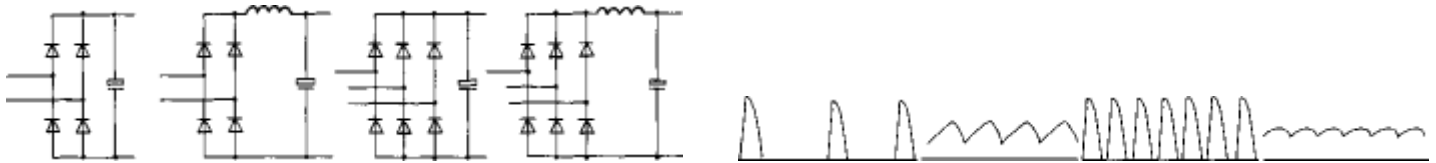


Jinpei as a professional snap - in electrolytic capacitor manufacturer that we introduce the with the snap - in electrolytic capacitor in the application of the rectifier filter

In the applications of rectifier power frequency filtering, the snap - in electrolytic capacitor due to its large capacity, high pressure and has an irreplaceable position. In power frequency rectifier filter applications, as a consumer, should pay attention to the snap - in electrolytic capacitor what performance?

With single-phase and three-phase rectifier circuit of aluminium electrolytic capacitor and under different ways of filtering of the output current of the rectifier and capacitor ripple current below



Can see from the picture, both in unidirectional rectifier and three-phase rectifier type can be divided into input filter capacitance and inductance type input filter. The former circuit is simple, but through the filter capacitor ripple current is big; Although the latter circuit is complex, but it can greatly reduce the ripple current flows through the filter capacitor. In the power output of the rectifier is large Choose the latter as well.

The choice of rated voltage

Undoubtedly, the first is the snap - in electrolytic capacitor pressure. Must not be lower than rated voltage peak voltage that may occur. Such as ac 220 V input rectifier, directly under the most unfavorable circumstances possible rated voltage + 20%, or 264 V, the rectifier voltage peak will reach about 370. After the V, light as the parasitic inductance in the circuit may make the filter capacitor voltage slightly higher than 370 V. In our country, therefore, ac 220 v direct rectifier (such as TV, computer, display, all kinds of power adapter and a variety of switching power supply) filter for aluminium electrolysis of rated voltage of electric container should select two 400 v or 200 v, 250 v) in series, and unfavorable apply asv rated voltage 350 v, 315 v or 350 snap - in electrolytic capacitor. Rectifier with power factor correction (PFC) circuit of the filter capacitor should choose 450 v rated voltage aluminum electrolytic capacitors. For 380 v three-phase rectifier need filter capacitor voltage of 700 v. For requires a lot like the inverter filter capacitor load, filter capacitor must be aluminum electrolysis electric container, but the monomer of aluminum electrolytic capacitor rated voltage (550 v) can not meet the requirements, only need two tandem application, usually with two same 400 v electric capacity of aluminum electrolytic capacitor in series.

After rectifier transformer for the rectifier filter capacitor rated voltage should be higher than the highest input voltage and no-load voltage rectifier filter, such as stable output voltage at least 18 v to 15 v 20 v ac input electric pressure, at this moment if choose 25 v rated voltage aluminum electrolytic capacitor is very dangerous, should choose 35 v or 50 v rated voltage aluminum electrolytic capacitor. For 14 v, 5 v dc stable output is need about 15 v, 10 v ac input electric pressure, the corresponding selection of rated voltage for at least 25 v, 16 v aluminum electrolytic capacitor

In terms of the selection of rated voltage must not consider the snap - in electrolytic capacitor has about 10% higher than the rated voltage + surge voltage as the working voltage. When the snap - in electrolytic capacitor pressure deficiency or need circuit, capacitor can be used in series connection. To make the two capacitor voltage can divide, need to adopt equalizing circuit. Usually equalizing circuit is parallel resistance in the electrolytic capacitor, the purpose is through the equalizing resistance, which make the snap - in electrolytic capacitor of the static voltage tends to be equal. Different snap - in electrolytic capacitor manufacturers recommend equalizing resistance calculation method is slightly different. Current through the equalizing resistance is usually calculated approximately 20 times of leakage current.

Select the snap - in electrolytic aluminum capacitor hours the highest working temperature and longevity for general applications, the snap - in electrolytic capacitor of the actual working environment temperature is not high, can choose 85 ° C / 1000 h "standard" snap - in electrolytic capacitor. For practical applications such as TV sets, computer environment temperature is relatively high, requires the use of relatively long life situation, should choose rated temperature of 105 ° C, at least 1000 h life; As electronic ballast and the harsh environment of the automobile engine compartment has ripple heating problem not only, more the main is the outside temperature is very high (usually can reach above 100 ° C), need the snap - in electrolytic capacitor rated temperature at least above 145 ° C. Selection of 105 ° C can significantly reduce the service life. There are, of course, there is no denying the fact that simple energy saving lamps and electronic ballast and fluorescent tube with the service life is usually no more than one year, so choose 105 ° C / 1000 h snap - in electrolytic capacitor can also.