

APEX-6.5K Inverter - Quick Start Guide



1. Safety Essentials

- Turn **OFF** all power sources before wiring.
- Indoor use only (IP20). Keep away from moisture, heat, and flammable materials.
- Electrical isolation gloves and safety glasses are recommended for safety.
- **NEVER** connect or disconnect wires while powered.

2. Mounting the Inverter

- Mount on a solid wall using included hardware.
- Maintain clearance: 50 cm (20 in) sides, 20 cm (8 in) top/bottom.
- Unscrew and remove the front terminal cover. **1**
- (optional) Inspect insect-proof netting for debris (located on the top left & right side) before wiring. **2**



3. Recommended Cable Size Chart

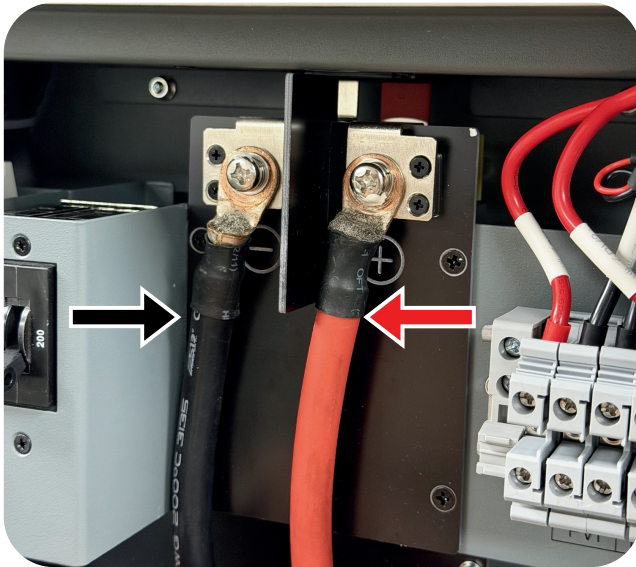
Connections	Cable Sizes	Circuit Breaker Model
PV Input	4 mm ² / 12 AWG	(2-pole) 25A
AC Input GRID	Single phase: 8 AWG (L1, L2) 4 AWG (N) Split phase: 8 AWG (L1, L2, N)	Single phase: (2-pole) 80A Split phase: (3-Pole) 40A
AC Output LOAD	Single phase: 8 AWG (L1, L2) 6 AWG (N) Split phase: 8 AWG (L1, L2, N)	Single phase: (2-pole) 80A Split phase: (3-Pole) 40A
Generator Input	Single phase: 8 AWG (L1, L2) 6 AWG (N) Split phase: 8 AWG (L1, L2, N)	Single phase: (2-pole) 80A Split phase: (3-Pole) 40A
Battery	2 AWG	(2-pole) 160A

4. Wiring Overview

Battery Wiring

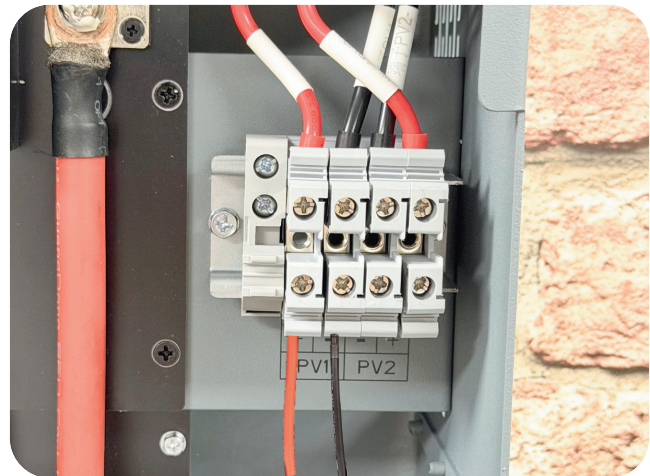
Note: Do not overtighten the battery connections.
Recommended torque is (8-10 N-m | 80-90 in-lb)

- Connect **Positive(+)** Battery **Terminal** to the **Positive(+)** Terminal on the Inverter.
- Connect **Negative(-)** Battery **Terminal** on the Battery to the **Negative(-)** Terminal on the Inverter.
- Use supplied ring terminals.

