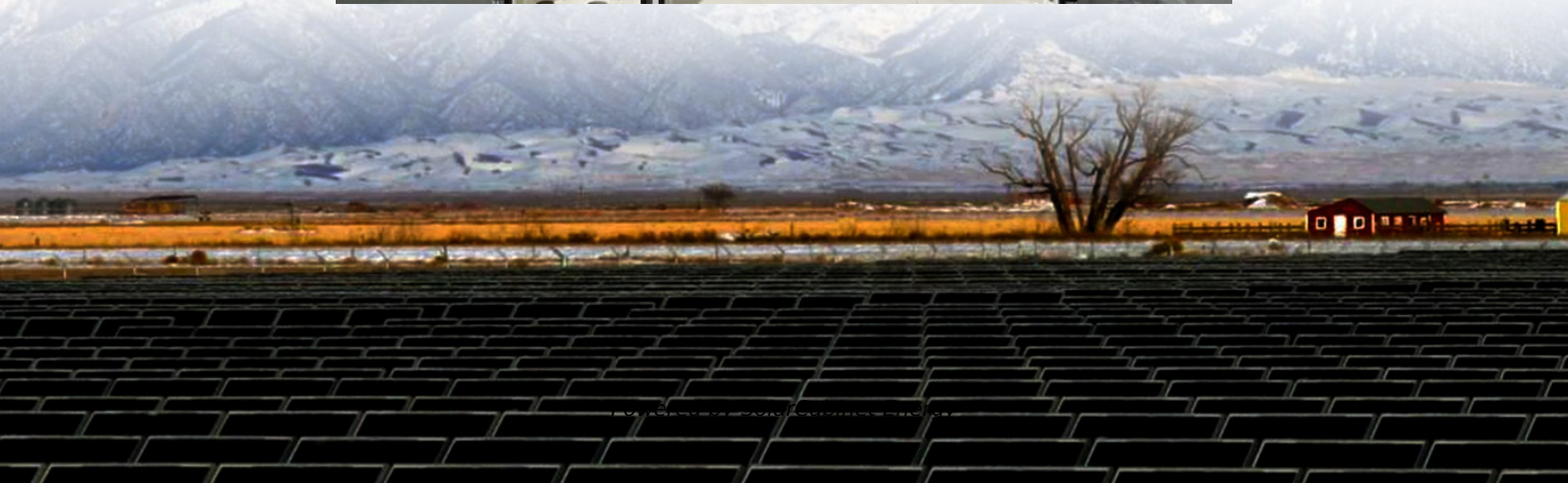


How much temperature can outdoor power supply withstand





Overview

The standard operating temperature range for a power supply is -40°C to +85°C range. High heat above +85°C and freezing environments below -40°C can cause a major threat to a power supply. What is the operating temperature of a power supply?

The operating temperature specified for a power supply refers to the temperature of the environment around it, rather than the external ambient temperature of the equipment. Typically, the operating temperature range for power supplies is between 0°C and 40°C, with some products able to reach standards of 0°C to 50°C.

What is a wide temperature power supply?

Wide temperature power supplies usually operate within a range of -40 to -20°C up to 70-80°C, exceeding the range of conventional power supplies and meeting the needs of most applications. Although wide temperature power supplies utilize internal components with superior heat resistance, these materials still have thermal and efficiency limits.

Do power supplies need to be housed outside?

Power supplies need to be housed outdoors, where the extreme heat of the summer and the extreme cold of the winter will both be present. Power supplies heat themselves up at different rates and intensities, and environmental influences will impact how quickly a power supply is exposed to high temperatures.

What happens if a power supply reaches a high temperature?

When the ambient temperature exceeds this range—such as during scorching summers or freezing winters—the power supply may fail to operate normally. To address such extreme environments, users are advised to opt for wide temperature (Wide Temperature) power supplies.

Which wattage power supply should I Choose?



Therefore, if the working environment temperature ranges between 50°C and 70°C and the load requirement is between 400W and 700W, customers are advised to select a higher wattage wide temperature power supply and strictly follow the derating curve guidelines.

How much power does a power supply provide?

Within -40°C to 50°C, the power supply can reliably deliver 700W of power. However, as the temperature rises to 50–70°C, the output power decreases gradually, dropping to 400W at 70°C. If the ambient temperature exceeds 70°C, the over-temperature protection function activates, halting output until the temperature returns to a safe range.



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However, it also has a specific temperature range within which it maintains its structural integrity and performance. Exceeding these limits can lead to pipe deformation, ...

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Typically, the operating temperature range for power supplies is between 0°C and 40°C, with some products able to reach standards of 0°C to 50°C. In other words, the temperature inside ...



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