



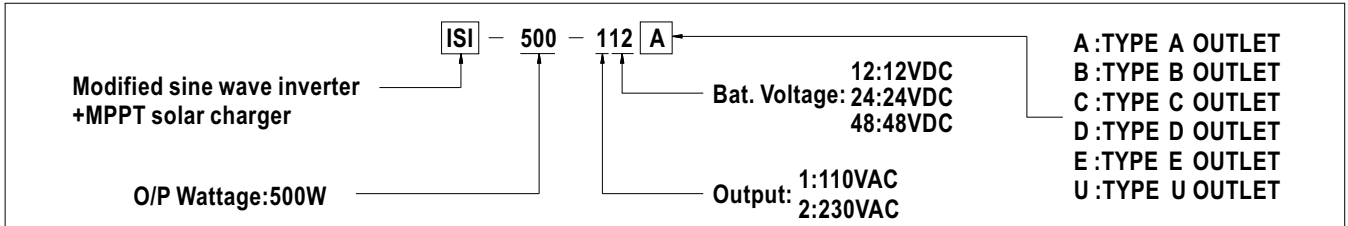
#### ■ Features :

- High surge power up to 1000W
- Power ON-OFF switch
- Protections: Bat. low alarm / Bat. low shutdown / Over temp. / Output short / Input polarity reverse / Over load
- High frequency design
- AC Output voltage regulation :  $\pm 10\%$
- AC Output waveform : Modified sine wave
- Modified models available(optional): 100/115/120VAC or 200/220/240VAC
- Cooling fan ON-OFF control
- Built-in 500W MPPT solar charger, MPPT efficiency: 98%(Typ.)
- Built-in battery low relay contact
- LED indicator for operation status
- 2 years warranty



