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

**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.

**Application**

- Power Systems
- HT Transformers
- Motors, Generators
- Bushings
- Power Cables
- Power Capacitors
- High Voltage Laboratories.

QUADRANT MEASUREMENTS Pvt. Ltd.
Simplified Measurements Solutions
www.quadrantmeasurements.com
### Technical Specification

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RANGE</th>
<th>RESOLUTION</th>
<th>ACCURACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPACITANCE</td>
<td>0.01 (1000pF)</td>
<td>0.01pF</td>
<td>± 0.5 % of the reading ± 1pF</td>
</tr>
<tr>
<td></td>
<td>0.1 (10nF)</td>
<td>1pF</td>
<td>± 0.5 % of the reading ± 10pF</td>
</tr>
<tr>
<td></td>
<td>1 (100nF)</td>
<td>10pF</td>
<td>± 0.5 % of the reading ± 100pF</td>
</tr>
<tr>
<td>TAN DELTA</td>
<td>0-0.1</td>
<td>0.0001</td>
<td>± 2.0 % of the reading ± 5 X 10^-4</td>
</tr>
<tr>
<td></td>
<td>0.1 - 1</td>
<td>0.001</td>
<td>± 2.0 % of the reading ± 5 X 10^-3</td>
</tr>
<tr>
<td>VOLTAGE</td>
<td>0-1 KV AC</td>
<td>1V</td>
<td>± 1.0 % of the reading ± 5 Digit</td>
</tr>
</tbody>
</table>

- **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 ± 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.

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**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.)