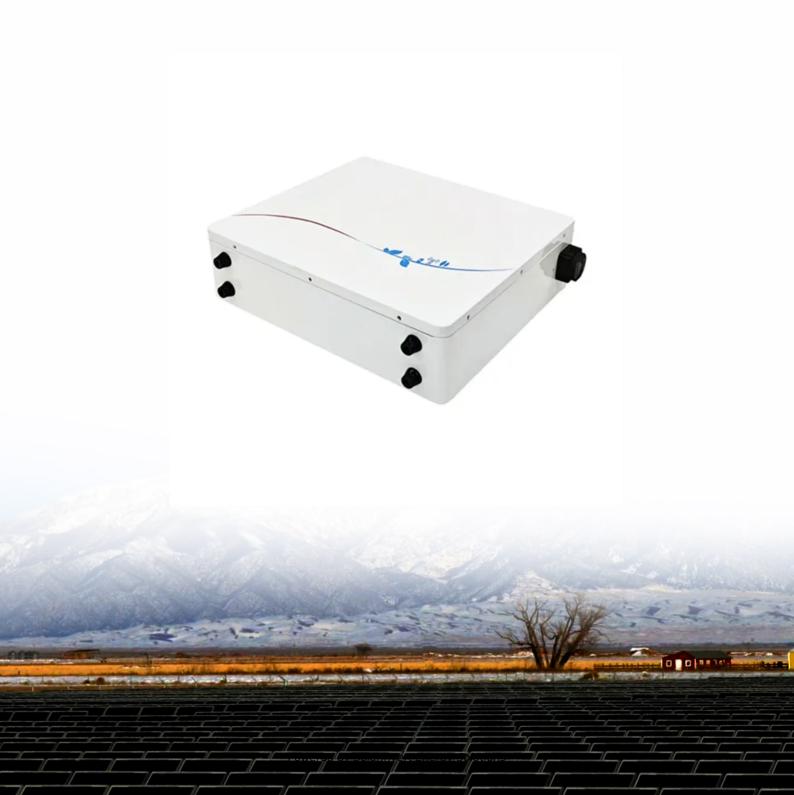


SolarInvert Energy Solutions

Power Supply Base Station Power Equipment Requirements





Overview

What is the maximum output power requirement for BS?

There is no general maximum output power requirement for BSs. As mentioned in the discussion of BS classes in the preceding section, there is, however, a maximum output power limit of 38 dBm for medium range BSs, 24 dBm for local area BSs, and of 20 dBm for home BSs.

How much power does a PSU need?

This is when the PSU is no longer powering the PA, which is the main power draw, but still needs to power other electronics. The current target for low-load efficiency is about 30 W. Some OEMs would like to see that drop to nearly 10 W.

How much power does a cellular base station use?

This problem exists particularly among the mobile telephony towers in rural areas, that lack quality grid power supply. A cellular base station can use anywhere from 1 to 5 kW power per hour depending upon the number of transceivers attached to the base station, the age of cell towers, and energy needed for air conditioning.

How to design a solar-powered base station?

In order to design and implement a solar-powered base station, PVSYST simulation software has been used in various countries including India, Nigeria, Morocco, and Sweden. This software allows for estimation of the number of PV panels, batteries, inverters, and cost of production of energy considering the geographical and other design parameters.

How can the electronic industry reduce power requirements for base stations?

As a result, the electronic industry is exploring new methods to reduce the power requirements for the electronic equipment used in the base stations. The first approach is to make the base stations more tolerant to heat which



will then require less power for air conditioning.

What type of generator does a base station use?

The air conditioning of the base station runs at 220 VAC. These base stations can be powered by two types of diesel generators. The first is the conventional type where 220 VAC is converted to 48 VDC to charge the batteries and power the communication equipment.



Power Supply Base Station Power Equipment Requirements



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6.2 Base Station output powerTechSpec

In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the ranges defined for the Normal test environment in Annex B. The rated ...

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