MEAN WELL

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

About MEAN WELL

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 fullfill 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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120~326W
Portable Battery Charger

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

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

2 TWO-YEARS WARRANTY

CB FC CE (GC series)

(GC120~220 & PB-230) (PA/PB-120 & GC330)

▲ GC120
167x 67x 35 mm

▲ GC160
175x 72x 35 mm

▲ GC220
210x 85x 46 mm

▲ GC330
220x 95x 46 mm

▲ PA/PB-120
180x 96x 49 mm

▲ PB-230
190x 96x 49 mm

Model Name	GC120	GC160	GC220	GC330□	P□-120 =A: pulse charge B: 2 section voltage charge	PB-230
AC input voltage range	85~264VAC		90~264VAC		88~132VAC / 176~264VAC selectable by switch	90~264VAC
Charge style	2 stage				3 stage	
Over voltage protection	105%~135%, shut off O/P voltage, re-power on to recover				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		-30~60°C		-10~+45°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 (Male, power supply side)	Power DIN 4P with lock type, Kycon KPPX-4P equivalent		4P/AMP 1-480702-0 equivalent		MIC 3P	MIC 4P

120W

Model Name	Wattage	Output	Effi.
GC120A12-□	102W	13.6V, 7.50A	86.5%
GC120A24-□	120W	27.2V, 4.42A	90.0%
GC120A48-□	120W	54.4V, 2.21A	91.0%

□ = R7B, AD1

160W

Model Name	Wattage	Output	Effi.
GC160A12-□	136W	13.6V, 10.0A	89.0%
GC160A24-□	160W	27.2V, 5.89A	92.5%
GC160A48-□	160W	54.4V, 2.95A	94.0%

□ = R7B, AD1

218W

Model Name	Wattage	Output	Effi.
GC220A12-□	184W	13.6V, 13.5A	89.0%
GC220A24-□	218W	27.2V, 8A	92.5%
GC220A48-□	218W	54.4V, 4A	93.0%

□ = R7B, AD1

326W

Model Name	Wattage	Output	Effi.
GC330A36-C4P	326W	40.8V, 8A	93.5%
GC330A48-C4P	326W	54.4V, 6A	93.5%

120W

Model Name	Wattage	Output	Effi.
P□-120-13	99W	13.8V, 0~7.2A	73.0%
P□-120-27	119W	27.6V, 0~4.3A	79.0%
P□-120-54	121W	55.2V, 0~2.2A	79.0%

230W

Model Name	Wattage	Output	Effi.
PB-230-12□	230W	14.4V, 0~16A	81.5%
PB-230-24□	230W	28.8V, 0~8A	85.5%
PB-230-48□	230W	57.6V, 0~4A	86.0%

□ = Blank, AD1 ; Blank: Power DIN 4P, AD1: Anderson Connector

Model Name	Output Connector	Safety
GC120A△-R7B GC160A△-R7B GC220A△-R7B PB-230-△	 Power DIN 4P	CB FC CE (GC series only)
GC120A△-AD1 GC160A△-AD1 GC220A△-AD1 PB-230-△AD1	 Anderson Connector	UL CB FC CE (GC series only)
GC330A○-C4P	 AMP Connector	c UL us CB FC CE

- UL1012 listed only for "Anderson Connector"
- △ = 12,24,48 ; R7B: Power DIN 4P, AD1: Anderson Connector
- ○ = 36,48 ; C4P: AMP 1-480702-0 equivalent

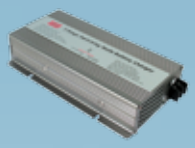
300~1000W
Stationary Battery Charger

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

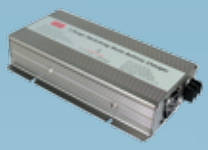
Features

- 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

(PB-600 / 1000) (12/24V only)



▲ PB-300 253x 135x 48.5 mm



▲ PB-360 253x 135x 48.5 mm

▲ PB-600 230x 158x 67 mm

▲ PB-1000 300x 184x 70 mm

Model Name		PB-300	PB-360	PB-600	PB-1000
AC input voltage range		90~132VAC / 180~264VAC selectable by switch		90~264VAC	
Charge style		3 stage		2/3/8 stage (selectable)	
Over voltage protection	Range	108%~125%		112%~125%	110%~125%
	Type	shut off output voltage, re-power on to recover			
Withstand voltage		I/P-O/P: 3kVAC, 1 minute			
Working temperature		-10~+50°C	-20~+60°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, EN61000-3-2,3 (except for PB-300N/360N)			
DC output connector		Terminal block 2P			Terminal block 3P

