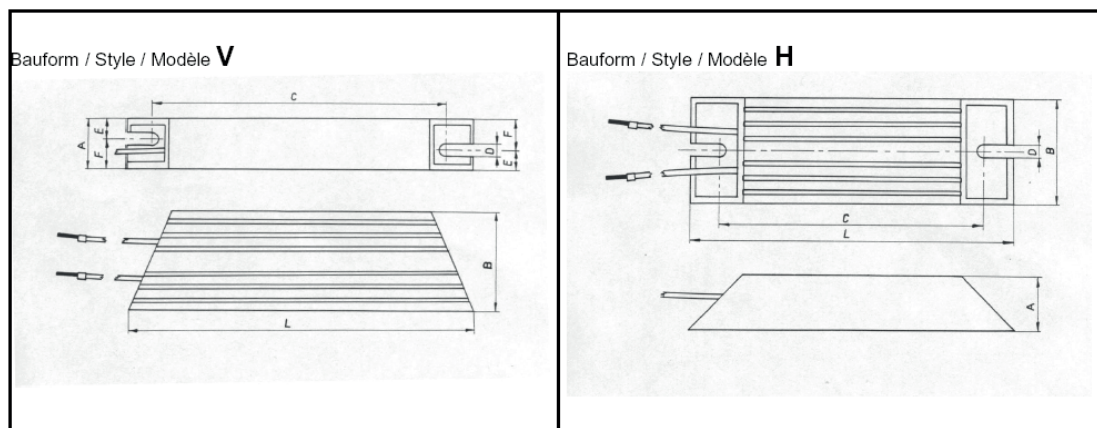




ALUMINIUM CASE BRAKING RESISTORS MODEL VHPR - UL

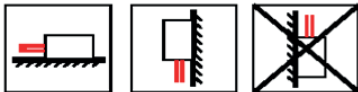
TECHNICAL DESIGN



GENERAL FEATURES

The resistors of the type VHPR are high power resistors and have a high withstand strength. One of the remarkable features of the type series VHPR is an increased impulse solidity. Its compact form, as well as the execution of the elements of its leads, make the fixing and mounting of the resistor elements easier when using. The complete metal protection guarantees a protection against dirt accumulation and accidental contact with the hot parts.

GENERAL FEATURES

| TYPE | | HPR VHPR 60 | HPR VHPR 80 | HPR VHPR 100 | HPR VHPR 120 | HPR VHPR 150 | HPR VHPR 200 | HPR VHPR 300 | HPR VHPR 400 | HPR VHPR 500 |
|---|--|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Style H - horizontal V - vertical | | H / V | | | | | | | | |
| Housing | | Al (elox.) | | | | | | | | |
| Dimensions in mm | L ±2 | 102 | 152 | 167 | 184 | 212 | 167 | 217 | 268 | 337 |
| | C ±1 | 83 | 133 | 148 | 165 | 193 | 147 | 197 | 247 | 317 |
| | B ±0,5 | 40 | 40 | 40 | 40 | 40 | 60 | 60 | 60 | 60 |
| | A ±0,5 | 21 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 |
| | D ±0,1 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 5,3 | 5,3 | 5,3 | 5,3 |
| | E ±0,5 | 8 | 8 | 8 | 8 | 8 | 11,5 | 11,5 | 11,5 | 11,5 |
| | F ±0,5 | 13 | 13 | 13 | 13 | 13 | 19,5 | 19,5 | 19,5 | 19,5 |
| Mounting position |  | | | | | | | | | |

| TYPE | | HPR VHPR 60 | HPR VHPR 80 | HPR VHPR 100 | HPR VHPR 120 | HPR VHPR 150 | HPR VHPR 200 | HPR VHPR 300 | HPR VHPR 400 | HPR VHPR 500 | |
|--|----------------------------------|---------------------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--|
| Resistance range *) ¹ | Ω | R10 - | R10 - | R10 - | R10 - | R10 - | R15 - | R20 - | R25 - | R30 - | |
| | | 1K1 | 1K2 | 1K4 | 1K6 | 1K8 | 2K5 | 3K3 | 4K7 | 7K5 | |
| Resistance tolerances *) ¹ | % | F (1%); G (2%); J (5%); K (10%) | | | | | | | | | |
| Temperature coefficient *) ¹ | 10 ⁻⁶ K ⁻¹ | -80 .. 200 | | | | | | | | | |
| Insulation resistance *) ² | MΩ | > 20 | | | | | | | | | |
| Operating voltage Ub *) ⁴ | V _{AC} f=50Hz | 250 - 800 | | | | | 250 - 1000 | | | | |
| Testing voltage Up | V _{AC} f=50Hz 1min. | 1000 - 2500 | | | | | 1000 - 4000 | | | | |
| Power rating P ₄₀ | W | 60 | 80 | 100 | 120 | 150 | 150 | 250 | 300 | 400 | |
| Derating of power | Linear | from 25 °C to 200 °C | | | | | | | | | |
| Impulse energy <1sec. | Ws | 500 | 800 | 1000 | 1600 | 1800 | 2000 | 3400 | 4900 | 6000 | |
| Max. impulse energy *) ³ | kWs | 10 | 28 | 35 | 44 | 54 | 54 | 77 | 108 | 144 | |
| Protection level | - | IP 65 | | | | | | | | | |
| Climatic category (IEC 68-1) | - | 40 / 155 / 21 | | | | | | | | | |
| Temperature range | °C | -40 .. 200 | | | | | | | | | |
| Long term test (P _N 40 °C 1000h) | % | 3 | | | | | | | | | |
| Long term environmental test (IEC 115-1/23) | % | 2 | | | | | | | | | |
| Periodical change of temperature (IEC 68 2.14) | % | 2 | | | | | | | | | |
| Safe max. load of vibration | ms ⁻² | 40 | | | | | | | | | |
| Ability to tractive power of terminals | N | 100 | | | | | | | | | |
| Kind of terminal *) ⁴ | - | Cavi L. 300mm | | | | | | | | | |
| Weight | g (ca.) | 140 | 220 | 240 | 260 | 310 | 490 | 650 | 800 | 1020 | |

*)¹ - without cables

*)² - Voltage = 1000 VDC

*)³ - as a function of the resistance

*)⁴ - - Silicon/white PTFE white, black or brown, referring to the required operating voltage or testing voltage, lenght tolerance: ± 6 mm
Leads cases (different lengths, styles and insulations are possible)