



# APEX-6.5K & APEX-10K

SKU: INV034 & INV035



## KEY FEATURES

- All-in-One Off-Grid Power Solution: Combines inverter, solar charger, and battery charger for seamless solar/battery/generator operation.
- High-Performance Dual MPPTs: Up to 10kW (APEX-6.5K) & 11kW (APEX-10K) PV input with wide 120–450 VDC MPPT range for flexible solar array design.
- Split-Phase 120/240V Output: Powers both standard household and heavy-duty 240V appliances, ideal for U.S. homes and cabins.
- Scalable Power: Parallel up to six units.
- Smart Energy Management: Time-of-use scheduling and intelligent charge/discharge modes to optimize battery lifespan and energy savings.
- Reliable & Connected: Pure sine wave output, built-in protections, and Wi-Fi/RS485/CAN communication for remote monitoring and control.

## ABOUT APEX

The **APEX-6.5K** and **APEX-10K** Hybrid Inverters, designed as an off-grid solar inverter with the hybrid versatility of an A/C input for grid connection/charging, generator input, or A/C solar inputs to intelligently manage energy from solar panels, batteries, and the grid to deliver seamless power. The APEX inverters are engineered for true energy independence, providing a split-phase 120/240V at 50/60 Hz with clean, pure sine-wave output, APEX pairs flawlessly with modern LiFePO<sub>4</sub> batteries and accepts both solar and generator inputs for seamless, all-day autonomy. A 40A (APEX-6.5K) & 64A (APEX-10K) pass-through keeps large appliances and critical loads humming, while wide operating temperatures and an indoor-ready enclosure for off-grid, reliable performance. Installer-friendly bottom-entry wiring and smart protections round out a system that's rugged, efficient, and ready to power your cabin, homestead, or remote residences to deliver the ultimate source of energy independence.

## CONTACT US

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## FREQUENTLY ASKED QUESTIONS

### Can the inverter work on-grid and off-grid?

Yes. The APEX is a true hybrid inverter. It syncs with the utility for grid use and runs independently from solar + batteries during outages, switching automatically for uninterrupted power.

### What batteries are compatible with the APEX inverter?

The Apex series inverters support most lithium batteries and are designed to work best with BigBattery batteries such as NEXUS, ETHOS, and HUSKY 2. RS485 and CAN enable smart integration; without communication, they operate in voltage-controlled mode. Tip: use a CAN-enabled BigBattery pack for optimal protection and performance reporting.

### How much solar input can the APEX inverter handle?

The APEX inverter supports a wide PV input range of up to 600 VDC, with dual independent MPPT trackers to optimize energy harvest from multiple solar strings. This design allows flexible array configurations, ideal for installations with varying roof angles or mixed sunlight exposure. The high input voltage and dual MPPT architecture ensure maximum solar utilization and stable operation under changing conditions.

# APEX-6.5K & APEX 10K INVERTER SPECIFICATIONS



| Model                                | APEX-6.5kW  | APEX-10kW                   |
|--------------------------------------|---|-----------------------------|
| Inverter output                      |   |                             |
| Rated Output Power                   | 6,500W  | 10,000W                     |
| Surge Capacity (Peak Power)          | 13,000W   | 20,000W                     |
| Rated Output Voltage                 | 120/240 Vac (single-phase/split-phase)                                      |                             |
| Load capacity of Motors              | 4 HP  | 6 HP                        |
| Rated Frequency                      | 50/60Hz   |                             |
| Output Wave                          | Pure sine wave  |                             |
| Switching Time                       | 10ms(typical value)   |                             |
| BATTERY                              |   |                             |
| Battery Type                         | Lithium-ion battery/lead-acid battery/user-defined battery                  |                             |
| Rated Battery Voltage                | 48V   |                             |
| Voltage Range                        | 40~60Vdc  |                             |
| Max. Solar Charging Current          | 140A  | 200A                        |
| Max. Grid/Generator Charging Current | 80A   | 120A                        |
| Max. Hybrid Charge Current           | 140A  | 200A                        |
| SOLAR INPUT                          |   |                             |
| No. Of MPPT                          | 1+1   |                             |
| Max. Input Power                     | 5,000W + 5,000W   | 5,500W + 5,500W             |
| Max. Input Current                   | 18A + 18A   | 22A + 22A                   |
| Max. Open Circuit Voltage            | 550Vdc+550Vdc   |                             |
| MPPT Voltage Range                   | 125~450Vdc  |                             |
| GRID/GENERATOR INPUT                 |   |                             |
| Input Voltage Range                  | 65~140Vac   |                             |
| Input Frequency Range                | 50/60Hz   |                             |
| Bypass Overload Current              | 40A   | 63A                         |
| A/C Inputs                           | 2 Inputs - Grid & Generator   | 1 Input - Grid or Generator |
| THD (V)                              | <5%   |                             |
| EFFICIENCY                           |   |                             |
| Max. Efficiency                      | 99.9%   |                             |
| MPPT Tracking Efficiency             | 93%   | 92%                         |
| Parallel Capacity                    | Up to 6 Units (3 or more units in parallel can form a three-phase output)   |                             |
| GENERAL DATA                         |   |                             |
| Dimension                            | 25.51 x 16.14 x 5.51 Inches   | 28.46 × 17.64 × 5.91 Inches |
| Weight                               | 48 lbs  | 62 lbs                      |
| Protection Degree                    | IP20 Indoor Only  |                             |
| Temperature                          | 14 - 131°F, > 113 °F Derate   |                             |
| External Module (Optional)           | Wi-Fi/GPRS  |                             |
| Certificate                          | UL1741/RoHs/EN61000-6-1/EC61000-6-3/FCC Part15 ClassB/IEC62109-1/IEC62109-2 |                             |
| Noise                                | <60dB   |                             |
| Cooling Method                       | Intelligent fan   |                             |
| Warranty                             | 5 years   |                             |
| Communication                        | RS485/CAN/USB/Dry Contact   |                             |
| Integrated Circuit Breaker           | Utility/Load/Battery/PV   |                             |
| OVERLOAD PROTECTION                  |   |                             |

**APEX-10KW** After overload protection is enabled, the inverter output will be restored after 3 min, and after 5 times of overload, the output will be off until the inverter is restarted. (102%< load <110%): An error will be reported, and the output will be turned off after 5 min. (110%< load <125%): An error will be reported, and the output will be turned off after 10s. Load >125%: An error will be reported, and the output will be turned off after 5s.

**APEX-6.5KW** Has PV input current limiting protection, PV input over-voltage, PV night reverse current protection, AC input overvoltage protection, AC input under-voltage protection, Battery over-voltage protection, Battery under-voltage Protection, Battery over-current protection, AC output short-circuit protection, Heat sink over-temperature protection, Inverter over-load protection.