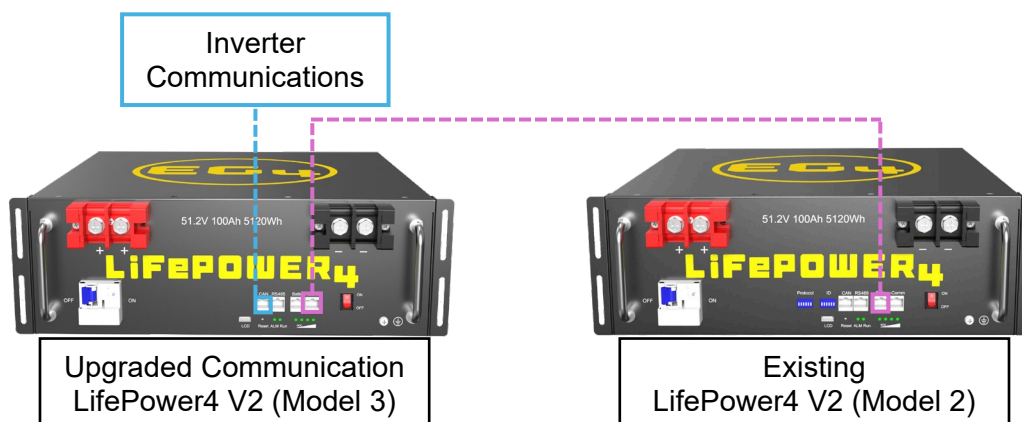
The new LifePower4 battery will have a new model number, designating it as SR-48-100-LP4-IN-03. In this document, the new model with upgraded communications will be referred to as "Model 3" for clarity. The existing LifePower4 V2 battery will be referred to as "Model 2".

PARALLELING MODEL 2 AND MODEL 3 BATTERIES:

- **Communication Cable:** The battery-to-battery cable requires RJ45 connectors to be wired only to pins 7 & 8 on both ends. Pins 1 through 6 must not be wired to the RJ45 connectors.
 - a. This cable must be used between the Model 3 and Model 2 LifePower4 batteries, and all Model 2 batteries must use this cable in the bank.
 - b. Model 3 battery-to-battery cables can use a standard CAT 5 or CAT 6 cable.

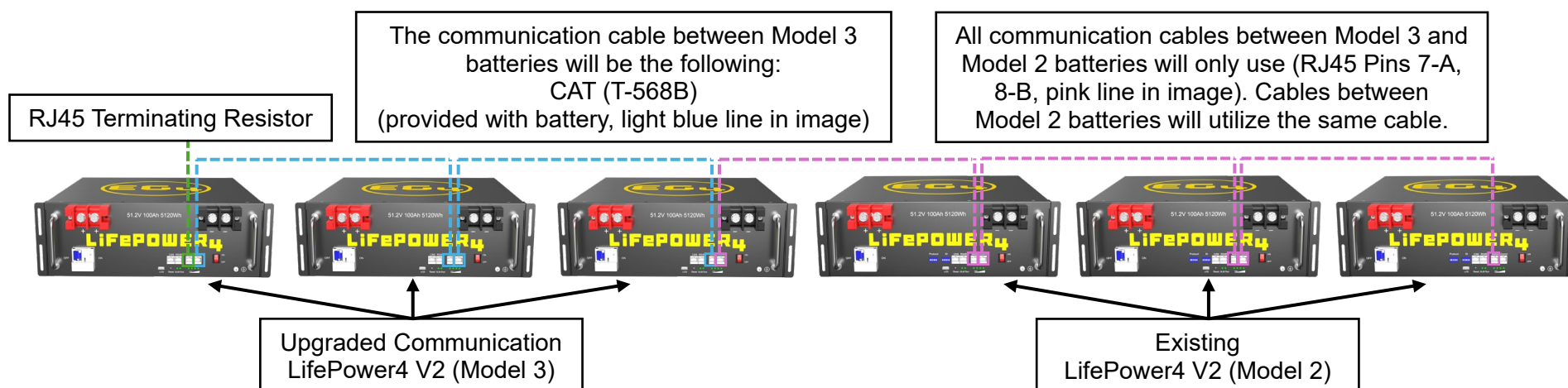


1. **Connections:** The right “Battery-Comm” port pairs with the left “Battery-Comm” port on all batteries. All communication cables between the Model 3 and Model 2 will **only** utilize (RJ45 Pins 7-A, 8-B, pink line in image) communication cables.



