**DATASHEET**

# FILM CAPACITORS – DC Link Capacitor

## PART NO.: YHA1128006K003

YUHUA ELECTRICAL

YHA Series, 1100VAC, 800µF, ±10 %, -40℃~85℃ , Radial, D116*H145mm, NUT

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AUTHORIZED DISTRIBUTOR

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## ■ PART NUMBER GUIDE

The 14 digits part number is formed as follow:

Series Code
YHA type

Rated Capacitance
800×$10^6$ pF = 800 μF

Internal Distinguishing Code
*** to 999 for different design

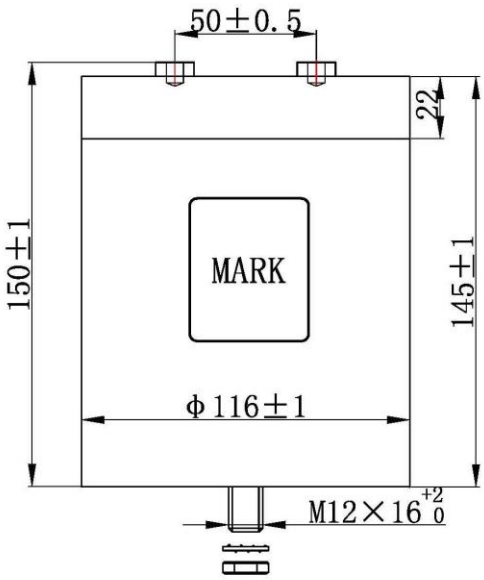
| Y | H | A | 1 | 1 | 2 | 8 | 0 | 0 | 6 | K | 0 | 0 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

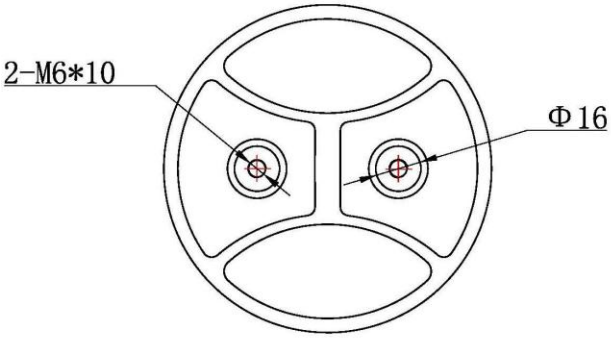
Rated Voltage
11×$10^2$=1100 Vdc

Capacitance Tolerance
J: ±5 % or 0 %～+5 %
K: ±10 % or -5 %～+10 %

## ■ PRODUCT PICTURE

## ■ Outline Drawing






Size units: mm

## ■ Features

1. Used in DC-Link circuits, be able to replace electrolytic capacitor
2. Low ESR, high ripple current handling capabilities
3. Low ESL
4. Long life-time
5. Polypropylene dielectric, Self-healing property

## ■ Applications

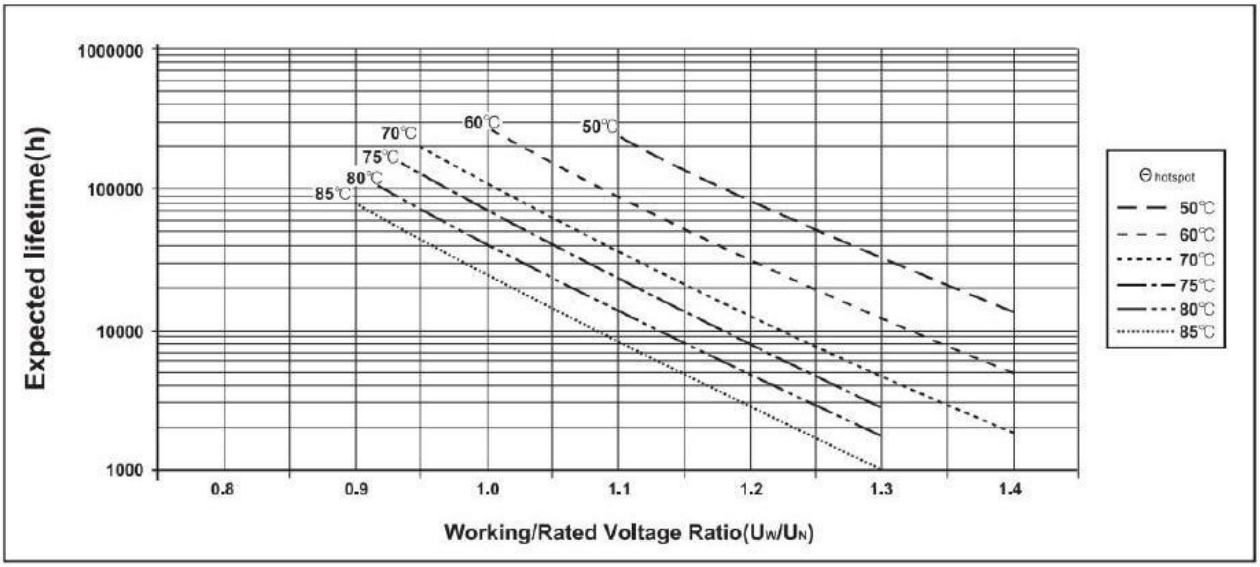
1.Wind power, solar power
2.High voltage frequency converters, SVG, SVC etc

