High voltage parallel capacitor fuse selection

What is a high voltage capacitor fuse?

For high voltage capacitor fuses,this is generally defined as 8.3,15.5 or 23 kV,the distribution system maximum voltages. Other voltage ratings may be available for special applications. When a capacitor fails,the energy stored in its series group of capacitors is available to dump into the combination of the failed capacitor and fuse.

How do I choose a shunt capacitor fuses?

For shunt capacitor applications, the energy is equal to 3.19 joules per kVar. The available energy is then compared to the rating of the fuse and capacitor unit. This is one criteria for selecting either expulsion or current-limiting fuses for a given application. If the parallel energy is above 20 kJ or 6000 kVar, we apply current-limiting fuses.

What is the maximum voltage a fuses can clear against?

The maximum power system voltage that the fuse can clear against. For high voltage capacitor fuses,this is generally defined as 8.3,15.5 or 23 kV,the distribution system maximum voltages. Other voltage ratings may be available for special applications.

How does a capacitor fault affect a fuse?

Either of these two effects can impede the proper operation of the fuse. In the event of a capacitor fault, excess current will flow through the fuse of the faulted unit. This current causes the fuse element to melt and vaporize. An arc will form across the vaporized section within the fuse tube.

Can a clxp fuse be used with multiple capacitors?

The fuse is usually applied to series,large shunt and DC capacitor banks. Because of the high back voltage that is developed,this fuse must be used with several capacitors in parallelto limit the voltage build up,or a flashover may occur elsewhere in the capacitor bank. The CLXP cannot be used in inductively limited fault applications.

What is a capacitor bank protection fuse?

related to the starting of the motor defined in IEC 60644. The capacitor bank protection fuse-links are described in IEC 60549 (High-voltage fuses for the external protection of shunt capacitors) . Also in this case the fuse should meet the requirements described in the general standard IEC 6028

The new HHA-BC current-limiting "Back-Up" rated series fuse line has been designed for optimum capacitor circuit protection for the North American market meeting requirements for indoor and ...

Low and high breaking capacity ratings typically range from 35A up to 10kA. The short circuit condition in

the final product determines what fuse breaking capacity is needed. o Identify the ...

It explains that capacitor fuses must interrupt fault currents from failed capacitors while withstanding the energy discharged by other parallel capacitors. Expulsion fuses clear faults by expelling a melted element, while current limiting fuses absorb more energy but limit fault current.

ABB High Voltage Fuses Catalogue - Free download as PDF File (.pdf), Text File (.txt) or read online for free. Current limiting fuses protect electrical apparatus like distribution transformers, motors, capacitor banks against overload currents. The fuses can operate as sole devices or can be combination with air / SF6 insulated switch disconnector.

Step 3: Determine the minimum value of the I2t-value of the fuse. Step 4: Selection of the correct fuse rating and part number from SCHURETR"s product line. The higher value determines the ...

The new HHA-BC current-limiting "Back-Up" rated series fuse line has been designed for optimum capacitor circuit protection for the North American market meeting requirements for indoor and outdoor usage. The HHA-BC capacitor fuse voltage rating is equal to or greater than the maximum open circuit voltage that the system

fuse-element in high-voltage fuses is high purity silver. Due to the high temperatures of the fuse-links observed during operation at rated conditions, the use of a material like copper may result in an unjustified breaking of the fuse-element as a result of oxidation processes. High-voltage fuses using copper may also change their

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