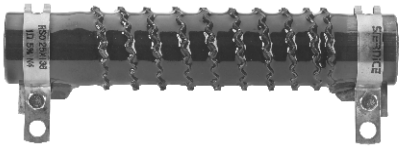
# RSO

Vishay Sfernice

# Fixed Wirewound Enamelled Corrugated Tape Resistors Very High Dissipation



AN Collars

CS Collars

## FEATURES

- 160 W to 1 kW at 25 °C
- Compliant to RoHS directive 2002/95/EC

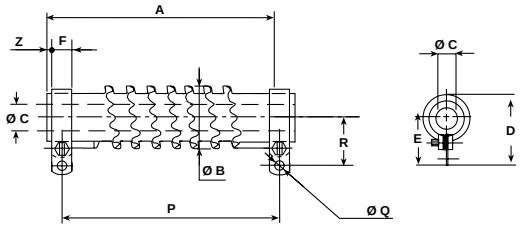
RoHS COMPLIANT

The remarkable dissipation power of this series is the result of an original winding method using corrugated edge-wound tape, thus forming a very active radiator. The enamelling follows the contour of the resistive element and provides effective insulation and support for the winding.
The tubular core is of special ceramic, capable of withstanding high thermal shock and overload of short duration.

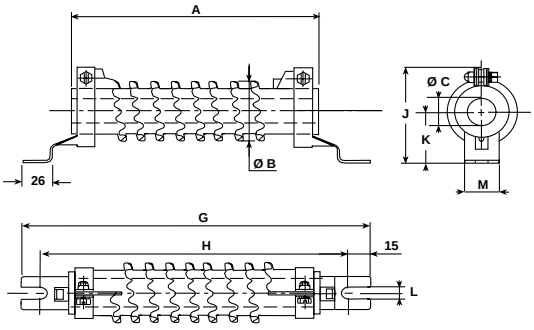
NF F 16101, 10/1988 and 16102, 04/1992: Not applicable (our parts are made of metallic and refractory materials).

## DIMENSIONS

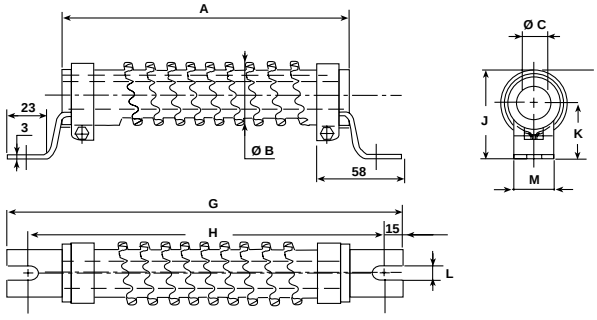
**SCREWED STAINLESS STEEL 304 L "AN" TYPE 1**




**SCREWED STAINLESS STEEL 304 L "CS" TYPE 1**




**SCREWED STAINLESS STEEL 304 L "CS" TYPE 2**




| **DIMENSIONS** in millimeters | | | | | | |
|---|---|---|---|---|---|---|
| **RSO STYLE** | | **25 x 138** | **25 x 168** | **30 x 250** | **40 x 370** | **50 x 373** |
| Connections | | AN type 1 | AN type 1 | AN type 1 | AN type 2 | AN type 2 |
| | | CS type 1 | CS type 1 | CS type 1 | CS type 2 | CS type 2 |
| A ± 2 | | 138 | 168 | 250 | 370 | 373 |
| Ø B max. | | 39 | 39 | 44 | 54.5 | 65 |
| Ø C min. | | 12.6 | 12.6 | 17.4 | 22.3 | 27.1 |
| D max. | | 54 | 54 | 62 | 85.8 | 97 |
| E | | 33.5 ± 1 | 33.5 ± 1 | 36 ± 1 | 57 ± 1.5 | 63 ± 1.5 |
| F + 0.5 + 0 | | 9 | 9 | 13 | 18 | 18 |
| Z | | 6 | 6 | 5 | 10 | 11.5 |
| G - 4 - 0 | | 199 | 229 | 317 | 432 | 432 |
| H - 4 - 0 | | 169 | 199 | 287 | 405 | 405 |
| J | | 50 ± 1.5 | 50 ± 1.5 | 60 ± 1.5 | 73.8 | 79 |
| K | | 27 ± 1 | 27 ± 1 | 30 ± 1 | 45 ± 1.5 | 45 ± 1.5 |
| L ± 0.5 | | 6.5 | 6.5 | 9 | 9 | 9 |
| M ± 0.5 | | 24 | 24 | 25 | 30 | 30 |
| P | | 117 ± 2 | 147 ± 2 | 227 ± 2.5 | 332 ± 3 | 332 ± 3 |
| Q | | 5.7 | 5.7 | 5.7 | 9.2 | 9.2 |
| R | | 28.5 ± 1 | 28.5 ± 1 | 31 ± 1 | 45 ± 1.5 | 51 ± 1.5 |
| Average weight in g | AN | 160 | 190 | 350 | 960 | 1375 |
| | CS | 205 | 235 | 400 | 1040 | 1455 |

