Scan for updates:

Scan for video of mounting and wiring:

Support Contact Information
In case of any technical issues with SolarEdge products, please contact us at:
https://www.solaredge.com/service/support

MAN-01-00989-1.2

Version: 1.2, August 2023
Subject to change without notice.

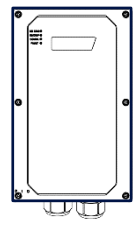
Quick Installation Guide

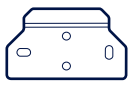
SolarEdge Home Backup Interface, Single Phase

BI-EU1P

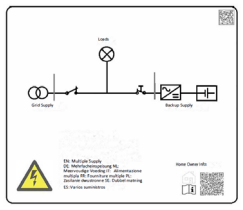
for use with the SolarEdge Home Hub Inverter, Single Phase

What's in the Package


Backup Interface


Mounting bracket


Lower bracket


Warning Label

Required Tools


Drill


Phillips screwdriver

Level

Watchmaker flat screwdriver

Torque wrench


CAT6 cable


M4, M5 Allen keys

Pencil


X 3
Mounting screws and wall plugs

SAFETY AND HANDLING INSTRUCTIONS

- Read this entire document before installing or operating the Backup Interface (also referred to as BUI). Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death, or may damage the Backup Interface and other property, it can also lead to warranty void.
- Do not discard this document! After installation, keep it adjacent to the Backup Interface for future reference!
- Before operating the Backup Interface and inverter, ensure that they are properly grounded. The Backup Interface and inverter must be connected to a grounded, metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead.
- Opening the Backup Interface and repairing or testing under power must be performed only by qualified service personnel familiar with the Backup Interface.

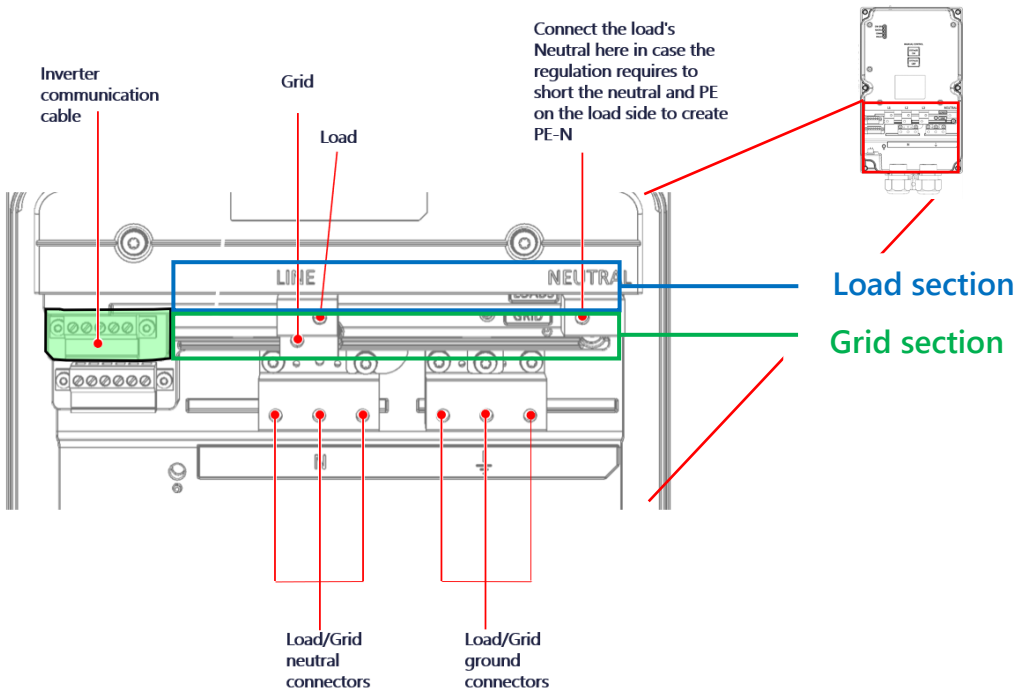
WARNINGS!
The backup systems generate power to the home when the grid is off or when the main circuit breaker is also OFF. Please make sure to attach the warning sticker (of Dual Supply warning) in a visible place at the main circuit cabinet. For additional safety, we recommend installing an external shutdown press button to make sure the Inverter is also off when the main circuit breaker is off.
For installation instructions please refer to the Inverter installation guide.

