

Taizhou Dingfeng Electric Appliance Co., Ltd.

**CAPACITOR**

**Ding  
feng**

# Welcome to Dingfeng

Taizhou Dingfeng Electric Appliance Co.,Ltd.(also called Wenling Shanshi Capacitor Manufactory) was founded in 1989,a professional manufacturer of world-class metalized polypropylene film capacitors, aluminum electrolysis capacitors, power Capacitor, intelligent combined low-voltage power Capacitor, also include CJ19 Series switching capacitor contactor,reactive power compensation controller and single/three phase series reactor dedicated in capacitor.

We are located at Shanshi industrial Zone,Daxi Town,Wenling City,Zhejiang Province.Our company occupies an area of 12000 square meters, with qualified employees of 200 staff members.

We operate our company according to ISO9001 Quality Control Standard strictly. Our products are highly reputed for their good quality and have received great praise from customers. Up to now, we have passed ISO9001,CQC,ROHS,UL,TUV and CE certifications.

We always abide by the principle of quality first, user foremost, punctual delivery, continuous improvement and customers' satisfaction. We cordially provide consumers from home and abroad with first-class products and service. Welcome to visit our company with suggestions and advice.



# Capacitor...

ADVANCED EQUIPMENT;  
NORMALIZED OPERATION  
PERFECT QUALITY CONTROL SYSTEM

Taizhou Dingfeng Electric Appliance Co., Ltd. [Http://www.dfcapacitor.com](http://www.dfcapacitor.com)





# HONOR



## General Description

The low voltage shunt capacitor of self-healing produced by our company has applied the Zn-Al complex metalized film, which is the most advanced in our country at present. It also adopts the advanced foreign production technology and techniques as well as the leading-edge equipment from Japan and Korea. This kind of capacitor is produced strictly according to the international GB/T12747-2004 and the international standard of IEC60831-1 (1996). It is mainly used for enhancing the power factor of the network, reducing the reactive loss and improving the voltage quality.



## Using conditions

**Indoor use only**

**Temperature range:** -25°C~50°C

**Humidity RH:** <85%

**Altitude:** <2000m

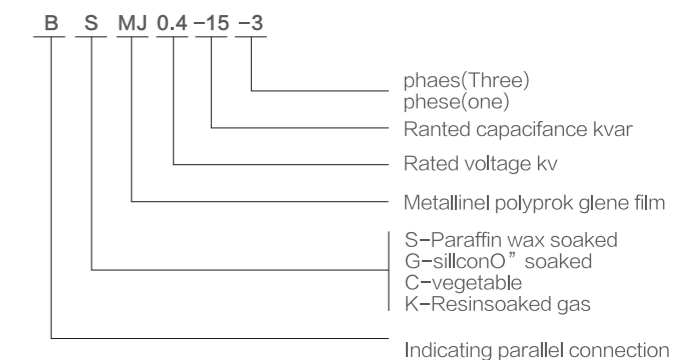
**Installation places:** No harmless gas and steamed gas; no inductive and explosive dust; no violent vibration.

**Ventilation and heat emission:** When more than two capacitors are mounted, the mounting gap shall be larger than 30mm. Further more, some effective measures for heat emission shall be taken during hotter times in summer.

## Features

- 1.Small volume, light weight: its volume and weight are only 1/4 or 1/5 of the previous products.
- 2.Low loss: the angle tangent value of the actual loss is less than 0.01%, which contributes to the low energy consumption for the capacitor itself, little heat and small temperature rise. Therefore, its service life is longer and the energy conservation effect is better.
- 3.Excellent self-healing performance: When a part of the isolation is punctured through due to the over voltage, the product is capable of quick self-healing, which makes it continue to work as usual, thus the reliability is greatly improved.
- 4.Safety: it is equipped with self-discharging resistant and safety devices inside. The inner self-discharging resistant can discharge the attached electric power within the capacitor, so that the safety device can cut off the electricity supply in time once there is something wrong with the capacitor. Consequently, the malfunction is hindered from further development and the usage safety is ensured.
- 5.No oil leakage: the capacitor has applied advanced half-solid soak materials whose melting point is higher than 70°C. This kind of material is environmentally friendly, which avoids pollution. Further more, the capacitor will not lose efficacy because of oil leakage either.

