



Zone 2 Solar Power Pod



ATEX



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

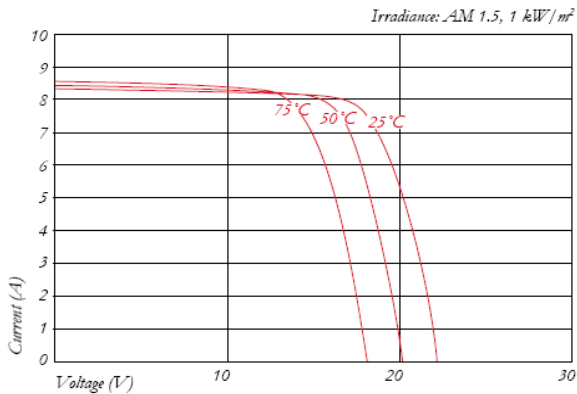
Ex Rating

Ex d ec mc IIB T4 Gc

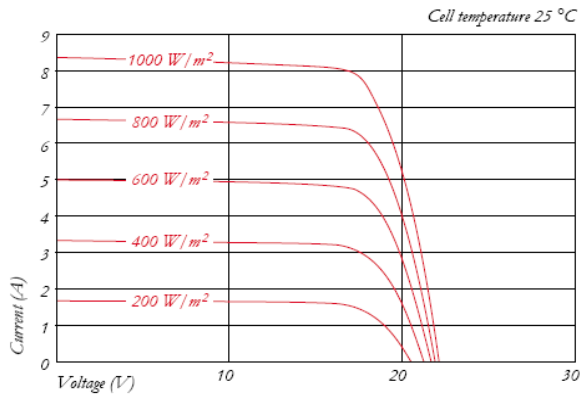
Solar Panel Specifications

ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



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
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 ² to 200 W/m ²)	[%]	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

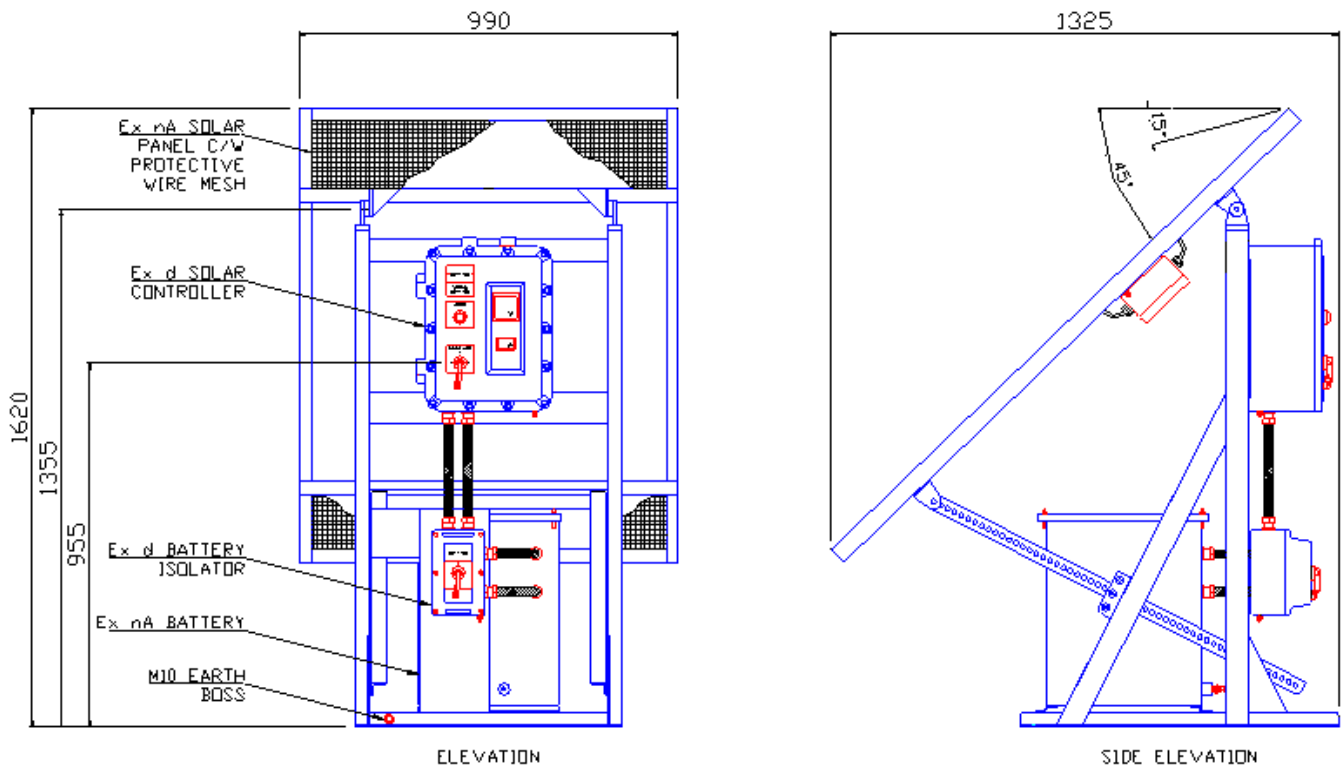
Number per module		36
Cell Technology		Polycrystalline
Cell Shape (Square)	[mm]	156x156
Cell Bonding		3 busbar

Specifications

Ex Protection	Ex d ec mc IIB T4 Gc
Output	24Vdc 5.0A max 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
	Height when solar panel is at 15° is 1715 mm
	Depth 740 mm
Weight	100kg
Ordering Information	See table (customised variations available on request)

Typical Dimensions



Ordering Information

Continuous Power (W)		Output Voltage (V)			
		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 Batt 12V 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



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