Mounting Recommendations for RCEC 400 GS and GD Resistors

By Benjamin Larcher

ASSEMBLY DIAGRAM

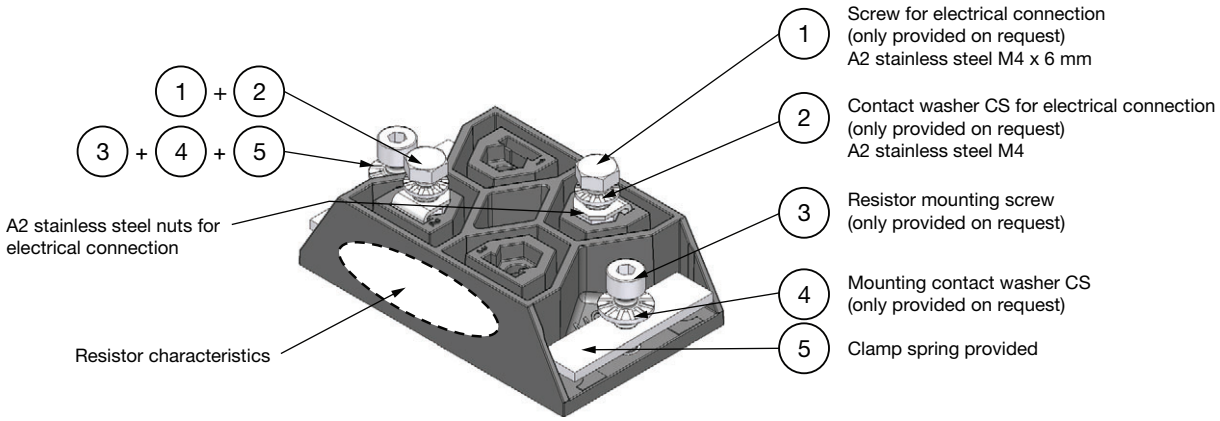

Fig. 1

MECHANICAL INTERFACE SET UP

Make sure that the dissipation area of the heatsink has been properly set up to ensure expected performance. The maximum flatness defect must not exceed 0.05 mm. The interface between the heatsink and the RCEC 400 resistor has to be free of any holes, scratches, flaws, or foreign objects. The heatsink contact surface roughness has to be less than Ra 6.3 µm.

Ensure a proper mounting of the resistor on the heatsink following operations 1, 2, and 3.

OPERATION 1

Clean both the heatsink (Fig. 2) and the RCEC 400 resistor (Fig. 3) with an ethanol-soaked wipe.

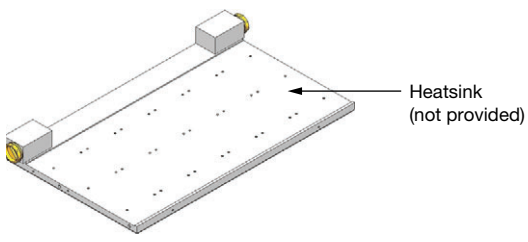

Fig. 2

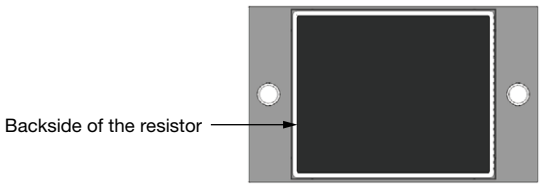

Fig. 3

APPLICATION NOTE

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OPERATION 2

Use a thermal interface material such as a thermal paste between the heatsink and resistor to ensure proper power dissipation. A thermal interface material thickness of 0.05 mm and thermal resistance ≤ 0.025 °C/W are required. In order to manage this step correctly, apply some thermal paste on the backside of the resistor (Fig. 4).

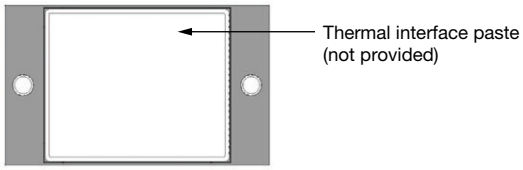

Fig. 4

Check that the active area of the resistor has been fully covered up with thermal interface material. Avoid any excess or lack of thermal paste on the active area.

OPERATION 3

You must use the following equipment (Fig. 1):

- M4 x 10 mm resistor mounting screws, minimum advised screw length, 2 x (3)
- M4 mounting contact washers CS, 2 x (4)
- Clamp spring, 2 x (5)

Make sure that the threading depth matches with the screws used. Apply a preliminary hand tightening on each screw until it touches the spring (Fig. 5). Then tighten the screws under a maximum tightening torque of 1.5 Nm.

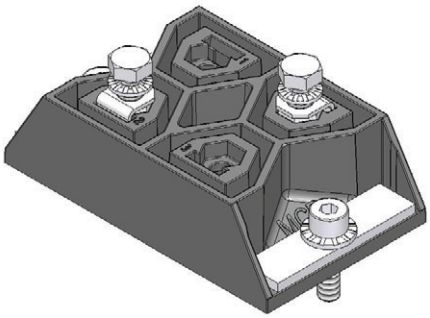

Fig. 5 - After hand tightening

ELECTRICAL INTERFACE SET UP

Apply a maximum tightening torque of 1.3 Nm on the electrical connections.

During assembly, it is necessary to keep applying a constant force on the electrical terminals to ensure that the nut remains in its plastic housing.

You must use the following equipment (Fig. 1):

- M4 x 12 mm stainless steel A2 or A4 screws for electrical connections, maximum advised screw length, from 2 x to 4 x (1), depending on the number of resistors in the same package
- M4 contact washer CS for electrical connections, from 2 x to 4 x (2), depending on the number of resistors in the same package

In the case of a double resistance in the same package with a middle point, the middle point is located on the marking side.