## ■ Technical Data

| | |
|---|---|
| Reference Standard | IEC 61071 |
| Rated Voltage | 1100VDC |
| Rated Capacitance | 800μF |
| Capacitance Tolerance | ±10% |
| **Main material and mechanical parameters** | |
| Dielectric | Polypropylene film |
| Sealing material | Resin(UL94V-0) |
| Shell | Aluminum |
| Terminal | Tinned brass |
| Body size | Φ116*145mm(See drawing for details) |
| Max. Torque of terminals | M6-6Nm |
| Max. Torque of Installation | M12-10Nm |
| Weight | ≈1.8kg |
| **Electrical parameters** | |
| Temporarily Overvoltage (per day) | 1.1 x Un,30% on load duration. |
| | 1.15 x Un for 30min |
| | 1.2 x Un for 5min |
| | 1.3 x Un for 1min |
| | 1.5 x Un for 50ms each time,1,000 times during the life of the capacitor. |
| Maximum ripple current（Irms） | Θamb≤50℃，Irms=80A |
| Maximum peak current ( Î) | 8.8kA(t ≤ 10 us,interval time ≥ 60 s) |
| Not-repetitive current( Îs) | 26.4kA |
| Equivalent series resistance (ESR) | ≤1.2mΩ（1V、1kHz） |
| Equivalent series inductance (ESL) | ≤50nH （1MHz） |
| Tangent of loss angle (tanδ) | ≤20×$10^{-4}$（100Hz，20℃） |
| Loss tangent tanδ0 | ≤2×$10^{-4}$（100Hz，20℃） |
| Thermal resistance (Rth) | 3.7K/W |
| Insulation resistance ($R_i$×$C_N$) | ≥ 10000s（500V，20℃） |
| Interpole voltage resistance test( $U_{TT}$) | 1.5$U_N$ (20℃,10S) |
| Voltage tolerance between polar shells ( $U_{TC}$) | 4000VAC (50Hz,20℃,10S) |
| Expected lifetime | 100000h(Un,70℃ Reference expected lifetime curves) |
| Failure rate | ≤100FIT |
| **Enviromental parameters** | |

| | |
|---|---|
| Relative humidity | ≤90% |
| Operating Temperature Range | -40℃～+85℃（$\Theta_{hs}$≤85℃） |
| Storage Temperature Range | -40℃～+85℃ |
| Altitude | 2000m |

## ■ Expected lifetime curves




# ■Product code description

The 14-bit product code is as follows：

1～3 Model code

Example: YHA= Series A products

4～7 Dc rated voltage

Example：112=11×$10^2$V=1100V

7～10 Nominal capacitance

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Nominal capacitance is 1 to 3 significant digits,coded in four-digit notation,ABCD=ABC*10DpF | | | | | | | | | |
| Example：8006=800×$10^6$pF=800μF　　5005=500×$10^5$pF=50μF | | | | | | | | | |
| If the nominal capacitance is 4 bits,ABCX=ABCXμF,the fourth X rule is as follows: | | | | | | | | | |
| The fourth X | P | Q | R | S | T | W | X | Y | Z |
| Capacity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Example：103T=1035μF | | | | | | | | | |

11 Capacity level

J=±5%，K=±10%

12～14 Internal characteristic code of the capacitor

## ■ Packing and Shipment

For the packing box with capacitors ,any kinds of shipments are permitted. But the sprinkle of rain or snow and mechanical damage must be avoided.

## ■ Cautions and Warnings

1.In order to eliminate the risk of shock,the capacitor is packaged with terminals shorted.But when it starts to work,the stocked energy of the capacitor may be lethal. So please discharge through resistor before operating the capacitor,short-circuit capacitor is not permitted.

2.Do not use or store capacitors in corrosive atmosphere,especially where chloride gas,sulfide gas,acid,alkali,salt or other similar substance that exists.In the dusty environment,it needs regular maintenance and cleaning,especially the terminals which are required to avoid conductive path between phases.

3. If the depth of the dent is more than 1mm or any other mechanical damage,capacitors are forbidden to use.

4.Don't hesitate to contact our technical service for any doubts and more detail information.