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- Specialist Drummond Testers

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MTL10 & MTL20 TEST LAMPS

INSTRUCTION MANUAL MTL10 & MTL20



DRAFT 0.91

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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 50V AC RMS, or 120V 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/instruct

REMEMBER: SAFETY IS NO ACCIDENT

MEANING OF SYMBOLS:



Equipment complies with relevant EU Directives



Caution - risk of danger & refer to instructions



Caution - risk of electric shock



End of life disposal of this equipment should be in accordance with relevant EU Directives



Equipment protected by double or reinforced insulation (Class II)



Suitable for live working

MARTINDALE Specification
ELECTRIC MTL10 & MTL20 Test Lamps



Maximum working voltage: 500VAC, 750DC

Voltage ranges: 50, 100, 200, 400V AC/DC

Range detection: automatically

Response Time: <0.1s

Frequency Range: DC, 0-65Hz

Test Current (500V AC/DC):

MTL10 and MTL20 (switches not operated) <3.5mA

MTL20 with switches depressed 28mA @ 240VAC, 60mA @ 500VAC

Temperature Range: -10°C – +55°C

Humidity: max. 85% rel.H.

Height above sea level: up to 2000m

Measurement Cat.: CATIV 600V CATIII 1000V

Pollution Degree: 2

Protection Degree: IP67

Compliance: EN 61243-3, EN 61010

	MTL10	MTL20
Weight packed	0.32Kg	0.35Kg
Dimension packed	213x112x72mm	213x112x72mm

6.0 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, 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 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.

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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1.0 Introduction

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.

Inspect the unit and its accessories for any damage. If any item is missing or there is damage to any item, consult your distributor immediately.

The MTL10 and MTL20 are voltage indicators for universal applications. They are constructed in accordance with the applicable safety standards and guarantee safe and reliable indication.

The voltage indicators have the following features:

DC and AC Voltage Tests up to 500VAC 750VDC

Bright LED indication

Full voltage indication function without batteries

Ergonomic and robust housing

Probe tips comply with GS38

Measurement Category CAT IV 600V, CAT III 1000V

Constructed in compliance with EN 61243-3, IEC 61010

Contains:

1pc. Tester

1pc. Instruction Manual

1pc. Carry Case

After unpacking, verify that the instrument is undamaged.

1.1 Transport and Storage

Instruments must be stored in dry and closed areas. In the case of an instrument being transported in extreme temperatures, a recovery time of at least 2 hours is required prior to instrument operation.

5.0 Maintenance

When using the instrument in compliance with the instruction manual, no special maintenance is required. Should operational problems occur during daily use, our technical help service is available, free of charge.

If functional errors occur after the warranty period, our after sales service will repair your instrument without delay.

5.1 Cleaning

If the instrument is dirty after daily usage, it is advised to clean it by using a moist cloth. The unit may be cleaned using a soft dry cloth. Do not use moisture, abrasives, solvents, or detergents, which can be conductive.

5.2 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. After cleaning, do not use the voltage tester for a period of approximately 2 hours.

5.3 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.

E: service@martindale-electric.co.uk

T: 01923 441717

4.0 Performing tests

4.1 Preparation and Safety

For any tests the safety references have to be observed as mentioned in section 2.0. Prior to use, a functional test must be carried out.

Only hold the unit and test leads behind the finger guards. Never touch the exposed metal test probes.

Function Test/ Self Test

Test the voltage tester on a known live source, or with a proving device (PD690), before and after use.

Connect test probes to the source, the appropriate LED band must be illuminated.

Do not use the voltage tester if any function fails or if no functional reliability can be detected.

4.2 Voltage Test

Connect both test probes to the UUT (Unit or location under test).

The unit indicates from 50V.

The voltage is displayed via LEDs.

For the Drummond MTL20, simultaneous depression of both switches (1 on the probe and 1 on the instrument body) causes the unit to draw a current of approximately 28mA at 240V. This ensures that indication caused by "phantom" voltages due to reactance will not occur.

The instrument is equipped with four LED bands giving: 50, 100, 200 and 400V indication.

2.0 Safety

Precautions

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

The MTL10 and MTL20 have been constructed and verified in compliance with applicable safety standards for voltage testers EN 61243-3, EN 61010.

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. Be sure the test lamp is in good working order before use.

Warning

The test lamp and this instruction manual are intended for use by personnel who are adequately trained.

Caution

Avoid severe mechanical shock or vibration and extreme temperature.

Normal safe working practices must be followed at all times.

In order to avoid electrical shock, the safety regulations regarding excessive contact voltages must be observed when working with voltages exceeding 120V (60V) DC or 50V (25V) rms AC. The values in brackets are valid for limited ranges (as for example in medicine and agriculture).

The instrument may only be used within the operating ranges specified in the technical data section and on low voltage systems up to 500V.

⚠ Caution

Do not use this instrument if any functions fail or if no functionality is indicated.

⚠ Caution

Do not use this instrument in wet conditions.

⚠ Caution

Perfect display is only guaranteed within a temperature range from 10°C up to +55°C at relative humidity <85%.

⚠ Caution

Only handle the unit and test leads behind the finger guards. Never touch the exposed metal test probes.

Prior to use ensure the instrument is functioning correctly, e.g. using a proving device (PD690).

Safety cannot be ensured if the instrument:

- shows obvious signs of damage
- does not carry out the desired measurements
- has been stored for too long under unfavourable conditions
- has been subjected to mechanical stress during transit
- has been modified in any way.

Avoid exposing the instrument to direct sunlight to ensure perfect function and long instrument life.

3 The instrument should only be used in conditions and for those

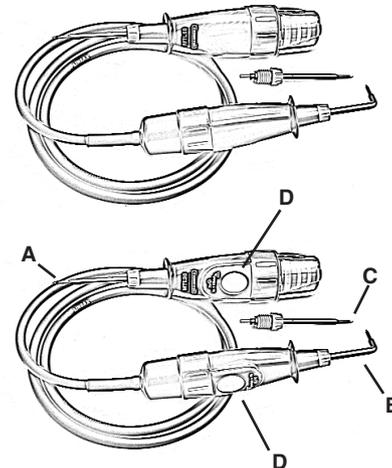
purposes for which it was designed. For this reason, the safety references, the technical data including environmental conditions and the usage in dry environments must be followed.

Appropriate Usage

The instrument is a sealed unit and cannot be opened for any reason.

3.0 Control elements and connections

- A - Handle Test Probe
- B - Instrument Test Probe +
- C - Alternative straight probe
- D - Switches (MTL20 only)



MTL10

MTL20