This symbol on the product or in the accompanying documentation denotes a hazard. It calls attention to a procedure that, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a warning note until the indicated conditions are fully understood and met.

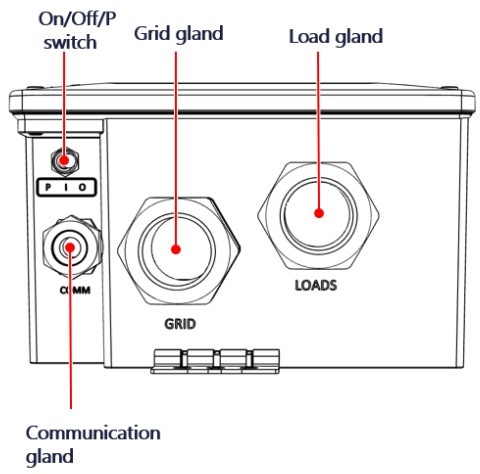
This symbol on the product denotes risk of electric shock due to stored energy. Before handling the product, wait for at least 5 seconds after disconnecting it from all sources of energy.

DANGER!
Before opening the covers and connecting the grid, please make sure that the main CB and the Inverters are OFF.

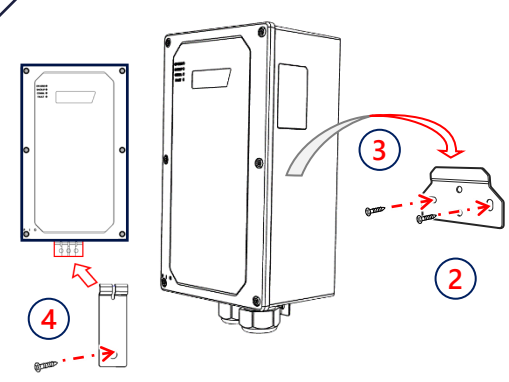
Main connection scheme



Bottom interface of the Backup Interface



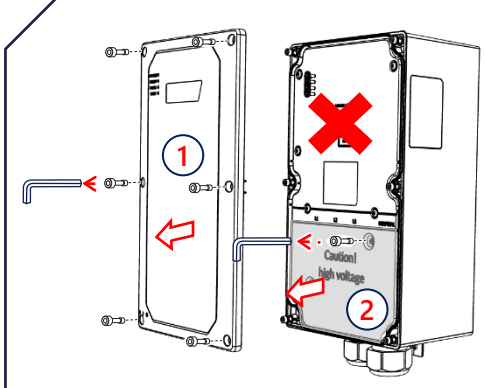
1



Mounting the Backup Interface

1. Select an installation location. Make sure you have enough space between the Backup Interface and other objects to securely access all its interfaces.
2. Install the mounting bracket to the wall and secure it with 2-4 screws. If using only 2 screws, use left and right ones.
3. Hang the Backup Interface on the mounting bracket.
4. Hang the lower bracket on the hook behind the bottom glands, secure it to the wall with a screw.

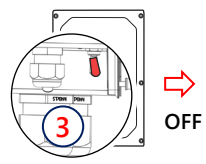
2



Removing the covers

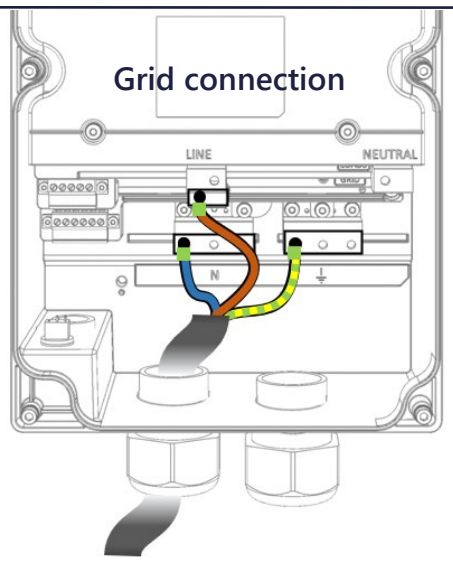
WARNING!
It is forbidden and dangerous to open the upper section.
Only the lower section is for user interface usage.

