

RW Series

AC/DC Standards Resistor



The design of the Wilkins Standards Resistors is a result of several years of development. Based on an original design by Wilkins of the National Standards Laboratory (NPL).

The RW series are made from a specially selected alloy having a low temperature coefficient mounted in a strain free manner, on formers made from a material of low dielectric loss but of high mechanical stability. Prolonged heat treatment of the elements ensures long term stability and low temperature coefficient of resistance. The elements are hermetically sealed in stainless steel containers and filled with dry oil.

The Wilkins design has been adopted by National and major industrial laboratories as their primary standard.

SPECIFICATION

Tolerance	±20ppm
Test certificate	3 ppm for 1, 10, 100 & 1000 Ohms 5 ppm for 25 Ohms
Optional calibration	Up to ±0.1ppm, depending on calibration laboratory
Stability	2 ppm per year
Temperature coefficient	Typically 2 ppm/°C
Frequency dependence	1 ppm up to 1592Hz
Working temperature	20°C, but within the range of 15°C to 40°C
Dissipation	10 milliwatts (recommended), 1 watt (maximum)
Load coefficient	Approximately 6 ppm / watt
Dimensions / weight	Diameter: 76mm, Height: 114mm, Weight: 3.3 kg.

**1 Ohm to
1000 Ohms**

ORDER CODES

RWx	where x is 1, 10, 25, 100 or 1000 ohms.
RWTE1	Thermal enclosure for RW resistor, 36°C fixed.
RWTE2	Thermal enclosure for 2 RW resistors, 40°C max. factory set.
CAL-RES-B	NPL calibration d.c. @ 20°C
CAL-RES-C	NPL calibration d.c. @ 23°C
CAL-RES-D	NPL calibration d.c. and one AC frequency at 20°C
CAL-RES-E	NPL calibration d.c. and one AC frequency at 23°C
CAL-RES-F	UKAS calibration d.c. @ 20°C