



Solar Satcom Pod (SAP)



II 2 G

The Solar Satcom Pod is a compact solar powered remote satellite telemetry system utilising the latest satellite and internet technologies to bring data from a remote location to your computer in near real time. It is available in different power ratings from 120 – 960W peak with output voltages ranging from 12 – 240V ac or dc.

The satellite internet telemetry system includes a data transceiver, a solar panel, a rechargeable battery, a ground to satellite antenna and mounting hardware. The unit facilitates wireless local area network (wlan) interface and portable telephone communications. The solar panel and battery provide power to the satellite communication system and ancillary devices connected to the unit.

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	Copper free aluminium alloys LM25 (BS1490) with less than 0.2% copper content.
Cover Bolts	Stainless Steel (18/8).
Finish	Chromate primed and polyester powder coated. Textured black as standard. Other finished available on request.
Frame	316L Stainless Steel
Antenna	GRP

Earthing

All enclosures are supplied with a 6mm stainless steel (18/8) internal and external earth stud as standard.

Larger internal earths can be fitted on request.

Entries and Thread Standards

Standard thread forms are ISO Metric to BS 3643, NPT or GAS can be supplied on request.

Protection Grade

Ingress Protection IP 23, or IP66 on request

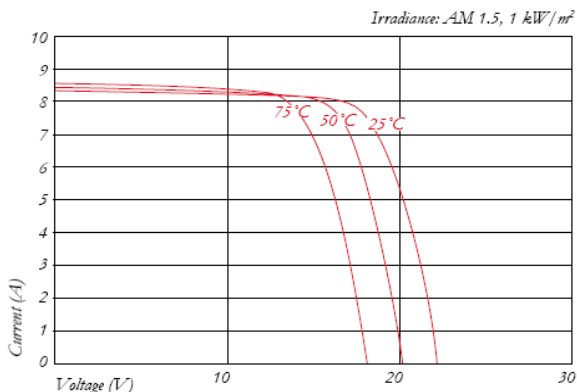
Ex Rating

Ex nA nR II T5

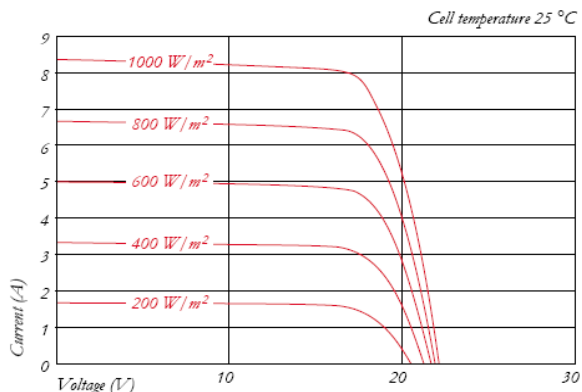
Solar Satcom Pod Specifications

ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



ELECTRICAL PERFORMANCE

Pv Module type

At 1000 W/m²(STC)*

Maximum Power [W]
Maximum System Voltage [V]
Maximum Power Voltage [V]

Maximum Power Current [A]
Open Circuit Voltage (Voc) [V]
Short Circuit Current (Isc) [A]

At 800 W/m²(NOCT)**

Maximum Power [W]
Maximum Power Voltage [V]
Maximum Power Current [A]
Open Circuit Voltage (Voc) [V]
Short Circuit Current (Isc) [A]
NOCT [°C]

Power Tolerance [%]
Maximum Reverse Current IR [A]
Series Fuse Rating [A]
Temperature Coefficient of Voc [V/°C]
Temperature Coefficient of Isc [A/°C]
Temperature Coefficient of Max. Power [W/°C]
Reduction Of Efficiency (from 1000W/m² to 200 W/m²) [%]

SPA-130A

135
1000
17.7
7..63
22.1
8.37

95
15.6
6.1
19.9
6.82
49

5/-5
15
15
-0.08
0.00501
-0.614
5.8

DIMENSIONS

Length [mm] 1500(+/-2.5)
Width [mm] 668(+/-2.5)
Depth/ incl. Junction Box [mm] 46
Weight [kg] 12.5
Cable [mm] (+)840 / (-) 840
MC PV-KBT3 / MC PV-KST3
Connection Type
Junction Box [mm] 100x108x15
IP Code IP66

