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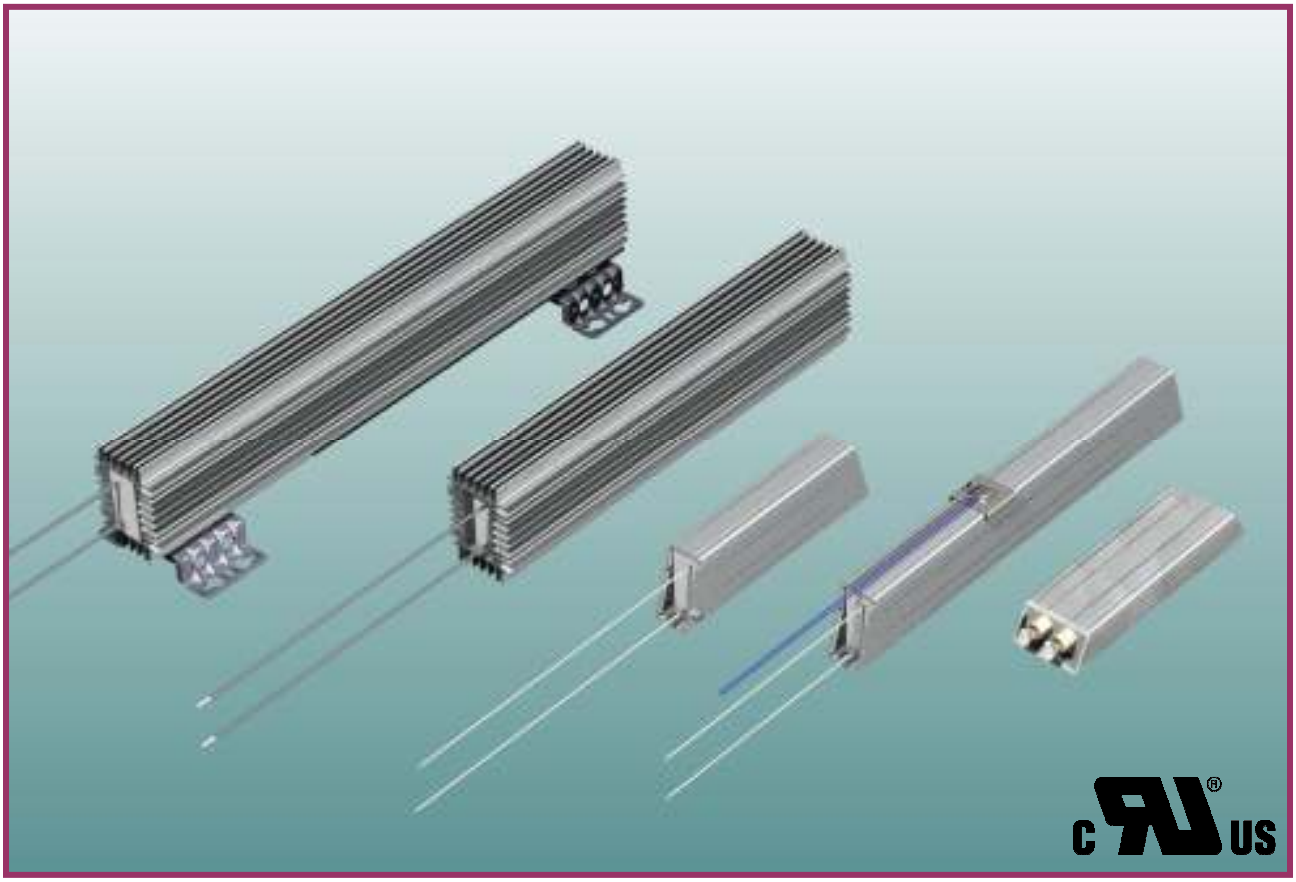
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Find the *Danotherm CBV 265 C 64R* at our website: *Click HERE*

α ALPHA

CBH / CBV / CBR

ALUMINIUM HOUSED
COMPACT BRAKE RESISTORS



CBH, CBV and **CBR** belonging to our medium range of **ALPHA ALUMINIUM HOUSED COMPACT BRAKE RESISTORS** are electrically insulated and with small dimensions so that they easily can be fitted into compact constructions. They are especially designed to endure high pulse loads compared to the average load.

The steady state power range span from **100W** to **1700W** steady state load and they can withstand pulse loads of up to 60 times these values for one second every 120 seconds.

