Plant Products
Industrial Supplier

# Zone 2 Solar Power Pod

The Solar Power Pod is a compact solar power supply unit and is available in different power ratings from 20-186W with output voltages ranging from 12V-240V AC or DC.

A solar power pod comes with a solar panel, to convert solar energy into electricity, a battery pack, to store energy for use during periods of darkness or shade, and a solar control unit, which provides battery management, monitoring and protection. The control unit can also include power conversion to provide regulated AC or DC output if required.

## Materials and Finish

**Battery Box -** 316L Stainless Steel

**Solar Panel -** Aluminium Mounting Frame. Terminal Enclosure made of GRP with 2 Exe ATEX M25 glands.

**Solar Panel Controller -**

| | |
|---|---|
| Body & Cover | Aluminium alloy ENAC-42000 (LM25) to BS EN 1706:1998 with less than 0.2% copper content. |
| Cover | Bolts Stainless steel (304) |
| Finish | Chromate primed and polyester powder Coated. Textured black as standard. |
| Frame | 316L stainless steel |

## Batteries

Ex e batteries have marine approved, valve regulated lead acid (VRLA) re-combination cells.

## Entries and Thread Standards

Standard thread forms are ISO Metric to BS 3643, NPT can supplied on request. Alternatively an Ex d connector can be fitted.

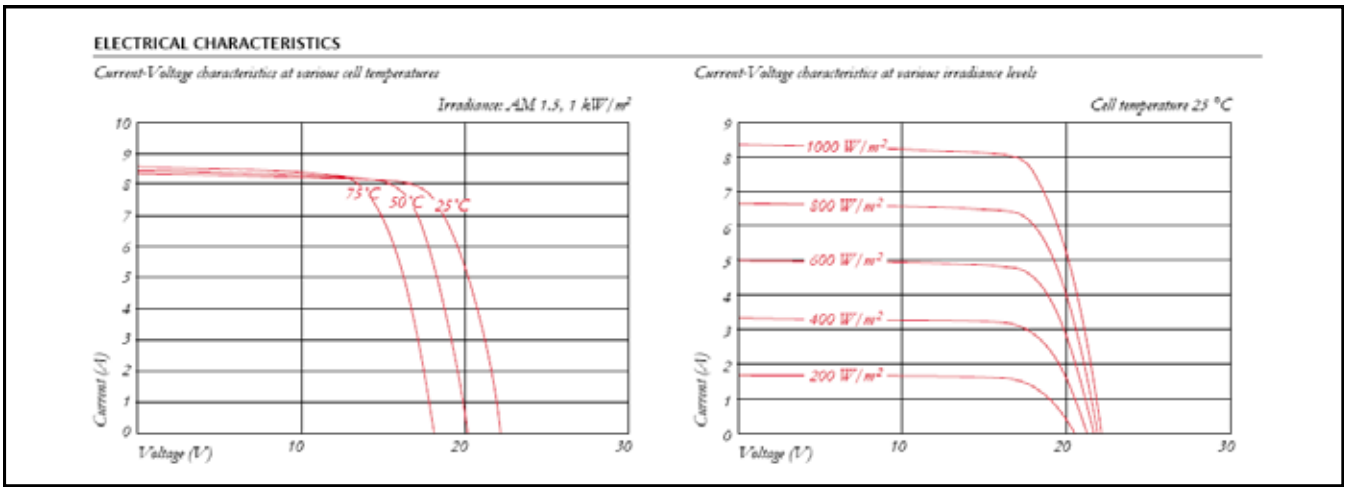
## Protection Grade

IP23 or IP66 on request

## Ex Rating

Ex d ec mc IIB T4 Gc

# Solar Panel Specifications




## ELECTRICAL PERFORMANCE

| | | |
|---|---|---|
| Pv Module type | | SPA-230 |
| **At 1000 W/m²(STC)*** | | |
| Maximum Power | [W] | 135 |
| Maximum System Voltage | [V] | 1000 |
| Maximum Power Voltage | [V] | 17.7 |
| Maximum Power Current | [A] | 7..63 |
| Open Circuit Voltage (Voc) | [V] | 22.1 |
| Short Circuit Current (Isc) | [A] | 8.37 |
| **At 800 W/m²(NOCT)**** | | |
| Maximum Power | [W] | 95 |
| Maximum Power Voltage | [V] | 15.6 |
| Maximum Power Current | [A] | 6.1 |
| Open Circuit Voltage (Voc) | [V] | 19.9 |
| Short Circuit Current (Isc) | [A] | 6.82 |
| NOCT | [˚C] | 49 |
| Power Tolerance | [%] | 5/-5 |
| Maximum Reverse Current IR | [A] | 15 |
| Series Fuse Rating | [A] | 15 |
| Temperture Coefficient of Voc | [V/˚C] | -0.08 |
| Temperture Coefficient of Isc | [A/˚C] | 0.00501 |
| Temperture Coefficient of Max. Power | [W/˚C] | -0.614 |
| Reduction Of Efficiency (from 1000W/m² to 200 W/m²) | [%] | 5.8 |