## Model and Implication



## Technical parameters

Rated voltage :	230VAC 250VAC 400VAC 525VAC 690VAC750VAC 1140VAC
Rated capacitance :	1-60kvar
Capacitance tolerance:	-5~+10%
Tangent of the loss angle :	≤0.15%
Inter-dynode voltage limit :	2.15Un.2s
Voltage limit between electrode shells :	3KV(AC)10s&3.6KV(AC)2s
Insulation:	500VDC among the phases 1min more than 100 MΩ
Max allowable voltage:	110% of rated voltage
Max allowable current:	130% of rated voltage
Self-discharging characteristic:	Within 3 min after switching off the power supply, the rest voltage drops to 50V or below.

## Appearance and installation size ( the printing type)

( four dimensional drawings 0.4kV-0.69kV)

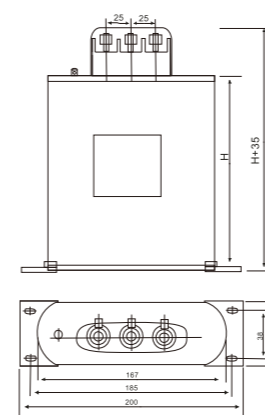


Figure 4

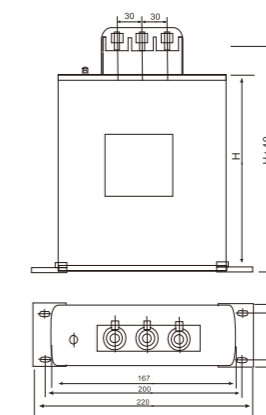


Figure 5

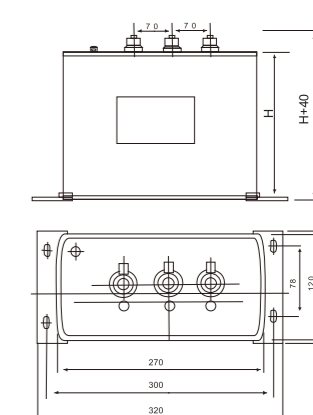


Figure 6

**Table 1 General & Dimension (0.4KV SERIES)**

Type	Rated voltage (KV)	Rated frequency (Hz)	Rated capacitance (Kvar)	Rated capacitance (μF)	Rated current (A)	Dimension(L × D × H) the printing type	
BSMJ0.4-1-3(1)	0.4	50	1	19.9	1.4	Figure 4	167 × 60 × 105
BSMJ0.4-2-3(1)			2	39.8	2.9		167 × 60 × 105
BSMJ0.4-3-3(1)			3	59.7	4.3		167 × 60 × 105
BSMJ0.4-4-3(1)			4	79.6	5.8		167 × 60 × 105
BSMJ0.4-5-3(1)			5	99.5	7.2		167 × 60 × 105
BSMJ0.4-6-3(1)			6	119.4	8.7		167 × 60 × 105
BSMJ0.4-7.5-3(1)			7.5	149.3	10.1		167 × 60 × 125
BSMJ0.4-8-3(1)			8	159.2	11.5		167 × 60 × 125
BSMJ0.4-10-3(1)			10	199	14.4		167 × 60 × 175
BSMJ0.4-12-3(1)			12	238.9	17.3		167 × 60 × 175
BSMJ0.4-14-3(1)			14	278.7	20.2	167 × 60 × 205	
BSMJ0.4-15-3(1)			15	298.6	21.7	167 × 60 × 205	
BSMJ0.4-16-3(1)			16	318.5	23.1	167 × 60 × 205	
BSMJ0.4-18-3(1)			18	358.3	26	167 × 60 × 125	
BSMJ0.4-20-3(1)			20	398.1	28.9	167 × 60 × 240	
BSMJ0.4-25-3(1)			25	497.6	36.1	167 × 85 × 205	
BSMJ0.4-30-3(1)			30	597.1	43.3	167 × 85 × 245	
BSMJ0.4-40-3(1)			40	796.2	57.7	270 × 120 × 200	
BSMJ0.4-50-3(1)			50	995.2	72.2	270 × 120 × 230	
BSMJ0.4-60-3(1)			60	1194.3	86.6	270 × 120 × 270	

