Capacitor Installation Guidelines

Installation of Non-Solid and Solid Aluminum Electrolytic Capacitors

Explanatory Notes

1. Used capacitors have deteriorated electrical parameters, and their remaining lifetime cannot be estimated. Used capacitors may also have developed other wear-out symptoms such as electrolyte loss, increased vapor pressure and reduced seal performance. Only capacitors that are taken from a device for periodic inspection can be returned to the device again, provided that the service condition is checked and no apparent failure in electrical or mechanical characteristics is evident.

2. Although discharged during the manufacturing process, capacitors may be slightly recharged spontaneously by a recovery voltage phenomenon with time. If these capacitors cause an electric shock, they may damage sensitive circuitry during the assembly process. Discharge the capacitors through a resistor of approximately 1k(omega) before installation.

3. Bi-polar capacitors that have only been discharged by shorting the terminals may still be charged with a high voltage between the capacitor can and the terminals. If these capacitors cause an electric shock, discharge the capacitors through a resistor of approximately 1k(omega) before installation.

4. Capacitors that have been stored for long periods of time may have high leakage current due to deterioration of the dielectric. When these capacitors are installed into a circuit and charged for the first time, a large amount of current will flow into the capacitors to reform the oxide layers and may blow a fuse. Therefore, it is advisable to reform the capacitors by applying voltage through a resistor of approximately 1k(omega) before use. See footnotes.

Precaution

1. Do not reuse capacitors except when performing periodic inspections.

2. Capacitors may have been recharged by a recovery voltage phenomenon. Discharge them before installation.

3. Stored capacitors may have higher than normal leakage current. In this case, reform them to return leakage current to initial level.

Footnotes

1. Voltage Reforming: Apply the full rated voltage to the capacitors through a resistor of approximately 1k(omega) for approximately 30 minutes.

2. For specific limits of storage periods, refer to the product literature.