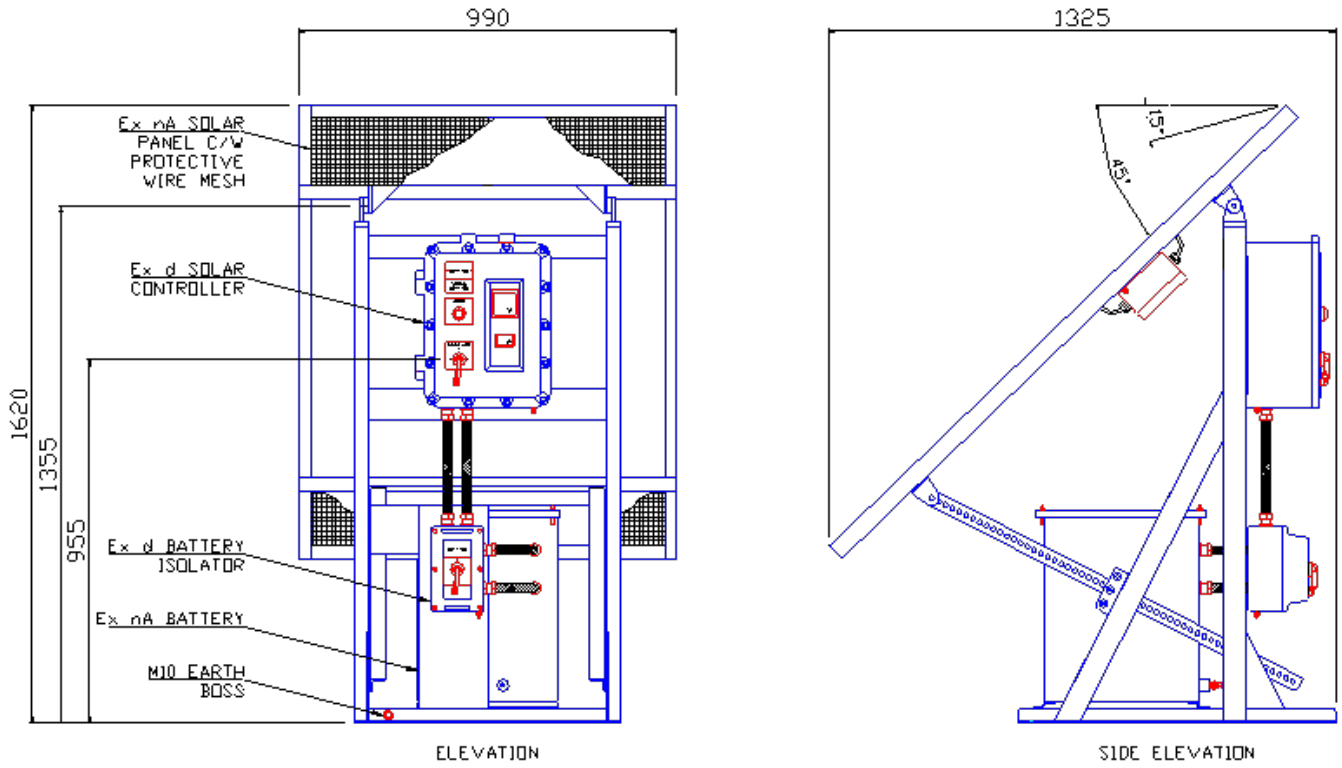
## DIMENSIONS

| | | |
|---|---|---|
| Length | [mm] | 1500 (+/-2.5) |
| Width | [mm] | 668 (+/-2.5) |
| Depth/ incl. Junction Box | [mm] | 136 |
| Weight | [kg] | 16 |
| Junction Box | [mm] | 160x160x90 |
| IP Code | | IP66 |
| **CELLS** | | |
| Number per module | | 36 |
| Cell Technology | | Polycrystalline |
| Cell Shape (Square) | [mm] | 156x156 |
| Cell Bonding | | 3 busbar |

## Specifications

| | |
|---|---|
| **Ex Protection** | Ex d ec mc IIB T4 Gc |
| **Output** | 24Vdc 5.0A max<br>24Vdc 0.9A continuous on 1.5 days battery autonomy. |
| **Battery** | 12V 65Ah |
| **Solar Panel** | 12V 10A peak |
| **Ingress Protection** | IP 23 |
| **Typical features** | Battery voltage and charge/ Discharge current meters. |
| **Dimensions** | Width when solar panel is at 180° Horizontal is 1500 mm<br>Height when solar panel is at 15 ° is 1715 mm<br>Depth 740 mm |
| **Weight** | 100kg |
| **Ordering Information** | See table (customised variations available on request) |

## Dimensions




## Technical Data

| | | Output Voltage (V) | | | |
|---|---|---|---|---|---|
| Continuous Power (W) | | 12Vdc | 24Vdc | 110Vac | 230Vac |
| 20W | 1 x 135W PV cell | **SPP-501** Batt 12V 65Ah | **SPP-601** Batt 12V 65Ah | **SPP-701** Batt 12V 65Ah | **SPP-801** Batt12V 65Ah |
| 40W | 2 x 135W PV cell | **SPP-502** Batt 12V 140Ah | **SPP-602** Batt 24V 65Ah | **SPP-702** Batt 24V 65Ah | **SPP-802** Batt 24V 65Ah |
| 80W | 4 x 135W PV cell | **SPP-503** Batt 12V 280Ah | **SPP-603** Batt 24V 140Ah | **SPP-703** Batt 24V 140Ah | **SPP-803** Batt 24V 140Ah |
| 186W | 8 X 135W PV cell | **SPP-504** Batt 24V 280Ah | **SPP-604** Batt 24V 280Ah | **SPP-704** Batt 24V 280Ah | **SPP-804** Batt 24V 280Ah |

Note: The above values are based on 5 hours sun per day @ 1000W/m² & 1.5 Days battery autonomy

- Details of certification and conformity can be provided on request.
- All products sold subject to our terms and conditions of business.
- Health and Safety at Work Act 1974. In the UK all equipment must be installed and disposed of (as required) within the legislative requirements of the Health & Safety at Work Act 1974.
- We reserve the right to make alterations to the technical data dimensions, weights, designs and product available without notice.
- The illustrations should not be considered legally binding.