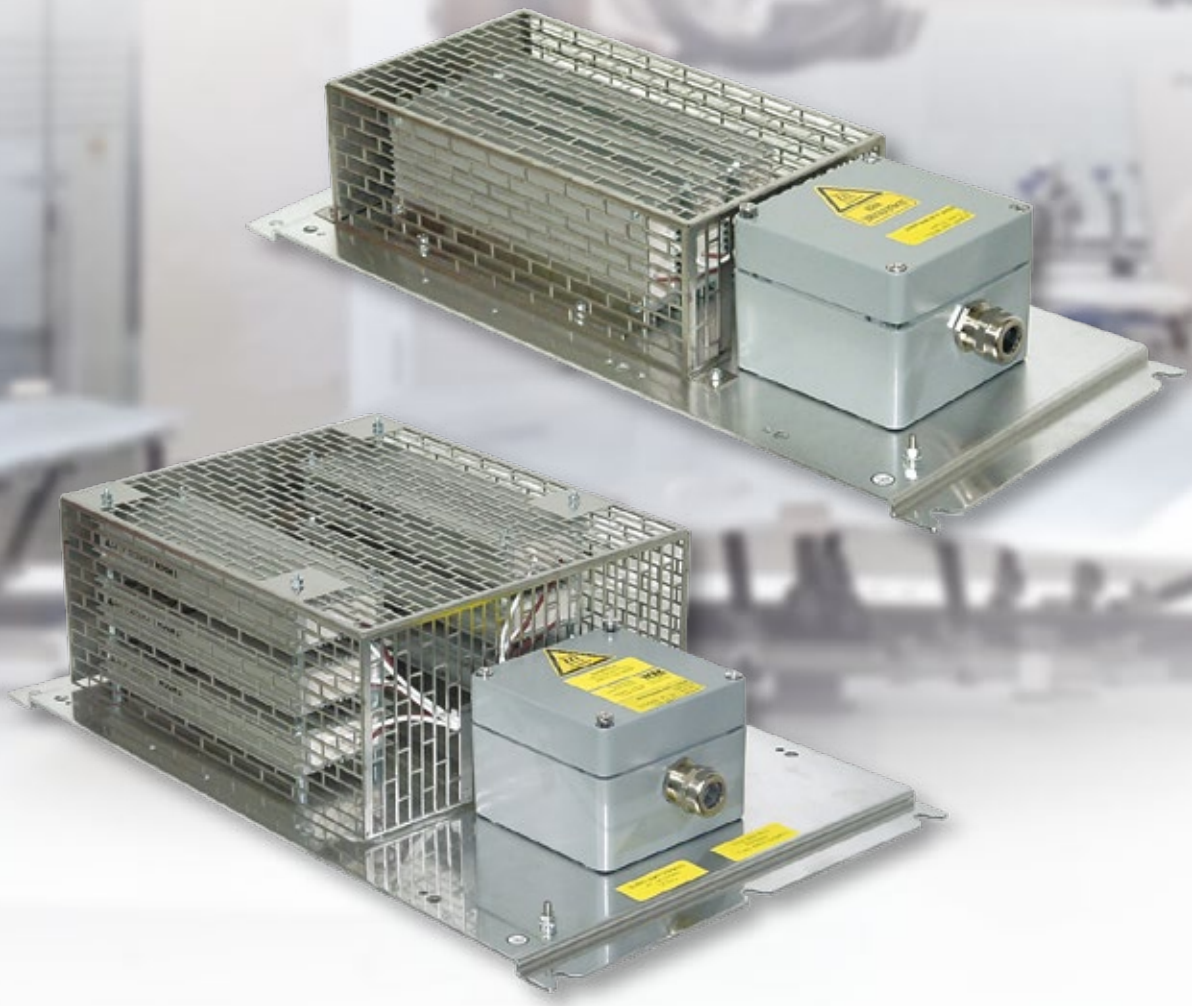
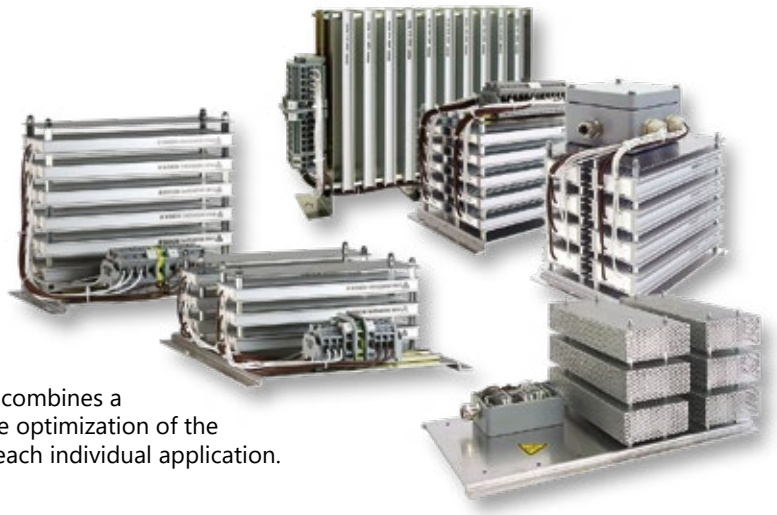
KOCH

