

HARMONIC FILTER

HARMONIC FILTER RESISTORS are often used, in combination with inductors and capacitors, as harmonic frequency filters.

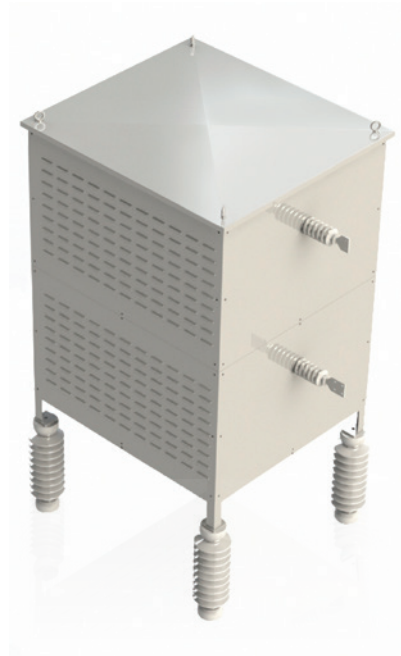
The purpose of these filters is to reduce distortions in power systems, produced by non linear loads such as arc welders, induction furnaces, variable frequency drives, ballasts, computer equipment, phones, uninterruptible power supplies etc., which can cause failure of motors, transformers and switchgear through insulation breakdown, arcing and overheating.

In a normal AC power system, supply voltage varies sinusoidally with a fundamental frequency of 50 or 60 hertz. When linear loads, such as resistive heaters, incandescent lamps, constant speed induction and synchronous motors, are connected to the system, sinusoidal currents will be drawn from the system at the same frequency as the voltage. However when non-linear loads are connected, a series of sinusoidal currents, called harmonics, will be drawn at integer multiples of the fundamental frequency.

Many industrial and commercial electrical systems have capacitors installed to offset the effect of low power factor. Most capacitors are designed to operate at a maximum of 110% of rated voltage and at 135% of their kvar ratings. Since capacitive reactance is inversely proportional to frequency, harmonic currents may result in capacitor banks overload and failure.

Features

- Very wide range of power and resistance ratings.
- Stainless steel nuts and bolts.
- Designed for three-phase stacked or side by side installation.
- Continuous wirewound, edgewound and stamped corrosion resistant elements selected to meet power rating, inductance limits and voltage requirements
- Low coefficient of change in resistance with changes in operating temperature
- High-temperature, porcelain or synthetic insulators selected to meet special creepage and clearance requirements .
- Conductive parts connected to a defined potentials.



Advantages

- ✓ Reduced neutral currents and resonance.
- ✓ Improved voltage stability.
- ✓ Reduced system losses.
- ✓ Improved system reliability.

Optional Features

Resistive Elements

Wirewound
 Edgewound
 Stamped Grid

Enclosures

NEMA 1**
 NEMA 3R

** Standard Models

Enclosure Materials

Galvanized Steel**
 Stainless Steel
 Anodized Aluminum

Enclosure Features

Drip Hood
 Elevating Stand

Bushings

Top Neutral
 Side Neutral
 Top Ground

