



QUICK INSTALLATION GUIDE



INSIGHT 12V, 24V, and 48V

LiFePO4

This Quick Installation Guide contains important information regarding the proper installation of your InSight Series™ lithium battery. This QIG applies to all RELiON InSight Series lithium batteries.

INSTALLATION INSTRUCTIONS

1. USE PARALLEL CONNECTIONS

InSight batteries are only to be connected in parallel to meet your energy requirements. **They cannot be connected in series.** See wiring diagram.

	12V	24V	48V
Parallel Connections	Unlimited	Unlimited	Unlimited
Series Connections	None	None	None

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. 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. The CAN cables have 90° connectors. CAN cables with 180° connectors 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.

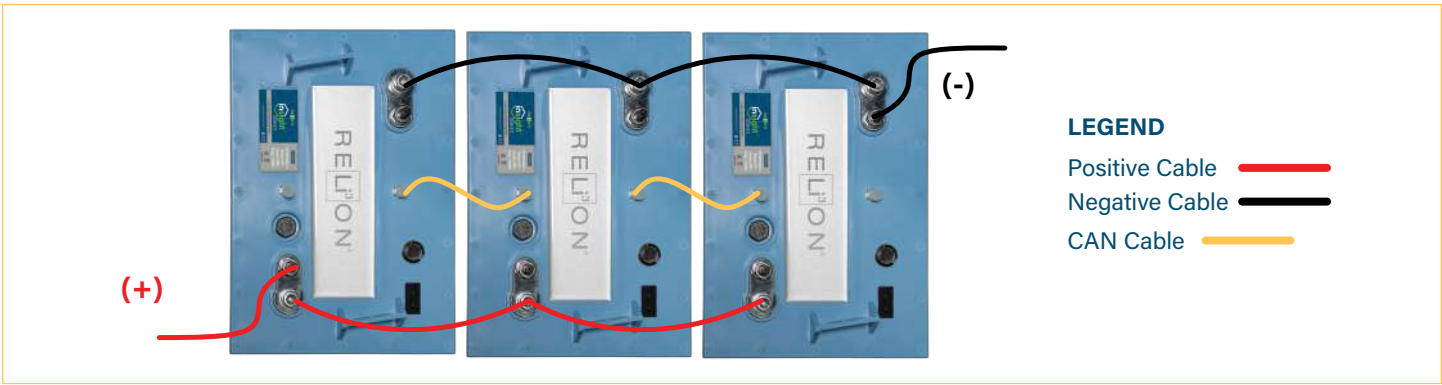
8. CHARGING

It is best to use/select a Lithium, GEL or AGM charge profile in that order of availability.

9. COMPATIBLE ACCESSORIES AVAILABLE

The backlit InSight Fuel Gauge is a plug-and-play accessory that provides real-time State of Charge. The InSight Remote Button gives you the convenience to power your InSight batteries on and off without having to access the battery compartment. These can be purchased on our website at reliombattery.com.

For more detail, please refer to RELiON's User's Manual, available at: 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	<i>Press and hold</i> button for 5s until: <ul style="list-style-type: none"> LED1 Flashes Green Then release button 	Battery will turn ON
Display SOC	With battery ON <i>Tap</i> button once	LED displays for 6 sec. See SOC STATUS Table 3
Power OFF	<i>Tap, release, then press and hold</i> button for 6s until: <ul style="list-style-type: none"> LED1 Solid Red LED2 Solid Red Then release button 	Battery will turn OFF

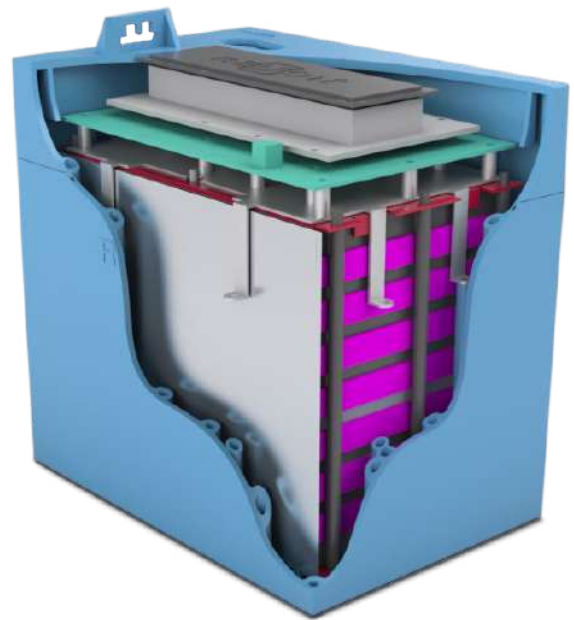
TABLE 3: LEDS - SOC STATUS (INITIATE WITH SINGLE TAP OF THE POWER BUTTON)

SOC	LED 1	LED 2
95% - 100%	Solid Green	Solid Green
75% - 95%	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) 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:



RELiON-Technical@OneASG.com



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Relionbattery.com

Challenge
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ISO 9001:2015

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WE'RE HERE TO HELP.

Check out our Knowledge Help Center at Relionbattery.com/Knowledge. You can search for a topic by keyword or simply browse through various articles by category.

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INSIGHT 12V QIG
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