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SL Series

Inverter / Charger

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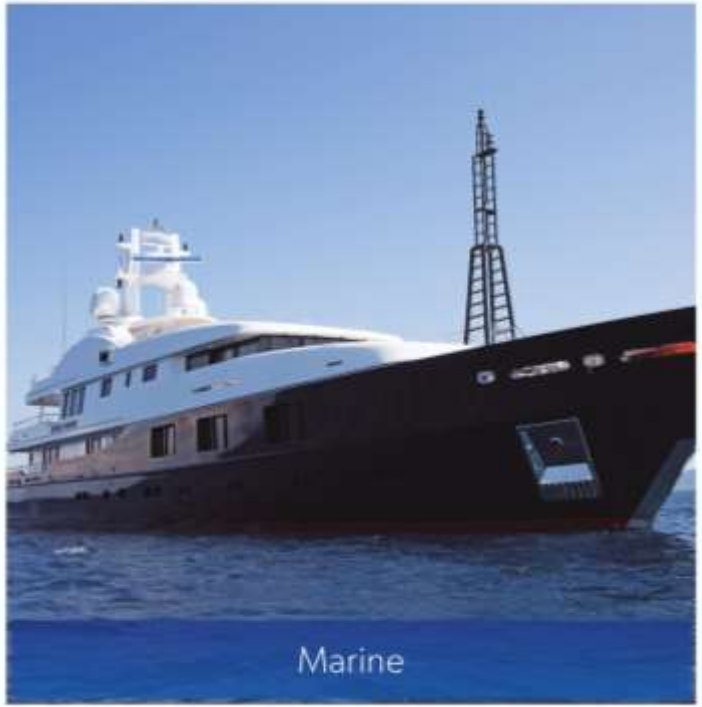
SL Series Overview

Professional Power Solutions Design and Manufacturing

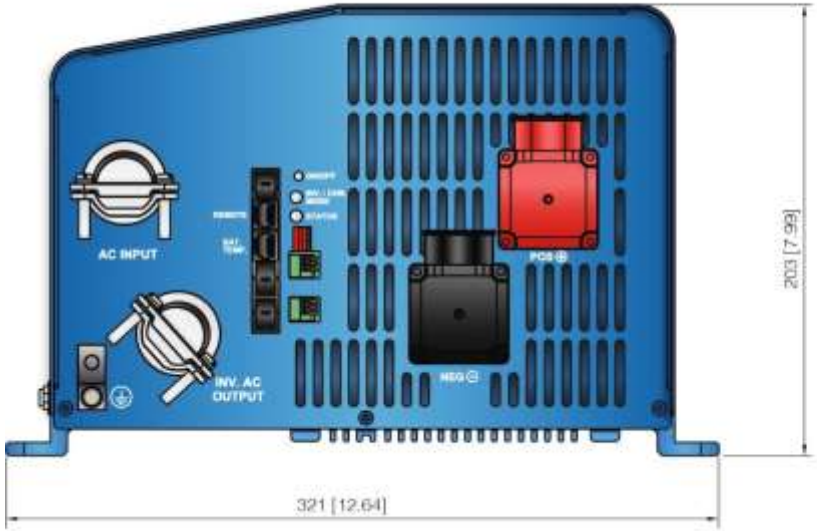
COTEK
Pure Sine Wave
Inverter / Charger
Wide Temperature Range
-20°C~40°C full load operation without derating
AC Bypass Power up to 12KW and
Inverter Power up to 2K/3KW
SL-Series
The most robust inverter charger
Innovative design of integrating inverter and battery charger
Well smooth mode switching to fulfill applications
Various Operating Mode
1. Inverter mode 2. Charger mode 3. Power Sharing
4. Power Generation 5. Power Support

