HELIOS Hybrid Inverter Bundle
Quick Start Guide

DISCOVER ENERGY SYSTEMS

This Quick Start Guide does not replace the product manuals. Review the HELIOS ESS and Megarevo LNA Series manuals before installation.

PRE-INSTALLATION CHECKLIST.

BATTERY

1. Inspect for shipping damage.
2. Turn battery ON and close the breaker.
3. Verify voltage at the battery terminals.
4. Confirm the latest firmware is installed.
5. Turn battery OFF. Open the breaker before wiring.

INVERTER

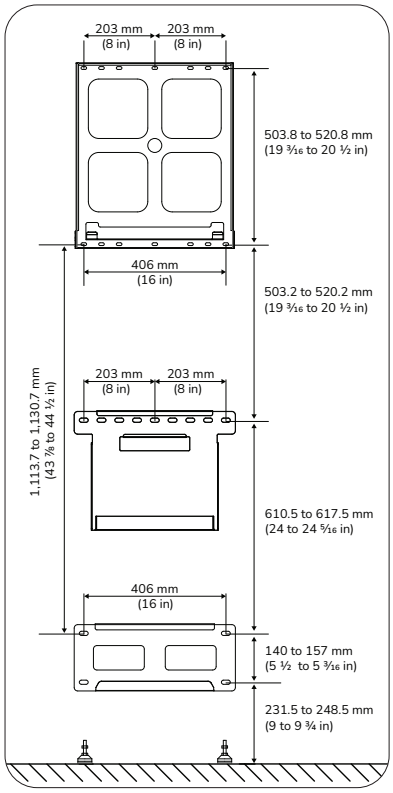
1. Inspect for shipping damage.
2. Confirm model: R12KLNA-P6 or R16KLNA-P6.
3. Keep all AC/DC breakers OPEN before wiring.

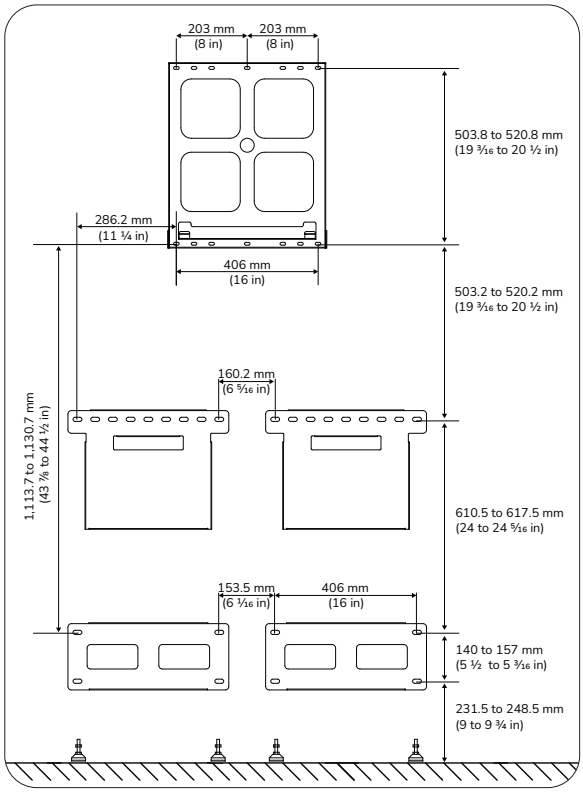
MOUNTING

Confirm the mounting surface supports the equipment and supplied hardware. Maintain the clearances shown.

ONE OR TWO BATTERIES + ONE INVERTER

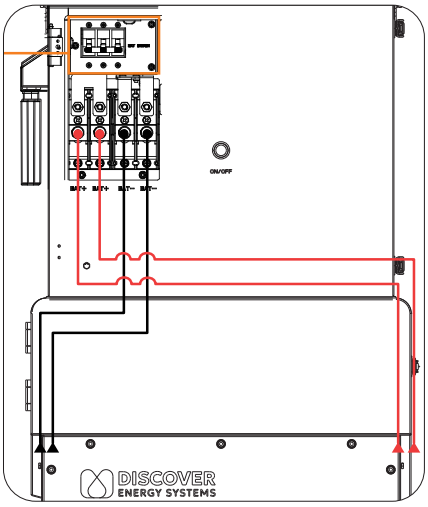
1. Install the battery bracket(s), or position the battery/batteries for floor mounting.
2. Mount and level the battery/ batteries.
3. Center the inverter bracket above the battery setup.
4. Maintain the specified spacing and clearances.

