



# Zone 1 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.

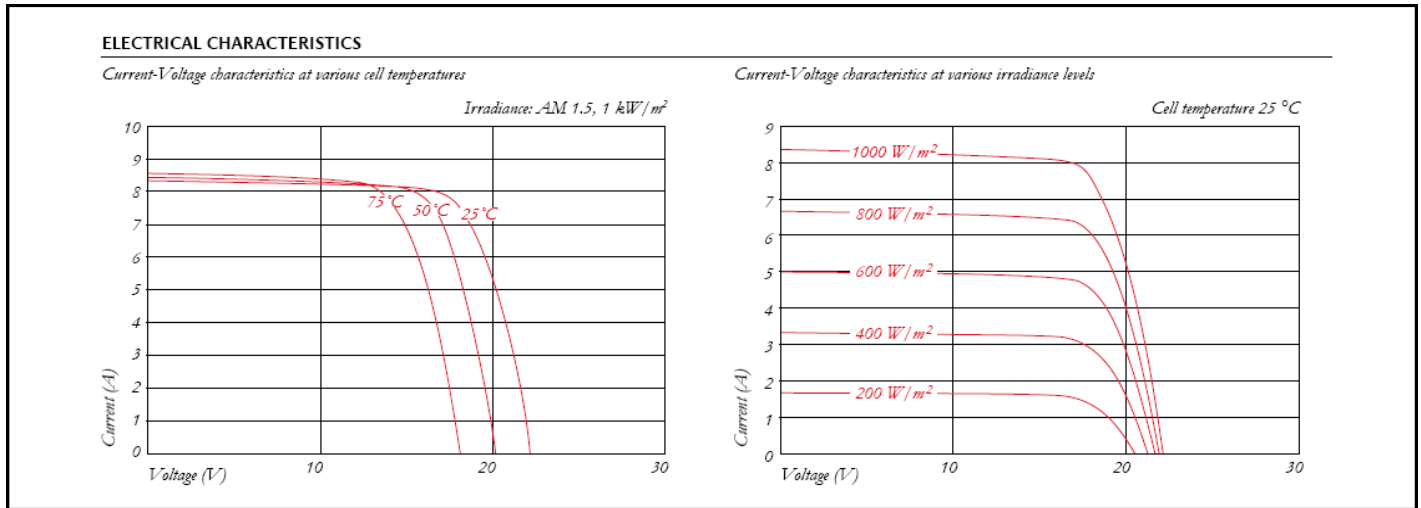
## Protection Grade

IP23 or IP66 on request

## Ex Rating

Ex d e mb IIB T5 Gb

# Solar Panel Specifications



## ELECTRICAL PERFORMANCE

Pv Module type		SPA-130A
<b>At 1000 W/m<sup>2</sup>(STC)*</b>		
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
<b>At 800 W/m<sup>2</sup>(NOCT)**</b>		
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
Temperature Coefficient of Voc	[V/°C]	-0.08
Temperature Coefficient of Isc	[A/°C]	0.00501
Temperature Coefficient of Max. Power	[W/°C]	-0.614
Reduction Of Efficiency (from 1000W/m <sup>2</sup> to 200 W/m <sup>2</sup> )	[%]	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

