

Online UPS / Off-Grid Low Frequency Solar Inverter MAGF Series 3KW-8KW with isolated transformer



MAGF Series 3KW – 8KW

Double-Conversion Online UPS (VFI) / Off-Grid Low-Frequency Solar Inverter with Isolated Transformer, The MAGF Series combines the benefits of an Online Double-Conversion UPS (Voltage and Frequency Independent - VFI) with a solar-ready inverter, delivering premium power protection for your critical and sensitive equipment.

Unmatched Power Protection & Reliability

Mash Mechanical UPS utilizes advanced double-conversion technology, effectively isolating your critical load from power disturbances such as surges, sags, distortions, and outages. This ensures a pure, conditioned AC sine wave output, safeguarding sensitive electronics from potential damage.

How It Works:

- 1. Double-Conversion Process:**
 - Converts incoming AC power to DC via a rectifier.
 - Reconstructs it back to clean AC power using an inverter.
- 2. Uninterrupted Backup Power:**
 - External batteries cabinet, flywheels, or supercapacitors to supply power when the grid fails or fluctuates.
- 3. Constant Voltage & Frequency:**
 - Ensures stable and reliable power 24/7 for mission-critical applications.

Advanced Features for Maximum Efficiency:

- **MCU-Controlled Technology:** Enables various functions, including:
 - Multi-mode settings
 - MPPT solar charge control
 - Voltage stabilization
 - Short-circuit & overload protection
 - Inverter frequency adaptability
 - Battery charging management
 - Intelligent monitoring
- **User-Friendly Display & Remote Management:**
 - LCD & LED display for real-time monitoring.
 - Intelligent control via RS232 & USB.
 - Remote monitoring through RS485 & SNMP.

Why Choose the MAGF Series?

With its high efficiency, superior stability, and unmatched reliability, the MAGF Series is the ideal power solution for environments demanding consistent and high-quality power delivery.

| Specifications | | | | | | |
|--|---|-----|-------------------|---------|-----|-----|
| Power | 3KW | 4KW | 3KW | 5KW | 6KW | 8KW |
| Battery Voltage | 96 VDC | | 192 VDC | | | |
| Working Mode | PV priority / AC priority optional | | | | | |
| PV | | | | | | |
| MPPT Voltage Range | 96 VDC – 200 VDC | | 192 VDC – 400 VDC | | | |
| Max. charge current | 10-60A | | 10-40 A | 10-60 A | | |
| PV Panel Configuration (Suggestions) (Vmp) | 120-142 VDC | | 240-284 VDC | | | |
| PV Panel Configuration (Suggestions) (Imp) | ≤ 60A | | ≤ 40A | ≤ 60A | | |
| Conversion efficiency | ≥ 98 % | | | | | |
| Display | | | | | | |
| Panel indicator | LCD+ LED Panel display | | | | | |
| AC Mode | | | | | | |
| Input voltage range | 165 VAC – 275 VAC | | | | | |
| Input frequency range | 40-70 Hz (auto transfer to battery mode. If beyond this range) | | | | | |
| Output voltage precision | 220 VAC ± 5% | | | | | |
| Input power factor | ≥ 0.8 | | | | | |
| Max. efficiency | 88% (inverter on) | | | | | |
| Overload | 110% transfer to bypass in 255s. 120% go to bypass in 60s. 150% go to bypass in 10s. | | | | | |
| Max. charging current | 8A | | 12A | | | |
| Short circuit protection | Electronic limited current output or turn bypass. Air breaker protection | | | | | |
| Inverter Mode | | | | | | |
| Output voltage | 220 VAC ± 5% | | | | | |
| Output frequency | 50 Hz / 60Hz ± 1% Frequency self-adjusted | | | | | |
| Output power factor | 1 | | | | | |
| Distortion | ≤ 5% Linear load | | | | | |
| PV-AC transfer time | 0ms | | | | | |
| Max. efficiency | ≥92% | | | | | |
| Overload | 110% transfer to bypass. In 255s or shut down. 120% go to bypass or shut down in 60s. 150% go to bypass or shut down in 10s | | | | | |
| Eco mode (Optional) | When Load < 5%. System will turn to bypass power supply (utility) in 1min | | | | | |
| Short circuit | Electronic limited current output, turn the bypass or system to be automatic shutdown | | | | | |
| Alarm | | | | | | |
| AC fails | 1/4s: automatic sound elimination after 40s | | | | | |
| Battery low voltage | 5/1s | | | | | |
| Overload | 1/1s | | | | | |
| Communication (Optional) | | | | | | |
| Communication interface | RS232 / USB / RS485 / SNMP | | | | | |
| Dry contact | PV failure, battery low-voltage, overload, bypass, inverter failure, remote start generator dry contact signal | | | | | |
| Others | | | | | | |
| Output connection | Terminal blocks | | | | | |
| Surge protection | Optional | | | | | |
| EMC | Accord with EN62040-2:2006:EN61000-3-2:2006: EN61000-3-3:2008 | | | | | |
| IP class | IP20 | | | | | |
| Ambient temperature | 0℃ – 40℃ | | | | | |
| Ambient humidity | 10% - 90% (Non Condensed) | | | | | |
| Noise | ≤ 50dB | | | | | |
| Working altitude | 2000m (Every 100m increase derating 1%) | | | | | |
| Dimension (WxDxH)mm | 560 x 265 x 725 | | | | | |
| Packing dimension (WxDxH)mm | 662 x 360 x 905 | | | | | |
| Weight (kg) | 76 | 80 | 60 | 67 | 69 | 85 |
| Packing weight (kg) | 85 | 89 | 69 | 76 | 78 | 94 |
| Service | | | | | | |
| Warranty | 2 Years | | | | | |

Battery Cabinet of UPS:

| Battery Cabinet of UPS | | | | | | |
|------------------------|-------------------------------------|-----|--------------------------------------|-----|-----|-----|
| Power | 3KW | 4KW | 3KW | 5KW | 6KW | 8KW |
| Cabinet | Rack Cabinet P/N: MA902R-BATRACK | | Rack Cabinet P/N: MA9010R-BATRACK | | | |
| Batteries | 8 x (12V x 9Ah) | | 16 x (12V x 9Ah) | | | |

Optional Battery Cabinets:

| Battery Cabinet of UPS | |
|------------------------|--|
| Cabinet (Option 1) | Tower Cabinet P/N: MA880-BATBANK Up to 48 x (17Ah x 12V) |
| Cabinet (Option 2) | Tower Cabinet P/N: EBP III W/360VDC Up to 60 x (17Ah x 12V) |
| Cabinet (Option 3) | Tower Cabinet P/N: EBP I W/360VDC Up to 60 x (7Ah x 12V) |
| Cabinet (Option 4) | Tower Cabinet P/N: MA890-BATBANK Up to 30 x (100Ah x 12V) |