Dry type power factor correction capacitors

C6S(PFC)

Metallized polypropylene film design, excellent self-healing property,Anti-explosiondesign, overpressure tear-off fuse more safety.Dry resin filling, flameretardant grade UL94 V-0,Dry type structure

DC-Link Capacitor （Dry-Type, Aluminum case capacitors)

C3B（miniature version)

Used in DC-Link circuits,can replace electrolytic capacitor Low ESR, high ripple current handling capabilities Low Ls Self-healing property Long lifetime Aluminum case，filled with resin

Snubber capacitor for high voltage, high current capacitors

C3T

Ceramic lead-through Self-healing property Filled with oil Anti-explosion design, more safety Especially suitable for snubber circuits For high pulse and high frequency application

AC-filter capacitors (Oil-filled type, 250Vac~850 capacitors)

C6M

The capacitors particularly suit for AC filter circuit in power electric equipment and UPS power unit. They have ability to withstand high harmonic current, peak current and peak voltage. Self-healing

DC-Link Capacitor (Dry-Type,Aluminum case)

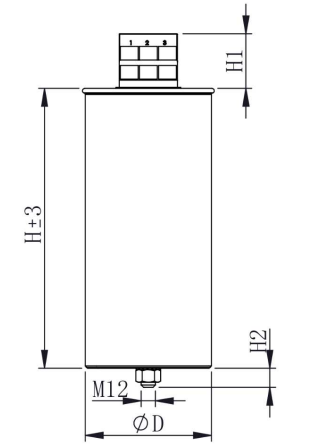
C3B

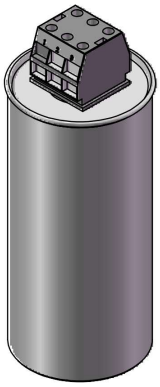
Used in DC-Link circuits（e.g. used in the circuits of converter or inverter）,Can replace electrolytic capacitor Low ESR, Low ESL, Can withstanding high r.m.s current Self-healing property)

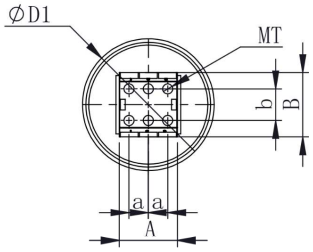
干式无功功率补偿电容器
Dry type power factor correction capacitors

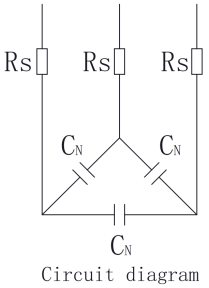
■ 外形图 Outline Drawing

帽式设计, △接法(无滚槽设计, D=76~106) Cap type design, delta connection(Without channeling)





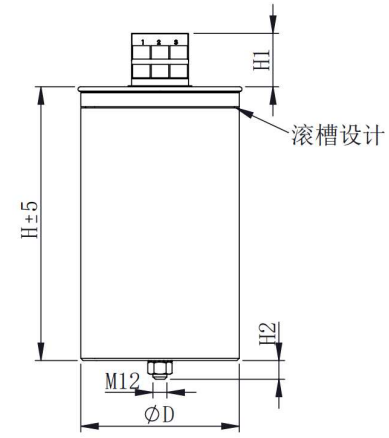


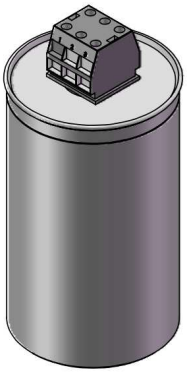


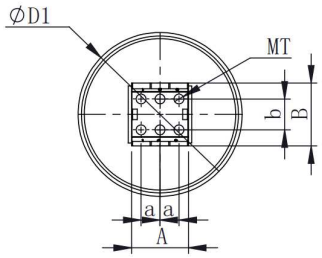
Circuit diagram

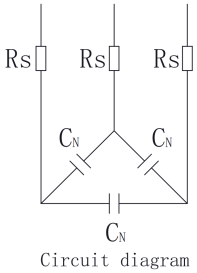
D±1	76~106
a±0.5	15
b±0.5	19.4
A±1	43.5
B±1	44.5
H1±2	35
H2±1	16
MT	M5

帽式设计, △接法(带滚槽设计, D=116~136)Cap type design, delta connection(Channeling)







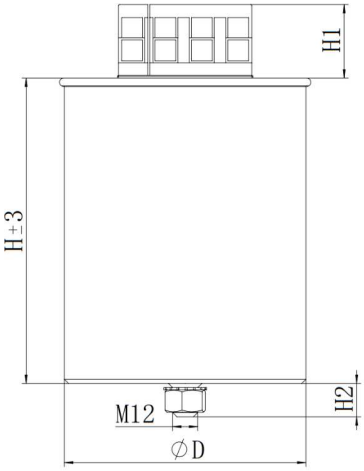


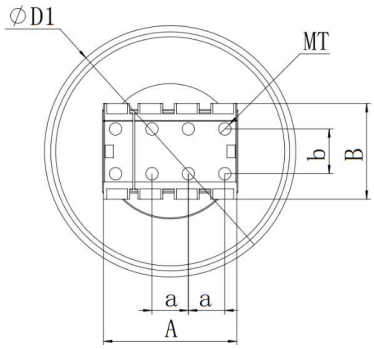
Circuit diagram

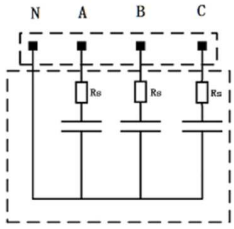
D±1	116	136
a±0.5	15	16.5
b±0.5	19.4	25
A±1	43.5	49
B±1	44.5	54.5
H1±2	35	45
H2±1	16	18
MT	M5	M6

帽式设计，Y接法(无滚槽设计, D=116~136)

Cap type design, star connection, neutral brought out(Without channeling)







Circuit diagram

D±1	116~136
a±0.5	15.0
b±0.5	19.4
A1±1	58.4
B1±1	44.5
H1±2	35
H2±1	16
MT	M5

■ 特点

- 金属化聚丙烯膜设计，自愈性优良
- 防爆设计，过压力保护更安全
- 干式树脂填充，树脂阻燃等级 UL94 V-0
- 干式结构，无漏液风险，安装方向更灵活
- 适用于交流电力系统的功率因数校正，提高低压电网的功率因素，广泛用于工厂、住宅楼等场合的无功功率补偿柜

■ Features

- **Metallized polypropylene film design, excellent self-healing property**
- **Anti-explosion design, overpressure tear-off fuse more safety**
- **Dry resin filling, flame retardant grade UL94 V-0**
- **Dry type structure, no leakage risk, more flexible installation direction**
- **Suitable for AC power system power factor correction, improve the power factor of low voltage grid, widely used in factories, houses and other occasions reactive power compensation cabinet**

■ 技术要求 Specifications

引用标准 Reference Standard		GB/T 12747.1/2 (IEC 60831-1/2)
额定电压 Rated Voltage (U_N)		440Vac ~ 525Vac (可根据客户要求定制 U_N≤690Vac 的设计) (The design of U_N≤690Vac can be customized according to custome requirements)
最高允许电压 Maximum permissible voltage		1.00 U_N，连续 Continuous 1.10 U_N，每 24h 中 8h 8 h in every 24 h 1.15 U_N，每 24h 中 30min 30 min in every 24 h 1.20 U_N，5min 1.30 U_N, 1min 注：高于 1.15 U_N 的过电压在电容器的整个使用寿命期间总共不超过 200 次。 Note：The overvoltages higher than 1.15U_N does not exceed a total of 200 times in the lifetime of the capacitor.
额定频率 Rated Frequency (f_N)		50Hz/60Hz
额定容量 Rated output (Q_N)		5kvar ~ 50kvar
额定电容 Rated capacitance (C_N)		50μF ~ 500μF
最大允许电流 Maximum permissible current		≤1.43I_N (I_N 是额定交流电流方均根值) (I_N is the rated r.m.s. value of the alternating current)
电容量偏差 Capacitance Tolerance		±5%(J)，±10% (K), -5%~+10%(6)
电容内部连接方式 Capacitor internal connection		三角形接法 (△)或星型接法，中性点引出(Y) Delta connection (△)or star connection, neutral brought out(Y)
极间耐电压 Test voltage between Terminals($U_{T\text{-}T}$)		2.15U_N (50Hz/60Hz), 10s
极壳耐电压 Test voltage between terminals to case($U_{T\text{-}C}$)		3 000Vac(50Hz/60Hz), 10s
绝缘电阻 Insulation Resistance(IR×C_N)		≥10 000s (20℃, 500V, 1min)
介质损耗角正切 Dielectric dissipation factor (tan δ_d)		2×10^{-4}
环境空气温度类别 Ambient air temperature categories		-40/D
可运行温度范围(热点温度) Operating temperature range(θ_{hs})		-40℃~85℃
贮存温度范围 Storage Temperature range(θ_s)		-40℃~70℃
预期寿命 Expected lifetime		|△C/C|≤5% after 30 000h @ U_N，θ_{hs}≤70℃
防爆装置 Explosion-proof device		过压力防护装置 Overpressure disconnector
内部填充料 Internal stuffing		干式聚氨酯 (PU)Polyurethane
冷却方式 Cooling		自然空气或强制冷却 Naturally air-cooled or force cooled
是否有放电电阻 Whether has the discharge resistor		配电阻，已预安装 Yes, resistor pre-installed
安装 Installation	位置 Position	任意方向 Any direction
	引出端形式 Terminal form	帽式(插头螺栓 M5 或 M6) Cap type (Plug bolt M5 or M6)
	安装形式 Fix style	底部螺栓 M12 Bottom-bolt M12
电极最大扭矩 Max. Torque of terminals		2N·m (M5); 3N·m (M6)
最大安装扭矩 Max. Torque of Installation		10N·m (M12)
最高使用海拔 Max. altitude		2 000m

■ 产品编码说明　Part number system

15 位产品代码如下：

The 15 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	6	S												

第 1~3 位	型号代码	**Digit 1 to 3**	**Series code**
	C6S		**C6S**
第 4~5 位	额定电压	**Digit 4 to 5**	**Rated voltage**
	S1=440Vac　S3=480Vac　T6=525Vac		**S1=440Vac　S3=480Vac　T6=525Vac**
第 6~8 位	标称容量	**Digit 6 to 8**	**Rated capacitance value**
	A to H & J 表示 0.1 to 0.9 举例：**506=50×106pF= 50μF** **26E=26.5μF**		**A to H & J:0.1 to 0.9** **for example: 506=50×106 pF= 50μF** **26E=26.5μF**
第 9 位	容量偏差	**Digit 9**	**Capacitance tolerance**
	J=±5%, K=±10%, 6=-5%~+10%		**J=±5%, K=±10%, 6=-5%~+10%**
第 **10** 位	产品特征码	**Digit 10**	**Product characteristic code**
	J:△接法, M: Y 接法		**J:△connection, M:** Y**connection**
第 11~15 位	内部特征码	**Digit 11 to 15**	**Internal use**

■ 技术参数 Technical data

U_N=440Vac/50Hz									
Q_N (kvar)	C_N (μF)	连接方式	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	I_N (A)	$\hat{I}_s$ (kA)	M (kg)	Part number
15	3×82	△	86	90	230	3×20	2.1	1.5	C6SS1136-J******
20	3×111	△	96	100	230	3×27	3.3	1.9	C6SS1040-J******
25	3×137	△	106	111	230	3×33	4.2	2.3	C6SS1056-J******
30	3×165	△	116	121	235	3×39	4.8	2.7	C6SS1057-J******
40	3×220	△	116	121	280	3×53	5.1	3.3	C6SS1227-J******
15	3×250	Y	116	121	180	3×20	4.0	2.2	C6SS1257-M******
20	3×330	Y	116	121	210	3×26	4.0	2.6	C6SS1337-M******
25	3×410	Y	116	121	240	3×36	5.0	2.9	C6SS1417-M******

U_N=480Vac/50Hz									
Q_N (kvar)	C_N (μF)	连接方式	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	I_N (A)	$\hat{I}_s$ (kA)	M (kg)	Part number
20	3×92	△	96	100	230	3×24	3.0	1.8	C6SS3926-J******
25	3×115	△	106	111	230	3×30	3.6	2.2	C6SS3127-J******
30	3×138	△	116	121	235	3×36	4.5	2.7	C6SS3056-J******
20	3×270	Y	96	100	240	3×24	3.3	2.0	C6SS3277-M******
25	3×340	Y	106	111	240	3×30	4.1	2.4	C6SS3347-M******
30	3×410	Y	116	121	240	3×36	5.0	2.9	C6SS3417-M******

U_N=525Vac/50Hz									
Q_N (kvar)	C_N (μF)	连接方式	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	I_N (A)	$\hat{I}_s$ (kA)	M (kg)	Part number
20	3×77	△	96	100	230	3×22	2.7	1.8	C6ST6776-J******
25	3×96	△	106	111	230	3×27	3.3	2.2	C6ST6966-J******
30	3×115	△	116	121	235	3×33	3.9	2.7	C6ST6127-J******
20	3×230	Y	96	100	240	3×22	3.0	2.0	C6ST6237-M******
25	3×290	Y	106	111	240	3×28	3.8	2.4	C6ST6297-M******
30	3×350	Y	116	121	240	3×33	4.5	2.9	C6ST6357-M******

备注 Note：1. “-”表示容量偏差。 “-” =capacitance tolerance code.

2. “******”表示内部特征码，请联系技术工程师确认完整代码。
“******” = Internal use, please contact the technical engineer to confirm the complete code.

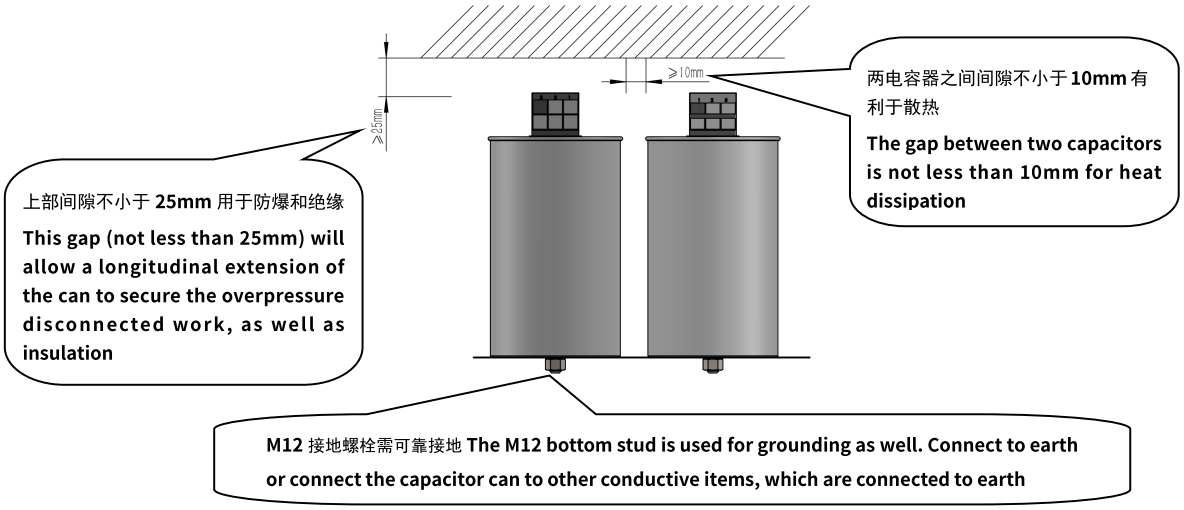
3. “I_N”表示线电流。 “I_N” stands for line current.