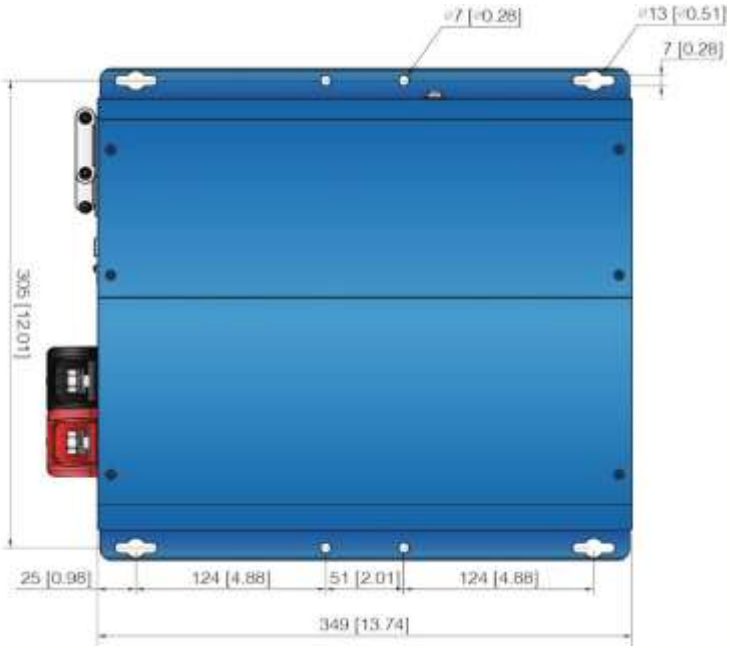
Applications



Features and Benefits

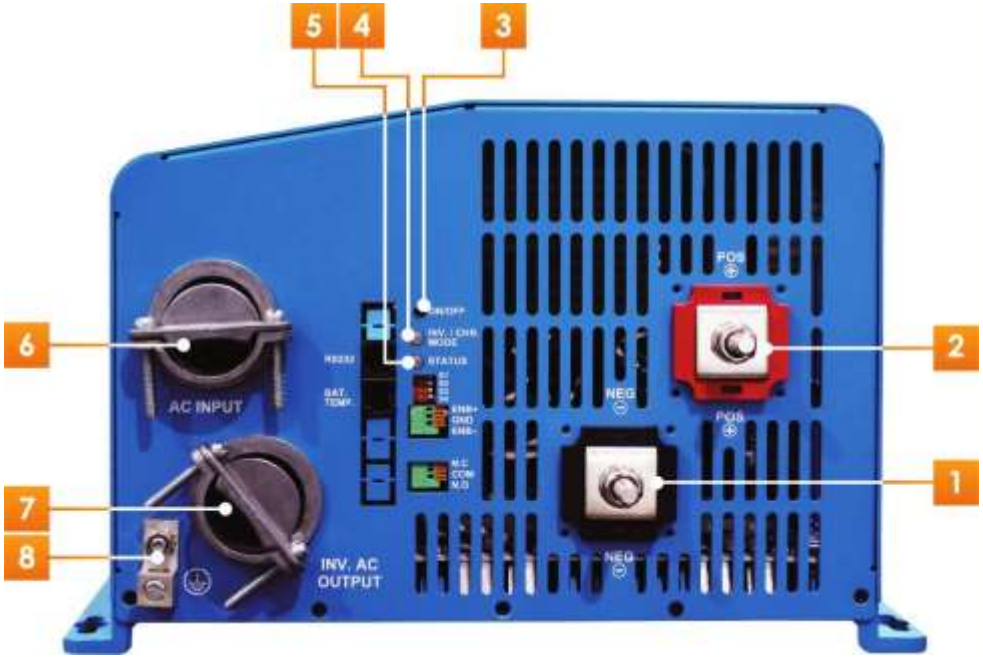
SL Series Dimension





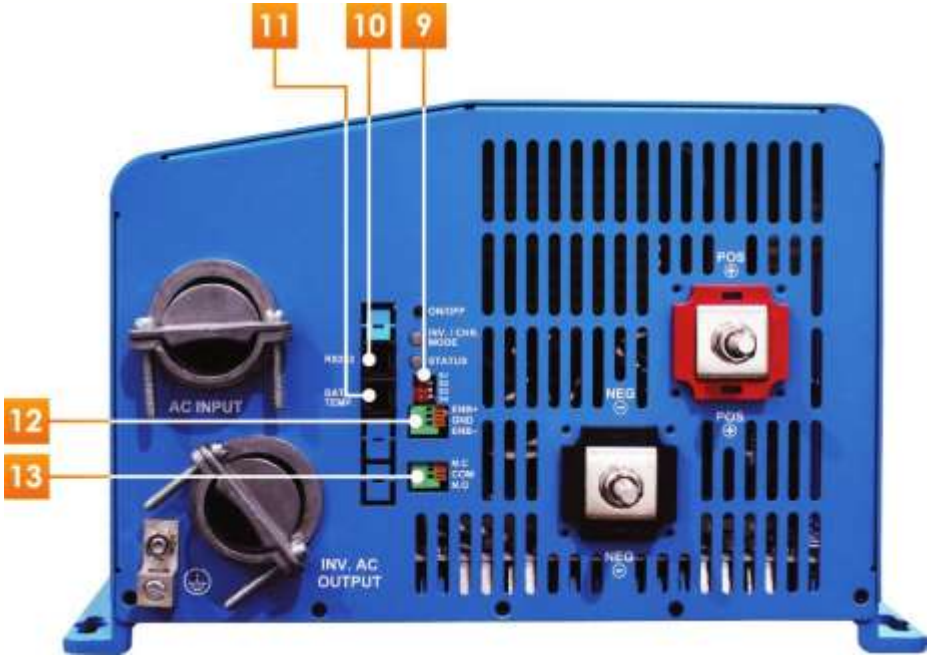
mm [inch]

Front Panel (1)



	Description
1	DC Input Connection(-)
2	DC Input Connection(+)
3	Power Switch
4	INV./CHR. Mode LED Indicator
5	STATUS LED Indicator
6	AC Input / Input Connections
7	AC Input / Output Connections
8	Chassis Ground

