

CRM 100C CONTACT RESISTANCE METER

CRM 100C directly measures resistance values with current injection of 10 Amps to 100 Amps DC under live switchyard conditions.

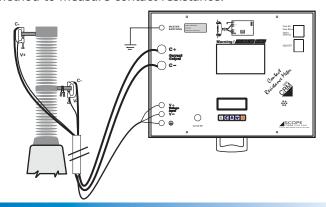
The CRM 100C is specially designed to reliably measure contact resistance of circuit breakers, isolators, busbar joints, welded joints etc., under the hostile electrostatic noise found in live EHV switchyards. It can also be used for testing cables, graphite bars etc.

It has a truly continuous current source without any ON/OFF duty cycle.

THE INSTRUMENT

CRM 100C has a built-in constant current source with switched ranges, a precision instrumentation amplifier, digital readout and micro-controller based control logic.

Selected test current is passed through the test object and voltage drop is sensed using the classical Kelvin's 4 wire method to measure contact resistance.



MEASURING WITH CRM

- □ Isolate the test object e.g. A breaker and provide earthing from both sides, close the breaker
- □ Connect CRM to breaker as shown in the diagram
- □ Remove Earthing from both sides
- □ Switch on the instrument and select the proper range
- □ Start TEST
- CRM will start current injection and display the contact resistance in micro-ohms and test current

SPECIAL FEATURES

Innovative design makes CRM 100C the lightest available continuous current contact resistance meter.

Direct display of micro-ohm value does away with manual calculations

Fool-proof connections and repeatability are ensured by SCOPE's specially designed proprietory Ck clamps

Supplied with rugged calibrated test lead set suitable for 4 wire measurement

SPECIFICATIONS

Ranges: On SCOPE's Calibrated Test Leads

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Test Current	Resistance Range	Resolution	
100 A	199.9 μΩ	0.1 μΩ	
	1999 μΩ	1 μΩ	
	$19.99~\text{m}\Omega$	$0.01~\text{m}\Omega$	
50 A	1999 μΩ	1 μΩ	
	19.99 m $Ω$	$0.01~\text{m}\Omega$	
20A	1999 μΩ	1 μΩ	
	19.99 mΩ	$0.01~\text{m}\Omega$	
	199.9 m $Ω$	$0.1~\text{m}\Omega$	
10 A	19.99 mΩ	$0.01~\text{m}\Omega$	
	199.9 m Ω	$0.1~\text{m}\Omega$	
	1999 mΩ	$1~\text{m}\Omega$	

Accuracy : Value \pm 0.5 % \pm 5 digits

Current : 10, 20, 50, 100 A DC, selectable

Display : One backlit 4 line LCD for interactive menu,

test results, keyboard functions and messages

Test Results : 3½ digit for resistance and current values

Test Leads : Calibrated Test Cables, 15 m long, 150A rating

Power : 230 V AC \pm 15%, 50 Hz \pm 10%, 500 VA

Dimensions : $475 \times 405 \times 175 \text{ mm}$ Weight : 11 kg, instrument

Environment : 0 to 50 °C max, 95 % RH (non-condensing)

Live EHV switch yard environment

ORDERING INFORMATION

Part No.	Description	Std Qty
2302.05.00	Contact Resistance Meter	
2502105100	Model CRM 100C complete	
	with standard accessories	1 set
STANDARD ACCESSORIES		

2302.45.01 Calibrated Test Cables 15 m long,

with Ck clamps of 75 mm opening 1 set 2300.23.02 Master Earthing Cable, 7 m long 1 set 3000.23.05 Mains cord, 3 m long 1 no. 2302.02.26 Spare fuses 1 set 2302AX550 Carrying case for Test Lead Set 1 no. 2302.24.01 Instruction Manual 1 no.

lote: Calibration Certificate having traceability to NPL is supplied

OPTIONAL ACCESSORIES

2302.45.01 Calibrated Test Cables 20 m long,

with 75, 100 or 150 mm Ck clamps 1 set

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lacksquare Simple solutions for difficult measurements $^{f (B)}$

