BZMJ Self-healing Shunt Capacitor

1.General

1.1 Electric ratings: ≤AC1000V;

1.2 Application: For improvement of power factor and power quality;

1.3 Standards: IEC/EN 60831-1:2014 IEC/EN 60831-2:2014.

2. Type designation

B Z M J □-□-□

- Number of phase
- Rated capacity(kvar)
- Rated voltage(kV)
- Capacitor series

3. Operating conditions

3.1 Ambient temperature: -25℃ ~+50℃

3.2 Relative humidity: ≤50% at 40℃ , ≤90% at 20℃

3.3 Altitude: ≤2000m

3.4 Environmental conditions:without dangerous gas & steam,insulated and explosive dustand dramatic mechanical vibration.

4. Technical data

4.1 Rated voltage: AC(0.23~1.0)kV;

4.2 Rated frequency: 50Hz or 60Hz;

4.3 Rated capacity: 1~60Kvar;

4.4 Capacity error: -5~+10%;

4.5 Dielectric loss tangent value:
≤30kvar tgs≤0.0012
> 30kvar tgs≤0.0015
at rated power frequecy voltage;

4.6 Max. Allowed over-voltage: 1.1Un;

4.7 Max. Allowed over-current: 1.3In (1.6 In, 2h/24h; 2.0 In, 30min/24h);

4.8 Having Self-discharging property: power off,voltage reduces from 2 Un to 75V and below within 3min;

4.9 Specific data;

4.10 Inrush current: 200In;

4.11 Withstand voltage: interelectrode, power frequency 2.15UN, 10s;

4.12 Withstand voltage: pole-to-case, power frequency 3.6kV, 60s;

4.13 Losses : ≤0.2W/kvar.

4.14 Network harmonic requirement : THDU ≤5% , THDI≤20%

4.14 Built-inover voltage protectiondevice , Self-healing technology.

4.16 lifetime : ≥100,000h

Main product models and data sheet

Serial number	Type and Specification	Rated voltage (kV)	Rated capacity (kvar)	Rated frequency (Hz)	Rated capacitor (μF)	Rated current (A)	Enclosure height (mm)	Figure Number
1	BZMJ 0.23-1-3	0.23	1	50 60	60 50	2.5	95	Figure 1
2	BZMJ 0.23-3-3	0.23	3	50 60	181 151	7.5	120	
3	BZMJ 0.23-5-3	0.23	5	50 60	301 251	12.6	140	
4	BZMJ 0.23-6-3	0.23	6	50 60	361 301	15.1	190	
5	BZMJ 0.23-7.5-3	0.23	7.5	50 60	451 376	18.8	190	
6	BZMJ 0.23-10-3	0.23	10	50 60	602 502	25.1	195	Figure 2
7	BZMJ 0.23-12-3	0.23	12	50 60	722 602	30.1	220	
8	BZMJ 0.23-15-3	0.23	15	50 60	904 753	37.7	250	
9	BZMJ 0.23-18-3	0.23	18	50 60	1084 903	45.2	295	
10	BZMJ 0.23-20-3	0.23	20	50 60	1203 1003	50.2	295	
11	BZMJ 0.23-25-3	0.23	25	50 60	1505 1245	62.8	250	Figure 3
12	BZMJ 0.23-30-3	0.23	30	50 60	1805 1504	75.3	315	
13	BZMJ 0.25-1-3	0.25	1	50 60	51 42	2.3	95	Figure 1
14	BZMJ 0.25-3-3	0.25	3	50 60	153 127	6.9	120	
15	BZMJ 0.25-5-3	0.25	5	50 60	255 212	11.5	140	
16	BZMJ 0.25-7.5-3	0.25	7.5	50 60	382 318	17.3	190	
17	BZMJ 0.25-10-3	0.25	10	50 60	510 424	23	195	Figure 2
18	BZMJ 0.25-12-3	0.25	12	50 60	611 510	27.7	220	
19	BZMJ 0.25-15-3	0.25	15	50 60	764 637	34.6	250	
20	BZMJ 0.25-20-3	0.25	20	50 60	1019 849	46.2	295	
21	BZMJ 0.25-25-3	0.25	25	50 60	1274 1062	57.7	250	Figure 3
22	BZMJ 0.25-30-3	0.25	30	50 60 60	1529 1274 124	69.3	315	
23	BZMJ 0.4-3-3	0.4	3	50 60	59.7 49.8	4.3	95	Figure 1
24	BZMJ 0.4-5-3	0.4	5	50 60	99 82.5	7.2	95	
25	BZMJ 0.4-6-3	0.4	6	50 60	119 99	8.7	120	
26	BZMJ 0.4-7.5-3	0.4	7.5	50 60	149 124	10.8	120	
27	BZMJ 0.4-10-3	0.4	10	50 60	199 166	14.4	140	
28	BZMJ 0.4-15-3	0.4	15	50 60	298 248	21.7	190	
29	BZMJ 0.4-16-3	0.4	16	50 60	318 265	23.1	190	
30	BZMJ 0.4-18-3	0.4	18	50 60	358 299	26.0	220	
31	BZMJ 0.4-20-3	0.4	20	50 60	398 332	28.9	220	
32	BZMJ 0.4-25-3	0.4	25	50 60	497 414	36.1	220	Figure 2
33	BZMJ 0.4-30-3	0.4	30	50 60	597 498	43.3	250	
34	BZMJ 0.4-40-3	0.4	40	50 60	796 663	57.7	250	Figure 3
35	BZMJ 0.4-50-3	0.4	50	50 60	995 829	72.7	315	
36	BZMJ 0.4-60-3	0.4	60	50 60	1194 995	86.6	315	
37	BZMJ 0.45-1-3	0.45	1	50 60	15.7 13.1	1.3	95	Figure 1
38	BZMJ 0.45-3-3	0.45	3	50 60	47.2 39.3	3.8	95	
39	BZMJ 0.45-5-3	0.45	5	50 60	79 65.8	6.4	95	
40	BZMJ 0.45-7.5-3	0.45	7.5	50 60	118 98	9.6	120	
41	BZMJ 0.45-10-3	0.45	10	50 60	157 131	12.8	140	
42	BZMJ 0.45-15-3	0.45	15	50 60	236 197	19.2	190	
43	BZMJ 0.45-16-3	0.45	16	50 60	252 210	20.5	190	
44	BZMJ 0.45-18-3	0.45	18	50 60	283 236	23.1	220	
45	BZMJ 0.45-20-3	0.45	20	50 60	314 262	25.7	220	
46	BZMJ 0.45-25-3	0.45	25	50 60	393 328	32.1	280	Figure 2
47	BZMJ 0.45-30-3	0.45	30	50 60	472 393	38.5	250	

