

TEK903 / TEK904 DECADE RESISTANCE BOX

INSTRUCTION MANUAL



GENERAL SAFETY INFORMATION: Always read before proceeding.

Warning

These instructions contain both information and warnings that are necessary for the safe operation and maintenance of this product. It is recommended that you read the instructions carefully and ensure that the contents are fully understood. Failure to understand and to comply with the warnings and instructions can result in serious injury, damage or even death.

In order to avoid the danger of electrical shock, it is important that proper safety measures are taken when working with voltages exceeding 30V AC RMS, 42V AC peak or 60V DC.





This product must only be used by a competent person capable of interpreting the results under the conditions and for the purposes for which it has been constructed. Particular attention should be paid to the Warnings, Precautions and Technical Specifications. Always check the unit is in good working order before use and that there are no signs of damage to it. Do not use if damaged.

Where applicable other safety measures such as use of protective gloves, goggles etc. should be employed.

Please keep these instructions for future reference. Updated instructions and product information are available at: www.martindale-electric.co.uk

REMEMBER: SAFETY IS NO ACCIDENT

MEANING OF SYMBOLS:

-  Equipment complies with relevant EU Directives
-  Caution - risk of danger and refer to instructions
-  Caution - risk of electric shock
-  End of life disposal of this equipment should be in accordance with relevant Local Directives

Thank you for buying one of our products. For safety and full understanding of its benefits please read this manual before use. Technical support is available from 01923 441717 and support@martindale-electric.co.uk.

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Specifications

1. INTRODUCTION

1.1 Inspection

Examine the shipping carton for any sign of damage. Inspect the unit and any accessories for damage. If there is any damage then consult your distributor immediately.

1.2 Description

The TEK903 and TEK904 use high quality rotary switches to provide the following range of resistance values:

TEK903: 10Ω to 10MΩ in 5 decades

TEK904: 1Ω to 10MΩ in 6 decades

The provision of a third terminal allows the TEK903 and TEK904 to be configured as voltage dividers if required.

1.3 Accessories

Mounting brackets x 2
Instructions

2. PRODUCT SPECIFIC SAFETY INFORMATION

2.1 Precautions

This product has been designed with your safety in mind, but please pay attention to the following warnings and cautions before use.

Warning

Before use check the unit for cracks or any other damage. Make sure the unit is free from dust, grease and moisture. Also check any associated leads and accessories for damage. Do not use if damaged.

Caution

Avoid severe mechanical shock or vibration and extreme temperature.

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3. OPERATION

3.1 General

To avoid damage to the unit DO NOT apply greater than 100V DC to the decade resistance terminals, or exceed the maximum current through the selected resistance decade (See Table 1).

Table 1

Decade	Maximum Current
x1 Ω	770 mA
x10 Ω	240 mA
x100 Ω	77 mA
x1k Ω	24 mA
x10k Ω	7.7 mA
x100k Ω	2.4 mA
x1M Ω	0.77 mA

3.2 Use as a Decade Resistance

To use the TEK903 or TEK904 as a variable decade resistance box make the required connections to the RED terminals.

3.3 Use as a Divider

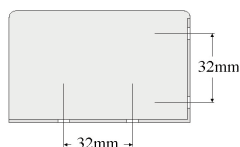
Connect the voltage to be divided between the BLACK terminal and the OUTER RED terminal.

The divided voltage will be present between the BLACK terminal and the CENTRE RED terminal. The ratio of the division will be dependent upon the decade settings.

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3.4 Fitting the Mounting Brackets

Mounting Bracket Hole Spacing



Bench Mounted



Wall Mounted



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4. MAINTENANCE

4.1 Calibration

To maintain the integrity of measurements made using your instrument, Martindale Electric recommends that it is returned at least once a year to an approved Calibration Laboratory for recalibration and certification.

Martindale Electric is pleased to offer you this service. Please contact our Service Department for details.

Email: service@martindale-electric.co.uk

Tel: 01923 650660

4.2 Cleaning

The unit may be cleaned using a soft dry cloth. Do not use moisture, abrasives, solvents, or detergents, which can be conductive.

4.3 Repair & Service

There are no user serviceable parts in this unit other than those that may be described in section 3. Return to Martindale Electric if faulty. Our service department will quote promptly to repair any fault that occurs outside the guarantee period.

Before the unit is returned, please ensure that you have checked the unit and poor connections.

4.4 Storage Conditions

The instrument should be kept in warm dry conditions away from direct sources of heat or sunlight, and in such a manner as to preserve the working life of the unit. It is strongly advised that the unit is not kept in a tool box where other tools may damage it.

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5. WARRANTY AND LIMITATION OF LIABILITY

This Martindale product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is 2 years and begins on the date of receipt by the end user. This warranty extends only to the original buyer or end-user customer, and does not apply to fuses, disposable batteries, test leads or to any product which, in Martindale's opinion, has been misused, altered, neglected, contaminated, or damaged by accident or abnormal conditions of operation, handling or storage.

Martindale authorised resellers shall extend this warranty on new and unused products to end-user customers only but have no authority to extend a greater or different warranty on behalf of Martindale.

Martindale's warranty obligation is limited, at Martindale's option, to refund of the purchase price, free of charge repair, or replacement of a defective product which is returned to Martindale within the warranty period.

This warranty is the buyer's sole and exclusive remedy and is in lieu of all other warranties, expressed or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. Martindale shall not be liable for any special, indirect, incidental or consequential damages or losses, including loss of data, arising from any cause or theory.

Since some jurisdictions do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any part of any provision of this warranty is held invalid or unenforceable by a court or other

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decision-maker of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision or other part of that provision.

Nothing in this statement reduces your statutory rights.



Specification TEK903/TEK904 Decade Resistance Box



Typical residual (zero) resistance: < 150 mΩ

Incremental accuracy: ± 1% of setting

1kΩ divider resistor accuracy: ± 1%

Maximum power per resistor: 0.6 W

Maximum applied voltage: 100 VDC

Temperature coefficient: 50 ppm/°C

Operating environment: 0°C to 50°C at < 70% RH

Dimensions: 345 x 71 x 51 mm

Weight: 536g approx

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- Test Leads
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- Specialist Drummond Testers



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