FOUR-TERMINAL PRECISION METAL-FOIL POWER SHUNT RESISTOR

RNG-2

Product datasheet

Features

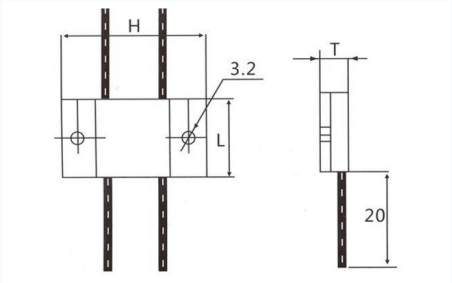
- High-stability, planar non-inductive design based on the resistance strain principle.
- High power-to-size ratio, low TCR over a wide temperature range, and custom mounting.



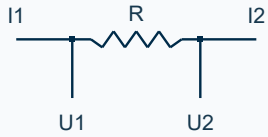
Applications

Stable measurement systems, reference sources, metrology and testing, protective relays, and power transmission and transformation.

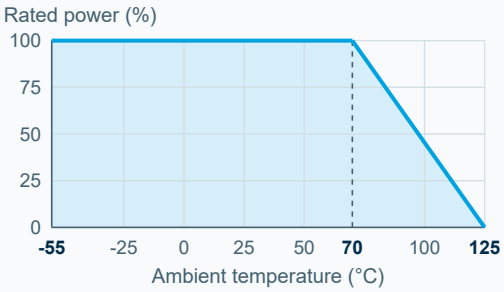
Outline drawing



Four-terminal circuit



Power derating



Package dimensions and current leads

With heatsink (W)	H (mm)	L (mm)	T (mm)
10	40	20	10
20	60	30	10
30	60	40	10
30	60	50	10
40	80	50	10
50	120	80	10
80	160	160	10

Lead current (A)	Diameter Ø (mm)
I ≤ 12	1.3
12 < I ≤ 25	2.2
25 < I ≤ 40	2.9
40 < I ≤ 50	3.2

The dimensions table lists TCRs of ±5 and ±25 ppm.

Select current-lead diameter by current.

Main specifications

Parameter	Source specification	Other values in source
Resistance range	Product overview: 0.0001 to 10 Ω	Technical table: 0.1 Ω to 200 kΩ
Maximum power	Dimensions table: 10, 20, 30, 40, 50, 80 W	Technical table (25 °C): 10, 20, 50, 80 W
TCR	Dimensions table: ±5 and ±25 ppm	Technical table: ±5 ppm
Tolerance	L (±0.01%), W (±0.05%), B (±0.1%)	D (±0.5%), F (±1%)
Temperature range	-55 to +125 °C	
Limiting element voltage	250 V	
Encapsulation	Epoxy encapsulation	

Confirm resistance range, power options and TCR before selection. The source lists differing values.

Heatsinking and mounting

- Use an external heatsink. Substantially reduce operating power when no heatsink is fitted.
- Keep mating surfaces flat and free of burrs and debris. Apply a thin layer of thermal grease if needed.
- Tighten opposing or diagonal screws gradually, alternating between them. Fit spring washers on high-power heatsink assemblies.