

Voltage Stability in Every Pulse



INDTECH[®]



DC-Link & Snubber Capacitors



Product Specification

DC-Link Capacitors: Essential Components for Power Conversion

DC-Link capacitors are crucial elements in power conversion systems, providing energy storage and voltage stabilization in DC circuits. These capacitors are designed to handle high ripple currents and have low equivalent series resistance (ESR), making them highly efficient and reliable for demanding applications.

Applications:

Automotive Onboard Chargers and Inverters: Facilitate smooth power flow from the battery to the motor, enhancing efficiency and performance.

Renewable Energy Systems: Optimize the conversion of DC power from solar panels or wind turbines into usable AC power.

Industrial Motor Drives: Offer a stable voltage buffer for dynamic load demands in industrial machinery.

Uninterruptible Power Supply (UPS) Systems: Ensure a consistent power supply during outages or fluctuations.



IGBT snubber capacitors are essential components in high-power electronic circuits, particularly where Insulated Gate Bipolar Transistors (IGBTs) are employed. These capacitors are designed to mitigate voltage spikes and surges caused by parasitic inductance during switching operations. By providing an alternative path for current flow during rapid transitions, they protect IGBTs from potential damage, thereby enhancing the reliability and performance of the overall circuit.

Energy Absorption: IGBT snubber capacitors effectively absorb energy generated by parasitic inductance during switching, minimizing the risk of voltage spikes.

Voltage Overshoot Reduction: These capacitors play a crucial role in reducing voltage overshoots, ensuring that the IGBT operates within safe voltage limits.

Minimization of Ringing Effects: By dampening oscillations, they help to minimize ringing effects, which can otherwise lead to inefficiencies and potential damage in the circuit.

Enhanced Switching Performance: By providing a smoother transition during switching, snubber capacitors improve the overall switching performance of IGBTs.

Applications: Motor Controls, Inverters, Power Supplies, Renewable Energy Systems, Industrial Automation, etc.



DC-Link
Capacitor for PCB

DC-Link Capacitor
Aluminium Body

DC-Link Capacitor
Plastic Body

Snubber Capacitor
For IGBT

Technical Specifications

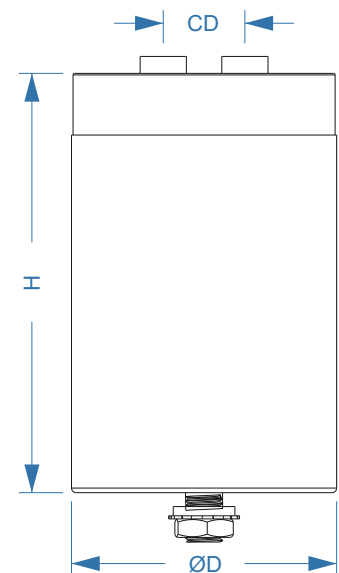
DC Link Capacitors

Capacitance Range	1 MFD to 3000 MFD
Capacitance Tolerance	±5%, ±10%
Rated Voltage	450V DC to 3000V DC
Rated Frequency	50/60Hz
Dissi. Factor (Tan δ)	≤0.0015(100Hz)
Climatic Category	-40°C to +105°C
Case	Aluminium & Plastic
Construction	Metallized Polypropylene Film
Encapsulation	Polyurethane Resin (PP-Dry & Oil Filled)
Installation	Any Position
Terminals	M6/M8 Male & M6 Female terminals
Mounting	M12 of aluminium case at the bottom
Reference Standards	IEC 61071

Snubber Capacitors

Capacitance Range	0.022 MFD to 10 MFD
Capacitance Tolerance	±5%, ±10%
Rated Voltage	630V DC to 2500V DC
Rated Frequency	50/60Hz
Dissi. Factor (Tan δ)	≤0.0015(100Hz)
Climatic Category	-40°C to +85°C
Case	Plastic
Construction	Metallized Polypropylene Film

ØD=76mm	CD=32mm;H3=16mm	D1=14mm;D2=17.5mm
		D1=12mm;D2=14mm
ØD=86mm	CD=32mm;H3=16mm	D1=14mm;D2=17.5mm
		D1=12mm;D2=15.5mm
ØD=100mm	CD=50mm;D1=16mm;D2=19.5mm;H3=26mm	P=50mm;D1=16mm;D2=19.5mm;H3=26mm
ØD=116mm		P=50mm;D1=16mm;D2=19.5mm;H3=26mm



Additional remark of dimensions:

Case Code	D	Terminals Style	φ
	(mm)	M	(mm)
1	84.5	M8×15~20	5.5
2	90	M8×15~20	5.5
3	118	M8×15~20	6.5
4	132	M8×15~20	6.5

* For more information, such as detailed specifications, dimensions, and capacitor ratings, please refer to the latest data sheet.

Smooth
Out the Spark

Empower
Your Circuit

Voltage Stability
in Every Pulse

Minimize Noise
Maximize Efficiency

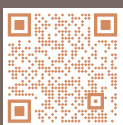
Features & Benefits of DC-Link & Snubber Capacitors

DC-Link Capacitors

- ❖ Custom Internal Structure
- ❖ Durable Terminals, Optimized for parallel Connection
- ❖ Standardized Internal Structure
- ❖ Inverters: Smooth the DC link voltage in solar and wind power inverters.
- ❖ UPS Systems: Provide stable DC voltage in uninterruptible power supplies.
- ❖ Industrial Drives: Used in motor drives to manage power conversion.
- ❖ Automotive Systems: Employed in electric and hybrid vehicle power trains.
- ❖ Medical Equipment: Power supplies for medical devices require reliable DC link capacitors
- ❖ High Efficiency: Low ESR and high ripple current capacity for superior performance.
- ❖ Versatility: Suitable for a wide range of applications, from automotive to industrial and renewable energy systems.

SNB-Capacitors

- ❖ Ideal for applications involving high voltage and high frequency circuits.
- ❖ Constructed using double-sided metallized polyester. Low equivalent series resistance (ESR) and equivalent series inductance (ESL).
- ❖ Self-healing capability.
- ❖ Durable with a low intrinsic temperature rise. Encapsulated with white resin, featuring tinned copper lugs for secure screw mounting.
- ❖ Non-inductive design. High dV/dt performance.



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