Post Glover Dynamic Braking Resistors

Rely on the industry's most innovative resistor manufacturer with over 100 years of industry experience.

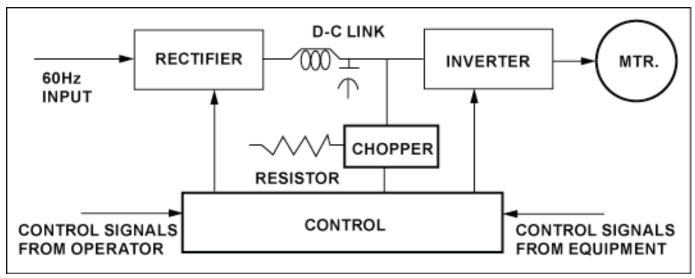
- Standard NEMA 1 Enclosure Design with Powder-coated, NEMA 3R and Stainless Steel options
- Thermal overloads
- Two Point terminal block
- Convenient Conduit Knockouts

Post Glover designs their DB resistors for the minimum resistance specified by the drive manufacturer. Tolerance is maintained at -0 to +5% of rated ohms to prevent overloading the drive and/or chopper.

All resistors are factory tested before shipment. This includes a hi-pot test at 2.5 kV for ten seconds on all designs, insuring compatibility for drives systems from 240 to 600V.

How Dynamic Braking Resistors Work

State of the art AC Variable Frequency Drives (VFD) are commonplace today, creating the need for reliable, proven Dynamic Braking Resistors that can be delivered quickly, completely assembled, and ready for convenient installation at the job-site. Dynamic Braking Resistors are used with AC VFD's to produce a braking torque in the motor during overhauling conditions. The dynamic braking resistor is connected across the DC bus and will see voltages as high as 800 volts.



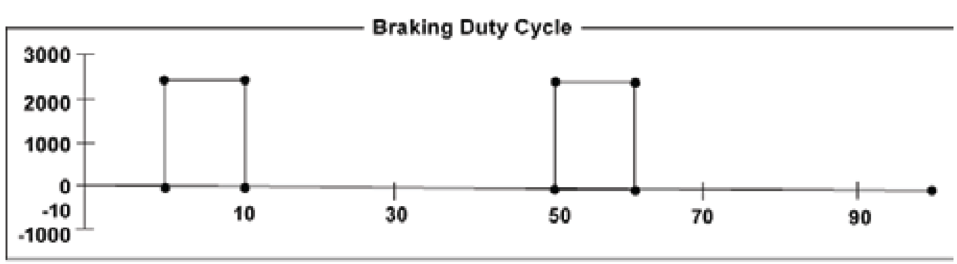
The drive manufacturer normally determines the power rating (watts) needed to prevent overheating during braking duty. The peak braking current is determined by the specified resistance value. Each drive manufacturer specifies a resistance range with a minimum to prevent overcurrent and damage to the drive and a maximum value to give adequate lower dissipation capability.

A three-phase variable frequency drive (VFD) consists of three basic components – rectifier, DC line, and inverter – and a control system to manage these three components as illustrated. The rectifier converts the three-phase 60Hz AC input to a DC signal.

Depending on the system, an inductor, a capacitor, or combination of these components smoothes the DC signal (reduces voltage ripple) in the DC link part of the VFD. The inverter circuit converts the DC signal into a variable frequency AC voltage to control the speed of the induction motor. During braking, the VFD ramps the frequency to zero. The rotational energy of the motor and load are driven back through the inverter to the DC bus and the rotational energy is dissipated through the resistor.

Example

An application requires a braking resistor rated 25 ohms with an average power during braking of 2500 Watts. The duty cycle is 20% – 10 seconds on and 40 seconds off – with a cycle time of 50 seconds.



The ohmic value of the resistor is typically between -0% and +5% – therefore, 25.0-26.25 ohms.

Post Glover

"The Resistor Specialists"

Quality System Certified to ISO 9001

Serving the Electrical Industry Since 1892

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How Post Glover makes your life a little simpler

Post Glover is the OEM supplier of choice for drive manufacturers the world over. As such, we have an extensive library of dynamic braking resistors pre-engineered and available to you. Please contact us with the particular drive model you are using and we will match to it to the appropriate resistor. Alternately, we can size a resistor for your particular needs based on a few simple details:

1. Ohms
2. Watts
3. Duty cycle (time on/time off)

Ohms are specified by the drive manufacturer as the minimum required resistance and are often stated as a range. Post Glover uses a manufacturing tolerance of -0 to +5% to prevent an overcurrent condition on the drive.

Watts are stated as either a maximum braking power or continuous braking power. In either case, the wattage rating of the resistor is calculated by factoring in the braking cycle.

Braking cycle is usually stated as a percentage; however, the actual times on and off can be used to offer the optional resistor package while minimizing size and cost. It is always best, when possible, to provide the braking time and time between operations in seconds as opposed to a percentage. This gives our engineers a better snapshot of the true operation, and provides a better end product for the customer.