SPGL Medium Voltage Capacitors

SPGL Medium Voltage Capacitors are designed for power factor correction and harmonics filtration at medium voltage power system. SPGL Medium Voltage capacitor are all-film dielectric impregnated with an environmentally friendly, non-toxic biodegradable insulating oil or oil mixed with special gas.

The SPGL Medium Voltage capacitors are internally fused and internal discharge resistors,comply fully with IEC(EN) 871. Single phase and three phase configurations are available.

Single phase Medium Voltage power capacitor is an application of the connection of star, double star in 6-550kv power systems.

Three phase Medium Voltage capacitors are specifically designed for PFC of transformers and large motors. Protected with HCR fuses and the rates are 3.3 kV - 5.5 kV - 6.3 kV - 11 kV, insulation class 12kV.

The filter power capacitor is high current ability designed according the harmonics system, specifically as pure power filter.

Advantages

- Improving power factor
- Decreasing voltage drop
- Reducing line losses
- Harmonic filter application

Features

- Long life cycle (200,000 hours)
- Highest pulse current withstand capability
- Corona-free
- Very low losses
- Internal fuse protection
- Terminal for high capacity cables with steel assistant

Mounting

- Reduced mounting costs
- Any position mounting is available
- Maintenance-free

Environment

- Non-pollution, PCB free
- Environmentally friendly manufactured
- Recyclable
- Easy to dispose

Safety

- Oil mixed with special protection gas filled
- Internal protection fuse with the weak point
- Plus pressure inside the cane
- Non-flammable
- Robust terminals
- Strong design of the end steel case

Specification

System Voltage (kV)	U_0	6,10,12,24,35,110,132,245,500
Rated voltage capacitor	Un	3640 V; 4200V; 6350 V; 7350 V, 11000 V,24000V,35000V (other voltage on request)
Frequency	fn	50/60Hz
Max. Over Voltage(V)	U_{max}	1.1Un (up to 8 hours daily),1.15Un (up to 30 minutes daily) 1.2Un (up to 5 minutes), 1.3Un (up to 1 minutes)
Over-Current(A)	I_{max}	1.3 In
Capacitance Tolerance(μF)	Cn	-5 % +10%
Test Voltage, Terminal/ Terminal	U_{TT}	4.3 Un DC, 10 s or 2.15Un AC, 10 s
Test Voltage, Terminal/ Case	U_{TC}	According to relevant IEC standard for 10 s
Insulating Levels(kV)		10/40 kV; 20/60 kV; 28/75 kV; 38/95 kV; 50/125 kV
Dielectric & Capacitors losses		0.15 W / kvar & 0.5 W / kvar (with discharge resistors)
Life Expectancy		>200000 hours
IP Rating		IP00, IP42 on request, indoor and outdoor
Ambient Temperature Category		-40 /50℃ or on request
Cooling		Natural by air
Humidity		maximum 95 %
Max Altitude		1000 m above sea level Max.4000m.
Mounting Position		Any position
Mounting		Side brackets
Safety Features		Internal fuses (or without fuse)
Case		Square - steel for indoor - steel with Zn layer or stainless steel for outdoor
Dielectric		Polypropylene film (all film), oil with protection gas.
Impregnation		Environmentally friendly, non toxic(non-PCB)
Terminals		Porcelain, welded
Discharge Resistors		Included -75V, 3 min, and 50V ,5min,or on request
Standards		IEC60871-1:1997 EN 60871-1: 1997 EN CSN 60871-1; 1999 IEC 60871-4:1997 EN 60871-4: 1997 EN CSN 60871-4; 1999

SPGL STANDARD-POWER

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Internal fuse

●Fig.1: When the voltage of the units close to its maximum amplitude, that is, at zone current, in this case, it is power stored in the capacitance of the parallel elements which best guarantees a current sufficient to rupture the internal fuse.

●Fig.2: When the voltage of the units close to the zone, that is, at zone to maximum current, in this case, it is line current circulating in the capacitor assembly which ensures breaking of the internal fuse.

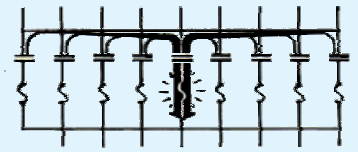


fig1

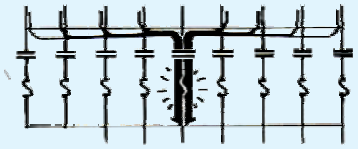
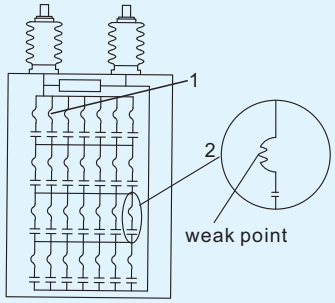


fig2

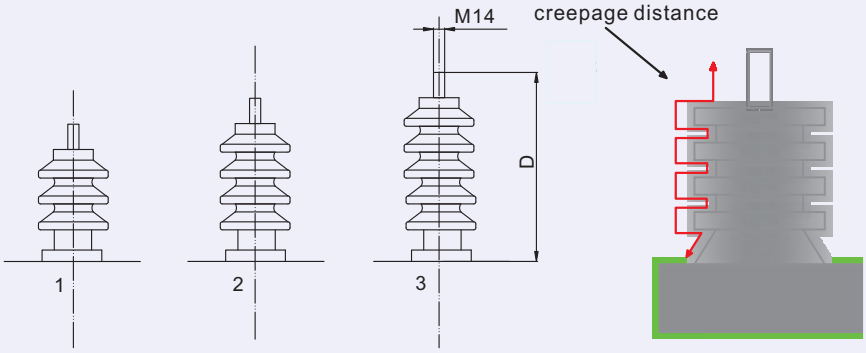


Execllent internal fuse & discharge system
1. Discharge resistor.
2. Internal fuse with the weak point.

Bushing

Bushing flange is welded to the capacitor case,forming an extremely strong hermetic seal with fewer leaks than soldered bushings.Bushing isolation distance according to the IEC standard is as following table:

Type	Highest System Voltage(kV)	BIL (kV)	D (mm)	Creepage Distance(mm)
1	10-12	28/75	>180	>215
2	23-24	50/150	>260	>470
3	35-36	70/170	>305	>575



Other advantages

●Heavy duty flush welded steel bottom with runnings gives supperior strength and durability, runnings keeps weldedseams from dragging on the ground.
●Birds caps offer on increased protection from outages caused by wildlife.
●Two steel beleville washers provide constant enough spring pressure, forcing connectors to follow could flow of conductors. Flattening of washers visually indicates a secure connection.

Filter capacitors

Series rates: medium voltage single phase filter capacitors 50/60Hz.(page 24)
●Heavy-Duty design
●High over current withstand capability
●High over voltage withstand capability
●Harmonic current withstand capability