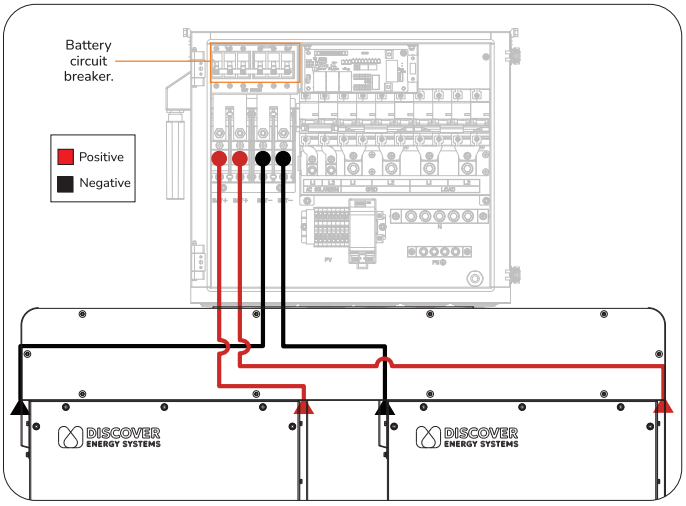




SYSTEM CONNECTIONS

DC WIRING





Battery Circuit Bracket

Positive

Negative

AC WIRING

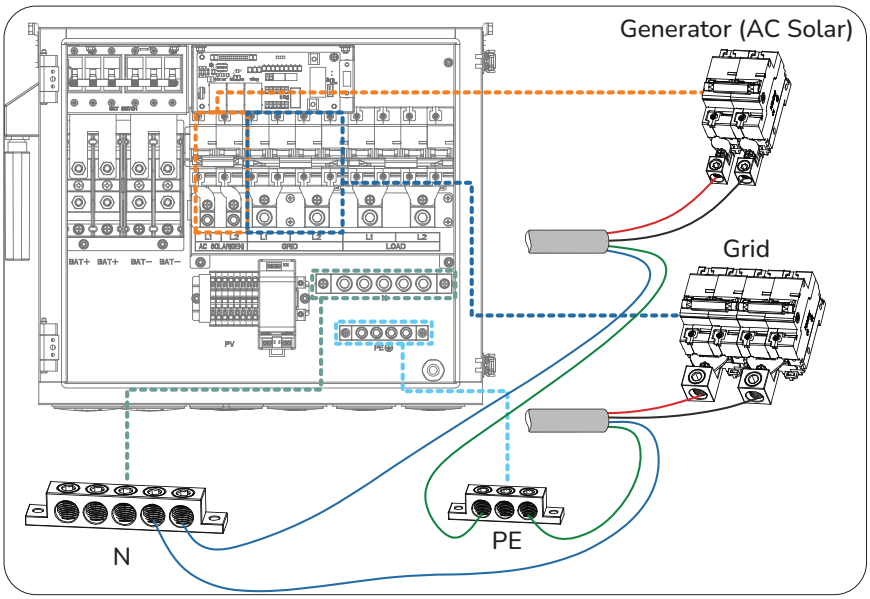
GRID CONNECTION

1. Verify grid voltage is within the permitted range and isolate the circuit.
2. Use the specified cable size:

- **Grid:** 10 AWG for R12KLNA-P6 and R16KLNA-P6
- **Generator:** 6 AWG for R12KLNA-P6; 5 AWG for R16KLNA-P6

3. Strip 18 mm of insulation from each conductor.
4. Route grid/generator cables through the conduit ports.
5. Connect L1, L2, N and PE as shown in the diagram.

