

# RFZ



**120 W ÷ 340 W**

### Description

Hermetic sealed aluminum heat sink case resistor

### Mechanical characteristics

IP54, Wire coiled inserted in ceramic tube and filled with quartzite sand, Sealed by silicone plug

### Applications

Charge/discharge capacitors  
Heating

### Market

Industrial automation,  
Energy

### Special version

Ohmic values out of range, Special tolerance on resistance (2%, 1%),  
Different cable length, Thermal switch

## ELECTRICAL CHARACTERISTICS

refers to room temperature 25°C

ID	Max Power	Rated Power	Min Resistance	Max Resistance	Thermal time constant
Unit	W	W	Ω	Ω	s
RFZ 100	120	80	0.56	2k2	450
RFZ 160	200	120	1.5	6k8	480
RFZ 200	220	150	2	11k	480
RFZ 260	300	200	2.7	16k	500
RFZ 300	340	220	3.3	18k	550

Insulation resistance (1000 VDC) $\geq 1000 M\Omega$	Limit voltage 600 V	Dielectric strength (50 Hz 60") 3000 V
Active materials: calculation for min ohmic value are made considering wire material CuNi44, whereas max ohmic value refers to wire material FeCrAl. Resistors can be made also with NiCr alloys. Temp. Coefficient Resistance depends on the used alloy, typically it is between 20 and 240 $10^{-6}/^{\circ}C$ . High ohmic values are made with wire wound on mica plate.		
<p>The standard version cable is single core with flexible conductor silicone rubber insulated with fiberglass braid. For cross section AWG14 and AWG16 the cable is classified 200°C – 600 V and made according to UL Style 3071. For cross section 1 mm<sup>2</sup>, 4 mm<sup>2</sup> and 6 mm<sup>2</sup> the cable is classified 180°C – 500 V and made according to IEC EN 60228 cl. 5 /CEI EN 50363-5. The tolerance on cable length is <math>\pm 5</math> mm. The choice of cross section to be used depends on the current that flows in the resistor. Internal thermal switch 160<math>\pm 5^{\circ}C</math> (rated voltage: 250 V; rated current: 2,5 A; leads single core conductor silicone rubber insulated cross section 0,25 mm<sup>2</sup> length 300 mm), it is an option and must be specified in the order. Housing is aluminum extrude, it is oxidized to prevent corrosion. Standard tolerance on ohmic value is <math>\pm 5\%</math>. Picture above refers to RFZ 260. Max power can be supplied to the resistor for not more than 30 minutes. RFZ model is not designed for overload conditions. The model RFZC is more suitable for this operation because the mass of wire inside is higher. Fairfield technical office is at your disposal for further detailed information.</p>		

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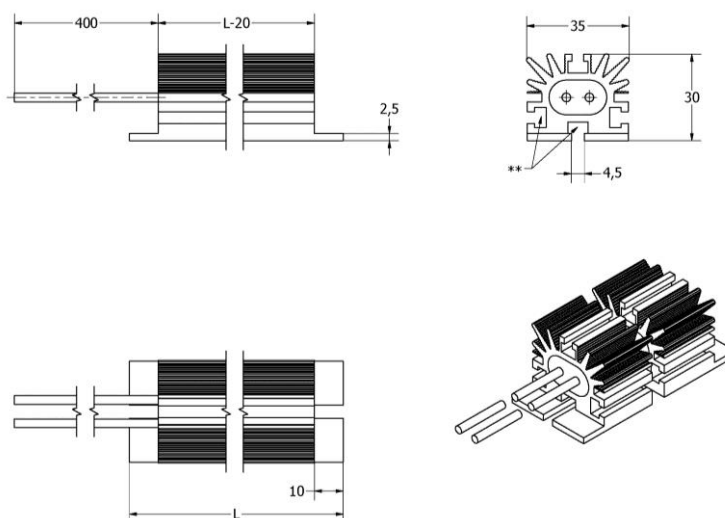
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### MECHANICAL DATA

Dimensions [mm]	L	Weight [g]
RFZ 100	100	160
RFZ 160	160	260
RFZ 200	200	330
RFZ 260	260	430
RFZ 300	300	510

