

## Result:

| Site Settings and Temperature Data Source |                                | Temperature                       |         |
|---|--------------------------------|-----------------------------------|---------|
| Sun rising                                | : Sun Ost to East              | Clima data base                   | : no    |
| Sunlight                                  | : 1200 W/m <sup>2</sup> a      |                                   |         |
| Roof pitch or Angle                       | : 25 Degree                    |                                   |         |
| Orientation to the Sun                    | : 5 Degree                     | Low Temp for Calculations         | : 10 C° |
| Type of mounting system                   | : Roof module with ventilation | High Module Temp for Calculations | : 65 C° |

| Modules                         |             | Inverter                              |             |
|---------------------------------|-------------|---------------------------------------|-------------|
| Database modules                | : OSP_270   |                                       | : NKI 9000  |
| Rated Power (STC)               | : 270 Wp    | Rated Output Voltage                  | : 230 VAC   |
| Rated power tolerance (%)       | : 5%        | Number of MPPT's                      | : Three     |
|                                 |             | Maximum Power Point Tracking (MPPT)   | : 60 Min.   |
|                                 |             | Maximum Input Voltage                 | : 145 VDC   |
| Adjusted Module Voc @ Low Temp  | : 36,14 VDC |                                       |             |
| Adjusted Module Vmp @ High Temp | : 35,85 VDC | Maximum Input Current Per MPPT        | : 60 VDC    |
| Adjusted Module Vmp @ Low Temp  | : 28,91 VDC | Maximum Output Current                | : 60 VDC    |
| Voc Correction (%/°C)           | : 0,31%     | Maximum Input Power                   | : 9.000 WDC |
| Vmp Correction (%/°C)           | : 0,41%     | Maximum design factor for this region | : 100 %     |
| ISC temp. coefficient (%/°C)    | : 0,053%    | Maximum input power for this region   | : 9.000 WDC |

|   | Per MPPT    |           | Per MPPT    |           | Per MPPT    |           |
|---|-------------|-----------|-------------|-----------|-------------|-----------|
| <b>String Configuration:</b>                | 6 x 2       | <b>OK</b> | 4 x 2       | <b>OK</b> | 6 x 2       | <b>OK</b> |
| Power Rating per MPPT (STC)                 | : 3.240 W   | <b>OK</b> | : 2.160 W   | <b>OK</b> | : 3.240 W   | <b>OK</b> |
| Adjusted Array Vmp @ High Temp              | : 072 VDC   | <b>OK</b> | : 072 VDC   | <b>OK</b> | : 072 VDC   | <b>OK</b> |
| Rated Isc for specified array               | : 55,92 ADC | <b>OK</b> | : 37,28 ADC | <b>OK</b> | : 37,28 ADC | <b>OK</b> |
| <b>DC Disconnect Calculations</b>           |             |           |             |           |             |           |
| Maximum System Voc @ Low Temp               | : 072 VDC   | <b>OK</b> | : 072 VDC   | <b>OK</b> | : 072 VDC   | <b>OK</b> |
| Maximum Vmp @ Low Temp                      | : 058 VDC   | <b>OK</b> | : 058 VDC   | <b>OK</b> | : 058 VDC   | <b>OK</b> |
| Voltage @ Rated Max Power (Typ. Op. Vmp)    | : 062 VDC   | <b>OK</b> | : 062 VDC   | <b>OK</b> | : 062 VDC   | <b>OK</b> |
| Maximum short circuit current               | : 9,52 ADC  | <b>OK</b> | : 9,52 ADC  | <b>OK</b> | : 9,52 ADC  | <b>OK</b> |
| Maximum power point current (Imp for array) | : 53,61 ADC | <b>OK</b> | : 35,74 ADC | <b>OK</b> | : 53,61 ADC | <b>OK</b> |
| Maximum numbers of modules                  | : 33 Units  |           |             |           |             |           |

### THE USER OF THIS SIZING TOOL HAS ACKNOWLEDGED:

The Solar PV String Sizing Tool is being offered free of charge as a guide only. Ren Power group make no representation or warranty regarding the output of the Solar PV String Sizing Tool or any claim to the actual performance of your system. It is the responsibility of the system design engineer to ensure that the PV module selection and array configuration are appropriate for the system being considered. The user agrees to use this Solar PV String Sizing Tool spreadsheet at their own risk and with the knowledge that ren Power group, will not be liable to the user for any damages, injury or death as a result of use of the Solar PV String Sizing Tool.