



■ Features :

- True sine wave output (THD<3%)
- High surge power up to 3000W
- U.P.S. mode and energy saving mode (selectable)
- High efficiency up to 91%
- Power ON-OFF switch
- Standby saving mode can be selectable
- Front panel indicator for operation status
- Thermostatically controlled cooling fan
- Protections: Bat. low alarm / Bat. low shutdown / Over voltage / Over temp. / Output short / Input polarity reverse / Overload / AC circuit breaker
- Application : Home appliance, power tools, office and portable equipment, vehicle and yacht ...etc.
- Built-in solar / AC charger
- Support RS-232 communication (communication cable RJ11-RS232 included) Note.7
- 3 years warranty



■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

SPECIFICATION

| MODEL NO.  |   | TN-1500-112□  | TN-1500-124□ | TN-1500-148□ | TN-1500-212□   | TN-1500-224□ | TN-1500-248□ |
|--|---|---|--------------|--------------|--|--------------|--------------|
|  |   | □ = A, F  |              |              | □ = B, C, D  |              |              |
| OUTPUT   | RATED POWER (Typ.)  | 1500W   |              |              |  |              |              |
|  | MAXIMUM OUTPUT POWER (Typ.)   | 1725W for 180 sec. / 1875W for 10 sec. / surge power 3000W for 30 cycles  |              |              |  |              |              |
|  | AC VOLTAGE  | Factory setting set at 110VAC   |              |              | Factory setting set at 230VAC  |              |              |
|  |   | 100 / 110 / 115 / 120VAC selectable by setting button S.W   |              |              | 200 / 220 / 230 / 240VAC selectable by setting button S.W                            |              |              |
|  | FREQUENCY Note.10   | 60 ± 0.1Hz 50/60Hz selectable by setting button S.W   |              |              | 50 ± 0.1Hz 50/60Hz selectable by setting button S.W                                  |              |              |
|  | WAVEFORM Note.2   | True sine wave (THD<3%)   |              |              |  |              |              |
|  | AC REGULATION (Typ.)  | ± 3.0%  |              |              |  |              |              |
|  | TRANSFER TIME (Typ.)  | 10ms inverter → → by pass   |              |              |  |              |              |
| INPUT  | SAVING MODE (Typ.)  | Default disabled. Load ≤ 5W will be changed to standby mode   |              |              |  |              |              |
|  | FRONT PANEL INDICATOR   | Battery voltage level, output load level, saving mode, fault and operation status   |              |              |  |              |              |
|  | BAT. VOLTAGE  | 12V   | 24V          | 48V          | 12V  | 24V          | 48V          |
|  | VOLTAGE RANGE (Typ.) Note.3,6   | 10.5 ~ 15VDC  | 21 ~ 30VDC   | 42 ~ 60VDC   | 10.5 ~ 15VDC   | 21 ~ 30VDC   | 42 ~ 60VDC   |
|  | DC CURRENT (Typ.) Note.5  | 150A  | 75A          | 37.5A        | 150A   | 75A          | 37.5A        |
|  | NO LOAD DISSIPATION (Typ.)  | ≤ 18W @ standby saving mode   |              |              |  |              |              |
|  | OFF MODE CURRENT DRAW   | ≤ 1mA   |              |              |  |              |              |
|  | EFFICIENCY (Typ.) Note.2  | 87%   | 89%          | 89%          | 88%  | 90%          | 91%          |
| BATTERY INPUT PROTECTION   | BATTERY TYPES   | Open & sealed Lead Acid   |              |              |  |              |              |
|  | FUSE  | 40A*5   | 30A*3        | 30A*2        | 40A*5  | 30A*3        | 30A*2        |
|  | BAT. LOW ALARM  | 11.3 ± 4%   | 22.5 ± 4%    | 45 ± 4%      | 11.3 ± 4%  | 22.5 ± 4%    | 45 ± 4%      |
|  | BAT. LOW SHUTDOWN   | 10.5 ± 4%   | 21 ± 4%      | 42 ± 4%      | 10.5 ± 4%  | 21 ± 4%      | 42 ± 4%      |
| OUTPUT PROTECTION  | REVERSE POLARITY  | By internal fuse open   |              |              |  |              |              |
|  | OVER TEMPERATURE  | 82°C ± 5°C  | 82°C ± 5°C   | 96°C ± 5°C   | 68°C ± 5°C   | 68°C ± 5°C   | 68°C ± 5°C   |
|  | OUTPUT SHORT  | Protection type : Shut down o/p voltage, re-power on to recover ; by internal RTH3 detect on heatsink of power transistor     |              |              |  |              |              |
|  | OVER LOAD (Typ.)  | 105 ~ 115% load for 180 sec., 115% ~ 125% load for 10 sec.<br>Protection type : Shut down o/p voltage, re-power on to recover |              |              |  |              |              |
|  | CIRCUIT BREAKER   | 15A   |              |              | 10A  |              |              |
