

Precision C & $\tan \delta$ Meter

DAC-PSC-20W



Introducing a current transformer type comparator bridge, DAC-PSC-20W gives automatically Capacitance and Dissipation Power Factor $\tan \delta$ in a comparative measurement of a specimen and standard capacitor.

The bridge is designed in electronic circuits and the measurement is so simple and quick that data can displayed digitally in a high resolution of 0.001% as $\tan \delta$ and 0.01% as an error in capacitance from a nominal capacitance only by keying in some parameters on the front panel.

DAC-PSC-20W can also provide great help to research and develop such a wide range of AC Capacitors as rated from 100V to 20kV. Combining with an external CT as option, test currents can be increased to extend testing ranges by 100 times.

■ **Test Specimen** High and Low Voltage Capacitor, Insulators, Bushing, and Cables.

- **Features**
- Precise measurement of Capacitance and $\tan \delta$
 - Wide Range Measurement:
Capacitance 1nF – 10 μ F
(Max 1000 μ F with Expanding CT)
 - Testing Voltage AC100V~20kV
 - Minimum Resolution of $\tan \delta$: 1×10^{-5} (10ppm)

Specifications

1) Measuring Ranges

	Standard Capacitor (Option)	
	1000pF	10000pF
Testing Voltage *1	1kV~20kV	100V~2kV
Capacitance (with CT 100:1)*2	0.001 μ F~1 μ F (0.001 μ F~100 μ F)	0.01 μ F~10 μ F (0.01 μ F~1000 μ F)
$\tan \delta$	4.000%	
Nominal Value	Csx0.1 – Csx1000(effective 3 digits on CTx100)	
Allowable Range of Capacitance	$\pm 20\%$ *3	

*1: 50/60Hz

*2: The maximum range is increased by 100 times.

*3: Maximum Set Range in error

2) Resolution:

Capacitance(ΔC): 0.01%
 $\tan \delta$: 0.001%

3) Measurement Accuracy

Capacitance: $\pm(0.1\%rdg+3\%Rdg+1digit)$
 $\tan \delta$: $\pm(0.01\%+3\%Rdg+1digit)$

4) Interface:

USB (2.0/1.1, B type connector) and GP-IB

5) AC source:

AC100V~240V $\pm 10\%$ 50/60Hz

6) Size and Weight:

W430×H250×D450 (mm) approx. 25kg

7) Environment

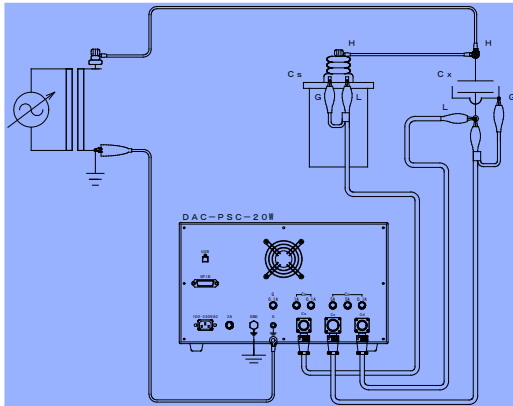
Operating: 15~35 degree C Storage:0~40 Degree C Humidity: less than 80%, no dew.

8) Accessory:

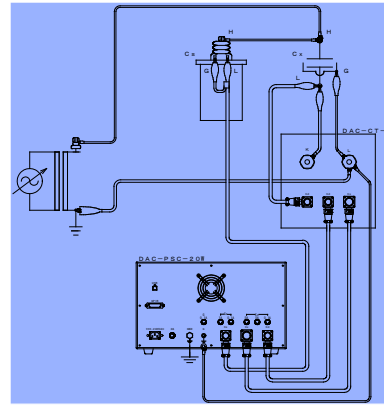
Cs Connecting Cable x1, Cx Connecting Cable x1, AC code x1, Grounding cable x1, Carrying bag x1

Wiring Diagram

■ measurement without Expanding CT



■ measurement with Expanding CT



Options

EXPANDING CURRENT TRANSFORMER DAC-CT-1

DAC-CT-1 is a precise Expanding Current Transformer (CT) with a built-in Double CT. Measuring Capacitance range can be expanded by 100 times only by combining this unit with the main unit.

■ Specification

Primary Current : 400A
Class : 0.1
Current Ratio : 100:1
Size and Weight : W270xH365xD270 (mm) Approx. 7kg



STANDARD CAPACITOR DAC-Cs-102A

DAC-Cs-102A is a three terminal capacitor filled with SF6 gas, and combined with DAC-PSC-20W as a reference capacitor.

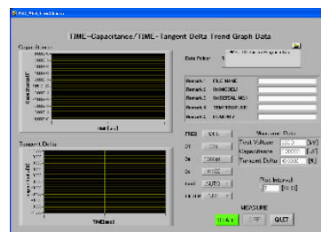
DAC-Cs-102A

■ Specification

Rated Voltage : AC20kV 50/60Hz
Nominal Capacitance : 1000pF $\pm 1\%$
 $\tan \delta$: $< 0.001\%$
Filled Gas : SF6 gas 0.2Mpa(20°C)
Size and Weight : W315xH708(mm) Approx. 31kg



Software



Data acquisition is available with a free program by USB Interface.

The program comes as standard accessory.

Setting Test Frequency, Cs, Cx Range, $\tan \delta$ range on a PC previously, measurement can be executed automatically in remote with a PC.

The program displays data like $\tan \delta$ and capacitance in curve, and save the data in a txt file in an optional folder.



Main Office • Factory
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Specifications are subject to change for improvements without prior notice.