These types is generally approved to UL 508 (E208678), please consult Danotherm.

Danotherm has developed **thermal models** for all resistor types and resistor values. By using these models we are able to predict the temperature rises in the resistor wire and on the surface for all possible load applications. We offer our assistance to our customers to find the optimum solution for any situation.

The resistors comply with IP50 giving electrical and thermal protection. The **CBR** are also available in an IP65 version. The resistors are Silicone free.

CBH and CBV can be equipped with CLIP-ON thermo watch. All tree types can be offered with internal thermo watch, please see separate datasheet.

DANOTHERM

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DANOTHERM

Construction

The resistors are designed as follows:

The resistor elements are wire wound on mica support sheets. Lower ohmic values are however made with helix wound elements mounted in a ceramic support part. The outer housing is an aluminium profile isolated with micanite sheets on all inner surfaces. The resistor elements are fixed symmetrical in the profile by the mica construction or the ceramic insulators. This ensures a symmetric expansion of the resistors and a maximum stability to high load impulses. The aluminium profile with the fixed resistor element is filled with quarts sand. This ensures a minimum change of the resistor surface temperature even if the resistor element reaches its maximum temperature during a pulse load.

The standard cables are 300 mm AWG 18 - 10 Style 1659 PTFE, nature colour. We can supply cables in specified length, colours and mounted with cable shoes or connectors.

The resistors are approved to UL 508 for USA and Canada. All thermal data in this data sheet complies with UL 508 (no further reduction is required)

If screw terminals or higher protection classes are required please use our **CBR** or **CBT** resistors with connection boxes. The highest protection class is IP65 / Type 4X, and the power range goes up to 6 kW.

Ratings

TYPE CBH/CBV CBR-V / CBR-H -V: Profile vertically -H: Profile horizontally	PN W @40°C Approved UL508	Max Surface temp. °C @40°C	Pulse Load in 1s each 120s P1/120 kW @40°C	Pulse Load in 5s each 120s P5/120 kW @40°C	Pulse Load in 10s each 120s P10/120 kW @40°C	Pulse Load in 40s each 120s P40/120 W @40°C	Time Const sec (Steady state)	R Ω ±10% (±5% on request)
CBH / CBV 165 C	110	230	5.5	1.8	1.0	330	1000	0.5 – 1000
CBH / CBV 215 C	155	230	8.5	3.0	1.65	475	1000	0.8 – 1500
CBH / CBV 265 C	200	230	12.5	4.0	2.2	540	1000	1.5 – 2000
CBH / CBV 335 C	270	230	18.0	6.0	3.1	800	1000	1.8 – 2000
CBH / CBV 405 C	330	240	25.0	8.3	4.5	1000	1000	2.0 – 2000
CBR-V/CBR-H 125 C	222	250	13.3	4.0	2.22	660	1000	0.5 – 1000
CBR-V/CBR-H 175 C	311	270	18.6	5.6	3.11	930	1000	0.8 – 1500
CBR-V/CBR-H 225 C	400	300	24	7.2	4.0	1200	1000	1.5 – 2000
CBR-V/CBR-H 295 C	525	340	31.5	9.4	5.2	1570	1000	1.8 – 2000
CBR-V/CBR-H 365 C	650	250	39	11.7	6.5	1950	1000	2.0 – 2000
CBR-V/CBR-H 426 C	980	270	58	17	9.8	2940	1000	2.4 – 40
CBR-V/CBR-H 526 C	1220	300	73	21.9	12	3660	1000	3.0 – 45
CBR-V/CBR-H 626 C	1460	340	87	26	14	4300	1000	3.5 – 50
CBR-V/CBR-H 726 C	1700	250	100	30	17	5100	1000	4.0 – 55

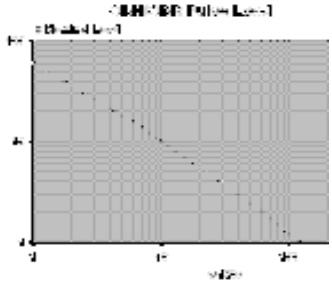
Pulse Ratings for short pulses depend on the ohmic value. (Resistors with lower resistance values have more resistor wire than resistors with higher resistance values). The ratings in this table refer to resistors of about 40 OHMS.

