# TANDHAN POWER

LIVE LIFE NON-STOP


SURJA PRO 3500

SURJA PRO 2000

| TECHNICAL SPECIFICATIONS : TANDHAN SUPS | | | |
|---|---|---|---|
| **Model** | 3500 | 5000 | 5000 |
| **System Rating (VA/W)** | 3500 VA | 5000 VA | 5000 VA |
| **INPUT PARAMETERS** | | | |
| **Nominal Input Battery Voltage** | 48V | | 96V |
| **Main Input Voltage Range (UPS Mode)** | 180 VAC - 265 VAC ± 5 VAC | | |
| **Main Input Voltage Range (Normal Mode)** | 100 VAC - 280 VAC ± 15 VAC | | |
| **BATTERY CHARGING** | | | |
| **Grid Charging Current** | 6A, 10A, 14A & 18A (Selectable) | | |
| **MODES** | | | |
| **UPS/NORMAL** | Via Switch | | |
| **Charging Mode** | 6A, 10A, 14A & 18A Via Switch | | |
| **Battery Mode** | b0 , b1 , b2 and b3 Via Switch | | |
| **OUTPUT PARAMETER** | | | |
| **Wave Form Type** | SINE WAVE | | |
| **Output Voltage Regulation** | 200 VAC ± 10% | | |
| **Output Frequency** | 50 Hz ± 0.5 Hz | | |
| **Overload Protection** | Provided at >100% with Auto Reset | | |
| **Low Battery Protection** | Provided with Auto Reset | | |
| **Short Circuit Protection** | Provided at >300% with Manual Reset | | |
| **Over Temperature Protection** | Provided at >85deg. C | | |
| **CHANGE OVER TIME** | | | |
| **In UPS Mode** | <14 miliseconds | | |
| **In Normal Mode** | <50 miliseconds | | |

| BATTERY PARAMETER (PER BATTERY) | | |
|---|---|---|
| **Boost Voltage** | Mode b0 : 14.1 VDC ± 0.2 VDC<br>Mode b1 : 14.4 VDC ± 0.2 VDC | Mode b2 : 14.4 VDC ± 0.2 VDC<br>Mode b3 : 14.6 VDC ± 0.2 VDC |
| **Float Voltage** | Mode b0 : 13.8 VDC ± 0.2 VDC<br>Mode b1 : 13.6 VDC ± 0.2 VDC | Mode b2 : 13.6 VDC ± 0.2 VDC<br>Mode b3 : 13.8 VDC ± 0.2 VDC |
| **Low Battery Warnning** | Mode b0 : 11.0 VDC ± 0.2 VDC<br>Mode b1 : 11.0 VDC ± 0.2 VDC | Mode b2 : 10.7 VDC ± 0.2 VDC<br>Mode b3 : 10.6 VDC ± 0.2 VDC |
| **Low Battery Cut** | Mode b0 : 10.8VDC ± 0.2 VDC<br>Mode b1 : 10.8 VDC ± 0.2 VDC | Mode b2 : 10.5 VDC ± 0.2 VDC<br>Mode b3 : 10.4 VDC ± 0.2 VDC |
| | **ENVIRONMENT** | |
| **Forced Cooling** | Through Cooling FAN | |
| **Humidity** | 0-90% Non Condensing | |
| **Operating & Storage Temperature** | 0-45deg. C | |
| | **DISPLAY PARAMETER'S** | |
| **Display Type** | LCD + LED DISPLAY (GRAPHICAL REPRESENTATION) | |
| **Parameters** | Mains voltage, Charging current, Battery Charging /Charged show in battery symbol, Battery Voltage, Loadvoltage , Load current DC, Load percentage, UPS mode, battery mode, charging mode, Low Battery, Over-load, Short Circuit, Over Temperature, Mains MCB Trip | |
| | **LED INDICATION** | |
| **Mains LED** | Continuous ON when mains available | |
| **Switch Press LED** | Blink when any switch pressed | |
| **System on backup LED** | Blinking when system on backup and mains unavailable | |
| **Fault LED** | ON when system in Fault condition | |