Front Panel (2) - Control Options

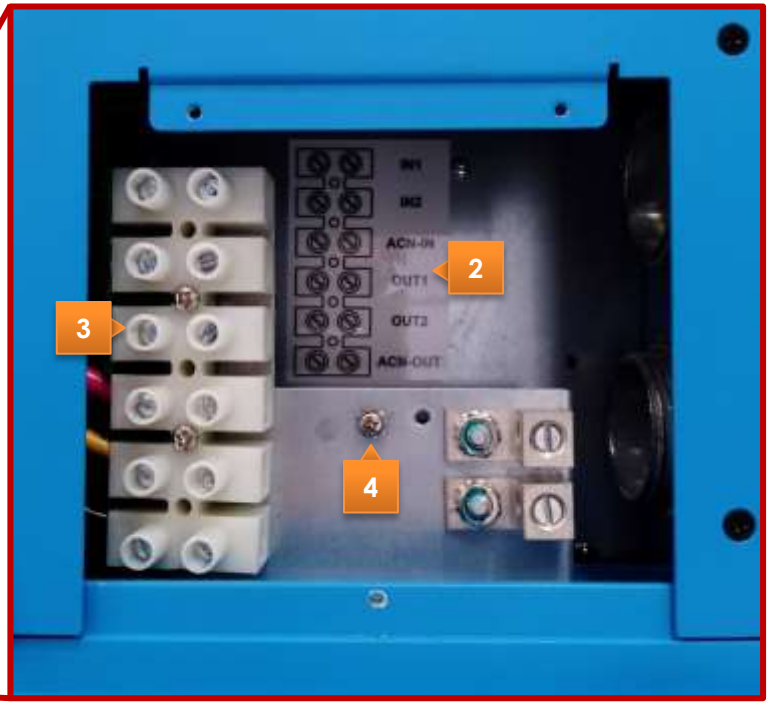


	Description
9	DIP Switch Setting
10	RS-232 / Remo control port
11	Green Terminal for Power On/Off
12	Green Terminal for Fault Alert
13	Dry Contact Green Terminal

AC Terminal Panel

1. AC cover plate removed
2. Terminal label
3. AC terminal block
4. ⊕ Connection between neutral conductor(N)

   ○ No connection between neutral conductor(N)



