



■ Features

- True sine wave output (THD<3%)
- High surge power up to 1000W
- Built-in MPPT solar charger, MPPT efficiency:98%(Typ.)
- High efficiency up to 88%
- LED indication for operation status and battery capacity
- Thermostatically controlled cooling fan
- Protections: Bat. low alarm / Bat. low shutdown / Over voltage / Over temp. / Output short / Input polarity reverse / Overload
- Cooling fan ON-OFF control
- Built-in remote ON-OFF control
- Built-in battery low relay contact
- 3 years warranty

■ Applications

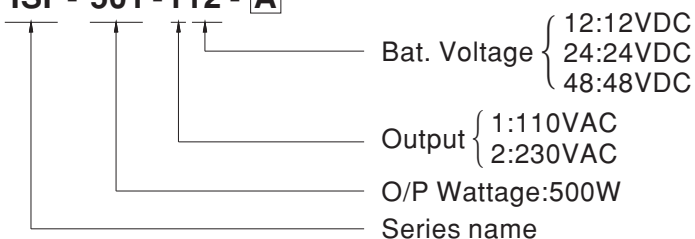
- Home appliance
- Power tools
- Portable equipment
- Yacht
- Vehicle

■ Description

- ISI-501 series integrates a DC/AC True Sine Wave Inverter and a MPPT charger. This series is a high performance true sine wave DC/AC inverter which converts the DC electricity from a system consisting of batteries and solar panels. ISI-501 is not only a high frequency designed inverter but also fully digitally controlled by an advanced microprocessor.
- With true sine wave output, ISI-501 series can provide 500W continuously, 550W for 60-second, and 1000W for 30 AC-cycles. This series incorporates a MPPT solar charger, including the constant current and constant voltage charging characteristics.

■ Model Encoding

ISI - 501 - 112 - A



- A :TYPE A OUTLET
- B :TYPE B OUTLET
- C :TYPE C OUTLET
- D :TYPE D OUTLET
- E :TYPE E OUTLET
- F :TYPE F OUTLET
- U :TYPE U OUTLET

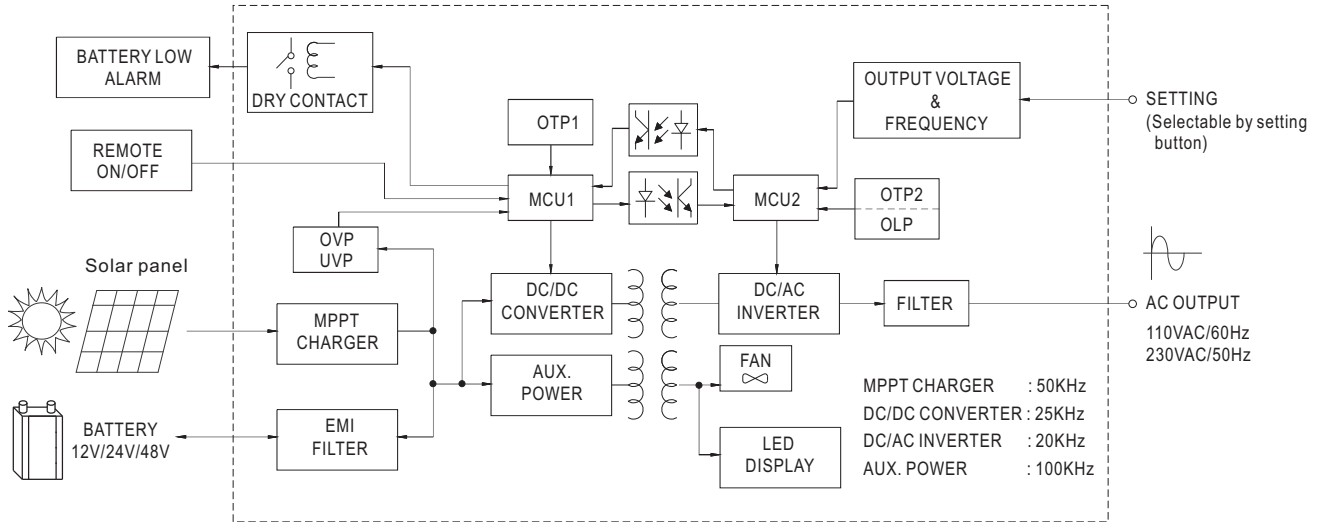
■ AC Output Receptacles(Optional)

