



**CONIMED**

**Model TD50 / FB15**

## **Capacitance and Dissipation Factor Bridge ( $tg\delta$ ) High Voltage Power Supply with Standard Capacitor**

### **Applications**

- Capacity and tan delta measurements in high voltage laboratories
- Field tests on power and instrument transformers, bushings, reactors, switchgears, etc.
- Cables and capacitors

### **Advantages**

- High accuracy and resolution
- Great versatility
- Direct reading for capacity and  $tg\delta$
- Test modes UST, GST and GSTg according to IEEE standard.
- Power supply up to 15 kV and 200 mA allows tests at nominal voltage on distribution transformers
- Digital kilovoltmeter and current meter
- Allows to change polarity of line feed for better interference rejection
- Interference suppression controls

### **Description:**

The bridge model TD50 works under the principle of a compensated inductive current divider system.

It is designed for capacity and dissipation factor measurements on the insulation of cables, transformers, bushings, or any sample that can be tested with high voltage. It can be used for quality control in the laboratory or for field measurements.



The bridge has an external compensation that allows the use of standard capacitors of 100 pF or 1000 pF with different lengths of cable. No corrections on readings are needed.

With 1000 pF standard capacitor the capacity range is up to 10  $\mu$ F. If needed, the capacity range can be extended x1000 using the optional Transformer Model TA100.

The set TD50 / FB15 is designed for measurements on grounded objects such as power or instruments transformers at a substation.

The power supply is double screened for measurement of grounded objects and has an interference suppressor that is useful near a high voltage transmission line.

## Specifications

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### Bridge Model TD50

#### Capacitance Measurement:

Ranges: Four ranges; Max. scale ranges :

1,1 nF; 11 nF; 110 nF; 1,1 $\mu$ F with  $C_s = 100$  pF  
Scale ranges x10 with  $C_s = 1$  nF

Resolution: 0,001 pF (at 1 nF range)

Accuracy:  $\pm 0,01$  % of scale range

#### Dissipation Factor ( $tg\delta$ ):

Ranges: Three ranges:

1 % - 10 % - 100 %

Resolution: 0,01 % of max. scale range

Accuracy:  $\pm$  (1% of reading + 0,3 % of scale range) with external cable length and standard capacity compensation matched

Maximum current at 1  $\mu$ F range: 20 A

#### Sensitivity

Minimum voltage for guaranteed accuracy:

1000 V with  $C_s = 100$  pF  
100 V with  $C_s = 1$  nF

Power frequency: 50 or 60 Hz (must be specified for direct reading)

High voltage protections included

### Power Supply Model FB15

Output voltage: 0 - 15 kV

Output current: < 200 mA

UST, GST and GSTg modes

Meters: digital kilovolt and milliampere meters

Interference Suppression Controls: Both module and argument controls to suppress interference current

Standard Capacitor: Solid insulation

Capacitance 100pF -  $tg\delta < 0,02$  %

Input: 110 / 220 V - 50 / 60 Hz

#### Dimensions:

Standard cabinets 19"

TD50: 483 x 208 x 400 mm

FB15: 483 x 430 x 500 mm

### Accessory (optional)

Transformer Model TA-100 to expand range of capacitance up to x 1000

*Please contact factory for further details and offers:*

## **CONIMED S.A.**

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