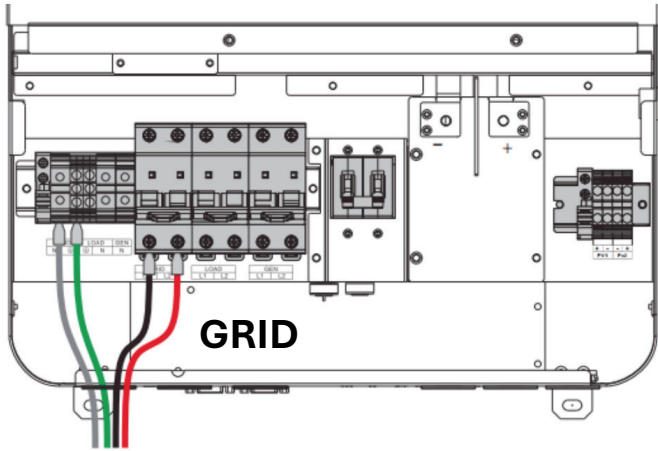


PV (Solar Panels)

- Connect each series of solar panels to PV1+ and PV1-.
- Make sure open circuit voltage of the series connected PV panel **does not exceed 500V**
- Each MPPT (PV1 or PV2) can support 2 panel strings, but they must be identical in panel type and number of panels and the **combined current must not exceed 22 Amps for each MPPT**



AC Wiring Color Codes

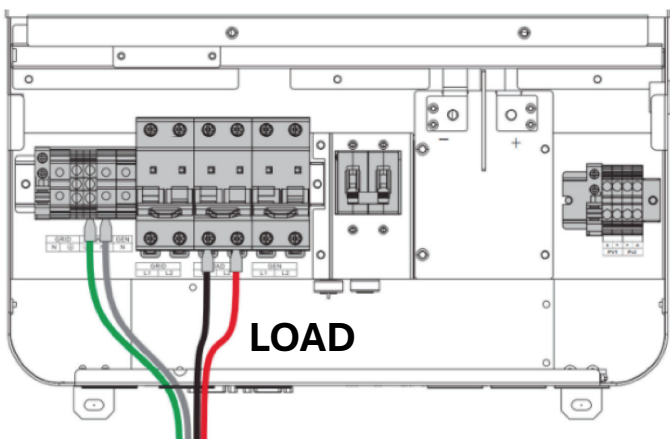


AC Input (Grid) Wiring (Optional)

Connect **L1**, **L2**, **N**, **PE/Ground**.

Default mode: Split-phase

120/240 V.

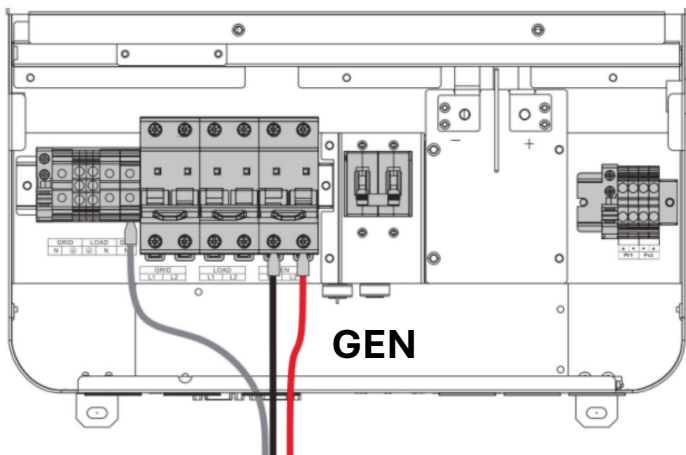


AC Output (Load) Wiring (Optional)

Connect **L1**, **L2**, **N**, **PE/Ground**.

Default mode: Split-phase

120/240 V.



AC Input (Generator) Wiring (Optional)

Connect **L1**, **L2**, **N**.