Receptacle type							
	TYPE-A	TYPE-B	TYPE-C	TYPE-D	TYPE-E	TYPE-F	TYPE-U
	Standard	Standard	Optional	Optional	Optional	Optional	Optional
Country	USA	EUROPE	AUSTRALIA	U.K	JAPAN	GFCI	UNIVERSAL
Certificate	FC	CE	CE	CE	FC	FC	Non

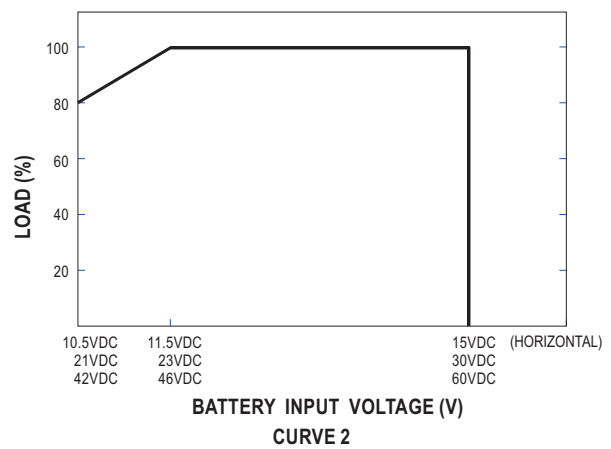
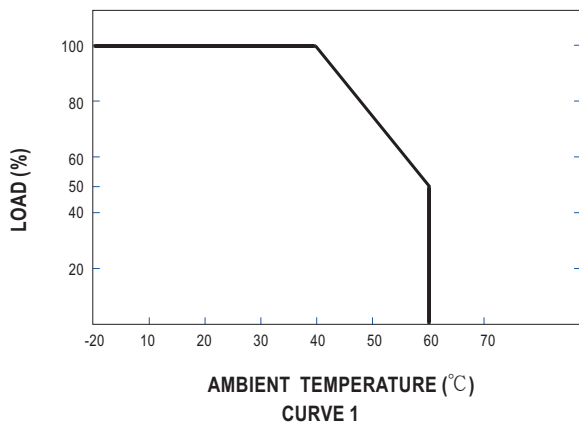
SPECIFICATION

