

Overview

As a basic reactive power component, capacitors are widely used in the power grid and play a very important role. By generating reactive power, they compensate for the reactive power consumption of electric motors, transformers, etc., which can increase the power factor, thereby increasing the transmission capacity and reducing the line loss. The result can be seen in the form of more stable power grid.

Capacitors also constitute a key component in the various filter solutions that reduce harmonic content. A non-distorted sinusoidal voltage without harmonics reduces the risk of problems in the form of disturbances in production equipment, metering errors and malfunctions in relay protection. It also extends the service life of connected equipment.

Sieyuan specializes in R&D, manufacturing, sales and service of power capacitors. We have a complete power capacitor research and development platform. Through the independent innovation of technology, process and service providers, it constantly creates excess value for customers and has become a leading domestic enterprise. The capacitor products offered by Sieyuan include the following:

Device Description	Rated Voltage	Rated Capacity
● Capacitor unit	1~24kV	30~1000kvar
● Capacitor installation		
▶ Power factor correction		
Open rack frame type	6~330kV	From 150kvar
Cabinet type	6~35kV	150~30000kvar
Container type	6~35kV	150~30000kvar
Pole mounted type	6~35kV	100~3000kvar
▶ Harmonic filter	6~330kV	From 150kvar
▶ Series compensation		
Series capacitor installation	220~1000kV	
▶ HVDC transmission and transformation		
DC filter capacitor bank	Up to ±1100kV	
AC filter capacitor bank	Up to 1000kV	
Shunt capacitor bank	Up to 1000kV	

Capacitor unit

■ Application

The capacitors are designed for power factor correction, power quality improvement and transmission line loss reduction in power system.

■ Technical Performance

1. Rated voltage: 1~24kV
2. Rated frequency: 50Hz, 60Hz
3. Rated capacity: 30~1000kvar
4. Continuous operating under 1.05 times rated voltage is permitted and operating under 1.1 times rated voltage up to 12 hours daily is also allowed.
5. Operating under steady over-current (rms) which has the value if 1.3times rated current caused by over-voltage and high harmonic is permitted. Steady over-current reaches 1.37 times rated current is permitted.
6. The tolerance of capacitance is -3%~+3%
7. The tangent of loss angle at rated voltage is less than or equal to 0.00015.
8. The internal resistor could discharge the residue voltage from $\sqrt{2}U_n$ to less than 75V within 10 minutes or from $\sqrt{2}U_n$ to less than 50V within 5 minutes after deenergized.



■ Executive Standard

IEC 60871

ANSI/IEEE standard 18

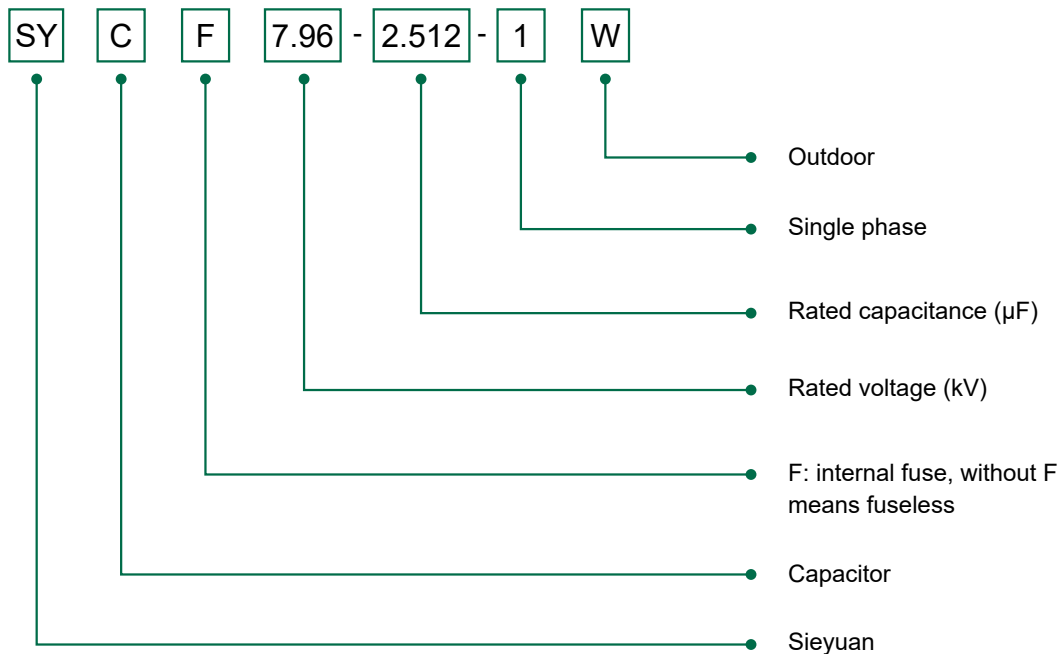
■ Service Condition

1. The altitude above sea level of mounting area does not exceed 2000m (if higher than 2000m, it is necessary to make an explanation when ordering).
2. The ambient temperature of mounting area should be -40℃ ~+55℃ (if operating under exceptional environment, it is necessary to make an explanation when ordering).
3. Mounting spot: Outdoor or indoor.

