

USER MANUAL

DYNAMIC BRAKING RESISTOR

REV. 9



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WARNINGS:

This equipment shall be installed, maintained and operated by qualified personnel only. Follow local codes and regulations.

Hazard of electric shock! Remove input power from the drive and wait ten minutes before connecting resistors to the drives DC Bus. DC Bus capacitors retain charge after power is removed. Connections to the dynamic braking resistor must be electrically insulated and mechanically shielded for safety. High Voltage warning signs are recommended. The unit must be properly grounded before applying power. Do not leave wire fragments inside the unit. Wire fragments can cause faults, breakdowns and malfunctions.

Hazard of fire or burn! Dynamic Braking resistors have the potential to reach high temperatures. Protection, such as a mechanical housing around the resistor assembly, should be provided by the installer to prevent injury to personnel that may come into proximity to the installation and prevent contact with material that could be combustible due to these temperatures. Do not allow lint, paper, wood chips, dust, metallic chips or other foreign matter into the DB unit; otherwise, fire or accident could occur.

Product specifications are subject to change without notice. MegaResistors Corp. assumes no responsibility for contingent or consequential damages or costs caused by incorrect use or malfunction of the equipment.

SHIPPING:

This equipment is shipped in a box or crate or bolted to a pallet and protected for transportation. A packing list is attached as well as an envelope with the corresponding documentation.

RECEPTION:

Please examine the equipment immediately upon receipt. If any damage to the unit is detected notify MegaResistors immediately.

INSTALLATION:

Unpack the resistor carefully. If a forklift is used make sure not to damage the bottom cover of the resistor. If the eyebolts are used for lifting make sure the angle of the cables with the vertical is 45 degrees or less. Bond the unit as required by the Electrical Code by using the lug supplied and marked with the ground symbol.

Do not mount the unit in direct sunlight. Isolate the unit from excessive vibration. Protect from moisture, dust, metallic particles, corrosive gases and liquid. Install the units on a smooth non-flammable surface. When installing multiple units in a panel, panel layout and cooling requirements must be analyzed for proper heat dissipation. Do not put anything on top of the resistor enclosure.

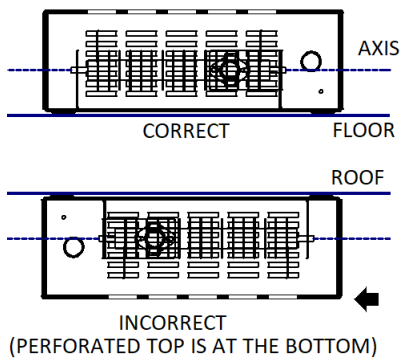
Dynamic Braking Resistors cool by natural convection. Air surrounding the resistor will be heated, become less dense and rise vertically while cooler air surrounding the unit will enter the enclosure to replace it. The units must be mounted with sufficient clearance to adjacent

equipment: 24 inches (60 cm) to the top of the enclosure and 6 inches (15 cm) to the sides. Free air should be allowed to circulate for proper cooling.

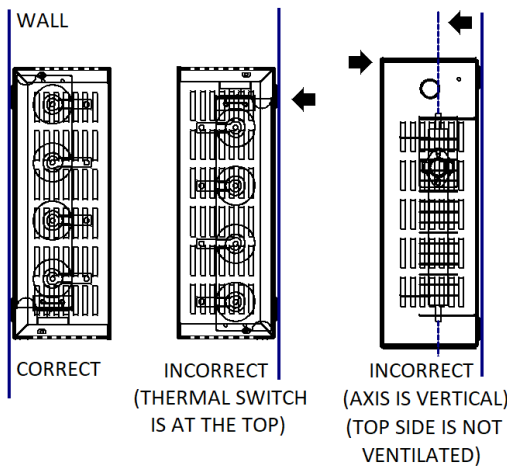
Some units can be installed vertically as long as the resistors' central axes remain horizontal, the top side is ventilated (perforated) and the thermal switch is at the bottom. See below for allowed mounting for your unit:

- ❑ **Only horizontal mounting allowed**
- ❑ **Horizontal and vertical mounting allowed:**

HORIZONTAL MOUNTING:



VERTICAL MOUNTING:



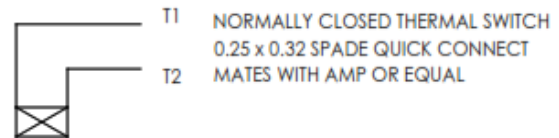
CONNECTIONS:

Mount Dynamic Braking Resistor within 15 feet (4.5m) of the Drive.

Make connections with twisted pair wire.

Connect the grounding lug terminal of both the drive and Dynamic Braking Resistor to ground.

Connect the resistor terminals R1 and R2 and the Thermal Overload Switch terminals T1 and T2 to the corresponding terminals as indicated in the Drive manual. Use 200°C wire to connect to T1 and T2.



Wiring gage and distance must comply with the electrical code.

Terminal blocks:

Type	Wiring	Torque
❑ 30A	#10 - #22 AWG	20 IN LB
❑ 115A	#8 - #14 AWG	35 IN LB
	#4 - #6 AWG	45 IN LB
	#2-#3 AWG	50 IN LB
❑ 175A	#10 - #14AWG	35 IN LB
	#8	40 IN LB
	2/0 - #6 AWG	120 IN LB
❑ 255A	250 kcmil - #6	275 IN LB

MAINTENANCE AND TESTING:

Inspect the resistor periodically as follows:

- 1) De-energize the system and allow the unit to cool down. Allow at least one minute after removing input power to allow the bus voltage to discharge.
- 2) Remove the resistor covers to allow for visual inspection of the internal components.
- 3) Ensure that all connections and fasteners are tight, that no insulators are cracked and that there are no signs of damage from heat, vibration, etc.
- 4) Use an Ohmmeter to verify the unit's resistance and the continuity of all connections. Resistance should be +/- 10% of the nominal value (see nameplate).
- 5) Use a Megger or Hi-pot to verify the insulation.
- 6) Clean the unit for excessive dust or dirt. If water is used for cleaning make sure the unit is perfectly dry before reconnecting.

WARRANTY:

MegaResistors Corp. is not responsible for products delivered in good condition to the carrier that arrive damaged to the final destination but we will help you make a claim to the courier if required.

All claims must be made within 30 days of delivery.

MegaResistors Corp. warrants the products to be free from defects under proper use,

maintenance and installation for one year from the date of delivery.

This warranty is limited to repair or replacement of the defective part or product according to our judgment and will not include installation, removal, transportation expenses or losses due to equipment failure.

We must be informed of the claim by the purchaser as soon as the problem is observed.

Defective products should not be sent to our location unless authorized in writing by one of our employees.

MegaResistors Corp. shall not be liable for any claims arising from special, indirect or consequential damages nor from any loss of production or other losses resulting from the failure of any equipment.

NOTES: