



■ Features :

- True sine wave output (THD<3%)
- High surge power up to 6000W
- U.P.S. mode and energy saving mode (selectable)
- High efficiency up to 92%
- 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
- Computer-based monitoring software (Note.7)
- 3 years warranty



**SPECIFICATION**

MODEL	TN-3000-112□	TN-3000-124□	TN-3000-148□	TN-3000-212□	TN-3000-224□	TN-3000-248□
OUTPUT	RATED POWER (Typ.) 3000W					
	MAXIMUM OUTPUT POWER (Typ.) 3450W for 180 sec. / 4500W for 10 sec. / surge power 6000W for 30 cycles					
	AC VOLTAGE			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 60±0.1Hz 50/60Hz selectable by setting button S.W					
	WAVEFORM Note.8 True sine wave (THD<3%)					
	AC REGULATION (Typ.) ±3%					
TRANSFER TIME (Typ.) 10ms inverter→→by pass						
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						
INPUT	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.4 300A 150A 75A 300A 150A 75A					
	NO LOAD DISSIPATION (Typ.) ≤ 10W @ standby saving mode					
	OFF MODE CURRENT DRAW (Typ.) ≤ 1mA					
	EFFICIENCY (Typ.) Note.1 88% 90% 91% 89% 91% 92%					
BATTERY TYPES Open & sealed lead acid battery						
BATTERY INPUT PROTECTION	FUSE 40A*12 40A*6 20A*6 40A*12 40A*6 20A*6					
	BAT. LOW ALARM Note.6 11.3V 22.5V 45V 11.3V 22.5V 45V					
	BAT. LOW SHUTDOWN Note.6 10.5V 21V 42V 10.5V 21V 42V					
	REVERSE POLARITY By internal fuse open					
OUTPUT PROTECTION	OVER TEMPERATURE 90°C ± 5°C 85°C ± 5°C 85°C ± 5°C 80°C ± 5°C 75°C ± 5°C 75°C ± 5°C					
	Protection type : Shut down o/p voltage, re-power on to recover					
	OUTPUT SHORT Protection type : Shut down o/p voltage, re-power on to recover					
	OVER LOAD (Typ.) 105 ~ 115% load for 180 sec., 115% ~ 150% load for 10 sec.					
	Protection type : Shut down o/p voltage, re-power on to recover					
CIRCUIT BREAKER			CIRCUIT BREAKER			
AC output: 40A, AC receptacle: 15A			AC output: 20A, AC receptacle: 15A			
GFCI PROTECTION			GFCI PROTECTION			
Optional (Only type F)			None			
ENVIRONMENT	WORKING TEMP. Note.2 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					
	VIBRATION 10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS			SAFETY STANDARDS		
	UL458 (only for Type G)			None		
	LVD			LVD		
	None			EN60950-1		
	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			EMC EMISSION			
Compliance to FCC class A			Compliance to EN55022 class A, 72/ 245/ CEE, 95/ 54/ CE, E-Mark			
EMC IMMUNITY			EMC IMMUNITY			
None			Compliance to EN61000-4-2,3,4,5,6,8,11			
AC CHARGER	CHARGE CURRENT (Typ.) 25A 12A 6A 25A 12A 6A					
	CHARGE VOLTAGE Note.6 14.3V 28.5V 57V 14.3V 28.5V 57V					
SOLAR PANEL	MAX OPEN CIRCUIT VOLTAGE 25V 45V 75V 25V 45V 75V					
	SHORT CIRCUIT CURRENT (max.) 30A					
OTHERS	CONTROL WIRING Note.7 RJ11 -RS232					
	DIMENSION 466.8*283.5*100mm (L*W*H)					
	PACKING 12.9Kg; 1pcs/14Kg/1.49CUFT					
NOTE	<p>1.Efficiency is tested by 2100W, linear load at 13V, 26V, 52V input voltage.</p> <p>2.Output derating capacity referenced by curve 1.</p> <p>3.Input derating capacity referenced by curve 2.</p> <p>4.DC current is tested by 3000W, linear load at 12V, 24V, 48V input voltage.</p> <p>5.All parameters not specified above are measured at rated load, 25°C of ambient temperature and set to factory setting.</p> <p>6.The tolerance of each voltage value by models is:112/212→±0.5V;124/224→±1V;148/248→±2V.</p> <p>7.The cable is enclosed for the connection between TN-3000 and computer for software monitoring.</p> <p>8.THd is tested by 3000W, linear load at 13,26,52V input voltage.</p> <p>9.Please do not turn on the inverter before start the engine if inverter connect to vehicle's battery directly.</p>					

**■ Instructions for TN-3000 monitoring software**

1. The monitoring software can be downloaded from product section (with TN-3000 specification) on MEAN WELL's official website, <http://www.meanwell.com>
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-3000 unit and PC