Other capacitance and dimension series can be specified in compliance with customer's request

**Table 1 General & Dimension (0.525KV SERIES)**

Type	Rated voltage (KV)	Rated frequency (Hz)	Rated capacitance (Kvar)	Rated capacitance (μF)	Rated current (A)	Dimension(L × D × H) the printing type	
BSMJ0.525-1-3	0.525	50	1	11.6	1.4	Figure 4	167 × 60 × 105
BSMJ0.525-2-3			2	23.1	2.9		167 × 60 × 105
BSMJ0.525-3-3			3	34.7	4.3		167 × 60 × 105
BSMJ0.525-4-3			4	46.2	5.8		167 × 60 × 105
BSMJ0.525-5-3			5	57.8	7.2		167 × 60 × 105
BSMJ0.525-6-3			6	69.3	8.7		167 × 60 × 105
BSMJ0.525-7.5-3			7.5	86.6	10.1		167 × 60 × 125
BSMJ0.525-8-3			8	92.4	11.5		167 × 60 × 125
BSMJ0.525-10-3			10	115.5	14.4		167 × 60 × 175
BSMJ0.525-12-3			12	138.7	17.3		167 × 60 × 175
BSMJ0.525-14-3			14	161.8	20.2	167 × 60 × 205	
BSMJ0.525-15-3			15	173.8	21.7	167 × 60 × 205	
BSMJ0.525-16-3			16	184.9	23.1	167 × 60 × 205	
BSMJ0.525-18-3			18	208	26	167 × 60 × 125	
BSMJ0.525-20-3			20	231.1	28.9	167 × 60 × 240	
BSMJ0.525-25-3			25	288.9	36.1	167 × 85 × 205	
BSMJ0.525-30-3			30	346.6	43.3	167 × 85 × 245	
BSMJ0.525-40-3			40	462.2	57.7	270 × 120 × 200	
BSMJ0.525-50-3			50	577.7	72.2	270 × 120 × 230	
BSMJ0.525-60-3			60	693.3	86.6	270 × 120 × 270	

**Table 1 General & Dimension (BSML0.45KV SERIES)**

Type	Rated voltage (KV)	Rated frequency (Hz)	Rated capacitance (Kvar)	Rated capacitance (μF)	Rated current (A)	Dimension(L × D × H) the printing type	
BSMJ0.45-1-3	0.45	50	1	15.7	1.28	Figure 4	167 × 60 × 105
BSMJ0.45-2-3			2	31.4	2.56		167 × 60 × 105
BSMJ0.45-3-3			3	47	3.8		167 × 60 × 105
BSMJ0.45-4-3			4	62.8	5.1		167 × 60 × 105
BSMJ0.45-5-3			5	79	6.4		167 × 60 × 105
BSMJ0.45-6-3			6	94	7.7		167 × 60 × 105
BSMJ0.45-7.5-3			7.5	118	9.6		167 × 60 × 125
BSMJ0.45-8-3			8	126	10.3		167 × 60 × 125
BSMJ0.45-10-3			10	157	12.8		167 × 60 × 175
BSMJ0.45-12-3			12	189	15.4		167 × 60 × 175
BSMJ0.45-14-3			14	220	18	167 × 60 × 205	
BSMJ0.45-15-3			15	236	19.2	167 × 60 × 205	
BSMJ0.45-16-3			16	252	20.5	167 × 60 × 205	
BSMJ0.45-18-3			18	283	23.1	167 × 60 × 125	
BSMJ0.45-20-3			20	314	25.7	167 × 60 × 240	
BSMJ0.45-25-3			25	393	32.1	167 × 85 × 205	
BSMJ0.45-30-3			30	472	38.5	167 × 85 × 245	
BSMJ0.45-40-3			40	629	51.3	270 × 120 × 200	
BSMJ0.45-50-3			50	786	64.2	270 × 120 × 230	
BSMJ0.45-60-3			60	943	77	270 × 120 × 270	