■ Product Advantage

1. High-quality raw material: adopt the imported high-quality double-side roughened polypropylene film, Ultra-thin aluminum foil and benzyl toluene for improving the electric performance of the product.
2. Foil edges auto-folding in order to improve the distribution of electric field and the level of partial discharge, the edges of aluminum foil are folded.
3. Internal fuse: Fuse with patented technology and structure in isolated elements can eliminate refusal-to-move, maloperation and group blasting of fuses. The capacitors become safer.
4. Internal fuse welding machine: Substitute the traditional element-fuse manual welding, adopt eddy-current electric soldering iron to control the welding temperature accurately. Automatic filling tin welding could control welding speed, dosage and achieve better quality. This technology is leading the industry.
5. Automatic Tungsten pulse argon arc welding (TIG welding): The welding of capacitor casing, the welding of container wall and top cover, the welding of lifting ear and casing are finished by robot station. The welding is smooth, graceful, firm and leakage free.
6. Shot-blasting treatment: Remove dirt and oxide layer of stainless steel, and make the surface roughness to increase the adhesion of paint, and effectively inspect welding quality.
7. Painting robot: By using imported painting robot and ultra-high-speed electrostatic spray gun, the painting surface is smooth, delicate and graceful.

■ Model and explanation



Double bushing

Lightning impulse withstand voltage kV (peak value)	125kV	150kV	200kV
Number of umbrella	10	13	16
H2/mm	310	370	420
Minimum arc distance/mm	240	300	360
Creepage distance/mm	610	800	1000
Clear distance between bushings/mm	160	160	160

Single bushing

Lightning impulse withstand voltage kV (peak value)	125kV	150kV	200kV
Number of umbrella	10	13	16
H2/mm	310	370	420
Minimum arc distance/mm	240	300	360
Creepage distance/mm	610	800	1000

50Hz, fuleless

Model	Voltage/ kV	Capacitance/ μF	Frequency/ Hz	Capacity/ kvar	Bushing No.	Dimension						Weight(kg)		
						h/ mm	W/ mm	L/ mm	H1/mm			125kV	150kV	200kV
									125kV	150kV	200kV			
SYC4.3-34.43-1W	4.3	34.430	50	200	2	100	138	343	475	-	-	37	-	-
SYC5-25.465-1W	5	25.465	50	200	2	100	138	343	475	-	-	37	-	-
SYC7.96-2.512-1W	7.96	2.512	50	50	2	80	138	343	180	-	-	18	-	-
SYC7.96-5.024-1W	7.96	5.024	50	100	2	100	138	343	275	-	-	24	-	-
SYC7.96-7.536-1W	7.96	7.536	50	150	2	100	138	343	375	-	-	31	-	-
SYC7.96-10.047-1W	7.96	10.047	50	200	2	100	138	343	475	-	-	37	-	-
SYC7.96-15.071-1W	7.96	15.071	50	300	2	200	138	343	650	-	-	48	-	-
SYC7.96-20.095-1W	7.96	20.095	50	400	2	200	178	343	675	-	-	61	-	-
SYC8.66-4.244-1W	8.66	4.244	50	100	2	100	138	343	275	-	-	24	-	-
SYC8.66-8.489-1W	8.66	8.489	50	200	2	100	138	343	450	-	-	37	-	-
SYC13.2-1.827-1W	13.2	1.827	50	100	2	100	138	343	275	300	-	24	27	-
SYC13.2-3.654-1W	13.2	3.654	50	200	2	100	138	343	450	475	-	36	38	-
SYC13.28-0.902-1W	13.28	0.902	50	50	2	80	138	343	180	200	-	18	21	-
SYC13.28-1.805-1W	13.28	1.805	50	100	2	100	138	343	275	275	-	24	25	-
SYC13.28-2.707-1W	13.28	2.707	50	150	2	100	138	343	375	375	-	30	32	-
SYC13.28-3.611-1W	13.28	3.610	50	200	2	100	138	343	450	475	-	35	38	-
SYC13.28-5.415-1W	13.28	5.415	50	300	2	200	178	343	525	525	-	49	50	-
SYC13.8-0.836-1W	13.8	0.836	50	50	2	80	138	343	180	200	-	18	21	-
SYC13.8-1.671-1W	13.8	1.671	50	100	2	100	138	343	275	275	-	24	25	-
SYC13.8-2.507-1W	13.8	2.507	50	150	2	100	138	343	350	375	-	29	32	-
SYC13.8-3.343-1W	13.8	3.343	50	200	2	100	138	343	450	450	-	35	36	-
SYC13.8-5.014-1W	13.8	5.014	50	300	2	200	178	343	500	525	-	47	50	-
SYC14.4-0.768-1W	14.4	0.768	50	50	2	80	138	343	180	200	-	18	21	-
SYC14.4-1.535-1W	14.4	1.535	50	100	2	100	138	343	275	300	-	24	27	-
SYC14.4-2.303-1W	14.4	2.303	50	150	2	100	138	343	375	400	-	30	34	-
SYC14.4-3.071-1W	14.4	3.070	50	200	2	100	138	343	475	500	-	37	40	-
SYC14.4-4.605-1W	14.4	4.605	50	300	2	200	178	343	525	525	-	49	50	-
SYC19.92-0.401-1W	19.92	0.401	50	50	1	200	138	343	-	200	200	-	18	19