| ENVIRONMENT  | GFCI PROTECTION   | Optional (Only type F)  |              |              | None   |              |              |
|  | WORKING TEMP. Note.1  | 0 ~ +40°C @ 100% load ; 60°C @ 50% load   |              |              |  |              |              |
|  | WORKING HUMIDITY  | 20% ~ 90% RH non-condensing   |              |              |  |              |              |
|  | STORAGE TEMP., HUMIDITY   | -30 ~ +70°C / -22 ~ +158°F, 10 ~ 95% RH non-condensing  |              |              |  |              |              |
| SAFETY & EMC   | VIBRATION   | 10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes  |              |              |  |              |              |
|  | SAFETY STANDARDS  | UL458 (only for "GFCI" receptacle-Type F), EAC TP TC 004  |              |              | IEC62368-1 CB, EAC TP TC 004 approved; Design refer to BS EN/EN62368-1               |              |              |
|  | WITHSTAND VOLTAGE   | Bat I/P - AC I/P: 3.0KVAC Bat I/P - AC O/P: 3.0KVAC AC O/P - FG: 1.5KVAC  |              |              |  |              |              |
|  | ISOLATION RESISTANCE  | Bat I/P - AC O/P, Bat I/P - FG, AC O/P - FG: 100M ohms / 500VDC / 25°C / 70% RH   |              |              |  |              |              |
|  | EMC EMISSION  | Compliance to FCC class A, EAC TP TC 020  |              |              | Compliance to BS EN/EN55032 class B, 72/ 245/ CEE, 95/ 54/ CE, E-Mark, EAC TP TC 020 |              |              |
| AC CHARGER   | EMC IMMUNITY  | Compliance to EAC TP TC 020   |              |              | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, EAC TP TC 020           |              |              |
|  | CHARGE CURRENT (Typ.)   | 5.5A  | 2.7A         | 1.35A        | 5.5A   | 2.7A         | 1.35A        |
|  | CHARGE VOLTAGE  | 14.3V ± 4%  | 28.5V ± 4%   | 57V ± 4%     | 14.3V ± 4%   | 28.5V ± 4%   | 57V ± 4%     |
| SOLAR CHARGER  | MAX OPEN CIRCUIT VOLTAGE  | 25V   | 45V          | 75V          | 25V  | 45V          | 75V          |
|  | CHARGE CURRENT (max.)   | 30A   |              |              |  |              |              |
| OTHERS   | CHARGE VOLTAGE  | 14.3V ± 4%  | 28.5V ± 4%   | 57V ± 4%     | 14.3V ± 4%   | 28.5V ± 4%   | 57V ± 4%     |
|  | CONTROL WIRING Note.7   | RJ11-RS232  |              |              |  |              |              |
|  | MTBF  | 229.1K hrs min. Telcordia SR-332 (Bellcore) ; 38.1K hrs min. MIL-HDBK-217F (25°C)   |              |              |  |              |              |
|  | DIMENSION   | 420*220*88mm (L*W*H)  |              |              |  |              |              |
| NOTE   | PACKING   | 6.85Kg; 2pcs/15.7Kg/1.61CUFT  |              |              |  |              |              |
|  | 1.Output derating capacity referenced by curve 1.                                     |   |              |              |  |              |              |
|  | 2.TH.D and Efficiency is tested by 1000W, linear load at 13V, 26V, 52V input voltage. |   |              |              |  |              |              |
| 3.Input derating capacity referenced by curve 2.   |   |   |              |              |  |              |              |
| 4.All parameters not specified above are measured at rated load, 25°C of ambient temperature and set to factory setting.   |   |   |              |              |  |              |              |
| 5.DC current is tested by 1500W, linear load at 13V, 26V, 52V input voltage.   |   |   |              |              |  |              |              |
| 6.The tolerance of each voltage value by models is:112/212 → ± 0.5V;124/224 → ± 1V;148/248 → ± 2V.   |   |   |              |              |  |              |              |
| 7.The cable is enclosed for the connection between TN-1500 and computer for software monitoring.   |   |   |              |              |  |              |              |
| 8.Please do not turn on the inverter before start the engine if inverter connect to vehicle's battery directly.  |   |   |              |              |  |              |              |
| 9.The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).                                 |   |   |              |              |  |              |              |
| 10.Type F for 60Hz only.   |   |   |              |              |  |              |              |
| ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |   |   |              |              |  |              |              |