1. Using M5 Allen key, release six screws and remove the Backup Interface front cover.
2. Using M4 Allen key, release two screws and remove the Backup Interface internal lower cover.
3. Make sure the ON/OFF switch is in the OFF position.



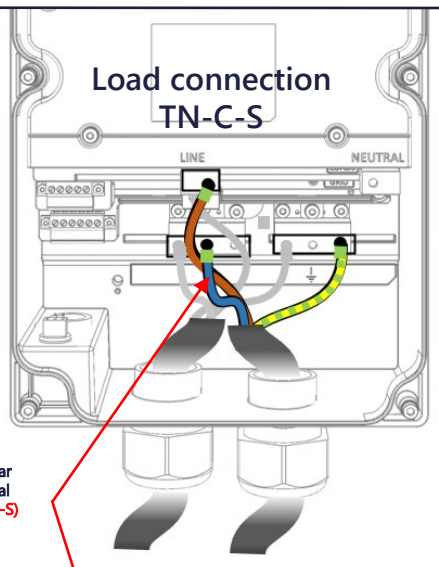
3

Grid connection



6 N*m

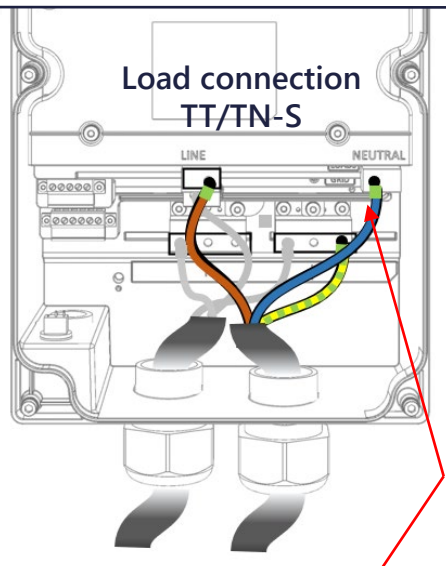
Load connection TN-C-S



6 N*m

Regular Neutral (TN-C-S)

Load connection TT/TN-S



6 N*m

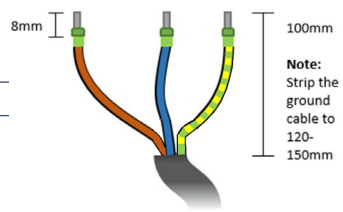
Neutral: Short with the Ground (TT/TN-S)

For the Home Hub inverter installation guide, scan

Cable

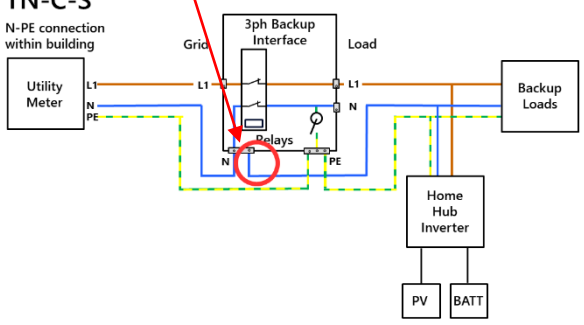
Outer diameter of 11-24mm

Cable cross-section of 6-25mm²



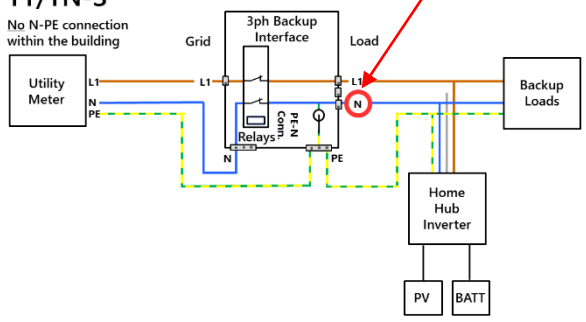
TN-C-S

N-PE connection within building



TT/TN-S

No N-PE connection within the building



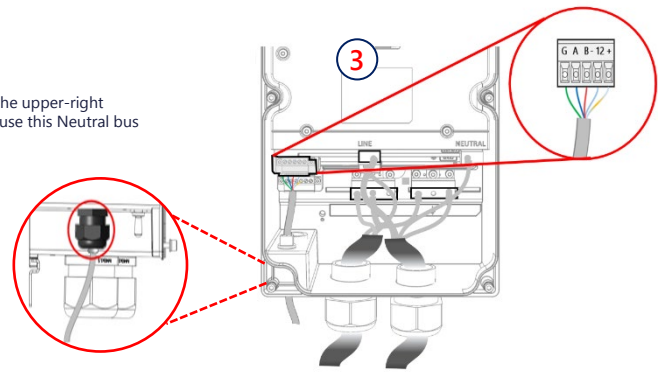
Connecting the Backup Interface

DANGER!