Serial number	Type and Specification	Rated voltage (kV)	Rated capacity (kvar)	Rated frequency (Hz)	Rated capacitor (μF)	Rated current (A)	Enclosure height (mm)	Figure Number
48	BZMJ 0.45-40-3	0.45	40	50 60	629 524	51.3	250	
49	BZMJ 0.45-50-3	0.45	50	50 60	786 655	64.2	315	Figure 3
50	BZMJ 0.45-60-3	0.45	60	50 60	943 786	77.0	315	
51	BZMJ 0.48-3-3	0.48	3	50 60	41.5 34.6	3.6	95	
52	BZMJ 0.48-5-3	0.48	5	50 60	69 57.5	6.0	95	
53	BZMJ 0.48-7.5-3	0.48	7.5	50 60	104 86.7	9.0	120	
54	BZMJ 0.48-10-3	0.48	10	50 60	138 115	12.0	140	Figure 1
55	BZMJ 0.48-15-3	0.48	15	50 60	207 173	18.0	190	
56	BZMJ 0.48-16-3	0.48	16	50 60	221 184	19.2	190	
57	BZMJ 0.48-20-3	0.48	20	50 60	277 231	24.0	220	
58	BZMJ 0.48-25-3	0.48	25	50 60	346 288	30.0	220	Figure 2
59	BZMJ 0.48-30-3	0.48	30	50 60	415 346	36.1	250	
60	BZMJ 0.48-40-3	0.48	40	50 60	553 461	48.1	250	
61	BZMJ 0.48-50-3	0.48	50	50 60	691 576	60.1	315	Figure 3
62	BZMJ 0.48-60-3	0.48	60	50 60	829 691	72.2	315	
63	BZMJ-0.525-3-3	0.48	3	50 60	34.7 28.9	3.3	95	
64	BZMJ-0.525-5-3	0.525	5	50 60	58 48	5.5	95	
65	BZMJ-0.525-7.5-3	0.525	7.5	50 60	86.7 72.2	8.2	120	
66	BZMJ-0.525-10-3	0.525	10	50 60	116 96.3	11.0	140	Figure 1
67	BZMJ-0.525-15-3	0.525	15	50 60	173 144	16.5	190	
68	BZMJ-0.525-16-3	0.525	16	50 60	185 154	17.6	190	
69	BZMJ-0.525-20-3	0.525	20	50 60	231 193	22.0	220	
70	BZMJ-0.525-25-3	0.525	25	50 60	289 241	27.5	220	Figure 2
71	BZMJ-0.525-30-3	0.525	30	50 60	346 288	33.0	250	
72	BZMJ-0.525-40-3	0.525	40	50 60	462 385	44.0	250	
73	BZMJ-0.525-50-3	0.525	50	50 60	577 481	55.0	315	Figure 3
74	BZMJ-0.525-60-3	0.525	60	50 60	693 578	66.0	315	
75	BZMJ 0.69-5-3	0.69	5	50	33	4.2	95	
76	BZMJ 0.69-7.5-3	0.69	7.5	50	50	6.3	120	
77	BZMJ 0.69-10-3	0.69	10	50	67	8.4	140	
78	BZMJ 0.69-15-3	0.69	15	50	100	12.6	190	
79	BZMJ 0.69-20-3	0.69	20	50	134	16.7	220	
80	BZMJ 0.69-25-3	0.69	20	50	167	20.9	220	
81	BZMJ 0.69-30-3	0.69	30	50	201	25.1	250	
82	BZMJ 0.69-40-3	0.69	40	50	267	33.5	250	
83	BZMJ 0.69-50-3	0.69	50	50	334	41.8	315	
84	BZMJ 0.69-60-3	0.69	60	50	401	50.2	315	
85	BZMJ 1.20-10-3	1.20	10	50	22	4.8	190	Figure 1
86	BZMJ 1.20-15-3	1.20	15	50	33	7.2	220	
87	BZMJ 1.20-20-3	1.20	20	50	44	9.6	250	Figure 2
88	BZMJ 1.20-30-3	1.20	30	50	66	14.4	250	
89	BZMJ 1.20-40-3	1.20	40	50	88	19.2	315	Figure 3
90	BZMJ 0.4-5-3YN	0.4	5	50	99	7.6	140	
91	BZMJ 0.4-7.5-3YN	0.4	7.5	50	149	10.8	195	
92	BZMJ 0.4-10-3YN	0.4	10	50	199	14.4	195	Figure 2
93	BZMJ 0.4-15-3YN	0.4	15	50	298	21.7	250	
94	BZMJ 0.4-20-3YN	0.4	20	50	398	28.9	295	
95	BZMJ 0.4-25-3YN	0.4	25	50	497	36.1	315	
96	BZMJ 0.4-30-3YN	0.4	30	50	597	43.3	315	Figure 3
97	BZMJ-0.45-5-3YN	0.45	5	50	99	7.6	140	
98	BZMJ-0.45-7.5-3YN	0.45	7.5	50	79	6.4	140	
99	BZMJ-0.45-10-3YN	0.45	10	50	118	9.6	140	
100	BZMJ-0.45-15-3YN	0.45	15	50	157	12.8	195	Figure 2
101	BZMJ-0.45-16-3YN	0.45	16	50	252	20.5	220	
102	BZMJ-0.45-20-3YN	0.45	20	50	314	25.7	250	
103	BZMJ-0.45-25-3YN	0.45	25	50	393	32.1	250	
104	BZMJ-0.45-30-3YN	0.45	30	50	472	38.5	315	Figure 3

