

## TECHNICAL DATA

## 5430 Standard AC/DC Resistors



### Key features

- Eight resistance values covering 1 ohm to 10,000 ohms
- Actual resistance within 10 ppm of its nominal value.
- Long-term stability better than 2 ppm/year, with typical performance under 1 ppm.
- Ideal for applications in thermometry and electrical settings, with both AC and DC bridges.

### Product overview: 5430 Standard AC/DC Resistors

Six resistors in Fluke Calibration's Model 5430 series cover resistance values from 1 ohm to 10,000 ohms. Each one has an actual resistance within 10 ppm of its nominal value and holds its resistance within 2 ppm per year.

Each resistor comes with a Tinsley certificate on AC performance, traceable to NPL, including calibration uncertainty of 3 ppm. Additionally, Fluke Calibration can provide an optional DC certificate, traceable to NIST and [NVLAP accredited](#), with uncertainty below 1 ppm.

Designed originally by a national lab, Tinsley resistors are bifilar wound to minimize reactance and are filled with oil to minimize both time- and temperature-caused instabilities. AC/DC transfer error at 90 Hz is only 0.1 ppm.

For maintaining your oil resistors, Fluke Calibration provides [baths](#) that range from 25- to 155-liter capacity with enough inside shelf space to maintain all your standard resistors. Each of these baths maintains your [resistors](#) within 1 mK in the short term (30–60 minutes) and within 5 mK for months at a time.

In our lab, we use both AC and DC [bridges](#) in addition to [Super-Thermometers](#). We calibrate SPRTs in fixed points, and we calibrate reference resistors. We use standard resistors every day, and we understand the value of being able to rely on resistors that won't drift. Tinsley makes the best AC/DC resistors around, and Fluke Calibration makes the best maintenance baths. Ask people who know. Then don't compromise.

## Specifications: 5430 Standard AC/DC Resistors

Specifications	
<b>Tolerance</b>	10 ppm
<b>Calibration Uncertainty</b>	AC: 3 ppm (10 kΩ: 4 ppm) DC: 1 ppm (optional)
<b>Long-Term Stability</b>	2 ppm per year
<b>Temperature Coefficient</b>	2 ppm per °C
<b>Recommended Current</b>	1Ω: 100 mA 10Ω: 32 mA 25Ω: 20 mA 100Ω: 10 mA 1 kΩ: 3 mA 10 kΩ: 1 mA
<b>Maximum Current</b>	1Ω: 1 A 10Ω: 320 mA 25Ω: 200 mA 100Ω: 100 mA 1 kΩ: 32 mA 10 kΩ: 10 ma
<b>AC/DC Transfer Error (at 90 hz)</b>	0.1 ppm, typical

## Ordering information



### **5430-1 Resistor**

AC/DC Standard 1 ohm

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### **5430-10 Resistor**

AC/DC Standard 10 ohm

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### **5430-25 Resistor**

AC/DC Standard 25 ohm

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### **5430-100 Resistor**

AC/DC Standard 100 ohm

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### **5430-200 Resistor**

AC/DC Standard 200 ohm

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### **5430-400 Resistor**

AC/DC Standard 400 ohm

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### **5430-1K Resistor**

AC/DC Standard 1 Kohm

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## **5430-10K Resistor**

AC/DC Standard 10 Kohm

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## **1960 Cal**

DC Standard Resistor

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