Before opening the covers and connecting the grid, please make sure that the main CB and the Inverters are OFF.

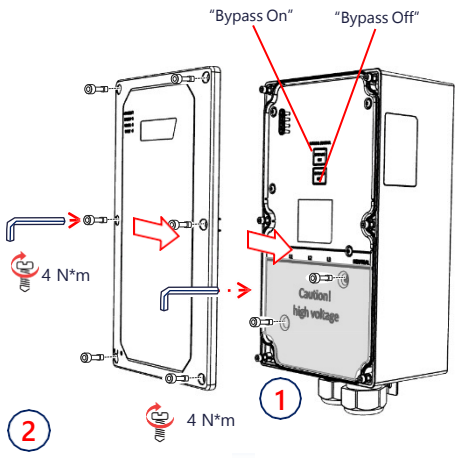
Note: If your local regulations require a short between Neutral and Protective earth on the load side (e. g. PE-N connection on the load side according to TNS, TT, and some TNC-S topologies), use the upper-right terminal for the Load Neutral (see the figure below and the Main Connection Scheme). In case the topologies do not allow to generate the local PE-N (like in TNC-S, according to VDE 2510), please use this Neutral bus to connect the load Neutral also.

1. Strip 120-150mm around the external **grid** cable and 8mm from the internal wire insulation. If needed, crimp the wire ferrules. Open the left gland marked with "Grid" and insert the grid cable. **Connect the ground wire first**. Torque – 6Nm. Connect the wires Ground (yellow), Line (brown), and Neutral (blue) to their respective terminals.
2. Strip 120-150mm around the external **load** cable and 8mm from the internal wire insulation. If needed, crimp the wire ferrules. Open the right gland marked with "Load" and insert the load cable. **Connect the ground wire first**. Torque – 6Nm. Connect the wires Ground (yellow), Line (brown), and Neutral (blue) to their respective terminals.
3. If your system doesn't use Solaredge Home Network, connect the Backup Interface to your inverter using a CAT5 E or a CAT6. Open the communication gland and insert the communication cable, close the gland. Pull out the communication connector and connect the communication cable wires to the G, A, B, and 12V +/- respectively. Use a twisted pair connection for A and B. Connect the other side of this cable to the inverter.
4. Backup Interface includes a built-in meter. If you are using full home backup, you will have to disconnect any other external export/import meter and remove it from SetApp. The internal meter must be configured as import/export. If you are using partial home backup, you will have to connect and define an external meter on the main panel and define it as the import/export meter of the system.



4

Closing the Backup Interface

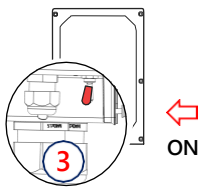


Before closing the Backup Interface, ensure proper operation:

1. Press "Bypass On".
2. Press "Bypass Off".

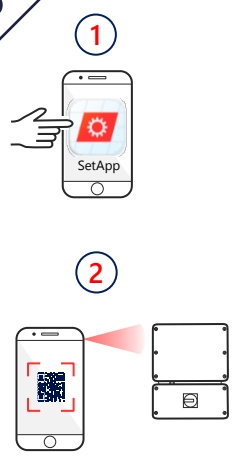
To close the Backup Interface:

1. Using M4 Allen key, secure Backup Interface internal lower cover with two screws.
2. Using M5 Allen key, secure Backup Interface external front cover with six screws.
3. Now you can turn on the main CB and the inverter.



5

Configuring Installation



Commissioning

Power Control

Energy Manager

Backup Configuration

Backup

Enable

1. Run SetApp.
2. Scan the QR code on the inverter.
3. Follow the on-screen instructions.
4. Configure the import/export meter on SetApp.

