

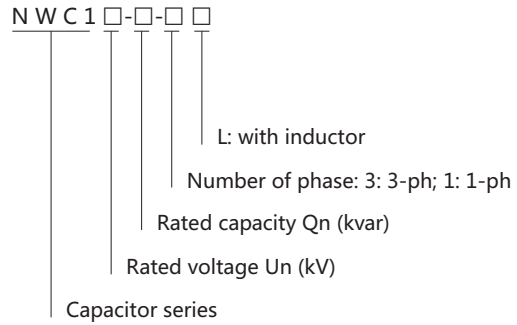


## NWC1 Self-healing Shunt Capacitor

### 1. General

- 1.1 Electric ratings:  $\leq$ 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



### 3. Operating conditions

- 3.1 Ambient temperature:  $-25^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- 3.2 Relative humidity:  $\leq 50\%$  at  $40^{\circ}\text{C}$ ,  $\leq 90\%$  at  $20^{\circ}\text{C}$
- 3.3 Altitude:  $\leq 2000\text{m}$
- 3.4 Environmental conditions:  
without dangerous gas & steam,  
insulated and explosive dust  
and dramatic mechanical vibration.

### 4. Technical data

- 4.1 Rated voltage: 0.4, 0.415, 0.45, 0.525 and 0.69kV
- 4.2 Rated frequency: 50Hz or 60Hz.
- 4.3 Rated capacity: 5~100Kvar
- 4.4 Capacity error:  $-5\% \sim +10\%$ ;
- 4.5 Dielectric loss tangent value:  
 $\leq 30\text{kvar}$   $\text{tgs} \leq 0.0012$   
 $> 30\text{kvar}$   $\text{tgs} \leq 0.0015$   
at rated power frequency voltage.
- 4.6 Max. allowed over-voltage:  $1.1U_n$ , not exceed 8h in 24h;
- 4.7 Max. allowed over-current:  $1.3I_n$ ;
- 4.8 Having Self-discharging property: power off,  
voltage reduces from  $\sqrt{2} U_n$  (DC) to 75V  
and below within 3min.
- 4.9 Model and Specifications
- 4.10 Inrush current: 200 In;
- 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 :  $\leq 0.3\text{W/kvar}$ ;
- 4.14 Expected life :  $\geq 170,000$  h.

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
1	NWC1-0.4-5-3	0.4	5	50	99	7.2	160	Fig.1
2	NWC1-0.4-6-3	0.4	6	50	119	8.7	160	Fig.1
3	NWC1-0.4-7.5-3	0.4	7.5	50	149	10.8	160	Fig.1
4	NWC1-0.4-8-3	0.4	8	50	159	11.5	160	Fig.1
5	NWC1-0.4-10-3	0.4	10	50	199	14.4	160	Fig.1
6	NWC1-0.4-12-3	0.4	12	50	239	17.3	220	Fig.1
7	NWC1-0.4-14-3	0.4	14	50	279	20.2	220	Fig.1
8	NWC1-0.4-15-3	0.4	15	50	298	21.7	220	Fig.1
9	NWC1-0.4-16-3	0.4	16	50	318	23.1	220	Fig.1
10	NWC1-0.4-18-3	0.4	18	50	358	26.0	260	Fig.1
11	NWC1-0.4-20-3	0.4	20	50	398	28.9	260	Fig.1
12	NWC1-0.4-24-3	0.4	24	50	477	34.6	230	Fig.2
13	NWC1-0.4-25-3	0.4	25	50	497	36.1	230	Fig.2
14	NWC1-0.4-30-3	0.4	30	50	597	43.3	230	Fig.2
15	NWC1-0.4-35-3	0.4	35	50	696	50.5	270	Fig.2
16	NWC1-0.4-40-3	0.4	40	50	796	57.7	270	Fig.2
17	NWC1-0.45-5-3	0.45	5	50	79	6.4	160	Fig.1
18	NWC1-0.45-6-3	0.45	6	50	94	7.7	160	Fig.1
19	NWC1-0.45-7.5-3	0.45	7.5	50	118	9.6	160	Fig.1
20	NWC1-0.45-8-3	0.45	8	50	126	10.3	160	Fig.1
21	NWC1-0.45-10-3	0.45	10	50	157	12.8	160	Fig.1
22	NWC1-0.45-12-3	0.45	12	50	189	15.4	220	Fig.1
23	NWC1-0.45-14-3	0.45	14	50	220	18.0	220	Fig.1
24	NWC1-0.45-15-3	0.45	15	50	236	19.2	220	Fig.1
25	NWC1-0.45-16-3	0.45	16	50	252	20.5	220	Fig.1
26	NWC1-0.45-18-3	0.45	18	50	283	23.1	260	Fig.1
27	NWC1-0.45-20-3	0.45	20	50	314	25.7	260	Fig.1
28	NWC1-0.45-24-3	0.45	24	50	377	30.8	230	Fig.2
29	NWC1-0.45-25-3	0.45	25	50	393	32.1	230	Fig.2
30	NWC1-0.45-30-3	0.45	30	50	472	38.5	230	Fig.2
31	NWC1-0.45-35-3	0.45	35	50	550	44.9	270	Fig.2
32	NWC1-0.45-40-3	0.45	40	50	629	51.3	270	Fig.2
33	NWC1-0.525-5-3	0.525	5	50	58	5.5	160	Fig.1
34	NWC1-0.525-6-3	0.525	6	50	69	6.6	160	Fig.1
35	NWC1-0.525-7.5-3	0.525	7.5	50	87	8.2	160	Fig.1
36	NWC1-0.525-8-3	0.525	8	50	92	8.8	160	Fig.1
37	NWC1-0.525-10-3	0.525	10	50	115	11.0	160	Fig.1
38	NWC1-0.525-12-3	0.525	12	50	139	13.2	220	Fig.1
39	NWC1-0.525-14-3	0.525	14	50	162	15.4	220	Fig.1
40	NWC1-0.525-15-3	0.525	15	50	173	16.5	220	Fig.1
41	NWC1-0.525-16-3	0.525	16	50	185	17.6	220	Fig.1
42	NWC1-0.525-18-3	0.525	18	50	208	19.8	260	Fig.1
43	NWC1-0.525-20-3	0.525	20	50	231	22.0	260	Fig.1
44	NWC1-0.525-24-3	0.525	24	50	277	26.4	230	Fig.2
45	NWC1-0.525-25-3	0.525	25	50	289	27.5	230	Fig.2
46	NWC1-0.525-30-3	0.525	30	50	346	33.0	230	Fig.2
47	NWC1-0.525-35-3	0.525	35	50	404	38.5	270	Fig.2
48	NWC1-0.525-40-3	0.525	40	50	462	44.0	270	Fig.2



