

Discharge resistor of high frequency inverter





Overview

How does a DC link discharge a resistor?

When discharging the DC link using constant power, intelligent control electronics apply a sequence of constant power pulses to the resistor at a high frequency, typically referred to as PWM. As a result, the discharge energy is distributed evenly over the entire discharge process of the DC link.

What is a discharge resistor?

Discharge resistors are used to discharge DC links. They discharge the electricity after an electric vehicle has been switched off and convert the energy into heat. This allows the DC link to be discharged reliably. The requirements and various methods for how best to carry out the discharging process are explained below.

Does the ec-c1200 inverter have a discharge resistor?

The EC-C1200 inverter has an internal discharge resistor, highlighted in the schematic below. The resistance of the discharge resistor is either 3,9 kOhm or 39 kOhm depending on which inverter variant is selected (small/large system option, see the datasheet for more information).

Can a discharge resistor force a DC-link voltage to zero?

Note that the discharge resistor cannot force the DC-link voltage to zero if there is some device actively feeding power into the DC-link, since the maximum dissipation power of the discharge resistor is very limited due to the high resistance.



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