

MICRO TANDELTA METER DAC-MD-1

- **Portable with built-in testing source**
- **Compact and Light Weight**
- **Suitable for on-site tests**
- **Wide Measuring Range**



Specimens

Generators, Motors, Transformers
Cables, Capacitors, Insulating Materials

Features

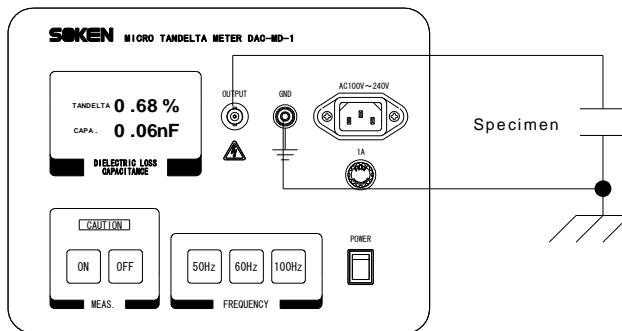
- 18bitA/D is used.
- **Stable measurement.**
Introducing a built-in synthesizer to asynchronous with power supply (50Hz, 60Hz, 100Hz).
- **Reliable measurement.**
Real-time-data arithmetic processing system from sine wave by simultaneous sampling.
- 90 degree digital phase control by exact control of sampling time.
- Data obtained with AD convertor realize true effective value.
- Digitalizing analog circuits, insusceptible by environment conditions

Specifications

Measurement system	:Real-time-data arithmetic processing system and simultaneous sampling with sine wave.
Measurement voltage	:200 V
Measurement maximum capacity	:1nF - 200nF
tanδ	:0.00% - 999%
Measurement frequency	:50Hz / 60Hz / 100Hz (Variable frequency power supply system by a synthesizer)
Accuracy	
Measurement voltage	:200 V ± 3%
Measurement frequency	:± 3%
Capacitance	:± (3%rdg + 2digit)
tanδ	:± (0.04% + 3%rdg + 2digit)
Input Power :	:AC100-240V 50/60Hz
Size and weight	:H180 × W270 × D255 mm, about 5kg

Model DAC-MD-1 MICRO TANDELTA METER

Connection



Functions

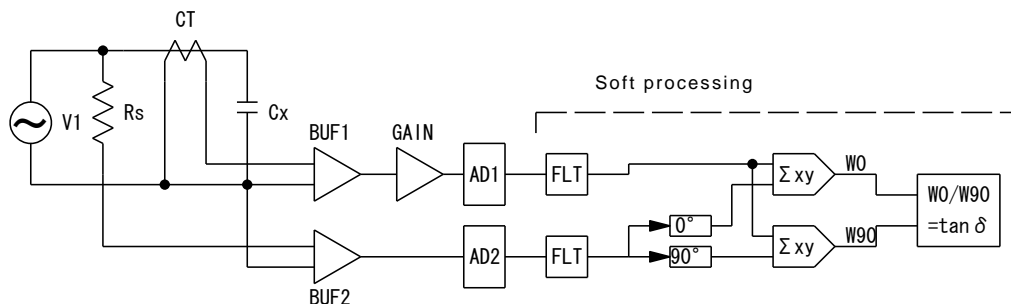
- Calibration working
The instrument calibrates the internal circuit at the time of power activation. (for three-frequency).
- Selection of testing frequency
Testing frequency can be changed by pushing a key of 50Hz, 60Hz or 100Hz.
- Error Messages: OVER/UNDER
The messages are given when capacitance is excess over measuring ranges or is too low to measure.
- EMG (Emergency Stop)
In case of shorting measuring cables or over currents, applied voltages are stopped promptly. To release the stop, push OFF button.

Principle

Controlling frequency and voltage of V1, this measuring instrument carries out the simultaneous sampling of AD1 and AD2, and collects the data of iR_s and iC_x .

After these data are collected at the timing synchronized with the frequency of the signal source and the data of the fixed section are obtained, the data are filtered to section data and their sine waves generated.

A reference signal, acquired from the R_s side at this time and divided into a 0-degree signal and a 90-degree signal, is used to calculate active power and reactive power by performing arithmetic operation with a signal of the C_x side, from which $\tan\delta$ is obtained. In addition, the accuracy of $\tan\delta$ is increased by carrying out error compensation of CT and the circuit by internal calibration functions performed at the time of power activation.



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