POWER WIRE RESISTOR PWR-R

This UL-certified aluminium housed resistor is suitable for a wide range of applications thanks to its compact design.

Customer-specific designs and assemblies are available on request. A temperature switch can be integrated.

Advantages
- High pulse stability
- Optimised thermal conduction
- High degree of protection
- UL 508 approval

Applications
- Charge, discharge and braking resistor for drive and automation technology
- Earthing resistor
- Protective resistor



Electrical Data	
Resistance Range	Freely selectable, see table
Tolerances	±5 % (R > 5 Ω) ±10 % (R = 1 – 5 Ω) ±20 % (R < 1 Ω) Further values on request
Temperature coefficient	±150 ppm / °C
Insulation resistance	≥10000 MΩ (500 V, 25 °C, 75 % RH)
Testing voltage	4000 VAC
Voltage limit	$\sqrt{(P \times R)}$
Stability	1000 h bei 25 °C, ΔR ±5 %
Inductance	< 0.5 mH at 1 kHz
Parasitic capacitance	< 120 pF at 20 kHz

Mechanical Data	
Dimensions	See table
Mounting positions	See drawing

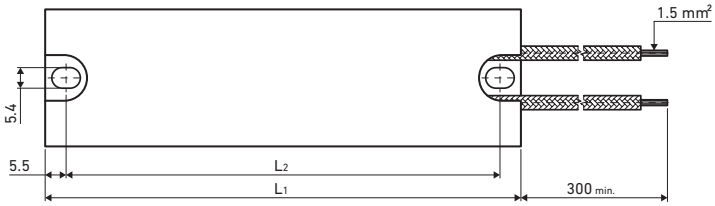
Environmental Data	
Operating temperature	-50 °C to +200 °C, max. 250 °C
Storage temperature	0 °C to +85 °C at 80 % RH max. for min. 12 months
Degree of protection acc. to IEC 60529	IP 65
Certification	UL 508 UL labeling on request

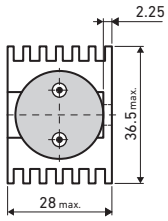
Overview

	Power without Heatsink		Power with Heatsink	Resistance Range		Operating Voltage	Dimensions		Weight
	$P_{NED = 30\%}$	$P_{NED = 100\%}$	P_N				L1	L2	
Type	W	W	W	Min. Ω	Max. Ω	V	mm	mm	g
PWR-R 150	120	45	150	1.0	180	1000	90	79	180
PWR-R 200	160	60	200	1.3	240	1000	105	94	208
PWR-R 300	240	70	300	2.7	430	1500	155	144	310
PWR-R 400	320	80	400	3.6	620	2000	200	189	400
PWR-R 500	400	100	500	5.1	910	2300	260	249	515
PWR-R 600	480	120	600	6.8	1200	2800	320	309	635

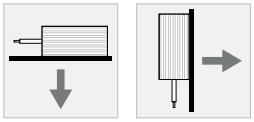
Mechanical tolerances acc. to ISO 2768-m

POWER WIRE RESISTOR PWR-R



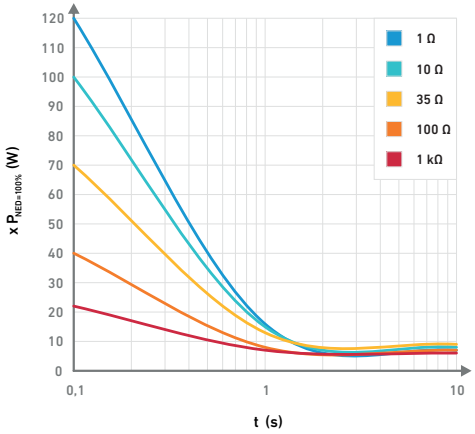


Mounting positions

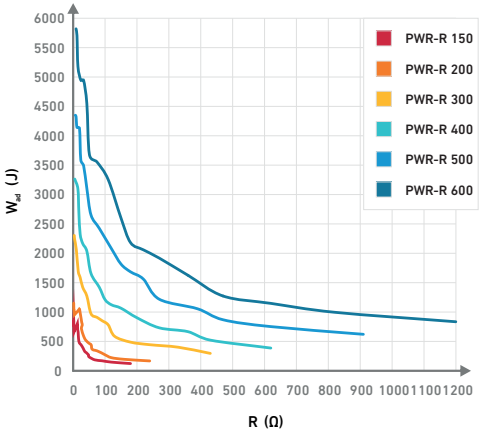


Mounting on a heatsink further improves heat dissipation and increases power of the resistors.

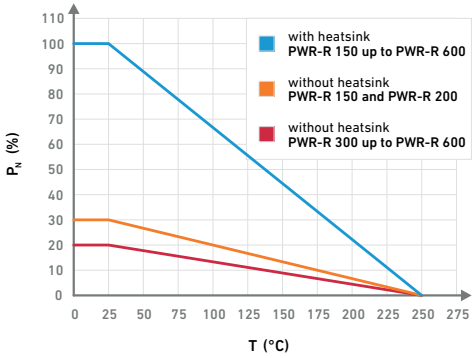
Pulse load – Depending on time and resistance value



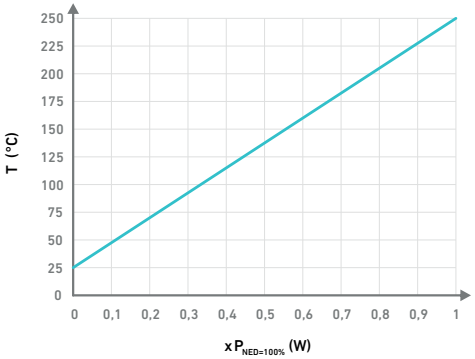
Adiabatic pulse – Depending on resistance value and time



Derating – Depending on ambient temperature



Surface temperature – Depending on load



Electrical Connection	
Cable	Standard: UL3071 AWG16 600 V 200 °C Cable length 300 mm Optional: UL1199 AWG16 600 V 200 °C UL10203 AWG16 1000 V 200 °C UL10371 AWG16 1000 V 250 °C Other connections and lengths on request

Options
Available with temperature switch

Order designation

To place an order we need the following information

Type	Temperature Switch	Resistance value	Tolerance	Cable length
PWR-R 150	T	Please specify	±5 % (J)	Please specify
PWR-R 200	–		±10 % (K)	
PWR-R 300			±20 % (M)	
PWR-R 400				
PWR-R 500				
PWR-R 600				

Metallux cannot picture the customer's operating and application conditions and the customer's existing environmental influences.
We therefore recommend that you carry out your own investigations into the planned use of the products under the actual operating conditions.

We continuously improve our products and also update our data sheets regularly. In this respect, there may be changes in the specification.
These changes will apply to orders received by us from the time of the update, unless otherwise agreed.

Our products comply with Directive 2011/65/EU (RoHS) including Directive 2015/863/EU and Regulation (EC) No. 1907/2006 (REACH).