CELLS

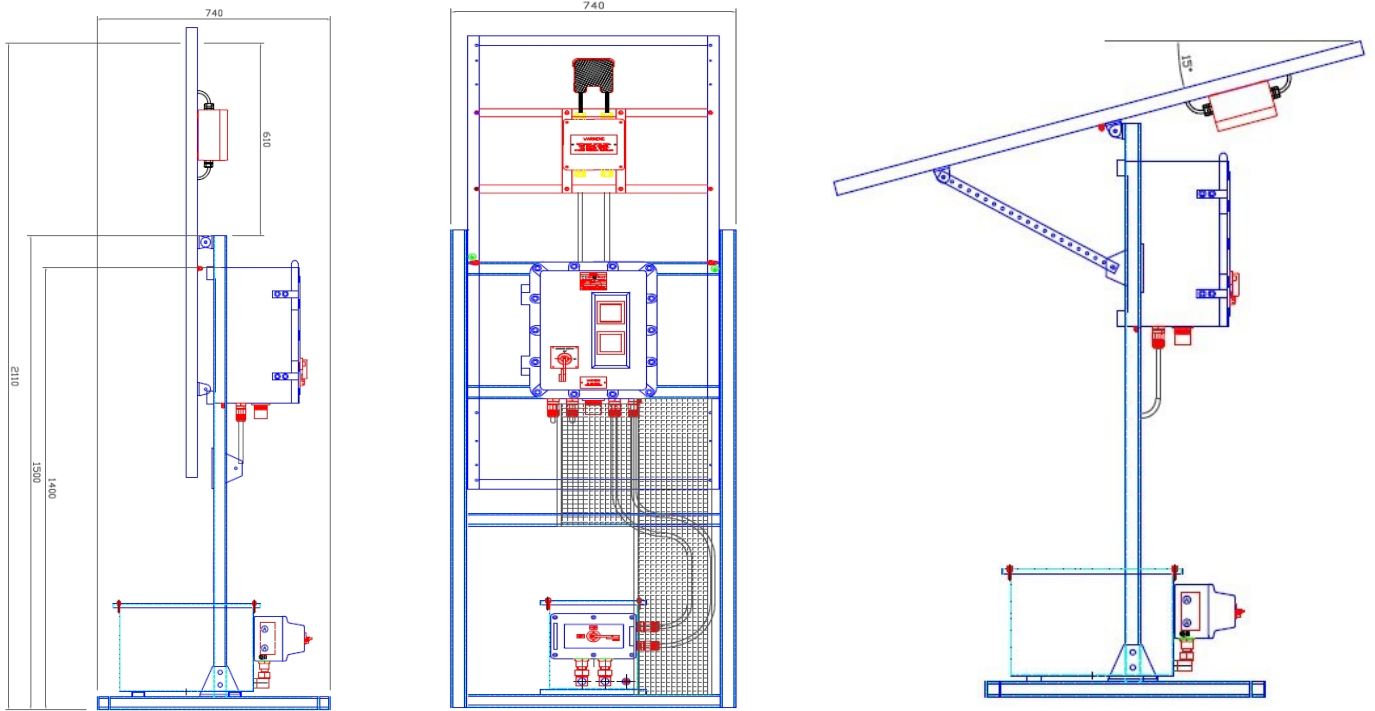
Number per Module 36
Cell Technology Polycrystalline
Cell Shape(Square) [mm] 156x156
Cell Bonding 3 busbar

Specifications

Ex Protection	EEX d e mb IIB T5
Output	24Vdc 5.0A max 24Vdc 1.0AContinuous on 1.5 Days battery autonomy.
Battery	12V 72Ah
Solar Panel	12V 10A peak
Ingress Protection	IP 23
Typical features	Battery voltage and charge/

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)

Dimensions



Ordering Information

Continuous Power (W)		Output Voltage (V)			
		12Vdc	24Vdc	110Vac	230Vac
24W	1 x 120W PV cell	SPP-101 Batt 12V 72Ah	SPP-201 Batt 12V 72Ah	SPP-301 Batt 12V 72Ah	SPP-401 Batt 12V 72Ah
48W	2 x 120W PV cell	SPP-102 Batt 12V 144Ah	SPP-202 Batt 24V 72Ah	SPP-302 Batt 24V 72Ah	SPP-402 Batt 24V 72Ah
96W	4 x 120W PV cell	SPP-103 Batt 12V 288Ah	SPP-203 Batt 24V 144Ah	SPP-303 Batt 24V 144Ah	SPP-403 Batt 24V 144Ah
192W	8 X 120W PV cell	SPP-104 Batt 12V 576Ah	SPP-204 Batt 24V 288Ah	SPP-304 Batt 24V 288Ah	SPP-404 Batt 24V 288Ah

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



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* Electrical values under standard test conditions(STC): irradiation of 1000 W/m², airmass AM 1.5 and all temperature of 25 °C
** Electrical values under normal operating all temperature (NOCT):irradiation of 800 W/m², airmass AM 1.5 wind speed os 1m/s and ambient temperature of 20 °C
*** 10 year or 90% of the minimally specified power P under standard test conditions (STC)
**** 20 years on 80% of the minimally specified power P under standard test conditions (STC)