300W

Model Name	Wattage	Output	Effi.
PB-300□-12	300W	14.4V, 0~20.85A	85%
PB-300□-24	302W	28.8V, 0~10.5A	86%
PB-300□-48	305W	57.6V, 0~5.3A	88%

□ =P, N ; P: with PFC, N: non PFC

600W

Model Name	Wattage	Output	Effi.
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%

360W

Model Name	Wattage	Output	Effi.
PB-360□-12	350W	14.4V, 0~24.3A	85%
PB-360□-24	360W	28.8V, 0~12.5A	86%
PB-360□-48	360W	57.6V, 0~6.25A	87%

□ =P, N ; P: with PFC, N: non PFC

1000W

Model Name	Wattage	Output	Effi.
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%

500W DC/AC Off-Grid Solar Inverter

Features

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

- 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

205x 158x 67 mm

FCC/CE pending

Output power		500W (rated power); 1000W (surge power)
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		±3% of rated output voltage
No load disspation (Typ.)		≤15W
Working temperature		-20~+60°C (refer to output derating curve)
Solar Panel	Input voltage range	25~50V, 35~90V or 70~160V
	Max. short circuit current	11A (4.5A for 48VDC input)
	Rated charger power	500W
Safety standards		EN60950-1(LVD)
EMC standards		FCC part 15 class B, EN55022 class B, EN61000-4-2,3,8

Model Name	Continue Power	Input VDC	Output VAC/Hz	Output socket	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 Page 4 for AC output receptacle list

100~2500W Modified Sine Wave

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

e13 CE

1 ONE-YEAR WARRANTY

AC Output Receptacle (optional) for A301/A302 Series

TYPE-1	TYPE-2	TYPE-3	TYPE-4	TYPE-5	TYPE-6
JAPAN	USA	EUROPE	UNIVERSAL	AUSTRALIA	U.K.

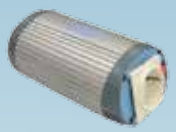
▸ Please consult MeanWell for other kinds of optional socket.
TYPE-2,3 (standard model) ; TYPE-1,4,5,6 (optional model)

▲ 100W (Built-in USB)
170mmx 65ø

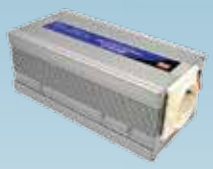
▲ 150W / 110V 122x 73x 45 mm

▲ 600W 210x 173x 65 mm

▲ 1500W 455x 210x 85 mm



▲ 150W / 230V
165x 94x 69 mm



▲ 300W 165x 88x 74 mm

▲ 1000W 320x 210x 85 mm

▲ 2500W 430x 210x 159 mm

Model Name	A301	A302
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 EN55022 class B, e-mark, EN61000-4-2,3	

100W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-100-F3	100W	10-15	230 / 50	TYPE-3	90%
A302-100-F3	100W	21-30	230 / 50	TYPE-3	90%

150W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-150-B2	150W	10-15	110 / 60	TYPE-2	78%
A301-150-F3	150W	10-15	230 / 50	TYPE-3	78%
A302-150-B2	150W	21-30	110 / 60	TYPE-2	82%
A302-150-F3	150W	21-30	230 / 50	TYPE-3	82%

300W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-300-B2	300W	10-15	110 / 60	TYPE-2	82%
A301-300-F3	300W	10-15	230 / 50	TYPE-3	82%
A302-300-B2	300W	21-30	110 / 60	TYPE-2	85%
A302-300-F3	300W	21-30	230 / 50	TYPE-3	85%

600W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-600-B2	600W	10-15	110 / 60	TYPE-2	82%
A301-600-F3	600W	10-15	230 / 50	TYPE-3	82%
A302-600-B2	600W	21-30	110 / 60	TYPE-2	85%
A302-600-F3	600W	21-30	230 / 50	TYPE-3	85%

1000W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-1K0-B2	1000W	10-15	110 / 60	TYPE-2	82%
A301-1K0-F3	1000W	10-15	230 / 50	TYPE-3	82%
A302-1K0-B2	1000W	21-30	110 / 60	TYPE-2	85%
A302-1K0-F3	1000W	21-30	230 / 50	TYPE-3	85%