■ **Instructions for TN-1500 monitoring software**

1. The monitoring software can be downloaded from product section (with TN-1500 specification) on MEAN WELL's official website, <http://www.meanwell.com/productsoftware.aspx>
2. The monitoring software can run on Windows 7 English version, Windows 7 Chinese (Traditional, Taiwan) version, Windows 8 English version and Windows 8 Chinese (Traditional, Taiwan) version
3. Installation of TN-1500 unit and PC

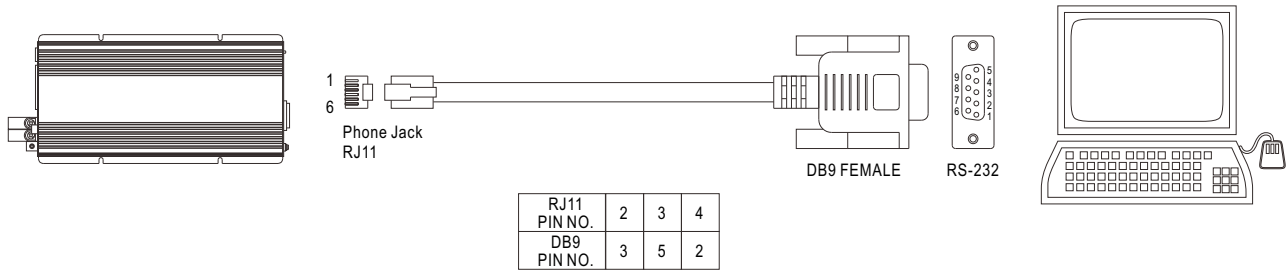


Figure 1

**4. Explanation of Monitoring Manu**

4.1 Main Page

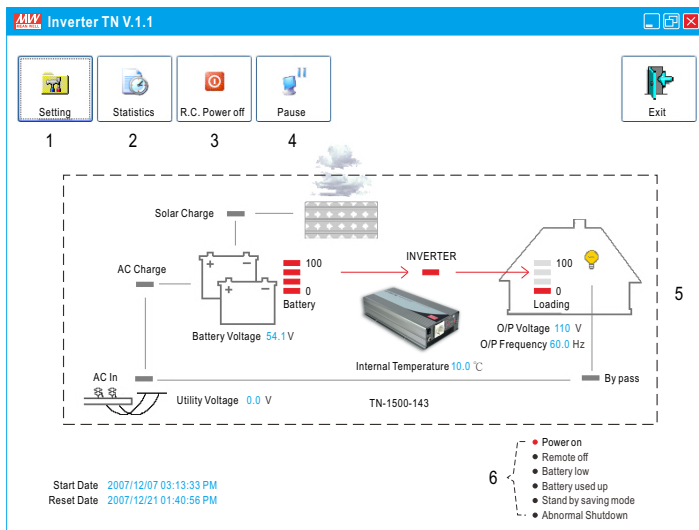


Figure 2

1. Setting: Adjustment for output voltage, charging related voltage, frequency, and operation mode. Please refer to Figure 3 for details.
2. Statistics: Calculate for the percentage of operating period for each operation mode. Please refer to Figure 4 for details.