NOTE:

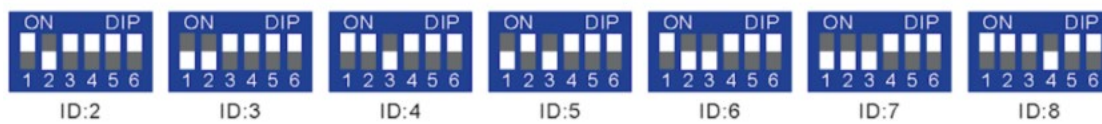
The image below shows the proper connections for closed-loop communication between multiple Model 3 and Model 2 batteries:



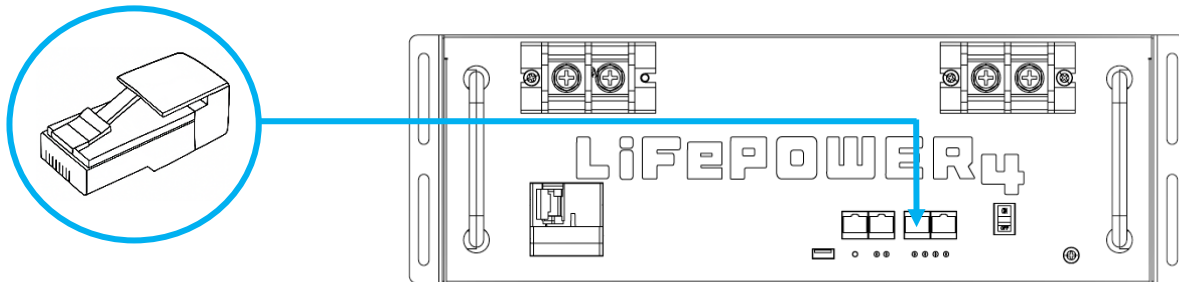
IMPORTANT:

The right-side “Battery-Comm” port pairs with the left-side “Battery-Comm” port on all batteries.

3. **LifePower4 Model 2 DIP Switch IDs:** The Model 2 DIP Switch IDs must be set to the numerical value after the last Model 3 battery in the bank. (E.g. 3 x Model 3 batteries, the Model 2 batteries would be set to 4, 5, 6...)



4. **Auto-ID Termination:** When paralleling a Model 3 battery, a 120 Ohm terminating resistor must be used to close the loop. The terminator is connected to the first/master Model 3 battery in the stack in the left "Battery-Comm" port.



5. **Turn On Sequence:** Power on the master Model 3 battery first, then turn on each remaining Model 3 battery in order in ~5 second intervals. Once all Model 3 batteries are on, switch on the Model 2 batteries corresponding to their DIP switch number.
6. **Power Cable Connections:** When connecting power cables between batteries and the inverter, the standard practice outlined in the manual must be followed. There is no special requirement to connect power cables between batteries.

FIRMWARE:

With this new update, LifePower4 firmware will vary depending on the model. The following information outlines how to identify the model of battery, as well as firmware that can be used.

Firmware:

There are two types of firmware for the battery; one for the Battery Management System (BMS), and the other for the communication board responsible for closed-loop communication.

- BMS Firmware begins with the letter "S" and uses the RS232 protocol. An example of this is S02T14.
- Communication Board Firmware begins with the letter "Z" and uses the RS485 protocol. An example of this is Z03T14.

The Model 2 and Model 3 battery can only share the BMS firmware that begins with the letter S. The firmware that begins with the letter Z is dependent on the model of the battery. Please confirm with EG4 support teams to ensure the appropriate firmware is being used.

Physical identification for each model:

LifePower4 Model 2: Has built-in DIP switches
LifePower4 Model 3: No built-in DIP switches

| Model #: SR-48-100-LP4-IN-02
| Model #: SR-48-100-LP4-IN-03

Release Firmware for Model 3 LifePower4:

- RS485- Z03T14
- RS232- S02T14

EG4

ELECTRONICS

support@eg4electronics.com
(903) 609-1988
www.eg4electronics.com