

High voltage special capacitor units

HIGH VOLTAGE SURGE PROTECTION CAPACITOR UNITS

Medium voltage rotating machines and transformers can be exposed to abnormal voltages (transient overvoltages or surges) due to internal or external reasons. The causes are:

- Capacitor bank switching on the connected power systems
- Operation of vacuum circuit breakers
- System faults
- Lightning

These surges can cause damage to the turn-to-turn insulation of rotating machines and transformers. Connecting surge capacitor units from line to ground prevents this damage by bringing down the steepness or slope of over voltage transients.

The surge capacitor units must be designed to withstand and absorb damped or oscillatory line disturbances without affecting the mains frequency performance at the point of common coupling.

Applications

- Large motors and generators
- MV switchgear and motor control centers
- Large transformers
- Shunt reactors

HV 1-phase surge protection capacitor units

- Electrical features:
 - Rated voltage: up to 21 kV
 - Rated frequency: 50 Hz or 60 Hz
 - Capacitance: 0.1 F - 0.5 F
 - Element fuses: fuseless design
 - Internal discharge resistors as standard
 - 1 or 2 bushings design
 - Insulation level: up to 70/170 kV
 - Standard capacitance tolerance: -5%...+10%
 - Total losses: under 0.14 W/kVAr
 - Standard: IEC 60871, IEC 60871-1



HIGH VOLTAGE INDUCTION HEATING INSTALLATION CAPACITOR UNITS

These capacitor units are designed for the oscillatory circuits of induction heating equipment. They tune the circuits to obtain a resonant frequency close to the power supply frequency.

Advantages

- Improving the low power factor of these installations
- Improving the electrical circuit properties

Applications

- Heat treatment furnaces
- Billet heating furnaces
- Forging and casting furnaces
- Melting furnaces

HV 1-phase induction heating installation capacitor units

- Electrical features:
 - Rated voltage: up to 3 kV
 - Rated frequency: 50 Hz or 60 Hz
 - Rated power:
 - > 50 Hz: up to 600 kVAr
 - > 60 Hz: up to 600 kVAr
 - Element fuses: internal fuse or fuseless designs
 - Internal discharge resistors as standard
 - 2 bushings design
 - Insulation level: up to 10/40 kV
 - Standard capacitance tolerance: -5%...+10%
 - Total losses: under 0.2 W/kVAr
 - Standard: IEC 60110, IEC 60871-1