

PRECISION C & TAN δ METER DAC-PSC-UA



DAC-PSC-UA is a high precision measuring instrument having minimum resolution 0.0001% in $\tan\delta$. Capacitance range from small to large and voltage range from low to ultra-high are available. The measuring range can be expanded further by using with an expanding CT. DAC-PSC-UA can measure small dielectric losses of specimens at high voltage, and applicable to tests for high voltage cables, insulation materials and bushings, etc. The meter will provide great help to research and development of dielectrics and insulation materials.

Application

- High-Voltage Cable
- Capacitors
- Insulation Materials

Features

- Precise measurement of Capacitance and $\tan\delta$.
- Wide measurement range^(*):
 - Capacitance 50pF - 10 μ F (Max 10000 μ F when with expanding CT 1000:1)
 - Testing Voltage AC 10V - 600kV
- Minimum Resolution of $\tan\delta$: 1 \times 10⁻⁶(1ppm)

Precision C & tanδ Meter DAC-PSC-UA

Specifications

1) Measuring Ranges (Examples)

Applicable Standard capacitor: 50pF – 10000pF *1	Standard Capacitor (Option)			
	50pF	100pF	1000pF	10000pF
Testing Voltage *2*3	2kV – 600kV	1kV – 300kV	0.1kV – 30kV	10V – 3000V
Capacitance*4	50pF – 50nF	100pF – 100nF	1000pF – 1μF	0.01uF–10uF
with CT-1 (100:1)	5nF - 5μF	10nF - 10μF	100nF - 100μF	1uF - 1000uF
with CT-2 (200:1)	10nF - 10μF	20nF - 20μF	200nF - 200μF	2μF - 2000μF
with CT-10 (1000:1)	50nF - 50μF	100nF - 100μF	1μF - 1000μF	10μF - 10000μF
tan δ	0 - 10% (3 ranges, 0-0.2%、0-2%、0-10%)			

*1: 3 types of standard capacitors from Cs 50pF – Cs 10000pF shall be registered on the meter.
(Cs 20000pF range is available upon request)

*2: Testing Frequency: 50/60Hz

*3: Accuracy guaranteed starting voltage (when tanδ range 2%, 10%) = Max testing voltage / 100 (kV)
Accuracy guaranteed starting voltage (when tanδ range 0.2%) = Max testing voltage / 10 (kV)

*4: Capacitance ranges are subject to be limited by measurable current capacity 8A.

2) Minimum Resolution:

Capacitance: 0.01pF 6 digits.
Tanδ: 0.0001%(1ppm) 4 digits

3) Measurement Accuracy

Capacitance: ±(0.1%rdg+2digits)
Tanδ: ±(0.003%+1%rdg+2digits)

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

5) AC source: AC100V - 240V±10% 50/60Hz

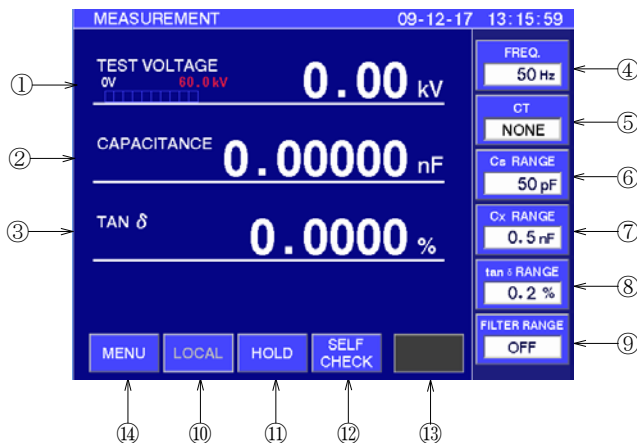
6) Size and Weight: W430×H250×D450 (mm) approx. 25kg

7) Environment:

Operating: 15 - 35 °C
Storage: 0 - 40 °C
Humidity: less than 85%, no dew.

