

SolarInnovate Energy Solutions

Capacitors for outdoor power supply



Overview

The outdoor power capacitors are used for three-phase PFC on low-voltage systems of 230 to 1000V and 50 or 60Hz. They feature output up to 56.2 kvar, depending on voltage and frequency. Which capacitor should I use for my power supply?

Capacitive power supplies designed for long load life require capacitors with foils and dimensions specifically designed for this application. For its capacitance stability and ruggedness, we recommend using THB film capacitors like the Würth supply applications.

Are capacitive power supplies short-circuit-proof?

In contrast to conventional designs, the capacitive power supplies are short-circuit-proof at the output. The vector diagram makes it clear: The majority of the input voltage drops out at the reactance of the capacitor with virtually no power dissipation being created in the capacitor.

What is an output filter capacitor used for?

They are primarily used in high-voltage power supplies as well as high-current applications. They are used in downhole exploration, high-frequency motor drives and are incorporated into space and aerospace electronics. Any application that calls for high reliability and superior output voltage quality will require an output filter capacitor.

What are output capacitors?

Output capacitors are available in a variety of dielectrics. These dielectrics, for given capacitance and voltage ratings, will determine the capacitors' footprint and size. Different applications will be matched to different dielectric technologies, which will have their own set of associated footprints.

Can X2 capacitors be used as a power supply?

In theory class X2 capacitors are electrically suited for that but this is not the

intended use of X2 capacitors as defined by IEC-60664-1. Many capacitor manufacturers do not recommend X2 capacitors for these applications, while some permit the use or offer alternative series for capacitive power supply.

What is a capacitive power supply?

INTRODUCTION A capacitive power supply is a very low-cost AC/DC converter without a transformer or switching components. With a very small parts count, these circuits can provide a DC voltage for low-power applications. In addition, because no high-speed switching is occurring, no EMI noise is generated.

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