

# TECHNICAL SPECIFICATION

## SAVER 3250VA/24V SOLAR PCU

**PRODUCT FG CODE** **SPD-SV-322-024-01**

### 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  |
| Frequency Output in Mains Mode        | Same as input  |

### BATTERY

|  |   |
|--|---|
| Battery Type                                       | LA / Tubular / SMF  |
| DC input voltage                                   | 24V   |
| Battery Quantity 12V 100Ah to 220Ah                | 2   |
| Float charging voltage                             | 27.4V±0.2V  |
| Bulk absorption Voltage                            | 29.6±0.2V   |
| Boost charging voltage for LA Battery              | 28.0V±0.2V  |
| Boost charging voltage for Tubular and SMF Battery | 29.0V±0.2V  |
| Battery deep Discharge Recovery                    | Yes (Independent Charger to Recover Deep Discharge Battery) |
| Charging Current at Grid priority/Battery priority | 15A ± 3A  |

### BACKUP MODE

|                                 |   |
|---------------------------------|---|
| Output voltage                  | 220VAC +5% -10% (until battery low alarm) |
| Output frequency                | 50Hz ± 0.2 Hz                             |
| Output waveform                 | Pure Sine Wave ≤ 5% THD                   |
| Discharging current @ full load | 90 ±3A                                    |
| Low Battery Warning             | 21.6V±0.2V                                |
| Low Battery Cut                 | 20.8V±0.2V                                |
| Change over time UPS mode       | < 10msec                                  |
| Change over time WUPS mode      | < 25msec                                  |

### 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 blown  |
| Phase to Phase protection in mains mode | Yes provided by electronic  |

### SOLAR CHARGE CONTROLLER

|  |  |
|--|--|
| Solar Charge Controller type                           | PWM type   |
| Max Panel wattage can be connected                     | 2400W  |
| Max PV current   | 70A  |
| Reverse PV protection                                  | Yes provided, it will also display on LCD panel  |
| Reverse current flow to PV                             | Yes provided, it will also display on LCD panel  |
| 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. |
| Mode Option  | 1. Solar >> Grid >> Battery<br>2. Solar >> Battery >> 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 25.0v±0.2V  |
|  | 30%- if battery voltage is 24.0v±0.2V  |
|  | 40%- if battery voltage is 23.0v±0.2V  |
|  | 50%- if battery voltage is 22.0v±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, Battery Capacity |
| 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,                         |
| Buzzer              | Audible beep for Overload, Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown / MCB Trip  |

### 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   |

### WEIGHT AND DIMENSIONS

|                  |                             |
|------------------|-----------------------------|
| Dimensions in mm | 415 (L) x 320 (W) x 415 (H) |
| Weight (Kg)      |                             |