4. 如需其它电压、容量产品，请联系技术工程师。 If need the other design, please contact our technical engineer.

■ 安装空间要求(以帽式设计为例) Installation space requirements (Take cap type design as an example)

电容要安装在阴凉、通风良好的位置，且其周围不能有热辐射的物体，如滤波电路电抗器、太阳直射。

The capacitor is to be installed at a cool and well-ventilated place, and must not be installed within the range of heat radiating objects, e.g. filter circuit reactors, direct sun radiation.

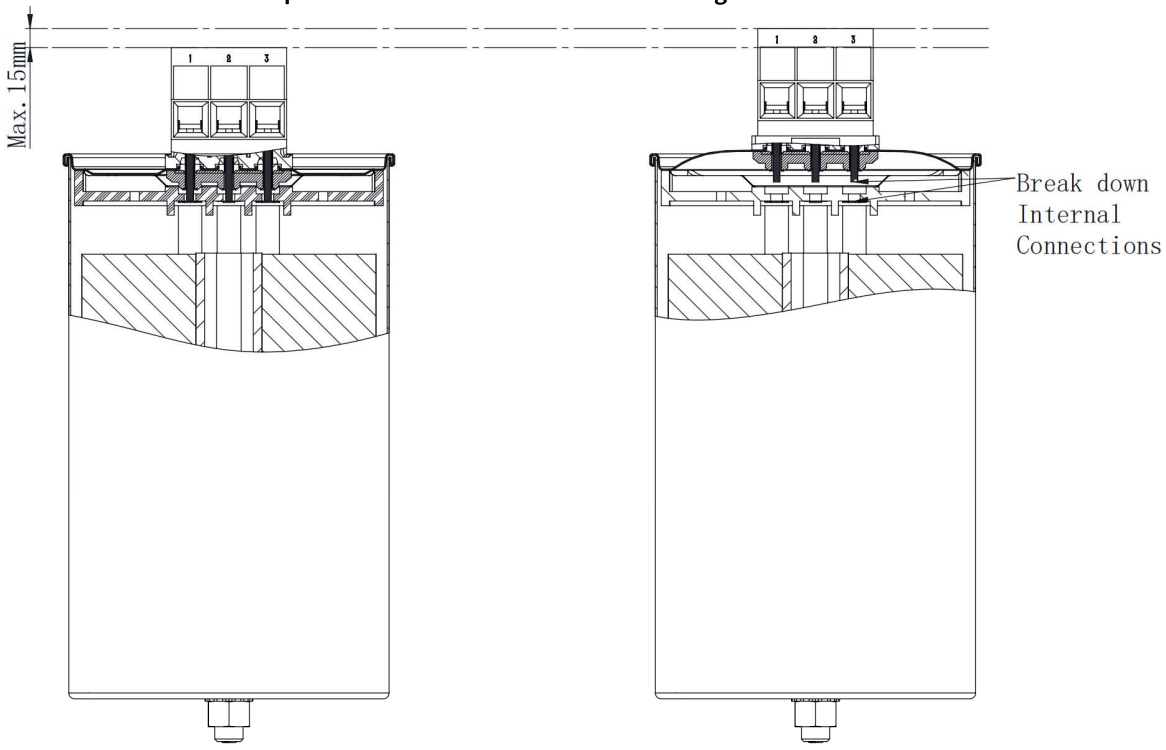


电容主要是通过底部螺栓安装固定，若需要其它安装固定方式，请联系我司技术人员确认。

The capacitor is mainly installed by bolts at the bottom. If you need other installation methods, please contact our technical staff to check.

电容的过压力防护装置需要通过盖面鼓起动作，所以盖面到引出端顶部间不能安装影响防爆动作的其它配件，装置动作前后如下图所示。

The overpressure disconnector of the capacitor is triggered by the cover bulge, so no other components can be installed between the cover and the top of the terminal end that affect the overpressure disconnector action. Before and after theaction of the overpressure disconnector is shown in the figure below.



■ 连接电缆(以帽式设计为例)　Connection of the supply cable(Take cap type design as an example)

产品本体（参考外形图的**φD×H**）上部必须保持足够的空间（参考安装空间要求），该空间内不能安装其它组件。

Keep enough space (refer to the outline drawing φD×H) on the top of the capacitors (refer to installation space requirements) and no other components can be installed in this space.

连接电缆应使用软性电线并保持松弛，不要用硬芯电缆，若使用母排等连接方式，请联系我司技术人员确认。

The connection cable shall be of flexible type and keep slack, do not use hard core cable. If using busbar connection or other methods, please contact our technical staff to check.

对于帽式设计，可安装的最大引线截面积为 **16mm²(M5)/25 mm²(M6)**，可根据实际电流值来选择合适的电缆。

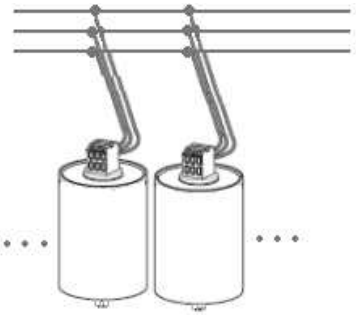
For the cap type design, maximum cable cross section is 16 mm2(M5)/25 mm2(M6), according to actual result to choose the appropriate cable.

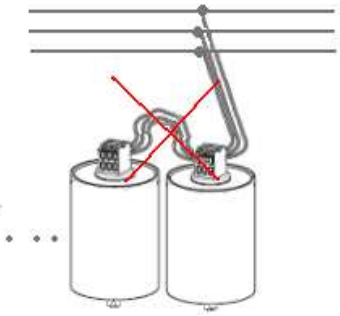
对于螺栓式设计，根据实际电流值来选择合适的电缆。

For the bolt type design, according to actual result to choose the appropriate cable.

以帽式设计为例，对于多个电容器并联，每个电容器采用直接连接到母线上方式，若有其它连接方式请联系我们。

Take cap type design as an example, for capacitors connected in parallel, each capacitor should use independent lead wires, if you have any other connection way please contact us.





■ 安装注意事项 Installation cautions

操作前注意电容器必须充分放电。

Discharge the capacitor completely before operation.

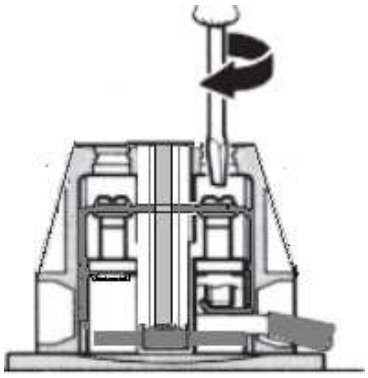
注意端子最大可承受电流，端子总电流不得超出规定的最大值:

Pay attention to the Max. Current on the terminals, the total current on terminals must not go beyond the Max. current by specified:

- **M6** 插头螺栓的引出端子最大电流为 **60A**。
  The maximum current of M6 plug bolt is 60A.
- **M5** 插头螺栓的引出端子最大电流为 **45A**。
  The maximum current of M5 plug bolt is 45A.

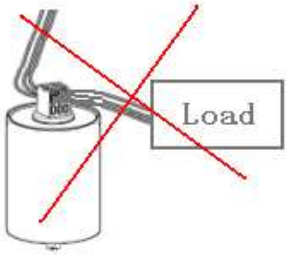
对于帽式设计，安装引出端子推荐使用一字螺丝刀，刀腿的直径小于防护盖孔以方便插入防护盖上的孔。

For the cap type design, recommend to using a slotted screwdriver to install the terminals.



以帽式设计为例，电容器均只能作为一个独立的分支，不能在电容器的一端连接负载（放电电阻除外）。

Take cap type design as an example, each capacitor is only used as an independent subfield，and not connected the load in the terminals(Except discharge resistors).



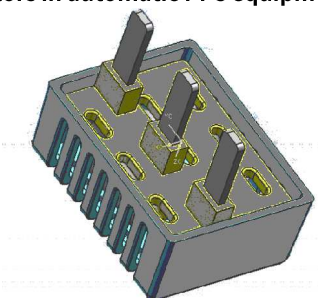
■ 放电电阻连接 Connection of the discharge resistors

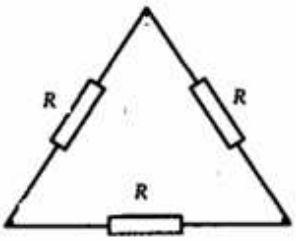
当用户有需求时，应提供将每一电容器单元或电容器组在 **10min** 之内从工作电压放电到 **75V** 或更低电压的装置。

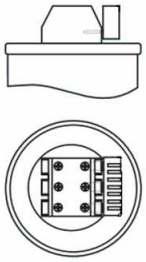
When required by the user, each capacitor unit or bank shall be provided with means for discharging each unit in 10 min to 75 V or less, from a working voltage U_N.

放电电阻用于对电容器进行放电以保护人免受电击的危险，同时也在自动 **PFC** 装置内电容器进行切换时放电。

Discharge resistors are required for discharging capacitor for protection of human being (Electric shock risk)，and for re-switching capacitors in automatic PFC equipment (Phase opposition).







C6S 帽式设计电容器系列有可选配的放电电阻，其配套的放电电阻能满足在 **3min** 内使电容器放电到 **75V** 或更低电压，放电电阻值的计算可以按如下公式：

Capacitors of the C6S series (cap type design) are fitted with discharge resistors for a discharge<75V within <180s, the resistors to be used can be calculated with the following formula:

$$R \leqslant \frac{T}{k \times C \times \ln \frac{U_N \times \sqrt{2}}{U}}$$

T: 放电时间 **Discharge time**　　**C:** 每一相的容量 **Capacitance of one phase**

U_W**:**实际工作电压 **Operating voltage**　　**U:** 最大允许的残留电压 **Maximum permissible voltage after discharging**

k: 系数，内部使用△接法，**k=1；**内部使用Y接法，**k=1/3**。

Coefficient，if delta connection，k=1；if star connection，k=1/3.

■ 环境温度 Ambient temperature

该电容的环境空气温度类别是**-40/D**，表示环境空气温度最高可达 **55°C**。温度对于聚丙烯膜式电容器来讲是影响损耗的一大因素，这会影响到产品的使用寿命。

The ambient temperature category is -40/D, means ambient temperature up to max. 55°C. Temperature is one of the main stress factors for polypropylene type capacitors, means it has a major influence on the life cycle of the capacitor.

■ 过电流 Overload currents

电容器决不可在电流超过最大允许电流下运行。

Capacitors should never be operated with currents exceeding the maximum permissible value.

在将电容器接入电路时，可能产生高幅值和高频率的瞬态过电流。在将电容器分组接入已通电的另一分组相并联时，也有可能产生这种瞬态效应，但不可超过电容器的浪涌峰值电流 $\hat{I}_s$。

Transient overcurrents of high amplitude and frequency may occur when capacitors are switched into circuit. Such transient effects are to be expected when a section of a capacitor bank is switched in parallel with other sections that arealreadyenergized, don't exceed the peak surge current ($\hat{I}_s$) of the capacitor.

为将这些瞬态过电流降低到电容器与设备能承受的值，可能需要通过电阻器来投电容器（电阻合闸），或在电容器组的每一分组的电源电路接入电抗器。

It may be necessary to reduce these transient overcurrents to acceptable values in relation to the capacitor and to the equipment by switching on the capacitors through a resistor (resistance switching), or by the insertion of reactors in thesupply circuit to each section of the bank.

如果电容器上配有熔断器，则由开关操作引起的过电流峰值应限制到 **100 I_N**(方均根值)及以下。

If the capacitors are provided with fuses, the peak value of the overcurrents due to switching operations shall be limited to amaximum of 100 I_N (r.m.s. value).

■ 谐波 Harmonics

主要的谐波源是整流器、电力电子设备及饱和的变压器铁心。

The chief sources of harmonics are rectifiers, power electronics, and saturated transformer cores.

如果电容器电流超过最大允许电流，而电压仍在 **1.1U_N**之内，则应测出主要谐波，以便找到最佳的解决办法。

If the capacitor current exceeds the maximum permissible value, while the voltage is within the permissible limit of 1.1U_N, the predominant harmonic should be determined in order to find the best remedy.

下列解决办法应予考虑：

The following remedies should be considered:

将一部分或全部电容器移到系统的其它部位。

Moving some or all of the capacitors to other parts of the system.

接入与电容器串联的电抗器，将电路的谐振频率降低到干扰的谐波频率值以下。

Connection of a reactor in series with the capacitor, to lower the resonant frequency of the circuit to a value below that of the disturbing harmonic.

当电容器附近有电力半导体设备时，增加电容器的电容值。

Increase of the capacitance value when the capacitor is connected close to power semiconductors.

建议检查输入线的电流总谐波畸变率 **THD_i**，要求 **THD_i≤50%**。

We would propose to check the total harmonic current distortion (THD_i) of the input terminals, theTHD_i must not exceed 50%.

$$THD_i = \frac{\sqrt{\sum_{n=1}^{\infty} I_n^2}}{I_0} \times 100(\%)$$

(**THD_i**：电流总谐波畸变率；**I_0**：实际工作的基波电流；I_n：实际工作的谐波电流)

(**THD_i**：**Total current harmonic distortion; I_0: Actual working fundamental current; I_n: Actual working harmonic current**)

■ 安全注意事项 Safety

电容器外壳保持良好和可靠接地。

Maintain good and effective earthing for enclosures of capacitors.

拆装电容器时要确保电容器已放电干净。

Handle capacitor to ensure capacitor has discharge clean.

遵循良好的工程规范。

Follow good engineering practices.

■ 维护 Maintenance

检查连接线与端子螺丝是否打紧。

Check tightness of Connections/terminals periodically.

定期清理引出端子避免因灰尘或其它可导电的垃圾引起短路。

Clean the terminals periodically to avoid dust or other conductive garbage can cause a short-circuit.

检查短路保护保险丝。

Check short circuit protection fuses.

每半年使用电流钳表或其它在线测电流的工具测量电容器电流。

Every half a year use current clamp table or other on-line measuring tools of current measurement capacitor current.

检查放电电阻是否正常工作，可以通过电容器先上电后断开 **3min** 后测量电容器的电压是否降至 **75V** 以下来进行判断。

To check whether the discharge resistance is working normally, it can be judged by measuring whether the voltage of the capacitor drops to 75V after the capacitor is turned on first and disconnected for 3 minutes.

