AC-DC BATTERY CHARGER
- 120~326W Portable Battery Charger
- 300~1000W Stationary Battery Charger

DC-AC POWER INVERTER
- 500W Stand-alone Solar Inverter
- 100~2500W Modified Sine Wave
- 200~3000W True Sine Wave
- 1500~3000W True Sine Wave with Solar Charger

Total Solution For
Power Inverter & Battery Charger
Established in 1982, MEAN WELL is a leading manufacturer of standard switching power supplies. In response to the world’s energy-saving trend, we’ve come up with a green power solution that include DC/AC inverters, solar inverters, and battery chargers to fulfill the alternative energy requirements in the market. Those products are highly efficient, save energy, low power consumption and approved by global safety/EMC certificates per TUV, UL, and CE, which greatly guarantee your safety for all-purpose solar power applications and any charging system, such as electric scooter, electric bicycle, electric wheelchair... etc.

Backed by 31 years’ experience, we have over 5,000 products that allow us to provide “one stop shopping” to our customers. Every product in the MEAN WELL range is the result of rigid procedures governing design, design verification test (DVT), design quality test (DQT), component selection, pilot-run production, and mass production. With our network of over 200 distributors in over 70 countries globally, your order can be delivered within 24 hours. No minimum order required. To source from a trusted industry supplier, contact us today!

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4. **TS Series** 200~3000W True Sine Wave Inverter
5. **TN Series** 1500~3000W True Sine Wave Inverter with Solar Charger
7. Comparison of UPS and Energy Saving Mode for TN Series
8. Applications
### Features

- Universal AC input / Full range
- AC input range selectable by switch (PB-120)
- No load power consumption ≤ 0.5W (GC120)
- No load power consumption ≤ 1W (GC160/220/330)
- High efficiency up to 94%
- Built-in active PFC function, PF > 0.9 (GC series)
- Built-in passive PFC function (PB-120)
- Fully enclosed plastic case (GC series)
- 3 pole AC inlet IEC320-C14
- Class I power (with earth pin)
- Fanless design, cooling by free air convection (GC series)
- Cooling by built-in DC fan (PB-120/230)
- Built-in ON/OFF power switch (PB-120/230)
- Built-in remote ON/OFF control (PB-230)
- Protections: Short circuit / Over voltage / Over temp. / Reverse polarity (PB-120/230)
- LED indicator for charging status
- Especially suitable for portable usage
- Charger for Lead-Acid, Li-Lon, Gel cell batteries
- 2 years warranty

### Specifications

#### Model Name

- GC120
- GC160
- GC220
- GC330
- PA/PB-120
- PB-230

#### AC input voltage range

- GC120: 85~264VAC
- GC160: 90~264VAC
- GC220: 88~132VAC / 176~264VAC
- GC330: 90~264VAC
- PB-230: 90~264VAC

#### Charge style

- 2 stage
- 3 stage

#### Over voltage protection

- GC120~220: 105%~135%, shut off O/P voltage, re-power on to recover
- GC330: 108%~127%, shut off output voltage, re-power on to recover (PB-230: 102%~125%)

#### Withstand voltage

- I/P-O/P: 3kVAC, 1 minute

#### Working temperature

- -30~+70°C
- -20~+50°C

#### Safety standards

- GC120~220: UL1012 (AD1-Type only), EN60950-1
- GC330: UL60950-1, EN60950-1
- UL60950-1, TUV EN60950-1, EN60335-2-29 (except for 55.2V)
- UL1012 (AD1-Type only), TUV EN60950-1

#### EMC standards

- EN55022 class B, EN61000-4-2,3,4,5,6,8,11, EN61000-3-2,3
- FCC part15 class B
- EN55022 class B, EN61000-4-2,3,4,5,6,8,11
- EN61000-3-2,3

#### Standard DC output plug

- Power DIN 4P with lock type, Kycon KPPX-4P equivalent
- 4P/AMP 1-480702-0 equivalent
- MIC 3P
- MIC 4P

#### Dimensions

- GC120: 167x67x35 mm
- GC160: 175x72x35 mm
- GC220: 210x85x46 mm
- GC330: 220x95x46 mm
- PA/PB-120: 180x96x49 mm
- PB-230: 190x96x49 mm