8) Accessory: Cs Connecting Cable (3M) x1, Cx Connecting Cable (3M) x1, AC code x1, Grounding cable x1, Accessory bag x1, Sample software

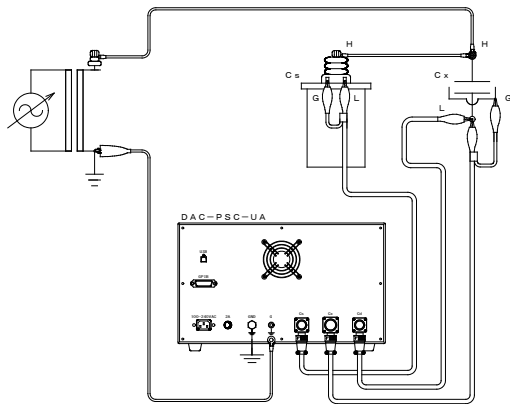
LCD Display



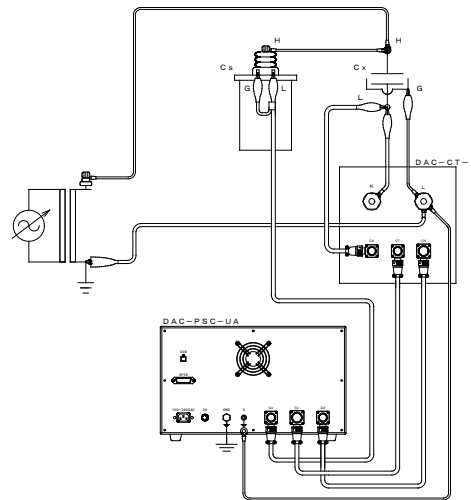
1. Test voltage
2. Capacitance
3. tanδ
4. Frequency
5. Condition of Extension CT
6. Cs value
7. Cx range
8. tanδ range
9. Filter
10. LOCAL or REMOTE
11. Hold the values
12. Self Check
13. Work lamp
14. Menu button

Connecting Diagrams

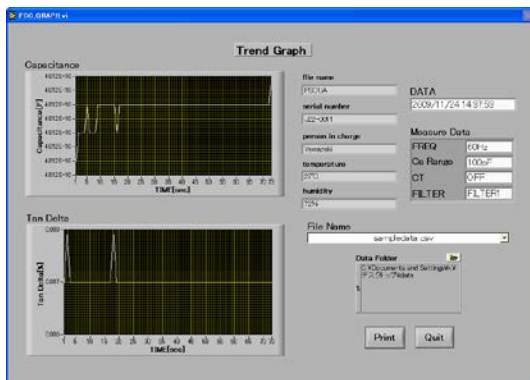
Measurement without expanding CT



Measurement with expanding CT



Software



- Data acquisition is possible through USB interface.
- Remote operation with PC is available, and measured data will be displayed graphically.
- The data is saved to an optional folder in a txt format.

Option Accessories

■ EXPANDING CURRENT TRANSFORMER Model DAC-CT-1 / DAC-CT-2 / DAC-CT-10

Measuring Capacitance range can be expanded by 100 times with DAC-CT-1, 200 times with DAC-CT-2 and 1000 times with DAC-CT-10.



Model	DAC-CT-1	DAC-CT-2	DAC-CT-10
Primary Current	Max 400A	Max 400A	Max 400A
Class	0.1	0.1	0.1
Current Ratio	100:0	200:1	1000:1
Size	W270xH365xD270 (mm)		
Weight	Approx. 7kg		

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Option Standard Capacitors

DAC-Cs-101A and DAC-Cs-102A are three-terminal capacitors filled with SF6 gas, and suitable to use as the standards of capacitance & tan δ for dielectric loss tangent tests.

Those can be used as a capacitive divider and a coupling capacitor as well.

■ Model DAC-Cs-101A

Specification

Rated Voltage	: AC40kV 50/60Hz
Nominal Capacitance	: 100pF \pm 1%
tan δ	: <0.001%
Filled Gas	: SF6 gas 0.5Mpa(20°C)
Size and Weight	: W428xH812(mm) Approx.45kg



■ Model DAC-Cs-102A

Specification

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



■ Model DAC-Cs-103B

DAC-Cs-103B is a stable 10000pF Standard Capacitor with tan δ less than 0.002%.

Electronic control of Current feed-forward compensation makes it possible to multiply 1000pF with the high-accuracy standard air capacitor.

Specification

Max Voltage	: AC1000V
Nominal Capacitance	: 10000pF
tan δ	: >0.002%
Size and Weight	: W280xH320xD280 (mm) Approx. 15kg
Driving power source	: AC100V 50/60Hz



Standard capacitors (polypropylene) 10000pF is also available.

Specifications are subject to be changed without prior notice.

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