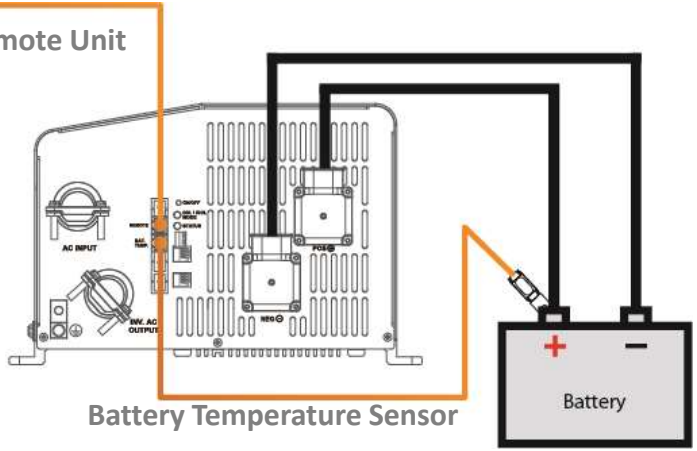
Accessories

1 Remote Unit
(Optional)

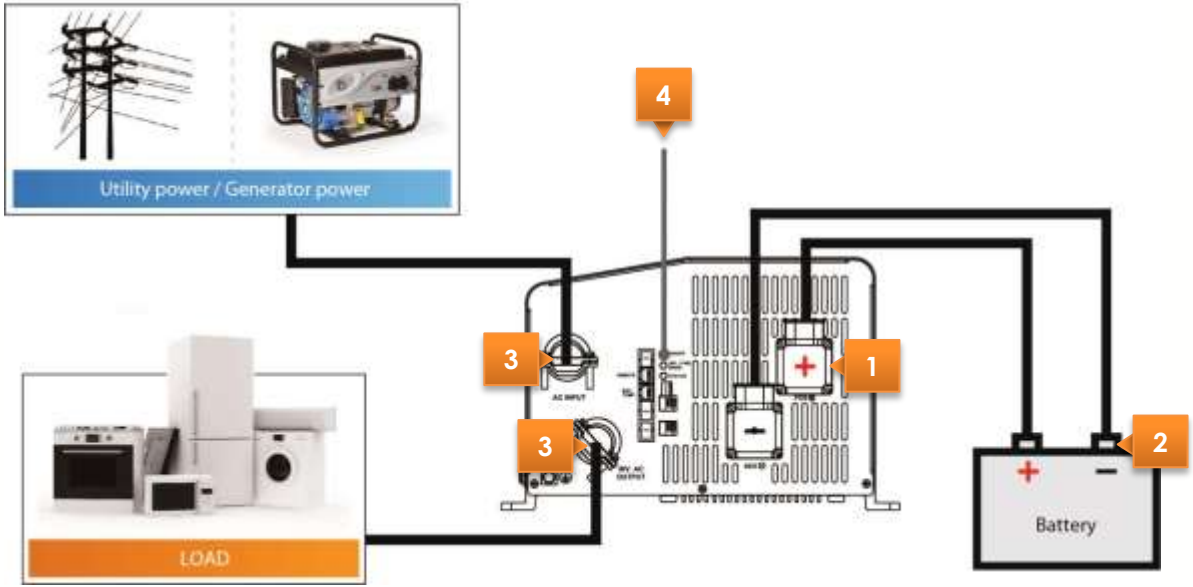
CR-20

CR-16B

2 Battery Temperature Sensor



Easy Installation



1. **Connect the DC cable** (Make sure the wire diameter vs. DC current)
2. **Connect the DC input cable to battery**
3. **Connect the AC cable**
4. **Power ON**

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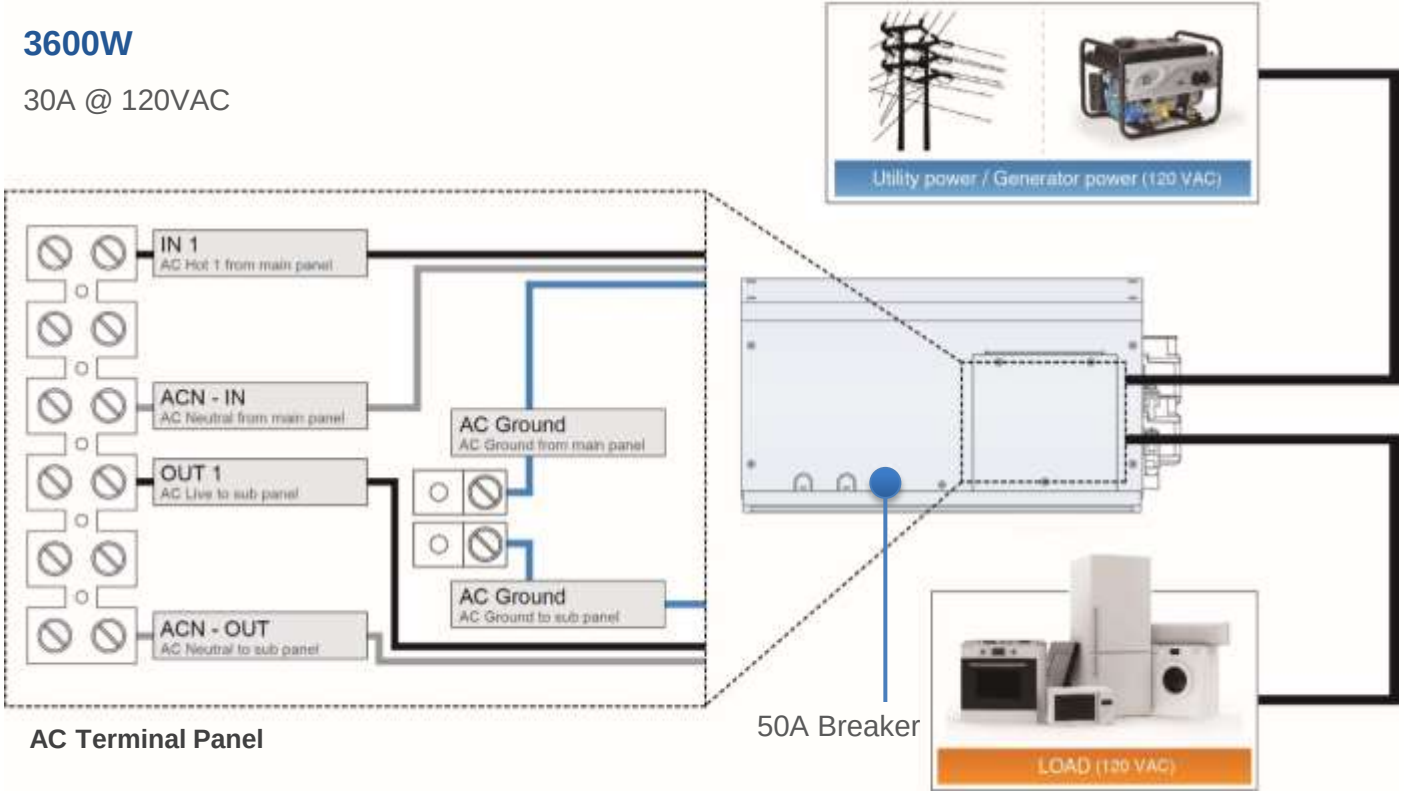
Features