#### Model Name Wattage Output Effi.

<table>
<thead>
<tr>
<th>120W</th>
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<tbody>
<tr>
<td>GC120A12-</td>
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<td>GC120A48-</td>
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<th>218W</th>
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<td>GC220A12-</td>
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<td>GC220A24-</td>
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<td>GC220A48-</td>
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<th>326W</th>
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<tr>
<td>GC330A36-C4P</td>
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<tr>
<td>GC330A48-C4P</td>
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</table>

Please refer to www.meanwell.com for detail spec.
Stationary Battery Charger

Features

- Universal AC input / Full range (PB-600/1000)
- AC input range selectable by switch (PB-300/360)
- Built-in passive PFC function (PB-300P/360P)
- Built-in active PFC function (PB-600/1000)
- 3 poles AC inlet IEC320–C14
- Cooling by built-in DC fan (except for PB-300)
- Built-in ON/OFF power switch
- Built-in remote ON/OFF control
- 2/3/8 stage smart charger for PB-600/1000
- Protections:
  - Short circuit / Over voltage / Over temperature / Reverse polarity
  - LED indicator for charging status
- 3 years warranty

- True sine wave output (THD<3%)
- Built-in 500W MPPT solar charger, MPPT efficiency: 98% (Peak)
- High surge power up to 1000W
- Output voltage / Frequency adjustable
- High efficiency up to 88%
- Front panel indicator for operation status
- Protections:
  - Input: Bat. low alarm / Bat. low shutdown / Reverse polarity / Over voltage
  - Output: Short circuit / Overload / Over temperature
- 3 years warranty

- Output power: 500W (rated power); 1000W (surge power)
- DC input rated voltage: 12VDC, 24VDC or 48VDC
- AC input voltage range: 90–132VAC / 180–264VAC selectable by switch
- Charge style: 3 stage
- Over voltage protection: 108%–125%
- Withstand voltage: 1/P: O/P: 3kVAC, 1 minute
- Working temperature: -10~+50°C
- Safety standards: PB-300/360: UL60950-1, CB IEC60335-2-29 (except for 48V)
  - PB-600: UL1012, TUV EN60950-1 (48V only), TUV EN60335-2-29 (except for 48V)
  - PB-1000: UL60950-1, TUV EN60950-1
- EMC standards: EN55022 class B, EN61000-4-2,3,4,5,6,8,11

500W DC/AC Off-Grid Solar Inverter

- Model Name Wattage Output Effi.
  - PB-360-12 360W 14.4V, 0~24.3A 86%
  - PB-360-24 360W 28.8V, 0~12.5A 86%
  - PB-360-48 360W 57.6V, 0~6.25A 87%
  - PB-600-12 576W 14.4V, 0~40.0A 86%
  - PB-600-24 605W 28.8V, 0~21.0A 87%
  - PB-600-48 605W 57.6V, 0~10.5A 89%
  - PB-1000-12 864W 14.4V, 0~60.0A 85%
  - PB-1000-24 999W 28.8V, 0~34.7A 88%
  - PB-1000-48 1002W 57.6V, 0~17.4A 89%

- Model Name Wattage Output Effi.
  - ISI-501-112 450W 10.5~15 110/60 TYPE-A 85%
  - ISI-501-124 500W 21~30 110/60 TYPE-A 87%
  - ISI-501-148 500W 42~60 110/60 TYPE-A 87%
  - ISI-501-212 450W 10.5~15 230/50 TYPE-B 86%
  - ISI-501-224 500W 21~30 230/50 TYPE-B 88%
  - ISI-501-248 500W 42~60 230/50 TYPE-B 88%

= A, B (standard model), C, D, E, F, U (optional model)

Please refer to www.meanwell.com for detail spec.
### Features

- High frequency design
- Input protections:
  - Reverse polarity / Over and under voltage / Battery low alarm and shutdown
- Output protections: Short circuit / Overload / Over temp.
- With power ON/OFF switch and LED indicator
- Built-in remote ON/OFF control for 1000~2500W (optional)
- Built-in USB interface and without fan for 100W
- Input and output fully isolation
- Low power consumption (standby)
- LVD meet EN60950-1 and e13 mark
- EMC meet EN61000-4-2,3, EN55022
- 1 year warranty

