



## SURGE PROTECTION CAPACITOR

“MADHAV” SURGE CAPACITORS ARE DESIGNED AND MANUFACTURED AS PER LATEST TECHNOLOGY, COMPLYING WITH **INDIAN** AND **INTERNATIONAL** STANDARDS.

Electrical networks experience surges wherein a voltage or a current rises rapidly to unsafe values and destroys the dielectric insulation. These along with partial discharges are blamed for the majority of failures of electrical equipment of all types.

Surge capacitors work by absorbing the energy from electrical surges, providing protection to the equipment. Lightning or Switching surges can cause damage to the turn-to-turn insulation of rotary machines, transformers. Connecting surge capacitors line to ground at the motor terminals prevents this damage. For a more comprehensive protection scheme, surge capacitors may be used in conjunction with surge arresters. This surge pack modifies both the wave shape and magnitude.

### APPLICATIONS

- High frequency transient over voltage surge suppression
- Protection of HT motors, transformers, switchgears and generators from voltage spikes, surges and other transients etc.
- Reduced medium voltage motor failures from voltage surges due to lightning, faults, and switching events.
- Reduced downtime and material waste from motor failure.
- Power generation and transmission sub stations (Generators, power station auxiliaries).
- Bus duct Protection
- Pumping (Oil pipelines, water pumping stations).
- Chemical and Petrochemicals industries.
- Induction and Arc furnaces.
- Synchronous Condenser.
- Along with Shunt Reactors.

### SAILENT FEATURES

- **Raw materials:** From Reputed Overseas and Genuine Manufacturers.
- **Installation location:** Indoor or Outdoor, Can be mounted vertically or horizontally.
- Enclosed or Open-air configurations.
- Simple to install and requires no maintenance.
- Low loss, Longer life, Environment friendly, Leak-free terminations.
- **Product Range:** 0.1  $\mu$ F, 0.125  $\mu$ F, 0.25  $\mu$ F, 0.5  $\mu$ F.
- **Voltage Range:** 440V to 40kV.
- **Complies to** IS 11548 (1986) and IEC 60871

## MOTOR SURGE PROTECTION PANEL(MSPP)

Design and Dimensions for Standard Surge Capacitor

Rated Voltage	No. of Pole	MFD Per Pole	Figure	Dimensions in mm				Order Code
				Length	Width	A	B	
7.2 kV	1	0.1	1	350	125	150	160	SC-7.2-0.10-1B
7.2 kV	1	0.25	1	350	125	125	160	SC-7.2-0.25-1B
7.2 kV	1	0.5	1	350	125	150	160	SC-7.2-0.50-1B
12 kV	1	0.1	1	350	125	200	243	SC-12-0.10-1B
12 kV	1	0.25	1	350	125	150	243	SC-12-0.25-1B
12 kV	1	0.5	1	350	125	200	243	SC-12-0.50-1B
15 kV	1	0.15	1	350	125	175	243	SC-15-0.15-1B
15 kV	1	0.25	1	350	125	175	243	SC-15-0.15-1B
24 kV	1	0.125	1	350	125	250	268	SC-24-0.125-1B
24 kV	1	0.25	1	350	125	250	268	SC-24-0.25-1B
24 kV	1	0.5	1	350	125	425	268	SC-24-0.50-1B
33 kV	1	0.125	1	350	125	250	375	SC-33-0.125-1B
33 kV	1	0.25	1	350	125	315	375	SC-33-0.25-1B
40 kV	1	0.125	1	350	375	400	820	SC-40-0.125-1B
40 kV	1	0.25	1	350	375	425	820	SC-40-0.25-1B

“MADHAV” offers Motor Surge Protection Panel (MSPP) to protect High Voltage Motors and Generators. Specially designed Surge Capacitors are connected in parallel with Station Class, Metal Oxide Lightning Arrestors.

The Combination of Surge Capacitor and Surge Arrestor results into reducing turn-to-turn insulation stress.

FIGURE 1

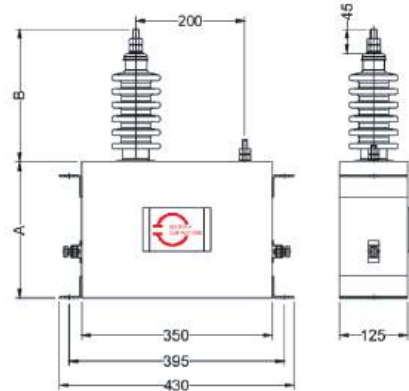
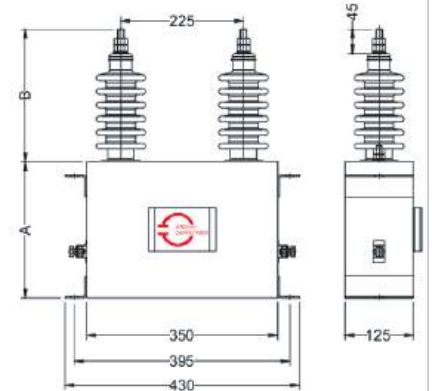


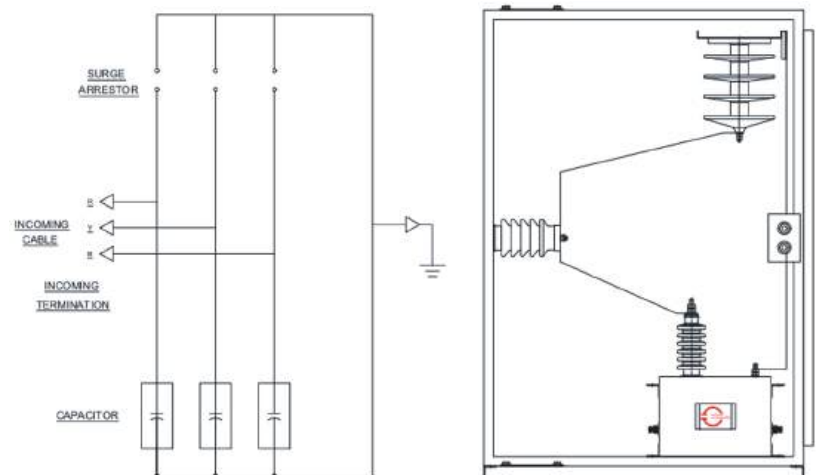
FIGURE 2



Note: Surge Capacitors with two bushings (Figure 2) available on request. 3 phase Surge Capacitor on request

### MAJOR ITEMS IN MSPP

- Heavy Duty Surge Capacitor
- Metal Oxide, Station Class Lightning Arrestor
- Suitable sized Busbar Support Insulators
- Copper Busbars
- Common Ground Connection
- Sheet Metal Enclosure
- Removable Gland Plate arrangement from top and bottom side



Standard Drawing for Motor Surge Protection Panel

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