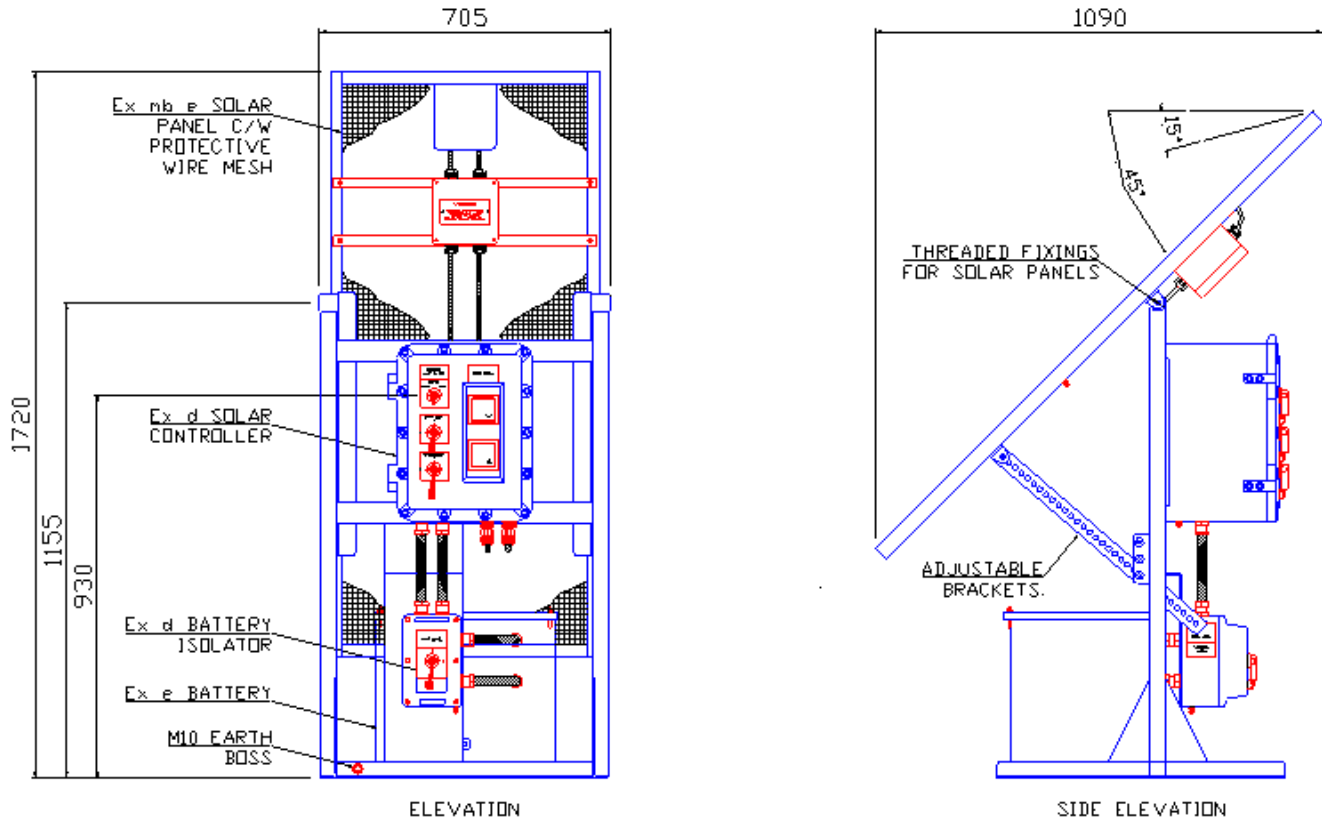
Number per module		36
Cell Technology		Polycrystalline
Cell Shape (Square)	[mm]	156x156
Cell Bonding		3 busbar

## Specifications

<b>Ex Protection</b>	Ex d e mb IIB T5 Gb
<b>Output</b>	24Vdc 5.0A max 24Vdc 0.9A continuous on 1.5 days battery autonomy.
<b>Battery</b>	12V 65Ah
<b>Solar Panel</b>	12V 10A peak
<b>Ingress Protection</b>	IP 23
<b>Typical features</b>	Battery voltage and charge/ Discharge current meters.

<b>Dimensions</b>	Width when solar panel is at 180° Horizontal is 1500 mm
	Height when solar panel is at 15 ° is 1715 mm
	Depth 740 mm
<b>Weight</b>	100kg
<b>Ordering Information</b>	See table (customised variations available on request)

## Dimensions



For SPP-101, SPP-201, SPP-301 & SPP-401

## Ordering Information

Continuous Power (W)		Output Voltage (V)			
		12Vdc	24Vdc	110Vac	230Vac
20W	1 x 135W PV cell	<b>SPP-101</b> Batt 12V 65Ah	<b>SPP-201</b> Batt 12V 65Ah	<b>SPP-301</b> Batt 12V 65Ah	<b>SPP-401</b> Batt 12V 65Ah
40W	2 x 135W PV cell	<b>SPP-102</b> Batt 12V 140Ah	<b>SPP-202</b> Batt 24V 65Ah	<b>SPP-302</b> Batt 24V 65Ah	<b>SPP-402</b> Batt 24V 65Ah
80W	4 x 135W PV cell	<b>SPP-103</b> Batt 12V 280Ah	<b>SPP-203</b> Batt 24V 140Ah	<b>SPP-303</b> Batt 24V 140Ah	<b>SPP-403</b> Batt 24V 140Ah
186W	8 X 135W PV cell	<b>SPP-104</b> Batt 24V 280Ah	<b>SPP-204</b> Batt 24V 280Ah	<b>SPP-304</b> Batt 24V 280Ah	<b>SPP-404</b> Batt 24V 280Ah

Note: The above values are based on 5 hours sun per day @ 1000W/m<sup>2</sup> & 1.5 Days battery autonomy



JCE Energy Ltd, Blackburn Business Park, Aberdeen, AB21 0PS  
Tel. +44 (0) 1224 798600 Fax +44 (0) 1224 798601  
E-Mail: info@jceenergy.com

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