Our modular system for safe brake resistors



B3H...V...
B3H...H...

Our modular system for safe brake resistors



We manufacture resistor combinations by an extensive set of accessories for high performance applications.

The modular system is based on individual modules of the BWD series 250 to 1000 with nominal output of 100 to 400 watts.

In addition to its high performance, this modular system combines a compact design with extreme flexibility. This results in the optimization of the braking resistor in accordance with the specifications of each individual application.

Optimized to the requirements of your application:

Required power - no „unnecessary over-dimensioning“

Many resistance values – based on the inverters requirements

Mechanical design – according to the existing installation space

Assembly - horizontal or vertical

Protection class IP 20 or IP 65[1] - according to installation location and environmental conditions

Individual modules with UL and CSA standard approval

Several braking resistors in a resistor combination, e.g. for moving and hoisting gear

Optional: Temperature switch, strain relief, protective cover, etc.

Technical specifications of individual modules

(ϑ_A = 20°C, unless otherwise specified)

Parameter	Symbol	Value	Unit	Conditions
Tolerance (resistance)		± 5	%	Room temperature
Insulation resistance	R_{ISO}	≥ 100	MΩ	U_{mess} = 1,000 VDC
Inductance	L	≤ 30	µH	f = 300 kHz, U_{mess} = 50 mV
Capacity against enclosure	C	≤ 300	pF	f = 300 kHz, U_{mess} = 50 mV
Thermal time constant	τ	approx. 550	s	BWD250/500
	τ	approx. 600	s	BWD600
	τ	approx. 850	s	BWD1000
Energy absorption BWD250	Q	4	kJ	with 1.2 s (1% duty cycle)
		8	kJ	with 7.2 s (6% duty cycle)
Energy absorption BWD500	Q	7,5	kJ	with 1.2 s (1% duty cycle)
		15	kJ	with 7.2 s (6% duty cycle)
Energy abs. BWD600/1000	Q	13	kJ	with 1.2 s (1% duty cycle)
		26	kJ	with 7.2 s (6% duty cycle)
Maximum permissible operating voltage	U_B	≤ 700 AC	V	Taking into consideration the „intrinsic safety“[2]
		≤ 1,000 DC	V	
		≤ 600 AC	V	according to CSA and UL
		≤ 848 DC	V	
Isolation voltage	U_{iso}	≥ 4,000 AC	V	f = 50 Hz; t = 1 s
Max. permissible case temp.	ϑ_C	≤ 250	°C	unobstructed convection
	ϑ_C	≤ 300	°C	unobstructed conv. (BWD1000)
Storage temperature	ϑ_S	-25 ... +85	°C	

[1] Test conditions: Water jet from nozzle 6.3 mm inside diameter, flow rate 12.5 l / min +/- 5%, water pressure according to volume flow, distance 2.5-3m, test duration 3min.
[2] With fourfold type power and free convection. 1. no short-circuit, 2. no fault to frame, 3. self-extinguishing, 4. no melting of casing. Type power always corresponds to 35% duty cycle of the respective resistor type.