# RSO

Fixed Wirewound Enamelled Corrugated Tape Resistors
Very High Dissipation

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## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| **Mechanical Protection** | Enamel |
| **Resistive Element** | Ni-Cr wire |
| **Connections** | AN CS supporting collars |
| **Average Unit Weight** | 160 to 1455 g |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| **Temperature Limits** | - 55 °C + 450 °C |
| **Climatic Category** | - 55 °C/+ 200 °C/56 days |

| ELECTRICAL SPECIFICATIONS | |
|---|---|
| **Resistance Range** | 0.068 Ω to 68 Ω<br>(E12 preferred series) |
| **Standard Resistance Tolerance** | Rn ≥ 1 Ω ± 5 %<br>Rn < 1 Ω ± 10 % |
| **Power Rating** | 160 W to 1 kW at 25 °C |
| **Temperature Coefficient** | 180 ppm/°C Typical |

| PERFORMANCE | | | |
|---|---|---|---|
| **TESTS** | **CONDITIONS** | **REQUIREMENTS** | **TYPICAL VALUES AND DRIFTS** |
| **Short Time Overload** | 10 Pr during 5 s | 2 % or 0.05 Ω | 1 % |
| **Thermal Shock** | Load at Pr<br>followed by cold<br>temp. exposure at - 55 °C/15 s | 2 % or 0.05 Ω | 1 % |
| **Climatic Sequence** | Phase A: + 200°<br>Phase C: - 55°<br>Phase D: 5 cycles | 3 % or 0.05 Ω | 1 % |
| **Load Life** | 90/30' cycle<br>1000 h at Pr 25 °C | 5 % | 2 % |

| SPECIAL FEATURES | | | | | |
|---|---|---|---|---|---|
| **RSO STYLE** | **25 x 138** | **25 x 168** | **30 x 250** | **40 x 370** | **50 x 373** |
| **Power Rating at 25 °C** | 160 W | 200 W | 350 W | 700 W | 1000 W |
| **Resistance Ohmic Range (E12 Series)** | 0.068 Ω<br>12 Ω | 0.10 Ω<br>18 Ω | 0.22 Ω<br>33 Ω | 0.33 Ω<br>56 Ω | 0.39 Ω<br>68 Ω |

## RECOMMENDATIONS FOR USE

OVERLOAD:
The RSO resistors are capable of withstanding overloads of about 10 Pr for a maximum period of 5 s; they can resist momentarily even greater overloads.

Particular requirements should be submitted to Vishay Sfernice.

# RSO

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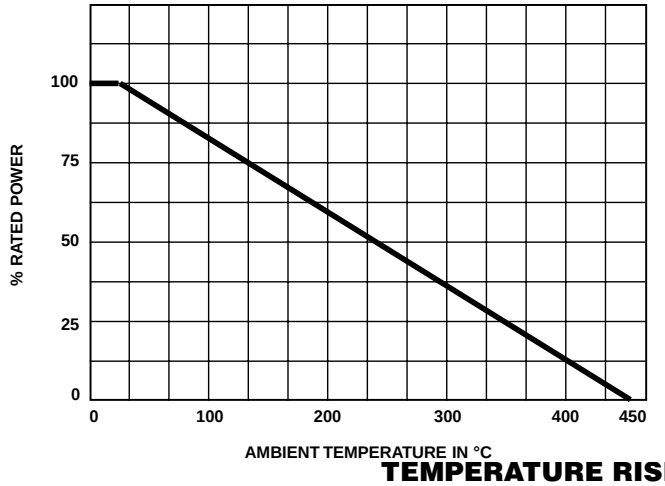
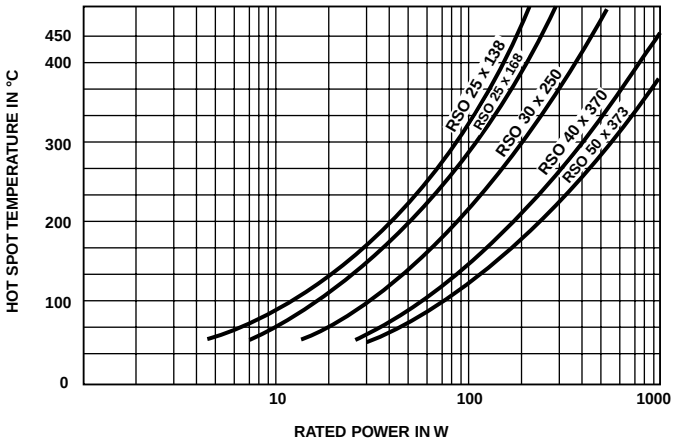
## POWER RATING CHART




## TEMPERATURE RISE




## PACKAGING

Box: Fixed qualtity depending on size and collars

## MARKING

SFERNICE trademark, model, style, nominal resistance (in Ω), tolerance (in %), manufacturing date.

## ORDERING INFORMATION

| RSO | 25 x 168 | XXX | CS | U82 | ± 10 % | B02NA | e |
|---|---|---|---|---|---|---|---|
| MODEL | STYLE | SPECIAL DESIGN<br>Method N° Optional | CONNECTIONS | OHMIC VALUE<br>Custom items are subject to extra-charge and min. order. Please see price list. | TOLERANCE | PACKAGING | LEAD (Pb)-FREE |

## SAP PART NUMBERING GUIDELINES

| RSO | 25168 | C | R820 | K | N |
|---|---|---|---|---|---|
| MODEL | STYLE | CONNECTIONS | OHMIC VALUE | TOLERANCE | PACKAGING |