RELi3ON®

A BRAND WITHIN ASG ADVANCED SYSTEMS GROUP

insight™ SERIES

INSIGHT SERIES FUEL GAUGE & REMOTE BUTTON INSTALLATION GUIDE

12V, 24V & 48V MODELS

THANK YOU FOR CHOOSING RELiON

Please read through this installation guide before installing your RELiON Fuel Gauge and Remote Button. Should you have any questions concerning installation or use, please contact us at relionbattery.com

The **InSight Fuel Gauge** is a constantly backlit (no off switch) battery gauge that will show the state of charge (SOC) for up to 14 InSight Batteries connected in parallel. The **InSight Remote Button** will power on or off up to 10 InSight Batteries connected in parallel. (InSight batteries should never be connected in series.)

WHAT'S INCLUDED

1x RELiON Fuel Gauge

1x Mounting Bracket

1x Fuel Gauge Cable Assembly
(3 meter standard)
(6 or 10 meter optional)

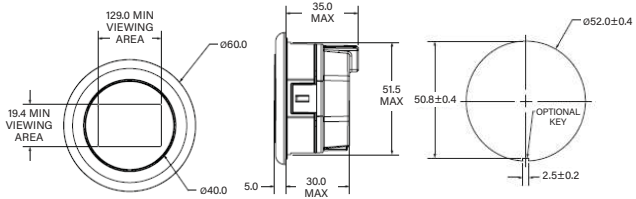
1x RELiON Remote Button Cable Assembly
(3 meter standard, 6 and 10 meter available)

CANBUS Splitter Cable

FUEL GAUGE INSTALLATION

1. Power down the device in which the fuel gauge will be installed. Power down the first InSight battery in the string by tapping the power button once and then depressing the button until both LEDs on the battery show solid red (approx 6 seconds). Release button. The rest of the batteries in the string will also power off automatically.
2. Begin by locating the Fuel Gauge Cable Assembly. Attach the red ring terminal to the positive battery post and then the black ring terminal to the negative battery post on the first InSight battery in the bank.
3. Insert the CANBUS plug attached to the cable assembly wiring harness in the provided CANBUS SPLITTER.
4. Route the other end of the cable through the mounting bracket to the fuel gauge display destination on the vehicle dashboard and insert the four-pin cable plug into the back of the gauge. Important note - be sure to route the cable through the mounting bracket on the back side of the dashboard. **Use zip ties to secure harness to vehicle to reduce strain on plugs!**
5. Insert the fuel gauge through the dashboard and seat in the mounting bracket. Rotate the mounting bracket until the fuel gauge is held firmly in place on the dashboard. Installation is now complete. The fuel gauge will display current state of charge and other messages communicated by the battery bank.

FUEL GAUGE MEASUREMENTS



REMOTE BUTTON INSTALLATION

1. Begin by locating the Remote Button Cable Assembly. Route the connecting end through the button mounting destination hole, ending in the battery compartment. Use zip ties to secure the cable assembly to the vehicle to reduce strain on connections.
2. Attach the red ring terminal to the positive battery post and then the black ring terminal to the negative battery post on the first InSight battery in the bank.
3. Insert the CANBUS plug attached to the remote button cable assembly in provided CANBUS splitter on the first InSight battery in the bank.
4. Insert the CANBUS splitter in the CANBUS IN port on the first battery in the string.
5. Installation is complete. Test the function of the remote button by depressing the remote button until the InSight Batteries in the string power on (approx five seconds). LED 1 on all batteries will flash green.

Note: Splitter is optional.
See diagrams for more information on your battery setup.

REMOTE BUTTON MEASUREMENTS

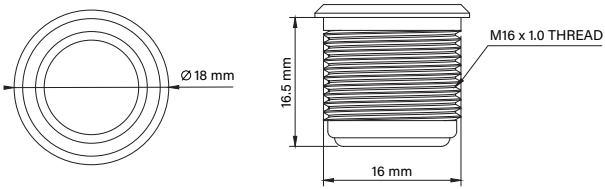
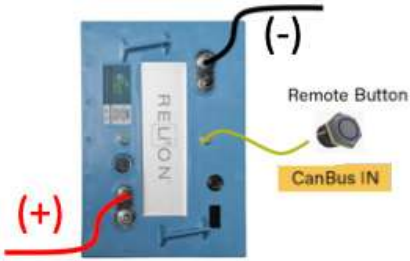
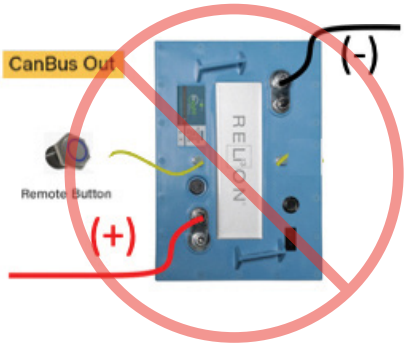


DIAGRAM #1:

Remote Button Only + 1 battery

- Connect to IN comm port only
- Button works on a single battery





DO NOT connect Remote Button OUT port.

