

SOLAR HYBRID SOLUTION FOR TELECOM REMOTE APPLICATION

In remote and inaccessible areas, day and night, through all kinds of weather, solar power systems are used to keep communications channels open the world over. Reliability, low maintenance requirements and proven ability to provide continuous power in virtually all environments, have led to the use of solar power in telecommunications systems of every size and type.



48 VDC Battery Bank

OSS OFFERS COMPLETE SOLUTION TO THE TELECOM INDUSTRY BY PROVIDING

- Dependable and robust solar power systems for Telecom networks
- Proven system engineering to provide reliable, low maintenance, cost effective power
- Available in all voltages from 12V to 120VDC (positive or negative ground)
- Options available for battery autonomy of 3 / 5 'No-Sun' days
- Communication via RS232 serial interface, modem or Ethernet
- Increased survivability & reliability, with typical MTBF of >50,000 hours
- Temperature –40°C to 85°C
- Typically power loads from small powered wireless terminals to several kilowatts systems for
- backbone repeater stations
- Solutions customized to meet specific needs
- Designed to operate under the harshest weather conditions
- Assured quality and conformity to international standards

VARIOUS TELECOM SECTOR APPLICATIONS

BTS Telecom Load

48 VDC Load

- GSM Base / Repeater stations and
- Digital & Analogue Microwave Repeaters
- Single subscriber telephones to Multi-Access Radio
- Earth stations for Satellite communications
- Rural payphhones / cellular telephone stations
- Telecommunication radal systems
- (Wireless Local Loop (WLL
- UHF/VHF Radio repeaters
- Navigation systems
- Domestic Satellite
- Telemetry Systems
- VSATs
- Fiber Optic Repeaters
- TV Translators
- Relay Stations
- Call Boxes
- Switching Stations

ADVANTAGES OF THE SOLAR POWER SYSTEM OVER CONVENTIONAL POWER SOURCES FOR TELECOM APPLICATION

With a portable or stationery solar remote systems, you can power mountain-top repeater sites, microwave relays, remote telecom applications, hand tools, laptop & mobile charging, dedicated load lighting and portable radio power systems.

With the highest reliability factors, solar array and battery systems can endure months of hostile weather and snow cover while still providing power to critical systems.

SOLAR POWER SYSTEMS FOR TELECOMMUNICATIONS & TV TRANSPOSERS

The power system consists of highly efficient solar modules, sealed VRLA batteries and a microprocessor based charge controller with remote monitoring and control facility to monitor the system performance from a central control station through telephone lines. A software package enables the user to communicate with the controller using a Windows or Linux platform. Graphical representation of the logged data for future analysis can be produced.

A Passive Cooled Shelter is designed to maintain the operating temperature of the telecom equipment and batteries up to a maximum of 38°C under certain ambient conditions. To facilitate increase in the telecom equipment heat load and in extreme ambient temperature conditions (peak >50°C and night > 30°C), a split air-conditioner will switch on automatically to reduce the shelter temperature. The A/C unit is powered by the same

solar power system and its operation is controlled by the charge controller, where the control parameters can be easily programmed.

SOLAR SYSTEMS FOR TELECOM EQUIPMENT

To support the public telecommunication network, both mobile and fixed spread over a vast area, telecom equipment viz. Microwave repeaters, LD repeaters, GSM base stations etc are powered through standalone solar photovoltaic power systems because of high degree of reliability and low maintenance. Generally these sites are kept at high altitudes to provide better coverage and most of them are accessed by helicopter where providing conventional power becomes impossible because of terrain and cost.

These solar systems consist of highly efficient solar modules, Sealed VRLA batteries, Passive cooled enclosures or shelters, Microprocessor based charge controller with remote monitoring and control facilities for monitoring the system performance from the central control station through telephone lines. Passive cooled shelter or enclosure is designed to maintain the operating temperature of the telecom equipment and batteries up to a maximum of 38 deg. C under certain ambient conditions. This improves the battery life as battery temperature directly affects the battery life in high ambient environment.

SOLAR POWERED PAYPHONE BOOTHS

This is common application for powering payphone booths with solar in remote areas, highways or otherwise where providing conventional power for small requirement becomes difficult. The solar system is designed to provide continuous power to telecom equipment and power to light in the night. These systems are economical and most reliable to power payphone equipment in the remote area.

SOLAR POWERED VSAT PHONE

With evolution of the telecommunication technology, VSAT phone are also becoming common to even connect remotest of the villages/regions to telephone network. These systems are powered through stand-alone solar power system, as they require very less maintenance.



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