Single Phase 1P2W

3600W

30A @ 120VAC



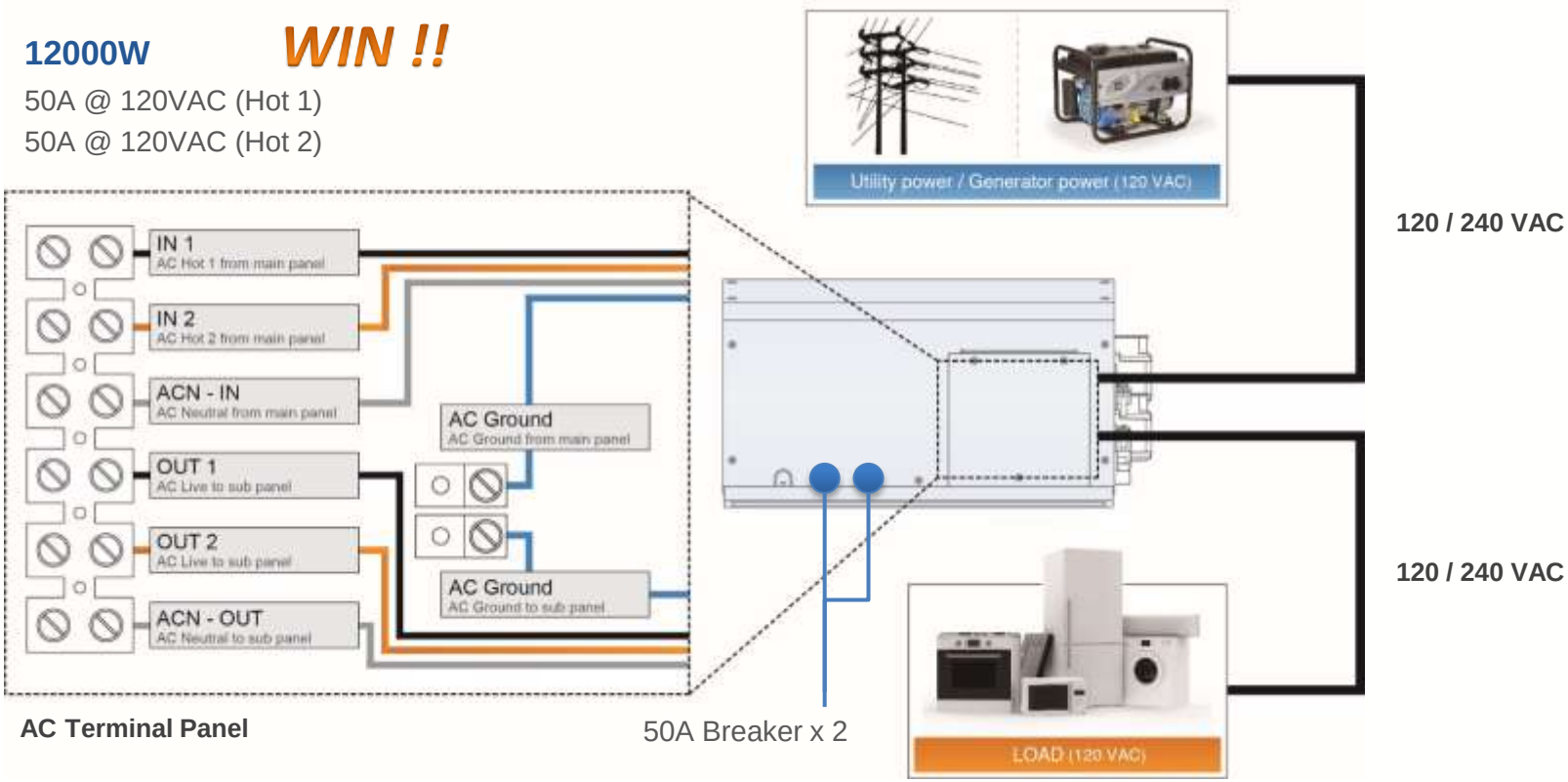
AC Terminal Panel

Splits Phase1P3W

12000W ***WIN !!***

50A @ 120VAC (Hot 1)

50A @ 120VAC (Hot 2)