MODEL		ISI-501-112□	ISI-501-124□	ISI-501-148□	ISI-501-212□	ISI-501-224□	ISI-501-248□	
INVERTER SECTION	OUTPUT	RATED POWER	450W	500W		450W	500W	
		MAXIMUM OUTPUT POWER (Typ.)	550W for 60 sec. / surge power 1000W for 30 cycles (112, 212 models : 495W for 60 sec. / surge power 900W for 30 cycles)					
		AC VOLTAGE	Factory setting set at 110VAC			Factory setting set at 230VAC		
		FREQUENCY	100 / 110 / 115 / 120VAC selectable by setting button S.W			200 / 220 / 230 / 240VAC selectable by setting button S.W		
		WAVEFORM	60±0.1Hz 50/60Hz selectable by setting button S.W					
		AC REGULATION (Typ.) Note.1	±3%					
	FRONT PANEL INDICATOR	Fault and operation status, Charger status, Battery voltage capacity						
	INPUT	BAT. VOLTAGE	12V	24V	48V	12V	24V	48V
		VOLTAGE RANGE Note.3,5	10.5 ~ 15VDC	21 ~ 30VDC	42 ~ 60VDC	10.5 ~ 15VDC	21 ~ 30VDC	42 ~ 60VDC
		DC CURRENT (Typ.)	50A	30A	15A	50A	30A	15A
		NO LOAD CURRENT DRAW (Typ.)	1.25A	0.63A	0.32A	1.25A	0.63A	0.32A
		OFF MODE CURRENT DRAW	≤ 1mA					
	OUTPUT PROTECTION	EFFICIENCY (Typ.) Note.2	85%	87%	87%	86%	88%	88%
		OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover					
		OUTPUT SHORT	Shut down o/p voltage, re-power on to recover					
OVER LOAD (Typ.)		110% load for 60 sec. Protection type : Shut down o/p voltage, re-power on to recover						
BATTERY SECTION	CHARGER CURRENT (Typ.)	30A	17A	8.5A	30A	17A	8.5A	
	EXTERNAL BATTERY TYPES	Open & sealed lead acid battery						
	FUSE	40A*2	40A*1	20A*1	40A*2	40A*1	20A*2	
	BAT. LOW ALARM Note.3	11V	22V	44V	11V	22V	44V	
	BAT. LOW SHUTDOWN Note.3	10.5V	21V	42V	10.5V	21V	42V	
	REVERSE POLARITY	By internal fuse open						
MPPT / SOLAR SECTION	MPPT CHARGER EFFICIENCY (Typ.)	98%						
	OPEN CIRCUIT VOLTAGE RANGE	35 ~ 50V	45 ~ 90V	90 ~ 160V	35 ~ 50V	45 ~ 90V	90 ~ 160V	
	MPPT RANGE	25 ~ 50V	35 ~ 90V	70 ~ 160V	25 ~ 50V	35 ~ 90V	70 ~ 160V	
	SOLAR INPUT CURRENT (Typ.)	11A	7A	4.5A	11A	7A	4.5A	
	SOLAR INPUT POWER (Typ.)	500W						
GENERAL SECTION	ENVIRONMENT	WORKING TEMP. Note.4	-20 ~ +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					
		VIBRATION	10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes					
	SAFETY & EMC	SAFETY STANDARDS	None				EN60950-1 (LVD)	
		WITHSTAND VOLTAGE	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	Compliance to FCC part 15 class B				Compliance to EN55022 class B	
		EMC IMMUNITY	None				Compliance to EN61000-4-2,3,8	
	OTHERS	MTBF	57.8K hrs min. MIL-HDBK-217F (25°C)					
		DIMENSION	205*158*67mm (L*W*H)					
		PACKING	2.35Kg; 6pcs/15.1Kg/1.55CUFT					
NOTE	<p>1. THD is tested by rated power, linear load at 13V,26V,52V input voltage.</p> <p>2. Efficiency is tested by 350W, linear load at 13V,26V,52V input voltage.</p> <p>3. The tolerance of each voltage value by models is : 112/212→±0.5V ; 124/224→±1V ; 148/248→±2V.</p> <p>4. Output derating capacity referenced by curve 1.</p> <p>5. Output derating capacity referenced by curve 2.</p> <p>7. All parameters not specified above are measured at rated load, 25°C of ambient temperature.</p>							

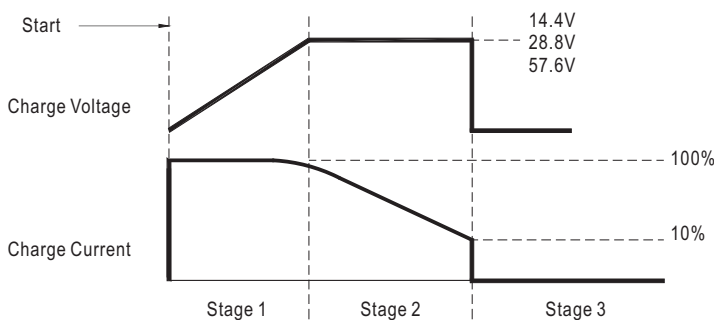
■ Block Diagram



■ Derating Curve



■ Charging Curve



- Stage 1 : Constant Current
- Stage 2 : Constant Voltage
- Stage 3 : MPPT Charger OFF

*Constant current condition : Dependent on solar input current and MPPT voltage of solar panel.

