Dynamic Braking Resistors

INFORMATION

Vishay Milwaukee Series:

- GRE1, GRES: http://www.vishay.com/doc?31833

What They Do

- When a load is being decelerated, the motor acts as a generator, converting kinetic energy of the load to electrical energy. The dynamic braking circuit converts this electrical energy into heat to slow the load, through the use of dynamic braking resistors. Braking resistors ensure proper motor operation, allowing heavy loads to stop quickly and protect the drive from damage.

Electrical Capabilities

- Full range of power and resistance capabilities
- Optional terminal blocks and thermal switches
- Grid and wirewound resistor technologies

Key Parameters

- IP00-, IP20-, and IP23-rated mounting configurations
- Stainless steel resistor elements offer high thermal capacity

Application Specifics

- Found in the oil and gas, industrial, and renewable energy markets
- Used with both AC variable-frequency drives and DC drive applications such as: overhead cranes, port cranes, industrial factories (automated production lines), and large ships

Examples of Various Form Factors

(Not to scale with each other)

How Can We Help

- What are the requirements as specified by the drive manufacturer (ohms, watts, duty cycle)?
- Do you have any special requirements for the resistor assembly and mounting configuration?
- If using an IP-rated enclosure, do you require a terminal block, thermal switch, lifting eyes, etc.?
### Dynamic Braking Resistors

**Nominal ohms:**

(Typical tolerance is 10%. If lower is required please include that info)

**Is there an absolute minimum ohms requirement?**

(Motor manufacturers will often provide a minimum resistance for braking resistor)

**Is there an absolute maximum ohm requirement?**

(Some applications require a minimum current, which means resistance shouldn’t exceed “x”)  

**Average continuous duty power:**

- **IF cycled application:**
- **Peak power:** (Average of the on time)
- **Seconds ON:**
- **Seconds OFF:**

**DC bus voltage:**

---

**Enclosure Info**

- **Type:**
  - [ ] Indoor (IP20)
  - [ ] Outdoor (IP23)
  - [ ] Frames (IP00)

- **Finish:**
  - [ ] Mill galvanized
  - [ ] Stainless steel
  - [ ] Other

**Other considerations/adders:**

**Space limitations:**

**Thermal switch kit:** (NC snap-action thermal switch wired to a terminal block or no switch)