



## QUICK INSTALLATION GUIDE



### INSIGHT 48V030-GC2 **LiFePO4**

This Quick Installation Guide contains important information regarding the proper installation of your InSight Series lithium battery. This QIG only applies to RELiON InSight Series 48V030-GC2 lithium battery.

#### INSTALLATION INSTRUCTIONS

##### 1. USE PARALLEL CONNECTIONS

The InSight 48V030-GC2 is a 48V, 30Ah battery that is only to be connected in parallel to meet your energy requirements. To get 60Ah connect two 48V InSight batteries in parallel, if you want 90Ah connect three in parallel and so on. You may connect up to ten 48V InSight batteries in parallel. They are only to be used in a 48V system and cannot be connected in series. See wiring diagram on next page. Caution, if you are running 12V accessories, you MUST use a 48V to 12V converter.

##### 2. INSTALL THE BATTERIES CLOSE TOGETHER

If you are replacing your existing batteries with fewer than the original batteries, install the new InSight batteries close to each other in the battery compartment.

##### 3. USE RELION INSIGHT BATTERY SPACERS

We recommend using our Battery Spacers to fill the empty battery spots so you can use the existing battery hold-downs that come in your vehicle. These can be purchased on our website at [reliombattery.com](http://reliombattery.com). If you do not use our Battery Spacers, please ensure your InSight batteries are securely held down.

##### 4. CABLE SIZE

Be sure to use cables of equal lengths to connect your InSight batteries.

##### 5. TORQUE

Use the proper torque.  
79.7 – 88.5 in-lbs . 6.6 - 7.4 ft-lbs . 9 – 10 N-m

##### 6. UTILIZE CAN CABLES

CAN cables (1 ft) are provided with your InSight battery. Starting with the first battery connect the CAN cable from the Output (positive battery side) to the Input of the 2nd battery (negative battery side) and so on. The CAN port on the negative side of the 1st battery and on the positive side of the last battery will remain unused. Longer CAN cables (2 and 4 ft) are available upon request.

##### 7. POWER THE BATTERY ON

Once connected, press and hold the Power button on one of the batteries until you see the first LED flash green. It will continue to flash green every 5 seconds. You will notice that once you wake up one battery the remaining batteries will automatically wake up. Once the batteries are awake, you can tap the Power button to see the state-of-charge (SOC) of each battery. Refer to Table 3 to determine the SOC. If the batteries are not at an equal SOC, they will balance upon being used. Refer to Table 2 for how to turn off the battery.

##### 8. CHARGING

Wait 2 full minutes after using your battery before connecting your charger. Failure to wait 2 minutes may result in failure to charge.

For more detail, please refer to RELiON's User's Manual, available at: [reliombattery.com/resources/documentation](http://reliombattery.com/resources/documentation)



**BATTERY INTERFACE:**

The battery cover has two tri-colored LEDs (green, yellow, and red) that are used to communicate the status of the battery, the SOC of the battery, as well as protection modes and errors. LED1 is on the left side and LED2 is on the right side of the LED display when facing the battery from the positive post side.

**TABLE 1: LEDs - BATTERY MODES:**

MODE	LED 1	LED 2
OFF	OFF	OFF
ON	Flashing Green (5 sec)	OFF
Charging	OFF	Flashing Green (2 sec)

**TABLE 2: WAKE UP BUTTON FUNCTIONS**

ACTION	OPERATION	REMARKS
Power ON	Press and hold button for 5s until: <ul style="list-style-type: none"> <li>LED1 Flashes Green</li> <li>Then release button</li> </ul>	Battery will turn ON
Display SOC	With battery ON Tap button once	LED displays for 6 sec. See SOC STATUS Table 3
Power OFF	Tap, release, then press and hold button for 6s until: <ul style="list-style-type: none"> <li>LED1 Solid Red</li> <li>LED2 Solid Red</li> <li>Then release button</li> </ul>	Battery will turn OFF

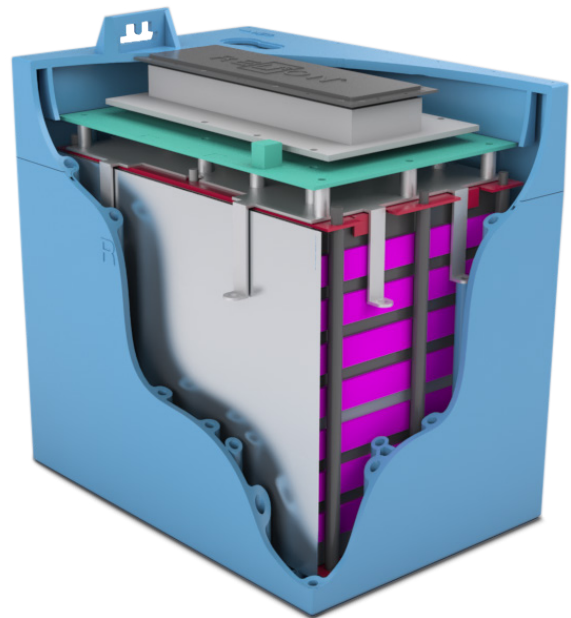
**TABLE 3: LEDS - SOC STATUS (INITIATE WITH SINGLE TAP OF THE POWER BUTTON)**

SOC	LED 1	LED 2
100%	Solid Green	Solid Green
75% - 98%	Solid Green	Flashing Green
50% - 75%	Solid Green	Solid Yellow
30% - 50%	Solid Green	Flashing Yellow
10% - 30%	Solid Green	Solid Red
0 - 10%	Solid Green	Flashing Red

**PRECAUTIONS:**

Lithium Iron Phosphate (LiFePO4) batteries are an inherently safe chemistry. Please reference RELiON's Lithium Iron Phosphate Safety Document (available on our website at [reliionbattery.com](http://reliionbattery.com)) for more details. However, as with any electronics, safety measures should always be taken. Please adhere to these instructions for safe handling and operation:

- Wear safety glasses when installing batteries
- Use a wrench with a rubber coated handle
- Do not place any objects on top of batteries
- Make sure all cable connections are properly tightened
- Refer to RELiON's LiFePO4 SDS for additional information



**TECHNICAL SUPPORT:**

If you have technical questions about your RELiON battery, please contact the original place of purchase or RELiON Battery directly:



[powerpros@reliionbattery.com](mailto:powerpros@reliionbattery.com)



(855) 931-2466



[Reliionbattery.com](http://Reliionbattery.com)

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ISO 9001:2015

UN38.3



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For more detail, please refer to RELiON's User's Manual, available at: [reliionbattery.com/resources/documentation](http://reliionbattery.com/resources/documentation)