

# Safe brake resistors in wire-wound technology



Safe brake  
resistors

# AWx125

# Brake resistor AWx125001P

Short-circuit proof, „intrinsically safe“<sup>1</sup> resistor in anodised aluminium case, protection class IP20, for operation on inverters (braking transistors).



**Rated power (W)**  
50 (125 with duty cycle ED = 35%,  $\vartheta_A = 20^\circ\text{C}$ )

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

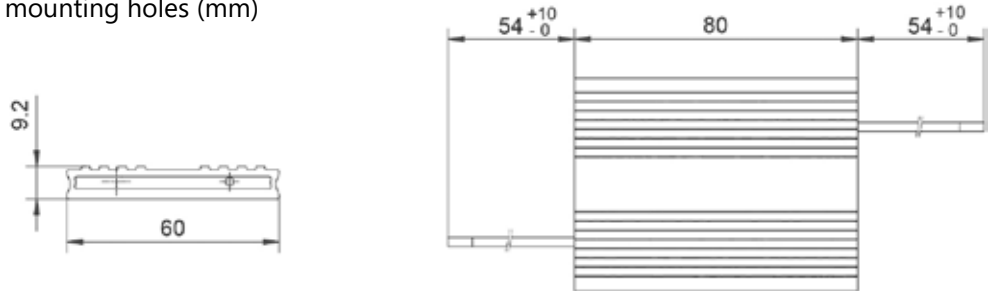
**Resistance (Ohm)**  
1

**Dimensions (mm)**  
Enclosure: 80 x 60 x 9.2  
Wiring: length 54 +10/-0  
Ø AWG16 or 1.5 mm<sup>2</sup>  
PTFE isolated,  
UL Style 1659

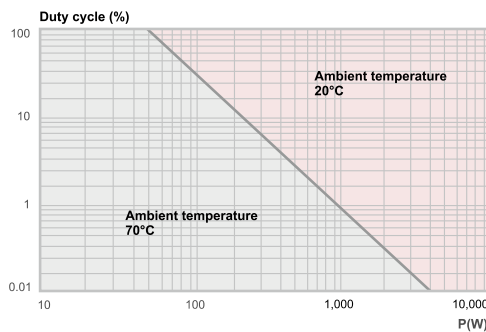
Parameter	Symbol	Value	Unit	Conditions
Tolerance (resistance)		± 5	%	Room temperature
Insulation resistance	$R_{ISO}$	≥ 100	MΩ	$U_{mess} = 1,000 \text{ VDC}$
Inductance	L	≤ 30	μH	$f = 300 \text{ kHz}, U_{mess} = 50 \text{ mV}$
Capacity against enclosure	C	≤ 500	pF	$f = 300 \text{ kHz}, U_{mess} = 50 \text{ mV}$
Thermal time constant	$\tau$	approx. 400	s	Enclosure AWD125xxx
Weight	m	100	g	
Energy absorption	Q	1.1	kJ	at 1.2 s (1% duty cycle)
		2.15	kJ	at 7.2 s (6% duty cycle)
Maximum permissible operating voltage	$U_B$	≤ 60 AC	V	Taking into consideration the „intrinsic safety“ <sup>1</sup>
		≤ 85 DC	V	
Isolation voltage	$U_{iso}$	≥ 2,500 AC	V	$f = 50 \text{ Hz}; t = 1 \text{ s}$
Max. permissible case temp.	$\vartheta_C$	≤ 220	°C	unobstructed convection
Storage temperature	$\vartheta_S$	-25 ... +85	°C	unobstructed convection



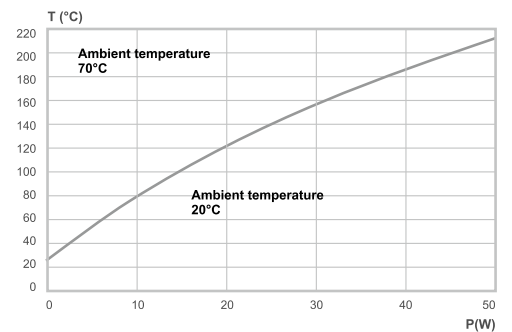
## Dimensions and mounting holes (mm)



## Pulse loading capacity Brake resistor AWx125001P



## Case temperature Brake resistor AWx125001P with duty cycle ED = 100% Maximum permissible temperature T = 180°C



<sup>1</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.

# Brake resistor AWx1252x30P

Short-circuit proof, „intrinsically safe“<sup>1</sup> resistor in anodised aluminium case, protection class IP20, for operation on inverters (braking transistors).



