



Certificate of Calibration

CUSTOMER NAME:

xDevs.com

CUSTOMER ADDRESS:



MEASURAND:

MODEL NO.: 742A-10M

S/N.: 6715004

MFG.: Fluke

DESCRIPTION: 10 MΩ Standard Air Resistor

CALIBRATION RANGE(S) OR POINTS COVERED BY THIS CERTIFICATE:

The measurement was performed with a test voltage of 20V at a bath temperature of 23 °C.

CALIBRATION PROCEDURE

CAL-11-030-03

REFERENCE STANDARD(S):

MFG. DESCRIPTION

MODEL NO.

S/N.

CALIBRATED DATE

CERTIFICATE NO.

ESI

10KΩ Standard Resistor

SR104

334054

August 11, 2021

ES-2021-0024-02

ENVIRONMENTAL CONDITIONS:

AMBIENT:

TEMPERATURE: 23 °C ± 2 °C

HUMIDITY: 40 % ± 10 %

BAROMETRIC PRESSURE: 101 kPa

OF MEASURAND:

TEMPERATURE: 23 °C ± 2 °C

HUMIDITY: 40 % ± 10 %

UNCERTAINTY OF MEASUREMENT

THE UNCERTAINTY OF MEASUREMENT IS ESTIMATED TO BE:

THE REPORTED UNCERTAINTY OF MEASUREMENT IS STATED AS THE COMBINED STANDARD UNCERTAINTY MULTIPLIED BY A COVERAGE FACTOR OF $k = 2$. THE MEASURED VALUE (y) AND THE ASSOCIATED UNCERTAINTY (U) REPRESENT THE INTERVAL ($y \pm U$) WHICH CONTAINS THE MEASURED QUANTITY WITH A PROBABILITY OF APPROXIMATELY 95%. THE UNCERTAINTY WAS ESTIMATED USING ISO GUIDE TO THE EXPRESSION OF UNCERTAINTY IN MEASUREMENT (GUM) GUIDELINES. THE ESTIMATED UNCERTAINTY CONTAINS CONTRIBUTIONS ORIGINATING FROM THE MEASUREMENT STANDARD CALIBRATED BY A NATIONAL LABORATORY, FROM THE CALIBRATION METHOD, FROM THE ENVIRONMENTAL CONDITIONS AND FROM THE MEASURAND BEING CALIBRATED. THE LONG-TERM BEHAVIOUR OF THE MEASURAND IS NOT INCLUDED.

AMENDMENTS (IF APPLICABLE):

CERTIFICATE NO. AMENDED: REASON FOR AMENDMENT:

CALIBRATED BY (SIGNATURE)

DATE OF CALIBRATION

June 30 – July 1, 2022

AUTHORIZING SIGNATURE

DATE OF ISSUE

22/07/06

The reported measurements contained within this report relate only to the measurands calibrated.
These measurements are traceable to national standards and thus to the International System of Units (SI).



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TEST RESULTS:

The resistor (UUT) was calibrated by using a Binary Voltage Divider Resistance Bridge, Model 6000.

The UUT was allowed to stabilize for 48 hours in a temperature controlled bath. Each run had a settling rate of 20 seconds, 7 measurements with 6 measurements for statistics. This was repeated 6 times, the type A uncertainty for the standard deviation of each measurement and the spread of values being inserted into the Uncertainty Analysis worksheet. The type B uncertainty for the measurement comes from the uncertainty of the 10K Ω resistor. The type B and type A uncertainties are root sum squared and doubled to give expanded uncertainty.

The reported value of resistance is based on the results found when the UUT was in circulating air at 23.000 °C +/- 50mK.

Resistance (M Ω)	Uncertainty ($\mu\Omega/\Omega$)	Voltage (V)	Bath Temperature (°C)
10.000091	0.64	20	23

MEAN DATE OF MEASUREMENT: July 1, 2022