



DC resistance measurement

About DC resistance measurement

DC resistance measurement system is designed and developed by our company and has recognition in the industry. These systems are used in DC resistance measurements of pellets and films. The total system is computer interfaced. Total operations are performed by PC and are fully automatic. The following are the main accessories:

- Fixed current source
- Nanovolt meter
- Current measurement unit
- Sample holder for different temperature ranges
- PID controller
- Power supply for furnaces



About Us

Marine India is a Professional company, working in design development and production of material research systems for the welfare of Indian Scientific Natured Groups. The main thrust of our company is to produce highly advanced adaptable and low cost systems to suit both Indian and Foreign research facilities.

Main Product Line

- PE loop tracer system
- BH loop tracer systems
- Resistance measurement systems
- Electromagnets
- DC polling unit
- AC/DC power supplies
- Source Measure Unit
- LCR Meter/Impedance analyzers interfacing, software's
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- 100 degree C to 250 degree C

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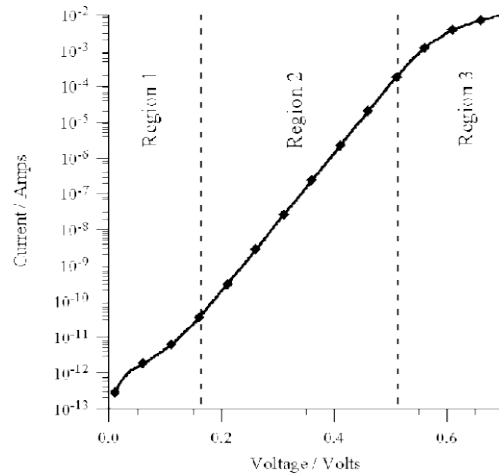
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*Application Oriented Basic Science
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Specifications

- Resistance range 1 milli ohm to 100 Giga Ohm
- Range I
- Temperature range RT- 500 C
- Range II
- Temperature range- 100 degree C to 250 degree C
- Resolution 0.1 degree
- Temperature stability 1 degree
- PID Controller with PC interface
- Voltage compliance 100V DC
- Resolution 1% of the range
- Current range 1 nano A 10 mili A
- Resolution 1% of the range
- Software to set heating rate, set point step etc included
- Standard graph and data in tabular form for following
 - o Current vs temperature in fixed interval
 - o DC resistivity vs temperature in fixed step
 - o Pyro vs temperature

Basic operation

In these measurements the system measures parameters with variation of temperature and frequency automatically. The sample is generally disk shaped. We provide attachments for temperature and magnetic variations with specifications listed. The material for construction of these sample holders depends upon temperature ranges. Mostly are made up of brass or SS304 materials with silver gold contacts.

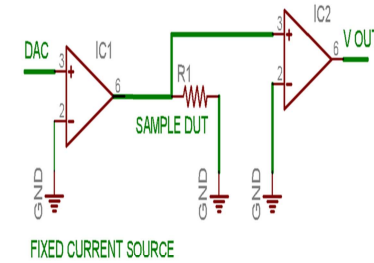
Requirements from customer side

- A normal PIV computer with windows xp/windows7 to be provided by user for installation.

NOTE

- User can also use their own choice of electrometer or current source with DC voltmeter

In such a case accuracy and resolution of measurement will be of the instrument provided by the user.



References

- Solid State Lab (SSPL) Delhi
- IIT Chennai
- Delhi University
- DMRL Hydrabad
- Haryana university
- IIT Chennai
- NPL Delhi
- Mahatma Gandhi university
- Cochin University

The full list is very exhaustive but above is only few major references.