### AC Output Receptacle (optional) for A301/A302 Series

<table>
<thead>
<tr>
<th>TYPE-1</th>
<th>TYPE-2</th>
<th>TYPE-3</th>
<th>TYPE-4</th>
<th>TYPE-5</th>
<th>TYPE-6</th>
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<tbody>
<tr>
<td>JAPAN</td>
<td>USA</td>
<td>EUROPE</td>
<td>UNIVERSAL</td>
<td>AUSTRALIA</td>
<td>U.K.</td>
</tr>
</tbody>
</table>

▲ Please consult MeanWell for other kinds of optional socket.
TYPE-2,3 (standard model) ; TYPE-1,4,5,6 (optional model)

### DC input rated voltage

- **12.5VDC**
- **25.0VDC**

### AC output voltage / Frequency

- **110VAC(rms) / 60Hz** or **230VAC(rms) / 50Hz**

### Max. output power

- **100W, 150W, 300W, 600W, 1000W, 1500W, 2500W**

### USB output power

- **5VDC / 500mA** (100W only)

### AC output regulation

- ±10% of rated output voltage

### Bat. low alarm

- **10±0.5VDC**
- **20.5±1.0VDC**

### Bat. low shut down

- **9.5±0.5VDC**
- **19.5±1.0VDC**

### I/P over voltage protection

- **15~17VDC**
- **30~32VDC**

### Working temperature

- **0~+40°C** (0~+25°C for 2500W)

### Safety standards

- Compliance to EN60950-1 (LVD)

### EMC standards

- Compliance to EN61000-4-2,3, EN55022

### Model Name

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Input power</th>
<th>Input VDC</th>
<th>Output VAC / Hz</th>
<th>Output socket</th>
<th>Effi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A301-100-F3</td>
<td>100W</td>
<td>10-15</td>
<td>230 / 50</td>
<td>TYPE-3</td>
<td>90%</td>
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<td>21-30</td>
<td>230 / 50</td>
<td>TYPE-3</td>
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<tr>
<td>A301-150-F3</td>
<td>150W</td>
<td>10-15</td>
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<tr>
<td>A302-150-F3</td>
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<td>110 / 60</td>
<td>TYPE-2</td>
<td>82%</td>
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<tr>
<td>A301-200-F3</td>
<td>200W</td>
<td>10-15</td>
<td>230 / 50</td>
<td>TYPE-3</td>
<td>82%</td>
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<tr>
<td>A302-200-F3</td>
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<td>230 / 50</td>
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<tr>
<td>A301-300-F3</td>
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<tr>
<td>A302-300-F3</td>
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<td>110 / 60</td>
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<td>A301-600-F3</td>
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<td>A302-1K0-F3</td>
<td>1000W</td>
<td>21-30</td>
<td>110 / 60</td>
<td>TYPE-2</td>
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<tr>
<td>A301-1K7-F3</td>
<td>1500W</td>
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<td>110 / 60</td>
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<td>A302-1K7-F3</td>
<td>1500W</td>
<td>21-30</td>
<td>110 / 60</td>
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<tr>
<td>A301-2K5-F3</td>
<td>2500W</td>
<td>10-15</td>
<td>110 / 60</td>
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<td>21-30</td>
<td>110 / 60</td>
<td>TYPE-2</td>
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<table>
<thead>
<tr>
<th>Model Name</th>
<th>Input power</th>
<th>Input VDC</th>
<th>Output VAC / Hz</th>
<th>Output socket</th>
<th>Effi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A301-1K0-B2</td>
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<td>110 / 60</td>
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<td>A301-1K0-F3</td>
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<td>110 / 60</td>
<td>TYPE-2</td>
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<tr>
<td>A302-1K0-B2</td>
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<td>110 / 60</td>
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<td>A302-1K0-F3</td>
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<td>TYPE-2</td>
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<tr>
<td>A302-1K7-F3</td>
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<td>TYPE-2</td>
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<td>110 / 60</td>
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<td>TYPE-2</td>
<td>82%</td>
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<tr>
<td>A302-2K5-F3</td>
<td>2500W</td>
<td>21-30</td>
<td>110 / 60</td>
<td>TYPE-2</td>
<td>82%</td>
</tr>
</tbody>
</table>

Please refer to www.meanwell.com for detail spec.
**Features**

- True sine wave output (THD<3%)
- 2 times high surge power for motor related application
- Advanced digital control by microprocessor
- Output voltage / frequency adjustable
- High efficiency up to 91%
- Conformal coating for TS-700
- Standby saving mode to conserve energy (TS-700)
- Built-in fan ON/OFF control function (TS-400/700)
- Fanless design, cooling by free air convection (TS-200)
- Front panel indicator for load / battery / operation status

**200~700W True Sine Wave**

Please refer to www.meanwell.com for detail spec.

