

# Brake resistor BWx375

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



Rated power (W)  
70 (150 with forced cooling)

Resistance (Ohm)  
90

Dimensions (mm)  
Enclosure: 185 x 22 x 36.5  
Wiring: length 290±20  
Ø AWG16 or 1.5 mm<sup>2</sup>  
PTFE isolated,  
UL Style 1659

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

Parameter	Symbol	Value	Unit	Conditions
Tolerance (resistance)		± 5	%	Room temperature
Temperature coefficient	TK	40 ... 65	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. 850	s	Heating phase free in air
		approx. 1,200		Cooling phase free in air
Weight	m	260	g	
Certifications	cURus <sup>3</sup>			Standard CSA-C22.2 and UL508
Energy absorption	Q	3.6	kJ	with 1.2 s (1% duty cycle)
		5.0	kJ	with 7.2 s (6% duty cycle)
Maximum permissible operating voltage	U <sub>B</sub>	≤ 700 AC	V	Taking into consideration the „intrinsic safety“ <sup>2</sup>
		≤ 1,000 DC	V	according to UL
		≤ 600 AC	V	
		≤ 848 DC	V	
Isolation voltage	U <sub>iso</sub>	≥ 4,000 AC	V	f = 50 Hz; t = 1 s
Max. permissible case temp.	ϑ <sub>C</sub>	≤ 200	°C	in consideration of UL and forced cooling
Storage temperature	ϑ <sub>S</sub>	-25 ... +85	°C	



## Versions



BWD375



BWS375



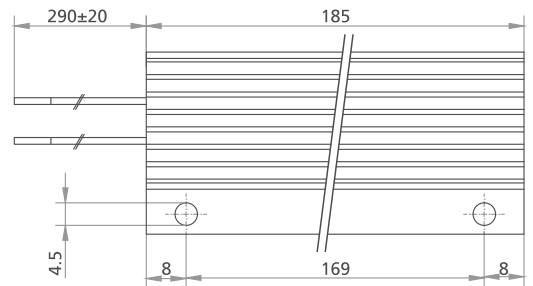
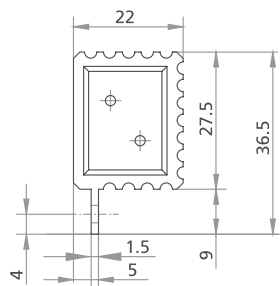
BWS375 with customer specific connector

<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.

<sup>3</sup> Certification only valid in customer specific application

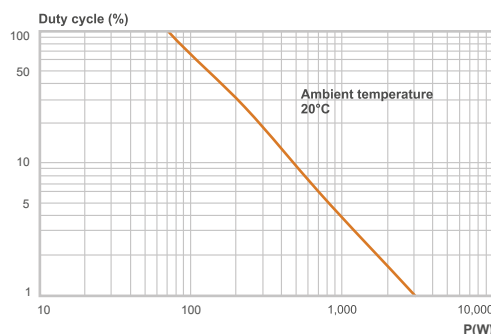
## Dimensions and mounting holes (mm)



## Pulse loading capacity

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— 120s / free in air



## Case temperature

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profile temperature averaged with duty cycle ED = 100%  
Maximum permissible temperature T = 250 °C