General Specifications	
Temperature Coefficient:	<±100ppm
Dielectric strength:	3500VAC 1 minute
Working Voltage:	UL: 600VAC / CE: 690VAC; 1100VDC
Isolation Resistance:	> 20 MΩ
Overload:	10 x in10 s / 120 s; 60 x in 1 s / 120 s
Environmental:	-40 °C – 90 °C
De-rating :	Linear: 40°C = P_N to 90°C = 0.75*PN
External Thermo watch (Internal thermo watch types see special data sheet.	Mounted with CLIP-ON bracket: 200°C (Optional 130°C/160°C/ 180°C), 2A, 250V, NC
Approvals	UL 508

PN: NOMINAL POWER WITH NATURAL COOLING WITHOUT INTERNAL THERMO WATCH and:
For CBV and CBH mounted in a horizontal position
For CBR-V and CBR-H mounted in a vertical position.
Please ask for special datasheet if resistors with internal thermo watch are required!
Color code for thermo watch cables: 130 °C: brown / 160°C: blue / 180°C: orange / 200°C: white

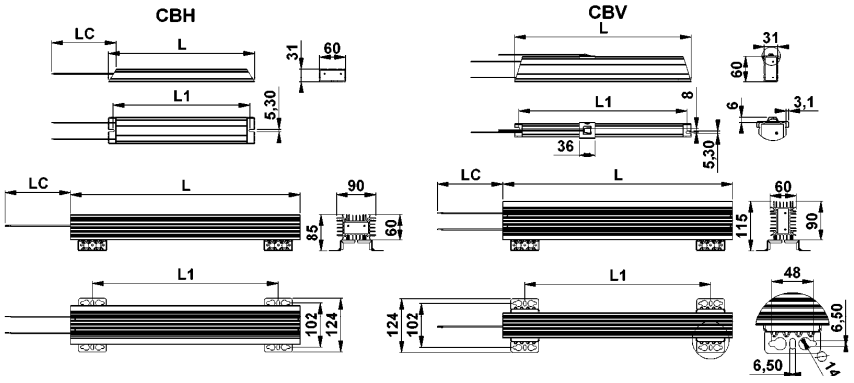
PULSE LOAD

The curve show the pulse load ability compared to the nominal load for the resistors under the following conditions: The load is a periodic pulse load with a constant **period time** of **120 seconds** and a pulse width from **1 second** to **40 seconds.**



For further optimization offers Danotherrn individual thermal electric circuit models for all types and ohm values. With these models can the temperature of the resistor wire and resistor surface be simulated during any pulse load conditions with a standard soft ware like PSpice. Alternatively offers Danotherm to make the thermal simulation for our customers

Mechanical Data



The external CLIP-ON thermo watch shown on CBV is also available for CBH.
Internal thermo watch require 25 - 35 mm longer resistor profile, please require special data sheet.

Type	L ± 2	L1 ± 2	Weight	Type	L ± 2	L1 ± 2	Weight
CBH / CBV 165 C	165	146	0.39	CBR-V/CBR-H 225	225	125	1.8
CBH / CBV 215 C	215	196	0.63	CBR-V/CBR-H 295	295	195	2.3
CBH / CBV 265 C	265	246	0.88	CBR-V/CBR-H 365	365	265	2.8
CBH / CBV 335 C	335	316	1.2	CBR-V/CBR-H 426	426	326	3.2
CBH / CBV 405 C	405	386	1.5	CBR-V/CBR-H 526	526	426	3.8
CBR-V/CBR-H 125	125	-	1.2	CBR-V/CBR-H 626	626	526	4.5
CBR-V/CBR-H 175	175	75	1.5	CBR-V/CBR-H 726	726	626	5.2

Type identification:

CBR-V 175 C (*H*)(T) 22R 800

(X): Only part of ID number if option is chosen
800 = Standard CBH and CBV; **001** = Standard CBR-V and CBR-H; **XXX > 400** for customer specified versions
Ohm Value (Examples: **2R2**=2.2Ω; **22R**=22 Ω; **220R**=220Ω; **2K2** = 2.2 kΩ)
(T = Internal thermo watch, 200°C, 180°C, 160°C or 130°C, (See spec data sheet))
***H*:** helix shape winding (specified by Danotherm).
C: Cable terminals, **W**: Cables, IP65 (only CBR)
Length of resistor profile in mm.
Type **CBH, CBV, CBR-H** or **CBR-V; NON UL** versions: **CBH*X* 335 C 22R 800**

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