

TECHNICAL SPECIFICATION

MODEL - SUPERB 400VA MPPT SOLAR PCU

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| DOC REF NO. | RD/SUP/4000/48V/R.01 |
| PRODUCT FG CODE | SPD-SB-402-048-01 |
| MAINS INPUT MODE | |
| Mains AC low cut UPS mode | 175VAC ± 10VAC |
| Mains AC low cut recovery UPS mode | 185VAC ± 10VAC |
| Mains AC high cut UPS mode | 265VAC ± 10VAC |
| Mains AC high cut recovery UPS mode | 255VAC ± 10VAC |
| Mains AC low cut WUPS mode | 90VAC ± 10VAC |
| Mains AC low cut recovery W. UPS mode | 110VAC ± 10VAC |
| Mains AC high cut WUPS mode | 295VAC ± 10VAC |
| Mains AC high cut recovery W. UPS mode | 285VAC ± 10VAC |
| Input Frequency Range | 48Hz to 52Hz |
| Voltage Output in Mains Mode | Same as input |
| Mains Charging Enable/Disable | Yes Provided, you can set by front switch |
| Frequency Output in Mains Mode | Same as input |
| BATTERY | |
| Battery Type | LA / Tubular / SMF |
| DC input voltage | 48V |
| Battery Quantity 12V 100Ah to 220Ah | 4 |
| Float charging voltage | 54.8V±0.2V |
| Boost charging voltage for LA Battery | 56V±0.4V |
| Boost charging voltage for Tubular and SMF Battery | 57.8V±0.4V |
| Bulk Absorption Battery Voltage | 60V±0.2V |
| Battery deep Discharge Recovery | Yes (Independent Charger to Recover Deep Discharge Battery) |
| Charging Current By Grid | 15A±3A |
| BACKUP MODE | |
| Output voltage | 220VAC±10% |
| Output frequency | 50Hz ± 0.2 Hz |
| Output waveform | Pure Sine Wave ≤ 5% THD |
| No Load current | <1.8A |
| Capacity | 4000VA |
| Discharging current @ full load | 60A ± 2A |
| Low Battery Warning | 43.2V±0.4V |
| Low Battery Cut | 41.6V±0.4V |
| Change over time UPS mode | < 10msec |
| Change over time WUPS mode | < 25msec |
| Switching Element | MOSFET |
| Cooling | Temp. Controlled Fan |
| PROTECTIONS | |
| Overload in backup mode | Yes provided, system will indicate on display at 101% load |
| Short Circuit in Backup Mode | System will shutdown after 3 - retries in case of output short circuit |
| Short Circuit in Mains Mode | Mains MCB will trip |
| Back feed | System will shutdown in case of back feed and there is no retry |
| Over temperature | Yes provided, if heat sink temperature goes above 100° C System will shut down |
| Reverse Battery | DC fuse will blow |
| Phase to Phase protection in mains mode | Yes provided by electronic |
| SOLAR CHARGE CONTROLLER | |
| Solar Charge Controller type | MPPT |
| Max Panel wattage can be connected | 3000 WATT |
| Maximum PV Voltage | 135V |
| Maximum Battery current | 50 Amp. |
| Efficiency | > 93% |
| Reverse PV protection | Yes provided, it will also display on LCD panel |
| Switches | Menu(Select),up,Down,Esc. |
| Reverse current flow to PV | Yes provided |
| Sharing of current when PV and Grid Both are available | If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid. |
| DOD definition(Depth of Discharge) | Mains will be connect when battery voltage reach at defined value of the battery voltage. |
| DOD (Depth of Discharge) | 20%- if battery voltage is 50.0v±0.2V |
| | 30%- if battery voltage is 48.0v±0.2V |
| | 40%- if battery voltage is 46.0v±0.2V |
| | 50%- if battery voltage is 44.0v±0.2V |
| DISPLAY AND ALARMS | |
| LCD Initial Display | Welcome, SMARTEN Website Address, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battery Type Selected LA / SMF / Tubular, DOD. |
| LCD Status Display | Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS OFF, Battery Voltage, Load %, Output Voltage, Output Frequency, Battery Current, PV Current, PV Voltage. Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut |
| LCD Fault / Protection Status Display | Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed |
| Buzzer | Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed |
| SAFETY | |
| HV Test Input to Earth | Leakage current <5mA when 1.5kV applied for 1 min |
| HV Test Output to Earth | Leakage current <5mA when 1.5kV applied for 1 min |
| IR Test Input to Earth | >5MΩ between @ 500VDC |
| IR Test Output to Earth | >5MΩ between @ 500VDC |
| Earth Leakage current in Mains mode | < 2.5mA |
| Earth Leakage current in Backup mode | < 2.5mA |
| ENVIRONMENT | |
| Operating Temperature | 0°C to 50°C |
| Storage Temperature | 0°C to 50°C |
| Operating Relative Humidity | 90% Non-Condensing |
| DIMENSIONS | |
| Dimensions in mm | 530x360x585 |