DIAGRAM #2:

Fuel Gauge Only + 1 battery

- Connect to IN or OUT comm port
- Gauge works on a single battery

DIAGRAM #3:

Remote Button + Fuel Gauge + 1 battery (with splitter)

- Button/Gauge/splitter = connect all to IN port only
- Gauge and Button work on a single battery

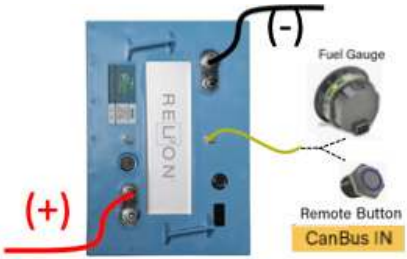


DIAGRAM #4:

Remote Button + Fuel Gauge + 1 battery (no splitter)

- Remote Button = connect to IN port
- Fuel Gauge = connect to OUT port
- Gauge and Button work on a single battery

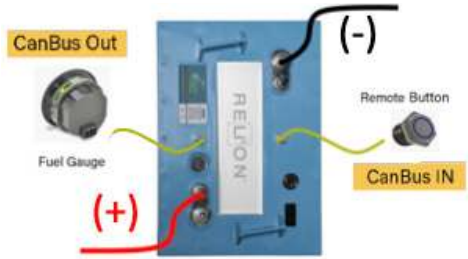


DIAGRAM #5:

Remote Button only + 2 or more batteries (with splitter)

- Remote Button/Resistor/Splitter = to IN port on Battery #1
- Termination resistor required

DIAGRAM #6:

Remote Button only + 2 or more batteries (no splitter)

- Button = to IN port on Battery #1
- Resistor = to OUT port on last battery in string
- Termination resistor required

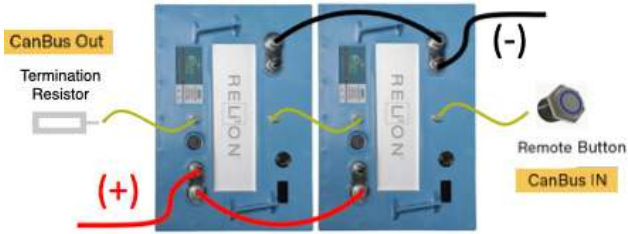


DIAGRAM #7:

Fuel Gauge only + 2 or more batteries

- IN port on Battery #1 or OUT port on last battery in string
- Gauge displays battery pack SOC

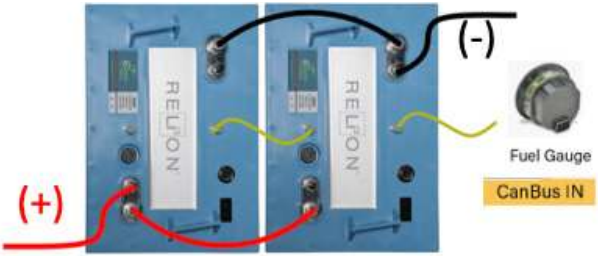


DIAGRAM #8:

Remote Button + Fuel Gauge + 2 or more batteries (with splitter)

- Button/Gauge/Splitter = to IN port on Battery #1
- Button and Gauge control entire battery pack

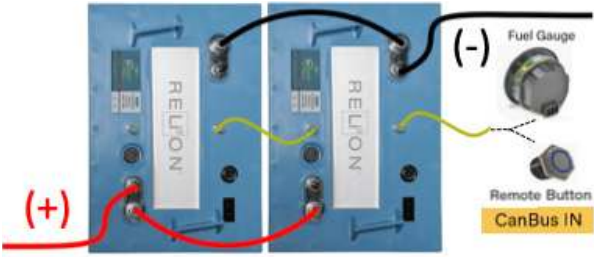
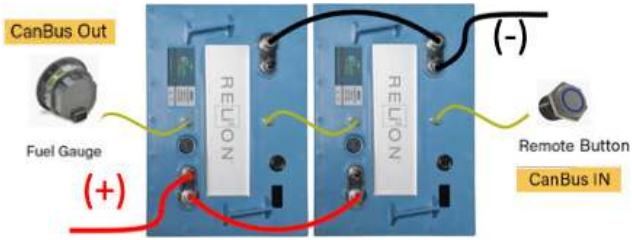


DIAGRAM #9:

Remote Button + Fuel Gauge + 2 or more batteries (no splitter)

- Button = connect only to IN port on Battery #1
- Gauge = to OUT port on last battery in string
- Button and Gauge control entire battery pack



Note: For CANbus connection network purposes, the Fuel Gauge is terminated, and the Remote Button is unterminated.

FUEL GAUGE MESSAGES AND WARNINGS

The fuel gauge will display several messages throughout its operation cycle.

1. Upon startup the gauge will display the number of batteries detected. Make sure the number of batteries detected match the number of batteries in the bank.
2. During normal operation the fuel gauge will display the state of charge of the battery bank digitally as a percentage from 0-100%.
3. While the battery bank is above 20% state of charge the upper line of text will display the SOC while the second line displays the number of batteries and the remaining amp hours of the battery bank.
4. While the battery bank is below 20% state of charge the upper line of text will display the SOC while the second line will show "LOBATT" message.
5. While the battery bank is at or below 10% state of charge the upper line of text will display the SOC while the second line of text will flash "LOBATT" every 2 seconds.
6. If the setup is not done correctly and the gauge does not read any batteries it will display the message "no comms".

FUEL GAUGE SPECIFICATIONS	
Operating Current	29 milliamps
Operating Temperature	14°F to 185°F (-10°C to 85°C)
Storage Temperatures	-40°F to 185°F (-40°C to 85°C)
Ingress Protection Rating	IP67

Questions?

Contact RELiON Technical Support at (855) 931-2466

TECHNICAL SUPPORT

If you have technical questions about your RELiON Fuel Gauge or Remote Button, please contact RELiON Battery directly at relionbattery.com

Fuel Gauge & Remote Button Install 06.23.22