



## DC-AC Inverter & Charge Controller for Solar Applications

⚡ Pure Sine Wave

Model  
 TN-1500-112F  
 12 VDC- 120 VAC  
 TN-1500-124F  
 24 VDC- 120 VAC

### Design Features

- High efficiency 1500W Inverter Charger
- Integrated 30A Solar Charge Controller and 5.5A / 2.7A AC Charger
- Digital control using advanced micro-controller
- Pure Sine Wave output (THD < 3%)
- Selectable Energy Saving / UPS Modes
- Selectable output voltage (100 / 110 / 115 / 120VAC) and frequency (50/60Hz)
- Selectable Saving (Standby) Mode to conserve power if load is < 5W
- LEDs for monitoring of operational status
- Optional Remote Monitoring Software
- Temperature controlled cooling fan for improved efficiency
- Safety listed to UL Standard UL-458

2 YEAR WARRANTY



MODEL NO.		TN-1500-112F	TN-1500-124F
OUTPUT	RATED POWER (Note 2)	1500W	
	AC VOLTAGE	Selectable: 100 / 110 / 115 / 120 VAC (Factory preset at 110 VAC)	
	MAXIMUM OUTPUT POWER	1725W for 180 sec / 1875 W for 10 sec / surge power 3000W for 30 cycles	
	WAVEFORM (Note 1)	True sine wave (THD < 3%) at rated input voltage	
	FREQUENCY	Selectable: 50 / 60 Hz ± 0.1 Hz	
	AC REGULATION	± 3.0%	
	TRANSFER TIME	10 ms	
	SAVING (STANDBY) MODE	Enabled if load ≤ 5W; Default - Disabled	
	FRONT PANEL INDICATIONS	Battery Voltage Level, Output Load Level, Saving (Standby) Mode, Fault & Operational Status	
	AC OUTPUT CONNECTION	20A, NEMA5-20R Duplex GFCI Outlet	
INPUT	BATTERY VOLTAGE (Note 4)	12 VDC (10.5 to 15 VDC)	24 VDC (21 to 30 VDC)
	DC CURRENT (Note 3)	150A	75A
	NO LOAD DISSIPATION	≤ 18W at Saving (Standby) Mode	
	OFF MODE CURRENT DRAW	1mA	
	EFFICIENCY (Note 1)	87%	89%
	BATTERY TYPES	Open & Sealed Lead Acid	
	AC INPUT CONNECTION	- 20A, AC Power Inlet Connector IEC-60320, C20 - Detachable power cord, AWG #12 (3 feet): • Inverter end: 20A, Female Plug, IEC-60320, C-19 • Utility end: 20A, NEMA5-20P plug	
	BATTERY INPUT CONNECTION	M8 Bolt	
	SOLAR PANEL INPUT CONNECTION	Customized, detachable Positive & Negative wiring (4 feet)	
	FUSE	40A x 5	30A x 3
BATTERY INPUT PROTECTION	BATTERY LOW ALARM (Note 4)	11.3 ± 4%	22.5 ± 4%
	BATTERY LOW SHUTDOWN (Note 4)	10.5 ± 4%	21.0 ± 4%
	BATTERY POLARITY	By internal fuse	
OUTPUT PROTECTION	OVER TEMPERATURE	82°C ± 5°C - Shutdown output voltage. Manual reset - switch OFF, then ON.	
	OUTPUT SHORT	Shutdown output voltage. Manual reset - switch OFF, then ON.	
	OVERLOAD (TYPICAL)	105 - 115% load for 180 sec., 115% - 125% load for 10 sec Shutdown output voltage. Manual reset - switch OFF, then ON.	
	CIRCUIT BREAKER	20A	
GFCI PROTECTION	Yes		

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**samlexamerica®**

# 1500W

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<b>ENVIRONMENT</b>	WORKING TEMPERATURE (Note 2)	0 to +40°C at 100% capacity; 60°C at 50% capacity	
	WORKING HUMIDITY	20% to 90% RH non-condensing	
	STORAGE TEMPERATURE, HUMIDITY	-30°C to + 70°C / -22°F to +158°F, 10 to 95% RH	
	VIBRATION	10 to 500Hz, 3G 10 min / 1 cycle, 60 min. each along X, Y Z axes.	
<b>SAFETY &amp; EMI</b>	SAFETY STANDARDS	UL listed to UL Standard UL-458	
	EMI (CONDUCTED/RADIATED)	FCC Part 15(B), Class A	
<b>AC CHARGER</b>	CHARGE CURRENT	5.5A ± 0.5A, DC	2.7A ± 0.4A, DC
	CHARGE VOLTAGE	14.3 VDC ± 4%	28.5 VDC ± 4%
<b>SOLAR CHARGER</b>	MAXIMUM OPEN CIRCUIT VOLTAGE "V <sub>OC</sub> " OF PANEL	25 VDC	45 VDC
	MAXIMUM SHORT CIRCUIT CURRENT "I <sub>sc</sub> " OF PANEL	30A, DC	
	DC CHARGE VOLTAGE	14.3 VDC ± 4%	28.5 VDC ± 4%
<b>REMOTE CONTROL</b>	PORT	RS-232 Serial Interface; 6P4C, RJ-11 Jack	
	SOFTWARE	Remote Monitoring Software (PC based) – optional	
<b>GENERAL</b>	WEIGHT, KG.	6.85	
	WEIGHT, LB.	15.1	
	DIMENSIONS, MM (W x D x H)	220 x 420 x 88	
	DIMENSIONS, INCHES (W x D x H)	8.66 x 16.54 x 3.46	

### Notes:

1. THD & Efficiency are tested using 1000W Linear Load at 13V / 26V Input Voltage.
2. Output power de-rating:
  - Linear de-rating from 100% up to 40°C & 50% at 60°C.
  - Linear de-rating from 100% up to 11.5 / 23 VDC input to 80% at 10.5 / 21 VDC input
3. DC Input Current is tested for 1500W load at input voltage of 13 / 26 VDC.
4. Tolerance for DC voltage values is ±0.5V for 12V system and 1V for 24V system.