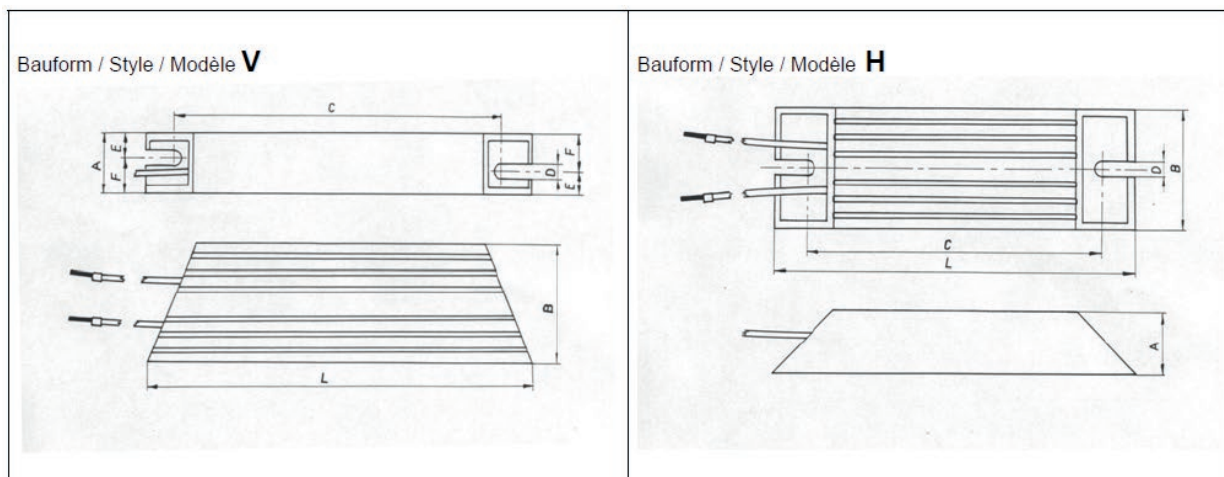




## ALUMINIUM CASE BRAKING RESISTORS MODEL HPR-VHPR

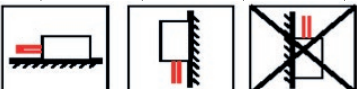
### TECHNICAL DESIGN



### 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 *) <sup>1</sup>	Ω	R10 - 1K1	R10 - 1K2	R10 - 1K4	R10 - 1K6	R10 - 1K8	R15 - 2K5	R20 - 3K3	R25 - 4K7	R30 - 7K5
Resistance tolerances *) <sup>1</sup>	%	F (1%); G (2%); J (5%); K (10%)								
Temperature coefficient *) <sup>1</sup>	10 <sup>-6</sup> K <sup>-1</sup>	-80 .. 200								
Insulation resistance *) <sup>2</sup>	MΩ	> 20								
Operating voltage Ub *) <sup>4</sup>	V <sub>AC</sub> f=50Hz	250 - 800					250 - 1000			
Testing voltage Up	V <sub>AC</sub> f=50Hz 1min.	1000 - 2500					1000 - 4000			
Power rating P <sub>40</sub>	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 *) <sup>3</sup>	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 <sub>N</sub> 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 <sup>-2</sup>	40								
Ability to tractive power of terminals	N	100								
Kind of terminal *) <sup>4</sup>	-	Cavi L. 300mm								
Weight	g (ca.)	140	220	240	260	310	490	650	800	1020

\*)<sup>1</sup> - without cables

\*)<sup>2</sup> - Voltage = 1000 VDC

\*)<sup>3</sup> - as a function of the resistance

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