

Features

- Excellent dust-proof performance with separate compartment design
- Built-in LiFePO4 lithium battery
- Intuitive display of battery SOC via 5-bar indicator lights
- Multiple DC output ports (5VDC/3A ports, 12VDC/2A ports, Type C ports)
- Large-sized LCD screen to monitor and modify system parameters
- Optional 4G or WiFi module to remote control the inverter/charger by the RS485 com. port
- AC input overload relay for disconnecting from the grid when the fault occurs
- Circuit breaker on PV input for equipment safety
- Circuit breaker on battery output for battery safety
- AC charging with PFC technology, high power factor for efficient energy consumption
- Bidirectional high-frequency transformer isolation topology
- Advanced MPPT technology: maximum tracking efficiency $\geq 99.5\%$
- EMC design on AC output to avoid interference with AC load
- Long-term continuous operation at full power
- Pure sine wave output
- Comprehensive electronic protection

Home Battery Backup



MacBook
7105mAh $\approx 42+$ times



Rice Cooker
600W $\approx 1.6+$ hours



iPhone
2942mAh $\approx 105+$ times



Television Set
100W $\approx 10+$ hours



Coffee Maker
900W $\approx 1.1+$ hours



Electric Oven / Toaster Oven
800W ≈ 1.3 hours



Impact Drill
1100w $\approx 0.9+$ hours

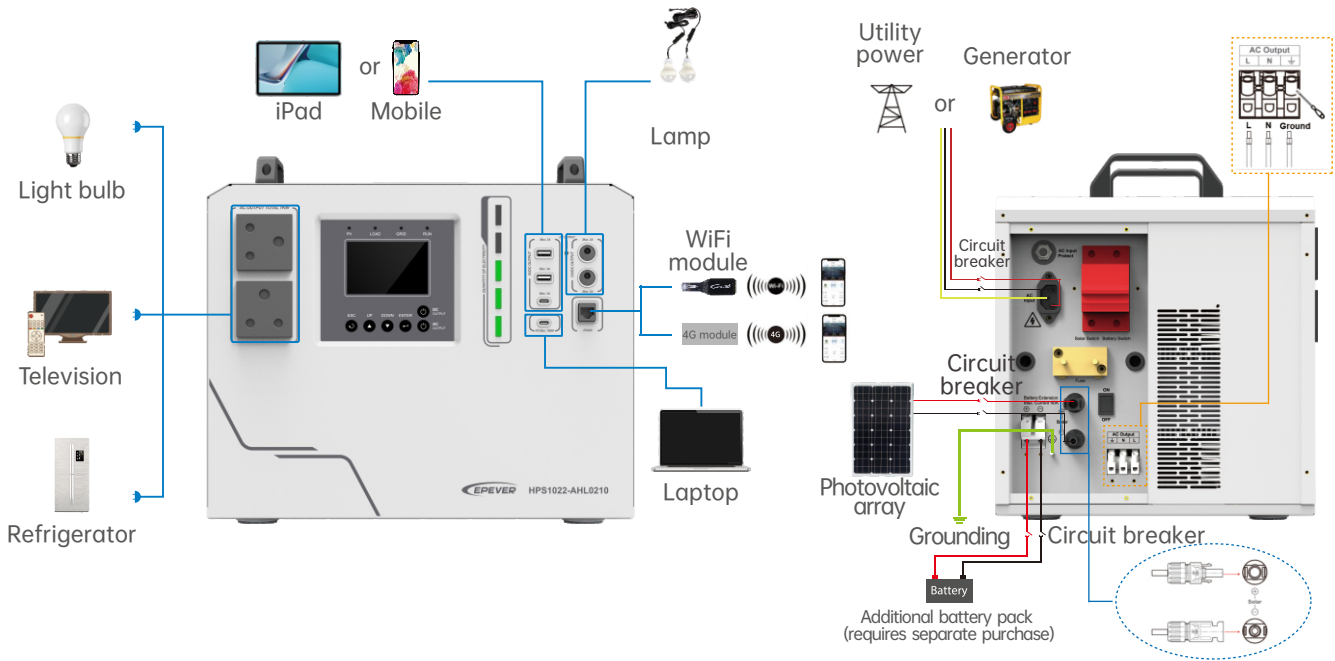


Car Refrigerator
62W $\approx 16+$ hours

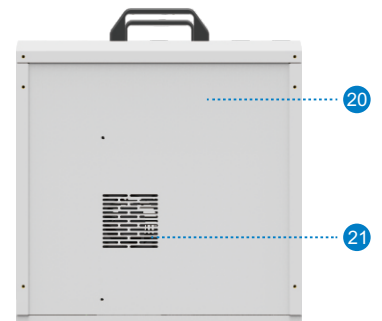
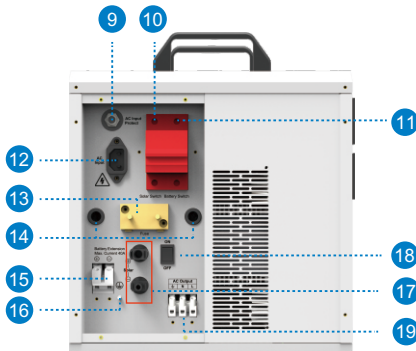
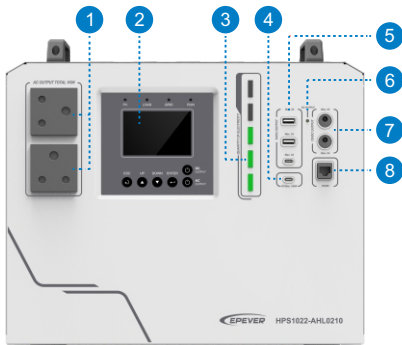