1500W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-1K7-B2	1500W	10-15	110 / 60	TYPE-2	82%
A301-1K7-F3	1500W	10-15	230 / 50	TYPE-3	82%
A302-1K7-B2	1500W	21-30	110 / 60	TYPE-2	85%
A302-1K7-F3	1500W	21-30	230 / 50	TYPE-3	85%

2500W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
A301-2K5-B4	2500W	10-15	110 / 60	TYPE-2	82%
A301-2K5-F3	2500W	10-15	230 / 50	TYPE-3	82%
A302-2K5-B4	2500W	21-30	110 / 60	TYPE-2	85%
A302-2K5-F3	2500W	21-30	230 / 50	TYPE-3	85%

200~700W True Sine Wave

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
- High frequency design
- 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

3 THREE-YEARS WARRANTY

FC E13 CE

	TS-200	TS-400	TS-700
	 205x 158x 59 mm	 205x 158x 67 mm	 295x 184x 70 mm
Rated output power	**200W**	**400W**	**700W**
Maximum output power	230W for 3 minutes; 300W for 10 sec.	460W for 3 minutes; 600W for 10 sec.	800W for 3 minutes; 1050W for 10 sec.
Output surge rating (30 cycles)	400W	800W	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		
Safety standards 230V	Compliance to EN60950-1(LVD)		
EMC standards 110V	Compliance to FCC part 15 class A		
EMC standards 230V	Compliance to EN55022 class A, E-Mark, EN61000-4-2,3,8		

200W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
TS-200-112A	200W	10.5-15	110 / 60	TYPE-A	86.0%
TS-200-124A	200W	21.0-30	110 / 60	TYPE-A	87.5%
TS-200-148A	200W	42.0-60	110 / 60	TYPE-A	88.0%
TS-200-212B	200W	10.5-15	230 / 50	TYPE-B	86.0%
TS-200-224B	200W	21.0-30	230 / 50	TYPE-B	87.5%
TS-200-248B	200W	42.0-60	230 / 50	TYPE-B	88.0%

400W

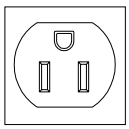
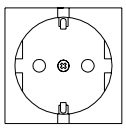
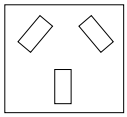
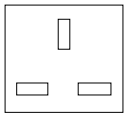
Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
TS-400-112A	400W	10.5-15	110 / 60	TYPE-A	84.5%
TS-400-124A	400W	21.0-30	110 / 60	TYPE-A	86.0%
TS-400-148A	400W	42.0-60	110 / 60	TYPE-A	87.0%
TS-400-212B	400W	10.5-15	230 / 50	TYPE-B	86.0%
TS-400-224B	400W	21.0-30	230 / 50	TYPE-B	87.5%
TS-400-248B	400W	42.0-60	230 / 50	TYPE-B	88.5%

700W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
TS-700-112A	700W	10.5-15	110 / 60	TYPE-A	86%
TS-700-124A	700W	21.0-30	110 / 60	TYPE-A	88%
TS-700-148A	700W	42.0-60	110 / 60	TYPE-A	89%
TS-700-212B	700W	10.5-15	230 / 50	TYPE-B	89%
TS-700-224B	700W	21.0-30	230 / 50	TYPE-B	90%
TS-700-248B	700W	42.0-60	230 / 50	TYPE-B	91%

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

AC Output Receptacle List

TYPE-A	TYPE-B	TYPE-C	TYPE-D
			
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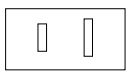
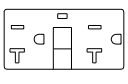
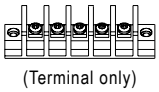
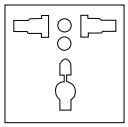
		 (Terminal only)	
Japan	GFCI	-----	Universal

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

1000~3000W True Sine Wave

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
- 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
- High frequency design
- 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

