

# Brake resistor BWx500

Short-circuit proof, „intrinsically safe“<sup>2</sup> resistor for use in inverters (brake transistors) in an anodized aluminum case, IP65<sup>1</sup> protection class.



**Rated power (W)**  
200 (500 with duty cycle)  
ED = 35%,  $\vartheta_A = 20^\circ\text{C}$

**Resistance (Ohm)**  
10,12, 15, 22, 27, 35, 40, 47, 50,  
60, 72, 100, 130,150, 160, 200,  
210, 240, 300, 310, 430, 620

**Dimensions (mm)**  
Enclosure: 216 x 80 x 15  
Wiring: length 510±40  
Ø AWG16 or 1.5 mm<sup>2</sup>  
PTFE isolated,  
UL Style 1659



### Versions



BWD500



BWG500



BWS500



BWT500  
without CSA and UL approval

<sup>1</sup> 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.

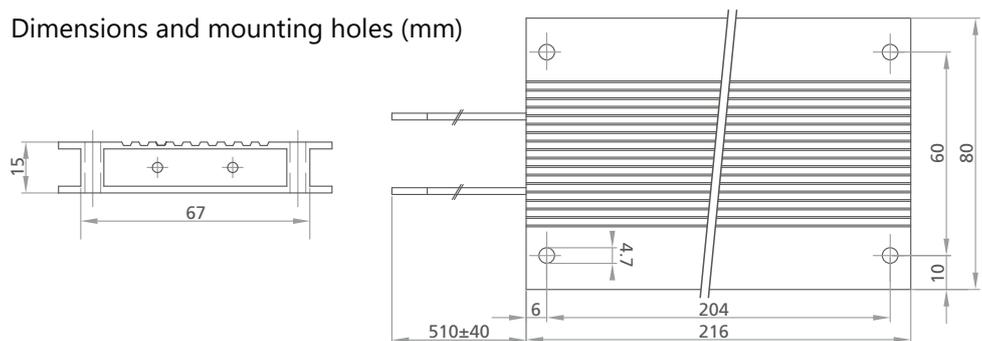
<sup>2</sup> With fourfold type power and free convection.  
1. no short-circuit, 2. no fault to frame, 3. self-extinguishing, 4. no melting of casing. Type power always corresponds to 35% duty cycle of the respective resistor type.

### Technical specifications

( $\vartheta_A = 20^\circ\text{C}$ , unless otherwise specified)

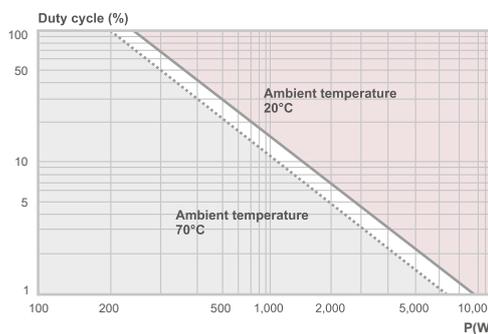
Parameter	Symbol	Value	Unit	Conditions
Tolerance (resistance)		± 5	%	Room temperature
Temperature coefficient	TK	20 ... 100	10 <sup>-6</sup> /K	
Insulation resistance	R <sub>iso</sub>	≥ 100	MΩ	U <sub>mess</sub> = 1,000 VDC
Inductance	L	≤ 30	μH	f = 300 kHz, U <sub>mess</sub> = 50 mV
Capacity against enclosure	C	≤ 300	pF	f = 300 kHz, U <sub>mess</sub> = 50 mV
Thermal time constant	τ	approx. 550	s	
Weight	m	550	g	
Certifications	cCSAus cURus			Standard CSA-C22.2 and UL508 Standard CSA-C22.2 and UL508
Energy absorption	Q	7.5	kJ	with 1.2 s (1% duty cycle)
		15	kJ	with 7.2 s (6% duty cycle)
Maximum permissible operating voltage	U <sub>B</sub>	≤ 700 AC ≤ 1,000 DC ≤ 600 AC ≤ 848 DC	V V V V	Taking into consideration the „intrinsic safety“ <sup>2</sup> according to CSA and UL
Isolation voltage	U <sub>iso</sub>	≥ 4,000 AC	V	f = 50 Hz; t = 1 s
Max. permissible case temp.	$\vartheta_C$	≤ 250	°C	unobstructed convection
Storage temperature	$\vartheta_S$	-25 ... +85	°C	

### Dimensions and mounting holes (mm)



### Pulse loading capacity

Brake resistor BWx500



### Case temperature

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With duty cycle ED = 100%  
Maximum permissible temperature T = 250 °C