**Rated output power**
- **TS-200**: 200W
- **TS-400**: 400W
- **TS-700**: 700W

**Maximum output power**
- **TS-200**: 230W for 3 minutes; 300W for 10 sec.
- **TS-400**: 460W for 3 minutes; 600W for 10 sec.
- **TS-700**: 800W for 3 minutes; 1050W for 10 sec.

**Output surge rating (30 cycles)**
- **TS-200**: 400W
- **TS-400**: 800W
- **TS-700**: 1400W

**DC input rated voltage**
- 12VDC, 24VDC or 48VDC

**AC output voltage**
- 100 / 110 / 115 / 120VAC; 200 / 220 / 230 / 240VAC adjustable via setting button on front panel

**Output frequency**
- 50Hz / 60Hz adjustable via setting button on front panel

**AC output waveform**
- True sine wave, THD<3.0%

**AC output regulation (Typ.)**
- ±3% of rated output voltage

**No load dissipation (Typ.)**
- ≤15W
- ≤6W @ standby saving mode

**Working temperature**
- −10~+60°C
- 0~+60°C

**Safety standards**
- 110V: Design refer to UL458
- 230V: Compliance to EN60950-1 (LVD)

**EMC standards**
- 110V: Compliance to FCC part 15 class A
- 230V: Compliance to EN55022 class A, E-Mark, EN61000-4-2,3,8

**AC Output Receptacle List**

- **TYPE-A**
- **TYPE-B**
- **TYPE-C**
- **TYPE-D**

<table>
<thead>
<tr>
<th>AC Output Receptacle List</th>
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</thead>
<tbody>
<tr>
<td>USA</td>
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<tr>
<td>TYPE-E</td>
</tr>
</tbody>
</table>

- **Japan**
- Type GFCI
- Universal

- Please consult MEAN WELL for other kinds of optional output socket.

### Rated output power

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Continue power</th>
<th>Input voltage</th>
<th>Output voltage</th>
<th>Output frequency</th>
<th>Output socket</th>
<th>Efficiency</th>
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<tbody>
<tr>
<td>TS-200-112A</td>
<td>200W</td>
<td>10.5-15</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>86.0%</td>
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<tr>
<td>TS-200-124A</td>
<td>200W</td>
<td>21.0-30</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>87.5%</td>
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<tr>
<td>TS-200-148A</td>
<td>200W</td>
<td>42.0-60</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>88.0%</td>
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<tr>
<td>TS-200-212B</td>
<td>200W</td>
<td>10.5-15</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>86.0%</td>
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<tr>
<td>TS-200-224B</td>
<td>200W</td>
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<td>230 / 50</td>
<td>TYPE-B</td>
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<tr>
<td>TS-200-248B</td>
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#### 400W

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<td>TS-400-148A</td>
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<td>110 / 60</td>
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<td>230 / 50</td>
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<tr>
<td>TS-400-224B</td>
<td>400W</td>
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<td>230 / 50</td>
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<tr>
<td>TS-400-248B</td>
<td>400W</td>
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<td>230 / 50</td>
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<td>88.5%</td>
<td></td>
</tr>
</tbody>
</table>

#### 700W

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Continue power</th>
<th>Input voltage</th>
<th>Output voltage</th>
<th>Output frequency</th>
<th>Output socket</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS-700-112A</td>
<td>700W</td>
<td>10.5-15</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>TS-700-124A</td>
<td>700W</td>
<td>21.0-30</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>88%</td>
<td></td>
</tr>
<tr>
<td>TS-700-148A</td>
<td>700W</td>
<td>42.0-60</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>89%</td>
<td></td>
</tr>
<tr>
<td>TS-700-212B</td>
<td>700W</td>
<td>10.5-15</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>89%</td>
<td></td>
</tr>
<tr>
<td>TS-700-224B</td>
<td>700W</td>
<td>21.0-30</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>TS-700-248B</td>
<td>700W</td>
<td>42.0-60</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>91%</td>
<td></td>
</tr>
</tbody>
</table>

