

## Product models

UP1500-M3222 UP2000-M3322 UP3000-M3322 UP3000-M2142

# UPower SERIES Inverter/Changer

The UPower series is a new type of the inverter/ charger combining with solar & utility charging and AC output, which adopts a multi-core processor design and advanced MPPT control algorithm, and has the features of high response speed, high reliability and high industrialization standard. It offers four charging modes to Solar priority, Utility priority, Solar and Utility & Solar; two output modes for Battery and Utility, meeting the various application demands.



# Features

- Adoption of the advanced SPWM technology, with pure sine wave output
- Fully digitalized voltage and current double closed-loop control
- Advanced MPPT technology, with efficiency no less than 99.5%.
- Four charging mode: Solar priority, Utility priority, Utility & solar and Solar
- LCD design that enables dynamic display of system running data and operating state

- Two OUTPUT mode: Battery and Utility
- Provided with common interface and advanced interface
- Multiple LED indicators that instantly indicate the operating state of the system
- 2P circuit breaker provided at the utility input end
- Independent control of AC output with AC OUT button
- Battery temperature compensation function.
- Extensive Electronic protection

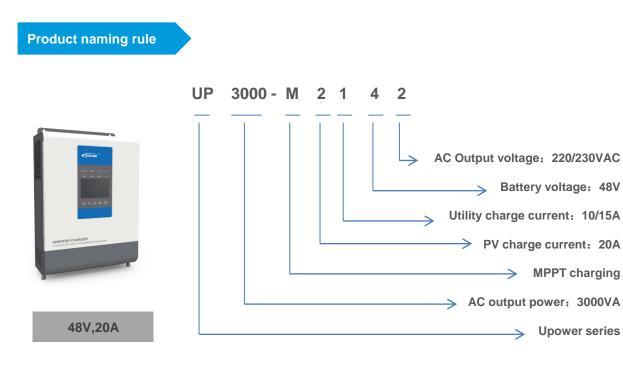
## **Protection function**

- PV Over Current protection
- PV Reverse Polarity protection
- Utility input overvoltage protection
- · Utility input under voltage protection
- Load Short Circuit protection
- · Device overheating protection

- · PV short circuit protection
- Night Reverse Charging protection
- Battery overvoltage protection
- Battery Over Discharge protection

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Load Overload protection





**Note:**When the battery voltage is lower than "Restore Auxiliary Module Charging Voltage( $V_{AON}$ )", the utility starts charging. When the battery voltage reaches to "Stop Auxiliary Module Charging Voltage ( $V_{AOF}$ )", the utility stops charging.

When the battery voltage is lower than "Restore Auxiliary Module Charging Voltage ( $V_{AON}$ )", the solar starts charging. When the battery voltage reaches to "Stop Auxiliary Module Charging Voltage( $V_{AOF}$ )", the solar stops charging.

#### **Electrical parameters**

| Item                        | UP1500-M3222 | UP2000-M3322 | UP3000-M3322 | UP3000-M2142 |  |
|-----------------------------|--------------|--------------|--------------|--------------|--|
| System battery voltage      |              | 48VDC        |              |              |  |
| Battery input voltage range | 21.6~31.9VDC |              |              | 43.2~63.9VDC |  |

| Item                               | UP1500-M3222                      | UP2000-M3322 | UP3000-M3322 | UP3000-M2142 |  |  |
|------------------------------------|-----------------------------------|--------------|--------------|--------------|--|--|
| Output rated power                 | 1200W                             | 1600W        | 2400W        | 2400W        |  |  |
| Output power (15min.)              | 1500W                             | 2000W        | 3000W        | 3000W        |  |  |
| Overload power(5s)                 | 2400W                             | 3200W        | 4800W        | 4800W        |  |  |
| Max. surge power                   | 3000W                             | 4000W        | 6000W        | 6000W        |  |  |
| Output voltage range               | 220VAC±3%                         |              |              |              |  |  |
| Output frequency                   | 50HZ/60HZ                         |              |              |              |  |  |
| Output wave                        | Pure Sine Wave                    |              |              |              |  |  |
| Power factor                       | 0.8                               |              |              |              |  |  |
| Distortion THD                     | ≤3% (24V or 48V resistive load)   |              |              |              |  |  |
| Inverter efficiency                | ≤95%                              |              |              |              |  |  |
| Utility input voltage range        | 170VAC~275VAC                     |              |              |              |  |  |
| Utility charge current             | 20A                               | 30A          | 30A          | 15A          |  |  |
| Transfer time                      | 20mS                              |              |              |              |  |  |
| Max. PV open circuit voltage       |                                   | 150V* 138V◆  |              |              |  |  |
| Max. PV input power                | 780W                              | 780W         | 780W         | 1040W        |  |  |
| PV charging current                | 30A                               | 30A          | 30A          | 20A          |  |  |
| Equalization voltage               | 29.2V 58.4V                       |              |              |              |  |  |
| Boost voltage                      | 28.8V                             |              |              | 57.6V        |  |  |
| Float voltage                      |                                   | 55.2V        |              |              |  |  |
| Tracking efficiency                | ≤99.5%                            |              |              |              |  |  |
| Charging conversion efficiency     | ≤98%                              |              |              |              |  |  |
| Temperature compensate coefficient | -3mV/°C/2V (Default)              |              |              |              |  |  |
| Self-consumption                   | ≤0.6A                             | ≤0.8A        | ≤0.8A        | ≤0.6A        |  |  |
| Enclosure                          | IP30                              |              |              |              |  |  |
| Relative humidity                  | < 95%(N.C.)                       |              |              |              |  |  |
| Working environment temperature    | -20°C∼50°C(100% input and output) |              |              |              |  |  |
| Dimension                          | 386×300×126mm 444×300×126mm       |              |              |              |  |  |
| Mounting dimension                 | 230mm                             |              |              |              |  |  |
| Mounting hole size                 | Φ8mm                              |              |              |              |  |  |

★ At minimum operating environment temperature.
♦ At 25<sup>°</sup>C environment temperature.



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