



## DECLARATION OF CONFORMITY

Fire Protection on Railway Vehicles

**Manufacturer's Name:** Danotherm Electric A/S

**Manufacturer's Address:** Naesbyvej 20  
2610 Roedovre – Denmark

### The products covered by this declaration:

**Ceramic Wirewound Resistors** Enamelled Types: GRF, GRV, GRI, GBF, GBV, GFF and Cemented Types: ZRF, ZRV, ZRI, ZBF, ZBV, ZFF. Fixed or Adjustable, Round or Oval types, types with Solder- Screw- or Snap-On Terminals.

- May be followed by diameter [mm] "10 thru 55" and "/" followed by length [mm] "44 thru 590" may be followed by additional letters and or numbers. Refer to newest datasheet nomenclature breakdown for further details.

### The basis on which conformity is being declared:

The manufacturer hereby declares under his partly responsibility that the products identified above comply with the principal elements of the safety objectives of **EN 45545 - Railway applications. Fire protection on railway vehicles** – as a Class A1 product by definition.

- No testing has been performed as the product is defined as Non-combustible, consisting only of materials grouped in; *"Products of natural stone, concrete, bricks, ceramic, glass, steel and many metallic products"*.

If the products are supplied further with cables and connectors – these are to be confirmed applicable for railway by the manufacturer and documented on a specific Danotherm customer drawing as reference.

- Custom test can be added according to the actual usage: High Power Devices EL6A-R22 Interior, Brake resistors EL8-R13 or Small electrotechnical products EL10-R26.

### The manufacturer has applied the following standards:

- **EN 45545** Railway applications. Fire protection on railway vehicles
  - All A1 classified products according to EN 13501-1 and products as described in the Directive 96/603/EC, except laminated glass, fulfil the highest requirements in terms of burning behaviour and therefore require no further testing.
- **IEC 60062** Marking codes for resistors and capacitors

### Signature:

Roedovre – Denmark  
Nov 09, 2016

Technical Director  
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