

# Brake resistor BWx250

Short-circuit proof, „intrinsicly 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)**  
100 (250 with duty cycle  
ED = 35%,  $\vartheta_A = 20^\circ\text{C}$ )

**Resistance (Ohm)**  
3 ( $U_B$  175 AC, 250 DC), 10, 24,  
27, 33, 47, 72, 100, 150, 200,  
220, 330, 390, 430, 620, 830

**Dimensions (mm)**  
Enclosure: 110 x 80 x 15  
Wiring: length 510±40  
Ø AWG16 or 1.5 mm<sup>2</sup>  
PTFE isolated,  
UL Style 1659



### Versions



BWD250



BWG250



BWS250

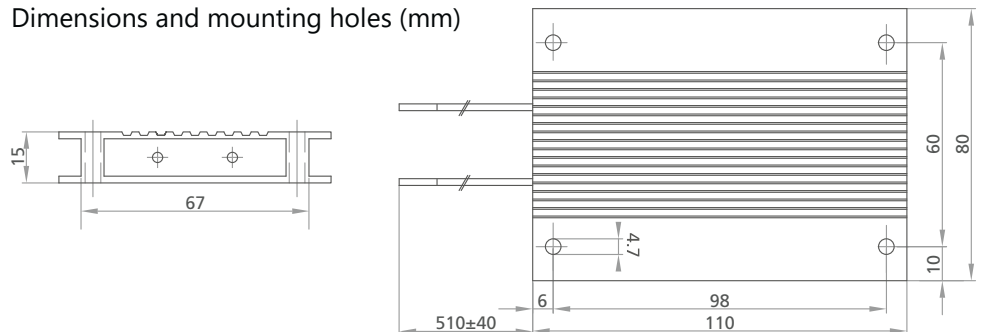


BWT250  
without CSA and UL approval

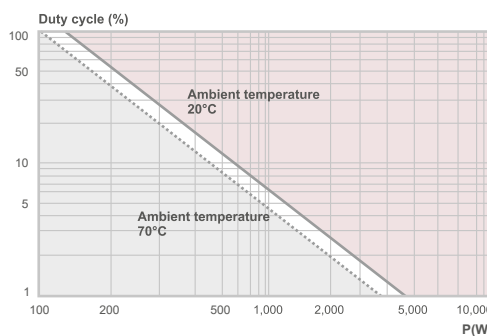
### Technical specifications ( $\vartheta_A = 20^\circ\text{C}$ , unless otherwise specified)

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	280	g	
Certifications	cCSAus cURus			Standard CSA-C22.2 and UL508 Standard CSA-C22.2 and UL508
Energy absorption	Q	4 8	kJ	with 1.2 s (1% duty cycle) 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.	ϑ <sub>C</sub>	≤ 250	°C	unobstructed convection
Storage temperature	ϑ <sub>S</sub>	-25 ... +85	°C	

### Dimensions and mounting holes (mm)

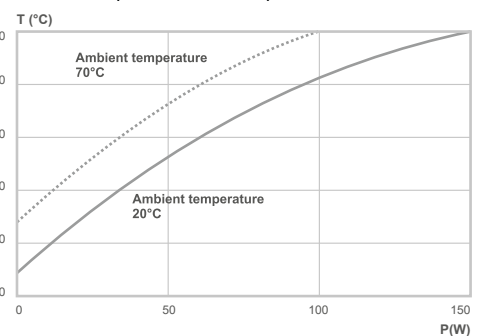


### Pulse loading capacity Brake resistor BWx250



### Case temperature

Brake resistor BWx250  
With duty cycle ED = 100%  
Maximum permissible temperature T = 250 °C



<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.