



CRT-100P / 200P

Contact and Loop Resistance Testers, 100 A & 200 A



KEY FEATURES

- 100 A or 200 A continuous DC
- 0.01 $\mu\Omega$ resolution
- Up to 10 m Ω at 50 A
- Four inch colour touch screen
- Built-in printer and USB transfer
- Quick, 10, 30 or 60 second tests

Enough Current to Break Through the Oxide.

A double-arm bridge measures contact resistance at milliamps, which is not enough to get through the oil film and oxide between a switch's contacts. The reading comes back several times too high and tells you nothing about the joint underneath.

These push 100 A or 200 A of continuous DC through the contact instead, from a switching supply rather than a pulse, so the film breaks down and the measurement is of the metal. Four-wire throughout, resolving to 0.01 $\mu\Omega$.

Two models. The CRT-100P offers 50 A and 100 A and reaches 10 m Ω ; the CRT-200P adds 150 A and 200 A. The measuring range falls as the current rises, because both hold the same compliance voltage.

Both carry a four inch colour touch screen, a built-in printer for a result at switchgear, and 200 records that transfer to a USB stick. Test time is set to quick, 10, 30 or 60 seconds, so the 60 second minimum in the standards is met by selection rather than by holding a button.

IDEAL FOR

- Circuit breaker and isolator contacts
- High and low voltage switchgear
- Cable and busbar joints
- Welded and bolted connections
- Switchgear manufacture and overhaul

MEASUREMENT RANGES

Range	Accuracy	Resolution	Notes
CRT-100P · measuring range falls as the current rises			
0 to 10 mΩ	±(0.5% rdg + 2 digits)	0.01 μΩ	At 50 A
0 to 5 mΩ	±(0.5% rdg + 2 digits)	0.01 μΩ	At 100 A
CRT-200P · adds 150 A and 200 A			
0 to 10 mΩ	±(0.5% rdg + 2 digits)	0.01 μΩ	At 50 A
0 to 5 mΩ	±(0.5% rdg + 2 digits)	0.01 μΩ	At 100 A
0 to 3.333 mΩ	±(0.5% rdg + 2 digits)	0.01 μΩ	At 150 A
0 to 2.500 mΩ	±(0.5% rdg + 2 digits)	0.01 μΩ	At 200 A
Resolution · both models			
0 to 99.99 μΩ	—	0.01 μΩ	
100.0 to 10000.0 μΩ	—	0.1 μΩ	

Every current setting works to the same compliance, so the ceiling and the current move together: 10 mΩ at 50 A down to 2.5 mΩ at 200 A. Choose the current for the standard you are working to, then check the ceiling is above the resistance you expect. The instrument switches range automatically as the signal changes.



WHAT'S IN THE BOX

- CRT-100P or CRT-200P tester
- Test leads with high current pliers, red and black
- Earth lead and mains lead
- Fuses · 5 A for the 100P, 10 A for the 200P
- Printer paper and USB stick
- Accessory bag, manual and warranty certificate

FUSE RATING · The two models take different fuses: 5 A for the CRT-100P and 10 A for the CRT-200P. Check the rating before fitting a replacement.

GENERAL SPECIFICATIONS

Code	Item	Part Number
CRT-100P	Contact and loop resistance tester, DC 50 A and 100 A	681008
CRT-200P	Contact and loop resistance tester, DC 50 A to 200 A	682003

MEASURES

Contact and loop resistance of high and low voltage switchgear · DC resistance of cable and busbar · four-wire measurement throughout

ACCURACY

±(0.5% of reading + 2 digits)

TEST TIME

Quick, 10, 30 or 60 seconds · the 60 second setting meets the minimum current maintenance time called for in the standards

DISPLAY

Four inch colour touch screen · English interface · current and resistance shown together

MEMORY

200 records · transferred to a USB stick and read by the supplied software

POWER

AC 220 V ±10%, 50 Hz · 600 W on the CRT-100P, 1000 W on the CRT-200P

DIMENSIONS

CRT-100P 390 × 300 × 150 mm · CRT-200P 390 × 300 × 200 mm

WARRANTY

1 year, subject to product registration with GPS LTD · service and calibration available

TEST CURRENT

CRT-100P: DC 50 A and 100 A · CRT-200P: DC 50 A, 100 A, 150 A and 200 A · fixed output, continuous

RESOLUTION

0.01 μΩ below 100 μΩ · 0.1 μΩ to 10000 μΩ

RANGING

Automatic: the instrument switches range with the signal to hold accuracy · over-temperature protection stops the output if the set temperature is exceeded

PRINTER

Built in, printing the result at the switchgear

CONSTRUCTION

Temperature compensation circuit to remove the effect of ambient temperature · military connectors for vibration resistance

ENVIRONMENT

Operating -10 to 40 °C · relative humidity 80% or below

WEIGHT

CRT-100P 6 kg · CRT-200P 7 kg · both excluding accessories