■ 安装与调试步骤 Installation & commissioning procedures

1、打开包装箱取出电容

Unpack Capacitor

取电容时请勿直接抓取端子

Do not touch capacitor terminals by hand directly while taking them

2、检查电容器外观（是否有机械损伤）

Check Physically

3、固定好电容器

Fixed capacitors

4、确保使用电容器场合的电压、频率、温度在电容器额定值以下

Ensure for correctness of supply voltage, frequency, temperature

5、连接好电容器

Connect Capacitor

6、打开电源开关

Switch on supply

7、检查主回路的电压与电流是否正常

Check main supply Voltage & current

8、电容器正常运行

Capacitor is commissioned

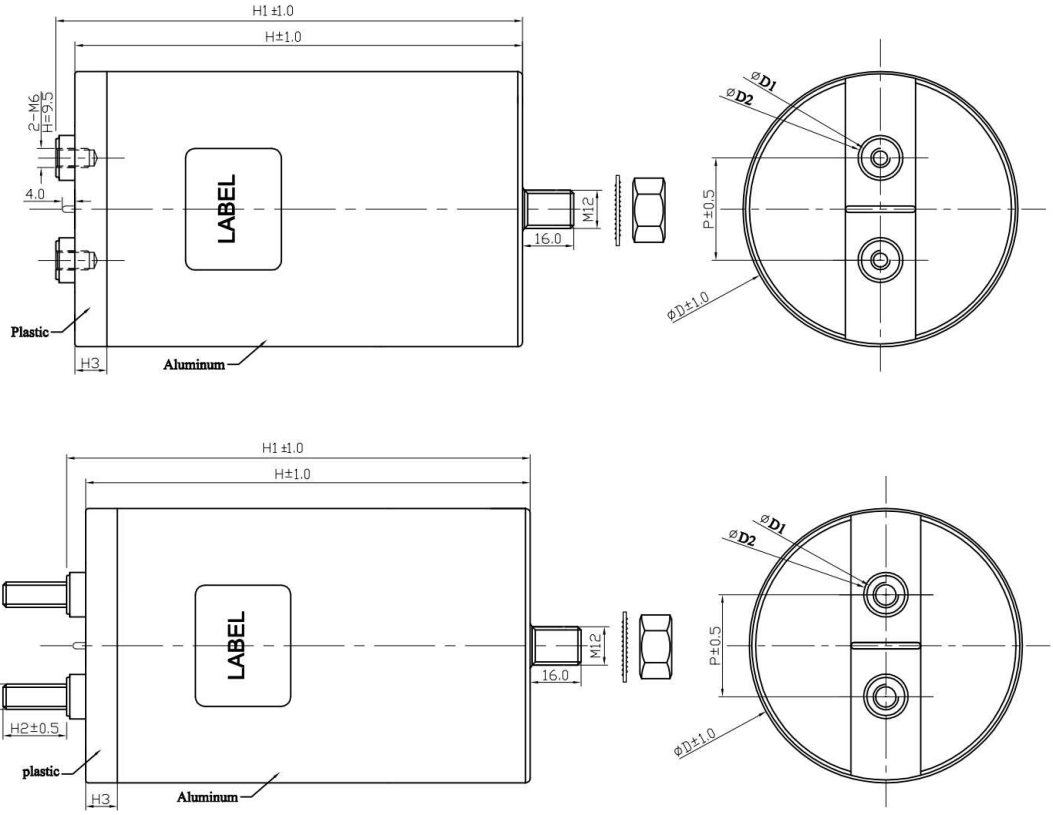
■ 预期寿命 Expected lifetime

电容器的应用中，有多种因素会影响到电容器的使用寿命，比如电压、温度、电流、电网谐波、湿度、光照或辐射以及其它一些未知的因素。预期寿命仅考虑电压、温度的关系，基于长期耐久性试验的合格结果，再通过预期寿命理论计算公式计算该电容在不同工况下的预期寿命。因此，预期寿命仅作为选型参考，而不代表电容器的实际使用寿命，也不代表质保要求。

For capacitors application, various factors will affect the expected lifetime of capacitors, such as voltage, temperature, current, network harmonics, humidity, lighting or radiation and other unknown factors. The lifetime only considers the effects of voltage and temperature. Based on the qualified results of long-term durability test, the lifetime curve of the capacitor under different working conditions is calculated by using the theoretical calculation formula of lifetime. Therefore, the lifetime is only used as a reference for selection, and does not represent the actual service life of the capacitor, nor does it represent the quality assurance requirements.

铝壳干式直流滤波电容器(小型化)
DC-Link Capacitor(Dry-Type, Aluminum case Miniature version)

■ 外形图 Outline Drawing



尺寸附加说明 Additional remark of dimensions

D=76mm	P=32mm; D1=12mm; D2=14mm; H3=10mm		
D=86mm	P=32mm; D1=12mm; D2=14mm; H3=10mm or 45mm		
	P=45mm;	Female terminals: D1=14mm; D2=16mm; H3=10mm or 45mm	
		Male terminals: D1=16mm; D2=20mm; H3=10mm or 45mm	
D=100mm	P=50mm; D1=14mm; D2=16mm;		H≤100mm, H3=10mm
			H＞100mm, H3=45mm
D=116mm	P=50mm; D1=14mm; D2=16mm;		H≤100mm, H3=10mm
			H＞100mm, H3=45mm
H3 can be changed in pursuance of customer's request.（H3=45mm when rated voltage＞1 500Vdc）			

C3B

■ 特点

- 应用于直流滤波电路中，可替代电解电容
- 等效串联电阻小，能承受较大的纹波电流
- 自感小
- 有自愈性
- 寿命长
- 铝壳，树酯灌封

■ 应用场合

- 太阳能发电用变频器上

■ Features

- Used in DC-Link circuits，can replace electrolytic capacitors
- Low ESR, high ripple current handling capabilities
- Low L_s
- Self-healing property
- Long lifetime
- Aluminum case, filled with resin

■ Applications

- Used in inverters of solar power

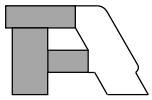
■ 安全认证 Safety Approvals

	TUV Rheinland (德国)	EN 61071:2007，EN 61881-1:2011, 600Vdc ~ 4 000Vdc, 5μF~5600μF, - 40°C/85°C, 证书号（Certificate No.）：R 50266039
	UL （美国）	UL 810 (construction only), max.5000Vdc, 90°C File No.: E256238　CCN: CZDS2

■ 技术要求 Specifications

引用标准 Reference Standard		GB/T 17702（IEC 61071）	
气候类别 Climatic Category		D≤116mm：40/85/56	
工作温度范围 Operating Temperature Range		D≤116mm：-40°C~ 85°C（θ_{hs}≤85°C）	
贮存温度范围 Storage temperature range		-40°C~ 85°C	
电压范围 Voltage Range		600Vdc~ 1 500Vdc	
电容量范围 Capacitance Range		110μF~ 3 400μF	
电容量偏差 Capacitance Tolerance		±5%(J)，±10%(K)	
耐电压（两极之间）Test Voltage Between Terminals		1.5U_N (10s, 20°C±5°C)	
耐电压（极壳之间） Test Voltage Between Terminals And Case		U_N＜1 500Vdc, 3 000Vac(10s, 50Hz, 20°C±5°C) U_N≥1 500Vdc, ($\sqrt{2}$ U_N+1 000)Vac(10s, 50Hz, 20°C±5°C)	
介质损耗角正切 $tan\delta_d$		2×10^{-4}	
IR×C_N		≥5 000s　(20°C, 500Vdc, 1min)	
过电压 Over Voltage		1.1 U_N (30% of on-load-dur.)	
		1 .15 U_N (30min/day)	
		1.2 U_N (5min/day)	
		1.3 U_N (1min/day)	
		1.5 U_N (30ms every time, 1000times during the life of the capacitor)	
预期寿命 Expected lifetime		100 000h @ U_N，θ_{hs}=70°C	
失效率 Failure rate		50 FIT	
最高使用海拔 Max. Altitude		2 000m	
安装 Installation	方向 Position	任意方向 Any Position	
	引出端形式 Terminal form	螺栓式 Male Terminals	
		螺孔式 Thread hole type	
	安装形式 Fixed style	下部螺栓 Bottom-bolt	
		中部卡圈 Ring-clip in the middle of case	
最大安装扭矩 Max. Torque of Installation		10N·m	
最大电极扭矩 Max. Torque of terminals		M6:5N·m	M8:6N·m

备注：如果海拔使用高度超过了 2 000m，应该考虑海拔对对流冷却和外绝缘的影响。
The effect of altitude on convection cooling and external insulation should be taken into consideration, if the altitude exceeds 2 000m.



■ 产品编码说明　Part number system

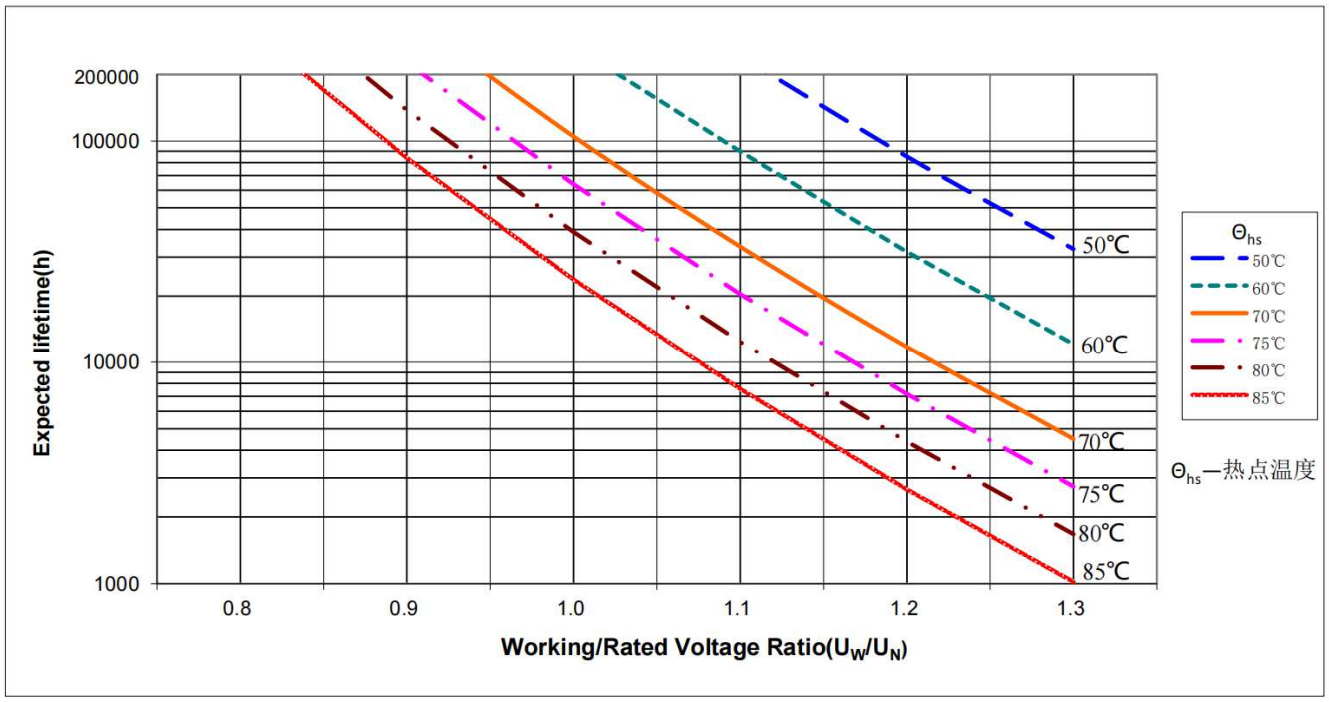
15 位产品代码如下：

The 15 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	3	B												

第 1~3 位	型号代码			**Digit 1 to 3**	**Series code**	
第 4~5 位	直流额定电压			**Digit 4 to 5**	**DC rated voltage**	
	1U=600V	**3V=750V**	**2K=800V**		**1U=600V**	**3V=750V**	**2K=800V**
	1X=900V	**3A=1 000V**	**1M=1 100V**		**1X=900V**	**3A=1 000V**	**1M=1 100V**
	3L=1 200V	**2M=1 300V**	**3M=1 400V**		**3L=1 200V**	**2M=1 300V**	**3M=1 400V**
	4M=1 500V				**4M=1 500V**		
第 6~8 位	标称容量			**Digit 6 to 8**	**Rated capacitance value**	
	举例：**127=12×10^{7}pF=120μF**				**for example: 127=12×10^{7}pF=120μF**	
第 9 位	容量偏差			**Digit 9**	**Capacitance tolerance**	
	J=±5%, K=±10%				**J=±5%, K=±10%**	
第 10~15 位	内部特征码			**Digit 10 to 15**	**Internal use**	

■ 预期寿命曲线 Expected lifetime curve

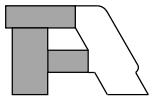


■ 技术参数 Technical data

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension (mm)			Weight (kg)	Part number
						40°C	50°C	60°C	ΦD	H	H1		
600	580	1.5	45	5.6	1 700	70	59	48	76	95	101	0.60	C3B1U587-******
	800	1.8	50	4.7	1 680	70	59	48	76	120	126	0.70	C3B1U807-******
	960	2.1	55	4.6	1 670	64	56	46	76	140	146	0.75	C3B1U967-******
	1 000	1.1	40	4.3	3 260	70	70	70	76	155	161	0.90	C3B1U108-******
	1 200	1.1	45	4.2	3 410	70	70	70	76	174	180	1.00	C3B1U128-******
	720	1.4	45	5.1	2 120	70	70	53	86	95	101	0.72	C3B1U727-******
	1 100	1.5	50	4.7	2 310	70	65	53	86	120	126	1.00	C3B1U118-******
	1 200	1.7	55	4.6	2 180	70	62	50	86	136	142	1.10	C3B1U128-******
	1 300	1.7	55	4.6	2 260	70	61	50	86	140	146	1.15	C3B1U138-******
	1 400	1.0	40	4.4	4 560	70	70	70	86	155	161	1.25	C3B1U148-******
	1 600	1.0	45	4.3	4 550	70	70	70	86	174	180	1.30	C3B1U168-******
	2 300	0.9	55	3.0	6 540	70	70	70	86	252	258	1.80	C3B1U238-******
	1 000	1.2	45	4.7	2 940	70	70	58	100	95	100	1.19	C3B1U108-******
	1 300	1.5	50	4.1	2 730	70	70	57	100	120	125	1.45	C3B1U138-******
	1 600	1.6	55	3.9	2 910	70	70	57	100	136	141	1.63	C3B1U168-******
	1 700	1.6	55	3.8	2 950	70	70	58	100	140	145	1.67	C3B1U178-******
	1 700	1.0	40	3.5	5 540	70	70	70	100	155	160	1.96	C3B1U178-******
	2 000	1.0	45	3.2	5 680	70	70	70	100	174	179	2.26	C3B1U208-******
	1 300	1.2	45	5.4	3 820	79	69	56	116	95	100	1.20	C3B1U138-******
	1 800	1.3	50	5.0	3 780	78	68	55	116	120	125	1.50	C3B1U188-******
	2 100	1.4	55	4.9	3 650	75	65	53	116	140	145	1.75	C3B1U218-******
	2 300	1.0	40	3.6	7 490	100	93	76	116	158	163	2.00	C3B1U238-******
	2 600	1.0	45	3.4	7 390	100	95	77	116	174	179	2.20	C3B1U268-******
	3 400	0.9	50	2.7	1 070	100	100	90	116	230	235	2.80	C3B1U348-******
750	520	1.6	45	5.6	1 750	70	57	47	76	95	101	0.60	C3B3V527-******
	700	2.0	50	4.7	1 680	66	57	46	76	120	126	0.70	C3B3V707-******
	850	2.3	55	4.6	1 690	62	54	44	76	140	146	0.75	C3B3V857-******
	900	1.1	40	4.3	3 360	70	70	70	76	155	161	0.90	C3B3V907-******
	1000	1.2	45	4.2	3 250	70	70	70	76	174	180	1.00	C3B3V108-******
	680	1.4	45	5.1	2 290	70	65	53	86	95	101	0.72	C3B3V687-******
	900	1.7	50	4.7	2 160	70	61	50	86	120	126	1.00	C3B3V907-******
	1 100	1.8	55	4.6	2 290	70	60	49	86	136	142	1.10	C3B3V118-******
	1 200	1.8	55	4.6	2 390	70	60	49	86	140	146	1.15	C3B3V128-******
	1 200	1.0	40	4.4	4 470	70	70	70	86	155	161	1.25	C3B3V128-******
	1 400	1.0	45	4.3	4 560	70	70	70	86	174	180	1.30	C3B3V148-******
	2 000	0.9	55	3.0	6 510	70	70	70	86	252	258	1.80	C3B3V208-******
	870	1.3	45	4.7	2 870	70	70	57	100	95	100	1.19	C3B3V877-******
	1 200	1.5	50	4.1	2 830	70	69	56	100	120	125	1.45	C3B3V128-******
	1 400	1.7	55	3.9	2 850	70	68	56	100	136	141	1.63	C3B3V148-******
	1 500	1.7	55	3.8	2 920	70	69	56	100	140	145	1.67	C3B3V158-******
	1 500	1.0	40	3.5	5 480	70	70	70	100	155	160	1.96	C3B3V158-******
	1 700	1.1	45	3.2	5 420	70	70	70	100	174	179	2.26	C3B3V178-******
	1 100	1.2	45	5.4	3 620	79	68	56	116	95	100	1.20	C3B3V118-******
	1 600	1.4	50	5.0	3 770	77	66	54	116	120	125	1.50	C3B3V168-******
	1 800	1.5	55	4.9	3 510	73	63	52	116	140	145	1.75	C3B3V188-******
	2 000	1.0	40	3.6	7 300	100	92	75	116	158	163	2.00	C3B3V208-******
	2 300	1.0	45	3.4	7 330	100	94	76	116	174	179	2.20	C3B3V238-******
	3 000	0.9	50	2.7	10 950	100	100	90	116	230	235	2.80	C3B3V308-******