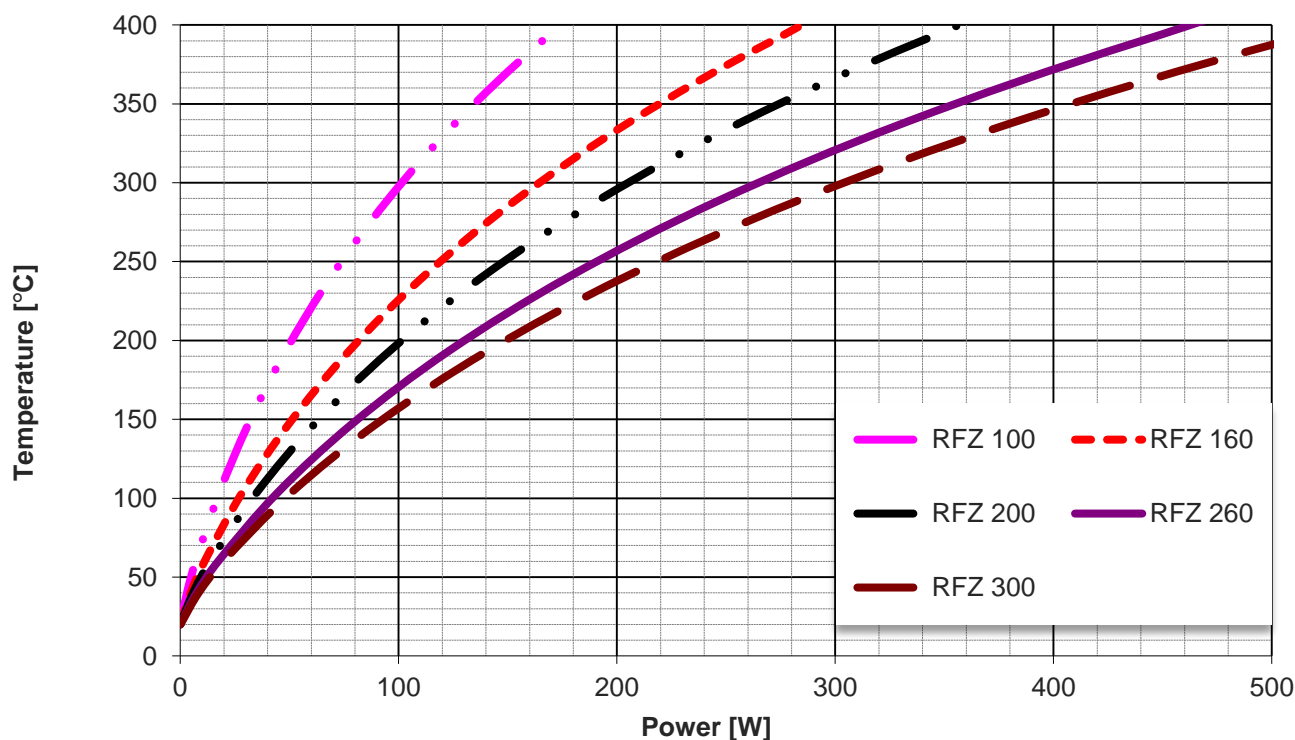
Unless otherwise specified, applicable standard of general tolerances for linear and angular dimensions is ISO 2768-1 class c; applicable standard for aluminum profile is EN 755-9:2008. \*\* Slot for screw M4

### DRAWING



The rated power stated in this datasheet refers to the resistor mounted in horizontal position (with no possibility to exchange heat in the bottom direction) at the ambient temperature of 25°C and 250°C on the external surface. The power dissipation is influenced by: Mounting position and arrangement (wall, heat - sink), Number of resistors mounted together (grouping), Ambient temperature (in free air or inside an enclosure). Ask the appropriate test reports for more details. See the following graph to know the external temperature corresponding to a certain continuous power.

### SURFACE TEMPERATURE CHARACTERISTIC



### Marking

The resistor is marked on the housing with indelible ink high temperature

FAIRFIELD – RFZ 300 150R 5% WW/YY (week / year)

### Installation

Warning: Units must never be mounted with the terminals uppermost

### Packing

The resistor is packed in a way to preserve incidental damages due to transport. To avoid resistor's break we recommend to never take it from the cables and to handle with care inside the original boxes provided by the factory.

### Disclaimer

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### Ordering information

RFZ/Y XXX RRRR 5%

Y T : Internal thermal switch 160±5°C (rated voltage: 250 V; rated current: 2,5 A; leads single core conductor silicone rubber insulated cross section 0,25 mm<sup>2</sup> length 300 mm).

XXX Model 100, 160, 200, 260, 300

RRRR Resistance value (nominal at 20°C)

#### Example

RFZ 300 150R 5%

RFZ is the name of the product

300 is the model

150R means 150 Ω that is the nominal ohmic value at 20°C

5% is the tolerance on the ohmic value, in this case the value of the resistor is accepted when is within 142.5 Ω + 157.5 Ω