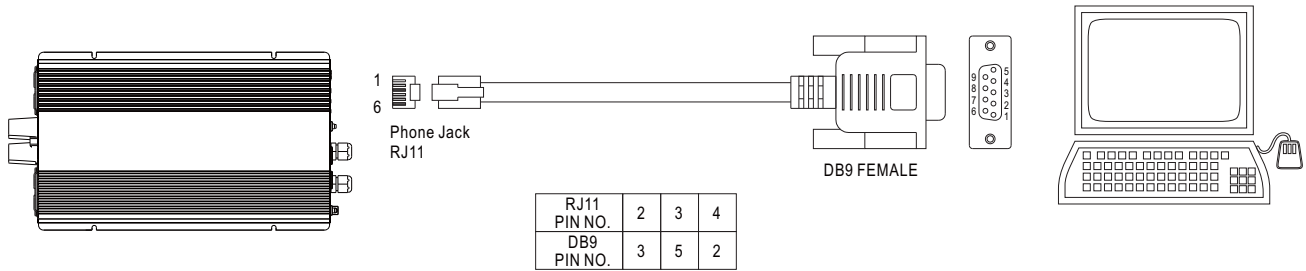


Figure 1

**4. Explanation of Monitoring Manu**

4.1 Main Page

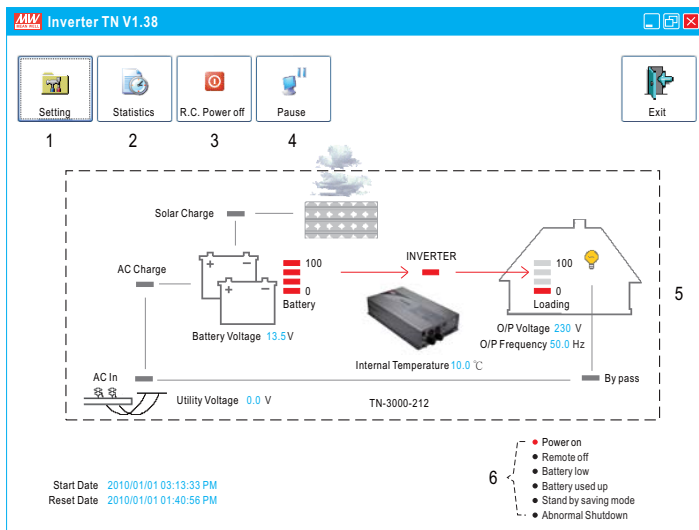


Figure 2

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-3000.
6. Signals that display current condition of the unit.

4.2 Setting Page

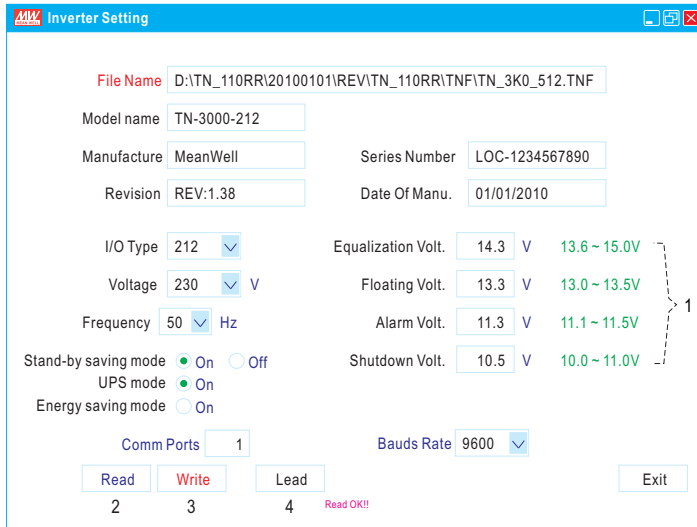


Figure 3

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

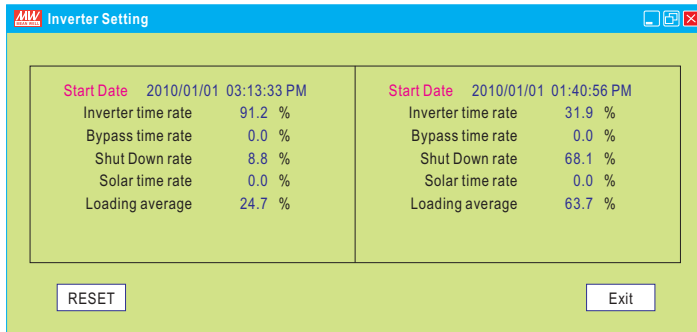
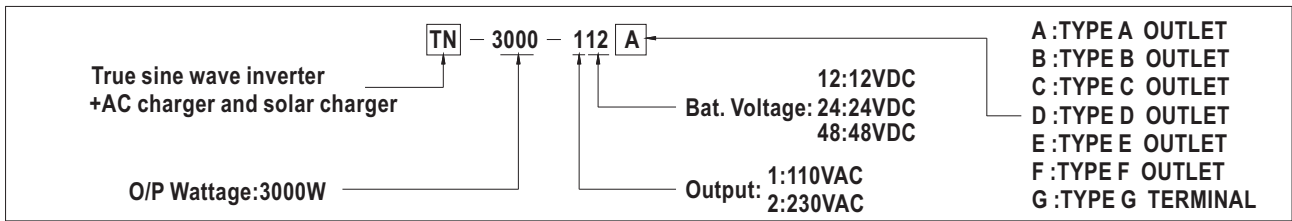


Figure 4

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-3000 unit.
7. Loading average: Average loading after turning on the TN-3000 unit.



**AC Output Receptacle (optional)**

Receptacle type							
	TYPE-A	TYPE-B	TYPE-C	TYPE-D	TYPE-E	TYPE-F	(Terminal only)
Country	USA	EUROPE	AUSTRALIA	U.K	JAPAN	GFCI	----
Certificate							

**Mechanical Specification**

Unit:mm

161.84  
122.44  
31.6  
100  
29  
129.63

46  
90.3  
286.2  
466.8  
7.5  
7  
273  
283.5

Air flow direction

**Derating Curve**

**CURVE 1**

Ambient Temperature (°C)	Load (%)
0 - 38	100
38 - 60	50
60 - 70	0

**CURVE 2**

Battery Input Voltage (V)	Load (%)
10.5VDC	80
11.5VDC	100
15VDC	100

10.5VDC 21VDC 42VDC  
11.5VDC 23VDC 46VDC  
15VDC (HORIZONTAL) 30VDC 60VDC

**Type-A**

**Type-B**

Note: When the load current is >15A, must use output terminal connection which can be found inside the AC output panel of the inverter.