**SPECIFICATION** 

# 1500W True Sine Wave DC-AC Inverter with Solar Charger

TN-1500 series





### ■ 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
- Computer-based monitoring software (Note.7)
- 3 years warranty



MODEL		TN-1500-112	TN-1500-124	TN-1500-148	TN-1500-212	TN-1500-224	TN-1500-248
	RATED POWER (Typ.)	1500W	_				
	MAXIMUM OUTPUT POWER (Typ.)	) 1725W for 180 sec. / 1875W for 10 sec. / surge power 3000W for 30 cycles					
ОИТРИТ		Factory setting set at 110VAC Factory setting set at 230VAC					
	AC VOLTAGE	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			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					
	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
INPUT	VOLTAGE RANGE (Typ.)Note.3,6		21 ~ 30VDC	42 ~ 60VDC	10.5 ~ 15VDC	21 ~ 30VDC	42 ~ 60VDC
			75A	37.5A	150A	75A	
	( ) (		-	37.3A	IDUA	/ DA	37.5A
		≤18W @ standby saving mode					
	OFF MODE CURRENT DRAW	≦1mA	Tanar.				Ta. (a)
	EFFICIENCY (Typ.) Note.2		89%	89%	88%	90%	91%
	BATTERY TYPES	Open & sealed Lea		1		1	
DATTERY	FUSE	40A*5	30A*3	30A*2	40A*5	30A*3	30A*2
BATTERY INPUT PROTECTION	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%
	REVERSE POLARITY	By internal fuse ope	n				
OUTPUT PROTECTION	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
		Protection type: Shut down o/p voltage, re-power on to recover; by internal RTH3 detect on heatsink of power transistor					
	OUTPUT SHORT	Protection type : Shut down o/p voltage, re-power on to recover					
	OVER LOAD (Typ.)	105 ~ 115% load for 180 sec., 115% ~ 125% load for 10 sec.					
	OVER LOAD (Typ.)	Protection type: Shut down o/p voltage, re-power on to recover					
	CIRCUIT BREAKER	15A			10A		
	GFCI PROCTECTION	Optional (Only type F)			None		
ENVIRONMENT	WORKING TEMP. Note.1	0 ~ +40°C @ 100% load ; 60°C @ 50% load					
	WORKING HUMIDITY	20% ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	$-30 \sim +70^{\circ}\text{C}$ / $-22 \sim +158^{\circ}\text{F}$ , $10 \sim 95\%$ RH non-condensing					
	VIBRATION	10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS	UL458 (only for "GFCI" receptacle-Type F ) None					
	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					
	EMC EMISSION	Compliance to FCC class A			Compliance to EN55032 class B, 72/ 245/ CEE, 95/ 54/ CE, E-		
	EMC IMMUNITY	None			Compliance to EN61000-4-2,3,4,5,6,8,11		
AC	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%
	MAX OPEN CIRCUIT VOLTAGE	25V	45V	75V	25V	45V	75V
SOLAR CHARGER	CHARGE CURRENT (max.)	30A					
	CHARGE VOLTAGE	14.3V±4%	28.5V±4%	57V±4%	14.3V±4%	28.5V±4%	57V±4%
	CONTROL WIRING Note.7	RJ11 -RS232					
OTHERS	DIMENSION	420*220*88mm (L*W*H)					
	PACKING	6.85Kg; 2pcs/15.7Kg/1.61CUFT					
NOTE	1.Output derating capacity re 2.THD and Efficiency is teste 3.Input derating capacity refe 4.All parameters not specifie 5.DC current is tested by 150 6.The tolerance of each voltz 7.The cable is enclosed for t	eferenced by curve 1. ed by 1000W, linear load at 13V, 26V, 52V input voltage.					
	o.i lease do not tum on the i	Tiverter belore start	the engine it inverte	connect to venicle	s battery unectry.		:TN-1500-SPEC 20





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## ■ 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
- 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

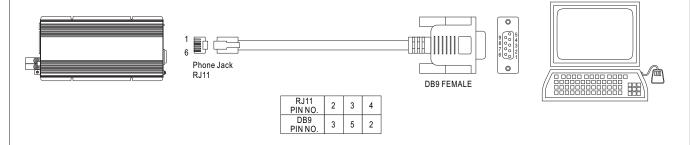


Figure 1

### 4. Explanation of Monitoring Manu

4.1 Main Page

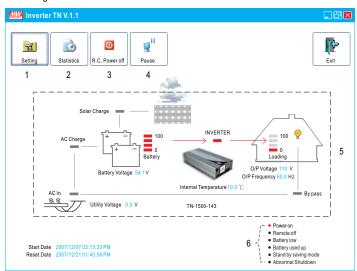
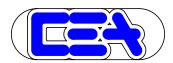


Figure 2

- 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.



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#### 4.2 Setting Page

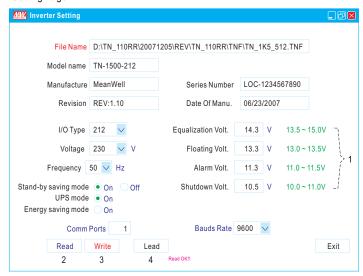


Figure 3

- 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

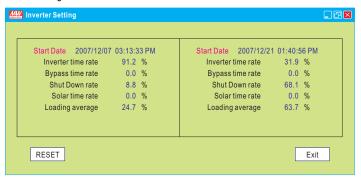


Figure 4

- 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
- 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.



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