# Three-phase Hybrid Inverter

## Features & Advantages

- Support Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build-in Anti-feed-in Function
- 100% unbalanced output, each phase;
  200% unbalanced output, each phase (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade



## Technical Specifications

| PV Input | Ares 8KH3 | Ares 12KH3 | Ares 15KH3 | Ares 17KH3 |
|---|---|---|---|---|
| Max. DC Input Power | 12kW | 18kW | 22.5kW | 25.5kW |
| Max. PV Voltage | | 1000V | | |
| Rated DC Input Voltage | | 620V | | |
| DC Input Voltage Range | | 150-1000V | | |
| MPPT Voltage Range | | 150-850V | | |
| Full MPPT Range | 300-850V | 500-850V | 500-850V | 500-850V |
| Start-up Voltage | | 160V | | |
| Max. DC Input Current | 20x2A | 20x2A | 20+32A | 32x2A |
| Max. Short Current | 30x2A | 30x2A | 30+48A | 48x2A |
| No. of MPPT Tracker / Strings | 2/2 | 2/2 | 2/3 | 2/4 |
| **Battery Port** | | | | |
| Battery Nominal Voltage | 300V | 450V | 500V | 400V |
| Battery Voltage Range | 150-800V | 150-800V | 150-800V | 150-800V |
| Max. Charge/Discharge Current | 30A | 30A | 50A | 50A |
| Max. Charge/Discharge Power | 8kW | 12kW | 15kW | 17kW |
| Charging Curve | | 3 Stages | | |
| Compatible Battery Type | | Li-ion / Lead-acid / Sodium metal chloride battery | | |
| **AC Grid** | | | | |
| Nominal AC Output Power | 8kW | 12kW | 15kW | 17kW |
| Max. AC Input/Output Power | 12/8.8kVA | 18/13.2kVA | 22.5/16.5kVA | 25.5/18.7kVA |
| Max. AC Output Current | 17A | 21.5A | 27A | 30A |
| Nominal AC Voltage | | 230/400V | | |
| Nominal AC Frenquency | | 50/60Hz | | |
| Power Factor | | 1（-0.8-0.8）adjustable | | |
| Current THD | | <3% | | |
| **AC Load Output (Back-up)** | | | | |
| Nominal Output Power | 8000VA | 12000VA | 15000VA | 17000VA |
| Nominal Output Voltage | | 230/400V | | |
| Nominal Output Frequency | | 50/60Hz | | |
| Nominal Output Current | 11.6A | 17.4 A | 21.8A | 24.7A |
| Peak Output Power | 8800VA, 60s | 13200VA, 60s | 16500VA, 60s | 18700VA, 60s |
| THDV (with linear load) | | <3% | | |
| Switching Time | | <10ms | | |
| **Efficency** | | | | |
| Europe Efficiency | 97.50% | 97.50% | 97.50% | 97.80% |
| Max. Efficiency | 98.20% | 98.30% | 98.30% | 98.30% |
| Battery Charge/Discharge Efficiency | | 98.00% | | |
| **Protecion** | | | | |
| Reverse Polarity Protection | | Yes | | |
| Over Current / Voltage Protection | | Yes | | |
| Anti-islanding Protection | | Yes | | |
| AC Short-ciruit Protection | | Yes | | |
| Leakage Current Detection | | Yes | | |
| Ground Fault Monitoring | | Yes | | |
| Grid Monitoring | | Yes | | |
| Enclosure Protect Level | | IP65 | | |
| AC/DC surge protection | | Type II | | |
| **General Data** | | | | |
| Dimensions | | 558 x 535 x 260 mm | | |
| Weight | | 29kg | | |
| Topology | | Transformerless | | |
| Cooling Concept | | Intelligent Fan | | |
| Relatively Humidity | | 0-100% | | |
| Operating Temperature Range | | -25 to 60℃ | | |
| Operating Altitude | | <4000m | | |
| Noise Emission | <30dB | <40dB | <40dB | <40dB |
| Standby Consumption | | <5W | | |
| Display & Communication Interfaces | | LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G | | |
| Certification & Approvals | NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2 | | | |
| EMC | | EN61000-6-2, EN61000-6-3 | | |