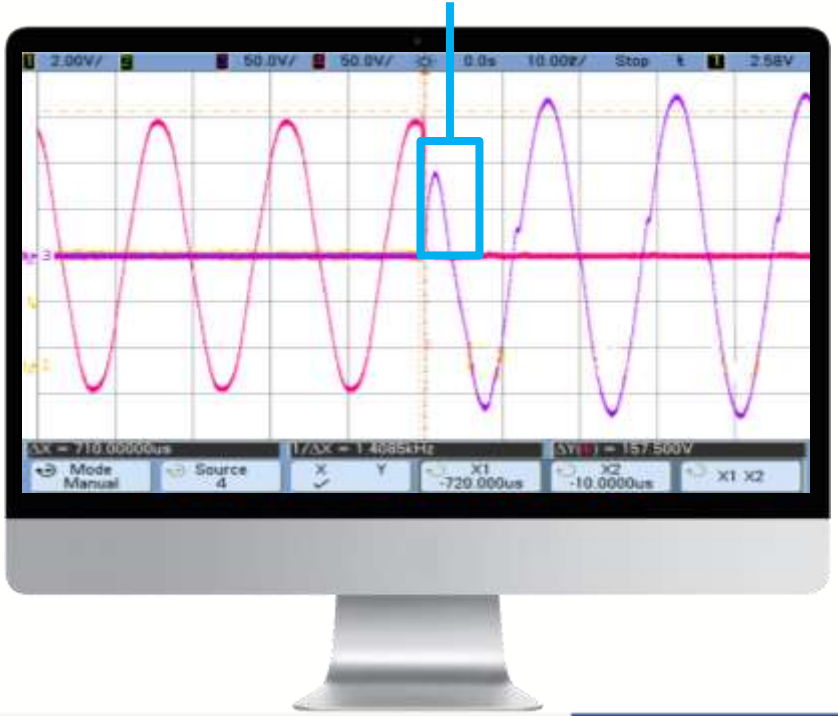


AC Terminal Panel

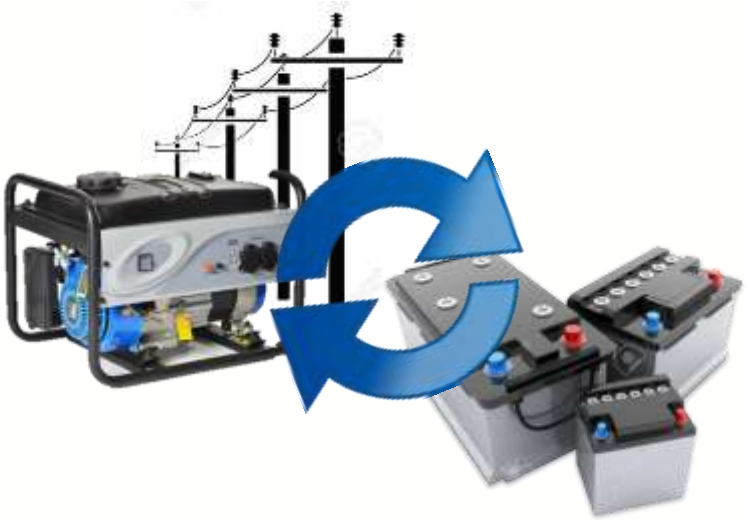
50A Breaker x 2

Bi-Direction Design

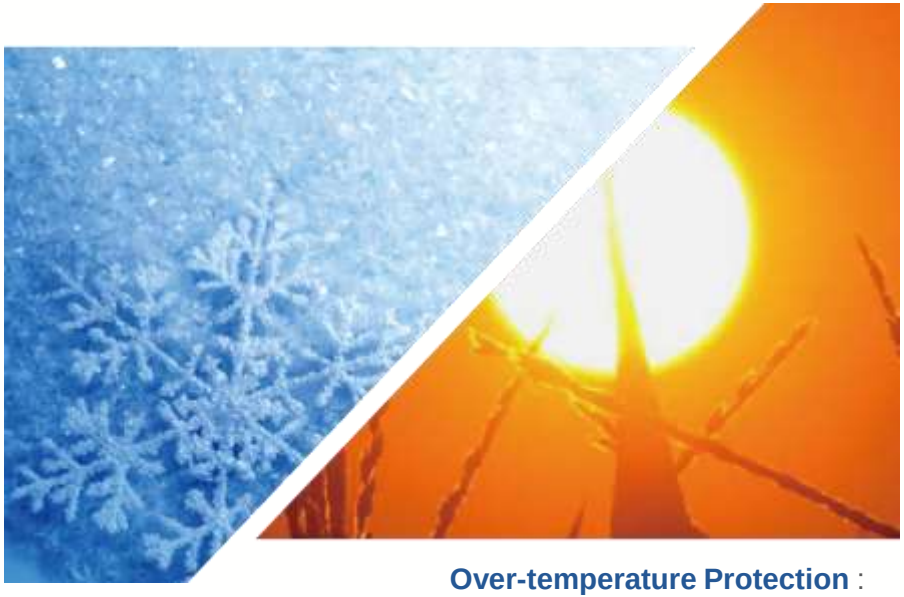
Transfer period <16ms
(below example < 4ms)



0 Second transfer-switch between AC and DC



Continual Full Load Operation



Over-temperature Protection :

Sensor on Transformer, MOSFETs, Battery, and Internal ambient

Full load up to 40℃

	SL - Series	Others
Full Load	-20℃ ~ 40℃	@25℃
De-rating	40℃ ~ 60℃	>25℃

De-rating Curve :

