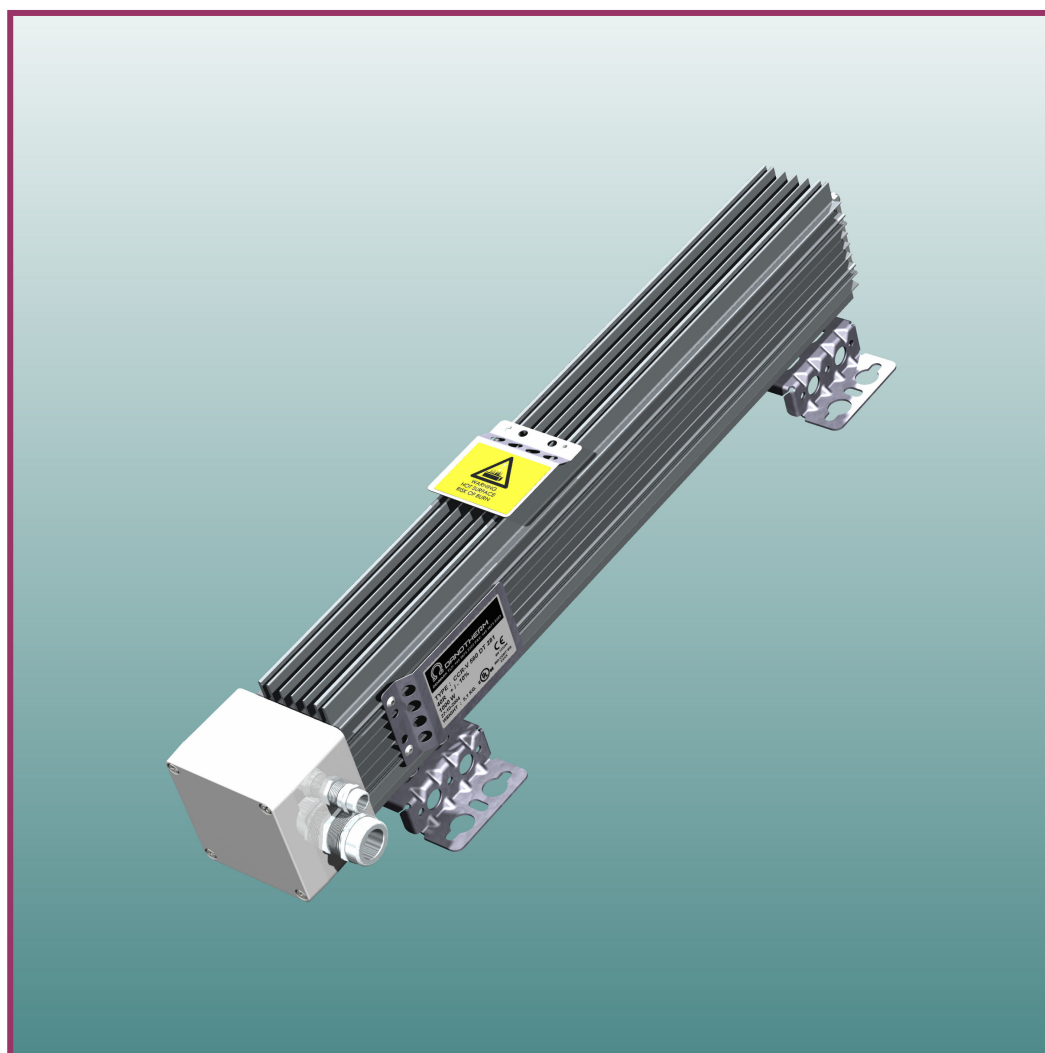


# α ALPHA CBR-BT

ALUMINIUM HOUSED  
COMPACT BRAKE RESISTORS IP 65



**c  $\Omega$  US**

**ALPHA CBR BT** is a range of compact Aluminum Profile Brake Resistors with protection class IP65. The resistors are supplied with an internal 200°C thermostat and equipped with a connection box, which contains cable glands and cable connection to the resistor and the thermostat.

**Connection**

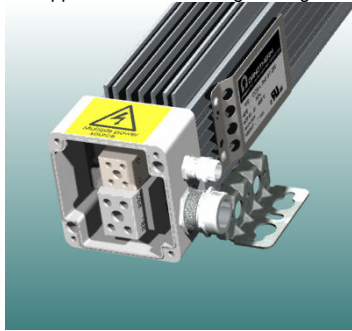
Power cables are connected through a M25 cable gland with integrated screen connection. The range of outer diameter of the power cable is 9.0- 16.6mm.

