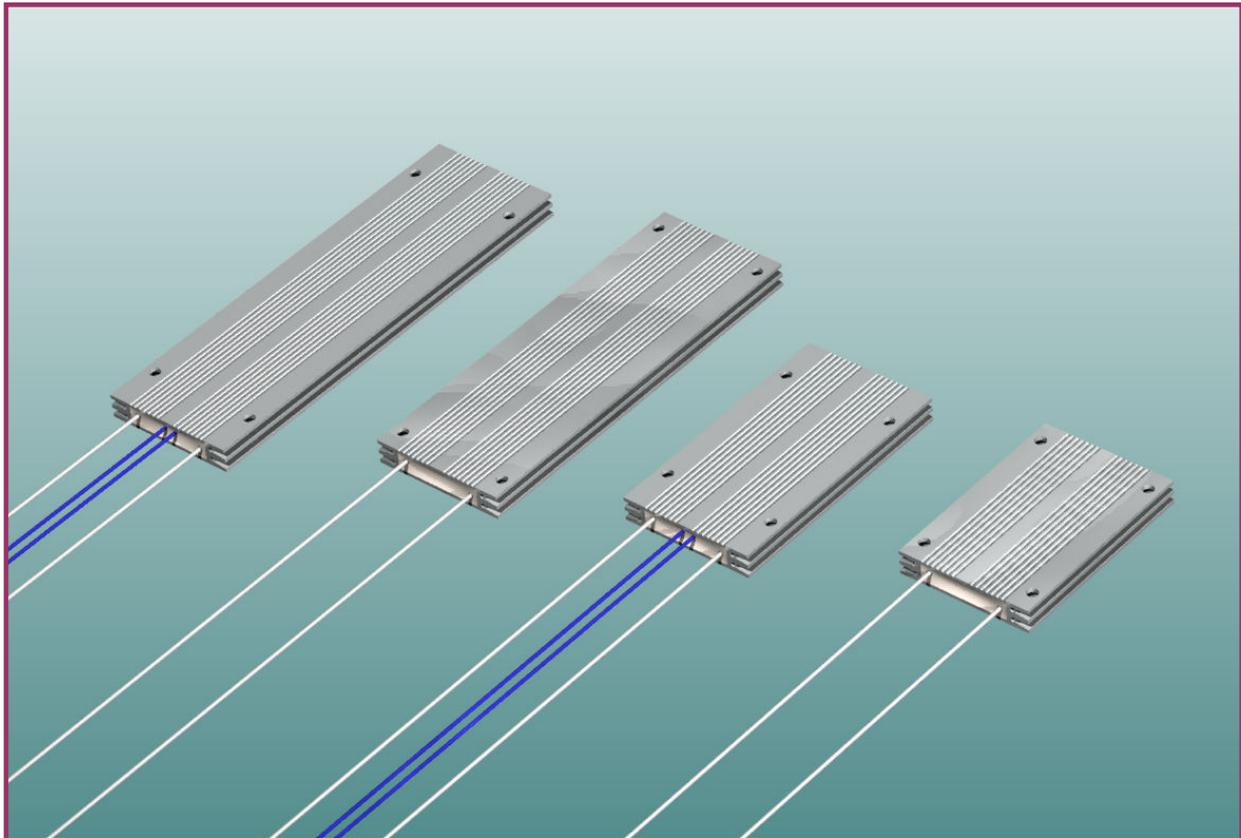


α ALPHA

CDH

ALUMINIUM HOUSED COMPACT BRAKE RESISTORS



CDH belong to our small range of **ALPHA ALUMINIUM HOUSED BRAKE RESISTORS**. These resistors are insulated and compact and can easily be integrated in compact constructions. They are constructed for high pulse loads compared to the average load.

The resistors comply with **IP45, or IP54** giving electrical and thermal protection. The resistors are Silicone free.

The power range is from **100 W to 200 W** steady state load and pulse loads of 40 times compared to the nominal load in one second each 120s

The flat construction of CDH makes it suitable for heat sink cooling and can be used in **water cooled** equipment.

Danothem has developed **thermal models** for all resistor types and resistor values. By using these models we are able to calculate 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. All types can be offered with thermostats.



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Construction

The Alpha resistors are constructed as follows:

The resistor elements are wire wound helix elements mounted and supported in a ceramic support part.

The housing is an aluminium profile. The resistor element is fixed symmetrical in the profiles by the ceramic support part. This ensures a symmetric expansion of the resistors and a maximum stability to high load impulses.

The resistor with the fixed resistor element is filled with quartz sand. This construction ensures a minimum change of temperature on the resistor surface even if the resistor element reaches its maximum temperature during a pulse load.

The standard cables are 300 mm AWG 18/16/14 Style 1659 PTFE, nature colour. We can supply cables in specified length, colours and mounted with cable shoes or connectors. Other cable types like glass fibre silicone insulated cables are available.

