

HIGH VOLTAGE INSULATION METERS

APPLICATION NOTE

by Jacques Botte

DEMO & SPOT CHECK WITH RCB-3

What is R.C.B.-3?

Resistor Calibration Box #3; "RCB-3" is SEW's Latest design of High Voltage Resistor Calibration Box.

What is it used for ?

RCB-3 can be utilized to demonstrate, spot check and proof all the High Voltage Insulation Meters manufactured by Standard Electric Works. Analogs and Digitals.

RCB-3 can be utilized with third party or second source Insulation Meters too.

Why RCB-3?

SEW's first motivation to design the RCB-3 was to have a inexpensive set of proofing calibrated resistors which can be used to demonstrate the performances of SEW High Voltage Insulation Meters to the prospective customers, at a lower cost, size and weight than RCB-1.

RCB-3 has less calibrated resistors then RCB-1.

RCB-3 is much smaller, lower cost but still remain as accurate as the RCB-1. RCB-3 is ideal for the user which does not need the calibration facility of RCB-1 (you need RCB-1 in order to calibrate the H.V. Insulation Meters).

The meters manufactured at the SEW factory can measure accurately to 500G . RCB-3 is also a "State of the Art" High Voltage Resistor Calibration Box which could be used for Demonstration and Proofing in the field.

The result is RCB-3, a portable set of H.V. resistors useable up to 10Kv with a few combinations.

For many, RCB-1 is an over-kill when you just want to do a demonstration or verify the performance of the meter at some points only. RCB-3 is the answer for field application and sales engineers.

Read application note #1

Large manufacturing plants require to check their H.V. Insulation Meter regularly so that they can be sure of the readings taken in the field. RCB-3 is more economical for that application.



What is special about it?

Firstly, the RCB-3 is compact and designed for High Voltage Insulation Reference measurement.

The RCB-3 is enclosed into an attractive and shielded carry case which has an integral guard circuitry. RCB-3 has a small size than RCB-1 and wight less too.

Each High Voltage Reference Resistor is custom made and encapsulated into a highly insulating material.

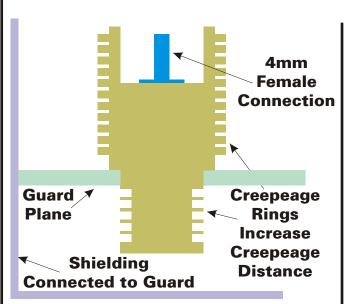
Each individual resistor is housed into a specially shaped cylinder with increased creepage distance.

The connection to each resistor is made using the AL-30 or AL-50 4mm test lead (or compatible).

Read application note #11

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Selection of FEATURES

- Same Technology as RCB-1.
- · Demo ready.
- Check H.V. Insulation Testers Performances.
- Quickly Spot Check Accuracy of Testers.
- · As accurate as RCB-1.
- · Lower Cost than RCB-1.
- Compact size (Smaller than RCB-1).
- Lower Weight than RCB-1.
- Ideal as field demonstration H.V. Resistors.

se the Guard Connection

Although RCB-1 has been designed to minimize the leakage currents, in case of high humidity levels, the leakage can be eliminated using the guard connection.

The guard connection collect the unwanted current which otherwise would lower the measured resistor of the calibrator.

Using the guard improve accuracy in difficult conditions.

Use AL-50 Test Lead.

The AL-50 has been designed for High Voltage Insulation Meters and has an integrated guard connection built into the "Coaxial Silicone".

Read application note #3

AL-50: A BETTER H.V. TEST LEAD



Read application note #2
USE THE GUARD - IT'S BETTER

Application Notes are available at HTTP://WWW.SEW.COM.TW for printed copy, e-mail to jacques@sew.com.tw

The New Global Alliance in T&M.





Designs

STANDARD ELECTRIC WORKS CO. LTD

Web: HTTP://WWW.SEW.COM.TW E-Mail: Jacques@SEW.COM.TW

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