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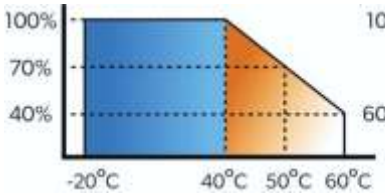
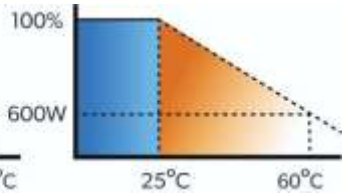


Other

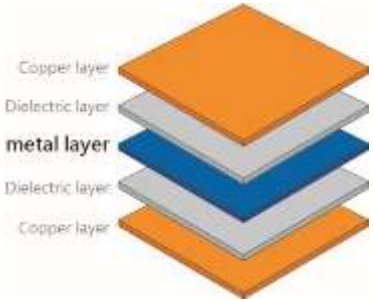


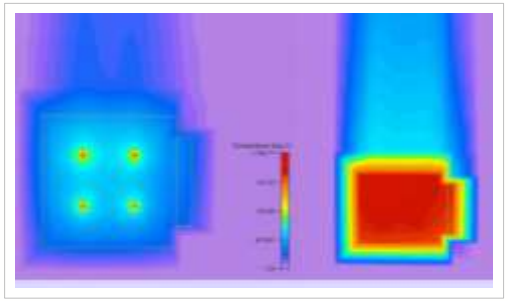
MC-PCB / Ball Bearing Fan

Feature : Good materials : Metal Core PCB vs FR4

Ball bearing Fan vs Sleeve bearing Fan

Benefit : 1. heat dissipation 2. Operating temperature 3. Power density





Temperature	Ball Bearing Fan	Sleeve Bearing Fan	% Difference
25° C	95K Hours	80K Hours	18%
40° C	75K Hours	52K Hours	44%
50° C	63K Hours	40K Hours	58%
60° C	54K Hours	30K Hours	80%
70° C	45K Hours	N/A	N/A

Generator Mode (Single Phase)

Feature : Strong Generator technology

70A/SL2000 80A/SL3000

Benefit : Break through the limitation of single input power and meanwhile satisfy the output power load

Max Output up to 9000VA!

AC Input power management

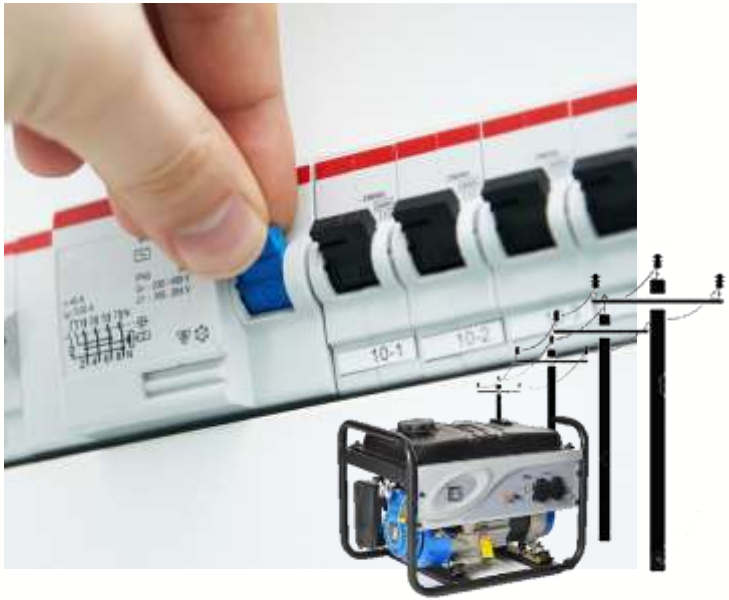
Feature : AC Input power management

Benefit : Power support by L1/ L2 simultaneously (Inverter/Charger/Sharing/Generator/Grid/Power protection)

Grid Power Protection

Feature : AC Input Current Limit Control

Benefit : Avoid the shut down of input power breaker system
Easy repair & maintenance