The power cables (0.5 – 10 mm<sup>2</sup>) are connected to a terminal block with screw connections. The PE is connected directly to the connector box with a screw.

The cable for the temperature switch is connected to a terminal block (0.5-4mm<sup>2</sup>) via a M12 gland with clamping range 3 – 7mm.

**High Temperature Warning**

The CBR BT resistors have a "High Temperature" warning label on the connector box. The resistors can optionally be supplied with a Protecting Grating



**Ratings:**

| TYPE CBR-V BT     | PN W @40°C Approved UL508 | Max Surface temp. °C @40°C | Pulse Load in 1 s each 120s. P1/120 kW @40°C | Pulse Load in 5 s each 120 s. P5/120 kW @40°C | Pulse Load in 10s each 120 s. P10/120 kW @40°C | Pulse Load in 40 s each 120 s P40/120 kW @40°C | Time Const. sec. (Steady state) | R Ω - kΩ ±10% (±5% on request) |
|-------------------|---------------------------|----------------------------|--|---|--|--|---------------------------------|--------------------------------|
| CBR-V 160 B T 281 | 280                       | 230                        | 12.6   | 4.54  | 2.84   | 0.84   | 1000                            | 0.5-1000                       |
| CBR-V 210 B T 281 | 360                       | 230                        | 16.2   | 5.83  | 3.65   | 1.08   | 1000                            | 0.8 - 1500                     |
| CBR-V 260 B T 281 | 450                       | 230                        | 20   | 7.2   | 4.56   | 1.35   | 1000                            | 1.5 - 2000                     |
| CBR-V 330 B T 281 | 570                       | 230                        | 25.6   | 6.24  | 5.75   | 1.70   | 1000                            | 1.8 - 2000                     |
| CBR-V 400 B T 281 | 680                       | 240                        | 30   | 10  | 6.85   | 2.04   | 1000                            | 2.0 - 2000                     |
| CBR-V 460 B T 281 | 790                       | 250                        | 35   | 12.7  | 7.9  | 2.23   | 1000                            | 2.4 - 40                       |
| CBR-V 560 B T 281 | 960                       | 270                        | 43   | 15.4  | 9.7  | 2.8  | 1000                            | 3.0 - 45                       |
| CBR-V 660 B T 281 | 1130                      | 300                        | 50   | 18  | 11   | 3.3  | 1000                            | 3.5 - 50                       |
| CBR-V 760 B T 281 | 1290                      | 340                        | 58   | 20  | 12.6   | 3.8  | 1000                            | 4.0 - 55                       |
| CBR-V 460 B T 282 | 1400                      | 250                        | 70   | 25  | 15   | 4.4  | 1000                            | 1.2 - 20                       |
| CBR-V 560 B T 282 | 1720                      | 270                        | 86   | 30  | 19   | 5.6  | 1000                            | 1.6 - 22                       |
| CBR-V 660 B T 282 | 2034                      | 300                        | 101  | 36  | 22   | 6.6  | 1000                            | 1.5 - 25                       |
| CBR-V 760 B T 282 | 2300                      | 340                        | 116  | 41  | 25   | 7.6  | 1000                            | 2.0 - 27                       |
| CBR-V 460 B T 283 | 2090                      | 250                        | 105  | 38  | 23   | 6.7  | 1000                            | 1.5 - 13                       |
| CBR-V 560 B T 283 | 2530                      | 270                        | 129  | 46  | 29   | 8.4  | 1000                            | 1.8 - 15                       |
| CBR-V 660 B T 283 | 3120                      | 300                        | 152  | 54  | 34   | 9.9  | 1000                            | 2.2 - 17                       |
| CBR-V 760 B T 283 | 3410                      | 340                        | 174  | 62  | 37   | 11   | 1000                            | 2.4 - 18                       |

| General Specifications   |  |
|--------------------------|--|
| Temperature Coefficient: | <±100ppm   |
| Dielectric strength:     | 2500VAC 1 minute   |
| Working Voltage:         | UL: 600VAC / CE: 690VAC; 1100VDC                           |
| Isolation Resistance:    | > 20 MΩ  |
| Overload:                | 5-10x in10 sec; 25-35 x in 1 s                             |
| Environmental:           | -40 °C – 90 °C   |
| Derating :               | Linear: 40°C = P <sub>N</sub> to 70°C = 0.5*P <sub>N</sub> |
| Approvals                | UL 508   |