**Rated power (W)**  
2x25 (125 with duty cycle ED = 35%,  $\vartheta_A = 20^\circ\text{C}$ )

**Resistance (Ohm)**  
2x30

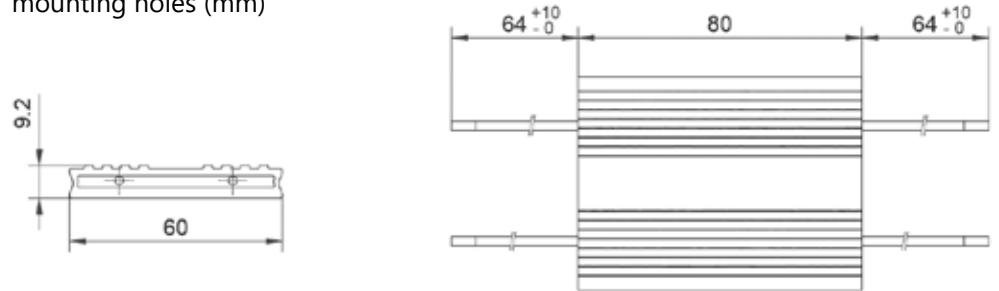
**Dimensions (mm)**  
Enclosure: 80 x 60 x 9.2  
Wiring: length 64 +10/-0  
Ø AWG16 or 1.5 mm<sup>2</sup>  
PTFE isolated,  
UL Style 1659



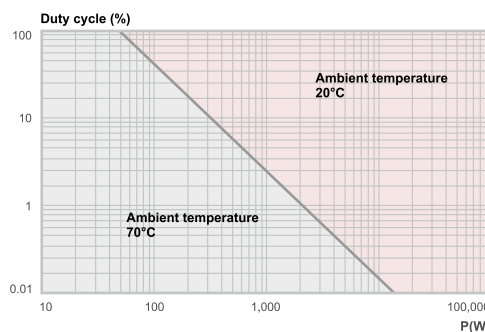
**Technical specifications**  
( $\vartheta_A = 20^\circ\text{C}$ , unless otherwise specified)

Parameter	Symbol	Value	Unit	Conditions
Tolerance (resistance)		± 5	%	Room temperature
Insulation resistance	$R_{ISO}$	≥ 100	MΩ	$U_{mess} = 1,000\text{ VDC}$
Inductance	L	≤ 30	μH	$f = 300\text{ kHz}, U_{mess} = 50\text{ mV}$
Capacity against enclosure	C	≤ 500	pF	$f = 300\text{ kHz}, U_{mess} = 50\text{ mV}$
Thermal time constant	$\tau$	approx. 400	s	Enclosure AWD125xxx
Weight	m	100	g	
Energy absorption	Q	1.44	kJ	at 1.2 s (1% duty cycle)
		2.5	kJ	at 7.2 s (6% duty cycle)
Maximum permissible operating voltage	$U_B$	≤ 600 AC	V	Taking into consideration the „intrinsic safety“ <sup>1</sup>
		≤ 848 DC	V	
Isolation voltage	$U_{iso}$	≥ 2,500 AC	V	$f = 50\text{ Hz}; t = 1\text{ s}$
Max. permissible case temp.	$\vartheta_C$	≤ 220	°C	unobstructed convection
Storage temperature	$\vartheta_S$	-25 ... +85	°C	unobstructed convection

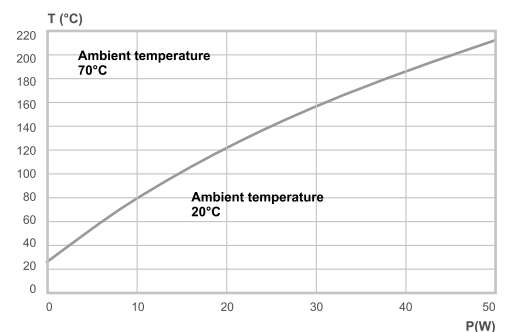
## Dimensions and mounting holes (mm)



## Pulse loading capacity Brake resistor AWx1252x30P



## Case temperature Brake resistor AWx1252x30P with duty cycle ED = 100% Maximum permissible temperature T = 180°C

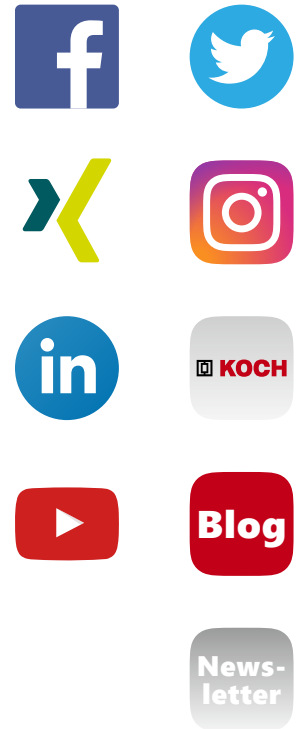


<sup>1</sup> With fourfold type power and free convection. 1. no short-circuit, 2. no fault to frame, 3. self-extinguishing, 4. no melting of casing. Type power always corresponds to 35% duty cycle of the respective resistor type.

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We look forward to hearing from you!



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