50Hz, fuleless

Model	Voltage/ kV	Capacitance/ μF	Frequency/ Hz	Capacity/ kvar	Bushing No.	Dimension						Weight(kg)		
						h/ mm	W/ mm	L/ mm	H1/mm			125kV	150kV	200kV
									125kV	150kV	200kV			
SYC19.92-0.802-1W	19.92	0.802	50	100	1	200	138	343	-	300	300	-	24	25
SYC19.92-1.203-1W	19.92	1.203	50	150	1	200	138	343	-	400	400	-	30	32
SYC19.92-1.604-1W	19.92	1.604	50	200	1	200	138	343	-	500	500	-	37	38
SYC19.92-2.407-1W	19.92	2.407	50	300	1	200	178	343	-	525	525	-	47	48

50Hz Internal Fuse

Model	Voltage/ kV	Capacitance/ μF	Frequency/ Hz	Capacity/ kvar	Bushing No.	Dimension						Weight(kg)		
						h/ mm	W/ mm	L/ mm	H1/mm			125kV	150kV	200kV
									125kV	150kV	200kV			
SYCF4.3-34.43-1W	4.3	34.430	50	200	2	100	138	343	475	-	-	38	-	-
SYCF5-25.465-1W	5	25.465	50	200	2	100	138	343	475	-	-	38	-	-
SYCF7.96-10.047-1W	7.96	10.047	50	200	2	100	138	343	500	-	-	38	-	-
SYCF7.96-15.071-1W	7.96	15.071	50	300	2	200	138	343	675	-	-	61	-	-
SYCF7.96-20.095-1W	7.96	20.095	50	400	2	200	178	343	700	-	-	63	-	-
SYCF11/2-43.879-1W	11/2	43.879	50	417	2	200	178	343	700	-	-	64	-	-
SYCF11/2-52.613-1W	11/2	52.613	50	500	2	200	178	343	800	-	-	72	-	-
SYCF12/2-36.871-1W	12/2	36.871	50	417	2	200	178	343	700	-	-	64	-	-
SYCF12/2-44.21-1W	12/2	44.210	50	500	2	200	178	343	800	-	-	72	-	-
SYC19.92-2.407-1W	19.92	2.407	50	300	1	200	178	343	-	525	525	-	47	48

