

Hermetically sealed stainless steel tube resistors

RCH

Description

Designed for roof mounting on the train

Mechanical characteristics

Protection Degree IP65; Wire wound on ceramic support filled with quartzite sand closed into a AISI304 tube sealed with resin and gasket

Applications

Harmonic filters, Neutral grounding, Charge/discharge capacitors, Crowbar

Market

Energy, Railways

Special version

Dielectric strength up to 25kV, Ohmic value out of range, Special tolerance on resistance (2%, 1%), Low inductance

Terminals

Stainless steel M8 tie rod



350 W ÷ 600 W



ELECTRICAL CHARACTERISTICS

refers to room temperature 25°C

ID	Max Power	Max Temperature	Rated Power	Min Resistance	Max Resistance
Unit	W	°C	W	Ω	Ω
RCH 700	350	500	90	0.82	16k
RCH 800	400	450	125	0.82	16k
RCH 1000	500	440	180	1.6	30k
RCH 1200	600	420	220	2.2	39k

Limit voltage 4000 V	Thermal time constant 900 s
Insulation resistance 1000 VDC ≥1000 MΩ	Dielectric strenght 50Hz; 60" 12000 V

Temp. Coefficient Resistance: low ohmic value are made with active material CuNi44 that has a TCR of 40 ppm/°C, whereas high ohmic value refers to wire material FeCrAl that has a TCR of 70 ppm/°C. Resistors can be made also with NiCr alloys with TCR between 70 and 240 ppm/°C.
 Standard tolerance on ohmic value ±5%.
 Max power can be dissipated for max 30 min.
 Rated power stated in this datasheet applies to resistor mounted in horizontal position at a temperature of 250 °C on the external surface.
 The power dissipation is influenced by mounting position and arrangement, number of resistor mounted together (grouping), ambient temperature.
 At page 2 is represented the graph of external temperature of resistor in respect of the power supplied to it.
 For overload conditions ask Fairfield technical office.
 Picture above refers to RCH 1200.

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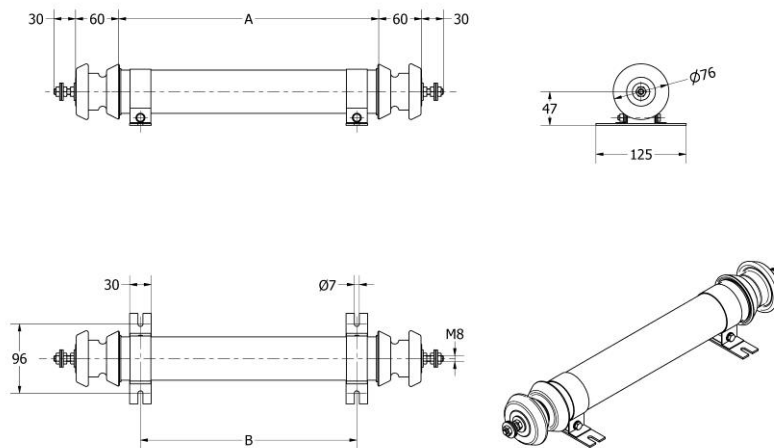
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MECHANICAL DATA

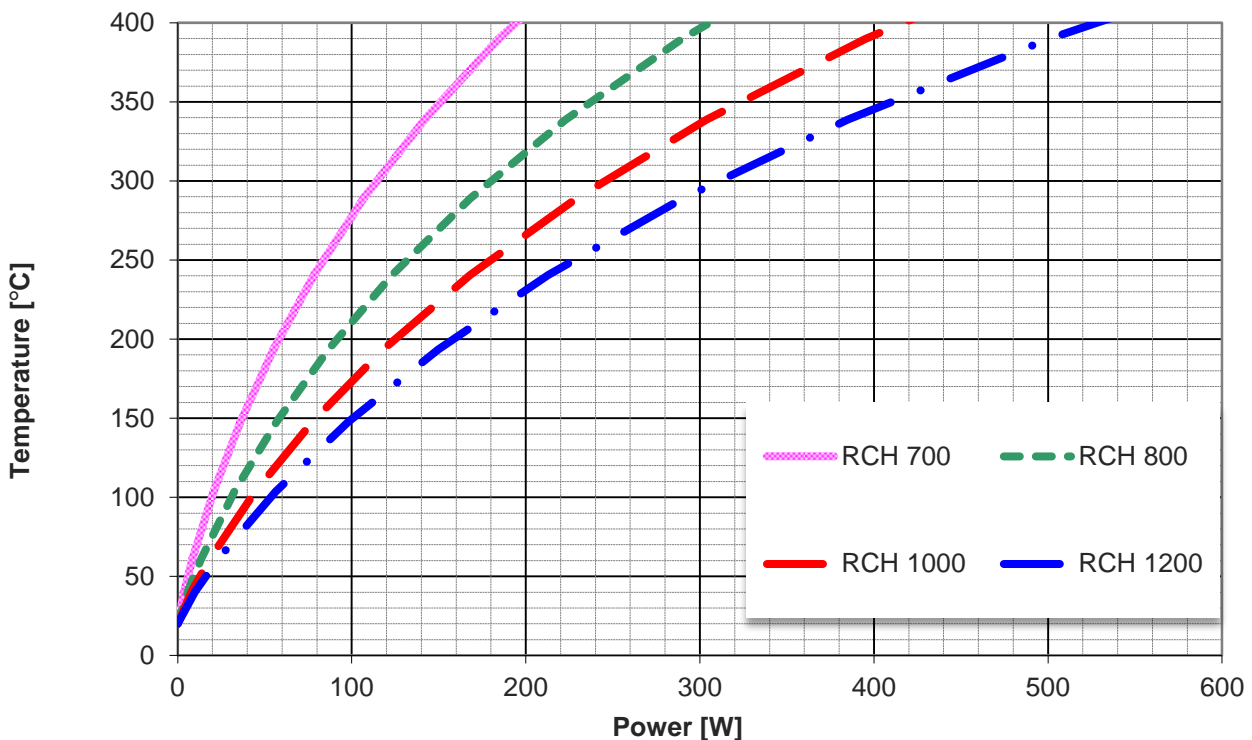
Dimensions [mm]	A	B	Weight [g]
RCH 700	250	140	2950
RCH 800	300	220	3300
RCH 1000	360	300	3800
RCH 1200	450	380	4650

Unless otherwise specified, applicable standard of general tolerances for linear and angular dimensions is ISO 2768-1 class c.

DRAWING



SURFACE TEMPERATURE CHARACTERISTIC



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Marking

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

FAIRFIELD – RCH 700 15R 5% WW/YY (week / year)

Installation

RCH is designed to be mounted in horizontal position. Vertical mounting may damage IP degree and insulation level.

Packing

The resistor is packed in a way to preserve incidental damages due to transport. The resistor is made by ceramic parts, accidental fall can damage it, handle with care.

Disclaimer

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Ordering Information

RCH/Y XXX RRRR 5%

Y N : low inductance

XXX Model 700, 800, 1000, 1200

RRRR Resistance value (nominal at 20°C)

Example

RCH 1000 15R 5%

RCH is the name of the product

15R means 15 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 14.25 Ω ÷ 15.75 Ω