Terminal capacity: Grid 16 mm² · Generator 12 mm²

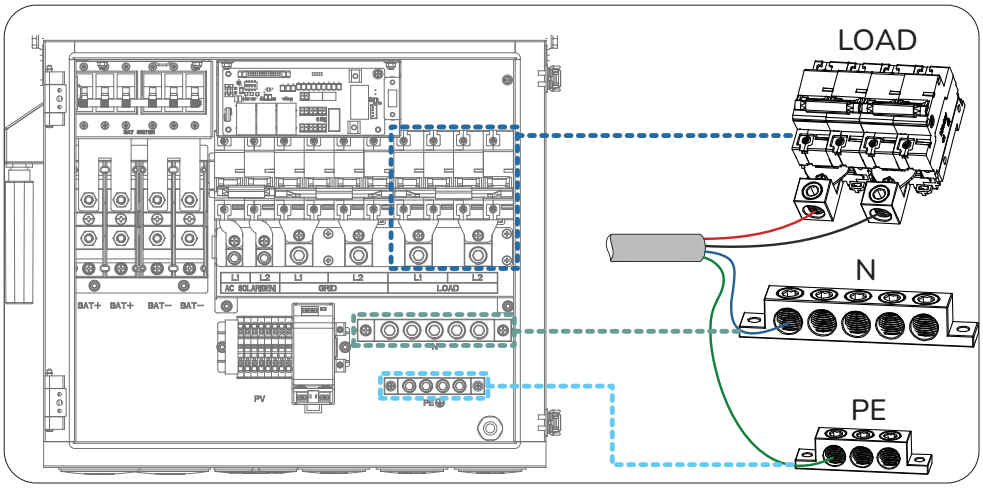


BACK-UP: LOAD CONNECTION

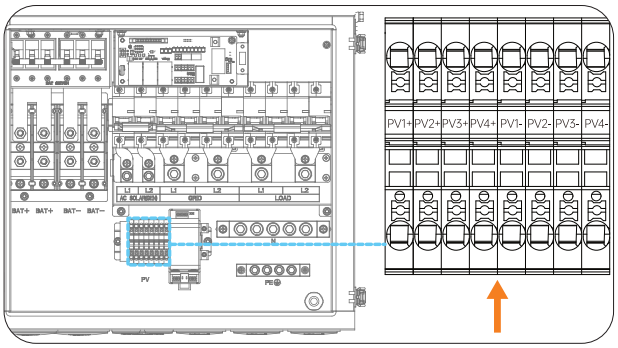
1. Confirm connected loads are within the inverter's BACK-UP output rating.
2. Use 10 AWG cable
3. Strip 18 mm of insulation.
4. Route the cable through the LOAD port.
5. Connect L, N and PE as shown and tighten securely.

IMPORTANT

- Do not exceed inverter's BACK-UP output rating.
- For non-linear loads, ensure starting power is within the inverter's output capability.
- If an overload occurs, reduce the load before restarting.

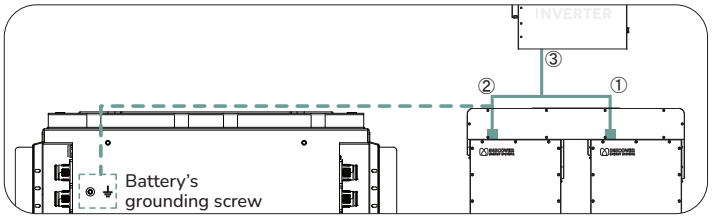


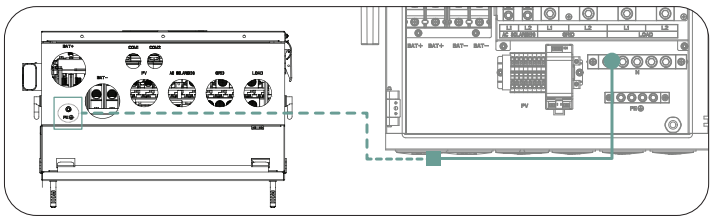
PV CONNECTION



1. Verify the PV array is within inverter limits:
- **MPPT range:** 120-500 VDC
- **MPPT range without battery:** 120-430 VDC
- **Maximum DC input:** 500 VDC
2. Use 12 AWG PV cable and strip 18 mm of insulation.
3. Install the required PV terminals.
4. Route cables through the PV ports and connect PV+ / PV–.

