



## TECHNICAL SPECIFICATION

### MODEL - SUPERB 2675VA/24V MPPT SOLAR PCU

|                                                        |                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRODUCT FG CODE</b>                                 | <b>SPD-SB-262-024-01</b>                                                                                                                                                                                                                                                                                                     |
| <b>MAINS INPUT MODE</b>                                |                                                                                                                                                                                                                                                                                                                              |
| 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                                                                                                                                                                                                                                                                                                                |
| <b>BATTERY</b>                                         |                                                                                                                                                                                                                                                                                                                              |
| Battery Type                                           | LA / Tubular / SMF                                                                                                                                                                                                                                                                                                           |
| DC input voltage                                       | 24V                                                                                                                                                                                                                                                                                                                          |
| Battery Quantity 12V 100Ah to 220Ah                    | 2                                                                                                                                                                                                                                                                                                                            |
| Float charging voltage                                 | 27.4V±0.2V                                                                                                                                                                                                                                                                                                                   |
| Boost charging voltage for LA Battery                  | 28V±0.3V                                                                                                                                                                                                                                                                                                                     |
| Boost charging voltage for Tubular and SMF Battery     | 28.8V±0.3V                                                                                                                                                                                                                                                                                                                   |
| Bulk Absorption Battery Voltage                        | 29.6±0.2V                                                                                                                                                                                                                                                                                                                    |
| Battery deep Discharge Recovery                        | Yes (Independent Charger to Recover Deep Discharge Battery)                                                                                                                                                                                                                                                                  |
| Charging Current By Grid                               | 15A±3A                                                                                                                                                                                                                                                                                                                       |
| <b>BACKUP MODE</b>                                     |                                                                                                                                                                                                                                                                                                                              |
| Output voltage                                         | 220VAC±10%                                                                                                                                                                                                                                                                                                                   |
| Output frequency                                       | 50Hz ± 0.2 Hz                                                                                                                                                                                                                                                                                                                |
| Output waveform                                        | Pure Sine Wave ≤ 5% THD                                                                                                                                                                                                                                                                                                      |
| No Load current                                        | <1.8A                                                                                                                                                                                                                                                                                                                        |
| Capacity                                               | 2500VA                                                                                                                                                                                                                                                                                                                       |
| Discharging current @ full load                        | 70A ± 2A                                                                                                                                                                                                                                                                                                                     |
| 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                                                                                                                                                                                                                                                                                                                     |
| Switching Element                                      | MOSFET                                                                                                                                                                                                                                                                                                                       |
| Cooling                                                | Temp. Controlled Fan                                                                                                                                                                                                                                                                                                         |
| <b>PROTECTIONS</b>                                     |                                                                                                                                                                                                                                                                                                                              |
| 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                                                                                                                                                                                                                                                                                                   |
| <b>SOLAR CHARGE CONTROLLER</b>                         |                                                                                                                                                                                                                                                                                                                              |
| Solar Charge Controller type                           | MPPT                                                                                                                                                                                                                                                                                                                         |
| Max Panel wattage can be connected                     | 1500WATT                                                                                                                                                                                                                                                                                                                     |
| PV Voltage Range                                       | 100±2V                                                                                                                                                                                                                                                                                                                       |
| Maximum Battery current                                | 50Amp.                                                                                                                                                                                                                                                                                                                       |
| 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 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                                                                                                                                                                                                                                                                                        |
| <b>DISPLAY AND ALARMS</b>                              |                                                                                                                                                                                                                                                                                                                              |
| LCD Initial Display                                    | Welcome, SMARTEN Website Address, System Capacity, Charging Till 90VAC and Deep Discharge Battery,<br>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.<br>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                                                                                                                                                                                                                               |
| <b>SAFETY</b>                                          |                                                                                                                                                                                                                                                                                                                              |
| 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                                                                                                                                                                                                                                                                                                                      |
| <b>ENVIRONMENT</b>                                     |                                                                                                                                                                                                                                                                                                                              |
| Operating Temperature                                  | 0°C to 50°C                                                                                                                                                                                                                                                                                                                  |
| Storage Temperature                                    | 0°C to 50°C                                                                                                                                                                                                                                                                                                                  |
| Operating Relative Humidity                            | 90% Non-Condensing                                                                                                                                                                                                                                                                                                           |
| <b>DIMENSIONS</b>                                      |                                                                                                                                                                                                                                                                                                                              |
| Dimensions in mm                                       | 425X315X335                                                                                                                                                                                                                                                                                                                  |
| Weight (Kg)                                            | 25                                                                                                                                                                                                                                                                                                                           |