

## Insulation Resistance Tester

One of the most commonly used instruments in industrial maintenance is an insulation resistance tester.

Since insulation breakdown can cause production loss and is a safety hazard, industrial electricians use insulation resistance tester to judge the condition of the insulation.

Depending on application area these come in low voltage (up to 1000VDC) medium voltage (up to 10kV DC) and high voltage (above 10kVDC) test voltage ranges. In electrical distribution system component testing high voltages of up to 200kV maybe required.

Insulation leakage is expressed in micro/milliamps and with exact knowledge of the test voltage direct reading of insulation resistance is possible.

Modern insulation resistance testers have full diagnostic capabilities exemplified by availability of PI (Polarization Index) DD (Dielectric Discharge) and DAR (Dielectric Absorption Ratio) parameters. It is fairly common to see additional parameters like capacitance, AC/DC voltage and frequency on the digital display.

Microprocessor control on insulation resistance testers allowed for incorporation of data storage into the memory and consequent download to PC through RS232 or USB ports.

Many insulation resistance testers have dual power mode (line/battery) and new battery technologies keep the total weight relatively low and suitable for portable operation.



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