Serial number	Type and Specification	Rated voltage (kV)	Rated capacity (kvar)	Rated frequency (Hz)	Rated capacitor (μF)	Rated current (A)	Enclosure height (mm)	Figure
49	NWC1-0.69-5-3	0.69	5	50	33	4.2	160	Fig.1
50	NWC1-0.69-6-3	0.69	6	50	40	5.0	160	Fig.1
51	NWC1-0.69-7.5-3	0.69	7.5	50	50	6.3	160	Fig.1
52	NWC1-0.69-8-3	0.69	8	50	53	6.7	160	Fig.1
53	NWC1-0.69-10-3	0.69	10	50	67	8.4	160	Fig.1
54	NWC1-0.69-12-3	0.69	12	50	80	10.0	220	Fig.1
55	NWC1-0.69-14-3	0.69	14	50	94	11.7	220	Fig.1
56	NWC1-0.69-15-3	0.69	15	50	100	12.6	220	Fig.1
57	NWC1-0.69-16-3	0.69	16	50	107	13.4	220	Fig.1
58	NWC1-0.69-18-3	0.69	18	50	120	15.1	260	Fig.1
59	NWC1-0.69-20-3	0.69	20	50	134	16.7	260	Fig.1
60	NWC1-0.69-24-3	0.69	24	50	160	20.1	230	Fig.2
61	NWC1-0.69-25-3	0.69	25	50	167	20.9	230	Fig.2
62	NWC1-0.69-30-3	0.69	30	50	201	25.1	230	Fig.2
63	NWC1-0.69-35-3	0.69	35	50	234	29.3	270	Fig.2
64	NWC1-0.69-40-3	0.69	40	50	267	33.5	270	Fig.2
65	NWC1-0.4-50-3	0.4	50	50	995	72.2	300	Fig.3
66	NWC1-0.4-60-3	0.4	60	50	1194	86.6	300	Fig.3
67	NWC1-0.4-80-3	0.4	80	50	1591	115.5	300	Fig.4
68	NWC1-0.4-100-3	0.4	100	50	1990	144.3	300	Fig.4
69	NWC1-0.45-50-3	0.45	50	50	786	64.2	300	Fig.3
70	NWC1-0.45-60-3	0.45	60	50	943	77	300	Fig.3
71	NWC1-0.45-80-3	0.45	80	50	1258	102.6	300	Fig.4
72	NWC1-0.45-100-3	0.45	100	50	1573	128.0	300	Fig.4

### 5. Notices

- 5.1 Please guarantee that the capacitors are operated under specified conditions, including the proper temperature, voltage and current, as over- voltageand over-current may shorten the life of the capacitor;
- 5.2 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.
- 5.3 Specific switches, contactors and over-current relays should be adopted when the capacitor is shuntly connected in the system.

