

# KEWTECH

## KT500DL

### RCD Tester





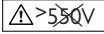
### Operating Instructions



[kewtechcorp.com](http://kewtechcorp.com)

# 1. Safety

## 1.1 Equipment Markings

	Caution - refer to the instruction manual.
	Construction is double insulated.
	Product should be recycled as electronic waste.
	Conforms to EU standards.
	Prohibited to use on Electrical Systems which use voltages above 550V.
CAT III 500V	<p>Measurement Category III is applicable to testing and measuring circuits connected after the source of the building's low-voltage MAINS installation. This part of the installation is expected to have a minimum of two levels of over-current protective devices between the transformer and connecting points of the measuring circuit.</p> <p>Examples of CAT III are measurements on devices installed after the main fuse or circuit breaker fixed within the building installation. Such as distribution boards, switches and socket outlets.</p> <p>This tester's voltage rating for CAT III location is 500V where the voltage is Phase (line) to Earth.</p>

## 1.2 Operational Safety

The KT500DL is designed to be used by skilled persons in accordance with safe methods of work. If the KT500DL is used in a manner not specified by Kewtech, the protection provided by it may be impaired.

Inspect the product before using. If any damage is visible; such as cracks in the casing, damage to any accessories, leads or probes, the unit should not be used.

Do not operate the KT500DL with the battery cover off as this will compromise the insulated safety barrier.

To maintain safety, ensure serviceability and to monitor accuracy of the KT500DL the tester should be checked on a checkbox such as the Kewtech FC2000 checkbox at regular intervals.

When connecting to mains, ensure the colour coding on the test leads and terminals is adhered to.

Although fully protected against over voltage up to 440V, the tester should only be used on 230V systems.

### Contents

KT500DL RCD tester

KAMP 12 Mains lead

Batteries

Carry Case

Manual

### Optional

ACC063 distribution board lead set

## 2. Description

The KT500DL is a digital RCD tester that will test the most commonly encountered RCD's to current standards. This includes standard (AC) type, selective (ACS) type and A type RCD's.

### 2.1 Features

- AC, ACS, A type RCD testing
- 30mA Auto test
- Ramp Test
- $x\frac{1}{2}$  ,  $x1$  test on all RCD types
- $x5$  test on 30mA RCD's
- Auto  $0^\circ$  -  $180^\circ$  cycle
- AC Voltage VLN
- Distribution network operator polarity test pad
- Result Recall
- Hands free function
- Polarity, voltage present LED
- Auto switch off function for battery preservation.

## 2.2 Indication

The white display backlight will illuminate on switching on and during testing. To preserve battery life the backlight will switch off after approximately 4 seconds of inactivity. The unit will automatically power off after approximately 3 minutes of inactivity. To switch the tester back on, after auto power off, press any button. A fail condition will be indicated by a red backlight and a warning tone.



LCD display shown in the ramp test function.

### 3. Usage



## 3.1 Battery Installation

Unit requires 4 x AA batteries.

Ensure that all test leads are removed before installing batteries. Remove the rubber over mould and battery cover on the reverse of the unit. Install the new batteries ensuring correct polarity as indicated. After installing batteries and before use ensure the battery cover and over-mould are correctly fitted, switch on the unit and check for correct operation.

Dispose of used batteries as per the local authority's guidelines.

## 3.2 Operation

### 30mA Auto Test

The 30mA auto test is available for A and AC type RCD. Select the required 30mA Auto test on the rotary dial. The tester will monitor the mains for correct polarity and voltage. If parameters are correct the Volts Present LED will illuminate green and a test can be carried out. On pressing the test button. The auto test will begin. x $\frac{1}{2}$ , x1 and x5 tests will automatically be carried out at 0° and 180°. The results can be seen by using the recall button to toggle through results.