3 THREE-YEARS WARRANTY

	TS-1000	TS-1500	TS-3000
	 345x 184x 70 mm	 420x 220x 88 mm	 466.8x 283.5x 100 mm
Rated output power	**1000W**	**1500W**	**3000W**
Maximum output power	1150W for 3 minutes; 1500W for 10 sec.	1725W for 3 minutes ; 2250W for 10 sec.	3450W for 3 minutes ; 4500W 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%		
AC output regulation (Typ.)	±3% of rated output voltage		
No load dissipation (Typ.)	≤ 6W @ standby saving mode	≤18W @ standby saving mode	≤10W @ standby saving mode
Working temperature	0~+60°C		
Safety standards 110V	UL458 approved (except for 48V and only for GFCI receptacle)		UL458 approved for TYPE-G
Safety standards 230V	Compliance to EN60950-1 (LVD)		
EMC standards 110V	Compliance to FCC part 15 class A		
EMC standards 230V	Compliance to EN55022 class A (class B for TS-1500), E-Mark, EN61000-4-2,3,8		

1000W

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

1500W

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

3000W

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

☐ = A, B (standard model), C, D, E ,F (optional model), G (optional model for TS-3000 only)

► Please refer to page 4 for AC output receptacle list.

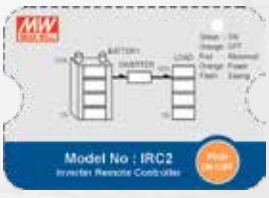
► Inverter Remote Controller

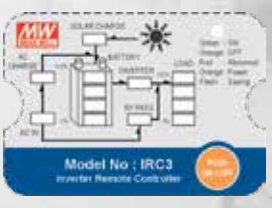
75x 55x 21mm

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
  TN-1500 / 3000
  IRC2: TS-700 / 1000 / 1500 / 3000
  IRC3: TN-1500 / 3000
- 3 years warranty





1500~3000W
True Sine Wave with Solar Charger

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

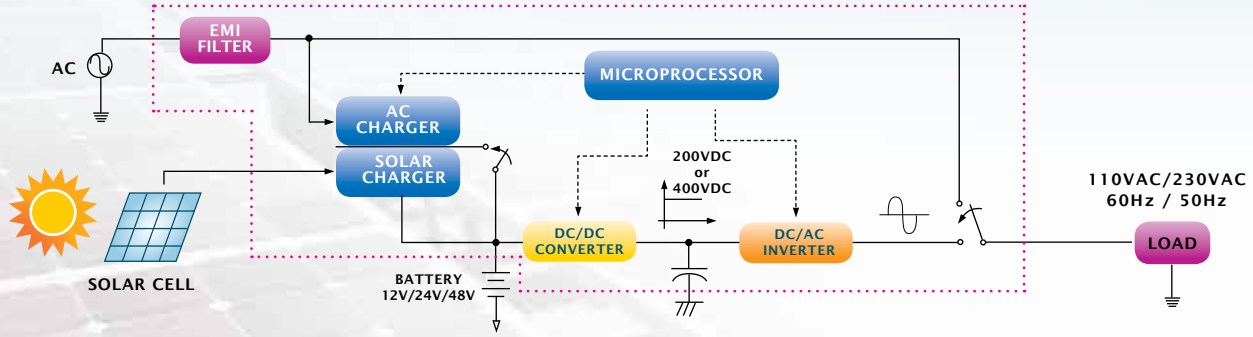
Features

- True sine wave output (THD<3%)
- 2 times high surge power for motor related application
- Advanced digital control by microprocessor
- 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)

3 THREE-YEARS WARRANTY

	TN-1500	TN-3000
	 420x 220x 88 mm	 466.8x 283.5x 100 mm
Rated output power	**1500W**	**3000W**
Maximum output power	1725W for 3 minutes ; 2250W for 10 seconds	3450W for 3 minutes ; 4500W for 10 seconds
Output surge rating (30 cycles)	3000W	6000W
DC input rated voltage	12VDC, 24VDC or 48VDC	
AC output voltage	100 / 110 / 115 / 120VAC or 200 / 220 / 230 / 240VAC adjustable via front panel or monitoring software	
AC output regulation (Typ.)	±3% of rated output voltage	
No load dissipation (Typ.)	≤18W @ standby saving mode	≤10W @ standby saving mode
Output frequency	50Hz/60Hz adjustable via front panel or monitoring software	
AC output waveform	True sine wave, THD<3.0%	
Transfer time (Typ.)	10ms; inverter mode ⇄ Bypass mode	
Working temperature	0~+60°C	
Safety standards 110V	UL458 approved (except for 48V and only for GFCI receptacle)	UL458 approved for TYPE-G
Safety standards 230V	Compliance to EN60950-1 (LVD)	
EMC standards 110V	Compliance to FCC part 15 class A	
EMC standards 230V	Compliance to EN55022 class A (class B for TN-1500), E-Mark, EN61000-4-2,3,4,5,6,8,11	

