

LRCD220

Combined Loop and RCD Tester



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

DESCRIPTION

The LRCD220 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 LRCD220 instruments are fully calibrated in our Dover factory before packing, and come with a Megger calibration certificate.

This instrument provides three phase safe nontrip loop testing and ½xl, 1xl, and 5xl RCD testing for standard, selective and pulsed DC RCDs. Suitable for domestic installers testing to UK Part P requirements.

The LRCD220 is suitable for

- 110 V loop testing
- 2 wire fast testing
- Phase to phase
- Phase to earth measurement
- Automatic RCD testing with result recall.

The LRCD220 will not trip RCDs rated at 30 mA or greater during loop testing, even electronic RCDs.

GENERAL FEATURES

The LRCD220 uses the trusted 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.

Loop testing features

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

LRC220

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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.

The auto RCD test on the LRC220 allows all the above tests to be performed automatically whilst the operator stands by the RCD and rests its as it trips. Results can then be recalled to the screen.

RCD testing features

- 10 mA to 500 mA RCD testing
- 1 x I RCD Test
- Type AC, Type A and Type S selection
- 0/180 degree selection
- Ramp testing
- 25 V or 50 V Touch voltage selection
- Optional Touch voltage display
- 1/2 x I and 5 x I RCD testing plus the LRC220 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.

Features	LRC220
Calibration certificate	■
Non tripping loop test	■
PFC	■
Hi current loop test	■
Phase to phase	■
3 phase safe	■
Voltmeter	■
1/2 x I test	■
1 x I test	■
5 x I Test	■
Auto RCD	■
Touch / Contact voltage display	■
Selectable 25 / 50 V touch voltage	■
10, 30, 100, 300, 500 mA ranges	■
1000 mA	■
Type AC, Type A and Type S tests	■
Selectable phase 0 / 180	■
Ramp test (20% to 110%)	■
Frequency	■
Phase rotation	■
Reverse polarity operation (Continental instruments only)	■
Backlight	■
BS1363, CEE7/7, AS / NZS 3112 plug variants	■
IP54	■
Working voltage 110 and 230 V	■

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SPECIFICATION

Voltage measurement:	0 V – 500 V
Accuracy:	±2% ±2 digits
Frequency measurement:	
Range:	25 Hz to 450 Hz
Accuracy:	25.0 Hz to 199.9 Hz ±0.1 Hz 200 Hz to 450 Hz ±1 Hz
Phase rotation indicator	Three wire identification of phase rotation.
Frequency:	45 Hz to 65 Hz
Loop testing:	Loop ranges (to EN 61557-3)
No Trip Loop test 3-wire (Line to Earth)	
Supply:	LRCD220 100 V – 280 V 45 Hz to 65 Hz
Nominal test current:	15 mA
Loop Accuracy:	0.01 Ω – 9.99 Ω (±5% ±0.03 Ω) 10.0 Ω – 99.9 Ω (±5% ±0.5 Ω) 100 Ω – 999 Ω (±5% ±5 Ω) 1.00 kΩ – 2.00 kΩ (±5% ±30 Ω)
HI current Line/Earth loop test 2 wire	
Supply:	100 V – 480 V
Nominal Test Current:	15 mA to 2.4 A
Loop accuracy:	0.01 Ω – 9.99 Ω (±5% ±0.03 Ω) 10.0 Ω – 99.9 Ω (±5% ±0.5 Ω) 100 Ω – 999 Ω (±5% ±5 Ω) 1.0 kΩ – 2.00 kΩ (±5% ±30 Ω)
Line/Line Supply:	100 V – 480 V 45 Hz to 65 Hz
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
	2.0 kA – 19.9 kA 100 A resolution
RCD Testing	
RCD Test Ranges (to EN61557-6)	
	10 mA, 30 mA, 100mA, 300 mA, 500 mA, 1000 mA
Supply voltage:	100 V – 280 V 45 Hz to 65 Hz
Test Current Accuracy:	
No Trip Test:	(½xl) -8% to -2%
Trip Test:	(1xl, 5xl) +2% to +8%
Trip Time:	±1% ±1 ms
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:	93% R.H. at +40 °C max.
Storage Range:	-25 °C to +70 °C
Maximum altitude:	2000 m
Environmental Protection:	IP54
Safety	IEC 61010
	Meets the requirements of IEC61010-1 Cat III 300 V 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
Part6 - Residual current devices

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 980 gms
Dimensions:	All units 203 x 148 x 78 mm
E.M.C.	In accordance with IEC61326-1

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ORDERING INFORMATION

Description	Order Code
Standard BS1363 plug version	
Combined No-trip loop tester with ½xl, 1xl, 5xl RCD tester 110 V, 230 V and Phase to Phase testing	LRC220-EN-BS
Included accessories	
Red/Black/Green 3 wire lead set	6231-592
BS1363 Mains plug test lead	6220-740
CEE 7/7 variants	
Combined No-trip loop tester with ½xl, 1xl, 5xl RCD tester 110 V, 230 V	LRC220-EN-SC
Included accessories	
Red/Black/Green 3 wire lead set	6231-592
CEE 7/7 Mains plug test lead Continental Europe	6220-741
AS/NZS 3112 variants	
Combined No-trip loop tester with ½xl, 1xl, 5xl RCD tester 110 V, 230 V	LRC220-EN-AU
Included accessories	
Red/Black/Green 3 wire lead set	6231-592
AS/NZS 3112 Mains plug test lead	6220-790
Optional Accessories	
Red/Green 2 wire Lead set	6220-784
Earth bond test lead	6231-586

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