Brake resistor combination
B3H...V...

Short-circuit-proof, „intrinsically safe“[2] resistor for operation with drive controllers (brake transistors), consisting of combinations of individual resistor modules of the 600/1000 series.

These combinations of resistors are distinguished by their compact design and their additional touch protection. They are suitable for both, wall mounting and mounting on the control cabinets top. Standard version with IP65[1] protection class.

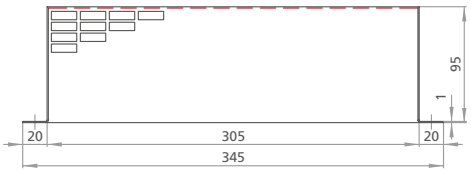
Rated power (kW)
0.48 - 1.2 or upon request

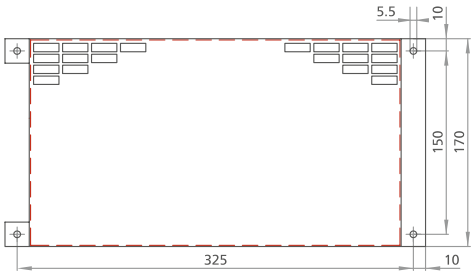
Resistance (Ohm)
1.67 - 900 or upon request

Dimensions (mm)
550 x 230 x 105

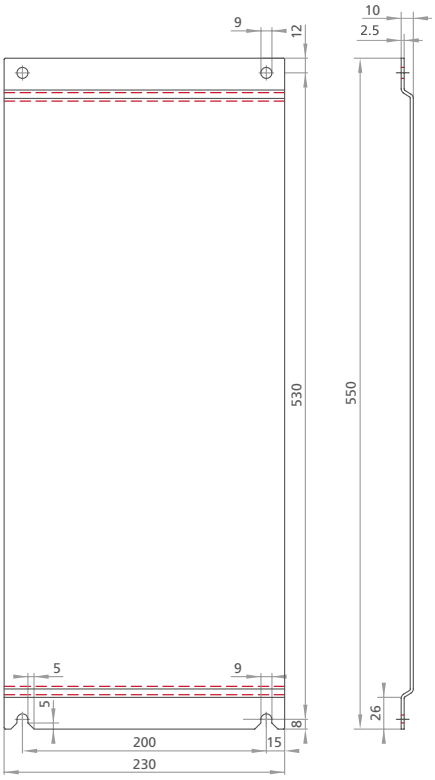
Technical specifications
The technical data can be found on page 2 of this document.

Dimensions and mounting holes (mm)
Mounting plates for brake resistor combinations BxH...V... Detailed dimensions for specific versions available upon request.





Cover H305



Mounting plate P550-230

Detailed views

Detailed view of a terminal box

Touch protection H305

Combination without cover

Nomenclature
Brake resistor combination BxH...V...

B3H0.7 100-600 IP65 V

- Individual design
- Module installation type (vertical)
- Protection class
- Series designation of the installed resistors
- Ohm value of the single resistor, three digits
- Total continuous or rated power of the combination in kW
- Combination on base plate, wired
- Number of individual resistors on a single plane, 1, 2, 3
- Position of the top-hat rail H: at right angles to the individual resistors

[1] Test conditions: Water jet from nozzle 6.3 mm inside diameter, flow rate 12.5 l / min +/- 5%, water pressure according to volume flow, distance 2.5-3m, test duration 3min.
[2] With fourfold type power and free convection. 1. no short-circuit, 2. no fault to frame, 3. self-extinguishing, 4. no melting of casing. Type power always corresponds to 35% duty cycle of the respective resistor type.

Brake resistor combination
B3H...H...