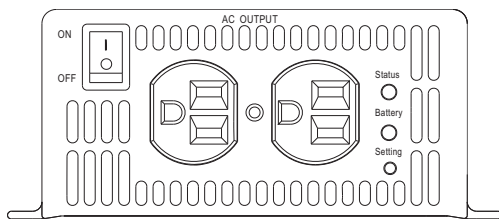
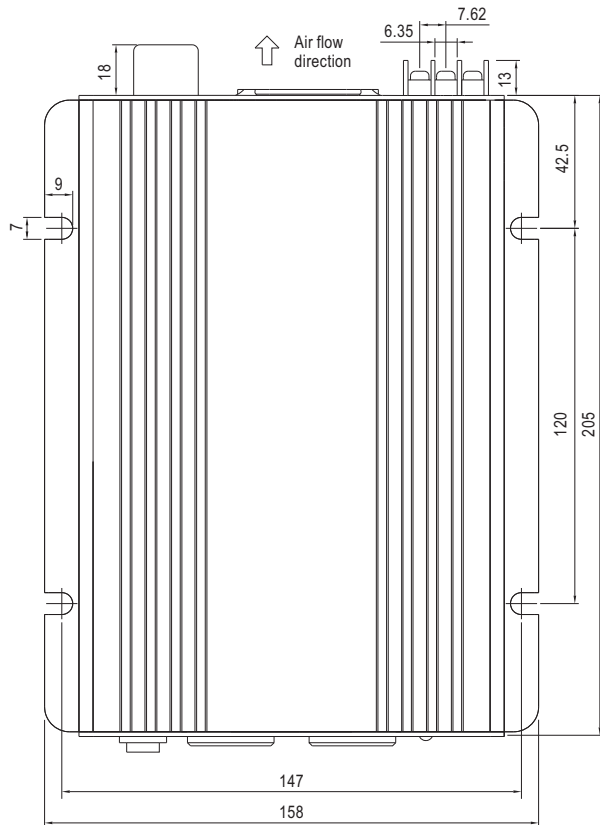
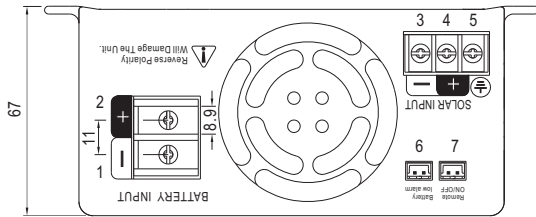
*MPPT charger OFF condition: Charge current less than 10% rated charge current and solar input power under 50W.

Mechanical Specification

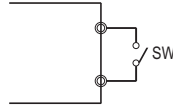
Case No.805 Unit:mm

Input Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	Battery Input NEG(-)	5	FG \perp
2	Battery Input POS(+)	6	Bat. Low Alarm Connector
3	Solar Input NEG(-)	7	Remote ON/OFF Connector
4	Solar Input POS(+)		



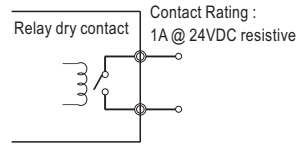
Type-A



Remote ON/OFF Connector

Remote ON/OFF Connector :
JST B-XH or equivalent

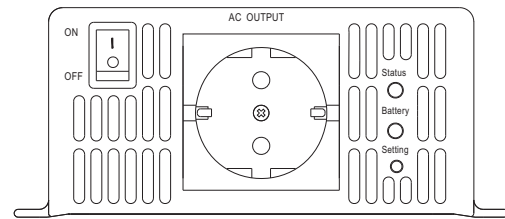
Open	Normal work
Short	Remote off



Bat. Low Alarm Connector

Bat. Low Alarm Connector :
JST B-XH or equivalent

Open	Battery low
Short	Battery OK



Type-B

Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>