GROUNDING

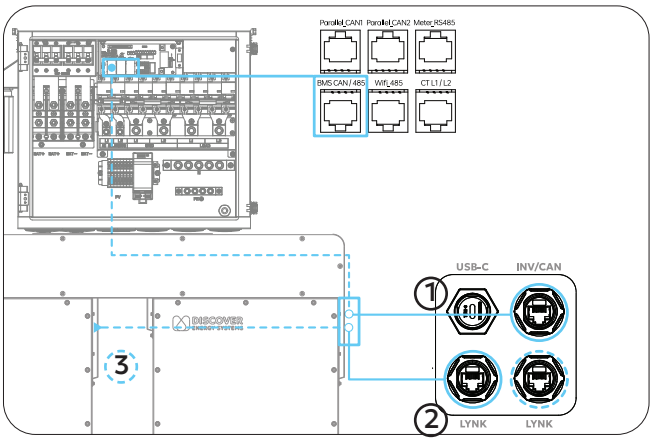




BATTERY. Connect AWG 6 grounding wires from battery to inverter ground. Four grounding points are provided on the rear of the DES conduit boxes.

INVERTER. Connect the distribution box ground to the inverter's bottom grounding point or internal PE copper bar. Do not use multi-point grounding.

COMMUNICATION



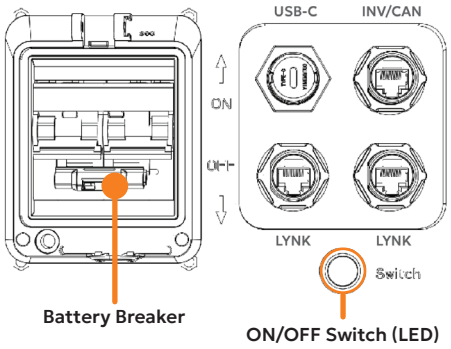
Use CAT5e or higher cables for CAN communication.

1. Connect HELIOS INV/CAN → inverter BMS CAN.
2. Connect multiple batteries through the LYNK ports.
3. Install the termination resistor on the last battery.
4. Set the inverter Battery Type to the applicable lithium/ Pylontech - compatible mode.

FIRMWARE UPDATE

Battery. Update through USB-C using LYNK ACCESS / **Inverter.** Update locally through the USB-C port.

START UP PROCEDURE

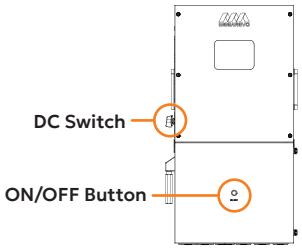


BATTERY FIRST

1. Verify cable polarity and connections.
2. Ensure all batteries are OFF.
3. Close all battery breakers (ON).
4. Close DC load breakers.
5. Press each battery ON/OFF switch to initiate pre-charge and activation.

***Solid LED** = battery is supplying power / **Flashing LED** = press ON/OFF again to repeat pre-charge.*

INVERTER SECOND



1. Close inverter DC Switch.
2. Press inverter's ON/OFF button.
3. On touch panel: set Battery Type → Lithium.
4. Confirm battery SOC and voltage are displayed.

POWER DOWN PROCEDURE

1. Turn OFF EPS and AC loads.
2. Turn OFF the inverter.
3. Open the inverter AC breaker and DC switch.
4. Turn OFF each battery.
5. Open all battery breakers.
6. Wait at least 5 minutes before accessing inverter internal component.

CONNECT INVERTER TO WIFI (Optional)

1. Install the Wi-Fi dongle.
2. Download SOLARMAN Smart app (1).
3. Pair the dongle by scanning its QR code (2).
4. Connect it to the local Wi-Fi network.
5. Confirm the system appears in the app.

For advanced configuration, refer to the inverter manual.

