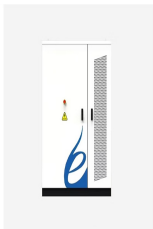
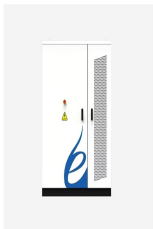


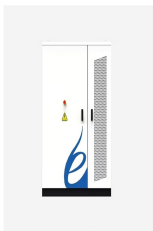
DOES RESISTANCE CONSUME ENERGY OR STORE ENERGY



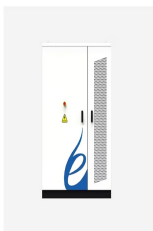
How does resistance affect electrical energy? Resistance is similar to friction for electrical energy; resistance causes the electrical energy to be lost as heat(thermal energy),just like friction causes mechanical energy to be lost as heat. Resistance is a measure of how much voltage an electrical element needs in order to increase the electric current.



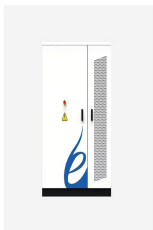
Do resistors transform electrical energy to heat? Yes,resistors will transform electrical energy to heat,which is considered "internal",however,you will not find many treatments of electrical circuits in terms of thermodynamics. The reason for that is because electrical circuits are extremely far away from thermal equilibrium and thermodynamics has very little useful things to say about that.



Does a resistor lose energy? @GM: No,because in any moment in which there is a voltage across the resistor and a current flowing through it,energy is lost. A resistor will lose it through heat. Something like a motor will lose it through mechanical work. A capacitor or inductor will lose it by building up energy in its field.

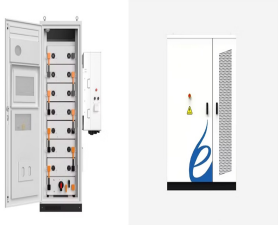


How does resistance affect electrical transmission? These are specially designed to have low resistance,so little energy is lost in electrical transmission. Resistance is similar to friction for electrical energy; resistance causes the electrical energy to be lost as heat(thermal energy),just like friction causes mechanical energy to be lost as heat.

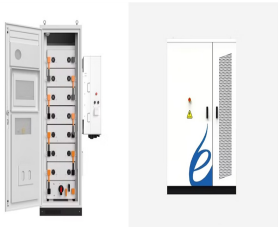


What power is absorbed by a resistor? In a circuit,a voltage drop across a resistor in the direction of positive current flow represents energy absorbed. This means that the power absorbed by a resistor is given by the product of the voltage drop across it and the current flowing through it.

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Does more resistance mean less heat? EDIT: OK, you're saying it is counter-intuitive that more resistance means less heat. Let me try to explain it. First, let's assume the voltage source has very low internal resistance compared to the resistor you are experimenting with, like, say, a 12-volt car battery.



The resistor is like a pipe that reduces pressure and limits flow because of its resistance. Conservation of energy has important consequences here. The voltage source supplies energy (causing an electric field and a current), and ???



Only when your fat stores are extremely low or depleted does your body then have to break down muscle mass to create useable proteins. Working out fasted can also lead to faster depletion of glycogen stores and ???



The greater the resistivity, the larger the field needed to produce a given current density. The lower the resistivity, the larger the current density produced by a given electrical field. Good conductors have a high conductivity ???



We now consider the power and energy absorbed by resistors and supplied by sources in more detail. Recall that a voltage drop (a decrease in electric potential) across a circuit element in the direction of positive current flow represents ???

DOES RESISTANCE CONSUME ENERGY OR STORE ENERGY



Resistance slows down the transfer rate of charge carriers (usually electrons) by "brute force." In this process, some energy is invariably converted from electrical form to heat. Resistance is said to consume power for this reason. Resistance ???



It is critical to address these inefficiencies as soon as possible because inefficient appliances consume more energy. 98. Keep Home Appliances in Good Condition. Ensure that your appliances are clean and free of dust and ???



A study published in the Journal of the International Society of Sports Nutrition in 2014 found that only eating within an eight-hour window during the day and fasting the other 16 hours ??? plus doing four resistance training ???



Energy is measured in units of joules (J). A thermodynamic system can be isolated, closed or open. An open system allows the exchange of energy and matter to or from its surroundings. A closed system can exchange ???



Why do resistors consume energy faster in series or parallel? Strategy and Solution for (c) $V_p = V$??? $V_1 = 12.0 \text{ V}$??? $2.35 \text{ V} = 9.65 \text{ V}$. Now the current I_2 through resistance R_2 is found using ???

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It might be more helpful to visualize the energy in a capacitor as being stored in the electric field between the plates. This electric field arises because of the displacement of the charge from one plate to the ???