Solar hybrid inverter uk

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Solar panels use photovoltaic (PV) cells to convert daylight into electricity. However, this electricity is in the form of a direct current (DC), while most household electrical devices operate from an alternating current (AC), so solar energy needs to be converted from DC to AC in order to power your home.

This is where a solar panel inverter comes in. It is an essential device for any solar panel system - and there are a few different types available on the market. Here, our experts explore the purpose of solar inverters in more detail, and how to choose the right one for your system"s installation.

This setup ensures the other panels remain unaffected if one panel is underperforming, perhaps due to shading or dirt. This is particularly beneficial for roofs with complex shapes or orientations, where shading may be an issue.

Unlike microinverters, a string inverter is a single unit that serves all the solar panels in your array. The solar panels are connected in a series, creating a “string”, and the generated DC is sent to the central string inverter to be converted into AC.

String inverters are more cost-effective than microinverters, as you only need one per array. They"re also easier to maintain and replace when necessary. However, if one panel performs poorly, it can affect the output of the whole string.

Choosing a hybrid inverter means that if your solar panels generate more power than you use, the excess energy can be stored in a battery for use later or exported to the utility grid. This could enable you to take advantage of the Smart Export Guarantee (SEG), where some energy companies will pay you for the excess energy you generate and feed into the grid.

One of the first features to consider is the inverter’s efficiency, typically expressed as ‘European’ or ‘weighted’ efficiency. This rating measures an inverter’s performance under realistic, varying conditions, not just perfect lab scenarios.

When planning your solar array, you"ll need to consider the power rating of your inverter. This rating stipulates the maximum load an inverter can handle, effectively defining how much power your system can yield.

For instance, suppose your solar panels have a peak output of 6kW during optimal sunlight hours. In that case, you’ll most likely want an inverter with at least a 6kW power rating to fully harness this potential.

While selecting an inverter with a significantly higher power rating may seem logical to prepare for possible

future solar array expansions, this isn’t usually the best course of action. Instead, industry best practices typically recommend sizing the inverter to approximately 75-90 per cent of the solar panels’ peak power output.

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