3. R.C. Power off: Power can be turned ON or OFF at the remote location.
4. Pause: Stop refreshing the page of monitoring software.
5. Status of unit: Indicating current operating status of TN-1500.
6. Signals that display current condition of the unit.

4.2 Setting Page

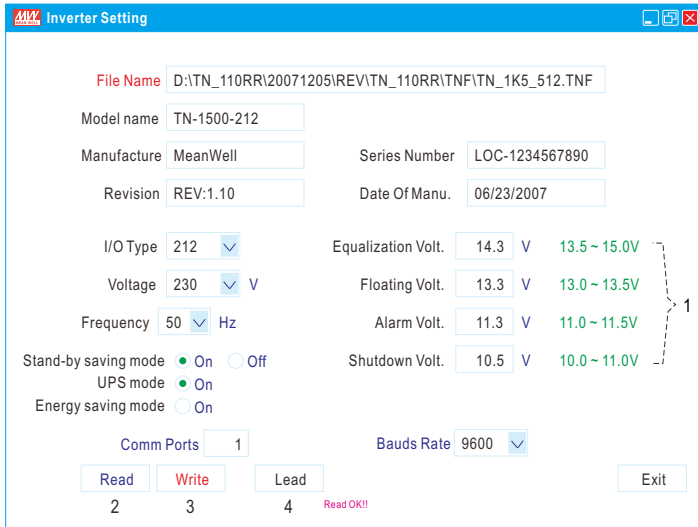


Figure 3

1. User can adjust the settings based on the characteristics of batteries been used: Equalization Voltage, Floating Voltage, Alarm Voltage, and Shut-down Voltage. UPS Mode / Energy Saving Mode selection and AC output voltage and frequency can also be set in this page.
2. Read: Read current settings of the unit.
3. Write: Write the revised setting into the unit.
4. Load: Load in factory default settings.

4.3 Statistic Page

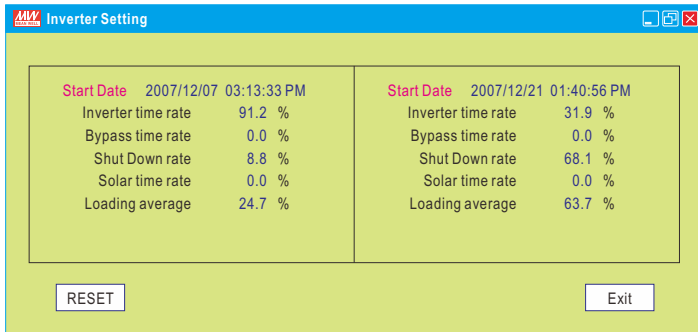
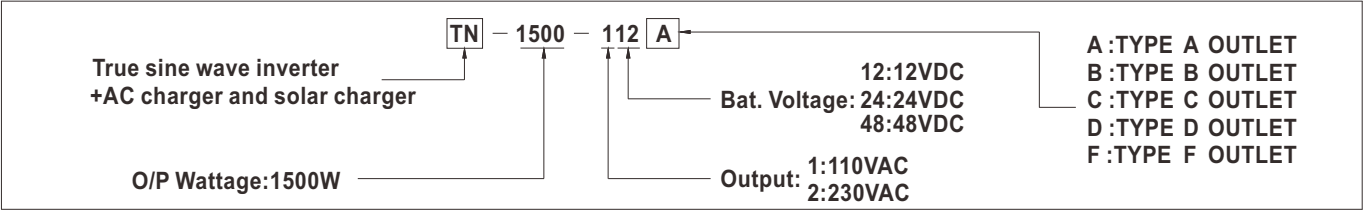


