

High voltage reactors

Grid Solutions' high voltage reactors offering is divided in:

HV AIR-CORE REACTORS

- HV air-core shunt reactors
- HV air-core current-limiting reactors
- HV air-core neutral-earthling reactors
- HV air-core power flow control reactors
- HV air-core motor starting reactors
- HV air-core arc-furnace series reactors
- HV air-core damping reactors
- HV air-core harmonic filter reactors
 - HV air-core detuned filter reactors
 - HV air-core tuned filter reactors
- HV air-core discharge reactors
- HV air-core smoothing reactors
- HV air-core reactors for special applications
 - HV air-core SVC reactors (TS R and TCR)
 - HV air-core test lab reactors



HV IRON-CORE REACTORS

- HV iron-core harmonic filter reactors
 - HV iron-core detuned filter reactors
 - HV iron-core tuned filter reactors



HV ENCAPSULATED REACTORS

- HV encapsulated damping reactors

HV ENCAPSULATED DAMPING REACTORS

When capacitor banks are switched on, this connection causes voltage transients and very high inrush currents. Damping reactors installed in capacitor banks limit the current transients to acceptable values for the capacitor units and reduce surge currents to acceptable values for the corresponding switching devices.

Advantages

- Increase of switching equipment life
- Increase of capacitor units life

Applications

- Capacitor banks formed by several steps
- Several capacitor banks connected in the same busbar
- Installations with very high network short-circuit power in relation to the power of the capacitor bank to be connected

HV IRON-CORE REACTORS

The filter reactors are connected in series with the capacitor units to form a series resonant circuit with a very low impedance.

Advantages

- Reactive power compensation (power factor correction) in networks with harmonics
- Reduction of inrush currents that flow from step to step of the capacitor banks when switched
- Avoiding the risk of resonance as the LC circuit is having a resonance frequency below the first existing harmonic
- Decrease the level of harmonic distortion as the circuit is also having a certain tuning frequency at which the branch will offer a low impedance path for harmonic currents

Applications

- Capacitor banks formed by several steps
- Several capacitor banks connected in the same busbar
- Capacitor bank installations with risk of resonance or with presence of harmonics



HV AIR-CORE REACTORS

Air-core dry-type reactors provide a linear response of impedance versus current that is essential to numerous applications. They are mainly employed in electric power transmission and distribution systems as well as in electric power systems of electrical plants. They are installed to protect these systems and to increase their efficiency. These reactors are also used in electrical test laboratories and research institutions.

Advantages

- No ferromagnetic saturation
- Good linearity degree
- Minimum maintenance
- Safe operation
- Environmentally friendly
- Dry-type construction

Applications

- Power generation
- T&D networks
- Industrial sites
- Electrical test laboratories

