



## CIT.300

### Introduction:

- With the development of my country's power industry, capacitor compensation devices have achieved unprecedented development, but the accident rate of capacitors has increased significantly, and serious group injuries have occurred. In order to prevent parallel capacitor accidents and ensure the safe and reliable operation of the power grid, the State Grid Corporation of China has formulated the "Measures for Preventing High-Voltage Parallel Capacitor Accidents". It clearly states that "regularly measure the capacitance of a single capacitor in a capacitor group, and it is recommended to use the measurement method without removing the connecting wire to avoid the failure of casing oil leakage caused by the casing being stressed due to the removal of the connecting wire."
- This instrument is designed for the problems existing in the measurement of high-voltage parallel capacitor groups at substations, and is specially developed with reference to national standards such as GB3983.2-1989 "High Voltage Parallel Capacitors", DL/T840-2003 "Technical Conditions for the Use of High-Voltage Parallel Capacitors" and JB5346-1998 "Series Reactors". It is mainly used to measure high-voltage parallel capacitor groups and reactors of reactive compensation devices.
- This instrument uses a high-speed microprocessor to synchronously collect the voltage and current signals of the test product, and automatically calculate the capacitance, inductance, and reactive power. There is no need to remove the connecting wires when measuring capacitors on site, which simplifies the test process, effectively improves work efficiency, and avoids damage to power equipment. After the test, the capacity and other parameters of each phase capacitor are automatically calculated, making it easy to identify quality changes in capacitors and faults in connecting conductors between devices.

### Key Features:

This instrument can measure the single capacitance of a group of parallel capacitors without removing the wires (both single-phase and three-phase capacitances can be measured). At the same time, this instrument can also measure the inductance of various reactors to meet various uses on site. During measurement, this instrument can display the measured capacitance value or inductance value while also displaying the measured voltage, current, frequency, impedance, phase angle and other data; The instrument uses heterodyne power output for testing, which greatly improves the anti-interference ability on site, and can be tested in high-intensity magnetic fields without affecting the accuracy. The 7.0-inch 1024×600 high-definition screen, touch operation, clear observation during the day and night for easy operation. The instrument has a built-in large-capacity memory: 500 sets of measurement data via USB. The instrument has a built-in high-precision real-time clock function, which can calibrate the date and time. The instrument comes with a printer to print measurement data.

### Standard Accessories:

Capacitance & Inductance Tester	x1
Test Lead set complete with clamps	x1
Power cable 220VAC	x1
Current Clamp sensor	x1
Grounding cable	x1
2A / 250V Fuses	x2
Accessories Case	x1
User manual	x1
Factory Certificate	x1

### Technical Information:

#### 1. Test voltage:

- AC 100V  $\pm 10\%$ , 55Hz
- AC 40V $\pm 10\%$ , 55Hz
- AC 8V $\pm 10\%$ , 55Hz
- AC 2V $\pm 10\%$ , 55Hz

#### 2. Measuring range and accuracy:

- Measurable capacitance range: 0.1uF ~ 10000uF  $\pm$ (reading 1%+0.01uF)
- Measurable inductance range: 50uH ~ 20H  $\pm$ (reading 3%+0.05uH)
- Measurable current range: 5mA ~ 2A  $\pm$ (reading 3%+0.05mA)
- Measurable resistance range: 20m $\Omega$  ~ 20k $\Omega$   $\pm$ (reading 3%+0.1m $\Omega$ )

#### 3. Dimensions:

- Main unit 360×290×170 (mm) Wire box 360×290×170 (mm)
- 4. Weight: Main unit 5KG Wire box 5KG
- 5. Test line length: 5 meters as standard, length can be customized

#### Usage conditions:

- Ambient temperature -20°C ~ 40°C
- Ambient humidity  $\leq 85\%$ RH
- Working power supply: AC220V $\pm 10\%$ , 50 $\pm 1$ Hz