Solar Inverter Block Diagram (Inverter with AC & Solar Charger) - TN Series



1500W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
TN-1500-112[A]	1500W	10.5-15	110 / 60	TYPE-A	87%
TN-1500-124[A]	1500W	21.0-30	110 / 60	TYPE-A	89%
TN-1500-148[A]	1500W	42.0-60	110 / 60	TYPE-A	89%
TN-1500-212[B]	1500W	10.5-15	230 / 50	TYPE-B	88%
TN-1500-224[B]	1500W	21.0-30	230 / 50	TYPE-B	90%
TN-1500-248[B]	1500W	42.0-60	230 / 50	TYPE-B	91%

☐ = A, B (standard model), C, D, E ,F (optional model), G (optional model for TN-3000 only)

▸ Please refer to page 4 for AC output receptacle list.

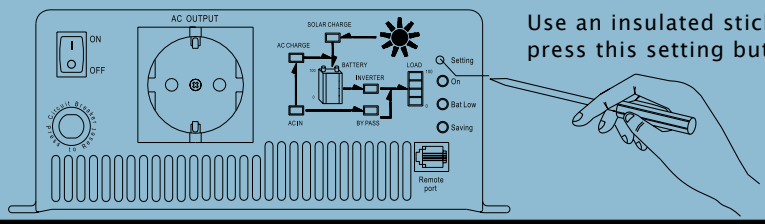
3000W

Model Name	Continue power	Input VDC	Output VAC / Hz	Output socket	Effi.
TN-3000-112[A]	3000W	10.5-15	110 / 60	TYPE-A	88%
TN-3000-124[A]	3000W	21.0-30	110 / 60	TYPE-A	90%
TN-3000-148[A]	3000W	42.0-60	110 / 60	TYPE-A	91%
TN-3000-212[B]	3000W	10.5-15	230 / 50	TYPE-B	89%
TN-3000-224[B]	3000W	21.0-30	230 / 50	TYPE-B	91%
TN-3000-248[B]	3000W	42.0-60	230 / 50	TYPE-B	92%

Setting Procedure via Front Panel

for TS/TN-1500/3000 Series

Front Panel



Function		Setting Procedure
First Level		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.
	UPS and Energy Saving Mode Selection	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)

Mode / LED Status	UPS Mode	Energy Saving Mode
On	○	●
Bat Low	✸	✸
Saving	✸	✸

● Light ○ Dark ✸ Flashing

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

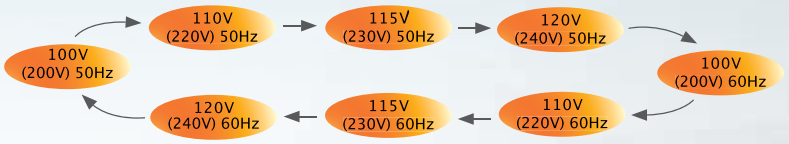
Step 1 After selecting the operating mode, pressing the setting button for 3~5 seconds and the inverter will send out a "Beep" sound. The button can be released and you can go on to the second section of "voltage / frequency".

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)

Mode / LED Status		100VAC (200VAC)	110VAC (220VAC)	115VAC (230VAC)	120VAC (240VAC)
50Hz	On	●	●	●	●
	Bat Low	○	○	●	●
	Saving	○	●	○	●
60Hz	On	✸	✸	✸	✸
	Bat Low	○	○	●	●
	Saving	○	●	○	●

● Light ○ Dark ✸ Flashing

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)