■ 技术参数 Technical data

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension (mm)			Weight (kg)	Part number
						40°C	50°C	60°C	ΦD	H	H1		
800	370	1.7	45	5.6	1 610	64	56	45	76	95	101	0.60	C3B2K377-******
	500	2.1	50	4.7	1 560	64	55	45	76	120	126	0.70	C3B2K507-******
	600	2.4	55	4.6	1 540	60	52	42	76	140	146	0.75	C3B2K607-******
	660	1.1	40	4.3	3 180	70	70	70	76	155	161	0.90	C3B2K667-******
	730	1.2	45	4.2	3 070	70	70	70	76	174	180	1.00	C3B2K737-******
	490	1.5	45	5.1	2 130	70	63	51	86	95	101	0.72	C3B2K497-******
	670	1.8	50	4.7	2 080	70	60	49	86	120	126	1.00	C3B2K677-******
	770	1.9	55	4.6	2 070	70	58	48	86	136	142	1.10	C3B2K777-******
	780	2.0	55	4.6	2 010	66	57	47	86	140	146	1.15	C3B2K787-******
	850	1.0	40	4.4	4 100	70	70	70	86	155	161	1.25	C3B2K857-******
	970	1.1	45	4.3	4 080	70	70	70	86	174	180	1.30	C3B2K977-******
	1 400	1.0	55	3.0	5 890	70	70	70	86	252	258	1.80	C3B2K148-******
	640	1.4	45	4.7	2 730	70	69	56	100	95	100	1.19	C3B2K647-******
	850	1.7	50	4.1	2 600	70	67	54	100	120	125	1.45	C3B2K857-******
	1 000	1.8	55	3.9	2 640	70	66	54	100	136	141	1.63	C3B2K108-******
	1 000	1.9	55	3.8	2 530	70	65	53	100	140	145	1.67	C3B2K108-******
	1 100	1.1	40	3.5	5 210	70	70	70	100	155	160	1.96	C3B2K118-******
	1 300	1.1	45	3.2	5 370	70	70	70	100	174	179	2.26	C3B2K138-******
	800	1.2	45	5.4	3 420	77	67	55	116	95	100	1.20	C3B2K807-******
	1 100	1.5	50	5.0	3 360	74	64	52	116	120	125	1.50	C3B2K118-******
	1 400	1.6	55	4.9	3 540	72	63	51	116	140	145	1.75	C3B2K148-******
	1 500	1.0	40	3.6	7 100	100	91	75	116	158	163	2.00	C3B2K158-******
	1 700	1.0	45	3.4	7 020	100	93	76	116	174	179	2.20	C3B2K178-******
	2 200	0.9	50	2.7	10 410	100	100	89	116	230	235	2.80	C3B2K228-******
900	370	1.7	45	5.6	1 610	64	56	45	76	95	101	0.60	C3B1X377-******
	500	2.1	50	4.7	1 560	64	55	45	76	120	126	0.70	C3B1X507-******
	600	2.4	55	4.6	1 540	60	52	42	76	140	146	0.75	C3B1X607-******
	660	1.1	40	4.3	3 180	70	70	70	76	155	161	0.90	C3B1X667-******
	730	1.2	45	4.2	3 070	70	70	70	76	174	180	1.00	C3B1X737-******
	490	1.5	45	5.1	2 130	70	63	51	86	95	101	0.72	C3B1X497-******
	670	1.8	50	4.7	2 080	70	60	49	86	120	126	1.00	C3B1X677-******
	770	1.9	55	4.6	2 070	70	58	48	86	136	142	1.10	C3B1X777-******
	780	2.0	55	4.6	2 010	66	57	47	86	140	146	1.15	C3B1X787-******
	850	1.0	40	4.4	4 100	70	70	70	86	155	161	1.25	C3B1X857-******
	970	1.1	45	4.3	4 080	70	70	70	86	174	180	1.30	C3B1X977-******
	1 400	1.0	55	3.0	5 890	70	70	70	86	252	258	1.80	C3B1X148-******
	640	1.4	45	4.7	2 730	70	68	55	100	95	100	1.19	C3B1X647-******
	850	1.7	50	4.1	2 600	70	66	54	100	120	125	1.45	C3B1X857-******
	1 000	1.8	55	3.9	2 640	70	65	53	100	136	141	1.63	C3B1X108-******
	1 000	1.9	55	3.8	2 530	70	64	52	100	140	145	1.67	C3B1X108-******
	1 100	1.1	40	3.5	5 210	70	70	70	100	155	160	1.96	C3B1X118-******
	1 300	1.1	45	3.2	5 370	70	70	70	100	174	179	2.26	C3B1X138-******
	800	1.3	45	5.4	3 420	76	66	54	116	95	100	1.20	C3B1X807-******
	1 100	1.5	50	5.0	3 360	73	63	52	116	120	125	1.50	C3B1X118-******
	1 400	1.6	55	4.9	3 540	71	62	50	116	140	145	1.75	C3B1X148-******
	1 500	1.0	40	3.6	7 100	100	91	74	116	158	163	2.00	C3B1X158-******
	1 700	1.0	45	3.4	7 020	100	92	75	116	174	179	2.20	C3B1X178-******
	2 200	0.9	50	2.7	10 410	100	100	89	116	230	235	2.80	C3B1X228-******

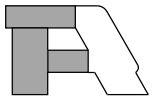


■ 技术参数 Technical data

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension (mm)			Weight (kg)	Part number
						40°C	50°C	60°C	ΦD	H	H1		
1 000	300	1.8	45	5.6	1 640	63	55	45	76	95	101	0.60	C3B3A307-******
	400	2.3	50	4.7	1 560	60	52	43	76	120	126	0.70	C3B3A407-******
	490	2.7	55	4.6	1 580	57	49	40	76	140	146	0.75	C3B3A497-******
	530	1.2	40	4.3	3 210	70	70	62	76	155	161	0.90	C3B3A537-******
	590	1.3	45	4.2	3 120	70	70	61	76	174	180	1.00	C3B3A597-******
	400	1.5	45	5.1	2 180	70	62	51	86	95	101	0.72	C3B3A407-******
	540	1.9	50	4.7	2 110	70	58	47	86	120	126	1.00	C3B3A547-******
	620	2.1	55	4.6	2 090	64	55	45	86	136	142	1.10	C3B3A627-******
	640	2.2	55	4.6	2 070	63	54	44	86	140	146	1.15	C3B3A647-******
	680	1.1	40	4.4	4 120	70	70	70	86	155	161	1.25	C3B3A687-******
	780	1.1	45	4.3	4 120	70	70	70	86	174	180	1.30	C3B3A787-******
	1 100	1.0	55	3.0	5 810	70	70	70	86	252	258	1.80	C3B3A118-******
	460	1.5	45	4.7	2 510	70	65	53	100	95	100	1.19	C3B3A467-******
	650	1.8	50	4.1	2 540	70	64	52	100	120	125	1.45	C3B3A657-******
	750	2.0	55	3.9	2 530	70	63	51	100	136	141	1.63	C3B3A757-******
	800	2.0	55	3.8	2 580	70	63	51	100	140	145	1.67	C3B3A807-******
	850	1.1	40	3.5	5 140	70	70	70	100	155	160	1.96	C3B3A857-******
	950	1.2	45	3.2	5 020	70	70	70	100	174	179	2.26	C3B3A957-******
	600	1.3	45	5.4	3 280	75	65	53	116	95	100	1.20	C3B3A607-******
	850	1.6	50	5.0	3 320	72	62	51	116	120	125	1.50	C3B3A857-******
	1 000	1.8	55	4.9	3 230	68	59	48	116	140	145	1.75	C3B3A108-******
	1 100	1.0	40	3.6	6 660	100	90	73	116	158	163	2.00	C3B3A118-******
	1 200	1.1	45	3.4	6 340	100	90	74	116	174	179	2.20	C3B3A128-******
	1 600	1.0	50	2.7	9 680	100	100	88	116	230	235	2.80	C3B3A168-******
1 100	220	1.9	45	5.6	1 630	61	53	43	76	95	101	0.60	C3B1M227-******
	300	2.5	50	4.7	1 570	58	50	41	76	120	126	0.70	C3B1M307-******
	360	3.0	55	4.6	1 510	54	47	38	76	140	146	0.75	C3B1M367-******
	400	1.3	40	4.3	3 150	70	70	60	76	155	161	0.90	C3B1M407-******
	440	1.4	45	4.2	3 020	70	70	59	76	174	180	1.00	C3B1M447-******
	300	1.6	45	5.1	2 130	70	60	49	86	95	101	0.72	C3B1M307-******
	400	2.1	50	4.7	2 030	63	55	45	86	120	126	1.00	C3B1M407-******
	450	2.4	55	4.6	1 980	60	52	43	86	136	142	1.10	C3B1M457-******
	500	1.2	40	4.4	3 940	70	70	62	86	155	161	1.25	C3B1M507-******
	580	1.2	45	4.3	3 990	70	70	62	86	174	180	1.30	C3B1M587-******
	840	1.1	55	3.0	5 770	70	70	70	86	252	258	1.80	C3B1M847-******
	360	1.5	45	4.7	2 560	70	65	53	100	95	100	1.19	C3B1M367-******
	480	1.9	50	4.1	2 440	70	62	50	100	120	125	1.45	C3B1M487-******
	550	2.1	55	3.9	2 420	70	60	49	100	136	141	1.63	C3B1M557-******
	580	2.2	55	3.8	2 440	70	61	49	100	140	145	1.67	C3B1M587-******
	600	1.2	40	3.5	4 720	70	70	70	100	155	160	1.96	C3B1M607-******
	680	1.2	45	3.2	4 670	70	70	70	100	174	179	2.26	C3B1M687-******
	460	1.4	45	5.4	3 270	73	64	52	116	95	100	1.20	C3B1M467-******
	650	1.6	50	5.0	3 300	70	61	50	116	120	125	1.50	C3B1M657-******
	780	1.8	55	4.9	3 280	67	58	48	116	140	145	1.75	C3B1M787-******
	810	1.1	40	3.6	6 380	100	88	72	116	158	163	2.00	C3B1M817-******
	950	1.1	45	3.4	6 530	100	90	73	116	174	179	2.20	C3B1M957-******
	1 300	1.0	50	2.7	10 230	100	100	87	116	230	235	2.80	C3B1M138-******

■ 技术参数 Technical data

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension (mm)			Weight (kg)	Part number
						40°C	50°C	60°C	ΦD	H	H1		
1 200	180	2.1	45	5.6	1 420	58	50	41	76	95	101	0.60	C3B3L187-******
	250	2.8	50	4.7	1 410	55	48	39	76	120	126	0.70	C3B3L257-******
	310	3.2	55	4.6	1 440	52	45	37	76	140	146	0.75	C3B3L317-******
	330	1.3	40	4.3	2 880	70	70	59	76	155	161	0.90	C3B3L337-******
	370	1.4	45	4.2	2 820	70	70	57	76	174	180	1.00	C3B3L377-******
	250	1.7	45	5.1	1 970	70	58	48	86	95	101	0.72	C3B3L257-******
	340	2.2	50	4.7	1 910	62	54	44	86	120	126	1.00	C3B3L347-******
	380	2.5	55	4.6	1 850	59	51	41	86	136	142	1.10	C3B3L387-******
	400	2.6	55	4.6	1 860	58	50	41	86	140	146	1.15	C3B3L407-******
	420	1.2	40	4.4	3 660	70	70	61	86	155	161	1.25	C3B3L427-******
	480	1.3	45	4.3	3 660	70	70	60	86	174	180	1.30	C3B3L487-******
	700	1.1	55	3.0	5 330	70	70	70	86	252	258	1.80	C3B3L707-******
	320	1.6	45	4.7	2 520	70	63	52	100	95	100	1.19	C3B3L327-******
	440	2.0	50	4.1	2 480	70	61	50	100	120	125	1.45	C3B3L447-******
	500	2.2	55	3.9	2 430	69	59	49	100	136	141	1.63	C3B3L507-******
	540	2.2	55	3.8	2 510	69	60	49	100	140	145	1.67	C3B3L547-******
	560	1.2	40	3.5	4 890	70	70	70	100	155	160	1.96	C3B3L567-******
	640	1.2	45	3.2	4 870	70	70	70	100	174	179	2.26	C3B3L647-******
	420	1.4	45	5.4	3 310	73	63	51	116	95	100	1.20	C3B3L427-******
	580	1.7	50	5.0	3 260	69	60	49	116	120	125	1.50	C3B3L587-******
	700	1.9	55	4.9	3 260	66	57	47	116	140	145	1.75	C3B3L707-******
	750	1.1	40	3.6	6 540	100	88	72	116	158	163	2.00	C3B3L757-******
	870	1.1	45	3.4	6 630	100	89	73	116	174	179	2.20	C3B3L877-******
	1 100	1.0	50	2.7	9 600	100	100	86	116	230	235	2.80	C3B3L118-******
1 300	140	2.5	45	5.6	1 330	53	46	38	76	95	101	0.60	C3B2M147-******
	190	3.4	50	4.7	1 290	50	43	35	76	120	126	0.70	C3B2M197-******
	230	4.0	55	4.6	1 290	47	40	33	76	140	146	0.75	C3B2M237-******
	230	1.6	40	4.3	2 420	70	70	53	76	155	161	0.90	C3B2M237-******
	260	1.8	45	4.2	2 390	70	64	52	76	174	180	1.00	C3B2M267-******
	190	2.1	45	5.1	1 810	62	54	44	86	95	101	0.72	C3B2M197-******
	250	2.8	50	4.7	1 700	55	48	39	86	120	126	1.00	C3B2M257-******
	290	3.1	55	4.6	1 700	53	46	37	86	136	142	1.10	C3B2M297-******
	290	3.3	55	4.6	1 630	51	44	36	86	140	146	1.15	C3B2M297-******
	300	1.4	40	4.4	3 160	70	70	57	86	155	161	1.25	C3B2M307-******
	340	1.5	45	4.3	3 130	70	70	55	86	174	180	1.30	C3B2M347-******
	540	1.2	55	3.0	4 970	70	70	70	86	252	258	1.80	C3B2M547-******
	230	1.9	45	4.7	2 190	67	58	47	100	95	100	1.19	C3B2M237-******
	300	2.5	50	4.1	2 040	62	54	44	100	120	125	1.45	C3B2M307-******
	350	2.8	55	3.9	2 060	61	53	43	100	136	141	1.63	C3B2M357-******
	380	2.8	55	3.8	2 140	61	53	43	100	140	145	1.67	C3B2M387-******
	400	1.3	40	3.5	4 210	70	70	66	100	155	160	1.96	C3B2M407-******
	440	1.4	45	3.2	4 050	70	70	66	100	174	179	2.26	C3B2M447-******
	340	1.5	45	5.4	3 230	69	60	49	116	95	100	1.20	C3B2M347-******
	450	1.9	50	5.0	3 060	64	56	45	116	120	125	1.50	C3B2M457-******
	540	2.2	55	4.9	3 040	61	53	43	116	140	145	1.75	C3B2M547-******
	560	1.2	40	3.6	5 900	97	84	69	116	158	163	2.00	C3B2M567-******
	650	1.2	45	3.4	5 980	98	85	70	116	174	179	2.20	C3B2M657-******
	850	1.0	50	2.7	8 950	100	100	84	116	230	235	2.80	C3B2M857-******