| Model | HPS1022-AHL0210 |
|--|--|
| Utility Input | |
| Utility Rated Voltage | 220VAC |
| Utility Voltage | 200~240VAC |
| Failure Voltage | 290VAC |
| Utility Frequency | 50Hz/60Hz |
| Utility Maximum Work Current (Charging + Bypass) | 7A@220VAC |
| Switch Response Time | Switch Response Time-Utility to Inverter: $\leq 20\text{ms}$ Switch Response Time-Inverter to Utility: $\leq 20\text{ms}$ |
| AC Input Overload Relay | HAVE |
| Inverter Output | |
| Inverter Rated Power (@25°C) | 1000W |
| 4-second Transient Surge Output Power | 1800W |
| Inverter Output Voltage | 220VAC $\pm 3\%$ |
| Inverter Frequency | 50Hz/60Hz $\pm 0.2\%$ |
| Output Voltage Waveform | Pure sine wave |
| Output Voltage Harmonic Distortion Rate | $\leq 3\%$ (Resistive load) |
| Output Gradual Start | HAVE |
| Solar Controller | |
| PV Maximum Input Withstand Voltage | 95VDC (at minimum operating environment temperature) |
| Solar Controller Type | MPPT |
| MPPT Maximum Efficiency | $\geq 99.5\%$ |
| MPPT Voltage Range | 24~76VDC |
| MPPT Input Channels | One way |
| PV Maximum Charging Current | 20A |
| Battery | |
| Battery Type | LFP8S2P |
| Battery Rated Capacity | 40Ah |
| Cell Dimension | Diameter: 40.0 ± 0.5 -0mm Height: 136.25 ± 0.5 mm |
| Battery Rated Voltage | 25.6VDC |
| Maximum Continuous Charging Current | 1C |
| Maximum Continuous Discharging Current | 1.8C |
| Battery Work Voltage Range | 21.0VDC~30.0VDC |
| Battery Work Temperature Range | Discharging Mode: -20°C~50°C Charging Mode: 0°C~50°C |
| Cycle Times | 2000 times |
| DC Output | |
| 12V DC Output (x2) | 12V=2A, Max. 24W/port, Total 48W |
| USB-A Output (x2) | 5V=3A, Max. 15W/port, Total 30W |
| USB-C Output (x1) | 5V=3A, Max. 15W |
| USB-C Output (x1) | 5/9/12/15V=3A, 20V=5A, Max. 100W |
| DC Output Switch | HAVE |
| Others | |
| Work Temperature Range | -20°C~50°C (when the environment temperature exceeds 30°C, the charging power and load power will be reduced appropriately; working of full load is not supported.) |
| Enclosure | IP30 |
| Communication Method | Bluetooth, RS485 (WiFi optional) |
| LCD | Monochrome LCD, English interface |
| Warranty | Two years |
| Dimension (Length x Width x Height) | 385x307x345mm (with floor mats and handles) |
| Net Weight | 20.0kg |

Solar System Connection



Product Information



- | | | |
|---------------------------|-----------------------------------|-------------------------------|
| 1 AC outlet | 8 RS485 com. port | 15 Extension battery terminal |
| 2 LCD | 9 Utility bypass overload relay | 16 Grounding terminal |
| 3 Battery SOC indicator | 10 PV input circuit breaker | 17 PV input terminals |
| 4 USB-C port (100W PD) | 11 Battery output circuit breaker | 18 Power switch |
| 5 5VDC/3A output port *3 | 12 AC input port | 19 AC output terminal |
| 6 DC output indicator | 13 Extension battery fuse | 20 Battery container |
| 7 12VDC/2A output port *2 | 14 Outlet holes | 21 Cooling fan |

Recommended Component Configuration Table

| Specification | Size | Power | Recommended PV module | PV voltage range | Recommended PV connection |
|-----------------|----------------|----------|---|------------------|---------------------------|
| Polycrystalline | 1470x670x28mm | 165~170W |  | 30VDC~95VDC | Two in series 45VDC |
| | | | | | Three in series 68VDC |
| Monocrystalline | 1580x710x28mm | 220~235W |  | 30VDC~95VDC | Two in series 53VDC |
| | | | | | Three in series 80VDC |
| Monocrystalline | 1570x765x28mm | 250~260W |  | 30VDC~95VDC | Two in series 53VDC |
| | | | | | Three in series 80VDC |
| Polycrystalline | 1640x992x30mm | 270~280W |  | 30VDC~95VDC | One in series 38VDC |
| | | | | | Two in series 76VDC |
| Polycrystalline | 1956x992x30mm | 330~350W |  | 30VDC~95VDC | One in series 45VDC |
| | | | | | Two in series 90VDC |
| Monocrystalline | 1755x1038x30mm | 370~380W |  | 30VDC~95VDC | One in series 45VDC |
| | | | | | Two in series 90VDC |
| Monocrystalline | 2094x1038x30mm | 450~470W |  | 30VDC~95VDC | One in series 53VDC |
| Monocrystalline | 1722x1134x28mm | 400~415W |  | 30VDC~95VDC | One in series 40VDC |
| | | | | | Two in series 80VDC |
| Monocrystalline | 2279x1134x30mm | 540~555W |  | 30VDC~95VDC | One in series 53VDC |
| Monocrystalline | 2204x1303x35mm | 590~600W |  | 30VDC~95VDC | One in series 53VDC |
| Monocrystalline | 2384x1303x35mm | 650~670W |  | 30VDC~95VDC | One in series 53VDC |

*This table should be validated based on the limit open-circuit voltage at the lowest temperature, and it is not allowed to exceed 95V under any conditions.