Short-circuit-proof, „intrinsically safe“[2] resistor for operation with drive controllers (brake transistors), consisting of combinations of individual resistor modules of the 600/1000 series.

These combinations of resistors are distinguished by their compact design and their additional touch protection. These are only suitable for wall mounting. Standard version with IP65[1] protection class.

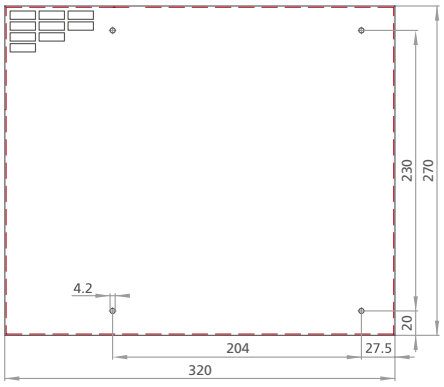
Rated power (kW)
0.24 - 3.6 or upon request

Resistance (Ohm)
0.55 - 2,700 or upon request

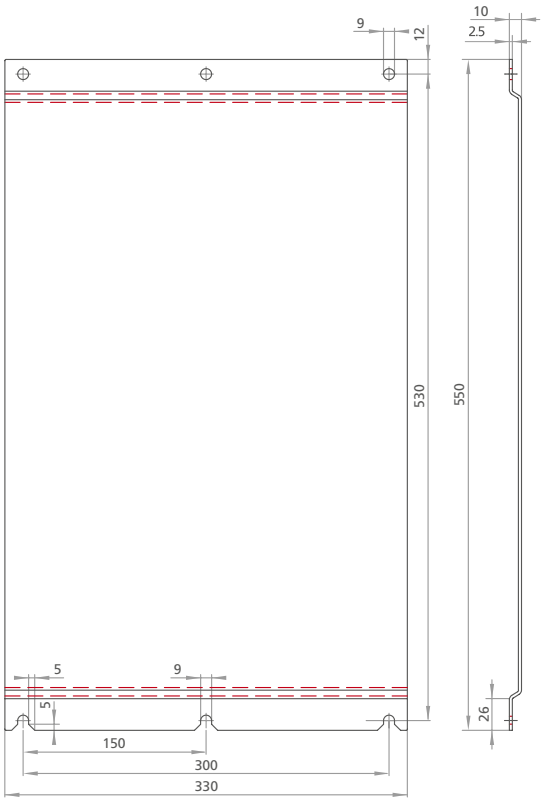
Dimensions (mm)
550 x 330 x 156

Technical specifications
The technical data can be found on page 2 of this document.

Dimensions and mounting holes (mm)
Mounting plates for brake resistor combinations BxH...H... Detailed dimensions for specific versions available upon request.



Cover H320



Mounting plate P550

Detailed views

Detailed view of a terminal box

Touch protection H320

Combination without cover

Nomenclature
Brake resistor combination BxH...H...

B3H3.6 100-600 IP65 H

- Individual design
- Module installation type (horizontal)
- Protection class
- Series designation of the installed resistors
- Ohm value of the single resistor, three digits
- Total continuous or rated power of the combination in kW
- Combination on base plate, wired
- Number of individual resistors on a single plane, 1, 2, 3
- Position of the top-hat rail H: at right angles to the individual resistors

[1] Test conditions: Water jet from nozzle 6.3 mm inside diameter, flow rate 12.5 l / min +/- 5%, water pressure according to volume flow, distance 2.5-3m, test duration 3min.
[2] With fourfold type power and free convection. 1. no short-circuit, 2. no fault to frame, 3. self-extinguishing, 4. no melting of casing. Type power always corresponds to 35% duty cycle of the respective resistor type.

What we offer:

- Tested product quality
- Certified processes
- Individual application support
- Machine specific design and sizing
- Rapid reaction
- Quick delivery times
- On-time delivery
- Reliable partner
- Long-term business relationship
- Direct customer relations

Use our communication channels:

Your specialist for:

- Active energy management devices and systems
- Safe brake resistors

We look forward to hearing from you!

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