■ 技术参数 Technical data

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension (mm)			Weight (kg)	Part number
						40°C	50°C	60°C	ΦD	H	H1		
1 400	120	2.3	45	5.6	1 310	55	48	39	76	95	101	0.60	C3B3M127-******
	160	3.2	50	4.7	1 250	52	45	37	76	120	126	0.70	C3B3M167-******
	190	3.8	55	4.6	1 230	48	42	34	76	140	146	0.75	C3B3M197-******
	190	1.6	40	4.3	2 300	70	70	55	76	155	161	0.90	C3B3M197-******
	220	1.7	45	4.2	2 320	70	70	54	76	174	180	1.00	C3B3M227-******
	160	1.9	45	5.1	1 740	64	55	45	86	95	101	0.72	C3B3M167-******
	210	2.6	50	4.7	1 640	57	50	41	86	120	126	1.00	C3B3M217-******
	250	2.8	55	4.6	1 690	55	48	39	86	136	142	1.10	C3B3M257-******
	260	1.3	40	4.4	3 140	70	70	59	86	155	161	1.25	C3B3M267-******
	290	1.4	45	4.3	3 060	70	70	57	86	174	180	1.30	C3B3M297-******
	440	1.2	55	3.0	4 640	70	70	70	86	252	258	1.80	C3B3M447-******
	200	2.1	45	4.7	2 320	64	56	45	100	95	100	1.19	C3B3M207-******
	270	2.7	50	4.1	2 240	60	52	43	100	120	125	1.45	C3B3M277-******
	310	3.0	55	3.9	2 130	58	50	41	100	136	141	1.63	C3B3M317-******
	340	1.4	40	3.5	4 370	70	70	64	100	155	160	1.96	C3B3M347-******
	380	1.5	45	3.2	4 270	70	70	64	100	174	179	2.26	C3B3M387-******
	280	1.7	45	5.4	3 250	66	57	47	116	95	100	1.20	C3B3M287-******
	380	2.1	50	5.0	3 150	61	53	43	116	120	125	1.50	C3B3M387-******
	470	2.4	55	4.9	3 230	58	50	41	116	140	145	1.75	C3B3M477-******
	480	1.2	40	3.6	6 170	95	82	67	116	158	163	2.00	C3B3M487-******
	560	1.3	45	3.4	6 290	96	83	68	116	174	179	2.20	C3B3M567-******
	730	1.1	50	2.7	9 390	100	100	83	116	230	235	2.80	C3B3M737-******

■ 技术参数 Technical data

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension (mm)			Weight (kg)	Part number
						40°C	50°C	60°C	ΦD	H	H1		
1 500	110	2.5	45	5.6	1 410	54	46	38	76	95	101	0.60	C3B4M117-******
	150	3.3	50	4.7	1 370	50	44	36	76	120	126	0.70	C3B4M157-******
	170	4.1	55	4.6	1 290	46	40	32	76	140	146	0.75	C3B4M177-******
	180	1.6	40	4.3	2 550	70	70	54	76	155	161	0.90	C3B4M187-******
	200	1.8	45	4.2	2 480	70	64	52	76	174	180	1.00	C3B4M207-******
	140	2.1	45	5.1	1 790	61	53	43	86	95	101	0.72	C3B4M147-******
	190	2.8	50	4.7	1 740	55	48	39	86	120	126	1.00	C3B4M197-******
	220	3.1	55	4.6	1 740	53	46	37	86	136	142	1.10	C3B4M227-******
	240	1.4	40	4.4	3 410	70	70	57	86	155	161	1.25	C3B4M247-******
	270	1.5	45	4.3	3 340	70	70	56	86	174	180	1.30	C3B4M277-******
	410	1.2	55	3.0	5 080	70	70	70	86	252	258	1.80	C3B4M417-******
	180	2.2	45	4.7	2 300	62	54	44	100	95	100	1.19	C3B4M187-******
	230	3.0	50	4.1	2 110	57	49	40	100	120	125	1.45	C3B4M237-******
	270	3.4	55	3.9	2 040	55	48	39	100	136	141	1.63	C3B4M277-******
	300	1.5	40	3.5	4 260	70	70	62	100	155	160	1.96	C3B4M307-******
	340	1.6	45	3.2	4 210	70	70	63	100	174	179	2.26	C3B4M347-******
	240	1.9	45	5.4	3 070	63	55	45	116	95	100	1.20	C3B4M247-******
	330	2.4	50	5.0	3 020	58	50	41	116	120	125	1.50	C3B4M337-******
	400	2.7	55	4.9	3 030	55	48	39	116	140	145	1.75	C3B4M407-******
	430	1.3	40	3.6	6 100	93	80	66	116	158	163	2.00	C3B4M437-******
	490	1.4	45	3.4	6 070	93	81	66	116	174	179	2.20	C3B4M497-******
	630	1.1	50	2.7	8 940	100	99	81	116	230	235	2.80	C3B4M637-******

备注 Note：1. “-”表示容量偏差。 “-”=capacitance tolerance code, J=±5.0%, K=±10%.

2. “******”表示内部特征码。 “******”=Internal use

3. “I_{max}”是指在环境温度(40°C, 50°C, 60°C)下的最大允许电流有效值。在这种条件下，热点温度将达到最大值。
“I_{max}” = Maxium allowable r.m.s current at θ_{amb}(40°C, 50°C, 60°C). θ_{hs} will reach the maximum value on this condition.

4. “R_{th}”是指在自然冷却条件下，电容器热点到环境的热阻。 “R_{th}” = R_{th} between hotspot and ambient on natural cooling condition.

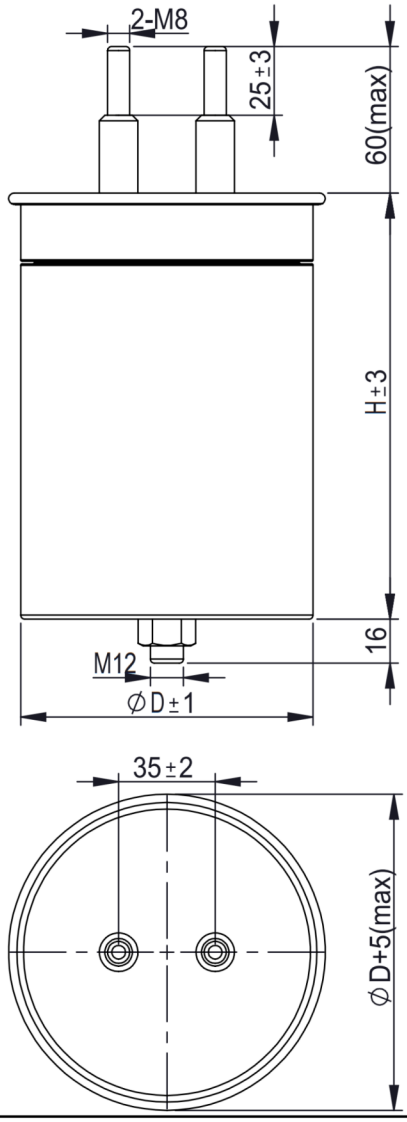
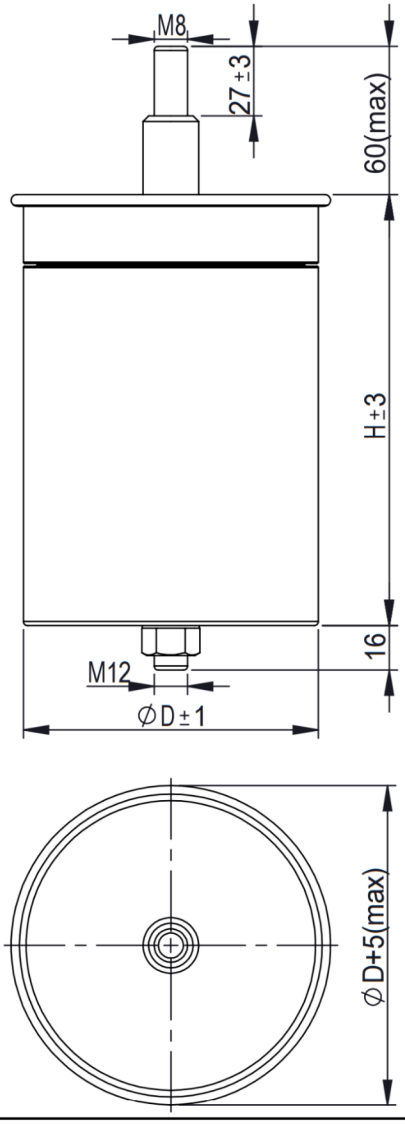
5. 上表中所列的尺寸为本产品系列中的常用壳号尺寸，其它规格尺寸也可以生产。
Sizes above are normally used dimension, other dimension can be produced in pursuance of customer's request.

6. *$\theta_{hs} = \theta_{amb} + I_{rms}^2 \times ESR \times R_{th}$.

油式高压、高脉冲电流吸收电容器

Snubber capacitor for high voltage, high current pulses (Oil-filled type)

■ 外形图 Outline Drawing

Type1 螺栓式 Bolt type 铝外壳 Aluminum case	Type2 螺栓式 Bolt type 铝外壳 Aluminum case
	

■ 特点

- 陶瓷端子
- 有自愈特性
- 油式
- 防爆设计，更加安全

■ 应用

- 特别适用于缓冲器电路
- 高压脉冲，高频应用

■ Features

- Ceramic lead-through
- Self-healing property
- Filled with oil
- Anti-explosion design, more safety

■ Applications

- Especially suitable for snubber circuits
- For high pulse and high frequency application

■ 技术要求 Specifications

引用标准 Reference Standard		GB/T 17702（IEC 61071）
气候类别 Climatic Category		40/85/56
工作温度范围(外壳) Operating temperature range(case)		-40°C ~ 85°C
额定电压 Rated Voltage (U_N)		1 400Vac ~ 3 500Vac
电容量偏差 Capacitance Tolerance		±5%(J)，±10%(K)
耐电压(两极间) Test voltage between terminals (U_{T-T})		2.15U_{rms}(ac), 10s or 3.05U_{rms}(dc), 10s
耐电压(极壳间) Test voltage between case and terminal (U_{T-C})		U_N＜1 500Vac, 3 000Vac(10s，50Hz, 20°C±5°C) U_N≥1 500Vac，($\sqrt{2}U_N$+1 000)Vac(10s, 50Hz, 20°C±5°C)
介质损耗角正切 Dielectric dissipation factor ($\tan\delta_d$)		2×10-4
绝缘电阻 Insulation Resistance（IR×C_N）		≥10 000s(20°C, 500Vdc,1min)
预期寿命 Expected lifetime		≥100 000h @ U_N，θ_{hs} =70°C
安装 Installation	端子形式 Terminal form	螺栓式 Bolt type
	安装方式 Fixed style	底部螺栓 Bottom-bolt
最大电极扭矩 Max. Torque of terminals		M8: 5N·m
最大安装扭矩 Max. Torque of Installation		M12: 10N·m

■ 产品编码说明 Part number system

15 位产品代码如下：

The 15 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	3	T												

第 1~3 位 型号代码

C3T

第 4~5 位 交流额定电压

M3=1 400V D3=2 000V E3=2 500V

Q6=3 200V R5=3 500V

第 6~8 位 标称容量

举例：105=10×10^5pF=1.0μF

第 9 位 容量偏差

J=±5%, K=±10%

第 10~15 位 内部特征码

Digit 1 to 3 Series code

C3T

Digit 4 to 5 A.C. rated voltage

M3=1 400V D3=2 000V E3=2 500V

Q6=3 200V R5=3 500V

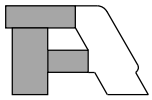
Digit 6 to 8 Rated capacitance value

for example: 105=10×10^5pF=1.0μF

Digit 9 Capacitance tolerance

J=±5%, K=±10%

Digit 10~15 Internal use



■ 技术参数 Technical data

C_N (μF)	U_N (Vdc)	U_{rms} (Vac)	dV/dt (V/μs)	Î (A)	$Î_s$ (A)	I_{max} 100kHz@70°C (A)	Rs @100kHz (mΩ)	L_s (nH)	D (mm)	H (mm)	Part number	外形样式 Shape style
4.7	1 400	1 000	100	470	1 200	60	9.3	150	60	175	C3TM3475+******	Type1
1.0	2 000	1 400	100	100	300	10	10.0	200	60	145	C3TD3105+******	Type1
4.0	2 500	1 700	150	600	1 800	40	5.0	200	86	280	C3TE3405+******	Type1
2.0	3 200	2 200	1 400	2 800	7 000	32	10.0	200	86	170	C3TQ6205+******	Type1
0.68	3 500	2 400	2 800	1 900	4 800	18	11.0	250	60	130	C3TR5684+******	Type2

备注 **Note**：1. “+”表示容量偏差。 “+” =capacitance tolerance code, J=±5%, K=±10%.

2. “*******”表示内部特征码。 “*******” = Internal use.

3. “I_{max}”为 100kHz、环境 70°C、$\triangle\theta_{case}$=15°C值。
“I_{max}” @100kHz, θ_{amb}=70°C, $\triangle\theta_{case}$=15°C.

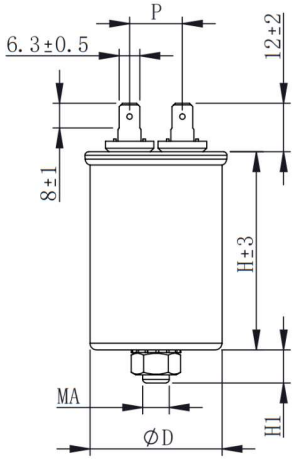
4. “R_s”、“ L_s”均为典型值。“R_s”，“L_s” are typical values.

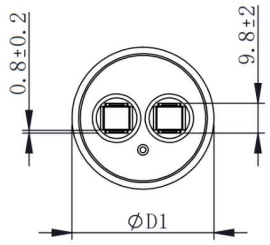
5. 其他容量，尺寸系列可按用户需求商定。 Other values and dimensions is available on request.

