RDJS-6100 Insulation Oil Dielectric Loss And Volume Resistivity Tester

Dielectric loss and resistivity tester of insulating oil is a high-precision integrated testing instrument designed and manufactured according to GB / t5654-2007 measurement of relative permittivity, dielectric loss factor and DC resistivity of liquid insulating materials. It is mainly used for the measurement of dielectric loss factor and DC resistivity of insulating oil and other liquid insulating media. It is internally integrated with dielectric loss oil cup, temperature controller, temperature sensor, dielectric loss test bridge, AC test power supply, standard capacitor, high resistance meter, DC high voltage source and other main components. With advanced measurement and control technology, the instrument can automatically complete the process of temperature rise, temperature control, high-speed data sampling, operation, display, printing and storage. Advanced measurement principle and high digital technology make your work easier and more convenient.

The instrument adopts all digital technology, all intelligent and automatic measurement, equipped with large screen color touch screen, all Chinese menu, Chinese prompt for each step, test results can be printed and output, and operators can use it skillfully without professional training.

✧ Product features

1. Highly automatic, temperature rise, dielectric loss measurement and resistivity measurement can be completed in one time;
2. The oil cup adopts a three electrode structure in accordance with the national standard GB / t5654-2007, with a gap of 2mm between the electrodes, which can eliminate the influence of stray capacitance and leakage on the dielectric loss test results;
3. The instrument adopts medium frequency induction heating and PID temperature control algorithm. The heating method has the advantages of non-contact between the

oil cup and the heating body, uniform heating, fast speed, convenient control, etc., so that the temperature is strictly controlled within the preset temperature error range.

4. Adopt advanced DSP and FFT technology to ensure data stability, accuracy and reliability.
5. The internal standard capacitor is SF6 inflatable three-point pole capacitor. The dielectric loss and capacitance of the capacitor are not affected by the ambient temperature and humidity, so that the accuracy of the instrument can still be guaranteed after long-term use.
6. Large screen color touch screen, Chinese operation menu, convenient conversation with others, simple and clear operation, at a glance.
7. Warm prompt such as opening the cover and breaking the high voltage, short circuit of the high and low voltage electrodes of the oil cup shall be provided to eliminate the potential safety hazards and ensure the personal safety of the operators and the normal operation of the equipment.
8. It has its own real-time clock, and the test date and time can be saved, displayed and printed along with the test results; the equipment can display the real-time monitoring of the environment.
9. Automatic storage of measurement data, which can store 100 groups of measurement data.
10. Empty electrode cup calibration function. Measure the capacitance and dielectric loss factor of the empty electrode cup to judge the cleaning and assembly condition of the empty electrode cup. The calibration data is saved automatically to facilitate the accurate calculation of relative permittivity and DC resistivity.

✧ **Product specifications and technical parameters**

<table>
<tr><th colspan="2">parameter</th><th>index</th><th colspan="2">parameter</th><th>index</th></tr>
<tr><td rowspan="3">measuring range</td><td>Capacitance</td><td>5pF～200pF</td><td rowspan="3">Resolving power</td><td>Capacitance</td><td>0.01pF</td></tr>
<tr><td>Relative permittivity</td><td>1.000～30.000</td><td>Relative permittivity</td><td>0.001</td></tr>
<tr><td>Dielectric loss factor loss</td><td>0.00001～100</td><td>Dielectric loss factor loss</td><td>0.00001</td></tr>
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<tr><td></td><td>resistivity</td><td>2.5MΩm～20TΩm</td><td></td><td>resistivity</td><td>0.1M</td></tr>
<tr><td rowspan="4">measurement accuracy</td><td>Capacitance</td><td>1%indication +1PF</td><td colspan="2">Measuring range</td><td>0～120℃</td></tr>
<tr><td>Relative permittivity</td><td>±1% indication</td><td colspan="2">Temperature measurement accuracy</td><td>±0.5℃</td></tr>
<tr><td>Dielectric loss factor</td><td>±(5% indication +0.0002)</td><td>AC voltage</td><td colspan="2">AC 500～2000V Continuously adjustable，50Hz</td></tr>
<tr><td>resistivity</td><td>±10% indication</td><td>DC voltage</td><td colspan="2">DC 0～500V Continuously adjustable</td></tr>
<tr><td colspan="2">Ambient temperature</td><td>0～40℃</td><td>Ambient humidity</td><td colspan="2">＜80%RH</td></tr>
<tr><td colspan="2">Working power supply</td><td colspan="4">AC220V，50Hz</td></tr>
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