### RCD Manual Testing

Select the required RCD type on the rotary dial. Then use the multiplier button to select the required test current. If the mains polarity and voltage are correct the 'green volts' present LED will illuminate and a test can be carried out by pushing the test button. The first test will always be done at 0° the tester will then automatically cycle to 180° ready for the next test.

## Ramp Test

Rather than applying a set test current this gradually increases the level of additional leakage to identify at what current the RCD trips.

Select the required RCD type on the rotary dial. Then use the multiplier button to select the ramp feature. If the mains polarity and voltage are correct the green volts present LED will illuminate and a test can be carried out by pushing the test button. The tester will display the leakage current at which the RCD tripped along with a pass or fail indication.

## Hands Free

The Hands Free function can be used with any RCD test. Select the required RCD type on the rotary dial. Press the Hands Free button HANDSFREE will be displayed on the screen. Once the tester is connected, correct voltage and polarity are confirmed a RCD test will be conducted without TEST being pressed.

## Polarity Test Pad

It is a little known fact that a system can be reverse wired at the incoming distribution board with Live (Phase) to earth/neutral and earth/neutral to Live (Phase). In this condition the sockets will all work and conventional testers will show and test that everything is correct despite this very dangerous wiring condition.

Although extremely rare, this dangerous condition can exist so if your test shows this fault do not proceed.

Touch the touchpad area next to the test button. There should be no change in the indication given. If the Voltage/Polarity LED flashes Red and a warning tone is emitted when the touchpad is touched a potentially dangerous polarity reversal exists. Do not proceed. If in any doubt advise the customer to contact the electricity supply company immediately.

## 4. Maintenance and Service

If required, clean with a damp cloth and mild detergent. Do not use abrasives or solvents.

With the exception of the batteries there are no user serviceable parts.

Contact Kewtech for parts and technical assistance.

WARRANTY - 2 years manufacturer's when registered on the website:  
[Kewtechcorp.com/product-registration](http://Kewtechcorp.com/product-registration)

ExpressCal, Unit 6, Shaw Wood Business Park, Shaw Wood Way, Doncaster DN2 5TB

T: 01302 761044

E: [expresscal@kewtechcorp.com](mailto:expresscal@kewtechcorp.com)

## SPECIFICATION

<b>Supply Voltage</b>	195V - 253V AC 50Hz
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Voltage	
0 - 260 V	$\pm (3\% + 3 \text{ digits})$

Test Current Accuracy	
<b>Test Current</b>	<b>Accuracy</b>
$\times \frac{1}{2}$	- 0% to - 10%
$\times 1, \times 5$	+ 0% to +10%

Trip Time Accuracy	
<b>Test Current</b>	<b>Accuracy</b>
< 1 second	$\pm (1\% + 1 \text{ ms})$
> 1 second	$\pm (1\% + 10 \text{ ms})$

RCD Trip Time	
<b>Measurement Range</b>	<b>Operating Range Per BSEN61557-6</b>
5 ms - 1999 ms	38 ms - 1999 ms

<b>Power supply</b>	4 x AA LR6 Batteries
<b>Battery life</b>	50 hours
<b>Overvoltage category</b>	CAT IV 300V
<b>Operating temperature</b>	0 - 40°C
<b>Storage temperature</b>	-10 to 60°C
<b>Operating humidity</b>	80% @ 31°C to 50% @ 40°C
<b>Safety compliance</b>	BSEN 61010-2-030:2010
<b>EMC compliance</b>	BSEN 61326-2-2:2013
<b>Performance standard</b>	BSEN 61557-1:2007 BSEN 61557-6:2007
<b>Probes</b>	GS38 compliant
<b>Dimension (mm)</b>	180mm x 85mm x 50mm
<b>Weight (g)</b>	Approximately 450g

For repair and calibration please return to us at :

**EXPRESSCAL**  
Electrical Testing Services

Express Cal

Unit 6, Shaw Wood Business Park, Shaw Wood Way, Doncaster DN2 5TB

0345 646 1404 (Select option 2)

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