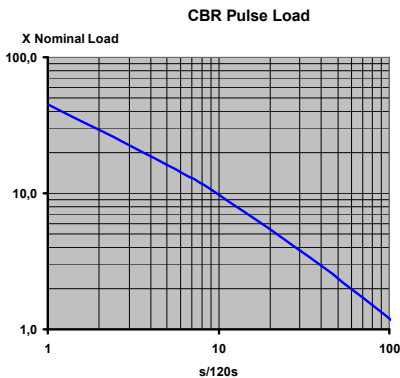
PN: NOMINAL POWER WITH NATURAL COOLING and mounted in a vertical position  
 SURFACE TEMPERATURE: 195°C @ 40°C AMB near Connector Box and Thermostat.

\*) Configuration: 2X1: ONE resistor profile; 2X2 TWO resistor profiles; 2X3 THREE resistor profiles.  
 X specifies thermostat temperature: X=5: 130°C ; X=6: 160°C ; X=7: 180°C ; X=8: 200°C ; X=0: No thermostat

(As an alternative to the two- and three profile versions please consider the CBT type)

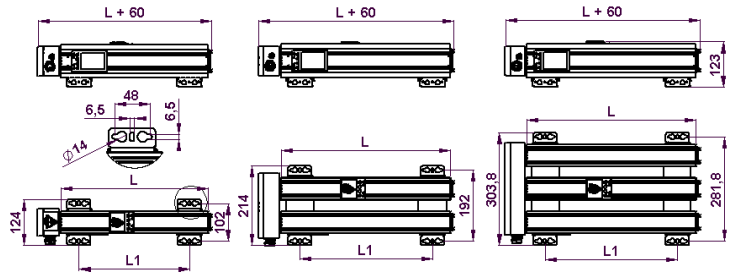
**PULSE LOAD**

The curves show the pulse load ability compared to the nominal load for the CCR resistors under the following conditions: The load is a periodic pulse load with a constant period time of 120 sec and a pulse width from one second to 40 sec.



For all other load conditions please contact DANOTHERM. By mean of individual thermal models we can simulate the rises of temperatures in the components and on the surfaces during and between specified pulses.

**Mechanical Data**  
 Resistors with one, two and three resistor profiles



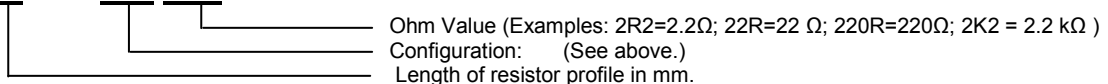
| Type              | L ± 2 | L1 ± 2 | Weight | Type              | L ± 2 | L1 ± 2 | Weight  |
|-------------------|-------|--------|--------|-------------------|-------|--------|---------|
| CBR-V 160 B T 281 | 160   | 70     | 1,3 Kg | CBR-B 460 B T 282 | 460   | 360    | 7,5 Kg  |
| CBR-V 210 B T 281 | 210   | 110    | 1,8 Kg | CBR-B 560 B T 282 | 560   | 460    | 9 Kg    |
| CBR-V 260 B T 281 | 260   | 160    | 2,4 Kg | CBR-B 660 B T 282 | 660   | 560    | 10,5 Kg |
| CBR-V 330 B T 281 | 330   | 230    | 3,0 Kg | CBR-B 760 B T 282 | 760   | 660    | 11,9 Kg |
| CBR-V 400 B T 281 | 400   | 300    | 3,5 Kg |                   |       |        |         |
| CBR-V 460 B T 281 | 460   | 360    | 3,9 Kg | CBR-B 460 B T 283 | 460   | 360    | 11 Kg   |
| CBR-V 560 B T 281 | 560   | 460    | 4,6 Kg | CBR-B 560 B T 283 | 560   | 460    | 13,2 Kg |
| CBR-V 660 B T 281 | 660   | 560    | 5,4 Kg | CBR-B 660 B T 283 | 660   | 560    | 15,5 Kg |
| CBR-V 760 B T 281 | 760   | 660    | 6,1 Kg | CBR-B 760 B T 283 | 760   | 660    | 18 Kg   |

**Type identification:**

If you have chosen a CBR Brake Resistor with IP21 protection it is necessary to specify the size (length), the configuration (Number of profiles) and the ohm value.

Please specify your CBR Brake resistor as follows

**CBR-V 645 B T 281 22R**



More configurations (IP23, IP50, Protection grid) can be supplied, please consult Danotherm Electric A/S for further details.