**Table 1 General & Dimension (0.69KV SERIES)**

Type	Rated voltage (KV)	Rated frequency (Hz)	Rated capacitance (Kvar)	Rated capacitance (μF)	Rated current (A)	Dimension(L × D × H) the printing type	
BSMJ0.69-1-3	0.69	50	1	6.7	0.8	Figure 4	167 × 60 × 105
BSMJ0.69-2-3			2	13.4	1.7		167 × 60 × 105
BSMJ0.69-3-3			3	20.1	2.5		167 × 60 × 105
BSMJ0.69-4-3			4	26.8	3.3		167 × 60 × 105
BSMJ0.69-5-3			5	33.4	4.2		167 × 60 × 105
BSMJ0.69-6-3			6	40.1	5		167 × 60 × 105
BSMJ0.69-7.5-3			7.5	50.2	5.9		167 × 60 × 125
BSMJ0.69-8-3			8	53.5	6.7		167 × 60 × 125
BSMJ0.69-10-3			10	66.9	8.4		167 × 60 × 175
BSMJ0.69-12-3			12	80.3	10		167 × 60 × 175
BSMJ0.69-14-3			14	93.6	11.7	167 × 60 × 205	
BSMJ0.69-15-3			15	100.3	12.6	167 × 60 × 205	
BSMJ0.69-16-3			16	107	13.4	167 × 60 × 205	
BSMJ0.69-18-3			18	120.4	15.1	167 × 60 × 125	
BSMJ0.69-20-3			20	133.8	16.7	167 × 60 × 240	
BSMJ0.69-25-3			25	167.2	20.9	167 × 85 × 205	
BSMJ0.69-30-3			30	200.7	25.1	167 × 85 × 245	
BSMJ0.69-40-3			40	267.6	33.4	270 × 120 × 200	
BSMJ0.69-50-3			50	334.5	41.8	270 × 120 × 230	
BSMJ0.69-60-3			60	401.4	50.2	270 × 120 × 270	

# BSMJ Slit-phase shunt capacitor of self-healing

# BSMJ Slit-phase shunt capacitor of self-healing



## General description

With the development of reactive compensation technology, we can apply the method of respective three-phase switching of the capacitor as for the three-phase unbalanced load, which means to compensate the reactive power by split phase. In this way, the accuracy of the compensation would be higher and the electricity-saving result would be better. It compensates the shut capacitor by split-phase. As the shell of the capacitor is designed without the neutral point to lead out the connecting terminals, the split phase switching of the capacitor can be conveniently achieved.

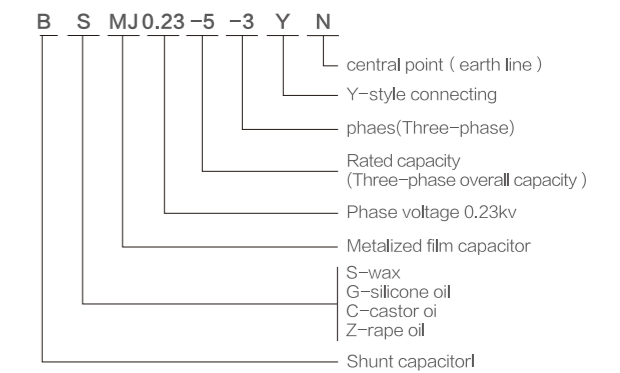
As to the main features, technical indexes, using conditions, appearance and installation size of the product, please refer to the relevant conditions and parameters of low-voltage shunt capacitor of BSMJ series manufactured by our company.



