LRCD200 Series
Combined Loop and RCD Testers

- **Non-trip loop tester**
- **RCD testing from 10 mA to 1000 mA**
- **Extremely easy and safe to use**
- **Built-in protective front cover**
- **Tough Rubber armoured case**
- **Weatherproof**
- **3 year warranty**

**DESCRIPTION**

The LRCD200 series is the latest generation of combined non-tripping loop tester and RCD test instruments that provide simple, affordable and flexible test tools for electrical contractors testing energised circuits.

All LRCD200 series instruments are supplied with a Megger calibration certificate.

Three instruments are available:

**LRCD200**
- This instrument provides 3 phase safe non trip loop testing and 1xI tests of 10mA to 500mA RCDs.
- **NOT SUITABLE FOR UK APPLICATIONS.**

**LRCD 210**
- This instrument provides three phase safe non-trip loop testing and 1/2I, I, and 5I RCD testing for standard, selective and DC RCDs. Suitable for domestic installers testing to UK Part P requirements.

**LRCD220**
- As the LRCD210 with the addition of 110 V loop testing and 2 wire fast testing, plus phase to phase and phase to earth measurement.

All three instruments will not trip RCDs rated at 30 mA or greater during loop testing, even electronic RCDs.

**GENERAL FEATURES**

All instruments are designed using the new Megger electricians tester case, providing tough rubber armouring, built-in front cover, weatherproof to IP54 and easy-to-use functions and layout.

The instruments can be hung around the neck or hand held and will not slip if placed on a bench or shelf.

Test leads can remain attached with the front cover open or closed.

L-N-E connection indicator LEDs show connection status and reverse polarity supplies.

**Non-tripping loop testing**

The Megger ‘No-Trip’ loop test is designed for loop testing on circuits where an RCD is fitted. The RCD is guaranteed not to trip if rated 30 mA or greater.

The ‘No-Trip’ loop test is also guaranteed not to trip electronic RCDs.

All LRCD testers offer

- Non-tripping Loop test. RCDs rated 30 mA or greater are not tripped by the loop test, even electronic RCDs.
- 3 wire low current non-tripping loop test provides measurements from 0.01 ohms to 2 kohms.
- Auto-ranging tests.
- PFC calculation and display from the loop test measurement
- Supply voltage display on connection to circuit.
- Supply frequency measurement

Additionally for the LRCD220
- 2-wire fast test is provided
- 415 V Phase to Phase loop measurement
- 110 V operation
- Backlit LCD display
- Phase rotation display

**RCD Testing**

Testing the trip times of RCDs with all commonly found RCD current ratings.

For most international applications and the UK, 5 tests must be performed:

1) 1/2 x RCD current rating, to ensure the RCD does not trip when half the rated current is flowing in the RCD.
2) 1 x RCD current rating. This is a trip test to ensure the RCD trips with the specified trip time.
3) 5 x RCD current rating. A Trip test to ensure the RCD trips within the specified time.
4 & 5) both the 1x and 5x tests must be performed at both 0 degrees and 180 degrees (positive and negative supply half cycles) to ensure worst case time is recorded.

All LRCD testers offer:
- 10 mA to 500 mA RCD testing
- 1 x I RCD Test
- AC, AC selective, DC and DC selective RCD type selection
- 0/180 degree selection
- Ramp testing
- 25 V or 50 V Touch voltage selection
- Optional Touch voltage display

Additionally the LRCD210 and LRCD220 offers:
- 1/2 x I and 5 x I RCD testing
  plus the LRCD220 offers:
- 1000 mA RCD testing
- Display backlight
- Test lock

- Phase rotation display

Additionally, instruments for non-UK markets can operate with the Live/Neutral supply reversed.

**Selection Guide**

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**SPECIFICATION**

Voltage measurement:
(LRCD200, 210, 220):
0 V - 500 V

Accuracy:
±2% ±2 digits

Frequency measurement:
(LRCD200, 210, 220)

Range:
25Hz to 450Hz

Accuracy:
25.0Hz to 199.9Hz ±0.1Hz
200Hz to 450Hz ±1Hz

Phase rotation indicator
(LRCD220 only)

Three wire identification of phase rotation.

Loop testing:
Loop ranges (to EN 61557-3)
(LRCD200, 210, 220)

No Trip Loop test 3-wire (Line to Earth)

Supply:
LRCD200/210 = 200V - 280 V 45Hz to 65Hz
LRCD220 = 100V - 280 V 45Hz to 65Hz

Nominal test current:
15 mA
0.01Ω - 9.99Ω (±5% ±0.03 Ω)
10.0Ω - 99.9Ω (±5% ±0.05 Ω)
100Ω - 999Ω (±5% ±5 Ω)
1.00 kΩ - 2.00 kΩ (±5% ±30 Ω)

HI current Line/Earth loop test 2 wire (LRCD220 only)

Supply:
100V - 480 V

Frequency:
45Hz to 65Hz

Nominal Test Current:
15 mA to 1.4 A

Loop accuracy:
0.01Ω - 9.99Ω (±5% ±0.03 Ω)
10.0Ω - 99.9Ω (±5% ±0.05 Ω)
100Ω - 999Ω (±5% ±5 Ω)
1.00 kΩ - 2.00 kΩ (±5% ±30 Ω)

Line/Line (LRCD220 only)

Supply:
100V - 480 V 45Hz to 65Hz

Nominal Test Current:
0.25 A to 2.4 A
0.01 Ω -19.99 Ω (±5% ±0.03 Ω)

Prospective Fault Current (PSCC)
Prospective fault current = Nominal supply voltage/Loop resistance

Accuracy is derived from loop test
1 A - 199 A 1 A resolution
0.20 kA - 1.99 kA 10 A resolution

RCD Testing
RCD Test Ranges (to EN61557-6)
LRCD200/210 = 10mA, 30mA, 100mA, 300mA, 500mA
LRCD220 = 10mA, 30mA, 100mA, 300mA, 500mA, 1000mA

Supply voltage:
LRCD200/210 = 207V - 280 V 45Hz to 65 Hz
LRCD220 = 200V - 280 V 45Hz to 65 Hz

Test Current Accuracy:

No Trip Test:
(1/2I) –8% to –2%

Trip Test:
(I, 5I) +2% to +8%

Trip Time:
±1% ±1ms

Fault (Touch) Voltage
Displayed range:
0 V to 50 V

Error:
+5%/+15% ±0.5 V

Temperature and humidity
Operating Range:
-5°C to +40°C

Operating Humidity:
95% R.H. at +40°C max.

Storage Range:
-25°C to +70°C

Maximum altitude:
2000m

Environmental Protection:
IP54

Safety
IEC 61010
Meets the requirements of IEC61010-1 Cat III 300V phase to earth.

EN61557
Complies with the following parts of EN61557, Electrical safety in low voltage systems up to 1000 V ac and 1500 V dc. Equipment for testing, measuring or monitoring of protective measures:
Part1- General Requirements
Part3- Loop resistance

Power supply
Battery:
8 x 1.5 V cells IEC LR6 type (AA alkaline).

Rechargeable:
8 x 1.2V NiCd or NiMH cells.

Battery Life:
2000 consecutive tests

Weight:
All units 980gms

Dimensions:
All units 203 x 148 x 78 mm

E.M.C.
In accordance with IEC61326 including amendment No.1
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