

Typical Types of Industrial Resistors

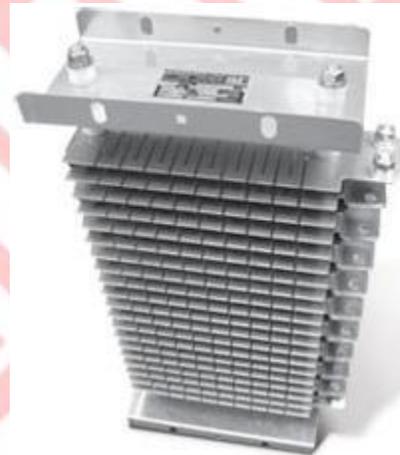
1. Grid trim type

This type is the most common structure which is utilized as an industrial resistor. It's structured as a lattice with regular cutting in width. The permissible current determines the cutting width of resistor. Usually, this structure is used in low current applications. The most applications of this structure are neutral grounding resistor, motor starting and load banks. This structure is more affordable than the other ones.



2. Punched Grid type

The structure of punched grid type resistors is similar to the grid trim type and also, the punched structure is more reliable than the grid trim ones. In punched structure, possibility of arc creating is very low but more expensive than the grid trim type. Important applications of this structure can be noted to neutral grounding resistors, motor starting resistors and resistive load banks.



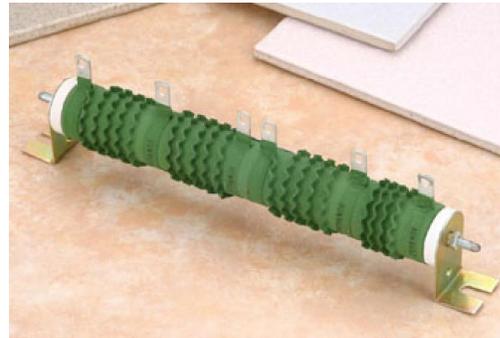
3. Wire Wound Structure

This type is very suitable to the low current and high resistance applications. This structure is mainly used in the high grounding resistance (HRG) but in high current applications the paralleled formation of units can be used. In this structure, the resistance coils are wrapped on special ceramics. So, in high frequency AC applications, this type has relatively high reactance.



1. Ribbon Wire Wound type

In order to increase the amount of resistance, usually a simple method is increasing the length of the conductor. This structure is unlikely that the wire wound type, which uses a spiral coil conductor to length increases, the method uses from ribbon form. This structure is suitable for high resistance applications.



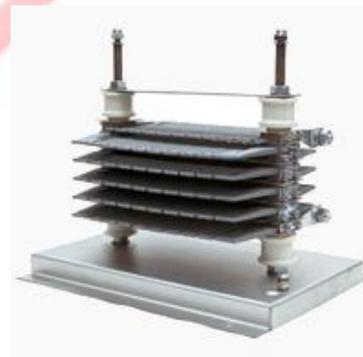
2. Edge Wound Structure

This structure is appropriate for high current applications that don't require to unit parallelism. Desired current range is usually between 10A to 100A. The main usage of the structure is in the speed and torque control of AC rotor wound induction motor. As well as on the primary side of squirrel cage induction motors as current limiting is used. Other applications of this structure can be noted to the neutral grounding resistors, AC and DC braking resistors and load banks.



3. Cast Iron structure

This structure which is made as a casting has a larger surface area than the rest of the structure, and it means that the major usage of this type is in high current applications (up to 1000A).



4. Ribbon structure

Ribbon structure for high current applications is used. The current range is usually around a few hundred amperes. Important applications of this structure include dynamic braking resistor, the resistance of the driver and the motor speed controller and current limiting.