## Structure and connection

- 1.Three single-phase capacitors should be connected like Y, with the neutral point introducing out(mark N end),thus three single-phase capacitors are composed. The AN,BN and CN are independent units during operation.
  - 2.Each independent unit is connected with discharge resistance respectively.
  - 3.Each of the independent units is connected with a over voltage buffer so that they can be cut off immediately if there is any damage.
- Note: the three single-phase capacitor with independent units is also suitable for the split-phase compensation. It is small and convenient, which is deeply appreciated by the users.  
Note: other products with special models will be supplied according to the users' requirements.

## Model and Implication



## Appearance and installation size (the printing type)

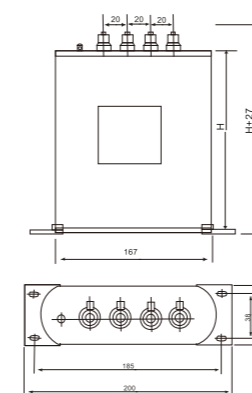


Figure 1

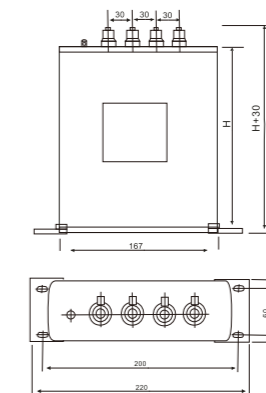


Figure 2

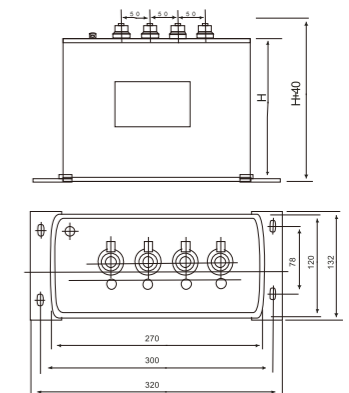


Figure 3

Table 2 BSMJ Shunt Capacitor of Self-healing

Type	Rated voltage (KV)	Rated capacitance (Kvar)	Rated capacitance (μF)		Dimension(L × D × H) the printing type
BSMJ0.23-5-3YN	0.23	5	301	Figure 1	167 × 60 × 175
BSMJ0.23-8-3YN	0.23	8	481		167 × 60 × 175
BSMJ0.23-10-3YN	0.23	10	602		167 × 85 × 205
BSMJ0.23-12-3YN	0.23	12	722	Figure 2	167 × 85 × 205
BSMJ0.23-15-3YN	0.23	15	903		167 × 85 × 245
BSMJ0.23-20-3YN	0.23	20	1204		270 × 120 × 200
BSMJ0.23-25-3YN	0.23	25	1505	Figure 3	270 × 120 × 230
BSMJ0.23-30-3YN	0.23	30	1806		270 × 120 × 270
BSMJ0.25-5-3YN	0.25	5	254		Figure 1
BSMJ0.25-8-3YN	0.25	8	407	167 × 60 × 175	
BSMJ0.25-10-3YN	0.25	10	509	167 × 85 × 205	
BSMJ0.25-12-3YN	0.25	12	611	Figure 2	167 × 85 × 205
BSMJ0.25-15-3YN	0.25	15	764		167 × 85 × 245
BSMJ0.25-20-3YN	0.25	20	1019		270 × 120 × 200
BSMJ0.25-25-3YN	0.25	25	1273	Figure 3	270 × 120 × 230
BSMJ0.25-30-3YN	0.25	30	1528		270 × 120 × 270

