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## **KALIBRATOR FÜR WIDERSTANDS- MESSBRÜCKEN RBC 100 M**

**14.062,00 €**

Hersteller: ISOTECH

Modell: 924-01-01

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**SKU:** KK-907

**Categories:** [Messbrücken Kalibrator](#)

### **PRODUKT BESCHREIBUNG**

- **Zur Kalibrierung von Wechselstrom und Gleichstrom Messbrücken**
- **Hohe Genauigkeit - besser 0,1ppm bei 100Ohm**
- **Patentiertes Design**
- **Windowsanwendungen zur vollständigen Analyse und Zertifikatserstellung**



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**Resistance Bridge Calibrators**  
**RBC100A/M & RBC400A/M**

Qualitate thermometry bridges quality, simply and in-house

- Calibrate as well as thermometry bridges
- High accuracy - better than 0.01 ppm at 100 Ohms RBC 100A
- Patented design licensed from PPL
- Windows application for full analysis and reporting

**Operating principle**

The problem: Temperature measurement is one of the most demanding applications in resistance measurement. It requires the measurement of resistance values to accuracies of 1 part in 10<sup>6</sup> or better. While all resistance standards are sometimes available in this field, no resistance standards are generally not. So how can we achieve our bridges an accuracy of the best, and that our resistance and temperature measurement is repeatable?

**The invariety method**

One simple method for checking a resistance bridge is to measure a pair of resistors separately, and then measure the two in series. Ideally, the series measurement should equal the sum of the two individual measurements. If not, then the measurements give us a level of information about the errors in the bridge readings. Note that we do not need to know the values of the resistors to make this test work.

**The complement method**

Another option is to measure the ratio of two resistors, say R<sub>1</sub>/R<sub>2</sub>. That way, the readings are not affected by the resistance ratio or temperature. If the product of the two measurements is close to 1.0, then the measurements give us more information on the bridge errors. Once again, we do not need to know the values of the resistors to make this test work.

**The combinatorial method**

The RBC reports the same principles as the invariety and complement methods. It uses a mixture of two bridge load terminals, which can be connected in all different ways and parallel combinations. By measuring each RBC combination in the test platform, we get the complement method as well. All different measurements can be made. Since the RBC is used for different resistance values, we have up to 80 resistance measurements containing information about the errors in the bridge readings.

The combinatorial calibration method is particularly powerful. Besides it is not necessary to know the actual values of the four resistors, or their frequency dependence. This means we can calibrate any set of four bridges to any accuracy, as long as the various resistance combinations are accurate.

The patented RBC Calibrators are a result of research conducted by the British and the Measurement Standards Laboratory of New Zealand, which operates under National Research Council (NZ), National Technology Centre on accurate transfer from Pt, Si devices, and the product the RBC.

[Datenblatt RBC](#)

**RESISTANCE BRIDGE CALIBRATORS MODELS RBC100M & RBC400M**  
User Maintenance Manual/Handbook

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The company is always willing to give technical advice and assistance where appropriate. Equally, because of the programme of continual development and improvement we reserve the right to amend or alter characteristics and design without prior notice. This publication is for information only.

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[Handbuch RBC Version 1](#)

**RESISTANCE BRIDGE CALIBRATORS MODELS RBC100A & RBC400A**  
User Maintenance Manual/Handbook

Software Version: 2

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