



Capacitance & Tan Delta Bridge

Model : QCTD-1K



The Capacitance & Tan Delta

Model- QCTD -1K

is transformer arm ratio type Bridge.

It is a special development for accurate capacitance and tan delta tests on electrical insulation systems

The Bridge is provided with Modes Selector switch so that once the object is connected; it can be measured in different modes without handling the test leads

Application

Power Systems

HT Transformers

Motors, Generators

Bushings

Power Cables

Power Capacitors

High Voltage Laboratories.

Features

- Both Measurements of Capacitance & Tan Delta built in Power Supply Unit, Standard Capacitor and Balancing Bridge Unit.
- Provision of calibrator to quickly verify the proper operation and calibration of the bridge.
- Specially designed for Engineering Colleges Lab Test voltage 1000V. This low voltage makes the instrument very safe to operate and easy to understand the concept of Capacitance and Tan Delta testing.
- Provision of Guard terminal. No external automatic guard potential regulator is required.
- Three different measurement modes can be conveniently selected by a Selector Switch.
- Suitable for both grounded as well as ungrounded objects.

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Technical Specification

PARAMETER	RANGE	RESOLUTION	ACCURACY
CAPACITANCE	0.01 (1000pF) 0.1 (10nF) 1 (100nF)	0.01pF 1pF 10pF	$\pm 0.5\%$ of the reading $\pm 1\text{pF}$ $\pm 0.5\%$ of the reading $\pm 10\text{pF}$ $\pm 0.5\%$ of the reading $\pm 100\text{pF}$
TAN DELTA	0-0.1 0.1 - 1	0.0001 0.001	$\pm 2.0\%$ of the reading $\pm 5 \times 10^{-4}$ $\pm 2.0\%$ of the reading $\pm 5 \times 10^{-3}$
VOLTAGE	0-1 KV AC	1V	$\pm 1.0\%$ of the reading ± 5 Digit

Test Voltage 0 to 1KV AC

Rated Current : 30mA continuous

Output Frequency 50Hz (Lines Frequency)

Switch for three different types measurement

1. **UST-** Ungrounded Specimen test.
2. **GST** - Grounded Specimen test.
3. **GSTg** - Grounded specimen test with Guard.

Indication : 3 ½ Digital panel meter for Voltage .

Standard Capacitor :100pF, 1KV built-in.

Input Voltage : 230VAC $\pm 10\%$, Single Phase, 50Hz.

Safety Features :

- Zero start control.
- Open ground indicating lamp with double ground connection.
- External Interlock
- HT cut off on overload.
- HT ON and Supply ON Indication.
- All operating controls at earth potential.
- Necessary terminals & Sockets for connection to Object.

Scope of Supply

- Main Units Power supply and Bridge
- HV cable 3 meters
- LV cable 3 meters
- Interconnecting Cables
- Ground cable 3 Meters
- Test Sample

Null Detector

Built in electronic Null Detector.

This type of Null detector is most suitable for balancing of the bridge. It gives high sensitivity and accuracy and it is very user friendly.

Phase sensitivity Null Detector can be given in place of electronic Null detector on request (Optional)

Calibration Box (Optional)

One Known value capacitor with three different Tan Delta values Calibration Box. For quick evaluation for setup at site.

Interference Cancellation Unit.(ICU) (Optional)

For situation where the pick up by the bridge is excessive, a separate multi level interference suppression unit can also be given with separate C & Tan delta adjustments.

We also Manufacture

Micro Ohm Meter

Metal Conductivity Meter

High Voltage Breakdown tester.

Oil Tan Delta Test Set

Insulation Resistance Tester

Various Calibrators (Resistance Decade, Capacitor Decade, Turns Ratio Calibrator,

Insulation Resistance Calibrator,

High Voltage Capacitor and Tan Delta etc.)



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MEASUREMENTS Pvt. Ltd.

D-51, M IDC SATPUR, NASHIK - 422 007

Web site : www.quadrantmeasurements.com

Email : sales@quadrantmeasurements.com