油式单相交流滤波电容器
Oil-filled type single phase AC filter capacitor

■ 外形图 Outline Drawing

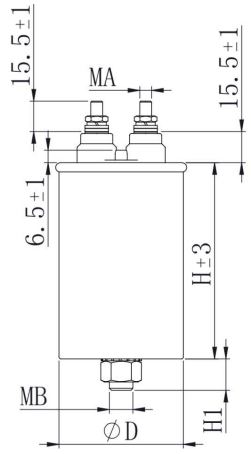
焊片式设计(无滚槽设计，D=40~60)Tab type design(Without channeling, D=40~60)

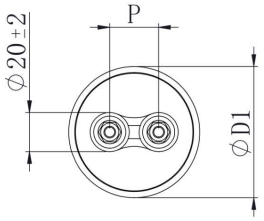




D±1	40	45~50	55	60
H1±1	10	10	12	16
P±1.5	16	18	20	20
MA	M8	M8	M10	M12

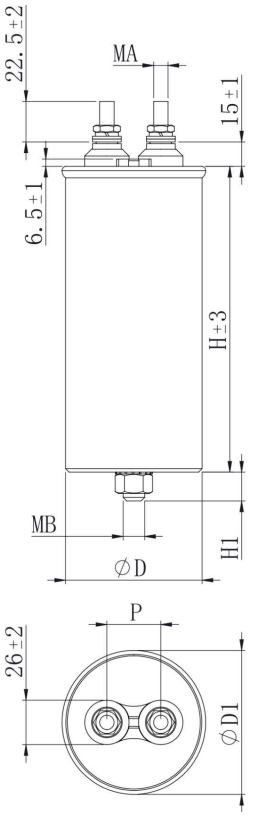
螺栓式设计(无滚槽设计，D=63.5)Bolt type design (Without channeling, D=63.5)





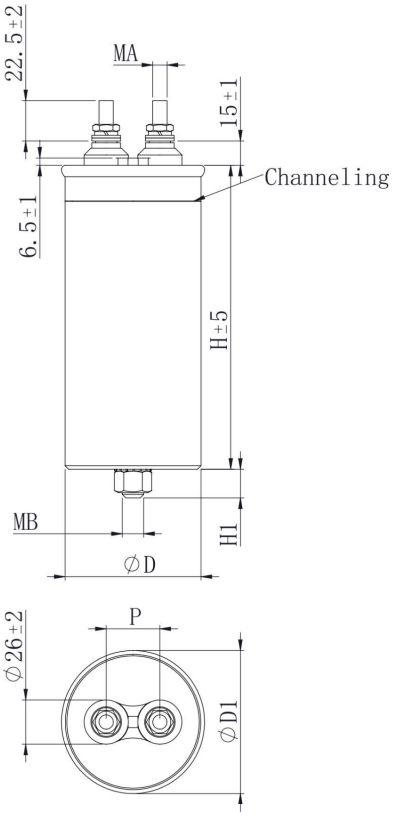
D±1	63.5
H1±1	16
P±1	25
MA	M6
MB	M12

螺栓式设计(无滚槽设计, D=76~116)Bolt type design(Without channeling, D=76~116)



D±1	76~96	106~116
H1±1	16	16
P±1	30	35
MA	M8	M10
MB	M12	M12

螺栓式设计(滚槽设计, D=116)Bolt type design(Channeling, D=116)



D±1	116
H1±1	16
P±1	35
MA	M10
MB	M12

C6M

■ 特点

- 金属化聚丙烯膜设计，自愈性优良
- 防爆设计，过压力保护更安全
- 适用于电力电子设备、UPS 电源中的交流滤波电路，能承受较高的谐波电流及峰值电流、电压
- 对于焊片式，可满足 96h 中性盐雾试验

■ Features

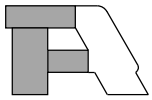
- Metallized polypropylene film design, excellent self-healing property
- Anti-explosion design, more safety overpressure protection
- The capacitors particularly suit for AC filter circuit in power electric equipment and UPS power unit. They have ability to withstand high harmonic current, peak current and peak voltage
- For tab type, the capacitors meet 96h neutral salt spray

■ 安全认证 Safety Approvals

●		TUV Rheinland (德国)	EN 61071:2017, EN 61881-1:2011, U_{rms}: 250Vac~1 200Vac, U_N:250Vac~1 700Vac, C_N: 3μF~660μF, - 40°C/70°C or - 40°C/85°C 证书号(Certificate No.):R 50479662

■ 技术要求 Specifications

引用标准 Reference standards	GB/T 17702 (IEC 61071)
额定均方根电压 Rated RMS voltage (U_{rms})	焊片式 (Tab type) 250Vac ~ 500Vac (可根据客户要求定制 U_{rms}≤660Vac 的设计) (The design of U_{rms}≤660Vac can be customized according to customer requirements)
	螺栓式 (Bolt type) 250Vac ~ 850Vac (可根据客户要求定制 U_{rms}≤1 500Vac 的设计) (The design of U_{rms}≤1 500Vac can be customized according to customer requirements)
额定频率 Rated frequency (f_N)	50Hz/60Hz
额定电容量 Rated capacitance (C_N)	焊片式 (Tab type) 10μF ~ 150μF
	螺栓式 (Bolt type) 10μF ~ 600μF
电容量偏差 Capacitance tolerance	±5% (J), ±10% (K), -5%~+10% (6)
极间耐电压 Test voltage between terminals ($U_{T\text{-}T}$)	2.15U_{rms} or 1.5U_N (50Hz/60Hz), 10s
极壳耐电压 Test voltage between terminals to case ($U_{T\text{-}C}$)	焊片式 (Tab type) 3 000Vac (50Hz/60Hz), 10s
	螺栓式 (Bolt type) 4 000Vac (50Hz/60Hz), 10s
绝缘电阻 Insulation resistance (IR×C_N)	≥10 000s (20°C, 500V, 1min)
介质损耗角正切 Dielectric dissipation factor (tan δ_d)	2×10^{-4}
气候类别 Climatic category	40/70/56
可运行温度范围 (热点温度) Operating temperature range (θ_{hs})	-40°C~ 85°C (建议使用过程中，保证θ_{hs}≤70°C，否则会影响寿命) (It is suggested that θ_{hs} should be guaranteed to be less than 70°C in the use process, otherwise the lifetime will be affected)
贮存温度范围 Storage temperature range (θ_s)	-40°C~85°C (若θ_s>70°C，会影响电容寿命) (If θ_s>70°C, the lifetime will be affected)



预期寿命 **Expected lifetime**		$\|\triangle C/C\| \leqslant 5\%$ **after 100 000h @0.8U_{rms}, $\theta_{hs} \leqslant 70°C$**
防爆装置 **Explosion-proof device**		过压力防护装置 **Overpressure disconnector**
内部填充料 **Internal stuffing**		**Oil (Non PCB)**
冷却方式 **Cooling**		自然空气或强制制冷 **Naturally air-cooled or force cooled**
安装 **Installation**	位置 **Position**	端子朝上 **Terminals upright**
	引出端形式 **Terminal form**	焊片式 **(Tab type)** **AMP250#** 插片每边 2 个 **Two AMP250# per side**
		螺栓式 **(Bolt type)** 螺栓式 **M6**、**M8** 或 **M10** **Bolt type M6, M8 or M10**
	安装形式 **Fixed style**	焊片式 **(Tab type)** 底部螺栓 **M8**、**M10** 或 **M12** **Bottom-bolt M8, M10 or M12** 中部卡圈 **Ring-clip in the middle of case**
		螺栓式 **(Bolt type)** 底部螺栓 **M12** **Bottom-bolt M12**
电极最大扭矩 **Max. torque of terminals**		螺栓式 **(Bolt type)** **3N·m (M6), 6N·m (M8), 8N·m (M10)**
最大安装扭矩 **Max. torque of installation**		**5N·m (M8), 7N·m (M10), 10N·m (M12)**
最高使用海拔 **Max. altitude**		**2 000m:**电流不降额**(No derating for current)** **2 000m to 5 000m:**电流每 **500m** 按 **3%**降额 **(Decreasing factor 3% per 500m for current)**

■ 产品编码说明　Part number system

15 位产品代码如下：

The 15 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	6	M												

第 **1~3** 位　型号代码
C6M

第 **4~5** 位　额定均方根电压
E2=250Vac　R1=330Vac　H2=500Vac
T1=540Vac　U1=600Vac　U2=690Vac
V2=760Vac　W1=850Vac

第 **6~8** 位　标称容量
举例**: 506=50×10^{6}pF=50μF**

第 **9** 位　容量偏差
J=±5%, K=±10%, 6=-5%~+10%

第 **10~15** 位 内部特征码

Digit 1 to 3　Series code
C6M

Digit 4 to 5　Rated RMS voltage
E2=250Vac　R1=330Vac　H2=500Vac
T1=540Vac　U1=600Vac　U2=690Vac
V2=760Vac　W1=850Vac

Digit 6 to 8　Rated capacitance value
For example: 506=50×10^{6}pF=50μF

Digit 9　Capacitance tolerance
J=±5%, K=±10%, 6=-5%~+10%

Digit 10 to 15　Internal use

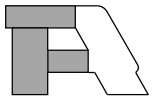
■ 技术参数 Technical data (mm)

焊片式 (Tab type)

U_{rms}=250Vac U_N=350Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1.5 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
15	40	44	65	16	7.1	80	21.4	10	0.2	0.6	0.10	C6ME2156-******
25	45	49	75	18	6.6	100	17.1	12	0.3	0.9	0.14	C6ME2256-******
35	50	54	75	18	5.1	100	15.1	14	0.4	1.2	0.17	C6ME2356-******
50	55	59	80	20	4.0	100	12.9	16	0.6	1.8	0.22	C6ME2506-******
60	60	64	80	20	3.5	100	11.4	16	0.7	2.1	0.26	C6ME2606-******
80	60	64	90	20	3.7	120	10.6	16	0.8	2.4	0.29	C6ME2806-******
100	60	64	105	20	4.3	150	9.4	16	0.7	2.1	0.34	C6ME2107-******
120	60	64	115	20	4.6	170	8.6	16	0.8	2.4	0.38	C6ME2127-******
140	60	64	130	20	5.1	210	7.8	16	0.8	2.4	0.43	C6ME2147-******
150	60	64	130	20	4.9	210	7.6	16	0.8	2.4	0.43	C6ME2157-******

U_{rms}=330Vac U_N=460Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1.5 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
15	45	49	65	18	5.8	80	18.7	11	0.3	0.9	0.12	C6MR1156-******
20	45	49	75	18	6.5	100	16.5	12	0.3	0.9	0.14	C6MR1206-******
25	50	54	75	18	5.5	100	15.0	13	0.4	1.2	0.17	C6MR1256-******
30	50	54	75	18	4.8	100	14.3	14	0.5	1.5	0.17	C6MR1306-******
35	55	59	80	20	4.3	100	12.9	16	0.6	1.8	0.22	C6MR1356-******
40	60	64	80	20	3.9	100	12.1	16	0.6	1.8	0.26	C6MR1406-******
50	60	64	90	20	4.3	120	10.9	16	0.7	2.1	0.29	C6MR1506-******
60	60	64	90	20	3.8	120	10.3	16	0.8	2.4	0.29	C6MR1606-******
80	60	64	115	20	5.2	170	8.7	16	0.7	2.1	0.38	C6MR1806-******
100	60	64	130	20	5.5	210	7.7	16	0.8	2.4	0.43	C6MR1107-******

U_{rms}=500Vac U_N=700Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1.5 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
10	45	49	75	18	5.3	100	16.7	11	0.3	0.9	0.14	C6MH2106-******
12	45	49	75	18	4.6	100	15.9	12	0.4	1.2	0.14	C6MH2126-******
15	50	54	75	18	4.0	100	14.5	14	0.5	1.5	0.17	C6MH2156-******
20	55	59	80	20	3.3	100	12.5	16	0.7	2.1	0.22	C6MH2206-******
25	60	64	80	20	2.9	100	11.4	16	0.9	2.7	0.26	C6MH2256-******
30	60	64	90	20	3.3	120	10.5	16	0.8	2.4	0.29	C6MH2306-******
35	60	64	105	20	3.9	150	9.6	16	0.7	2.1	0.34	C6MH2356-******
40	60	64	105	20	3.6	150	9.1	16	0.9	2.7	0.34	C6MH2406-******
45	60	64	115	20	4.0	170	8.5	16	0.8	2.4	0.38	C6MH2456-******
50	60	64	130	20	4.6	210	7.9	16	0.8	2.4	0.43	C6MH2506-******



■ 技术参数 Technical data (mm)

螺栓式(Bolt type)

U_{rms}=250Vac U_N=350Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
150	76	80	120	30	2.8	140	7.3	35	2.4	7.2	0.6	C6ME2157-******
160	76	80	120	30	2.6	140	7.1	36	2.6	7.8	0.6	C6ME2167-******
180	76	80	130	30	2.9	160	6.7	35	2.4	7.2	0.6	C6ME2187-******
200	76	80	130	30	2.7	160	6.5	37	2.7	8.1	0.6	C6ME2207-******
230	76	80	145	30	3.0	190	6.0	36	2.4	7.1	0.7	C6ME2237-******
250	76	80	170	30	2.0	110	5.3	47	2.6	7.8	0.8	C6ME2257-******
300	76	80	200	30	1.9	140	4.7	51	4.8	14.4	1.0	C6ME2307-******
350	76	80	200	30	1.8	140	4.4	54	5.6	16.8	1.0	C6ME2357-******
400	86	90	200	30	1.6	140	4.3	57	6.4	19.2	1.3	C6ME2407-******
500	86	90	220	30	1.7	160	3.8	59	6.6	19.8	1.4	C6ME2507-******
600	86	90	250	30	1.8	190	3.4	59	6.2	18.6	1.6	C6ME2607-******

U_{rms}=330Vac U_N=460Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
80	63.5	67.5	110	25	3.7	140	8.7	25	1.2	3.6	0.4	C6MR1806-******
100	76	80	120	30	3.1	140	7.4	31	1.6	4.8	0.6	C6MR1107-******
120	76	80	120	30	2.8	140	6.9	34	1.9	5.7	0.6	C6MR1127-******
140	76	80	145	30	3.7	190	6.3	31	1.4	4.2	0.7	C6MR1147-******
150	76	80	145	30	3.5	190	6.1	32	1.6	4.8	0.7	C6MR1157-******
160	76	80	145	30	3.4	190	6.0	33	1.7	5.1	0.7	C6MR1167-******
180	76	80	170	30	1.7	110	5.2	49	1.9	5.7	0.8	C6MR1187-******
200	76	80	200	30	2.0	140	4.8	47	3.2	9.6	1.0	C6MR1207-******
230	76	80	200	30	2.0	140	4.6	49	3.7	11.1	1.0	C6MR1237-******
250	76	80	200	30	1.9	140	4.4	51	4.0	12.0	1.0	C6MR1257-******
300	86	90	200	30	1.7	140	4.1	54	4.8	14.4	1.3	C6MR1307-******
350	86	90	220	30	1.7	160	3.8	55	4.6	13.8	1.4	C6MR1357-******
400	86	90	250	30	2.0	190	3.5	54	4.1	12.3	1.6	C6MR1407-******

U_{rms}=500Vac U_N=700Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
20	76	80	75	30	1.9	80	9.8	22	1.2	3.6	0.4	C6MH2206-******
50	76	80	120	30	2.6	140	7.5	32	1.2	3.6	0.6	C6MH2506-******
60	76	80	120	30	2.3	140	7.1	34	1.4	4.2	0.6	C6MH2606-******
70	76	80	145	30	3.1	190	6.4	32	1.1	3.3	0.8	C6MH2706-******
80	76	80	145	30	2.8	190	6.1	34	1.2	3.6	0.8	C6MH2806-******
90	76	80	145	30	2.6	190	5.8	36	1.4	4.2	0.8	C6MH2906-******
100	76	80	200	30	1.7	140	4.9	48	2.3	6.9	1.1	C6MH2107-******
133	86	90	200	30	1.5	140	4.4	53	3.1	9.3	1.1	C6MH2A00-******
150	86	90	200	30	1.4	140	4.2	55	3.5	10.5	1.1	C6MH2157-******
200	86	90	220	30	1.4	160	3.7	58	3.9	11.7	1.2	C6MH2207-******
250	86	90	250	30	1.5	190	3.2	59	3.8	11.4	1.4	C6MH2257-******

