



Box Type DC Link Capacitor

A Box Type DC Link Capacitor is a crucial component used in power electronics applications to stabilize and filter the DC voltage in the link between the rectifier and the inverter. These capacitors are typically housed in a robust box-shaped enclosure that provides protection and facilitates easy integration into various electrical systems. They offer high capacitance values and low equivalent series resistance (ESR), making them effective in reducing voltage ripple and improving the overall efficiency of the power conversion process.

Box Type DC Link Capacitors are designed to handle high ripple currents and operate reliably under high voltage conditions, which is essential for maintaining the performance and longevity of power electronic devices. These capacitors are known for their excellent thermal stability, ensuring consistent performance even under varying temperature conditions.

The design of these capacitors includes features such as self-healing properties, in-built fuses, which enhance their durability and safety by preventing catastrophic failures. The box-type construction also allows for compact and modular installation, making them suitable for space-constrained environments. Additionally, they are available in various capacitance and voltage ratings, providing flexibility to meet specific application requirements. Overall, Box Type DC Link Capacitors are integral to ensuring the smooth operation and reliability of modern power electronic systems.

Technical Data

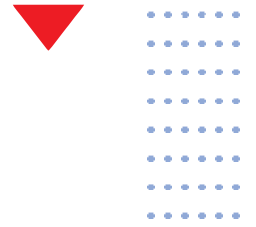
Applications: Renewable energy systems, electric vehicles, industrial drives, and uninterruptible power supplies (UPS) and power converters.

Voltage Range: Up to 6000 V DC.

Safety:

- Self-Healing Capacitor Technology
- In-built fuses (segmented film technology)
- Fault Detection and Protection Systems





Construction

- Dielectric: Metallised Polypropylene film
- Non-PCB, Impregnation - Biodegradable Soft PU Resin
- Aluminium or Stainless Steel Case

Features

- Self-Healing Technology
- High partial discharge voltage
- High humidity resistance
- Low dissipation factor
- High insulation resistance
- Segmented Film design providing in-built fuses
- CE & RoHS Compliant
- NPCB, Biodegradable Polyurethane Resin

Technical data and Specifications:

Capacitance Value	Upto 25000 uF (* Higher ratings available on request)
Tolerance	±5%
Voltage Rating	Upto 6000 VDC
tan δ0 (dielectric)	2x10 ⁻⁴
Voltage test between terminals	
V (Terminal to Terminal)	1.5 X U _{RMS} AC, 2 sec
Voltage test between terminals and case	
V (Terminals and Case) (Uiso)	2*Ui + 1000 V or 2000 V whichever is the highest value for 10 seconds
TMIN	-40 °C
TMAX	+70 °C
Storage temperature	-40 °C to +85 °C
Hot Spot temperature	+85 °C
Maximum Humidity	Max. 95% (non-condensing)
Life Expectancy	up to 100,000 hours * Greater life expectancy can be offered based on customer request
Impregnation	Biodegradable soft PU resin
Mounting position	Any
Terminals Type	As per customer requirement
Enclosure material	Aluminium / Stainless Steel
Reference Standard	IEC 61071 and IEC 61881

