2. PRODUCT SPECIFIC SAFETY INFORMATION

Safety: Complies with BS EN 61010 and BS EN 61557. Overvoltage Category: CAT III 600V, Pollution Degree 2.

This tester has been designed with your safety in mind, however, no design can completely protect against incorrect use.

- Do not touch exposed wiring, connections or other live parts of an electrical circuit.
- When using this tester to monitor high voltages, turn off the power before connecting the tester.
- If in doubt check the circuit first before touching it.
- Do not use cracked or broken test leads.
- Do not use in wet conditions.

Note: Capacitance Discharge

On completion of an insulation test, the tester should remain connected to the circuit under test for a short period after releasing the TEST button. The TEST button if latched must be released. This discharges any capacitance via the tester. Before disconnecting the tester ensure indicated voltage is zero.

WARNING
THIS TESTER SHOULD ONLY BE USED BY A COMPETENT AND SUITABLY TRAINED PERSON.
REMEMBER - SAFETY IS NO ACCIDENT!

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.

Specification

MARTINDALE ELECTRIC
IN2101 & IN2102 Insulation Tester

General:

Digital Display: 5000 count
Overrange: OL is displayed
Analogue Bargraph: 51 segment
Low battery indication: the symbol is displayed when the battery voltage drops below the operating level.
Measurement rate: 2.5 times per second, nominal.
Backlight
Auto Zero & Autohold
Auto Power Off: 5 minutes
APO (Auto Power Off) disable option
1. **VΩ - Input Terminal**
   This is the positive terminal for voltage and resistance measurements. Connection is made to it using the red test lead.

2. **COM - Common Terminal**
   This is the negative (Ground) terminal. Connection is made to it using the black test lead.

3. **Display**
4. **Soft keys**
5. **Rotary switch**
   Selects the desired range.

6. **TEST button**
   Used to perform all tests apart from voltage measurement.

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**Voltage test**

Voltage warning: >30V

<table>
<thead>
<tr>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>600V AC/DC</td>
<td>1V</td>
<td>±(3% rdgs +5d)</td>
</tr>
</tbody>
</table>

**Continuity test**

<table>
<thead>
<tr>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>40Ω</td>
<td>0.01Ω</td>
<td>±(3% rdgs +5d)</td>
</tr>
</tbody>
</table>

Short circuit current: >200mA
Auto-Discharge: when TEST button released

Buzzer disable option: yes

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**Safety**

Complies with BS EN 61010 and BS EN 61557 (16th Edition)

Overvoltage Category: CAT III 600V, Pollution Degree 2.

Altitude: Up to 2000M

Protection: IP44

Not for use in wet conditions.

Operating Environment: 0°C to 40°C at < 70% relative humidity

Storage Temperature: -20°C to 60°C, 0 to 80% R.H. with batteries removed from tester.

Dimensions: 90 x 210 x 54mm

**Buzzer**

<30Ω

Buzzer disable option: yes

**Range**

0.01Ω

**Accuracy**

±(3% rdgs +5d)

**Dimensions**

90 x 210 x 54mm
1. INTRODUCTION
This manual contains information and warnings which must be followed to ensure safe operation of the IN2101/2.

**WARNING**
READ "SAFETY INFORMATION" BEFORE USING THIS METER

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.

You should have the following items:
1. IN2101 or IN2102
2. TL47A lead set
3. Instruction manual
4. Protective carry case with strap
5. Six LR6 alkaline batteries
6. Spare fuse (located in battery compartment)

1.2 Description
The IN2101/2 Digital Insulation and Continuity Tester is designed to perform testing in accordance with international standards, including BS7671. Insulation testing can be undertaken at 500V DC (IN2101) or 250/500/1000V DC (IN2102). The tester is powered by six 1.5V alkaline batteries type LR6. To install or replace batteries refer to section 3.1

### kΩ test

<table>
<thead>
<tr>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999kΩ</td>
<td>0.1Ω&lt;999.9Ω</td>
<td>±(3% rdgs +5d)</td>
</tr>
</tbody>
</table>

Auto-Discharge: when TEST button released

### Insulation test (IN2101)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>500V</td>
<td>4/40/400/1000MΩ</td>
<td>1kΩ/10kΩ/100kΩ/1MΩ</td>
<td>±(3% rdgs +5d)</td>
</tr>
</tbody>
</table>

Short circuit current: <1.5mA
Auto-Discharge: when TEST button released
Buzzer disable option: yes

### Insulation test (IN2102)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>250V</td>
<td>4/40/400/1000MΩ</td>
<td>1kΩ/10kΩ/100kΩ/1MΩ</td>
<td>±(3% rdgs +5d)</td>
</tr>
<tr>
<td>500V</td>
<td>4/40/400/4000MΩ</td>
<td>1kΩ/10kΩ/100kΩ/1MΩ</td>
<td>±(3% rdgs +5d)</td>
</tr>
<tr>
<td>1000V</td>
<td>4/40/400/5000MΩ</td>
<td>1kΩ/10kΩ/100kΩ/1MΩ</td>
<td>±(3% rdgs +5d)</td>
</tr>
</tbody>
</table>

Short circuit current: <1.5mA
Auto-Discharge: when TEST button released
Buzzer disable option: yes