60Hz, fuseless

Model	Voltage/ kV	Capacitance/ μF	Frequency/ Hz	Capacity/ kvar	Bushing No.	Dimension						Weight(kg)		
						h/ mm	W/ mm	L/ mm	H1/mm			125kV	150kV	200kV
									125kV	150kV	200kV			
SYC4.3-28.692-1W	4.3	28.692	60	200	2	100	138	343	400	-	-	33	-	-
SYC5-21.221-1W	5	21.221	60	200	2	100	138	343	400	-	-	33	-	-
SYC7.96-2.093-1W	7.96	2.093	60	50	2	80	138	343	180	-	-	18	-	-
SYC7.96-4.186-1W	7.96	4.186	60	100	2	100	138	343	275	-	-	25	-	-
SYC7.96-6.28-1W	7.96	6.280	60	150	2	100	138	343	325	-	-	27	-	-
SYC7.96-8.373-1W	7.96	8.373	60	200	2	100	138	343	425	-	-	34	-	-
SYC7.96-12.559-1W	7.96	12.559	60	300	2	200	138	343	600	-	-	45	-	-
SYC7.96-16.746-1W	7.96	16.746	60	400	2	200	178	343	575	-	-	53	-	-
SYC8.66-3.537-1W	8.66	3.537	60	100	2	100	138	343	250	-	-	23	-	-
SYC8.66-7.074-1W	8.66	7.074	60	200	2	100	138	343	400	-	-	33	-	-
SYC13.2-1.522-1W	13.2	1.522	60	100	2	100	138	343	250	250	-	23	24	-
SYC13.2-3.045-1W	13.2	3.045	60	200	2	100	138	343	400	400	-	33	34	-
SYC13.28-0.752-1W	13.28	0.752	60	50	2	80	138	343	180	180	-	18	19	-
SYC13.28-1.504-1W	13.28	1.504	60	100	2	100	138	343	250	250	-	23	25	-
SYC13.28-2.256-1W	13.28	2.256	60	150	2	100	138	343	325	350	-	27	30	-
SYC13.28-3.008-1W	13.28	3.008	60	200	2	100	138	343	400	425	-	32	35	-
SYC13.28-4.512-1W	13.28	4.512	60	300	2	200	138	343	550	575	-	42	45	-
SYC13.8-0.696-1W	13.8	0.696	60	50	2	80	138	343	180	200	-	18	21	-
SYC13.8-1.393-1W	13.8	1.393	60	100	2	100	138	343	250	275	-	23	26	-
SYC13.8-2.089-1W	13.8	2.089	60	150	2	100	138	343	325	325	-	28	29	-

60Hz, fuseless

Model	Voltage/ kV	Capacitance/ μF	Frequency/ Hz	Capacity/ kvar	Bushing No.	Dimension						Weight(kg)		
						h/ mm	W/ mm	L/ mm	H1/mm			125kV	150kV	200kV
									125kV	150kV	200kV			
SYC13.8-2.786-1W	13.8	2.786	60	200	2	100	138	343	400	400	-	33	34	-
SYC13.8-4.179-1W	13.8	4.179	60	300	2	200	138	343	550	550	-	42	43	-
SYC14.4-0.64-1W	14.4	0.640	60	50	2	80	138	343	180	200	-	18	21	-
SYC14.4-1.279-1W	14.4	1.279	60	100	2	100	138	343	250	275	-	23	25	-
SYC14.4-1.919-1W	14.4	1.919	60	150	2	100	138	343	350	350	-	29	30	-
SYC14.4-2.558-1W	14.4	2.558	60	200	2	100	138	343	425	425	-	34	36	-
SYC14.4-3.838-1W	14.4	3.838	60	300	2	200	138	343	550	550	-	42	43	-
SYC19.92-0.334-1W	19.92	0.334	60	50	1	200	138	343	-	200	200	-	17	19
SYC19.92-0.668-1W	19.92	0.668	60	100	1	200	138	343	-	300	300	-	24	25
SYC19.92-1.003-1W	19.92	1.003	60	150	1	200	138	343	-	350	350	-	27	29
SYC19.92-1.337-1W	19.92	1.337	60	200	1	200	138	343	-	425	425	-	32	33
SYC19.92-2.005-1W	19.92	2.005	60	300	1	200	138	343	-	575	575	-	42	43

60Hz, internal fuse

Model	Voltage/ kV	Capacitance/ μF	Frequency/ Hz	Capacity/ kvar	Bushing No.	Dimension						Weight(kg)		
						h/ mm	W/ mm	L/ mm	H1/mm			125kV	150kV	200kV
									125kV	150kV	200kV			
SYCF4.3-28.692-1W	4.3	28.692	60	200	2	100	138	343	425	-	-	35	-	-
SYCF5-21.221-1W	5	21.221	60	200	2	100	138	343	450	-	-	36	-	-
SYCF7.96-8.373-1W	7.96	8.373	60	200	2	100	138	343	450	-	-	35	-	-
SYCF7.96-12.559-1W	7.96	12.559	60	300	2	200	138	343	600	-	-	45	-	-
SYCF7.96-16.746-1W	7.96	16.746	60	400	2	200	178	343	600	-	-	55	-	-
SYCF11/2-36.566-1W	11/2	36.566	60	417	2	200	178	343	600	-	-	56	-	-
SYCF11/2-43.844-1W	11/2	43.844	60	500	2	200	178	343	700	-	s	64	-	-
SYCF12/2-30.726-1W	12/2	30.726	60	417	2	200	178	343	600	-	-	55	-	-
SYCF12/2-36.841-1W	12/2	36.841	60	500	2	200	178	343	700	-	-	63	-	-