6

Backup system checkup

Note: Before you start, make sure you have the Inverter system operating and producing with battery at above 20%.

Checking the backup operation may cause 2-3 seconds of electricity supply failure to the loads before they are powered up again; if you have a load sensitive to such interruption, please disconnect it from the load backup section.

1. Make sure you have power from the grid and your inverter is working.
2. Before you start, check that the Battery SoC level is above 20%.
3. Make sure the Grid LED is ON and there is no fault detected. Turn OFF the main CB coming from the grid. Immediately after that, all home loads should shut down and the On Grid LED should turn OFF.
4. Wait for a few seconds till all the home loads are powered up again, the LED marked as "Backup" should turn ON.
5. After a few minutes of stable operation, turn ON the main CB again.
6. "Backup" LED should turn OFF and the On Grid LED should turn on again.

LED Indications

Grid

ON
On grid or boot

OFF
Backup mode

Blinking
Firmware upgrade

Fast blinking
Backup interface received request to identify itself

Backup

ON
In backup or boot

OFF
On Grid

Blinking
Firmware upgrade

Fast blinking
Backup interface received request to identify itself

Comm

ON
Connected to the network/ received modbus packet/ boot

Blinking
There is no communication over RF or RS485
- On RF – not connected or temporarily disconnected
- On RS485 – no packet received for 30 seconds

Flickering
Bootloader is upgrading software

Fast blinking
Device received a request to identify itself

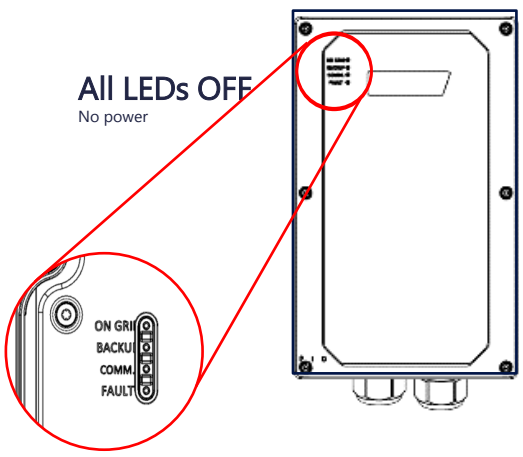
Fault

ON
Fault or boot

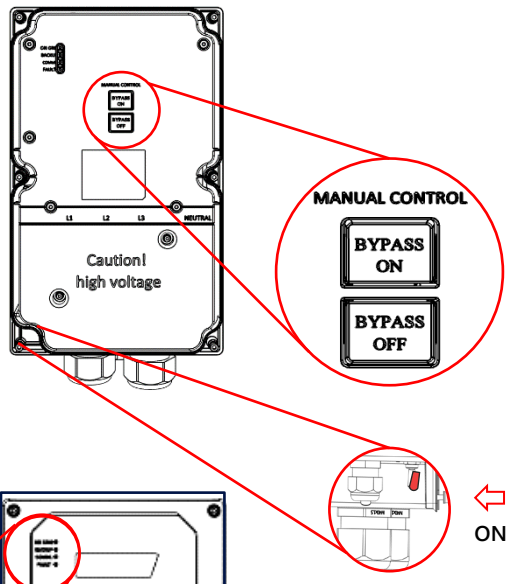
OFF
No faults

Blinking
Firmware upgrade

All LEDs OFF
No power



Manually Switching to/from Grid-Connected Mode



WARNING!
Only a certified installer is permitted to perform this operation

This section describes how to reconnect the grid in case the Backup Interface hasn't switched it back for some reason.

Before operating these Bypass switches, **make sure the ON/OFF/P switch is in *ON* position**.

If the ON/OFF/P switch is in *OFF* position, the Bypass switch may malfunction.

Switching from *Off Grid* to *On Grid*

In case the grid came back from outage, but the system is still working in *Off Grid*, use the following procedure to switch the grid back to the system:

1. Remove the Backup Interface front cover as shown above.
2. Press "Bypass On" on Manual Control panel.
3. Close the external cover.

Please note that *Bypass OFF* disconnects the grid from the home, use this switch ONLY in case you want to check that the backup system is ready for operation.