A, B (standard model), C, D, E, F (optional model)
**Features**

- True sine wave output (THD<3%)
- 2 times high surge power for motor related application
- Advanced digital control by microprocessor
- High efficiency up to 92%
- Conformal coating
- Standby saving mode to conserve energy
- Built-in fan ON/OFF control function
- Output voltage / frequency adjustable
- Front panel indicator for load / battery / operation status

**Specifications**

- **Rated output power**: 1000W, 1500W, 3000W
- **Maximum output power**: 1150W for 3 minutes; 1500W for 10 sec.
- **Output surge rating** (30 cycles): 2000W, 3000W, 6000W
- **DC input rated voltage**: 12VDC, 24VDC or 48VDC
- **AC output voltage**: 100 / 110 / 115 / 120VAC or 200 / 220 / 230 / 240VAC adjustable via setting button on front panel
- **Output frequency**: 50Hz/60Hz adjustable via setting button on front panel
- **AC output waveform**: True sine wave, THD<3.0%
- **Output surge rating**: 2000W, 3000W, 6000W
- **Input protections**: Bat. low alarm / Bat. low shutdown / Reverse polarity / Over voltage
- **Output protections**: Short circuit / Overload / Over temperature
- **Applications**: Home appliance, power tools, office and portable equipment, vehicle and yacht...etc.
- **3 years warranty**

**TS-1000**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Continue power</th>
<th>Input VDC</th>
<th>Output VAC / Hz</th>
<th>Output socket</th>
<th>Effi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS-1000-112A</td>
<td>1000W</td>
<td>10.5-15</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>88%</td>
</tr>
<tr>
<td>TS-1000-124A</td>
<td>1000W</td>
<td>21.0-30</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>89%</td>
</tr>
<tr>
<td>TS-1000-148A</td>
<td>1000W</td>
<td>42.0-60</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>90%</td>
</tr>
<tr>
<td>TS-1000-212B</td>
<td>1000W</td>
<td>10.5-15</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>90%</td>
</tr>
<tr>
<td>TS-1000-224B</td>
<td>1000W</td>
<td>21.0-30</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>91%</td>
</tr>
<tr>
<td>TS-1000-248B</td>
<td>1000W</td>
<td>42.0-60</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>92%</td>
</tr>
</tbody>
</table>

**TS-1500**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Continue power</th>
<th>Input VDC</th>
<th>Output VAC / Hz</th>
<th>Output socket</th>
<th>Effi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS-1500-112A</td>
<td>1500W</td>
<td>10.5-15</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>87%</td>
</tr>
<tr>
<td>TS-1500-124A</td>
<td>1500W</td>
<td>21.0-30</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>89%</td>
</tr>
<tr>
<td>TS-1500-148A</td>
<td>1500W</td>
<td>42.0-60</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>89%</td>
</tr>
<tr>
<td>TS-1500-212B</td>
<td>1500W</td>
<td>10.5-15</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>88%</td>
</tr>
<tr>
<td>TS-1500-224B</td>
<td>1500W</td>
<td>21.0-30</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>90%</td>
</tr>
<tr>
<td>TS-1500-248B</td>
<td>1500W</td>
<td>42.0-60</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>91%</td>
</tr>
</tbody>
</table>

**TS-3000**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Continue power</th>
<th>Input VDC</th>
<th>Output VAC / Hz</th>
<th>Output socket</th>
<th>Effi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS-3000-112A</td>
<td>3000W</td>
<td>10.5-15</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>88%</td>
</tr>
<tr>
<td>TS-3000-124A</td>
<td>3000W</td>
<td>21.0-30</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>90%</td>
</tr>
<tr>
<td>TS-3000-148A</td>
<td>3000W</td>
<td>42.0-60</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>91%</td>
</tr>
<tr>
<td>TS-3000-212B</td>
<td>3000W</td>
<td>10.5-15</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>89%</td>
</tr>
<tr>
<td>TS-3000-224B</td>
<td>3000W</td>
<td>21.0-30</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>91%</td>
</tr>
<tr>
<td>TS-3000-248B</td>
<td>3000W</td>
<td>42.0-60</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>92%</td>
</tr>
</tbody>
</table>

**Inverter Remote Controller**

IRC series is the monitoring and control unit used for the inverter series. It can decode the RS-232 signal sent by inverter series and display through digital meters.