6. Mounting dimensions (mm)

Figure 1

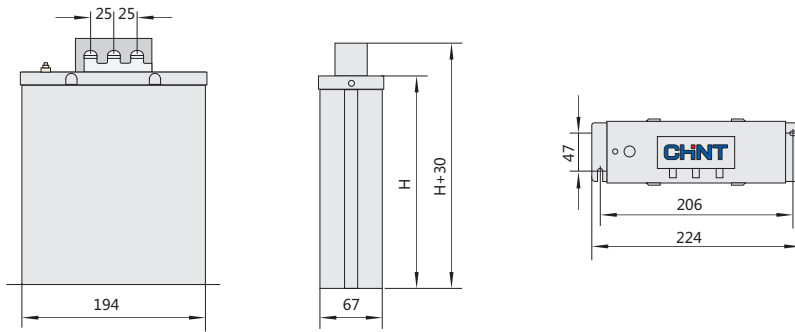


Figure 2

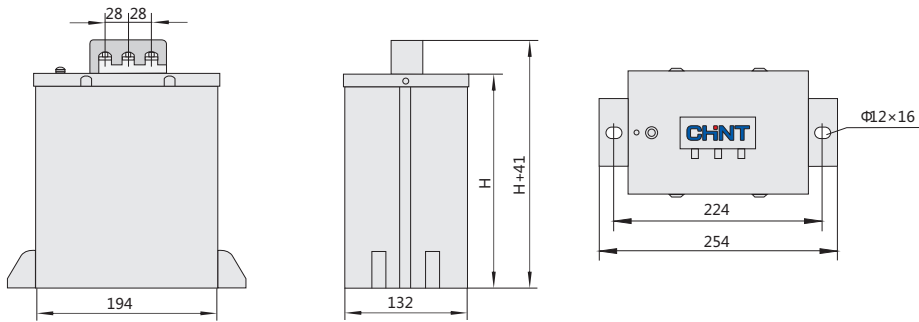


Figure 3

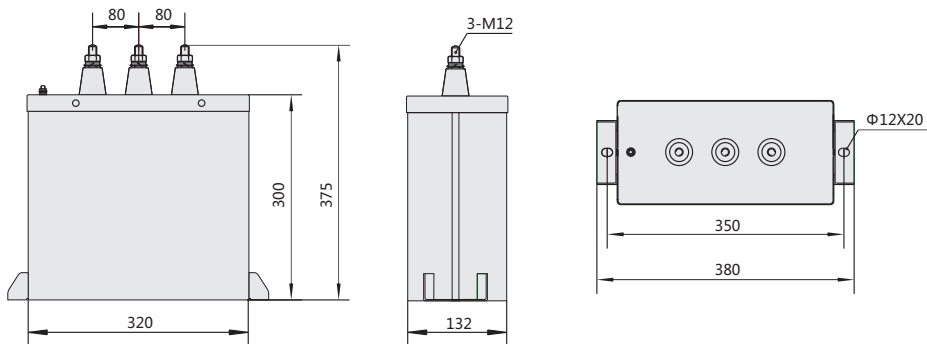
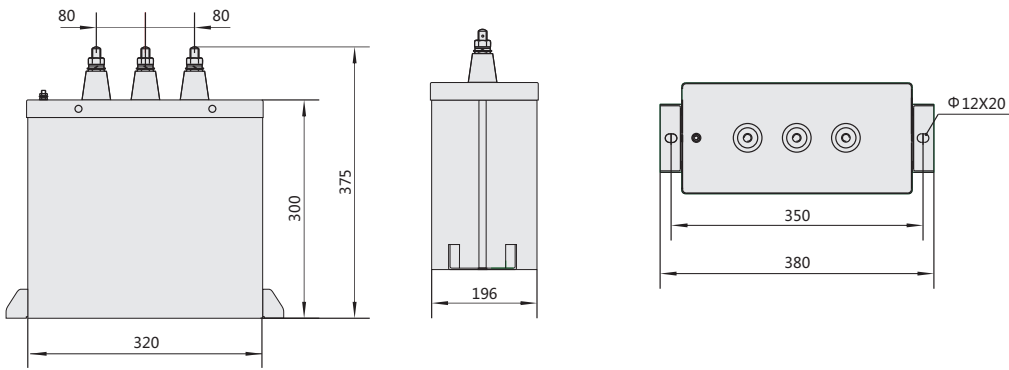


Figure 3



### 7. Ordering information

On ordering, please clarify rated voltage, capacity, number of phase, frequency, etc of the products; and associated conditions at the mounting place.