VISHAY
The DNA of tech.®

DID YOU KNOW?

CIRCUIT PROTECTION WITH VISHAY AMETHERM MINI-AMP

In electronics and electrical engineering, most consumers overlook inrush current. When you power on electronic devices, they can experience a sudden surge in current, often several times higher than their usual levels. This surge can cause various issues, such as reducing equipment lifespan and damaging circuits. Let's explore Vishay Ametherm Mini-Amp inrush current limiters as an effective solution for circuit protection.

Understanding Inrush Current

Before we discuss Mini-Amp inrush current limiters, it's crucial to grasp the concept of inrush current. When electronic devices, especially those with capacitors and transformers, turn on, they draw an initial burst of current. This power surge can stress the device's components and may lead to voltage drops, resulting in malfunctions or reduced lifespan. Engineers use inrush current limiters to mitigate this issue.

Vishay Ametherm Mini-Amp Inrush Current Limiters

Vishay offers a comprehensive line of Mini-Amp inrush current limiters under the Vishay Ametherm brand to manage inrush currents effectively. Let's explore their key features and advantages.

- **Compact Design:** Mini-Amp inrush current limiters stand out for their compact design. These components have a minimal footprint, making them suitable for space-constrained applications. Their small size allows easy integration into various electronic systems and printed circuit board (PCB) designs. The limiters are available with diameters of 3 mm, 5 mm, 8 mm, and 10 mm, and weigh as little as 0.6 g
- **High Reliability:** Vishay's commitment to quality and reliability is well-known. The Mini-Amp inrush current limiters uphold this reputation. Constructed using premium materials and rigorous manufacturing processes, these limiters ensure longevity and consistent performance. They are rated for continuous currents ranging from 250 mA to 3 A and can handle up to 20 J of input energy
- **Rapid Response:** Mini-Amp inrush current limiters respond swiftly to inrush currents. Their quick response effectively limits the initial power surge when a device powers on, protecting sensitive components and reducing the risk of damage
- **Diverse Range of Options:** Vishay offers multiple Mini-Amp inrush current limiter models with different specifications. This variety ensures that engineers can select the most suitable component for their specific project requirements
- **RoHS Compliance:** Vishay places a strong emphasis on environmental responsibility. Our Mini-Amp inrush current limiters comply with the Restriction of Hazardous Substances (RoHS) directive, ensuring they are free from hazardous materials and environmentally friendly

VISHAY
The DNA of tech.

DID YOU KNOW?

CIRCUIT PROTECTION WITH VISHAY AMETHERM MINI-AMP

Applications

Vishay Ametherm Mini-Amp inrush current limiters are utilized in applications across several industries, including:

Industrial Automation: These limiters protect sensitive control and monitoring equipment from voltage spikes during the startup of large motors and machinery

Example: Fractional horsepower motor drives, 300 W to 500 W power supplies, robotics

Consumer Electronics: They improve equipment lifespan and reduce power-related issues in power supplies for televisions, audio systems, and other electronic devices

Example: Phone chargers, appliances, audio amplifiers, LED lighting

Renewable Energy: Mini-Amp inrush current limiters prevent damaging inrush currents during startup in solar inverters and wind turbine systems.

Example: On-board charging (OBC) in EVs, home battery energy storage, solar panel inverters

Vishay Ametherm Mini-Amp inrush current limiters exemplify our dedication to innovation and excellence in circuit protection and control solutions. By effectively addressing the critical issue of inrush currents, these compact and reliable components enhance the reliability and lifespan of electronic equipment across various industries. Whether you're an engineer designing the next generation of electronics or a consumer seeking more reliable and durable devices, Mini-Amp inrush current limiters provide a compelling solution to mitigate inrush current-related challenges.

RESOURCES

bigAMP Inrush Current Limiters
miniAMP Inrush Current Limiters
Standard Inrush Current Limiters