Temperature Compensation

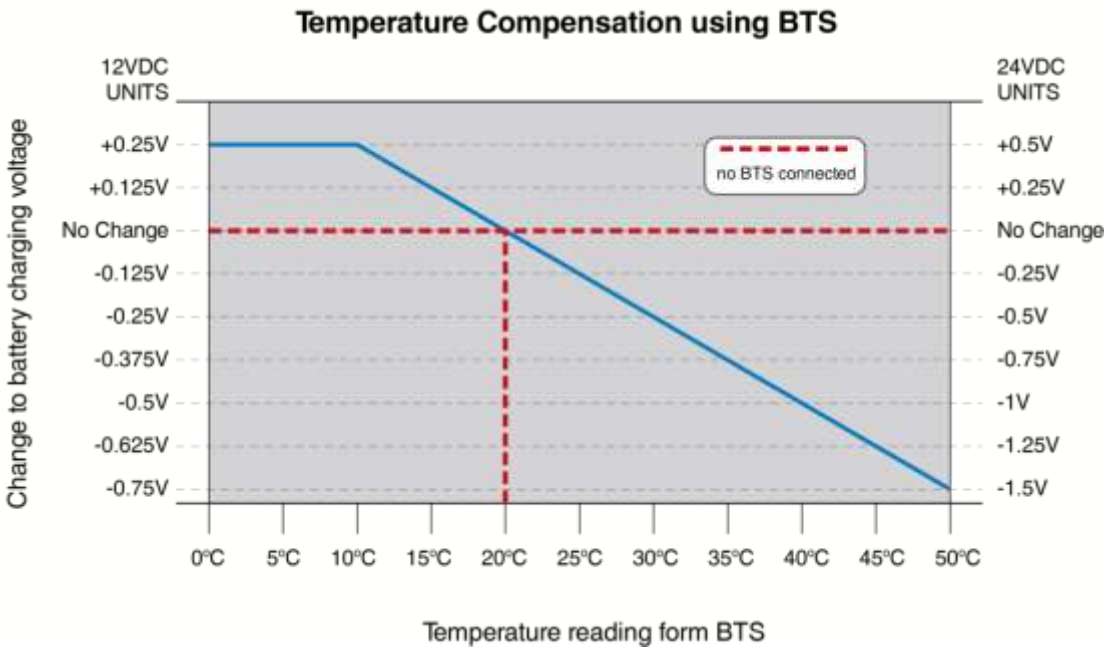
Feature:

the charge voltages are automatically adapted for deviating temperature

Benefit:

(1) The unit is delivered with a battery temperature sensor (BTS).

(2) Avoid the early or late trigger of the battery temperature protection



Remote Unit CR-20

Direct Error Message

Protection List

Protection Type	Latch or auto recovery	Protection point	Recovery point	Fail after retry 3 time
UVP (Under Voltage Protection)	auto recovery	10.5V	12.5V, retry 3 times	Latch
OVP (Over Voltage Protection)	auto recovery	16.5V	14.5V, retry 3 times	Latch
OTP (by Heat Sink) (Over Temperature Protection)	auto recovery	80 ˚C	60 ˚C, retry 3 times	Latch
UTP (Under Temperature Protection)	auto recovery	-20 ˚C	0 ˚C, retry 3 times	Latch
OLP (Over Load Protection)	latch	115% <1min., 150% <3sec.	No	N/A
SCP (Short Circuit Protection)	auto recovery	Short, retry 3 times	N/A	Latch

Mounting Design

Feature : Mounting design compatible to the existed inverter system.

Benefit : High Compatibility

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Comparison Chart

Professional Power Solutions Design and Manufacturing

Model name		SL2000	SL3000	MS2012	MS2812	SW2012	SW3012	EVO2212	EVO3012
Category	Photo								
Inventer									
Input	AC Connection	**HW single phase or Split phase, Dual input / Dual output AC**			Split phase in/dual out, dual in/out	Single phase in/out	Split phase in/dual out, dual in/out	Split phase	Single phase/ Split phase
Output	AC output voltage	120 VAC +/- 5%		120 VAC +/- 5%		120 VAC		120 VAC +/- 5%	
	Surge Power (Watts)								
	5 seconds	3400	5100	3300	3900	4000	6000	3300	4500
	30 seconds	3200	4800	3100	3800			3080	4200
	5 minutes	2900	4350	2800	3200			2640	3600
	30 minutes	2300	3450	2200	3000			2420	3300
	Efficiency	95%		80%		NA		NA	
Charger									
Input	AC input voltage range	65-140 VAC		50 to 70 Hz/ 60 to 140 VAC (120 VAC nominal)		85-140 VAC		60-140 VAC	
	AC input power factor	**>0.97**		> 0.95		0.98	0.98	> 0.95	
Output	DC output current (@25∘C)	100 ADC	125A	100 ADC	125 ADC	100 ADC	150 ADC	100 ADC	130 ADC
Other									
Transfer relay	Transfer relay rating	**2 legs at 50A for 120V**		1 leg of 30A (30A in total)	2 les at 30A each (60A in total)	1 leg of 30A	2 les at 30A each	1 leg of 40A	2 legs at 35A each
Operating Temp. Range(Full load)		**-20℃~40℃**		At 25℃		NA		NA	
Weight		**17.6 Kg(38.71 Lb)**	**22.6 Kg(49.82 Lb)**	19.1 Kg(42 Lb)	24.9 Kg(55 Lb)	30 Kg(66 Lb)	33.5 Kg(73.7Lb)	19.1 Kg(42 Lb)	19.1 Kg(42 Lb)
Safety		**UL458 Vehicle and marine** IEEE1547 FCC Part 15 Class B CSA 22.2 #107.1		Intertek ETL listed: UL458, 1741, CSA 22.2, KKK		Intertek ETL listed: UL458 Vehicle and Marine CSA 22.2 #107.1 FCC Part 15 Class B		Intertek ETL listed: UL458 Vehicle and Marine UL1741, CSA 22.2 #107.1, FCC Part 15 Class B	

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