#### SPECIFICATION

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                    | ISI-500-112                                                                                                                | ISI-500-124 | ISI-500-148 | ISI-500-212                   | ISI-500-224 | ISI-500-248 |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------------------------|-------------|-------------|
| OUTPUT                   | RATED POWER                                                                                                                                                                                                                                                                                                                                                                        | 350W                                                                                                                       | 500W        | 500W        | 350W                          | 500W        | 500W        |
|                          | MAXIMUM OUTPUT POWER (Typ.)                                                                                                                                                                                                                                                                                                                                                        | 550W for 1 minute / surge power 1000W for 30 cycles (112, 212 models : 385W for 1 minute / surge power 700W for 30 cycles) |             |             |                               |             |             |
|                          | WAVEFORM                                                                                                                                                                                                                                                                                                                                                                           | Modified sine wave                                                                                                         |             |             |                               |             |             |
|                          | AC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                         | 110V                                                                                                                       |             |             | 230V                          |             |             |
|                          | FREQUENCY                                                                                                                                                                                                                                                                                                                                                                          | 60Hz±0.5Hz                                                                                                                 |             |             | 50Hz±0.5Hz                    |             |             |
|                          | AC REGULATION                                                                                                                                                                                                                                                                                                                                                                      | ±10%                                                                                                                       |             |             |                               |             |             |
|                          | LED INDICATOR                                                                                                                                                                                                                                                                                                                                                                      | Green: Inverter OK    Green (flashing): Inverter OK and charging    Red: abnormal                                          |             |             |                               |             |             |
| INPUT                    | BAT. VOLTAGE                                                                                                                                                                                                                                                                                                                                                                       | 12V                                                                                                                        | 24V         | 48V         | 12V                           | 24V         | 48V         |
|                          | VOLTAGE RANGE    Note.3,4                                                                                                                                                                                                                                                                                                                                                          | 10.5 ~ 15VDC                                                                                                               | 21 ~ 30VDC  | 42 ~ 60VDC  | 10.5 ~ 15VDC                  | 21 ~ 30VDC  | 42 ~ 60VDC  |
|                          | DC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                  | 35A                                                                                                                        | 25A         | 12.5A       | 35A                           | 25A         | 12.5A       |
|                          | NO LOAD CURRENT DRAW                                                                                                                                                                                                                                                                                                                                                               | 0.8A                                                                                                                       | 0.4A        | 0.2A        | 0.8A                          | 0.4A        | 0.2A        |
|                          | OFF MODE CURRENT DRAW                                                                                                                                                                                                                                                                                                                                                              | ≤ 1mA                                                                                                                      |             |             |                               |             |             |
|                          | EFFICIENCY (Typ.)    Note.1                                                                                                                                                                                                                                                                                                                                                        | 85%                                                                                                                        | 87%         | 87%         | 86%                           | 88%         | 88%         |
|                          | BATTERY TYPE                                                                                                                                                                                                                                                                                                                                                                       | Open & sealed Lead Acid                                                                                                    |             |             |                               |             |             |
| SOLAR PANEL INPUT        | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                      | 20 ~ 40V                                                                                                                   | 35 ~ 80V    | 70 ~ 160V   | 20 ~ 40V                      | 35 ~ 80V    | 70 ~ 160V   |
|                          | MAX. SHORT CIRCUIT CURRENT                                                                                                                                                                                                                                                                                                                                                         | 15A                                                                                                                        | 15A         | 7.5A        | 15A                           | 15A         | 7.5A        |
|                          | RATED CHARGE POWER (Typ.)                                                                                                                                                                                                                                                                                                                                                          | 350W                                                                                                                       | 500W        | 500W        | 350W                          | 500W        | 500W        |
| SOLAR CHARGER            | MAX. CHARGE VOLTAGE                                                                                                                                                                                                                                                                                                                                                                | 14V                                                                                                                        | 28V         | 56V         | 14V                           | 28V         | 56V         |
|                          | MAX. CHARGE CURRENT                                                                                                                                                                                                                                                                                                                                                                | 25A                                                                                                                        | 20A         | 10A         | 25A                           | 20A         | 10A         |
| CHARGER OUTPUT           | MAX. CHARGING VOLTAGE                                                                                                                                                                                                                                                                                                                                                              | 14V                                                                                                                        | 28V         | 56V         | 14V                           | 28V         | 56V         |
|                          | MAX. CHARGING CURRENT                                                                                                                                                                                                                                                                                                                                                              | 25A                                                                                                                        | 20A         | 10A         | 25A                           | 20A         | 10A         |
| BATTERY INPUT PROTECTION | FUSE                                                                                                                                                                                                                                                                                                                                                                               | 40A                                                                                                                        | 30A         | 15A         | 40A                           | 30A         | 15A         |
|                          | BAT. LOW ALARM    Note.4                                                                                                                                                                                                                                                                                                                                                           | 11V                                                                                                                        | 22V         | 44V         | 11V                           | 22V         | 44V         |
|                          | BAT. LOW SHUTDOWN    Note.4                                                                                                                                                                                                                                                                                                                                                        | 10.5V                                                                                                                      | 21V         | 42V         | 10.5V                         | 21V         | 42V         |
|                          | REVERSE POLARITY                                                                                                                                                                                                                                                                                                                                                                   | By internal fuse                                                                                                           |             |             |                               |             |             |
| OUTPUT PROTECTION        | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                   | 70℃±10℃                                                                                                                    |             |             | 65℃±10℃                       |             |             |
|                          |                                                                                                                                                                                                                                                                                                                                                                                    | Protection type : Shut down o/p voltage, re-power on to recover ; by internal RTH9 detect on power transistor              |             |             |                               |             |             |
|                          | OUTPUT SHORT                                                                                                                                                                                                                                                                                                                                                                       | Protection type : Shut down o/p voltage, re-power on to recover                                                            |             |             |                               |             |             |
|                          | OVER LOAD                                                                                                                                                                                                                                                                                                                                                                          | Protection type : Shut down o/p voltage, re-power on to recover ; >105% load @ 60 sec.                                     |             |             |                               |             |             |
| FUNCTION                 | BAT. LOW RELAY CONTACT                                                                                                                                                                                                                                                                                                                                                             | Open : Battery low ; Short : Battery ok                                                                                    |             |             |                               |             |             |
| ENVIRONMENT              | WORKING TEMP.    Note.2                                                                                                                                                                                                                                                                                                                                                            | -20 ~ +40℃ @ 100% load ; 60℃ @ 50% load                                                                                    |             |             |                               |             |             |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                   | 20% ~ 90% RH non-condensing                                                                                                |             |             |                               |             |             |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                            | -30 ~ +70℃ / -22 ~ +158°F, 10 ~ 95% RH                                                                                     |             |             |                               |             |             |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                          | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                               |             |             |                               |             |             |
| EMC                      | LVD                                                                                                                                                                                                                                                                                                                                                                                | None                                                                                                                       |             |             | EN60950-1                     |             |             |
|                          | 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℃ / 70% RH                                                  |             |             |                               |             |             |
|                          | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                       | Compliance to FCC part 15 class A                                                                                          |             |             | Compliance to EN55022 class A |             |             |
|                          | EMS IMMUNITY                                                                                                                                                                                                                                                                                                                                                                       | None                                                                                                                       |             |             | Compliance to EN61000-4-2,3,8 |             |             |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                               | 81.1K hrs min.    MIL-HDBK-217F (25℃)                                                                                      |             |             |                               |             |             |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                          | 205*158*67mm (L*W*H)                                                                                                       |             |             |                               |             |             |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                            | 1.92Kg; 6pcs/12.5Kg/1.55CUFT                                                                                               |             |             |                               |             |             |
| NOTE                     | 1.Efficiency is tested by 350W, linear load at 13V, 26V, 52V input voltage.<br>2.Output derating capacity referenced by curve 1.<br>3.Output derating capacity referenced by curve 2.<br>4.The tolerance of each voltage value by models is:112/212→±0.5V;124/224→±1V;148/248→±2V.<br>5.All parameters not specified above are measured at rated load, 25℃ of ambient temperature. |                                                                                                                            |             |             |                               |             |             |

