Semi Automatic Capacitance & Tan Delta Bridge
Model : QCTD-M

Application:
- Power Systems
- HT Transformers
- Motors
- Bushings
- Power Cables
- Power Capacitors
- High Voltage Laboratories
- Generators

Features
- DIGITAL DISPLAY for Capacitance and Tan Delta
- NO NEED of calculation
- SAVING OF Result and INTERACTIVE DOWNLOAD SOFTWARE
- High Resolution for Tan Delta measurements
  \(0.00001 \times 10^{-5}\)
- Easy to use
- Safety Protections incorporated

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>± 0.3 % of the reading ± 1pF</td>
</tr>
<tr>
<td></td>
<td>0.1  (10nF)</td>
<td>1pF</td>
<td>± 0.3 % of the reading ± 10pF</td>
</tr>
<tr>
<td></td>
<td>1   (100nF)</td>
<td>10pF</td>
<td>± 0.3 % of the reading ± 100pF</td>
</tr>
<tr>
<td>Tan Delta</td>
<td>0 - 0.1</td>
<td>0.00001</td>
<td>± 1.0 % of the reading ± 5 X 10^{-4}</td>
</tr>
<tr>
<td></td>
<td>0.1 - 1</td>
<td>0.0001</td>
<td>± 1.0 % of the reading ± 5 X 10^{-3}</td>
</tr>
<tr>
<td>Voltage</td>
<td>0-12 KV AC</td>
<td>0.01 KV</td>
<td>± 1.0 % of the reading ± 1 Digit</td>
</tr>
<tr>
<td>Current</td>
<td>0-100mA</td>
<td>1mA</td>
<td>± 2.0 % of the reading ± 1 Digit</td>
</tr>
</tbody>
</table>

Test Voltage 0 to 12KV AC
Rated Current 100mA continuous
Output Frequency 50Hz (Lines Frequency)
Accuracies Applicable Cx >100pF

Indication : 3 ½ Digital panel meter for Voltage & Current.
Standard Capacitor :100pF, 12KV built-in.
Input Voltage : 230VAC ± 10%, Single Phase, 50Hz.

Switch for three different types measurement
Seven/ Three mode test operation
1. UST- Ungrounded Specimen test. 2. GST - Grounded Specimen test. 3. GSTg - Grounded specimen test with Guard.

Simplified Measurements Solutions
**Semi Automatic Capacitance & Tan Delta Bridge**

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### 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 Bridge.

### Scope of Supply
- Main Units Power supply and Bridge
- Interconnecting Leads
- Double Shield HV cable 10 meters
- Single Sield LV cable 10 meters
- Ground cable 5 Meters
- Safety switch

### Null Detector
Built in battery operated/ external powered 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.

### 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.

### Resonating Inductor (Optional)
In case the test current requirement is more e.g. For testing Motors, Generators, Cables, etc with Resonating inductor capacitive current can be compensate by having same amount of Inductive current to enhance the requirement of high test currents.

### Data Logger (Optional)
Software CD and communication Port will be provided to record measured value to keep records, print the result with statistical data analysis.

### Ordering Information
a. Interconnecting Leads set - QCTD /12M/LS
b. Foot Switch - QCTD /12M/FS
c. Instruction Manual - QCTD /12M/M
d. Application Notes and Testing Guide - QCTD /12M/AN
e. Set of Fuses - QCTD /12M/FS

### Optional
a. Interference Compensation Unit (ICU) - QCTD – 12M/ICU
b. Calibration Standard - QCTD – 12M/CS
c. Carrying Case - QCTD – 12M/CC