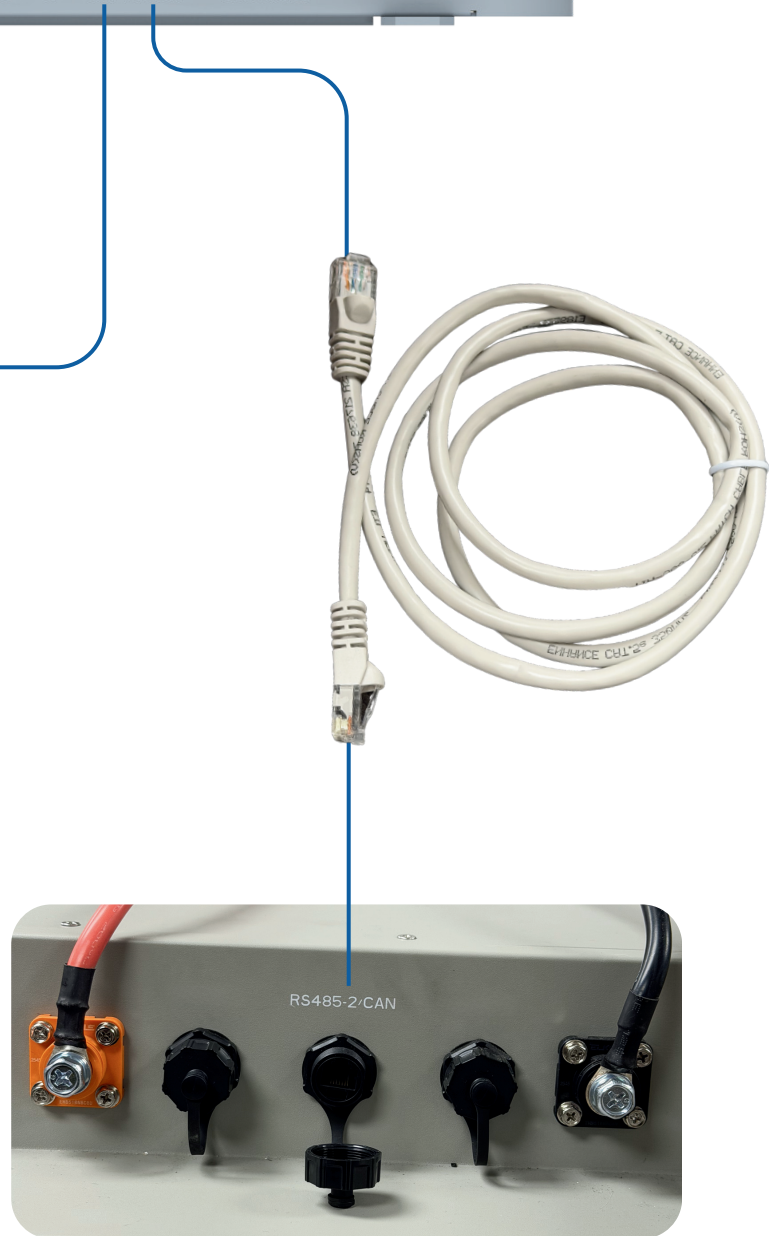
Default mode: Split-phase

120/240 V.

APEX-6.5K Input wiring ports (bottom view)