# DFMJ

## Columniform capacitor of self-healing



### Appearance and installation size (the column type)

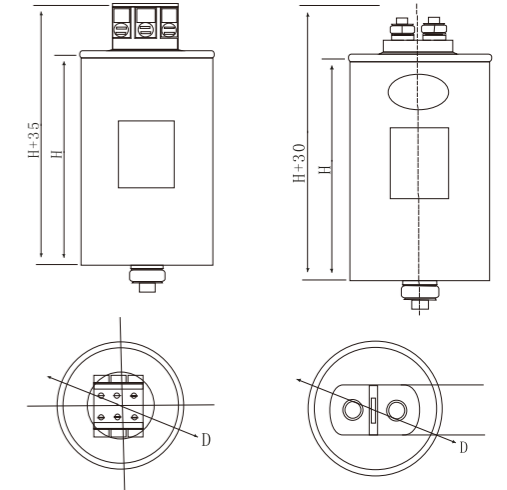


Figure 7

Figure 8

### Features

Designed into column type and mini structure, this product can be installed in any direction. Providing strengthened safety protection, reinforced connection terminals and reactive compensation device parts, it is the first rank product that is more suitable for the power grid.

### Notice to orders

1. The rated voltage of the capacitor should be in accordance with the actual net voltage, and the increased voltage resulted from the capacitor should be taken into consideration. Usually, the actual net voltage would be much higher than the nominal voltage. If the voltage is too low, the service life of the capacitor would be greatly reduced. But it is not the higher, the better because the output of the capacitor will enormously lower down if the high voltage is chosen while the actual voltage is relatively low.
2. Do not test the capacitor is qualified or not by measuring the current. You should measure the capacitance of the capacitor.  
Three-phase capacitor: the actual measured capacitance between any two ends should be half of the total capacitance, which is marked on the capacitor with the error between -5 and +10%.  
Single-phase capacitor: the actual measured capacitance between the two ends should be equal to the total capacitance with the error between -5 and +10%.
3. If the capacitor is used in places of large harmonic wave, some measures of inhibiting the harmonic wave should be adopted, or the harmonic wave may become larger and may even cause resonance because of the capacitor, which would endanger the safety of the network and cause the damage to the capacitor. We can hardly see capacitors working without a series reactor of inhibiting harmonic wave abroad. Compared with the aluminum pole capacitor, the metalized capacitors are more likely to be damaged if being used without the method of inhibiting harmonic wave. Please pay special attention to that. Commutating facilities, middle-frequency devices, and power electronic devices (frequent regulator, controlled silicon voltage regulation, controlled equipment, introverting power devices and switching power supplies), furnace and magnetic iron-core equipment are all the sources of harmonic wave.
4. The capacitance of the ground compensation capacitor should be controlled under a  $I_0$  of the excitation current of the generator, generally 0.9 $I_0$  is considered suitable.
5. Never operate the capacitor and transformer in parallel connection under light load, or the net voltage will rise too much and it may also cause the iron core of the transformer to become saturated, which would result in harmonic waves and one of them might be enlarged by the resonance between the transformer and the capacitor. It can be very dangerous.

**Table3 0.4KV Columniform capacitor of self-healing (0.4KV SERIES)**

Type	Rated voltage (KV)	Rated capacitance (Hz)	Rated capacitance ( $\mu F$ )	Rated current (A)	Dimension(L x D x H) the printing type	Mounting screws
BSMJ0.4-1-3	0.4	50	19.9	1.4	76 x 120	M12
BSMJ0.4-2.5-3			49.8	3.6	76 x 120	M12
BSMJ0.4-5-3			99.5	7.2	76 x 175	M12
BSMJ0.4-6-3			118.4	8.7	76 x 175	M12
BSMJ0.4-8-3			159.2	11.5	76 x 175	M12
BSMJ0.4-10-3			199	14.4	86 x 245	M12
BSMJ0.4-12-3			238.9	17.3	86 x 245	M12
BSMJ0.4-14-3			278.7	20	86 x 245	M12
BSMJ0.4-15-3			298.6	21.7	96 x 245	M16
BSMJ0.4-16-3			318.5	23.1	96 x 245	M16
BSMJ0.4-18-3			358.3	26	106 x 245	M16
BSMJ0.4-20-3			398.1	28.9	106 x 245	M16
BSMJ0.4-25-3			497.6	36.1	116 x 290	M16
BSMJ0.4-30-3			597	43.3	116 x 290	M16

# Ding Feng

CAPACITOR