| SOLAR INVERTER SPECIFICATIONS (PWM Based) | | | | | | |
|---|---|---|---|---|---|---|
| **Model Name** | **SURJA- PRO 1150** | **SURJA- PRO 2000** | **SURJA- PRO 3500** | **SURJA- PRO 5000** | **SURJA- PRO 5000** | **SURJA- PRO- 10000** |
| Nominal Input Battery Voltage | 12 V | 24 V | 48 V | | 96 V | 120 V |
| Solar Charger Rating | 40 A | 50 A | 60 A | 80 A | 50 A | 60 A |
| **Input Parameters** | | | | | | |
| Nominal Input Battery Voltage | 12V | 24 V | 48 V | | 96 V | 120 V |
| Main Input Voltage Range (UPS Mode) | 180 VAC - 265 VAC ± 5 VAC | | | | | |
| Main Input Voltage Range (Normal Mode) | 100 VAC - 280 VAC ± 15 VAC | | | | | |
| **Battery Charging** | | | | | | |
| Max. Grid Charging Current to Battery | 15 A | | | | | |
| Max. Solar Charging Current to Battery | 20 A | 25 A | 60 A | 25 A | | 60 A |
| **Modes** | | | | | | |
| Energy Saver Mode | Via Switch (Front Side Touch Feel) | Via Switch (Front Side Touch Feel) | Via Switch (Back Side) | Via Switch (Front Side Touch Feel) | | Via Switch (Back Side) |
| Solar Charging Selection Mode | | Via Switch (Front Side Touch Feel) | NA | Via Switch (Front Side Touch Feel) | | NA |
| Grid Charging ON/OFF Mode | NA | | | | | Via Switch (Back Side) |
| UPS/NORMAL Mode | Via Switch (Front Side Touch Feel) | Via Switch (Front Side Touch Feel) | Via Switch (Back Side) | Via Switch (Front Side Touch Feel) | | Via Switch (Back Side) |
| **Output Parameters** | | | | | | |
| Wave Form Type | PURE SINE WAVE | | | | | |
| Output Voltage Regulation | 200 VAC ± 10% | | | 210 VAC ± 10% | | |
| Output Frequency | 50 Hz ± 0.5 Hz | | | | | |
| Peak Efficiency (with linear load) | > 73% | > 75% | > 80 % | | | > 85% |
| Distortion (THD) | <3% on linear load | | | | | |
| Overload Protection | Provided at >100% with Auto Reset | | | | | |
| Low Battery Protection | Provided at < 10.4V (Per Battery) with Auto Reset | | | | | |
| Short Circuit Protection | Provided at >300% with Manual Reset | | | | | |
| Over Temperature Protection | Provided at >85deg. C | | Provided at >90deg. C | | | |
| **Change Over Time** | | | | | | |
| In UPS Mode | <12 miliseconds | | | | | |
| In Normal Mode | <50 miliseconds | | | | | |
| **Battery Parameter (Per Battery)** | | | | | | |
| Boost Voltage | 14.4 VDC ± 0.2 VDC | | | | | |
| Float Voltage | 13.5 VDC ± 0.2 VDC | | | | | |
| Low Battery Cut | 10.4 VDC ± 0.2 VDC | | | | | |
| Battery Type | 12 V (100AH to 240AH) | 12 V (100AH to 300AH) | 12 V (100AH to 600AH) | 12 V (100AH to 300AH) | | 12 V (100AH to 600AH) |
| Solar Charge Controller | | | | | | |
| Type | PWM | | | | | |
| Solar Input Voltage range ( Vmpp ) | 15V - 30V | 30V-42V | 60V-84V | | 120V - 170V | 150V - 190V |
| Max Solar DC Input Voltage ( Voc ) | 37 V | 50 V | 100 V | | 200 V | 225 V |
| Maximum Solar Array | 660 W | 1600 W | 3500 W | 5000 W | 6700 W | 10000 W |
| Max. Solar Current | 40 A | 50 A | 60 A | 80 A | 50 A | 60 A |
| Charger Efficiency | Upto 92% | | | | | |
| **Environment** | | | | | | |
| Forced Cooling | Through Cooling FAN | | | | | |
| Humidity | 0-90% Non Condensing | | | | | |
| Operating & Storage Temperature | 0-45deg. C | | | | | |
| **Display Parameters** | | | | | | |
| Display Type | Dual Display (LCD & LED) | Dual Display (LCD & LED) | | | | LCD Display |
| Parameters | Solar ON/OFF, Switch On/Off, Main On/Off, Main Fuse Blown / MCB Trip, Load Level Graph, PV Current & Voltage, Warnings & Protections, System Capacity, Energy Saver Mode On/Off, UPS/Normal Mode Status Etc | Solar ON/OFF, Switch On/Off, Main On/Off, Main Fuse Blown / MCB Trip, Load Level Graph, PV Current & Voltage, Warnings & Protections, System Capacity, Energy Saver Mode On/Off, UPS/Normal Mode Status Etc | | | | |
| **Connectivity** | Bluetooth / Wifi (Optional) | | | | | |
| **Mechanical Parameters (Without Packing)** | | | | | | |
| Dimension (LxWxH) mm | 275x230x133 | 265x400x167 | 315x290x460 | 410x350x500 | | 450x400x680 |
| **Major BOM Parts** | | | | | | |
| Battery Wires | Aluminum | Aluminum | Copper | Copper | Copper | Copper |
| Transformer | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum |
| Output Socket Type | Indian | Indian | Terminal Block | Terminal Block | Terminal Block | Terminal Block |
| Mains (Grid) Top Type | Indian (Round Pin) | Indian (Round Pin) | Terminal Block | Terminal Block | Terminal Block | Terminal Block |
| Battery MCB | No | No | Yes | Yes | Yes | Yes |
| Solar MCB | No | No | Yes | Yes | Yes | Yes |
| Grid MCB / Fuse | Fuse | Fuse | Yes | Yes | Yes | Yes |
| By-Pass Switch | No | No | Yes | Yes | Yes | Yes |

Note : Specifications and models subject to change without prior notice