■ 技术参数 Technical data (mm)

螺栓式(Bolt type)

U_{rms}=540Vac U_N=760Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
22	76	80	85	30	1.8	80	9.6	29	1.4	4.2	0.4	C6MT1226-******
33	76	80	105	30	1.8	120	8.3	33	1.4	4.2	0.5	C6MT1336-******
47	76	80	120	30	2.4	140	7.1	33	1.1	3.3	0.6	C6MT1476-******
60	76	80	145	30	3.1	190	6.2	33	0.9	2.7	0.7	C6MT1606-******
68	76	80	145	30	2.8	190	5.9	35	1.0	3.0	0.7	C6MT1686-******
82	76	80	170	30	1.4	110	4.9	50	2.7	8.1	0.8	C6MT1826-******
100	86	90	170	30	1.3	110	4.6	54	3.3	9.9	1.0	C6MT1107-******
120	76	80	250	30	2.1	190	3.8	49	1.8	5.4	1.2	C6MT1127-******
150	86	90	250	30	1.9	190	3.6	53	2.3	6.9	1.5	C6MT1157-******
200	96	101	250	30	1.6	190	3.2	58	3.0	9.0	1.9	C6MT1207-******
250	106	111	250	35	1.4	190	2.9	62	3.8	11.4	2.3	C6MT1257-******
300	106	111	250	35	1.3	190	2.7	64	4.5	13.5	2.3	C6MT1307-******

U_{rms}=600Vac U_N=850Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
22	76	80	105	30	2.6	120	8.2	28	0.8	2.4	0.5	C6MU1226-******
33	76	80	120	30	2.7	140	7.1	31	0.8	2.4	0.6	C6MU1336-******
47	76	80	170	30	2.1	120	5.3	41	1.7	5.1	0.8	C6MU1476-******
50	76	80	170	30	2.1	120	5.2	42	1.8	5.4	0.8	C6MU1506-******
60	86	90	170	30	1.9	110	4.8	45	2.2	6.6	1.0	C6MU1606-******
68	86	90	170	30	1.4	110	4.7	51	2.4	7.2	1.0	C6MU1686-******
82	86	90	200	30	1.7	140	4.1	52	2.1	6.3	1.2	C6MU1826-******
100	76	80	250	30	2.2	190	3.5	51	1.6	4.8	1.2	C6MU1107-******
120	86	90	250	30	1.9	190	3.4	54	2.0	6.0	1.5	C6MU1127-******
150	96	101	250	30	1.7	190	3.1	57	2.4	7.2	1.9	C6MU1157-******
180	106	111	250	35	1.6	190	2.8	62	2.9	8.7	2.3	C6MU1187-******
200	116	121	250	35	1.4	190	2.8	64	3.3	9.9	2.8	C6MU1207-******

U_{rms}=690Vac U_N=980Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
15	76	80	95	30	2.4	100	9.4	25	0.8	2.4	0.5	C6MU2156-******
22	76	80	105	30	2.4	120	8.1	28	0.9	2.7	0.5	C6MU2226-******
33	76	80	170	30	2.1	120	6.0	36	1.3	3.9	0.8	C6MU2336-******
47	86	90	170	30	1.8	110	5.3	42	1.9	5.7	1.0	C6MU2476-******
60	86	90	200	30	2.0	140	4.6	43	1.7	5.1	1.2	C6MU2606-******
68	86	90	200	30	1.6	140	4.4	49	1.9	5.7	1.2	C6MU2686-******
82	86	90	250	30	2.0	190	3.8	48	1.5	4.5	1.5	C6MU2826-******
100	86	90	250	30	1.8	190	3.5	52	1.8	5.4	1.5	C6MU2107-******
120	96	101	250	30	1.6	190	3.3	55	2.2	6.6	1.9	C6MU2127-******
150	106	111	250	35	1.4	190	3.0	59	2.7	8.1	2.3	C6MU2157-******
200	116	121	250	35	1.3	190	2.8	64	3.3	9.9	2.8	C6MU2207-******

■ 技术参数 Technical data (mm)

螺栓式(Bolt type)

U_{rms}=760Vac/850Vac # U_N=1 070Vac/1 200Vac												
C_N (μF)	D±1 (mm)	$D1_{max}$ (mm)	H (mm)	P±1 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (K/W)	I_{max} (A)	Î (kA)	$Î_s$ (kA)	M (kg)	Part number
10	76	80	95	30	2.7	100	8.8	22	0.6	1.8	0.5	C6MW1106-******
15	76	80	105	30	2.7	120	7.6	26	0.7	2.1	0.5	C6MW1156-******
22	76	80	145	30	4.4	190	6.3	25	0.5	1.5	0.7	C6MW1226-******
33	76	80	170	30	1.9	110	4.9	40	1.5	4.5	0.8	C6MW1336-******
47	86	90	200	30	2.1	140	4.2	43	1.7	5.1	1.2	C6MW1476-******
68	86	90	250	30	2.0	190	3.4	49	1.4	4.2	1.5	C6MW1686-******
82	96	101	250	30	1.8	190	3.2	52	1.7	5.1	1.9	C6MW1826-******
100	96	101	250	30	1.6	190	2.9	56	2.1	6.3	1.9	C6MW1107-******
150	116	121	250	35	1.5	190	2.6	62	2.9	8.7	2.8	C6MW1157-******

备注 Note:1. “-”表示电容量偏差。 “-” = Capacitance tolerance code, J=±5%, K=±10%, 6=-5%~+10%.

2. “******”表示内部特征码。 “******” = Internal use

3. “#”当额定均方根电压为 760Vac 时，第 4~5 位是 V2。 “#” when the rated RMS voltage is 760Vac, the digit 4~5 is V2.

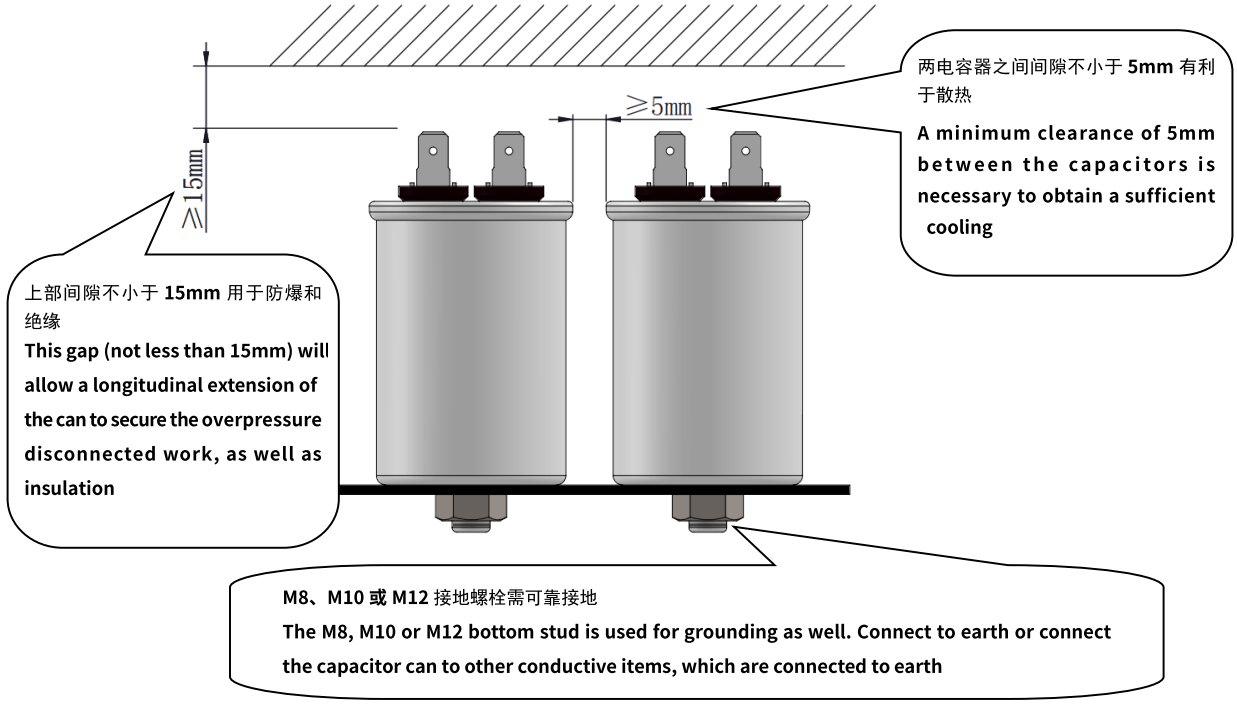
4. “R_{th}”是指在自然冷却条件下，电容器热点到环境的热阻。
“R_{th}” = R_{th} between hotspot and ambient on natural cooling condition.

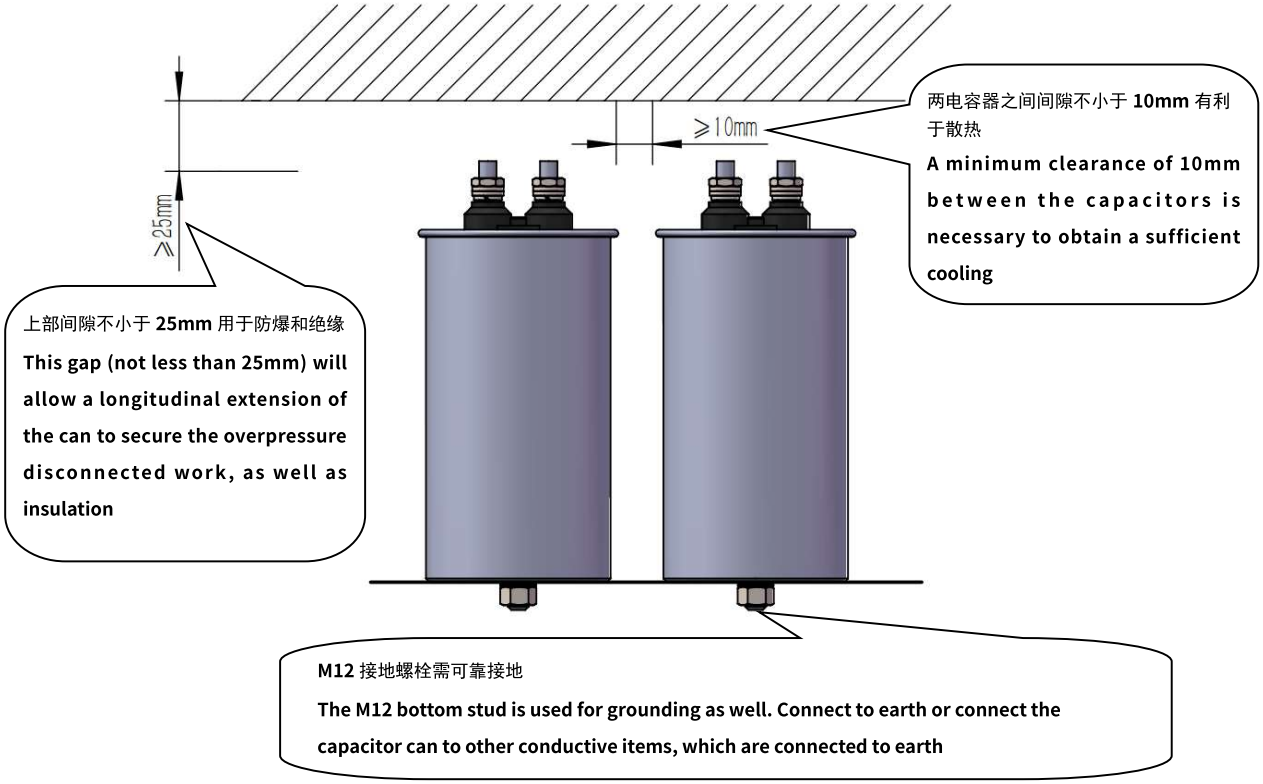
5. I_{max} 可应要求提供更高数值。 For I_{max} higher values available on request.

■ 安装空间要求 Installation space requirements

电容要安装在阴凉、通风良好的位置，且其周围不能有热辐射的物体，如滤波电路电抗器、太阳直射。

The capacitor is to be installed at a cool and well-ventilated place, and must not be installed within the range of heat radiating objects, e.g. filter circuit reactors, direct sun radiation.



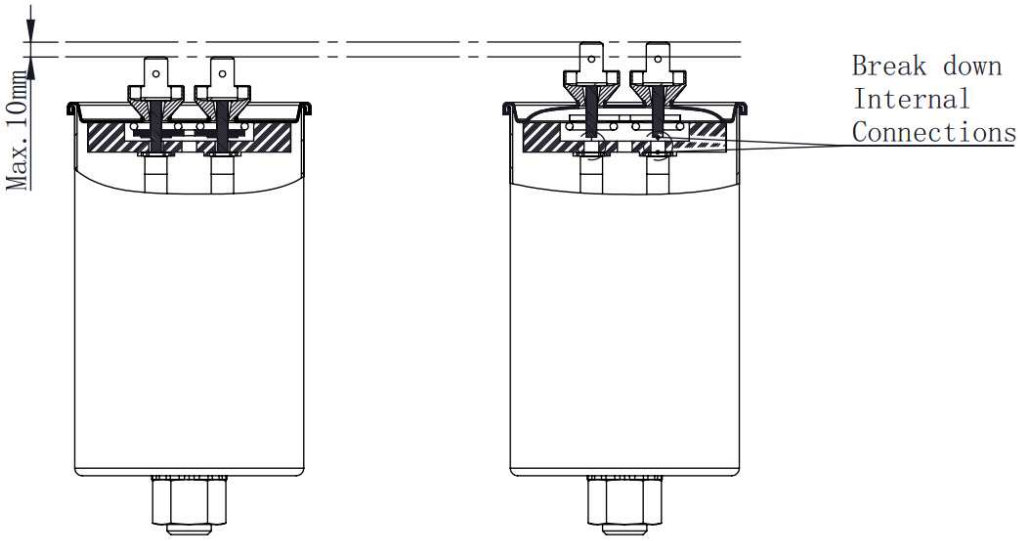


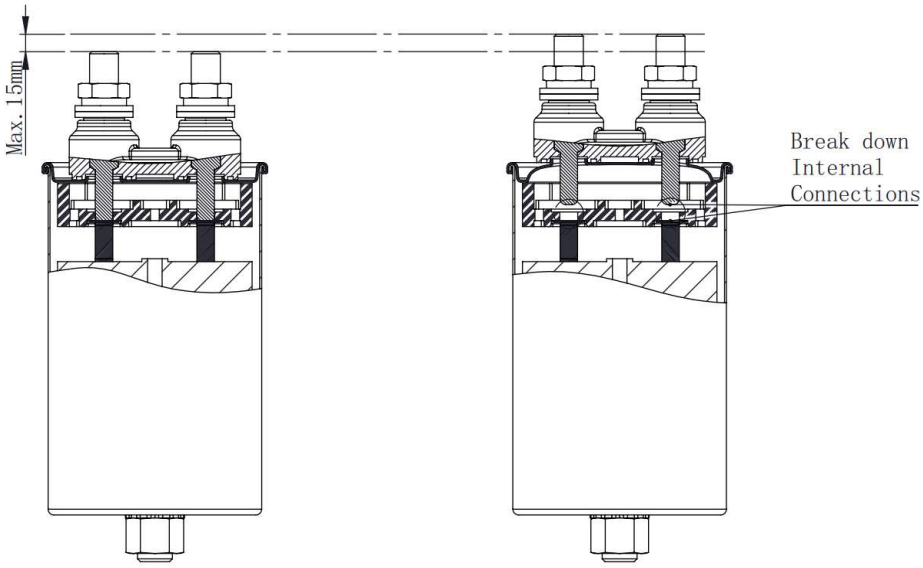
电容主要是通过底部螺栓安装固定，若需要其它安装固定方式，请联系我司技术人员确认。

The capacitor is mainly installed by bolts at the bottom. If you need other installation methods, please contact our technical staff to check.

