



شركة إلكترونيات الطاقة العربية
Arabian Power Electronics Company

ESP PV SOLAR TELECOM Battery Charger/Eliminator

SOLASMART-220

New Green Solution for Telecom Field Power

The biggest challenge in rural telecom installation in many countries in the world is the total absence or poor quality of utility supply. Wide voltage swings, noise and instability are common. This uncertainty is no more! We bring to you easy to use green power from solar energy.

SOLASMART-220 PV solar telecom battery chargers/ eliminator uses the new revolutionary MITRAMAX™ integrated PV solar module, the ESP. ESP is designed to harvest maximum energy from SUN LIGHT and deliver it as regulated DC source of 48V DC using its embedded energy processor. This helps telecom

service providers to go clean and green eliminating dependence on commercial line power or avoid the noisy and smoky DG sets.

Constant Power; Peak Harvest

SOLASMART-220 harvests all available peak power at any time during daylight hours delivers it as a constant voltage source acting as telecom charger/eliminator. It delivers 54.4V DC with over 96% conversion efficiency. One can use it to float charge any type 48V DC lead-acid or also as solar powered regulated DC supply. It can be deployed at any indoor or outdoor or mobile location. User does not need any extra investment in a charge controller or blocker diodes etc.

APPLICATIONS

Rural Telephone Exchanges



GSM/CDMA tower base stations



Microwave communication stations



GSM/CDMA/RF repeaters



WFI and VOIP



Benefit from system simplicity, higher efficiency & reduced cost of All Parallel Array

SOLASMART-220 from MITRAMAX™ is a 220Wp rated PV solar DC source. It eliminates the need to connect several PV panels in series and its associated disadvantages. For higher power, one can connect N+1 SOLASMART-220s in parallel; each delivering its peak power. One can therefore have any DC power up to several kilowatts in multiple of 220Wp.

Designed for every outdoor telecom application

SOLASMART-220 is IP68 compliant and works reliably even at ambient temperatures to 80°C. This makes it ideal for in-field unattended telecom installations even in remote locations. This makes SOLASMART-220 highly suitable rural telecom applications like Rural Telephone exchanges, GSM/CDMA tower base stations, GSM/CDMA /RF repeaters, Microwave communication stations, VOIP, WiFi and Routers and WLL based small exchanges

FEATURES

- Fully integrated source of 'processed' solar energy
- Only PV solar source for ALL PARALLEL ARRAY configuration
- Built-in maximum energy harvesting controller under all solar conditions
- Provided regulated output voltage of 54.4V DC
- Provides constant power at any battery voltage from 39V to 54.4V
- Available with panel using either Mono or Poly-crystalline Solar Cells
- Built-in +95% efficient DC-DC converter
- Packaged in IP65 case to meet climatic endurance in open fields
- Performs reliably at ambient temperature up to 80p C and 100% moisture
- Array output unaffected by shadow/dirt on panel like in series array
- No need to sort and match as in conventional array

SPECIFICATIONS:

Output Voltage	54.4 VDC
Peak Power Capacity	220Wp *see note
Constant Power Voltage Range	39 to 54.4V DC
O/P Voltage Regulation	1%
Output Current	3.5A typical max
Conversion Efficiency	> 95%
MPPT Logic Efficiency	>99%
Mechanical Ingress Protection	IP65
Protection	Output OV, OL, reverse polarity
Operating Temperature	-20 to 80°C
Storage Temperature	-25 to 90°C
Dimension (mm)	1600 x 1000 x 50
Connectors	4mm ² polarised solar PV connectors—type MC
Safety Specifications	UL1741 FCC class B compliant
Conform To	IEC: 61215: 2005 and IEC 61730-2: 2007

*Note: SOLASMART-220 is also available in other power ratings on special request