Figure 4

1. Start Date: Date that installing the monitoring software.
2. Reset Date: Date that resetting the statistics. The Start Date will not be influenced by resetting the statistics or turning off the unit.
3. Inverter time rate: Operating period of "Inverter Mode" represents how many percent of the whole operating period.
4. Bypass time rate: Operating period of "Bypass Mode" (energy provides directly by the utility) represents how many percent of the whole operating period.
5. Shut down rate: Percentage of time period that the unit is under the condition of shut down.  
**\* Inverter time rate + Bypass time rate + Shut down rate = 100%**
6. Solar time rate: Percentage of time period that the solar charger is functioning after turning on the TN-1500 unit.
7. Loading average: Average loading after turning on the TN-1500 unit.



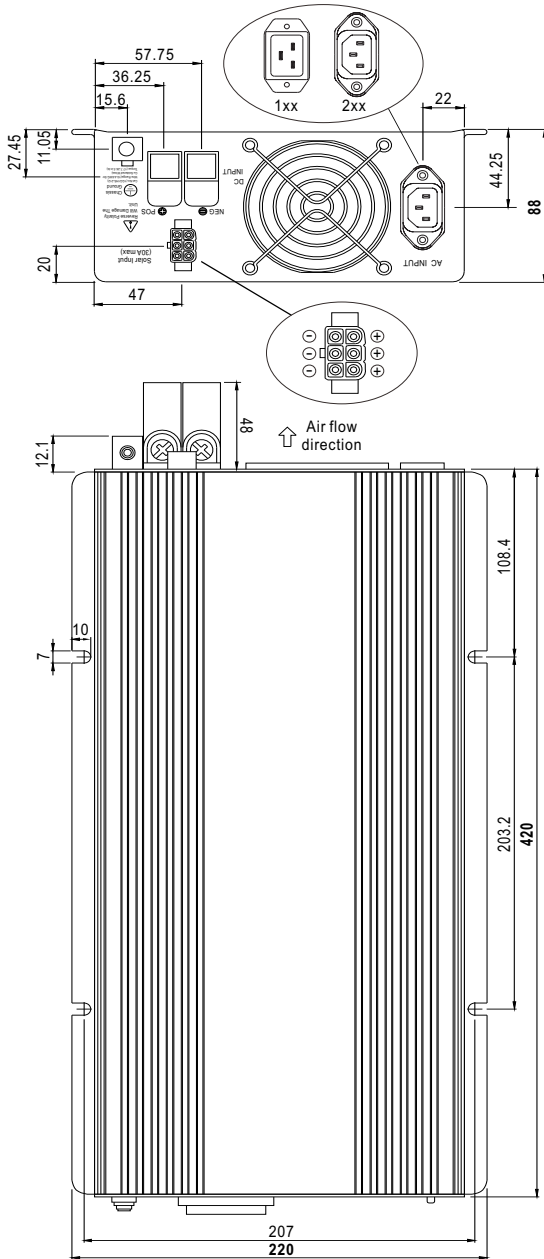
■ AC Output Socket (optional)

| MODEL NO.   | TN-1500-112 <input type="checkbox"/> | TN-1500-124 <input type="checkbox"/> | TN-1500-148 <input type="checkbox"/> | TN-1500-212 <input type="checkbox"/> | TN-1500-224 <input type="checkbox"/> | TN-1500-248 <input type="checkbox"/> |
|-------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Socket type |                                      |                                      |                                      |                                      |                                      |                                      |
|             | TYPE-A                               | TYPE-F                               | TYPE-B                               | TYPE-C                               | TYPE-D                               |                                      |
|             | Standard                             | Optional                             | Standard                             | Optional                             | Optional                             |                                      |
| Country     | USA                                  | GFCI (60Hz)                          | EUROPE                               | AUSTRALIA                            | U.K                                  |                                      |
| Certificate |                                      |                                      |                                      |                                      |                                      |                                      |

■ Mechanical Specification

(Unit: mm , tolerance ±0.5mm)

Unit:mm



■ Derating Curve