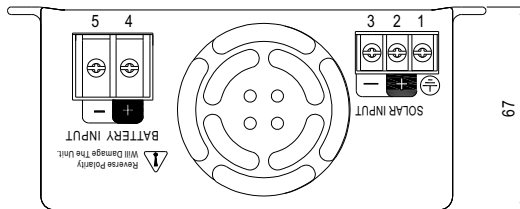


## AC Output Receptacles (optional)

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

## Mechanical Specification

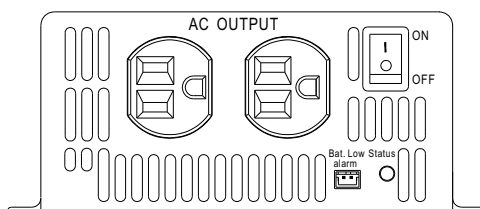
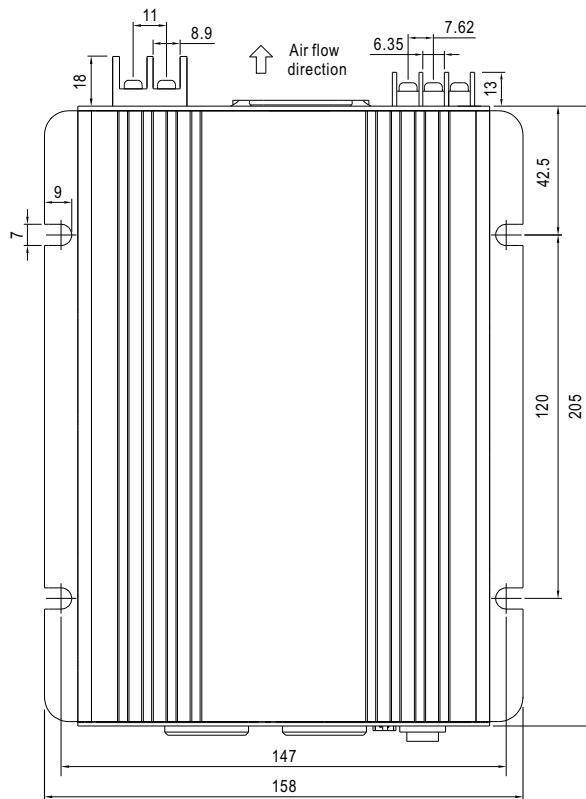
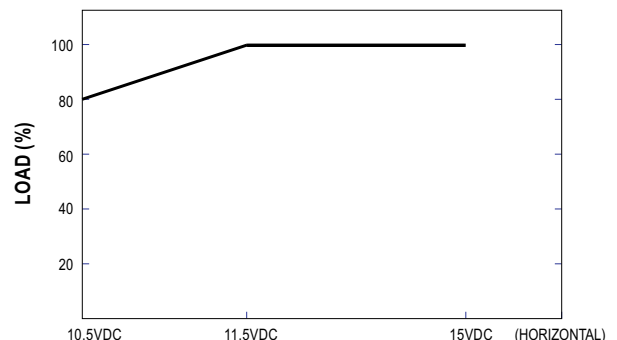
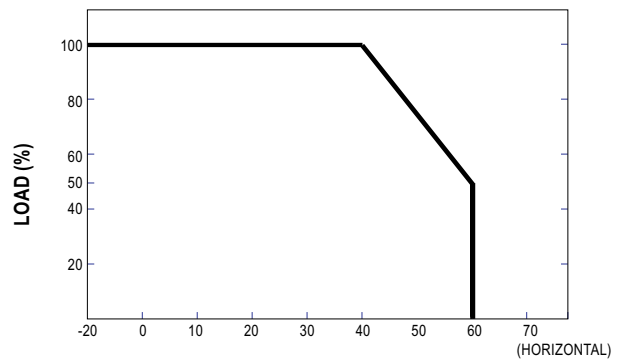
Unit:mm



Input Terminal Pin No. Assignment

| Pin No. | Assignment   | Pin No. | Assignment     |
|---------|--------------|---------|----------------|
| 1       | FG $\perp$   | 4       | Battery POS(+) |
| 2       | Solar POS(+) | 5       | Battery NEG(-) |
| 3       | Solar NEG(-) |         |                |

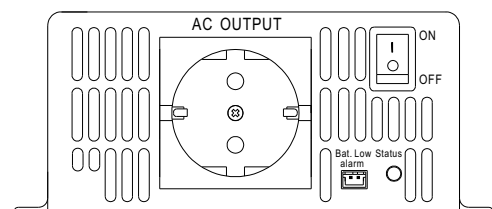
## Derating Curve



Type-A

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

|       |             |
|-------|-------------|
| Open  | Battery low |
| Short | Battery OK  |



Type-B