

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
- Minimum Resolution of $\tan\delta$: 1×10^{-6} (1ppm)

Precision C & tanδ Meter DAC-PSC-UA

Specifications

- 1) **Measuring Ranges** *1*2*4
 Capacitance 20pF - 10000μF
 Testing Voltage AC 1V - 1500kV
(Examples)

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

- *1: 3 types of optional standard capacitors from Cs 20pF – Cs 100nF can be registered on the meter.
 *2: Testing Frequency: 50/60Hz, Max test voltage=30000/capacitance of Cs(pF).
 *3: Accuracy guaranteed starting voltage (when tanδ range 2%, 10%) = Max testing voltage / 10
 Accuracy guaranteed starting voltage (when tanδ range 0.2%) = Max testing voltage / 10
 *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

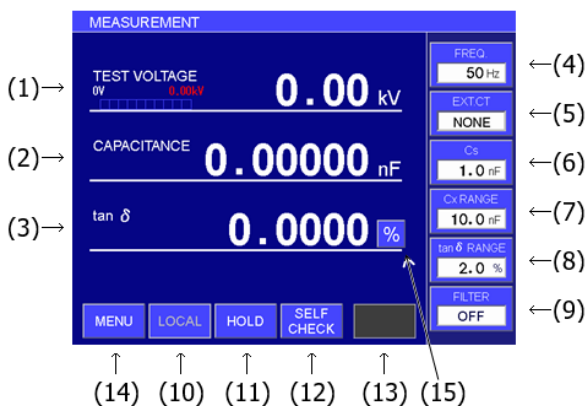
7) **Environment:**

- 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

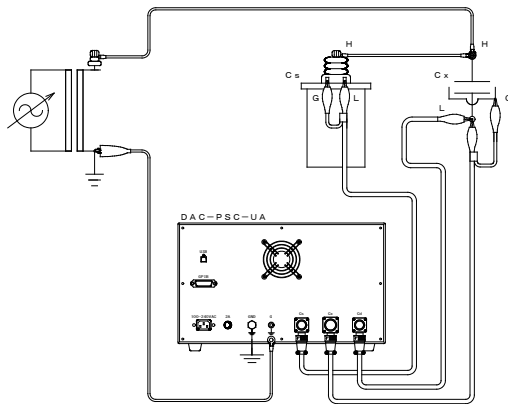
LCD Display



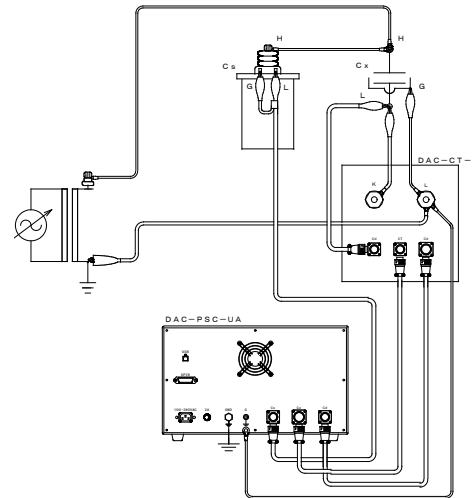
1. Test voltage
2. Capacitance
3. tanδ
4. Frequency
5. Condition of Extension CT
6. Cs value
7. Cx range
8. tanδ range
9. Filter
10. LOCAL or REMOTE
11. Hold the values
12. Self Check
13. Work lamp
14. Menu button
15. Switch the tan delta % ON or OFF
 % OFF: 0.00000 – 0.04000
 % ON: 0.000% - 4.000%

Connecting Diagrams

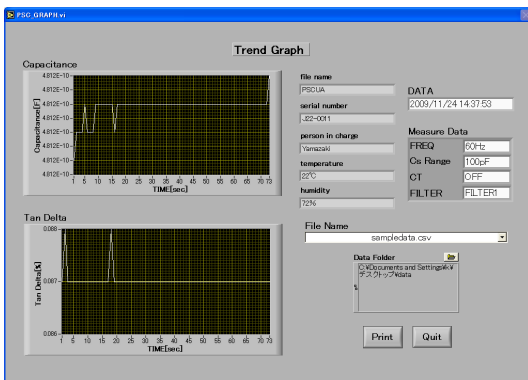
Measurement without expanding CT



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 TYPE1200

Capacitance measurement range can be expanded by 100x, 200x, or 1000x by using an optional expanding current transformer.



DAC-CT-1/DAC-CT-2



DAC-CT-10 TYPE1200

Model	DAC-CT-1	DAC-CT-2	DAC-CT-10 TYPE 1200
Current Ratio	100:1	200:1	1000:1
Rated Current	Max 400A	Max 400A	Max 400A
Class	0.1	0.1	0.1
Connection Type	With terminal	With terminal	Through hole type (φ60mm)
Size	W270xH365xD270 (mm)		W220xH240xD100 (mm)
Weight	Approx. 10kg		Approx. 8kg

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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	: W428xH812(mm) Approx. 31kg

■ Model DAC-Cs-103

Specification

Rated Voltage	: AC3kV 50/60Hz
Nominal Capacitance	: 10000pF \pm 2%
tan δ	: <0.015%
Insulation Type	: Film capacitor
Size and Weight	: W120xH200xD65(mm) Approx.1.6kg



To be the world's standard
of measuring instruments

SOKEN produces measuring instruments for all power management, power generation, transmission, distribution, substation, storage and consumption.

Specifications are subject to be changed without prior notice.

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