**Features**

- Wall-mounted and control panel assembly acceptable
- Built-in ON/OFF button
- LED indicators for remote ON/OFF, abnormal and power saving mode
- Equipped with 10FT cable, optional for 25FT or 50FT
- Connect directly to the remote socket of inverter; no power supply needed
- Suitable series:
  - IRC1: TS-700 / 1000 / 1500 / 3000
  - IRC2: TS-700 / 1000 / 1500 / 3000
  - IRC3: TS-1500 / 3000
- 3 years warranty

**Please refer to page 4 for AC output receptacle list.**
**Features**

- True sine wave output (THD<3%)
- 2 times high surge power for motor related applications
- Advanced digital control by microprocessor
- High frequency design; high efficiency up to 92%
- Conformal coating
- Standby saving mode to conserve energy
- Built-in fan ON/OFF control function
- Output voltage / frequency adjustable
- Input protections: Bat. low alarm / Bat. low shutdown / Reverse polarity / Over voltage
- Solar input current up to 30A max.
- Output protections: Short circuit / Overload / Over temperature / AC circuit breaker
- Front panel indicator for load / battery / operation status
- Selectable UPS & energy saving mode
- AC by pass / Built-in AC and solar charger
- Fast transfer time under 10ms (Inverter mode ➔ Bypass mode)
- Optional monitoring software and connection cable (MW order No.: DS−TN−1500 for TN−1500/3000)

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**1500~3000W**

**True Sine Wave with Solar Charger**

Please refer to [www.meanwell.com](http://www.meanwell.com) for detail spec.

---

**Specifications**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Continue power</th>
<th>Input VDC</th>
<th>Output VAC / Hz</th>
<th>Output socket</th>
<th>Effi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN-1500-112A</td>
<td>1500W</td>
<td>10.5-15</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>87%</td>
</tr>
<tr>
<td>TN-1500-124A</td>
<td>1500W</td>
<td>21.0-30</td>
<td>110 / 60</td>
<td>TYPE-A</td>
<td>89%</td>
</tr>
<tr>
<td>TN-1500-148A</td>
<td>1500W</td>
<td>42.0-60</td>
<td>230 / 50</td>
<td>TYPE-A</td>
<td>89%</td>
</tr>
<tr>
<td>TN-1500-212B</td>
<td>1500W</td>
<td>10.5-15</td>
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<tr>
<td>TN-1500-224B</td>
<td>1500W</td>
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<tr>
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<td>1500W</td>
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<td>TYPE-B</td>
<td>91%</td>
</tr>
<tr>
<td>TN-3000-112A</td>
<td>3000W</td>
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<td>110 / 60</td>
<td>TYPE-A</td>
<td>88%</td>
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<tr>
<td>TN-3000-124A</td>
<td>3000W</td>
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<td>3000W</td>
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<td>230 / 50</td>
<td>TYPE-B</td>
<td>91%</td>
</tr>
<tr>
<td>TN-3000-248B</td>
<td>3000W</td>
<td>42.0-60</td>
<td>230 / 50</td>
<td>TYPE-B</td>
<td>92%</td>
</tr>
</tbody>
</table>

---

**TN-1500**

420 x 220 x 88 mm

**TN-3000**

466.8 x 283.5 x 100 mm

---

Please refer to page 4 for AC output receptacle list.
Setting Procedure via Front Panel
for TS/TN-1500/3000 Series

Front Panel

Function Setting Procedure

First Level

UPS and Energy Saving Mode Selection

Step 1 The inverter should be turned off while resetting, input batteries should be connected. AC main can either be connected or disconnected, and the load should be removed.

Step 2 Use an insulated stick to press the setting button and then turn on the power switch. After pressing for 5 seconds, the inverter will send out a "Beep" sound. User can release the button and go into the setting procedure.