Mode / LED Status	ON	OFF
On	✸	✸
Bat Low	✸	✸
Saving	●	○

● Light ○ Dark ✸ Flashing

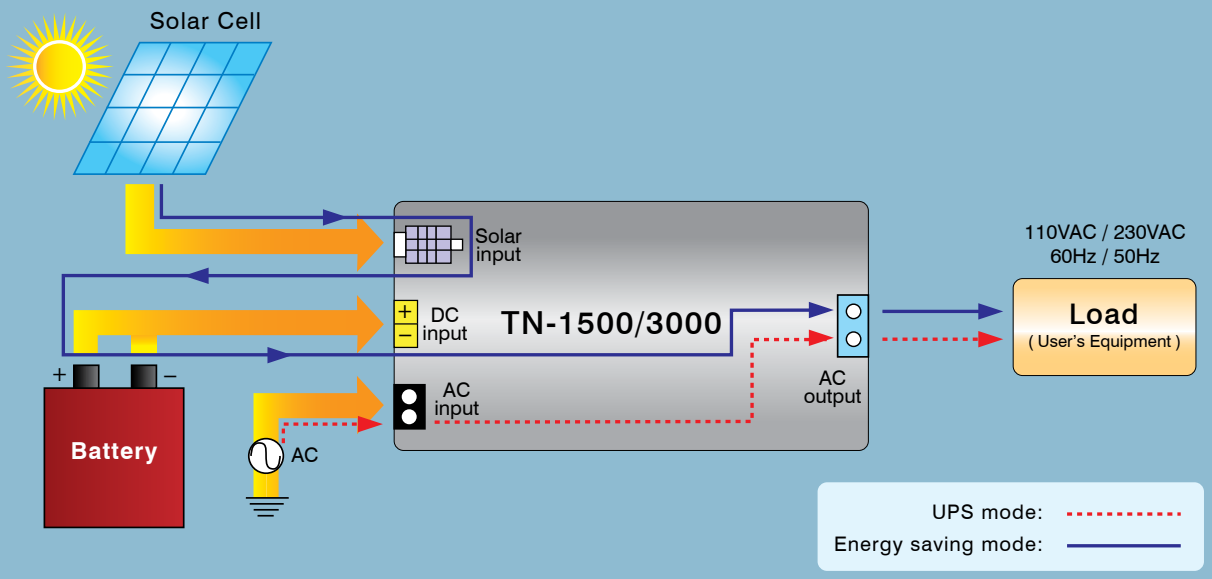
Step 3 The LED will change state by pressing the setting button for 1 second and then release.

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



Operation Mode	Description & Special Feature	Possible Application
UPS mode	Utility has the highest priority, the TN unit will operate as an UPS system. Utility —bypass→ load (user's equipment) Utility —back-up→ battery bank ⋯→ Inverter ⋯→ load (user's equipment)	• 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. Solar panel → battery bank → inverter → load (user's equipment)	• 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.
	• With additional solar panel. It can be used as individual sub power station (Independent power station) • Area without utility or unstable utility • Cut cost on utility bill	

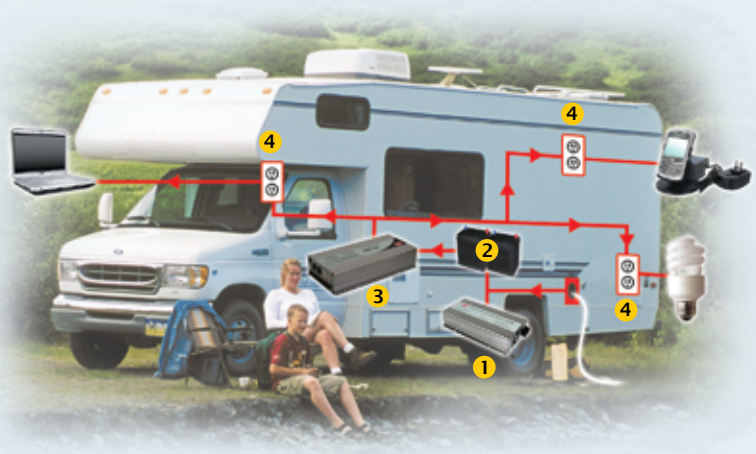
Notice

- 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

1. **Solar Panel**
2. **Battery Bank**
3. **Off-Grid DC/AC Solar Inverter** (TN Series)
4. **AC Input** (bypass)
5. **AC Outlet**

1. **Utility Input** (Shore)
2. **AC/DC Battery Charger** (PB series)
3. **Battery Bank**
4. **Off-Grid AC/DC Power Inverter** (TS series)
5. **AC Outlet**



1. **AC/DC Battery Charger** (PB series)
2. **Battery Bank**
3. **Off-Grid DC/AC Inverter** (TS series)
4. **AC Outlet**

Applications:

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