TECHNICAL DATA

5430 Standard AC/DC Resistors

Key features

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

Ordering information

5430-1 Resistor
AC/DC Standard 1 ohm

5430-10 Resistor
AC/DC Standard 10 ohm

5430-25 Resistor

AC/DC Standard 25 ohm

5430-100 Resistor

AC/DC Standard 100 ohm

5430-200 Resistor
AC/DC Standard 200 ohm

5430-400 Resistor
AC/DC Standard 400 ohm

5430-1K Resistor
AC/DC Standard 1 Kohm

5430-10K Resistor

AC/DC Standard 10 Kohm

1960 Cal

DC Standard Resistor

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Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

For more information call:
In the U.S.A. (800) 443-5853
In Europe/M-East/Africa
+31 (0)40 267 5100
In Canada (800)-36-FLUKE
From other countries +1 (425) 446-5500

BUT. FLUKE SOUTH EAST ASIA PTE LTD
Menera Satu Sentra Kelapa Gading #06-05
JI. Bulevar Kelapa Gading Kav. LA# No. 1
Summarecon Kelapa Gading
Jakarta Utara 14240
Indonesia
Tel: +62 21 2938 5922
Email: info.asean@fluke.com
www.fluke.com/id-en
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