Step 3 Please refer to table below and check the LED status to see if the operating mode is the one you need. (Factory setting: UPS mode)

<table>
<thead>
<tr>
<th>Mode</th>
<th>UPS Mode</th>
<th>Energy Saving Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bat Low</td>
<td>● ★</td>
<td>● ★</td>
</tr>
<tr>
<td>Saving</td>
<td>● ★</td>
<td>● ★</td>
</tr>
</tbody>
</table>

Step 4 The LED will change state by pressing the setting button for 1 second and then release.

Second Level

Output Voltage and Frequency Adjustment

Step 1 After selecting the operating mode, pressing the setting button for 3–5 seconds and the inverter will send out a "Beep" sound. The button can be released and you can go on to the second section of "voltage / frequency".

Step 2 Please refer to table below and check the LED status to see if the output voltage / frequency is the one you need.

(Factory setting: 230VAC/50Hz or 110VAC / 60Hz)

<table>
<thead>
<tr>
<th>LED Status</th>
<th>Mode</th>
<th>100VAC (200VAC)</th>
<th>110VAC (220VAC)</th>
<th>115VAC (230VAC)</th>
<th>120VAC (240VAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bat Low</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Saving</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Step 3 The LED will change state by pressing the setting button for 1 second and then release.

Third Level

Saving Mode Selection

Step 1 After selecting the output voltage and frequency, press the setting button for 5 seconds and the inverter will send out a "Beep" sound. The button can be released and you can go into the setting section for "saving mode".

Step 2 Please refer to table below and check the LED status.

(Factory setting: saving mode OFF)

<table>
<thead>
<tr>
<th>Mode</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>●</td>
<td>★</td>
</tr>
<tr>
<td>Bat Low</td>
<td>●</td>
<td>★</td>
</tr>
<tr>
<td>Saving</td>
<td>●</td>
<td>★</td>
</tr>
</tbody>
</table>

Step 3 The LED will change state by pressing the setting button for 1 second and then release.

Step 4 Press the setting button for 5 seconds and the inverter will send out a "Beep" sound, the button can be released and all the setting are finished. The inverter will automatically store all the setting and then start to operate.

Note: 1. Descriptions which are highlighted represent functions exclusive to the TN-1500/3000 series.
2. For setting procedure of other product series, please refer to http://www.meanwell.com/product/inverter/inverter01.html.
**Comparison of UPS and Energy Saving Mode**

**UPS and Energy Saving Block Diagram**

### UPS mode
- Utility has the highest priority, the TN unit will operate as an UPS system.
- **Operation Mode:** Utility
- **Description & Special Feature:** Utility will bypass load (user's equipment)
- **Possible Application:**
  - Office: computer system, security system, printer, scanner, fax...etc.
  - Home: personal computer, refrigerator, lighting...etc.
  - Telecom sub-station
  - Area with unstable utility
  - Better performance as compared to conventional UPS (capable of withstanding heavy load)

### Energy Saving mode
- Solar energy has the highest priority. Utility bill can be reduced since the TN unit acquires energy from the solar panel as higher priority.
- **Operation Mode:** Solar
- **Description & Special Feature:** Solar panel → battery bank → inverter → load (user's equipment)
- **Possible Application:**
  - High altitude location or green building: weather station, lighting, hair dryer...etc.
  - Yacht: TV, DVD, radio, air conditioner, coffee maker...etc.
  - Vehicle: mobile phone charger, notebook, electronic pot...etc.

### Notice
- **Modified sine wave inverter** is a stepped waveform that is designed to have characteristics similar to the sine wave shape of utility power. It is suitable for most household applications, such as notebook, PC, MP3 player, cell phone charger, and digital camera...etc. but may present certain compromises with some loads such as ham radio, microwave oven(with clock), laser printer, motor speed controller, transformer-less charger, and load with high surge demand (capacitance, fluorescent lamp...etc.).
- **True sine wave inverter** is suitable for most AC loads, including all electronic equipment of household, motor related application such as electronic drill, linear and switching power supply used in electronic equipment.
Applications:

TV, DVD, notebook, personal computer, lighting, refrigerator, fan, radio, hair dryer, electronic pot, coffee maker, and cell phone charger...etc.
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