

What is the appropriate temperature for solar air conditioning





Overview

What is Sol-air temperature?

This calculation helps in the design and analysis of heating, ventilation, and air conditioning (HVAC) systems, as well as in the assessment of thermal comfort and energy efficiency. The concept of Sol-Air Temperature was developed as a method to incorporate the effects of solar radiation on the thermal performance of buildings and materials.

What is Sol air temperature?

The concept of Sol-Air Temperature was developed as a method to incorporate the effects of solar radiation on the thermal performance of buildings and materials. It represents an effective outdoor temperature considering solar gain and is used in building simulations and environmental assessments.

How do I calculate Sol-air temperature?

Common values range between 10 and 30 W/m²·K depending on wind speed and surface conditions. The sol-air temperature will be displayed automatically in the designated field. The equation used by the calculator is: Sol-Air Temperature = Outdoor Temperature + (Solar Absorptivity × Solar Irradiance + Infrared Radiation) / Heat Transfer Coefficient.

How can I maximise my solar system for my air conditioning needs?

The following guide will outline what to consider in order to maximise your solar system for your air conditioning needs. Temperature coefficient (Pmax) refers to the amount of panel efficiency lost for every 1°C over 25°C. The general number is 0.5% loss for each 1°C as a standard variable.



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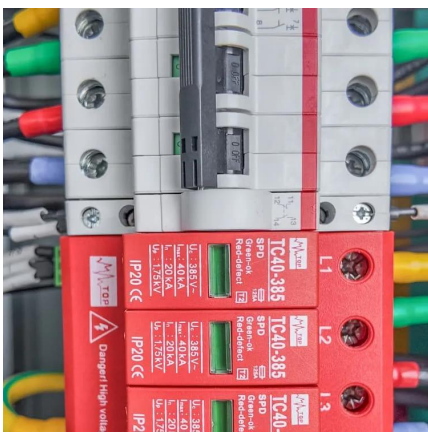


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What is the temperature setting for solar temperature control?

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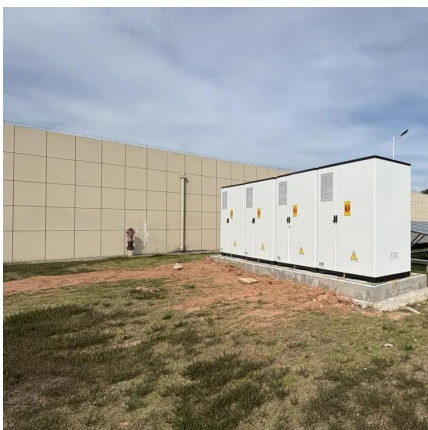


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