Note: To monitor remotely, connect included WiFi Logger



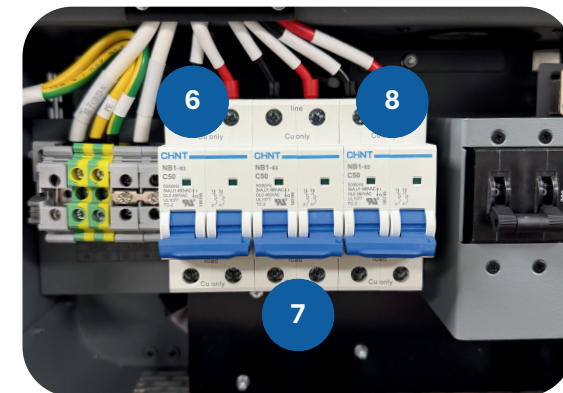
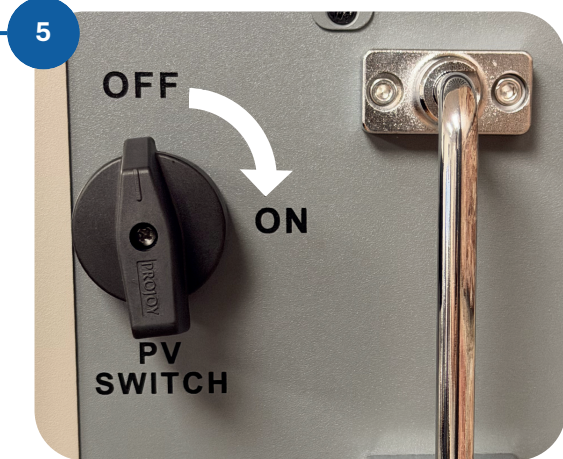
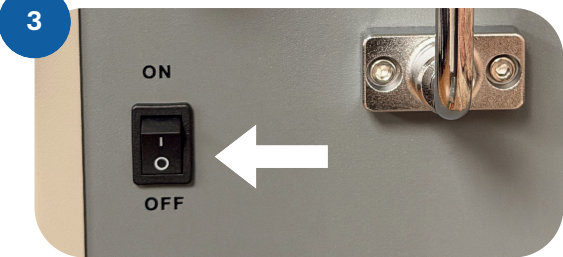
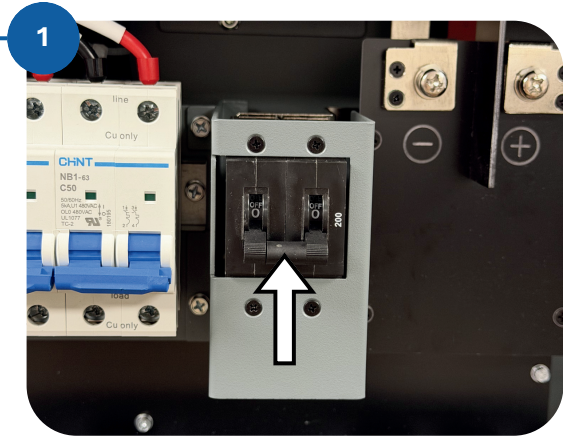
For the battery to communicate with the inverter, be sure to plug in the provided communication cable from the inverter RS485/CAN port to the battery.

5. Power-On Sequence

1. Turn **ON** the **Battery Breaker** on the Inverter.
2. Turn **ON** your **Battery**
(Power switch/button located on the battery
“if equipped”)
(Wait 10 Seconds...)
3. Turn **ON** the **Inverter**.
(Wait 45 Seconds...)
4. Set the **Recommended Settings** from the
table below using the LCD screen. (For
additional parameters, refer to user manual)

Menu	Setting	Recommended Input
01	Output Mode	Sub or Sbu
07	Battery charge current	Setting range: 0-140A (Default: 60A)
08	Battery Type	L16 (LFP)
28	Grid charge current	Setting range: 0-80A (Default: 60A)
32	BMS Comms	CAN
33	BMS Protocol	LUX or UZE (universal)
38	Output Voltage	120/240Vac Default: 120Vac
73	Max charging current by generator	Setting range: 0-80A (Default: 40A)
74	Generator input power	Setting range: 0-10KW (Default: 6KW)

5. Turn **ON** the **PV Switch**.
6. Turn **ON** the **Grid Breaker**.
7. Turn **ON** the **Load Breaker**.
8. Turn **ON** the **Generator Breaker** (If Connected)



6. LED Indicators

Red	Alert/Fault
Green	Battery is Charging
Yellow	System is Ready

7. Start-up Checklist

- All wiring torqued. (8-10 N-m | 80-90 in-lb)
- Correct wire sizes used.
- PV voltage verified.
- Battery polarity correct.
- All connections secured.
- Terminal covers reinstalled.
- No fault indicators are present.

Need Additional Assistance?

Contact BigBattery **Tech Support**

Email: Support@BigBattery.com

Phone: (818) 280-3091 (Opt. 2)

Additional Resources



APEX-6.5K
User Manual

Install the SOLARMANSmart APP to stay connected to your home from anywhere. Enjoy the confidence of knowing your energy is always under control.



SOLARMAN Smart

We are thrilled to help you power your life with safe, sustainable, and reliable American Engineered technology. Let's get you up and running!

— The BigBattery Team