电容的过压力防护装置需要通过盖面鼓起动作，所以盖面到引出端顶部间不能安装影响防爆动作的其它配件，装置动作前后如下图所示。

The overpressure disconnector of the capacitor is triggered by the cover bulge, so no other components can be installed between the cover and the top of the terminal end that affect the overpressure disconnector action. Before and after the action of the overpressure disconnector is shown in the figure below.





电容必须要垂直安装，且引出端子朝上。

The capacitor must be mounted vertically with the terminal is upward.

■ 连接电缆(以 C6M 螺栓式为例) Connection of the supply cable(Take C6M bolt type as an example)

产品本体（参考外形图的**φD×H**）上部必须保持足够的空间（参考安装空间要求），该空间内不能安装其它组件。

Keep enough space (refer to the outline drawing φD×H) on the top of the capacitors (refer to installation space requirements) and no other components can be installed in this space.

连接电缆要使用软性电线并保持松弛，不能用硬芯电缆，若使用母排等连接方式，请联系我司技术人员确认。

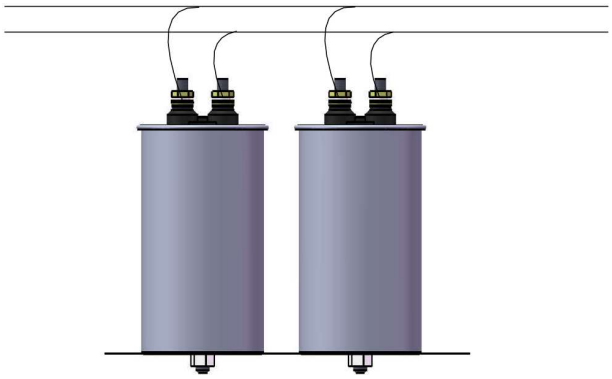
The connection cable shall be of flexible type and keep slack, do not use hard core cable. If using busbar connection or other methods, please contact our technical staff to check.

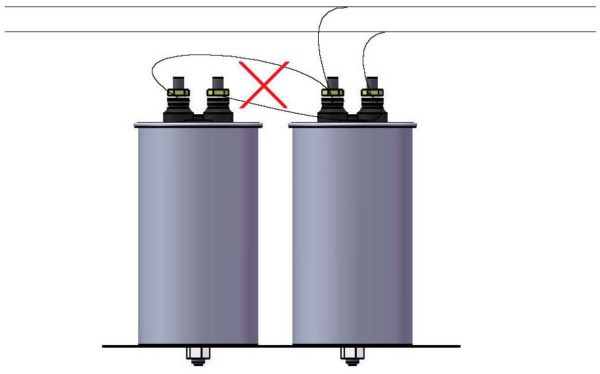
可根据实际电流值来选择合适的电缆。

According to actual result to choose the appropriate cable.

对于多个电容器并联，每个电容器采用直接连接到母线上方式，若有其他连接方式请联系我们。

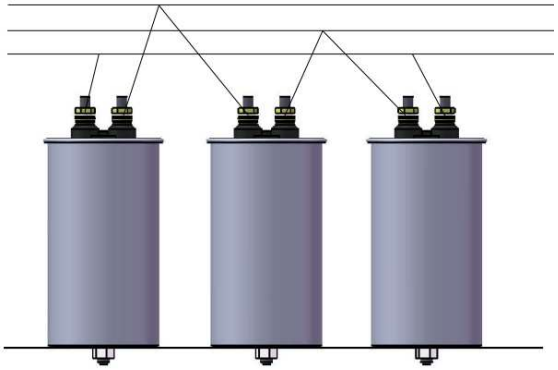
For capacitors connected in parallel, each capacitor should use independent lead wires, if you have any other connection way please contact us.

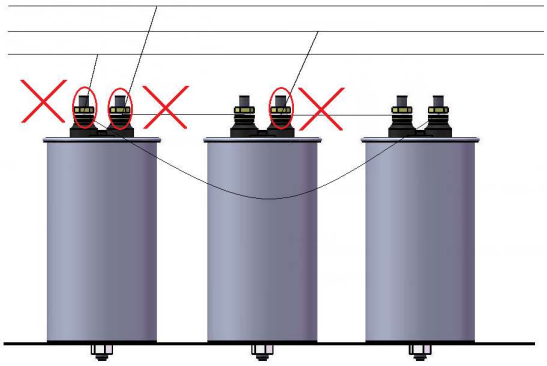




将电容使用三角形接法进行外部连接时，建议使用以下方式连接，避免汇流导致端子过热。

When the capacitors are connected externally by the delta connection method, it is recommended to use the following way connection, avoid terminals overheating due to current confluence.





■ 安装注意事项 Installation cautions

操作前注意电容器必须充分放电。

Discharge the capacitor completely before operation.

注意端子最大可承受电流，端子总电流不得超出规定的最大值：

Pay attention to the Max. Current on the terminals, the total current on terminals must not go beyond the Max. current by specified:

- 焊片式 **AMP250#**引出端子最大电流为 **16A**。
  The Max. Current on terminals is 16A for tab type AMP250# terminals.
- **M6** 引出螺栓最大电流为 **60A**。
  The Max. Current on terminals is 60A for Bolt M6 terminals.
- **M8** 引出螺栓最大电流为 **80A**。
  The Max. Current on terminals is 80A for Bolt M8 terminals.
- **M10** 引出螺栓最大电流为 **100A**。
  The Max. Current on terminals is 100A for Bolt M10 terminals.

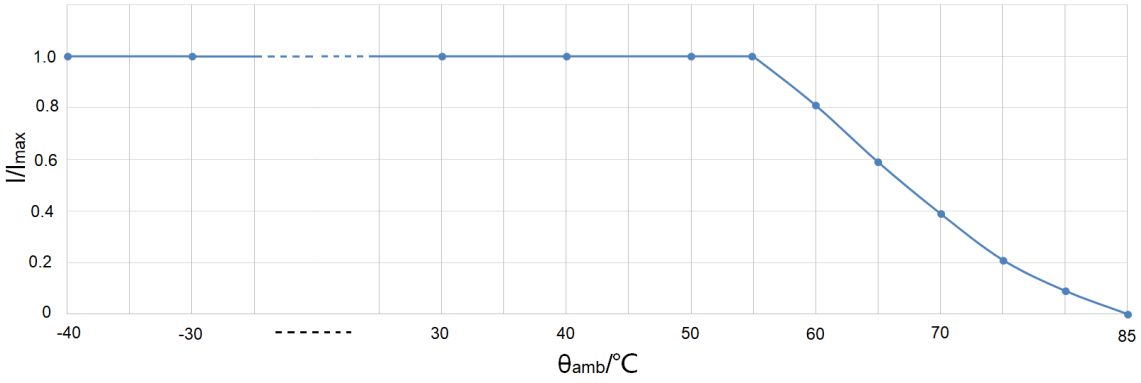
■ 环境温度 Ambient temperature

建议电容使用环境温度≤**55℃**；当环境温度＞**55℃**时，随环境温度升高，电容发热功率应逐渐下降，当环境温度达最高温度 **85℃**时，电容发热功率为 **0W**。电容环境温度的使用，可参照预期寿命曲线和电流随环境温度降额曲线。

The capacitors' working ambient temperature that we recommend is 55℃(or lower). When the ambient temperature exceeds 55℃, considering the ambient temperature rising, the active power of the capacitor should be gradually decreased(When it gets to the highest temperature(85℃), the active power of the capacitor should be decreased to 0 Watt). If you want to know more details about the capacitors' operating temperature, please refers to the expected lifetime curves of capacitors and the current derating curve with ambient temperature.

电流随环境温度降额曲线

Current derating curve with ambient temperature



■ 冲击电流限制 Inrush current limitation

当电容器接入电路或设备切换时可能会出现高幅值和高频率的暂态过电流，暂态过电流可能是额定电流数十倍或更大的冲击电流，但要保证电容器不在电流超过 I_{max}(最大电流)、$\hat{I}$(最大峰值电流)和$\hat{I}_s$(最大冲击电流)规定的最大参数值下运行。

Transient overcurrents of high amplitude and frequency may occur when capacitors are switched into the circuit or the equipment is switched. Transient overcurrent may be tens of times the rated current or greater impulse current. However, make sure that the capacitor does not operate with current exceeding the maximum parameters specified by I_{max} (maximum current), $\hat{I}$ (maximum peak current) and $\hat{I}_s$ (maximum impulse current).

I_{max}：连续运行时的最大均方根电流。

I_{max}: The maximum RMS current at continuous operation.

$\hat{I}$：在连续运行中出现的最大重复峰值电流，通常持续时间为 ms 级。

$\hat{I}$: The maximum repeated peak current that occurs in continuous operation. Usually the duration is ms level.

$\hat{I}_s$：由切换或系统中任何其它扰动所感应的非重复峰值电流，此电流只允许持续比基本周期短的时间和出现有限的次数，通常持续时间为μs 级且在生命周期内不超过 1 000 次。

$\hat{I}_s$: A non-repeating peak current induced by a switch or any other disturbance in the system that is allowed to last only a limited number of times shorter than the base period. Usually the duration is μs level and it occurs not more than 1 000 times in a lifetime.

■ 谐波 Harmonics

谐波是由于一些非线性电器运行时造成的，这些载荷诸如现代电力电子中的转换器、电气传动、焊接机、备用电源等。谐波由一系列频率为 50Hz 或 60Hz 倍数的正弦电流和电压组成。

Harmonics result from the operation of electrical loads with non-linear voltage-current characteristics. They are caused by loads operated with modern power electronic，such as converters，electrical drives，welding machines and stand-by power supplies. Harmonics are sinusoidal voltages and currents with frequencies that are multiples of a 50Hz or 60Hz power supply frequency.

在使用过程中计算产品的温升以及核心热点温度是必要的，若使用过程中理论计算出的电容器热点超出了允许的最高范围，建议检查输入线的电流总谐波畸变率 THD_i，并按以下要求执行：

It is necessary to calculate the temperature rise of the capacitors from hotspot to case during the using process. If the temperature rise of theoretical calculation of capacitors' hotspot beyond the maximum allowable range, we would propose to check the total harmonic current distortion (THD_i) of the input terminals, and according to the following requirements:

- 当 $I_N \geqslant 40A$ 时，建议 $THD_i \leqslant 100\%$。
  When $I_N \geqslant 40A$, suggest $THD_i \leqslant 100\%$.
- 当 $40A > I_N \geqslant 35A$ 时，建议 $THD_i \leqslant 150\%$。
  When $40A > I_N \geqslant 35A$, suggest $THD_i \leqslant 150\%$.
- 当 $35A > I_N \geqslant 30A$ 时，建议 $THD_i \leqslant 200\%$。
  When $35A > I_N \geqslant 30A$, suggest $THD_i \leqslant 200\%$.
- 当 $30A > I_N \geqslant 25A$ 时，建议 $THD_i \leqslant 250\%$。
  When $30A > I_N \geqslant 25A$, suggest $THD_i \leqslant 250\%$.
- 当 $25A > I_N \geqslant 20A$ 时，建议 $THD_i \leqslant 300\%$。
  When $25A > I_N \geqslant 20A$, suggest $THD_i \leqslant 300\%$.
- 当 $I_N < 20A$ 时，关于 THD_i 的限定，请联系我司技术人员确认。
  When $I_N < 20A$, please contact our technical staff to check the THD_i limit.
  (注：I_N 是指额定均方根电压、额定容量条件下的基波电流。)
  (Note: I_N is the fundamental current under rated RMS voltage and rated capacity.)

$$THD_i = \frac{\sqrt{\sum_{n=1}^{\infty} I_n^2}}{I_0} \times 100(\%)$$

（THD_i：电流总谐波畸变率，I_0：实际工作的基波电流，I_n：实际工作的谐波电流）

（THD_i: Total current harmonic distortion，I_0: Actual working fundamental current，I_n: Actual working harmonic current）

■ 安全注意事项 Safety

电容器外壳保持良好和可靠接地。

Maintain good and effective earthing for enclosures of capacitors.

拆装电容器时要确保电容器已放电干净。

Handle capacitor to ensure capacitor has discharge clean.

遵循良好的工程规范。

Follow good engineering practices.

■ 过流/短路保护 Over current/short circuit protection

建议使用限流熔断器或塑壳断路器来进行短路保护。短路保护的元件以及连接电缆需能长时间承受 **1.5** 倍电容器额定电流。

HRC-fuse or MCCB for short circuit protection is recommended to use. Short circuit protection equipment and connection cable should be selected so that the 1.5 times rated current of the capacitor can be managed permanently.

限流熔断器额定电流值应为正常电容电流的 **1.6~1.8** 倍。

HRC-fuse rating has to be 1.6 to 1.8 times nominal capacitor current.

使用热磁继电器为过载保护。

Use thermal magnetic overcurrent relays for overload protection.

将电容使用星形接法进行外部连接时，为了保证三相电压不发生偏压，建议中性点接地使用。

When the capacitors are connected externally by the star connection method, the neutral point grounding is recommended for keep the three-phase voltage balance.

■ 维护 Maintenance

检查连接线与端子螺丝是否打紧。

Check tightness of Connections/terminals periodically.

定期清理引出端子避免因灰尘或其他可导电的垃圾引起短路。

Clean the terminals periodically to avoid dust or other conductive garbage can cause a short-circuit.

检查短路保护保险丝。

Check short circuit protection fuses.

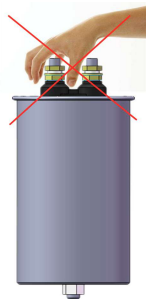
每半年使用电流钳表或其他在线测电流的工具测量电容器电流。

Every half a year use current clamp table or other on-line measuring tools of current measurement capacitor current.

■ 安装与调试步骤 Installation & commissioning procedures

1. 打开包装箱取出电容
   Unpack Capacitor
   取电容时请勿直接抓取端子。
   Do not touch capacitor terminals by hand directly while taking them
2. 检查电容器外观（是否有机械损伤）
   Check Physically
3. 固定好电容器
   Fixed capacitors

4. 确保使用电容器场合的电压、频率、温度在电容器额定值以下
   Ensure for correctness of supply voltage, frequency, temperature
5. 连接好电容器
   Connect Capacitor
6. 打开电源开关
   Switch on supply
7. 检查主回路的电压与电流是否正常
   Check main supply Voltage & current
8. 电容器正常运行
   Capacitor is commissioned



■ 预期寿命 Expected lifetime

电容器的应用中，有多种因素会影响到电容器的使用寿命，比如电压、温度、电流、电网谐波、光照或辐射以及其它一些未知的因素。预期寿命仅考虑电压、温度的关系，基于长期耐久性试验的合格结果，再通过预期寿命理论计算公式计算该电容在不同工况下的预期寿命。因此，预期寿命仅作为选型参考，而不代表电容器的实际使用寿命，也不代表质保要求。

For capacitors application, various factors will affect the expected lifetime of capacitors, such as voltage, temperature, current, network harmonics, humidity, lighting or radiation and other unknown factors. The lifetime only considers the relationship between voltage and temperature. Based on the qualified results of long-term durability test, the lifetime curve of the capacitor under different working conditions is calculated by using the theoretical calculation formula of lifetime. Therefore, the lifetime is only used as a reference for selection, and does not represent the actual service life of the capacitor, nor does it represent the quality assurance requirements.