Resistors with integrated thermo watch are available in two versions, a normally and an extra insulated type. The extra insulated types have thermostats mounted in a ceramic insulator which require 25 mm extra length of aluminium profile.

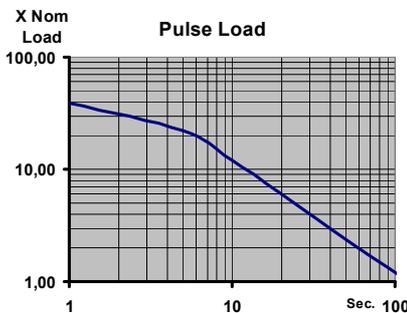
Ratings:

TYPE CDH- -D: D range -H: Profile horizontally	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 W @40°C	Time Const sec.	R Ω (±5%) ±10%
CDH 102 C(TI)	110	250	4	2,5	1,3	330	1000	2,2 – 200
CDH 145 C(TI)	155	255	6	3,7	1,86	465	1000	3,3 – 250
CDH 195 C(TI)	205	255	8	4,9	2,46	615	1000	3,3 - 300
CDH 130 CT	110	200	4	2,5	1,3	330	1000	2,2 – 200
CDH 175 CT	140	200	6	3,3	1,68	420	1000	3,3 – 250
CDH 225 CT	180	205	8	4,8	2,16	540	1000	3,3 - 300

General Specifications	
Temperature Coefficient:	<±100ppm
Dielectric strength:	3500VAC 1 minute
Working Voltage:	UL: 600VAC / CE: 690VAC; 1100VDC
Isolation Resistance:	> 20 MΩ
Overload, non repeatable:	
CDH 102 C(TI) / CDH 130 CT	5kW in 5s
CDH 145 C(TI) / CDH 175 CT	8 kW in 5 s
CDH 195 C (TI) / CDH 225 CT	10 kW in 5 s
Environmental:	-40 °C – 90 °C
De-rating :	Linear: 40°C = P _N to 90°C = 0.75*P _N
Thermostat :	160°C (Optional 200°C/180°C), 2A, 250VAC
Approvals	

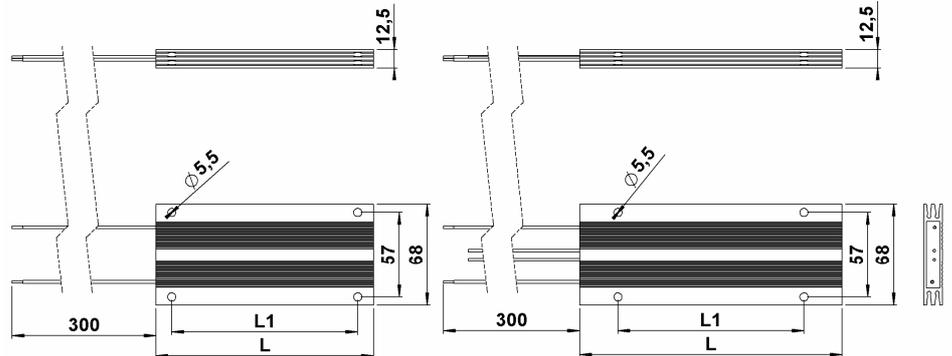
PN: NOMINAL POWER WITH NATURAL COOLING and:
CDH mounted in a horizontal position in air and natural cooling.

PULSE LOAD



The curves show the pulse load ability compared to the nominal load for the CDH resistors under the following conditions: The load is a periodic pulse load with a constant period time of 120 sec

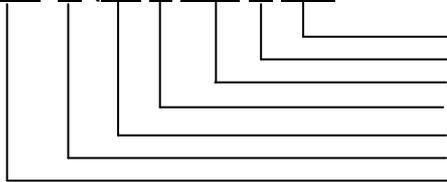
Mechanical Data



Type	L ± 2	L1±0.5	W g	Type	L ± 2	L1±0.5	W g
CDH 102 C(TI)	102	81	195	CDH 130 CT	130	81	245
CDH 145 C(TI)	145	124	270	CDH 175 CT	175	124	325
CDH 195 C(TI)	195	174	365	CDH 225 CT	225	174	420

Type identification:

CDH 326 C (TI) A 22R K 001



(X): Only part of ID ig option is chosen

001 = Standard, XXX > 400 customer specified versions

Tolerance: **K** = ± 10%; **J** = ± 5 %

Ohm Value (Examples: 2R2=2.2Ω; 22R=22 Ω; 220R=220Ω; 2K2 = 2.2 kΩ)

Protection degree: **A** = Standard IP54, **B** = IP65

T = Thermo watch, internal extra insulated; **TI** = Thermo watch. Standard 160°C

C: Cable terminals

Length of resistor profile in mm.