Note: The specifications marked with are used for compensating the individual phase,the bigger one of the four terminals should be connected to the neutral line.

5. Features

5.1 Compact design and reliable quality thanks to advanced technology and excellent imported material;

5.2 Available for use in places with higher ambient temperature and voltage variation;

5.3 Having good sealing properties; amd outgoing terminals for convenient wiring and reliable connection;

5.4 Fixed type, convenient for mounting and elegant appearance due to novel mounting pins;

5.5 No painting thanks to coated metal Enclosure used.

6. Note

6.1 Please guarantee that the capacitors are operated under specified conditions,including the proper temperature,voltage and current, as over-voltage and over-current may shorten the life of the capacitor;

6.2 Please pay attention to the points following when the capacitor is shuntly connected in the system

a. For the system of current regulating system and the electric equipments system,the capacitor should not be directly connected;

b. Operational current of the capacitor should be less than the off-load current of the shuntly connected motor;

c. When the transformer is off-load,the capacitor should stop operating.

6.3 Specific switches, contactors and over-current relays should be adopted when the capacitor is shuntly connected in the system.

7. Mounting dimensions (mm)

Figure 1

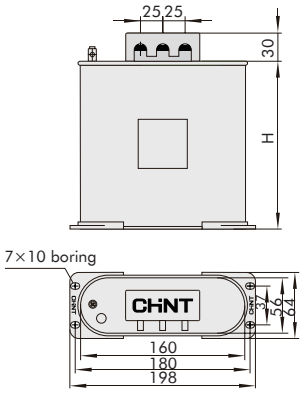

Figure 2

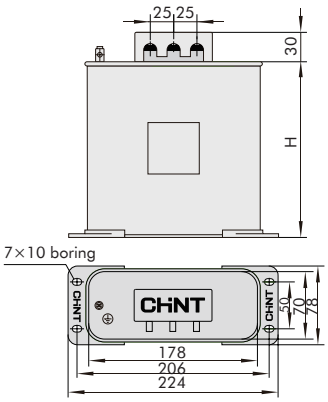
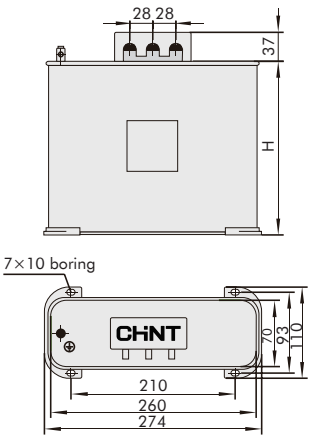
Figure 3