

## PARTIAL DISCHARGE MEASURING SET DAC-PD-3



DAC-PD-3 provides Wide Band (10kHz~4MHz) and Narrow Band (10kHz~200kHz). Since bandwidth can be easily chosen according as the kind of test specimen and measuring sensitivity, etc., DAC-PD-3 is available with partial discharge tests such as electric equipments, electronic parts and insulating materials.

### Application

- Electric Equipments :Generators, motors, transformers, cables
- Electric Parts: Capacitors etc.
- Insulating materials
- Power devices
- High frequency equipments: compact high frequency transformers

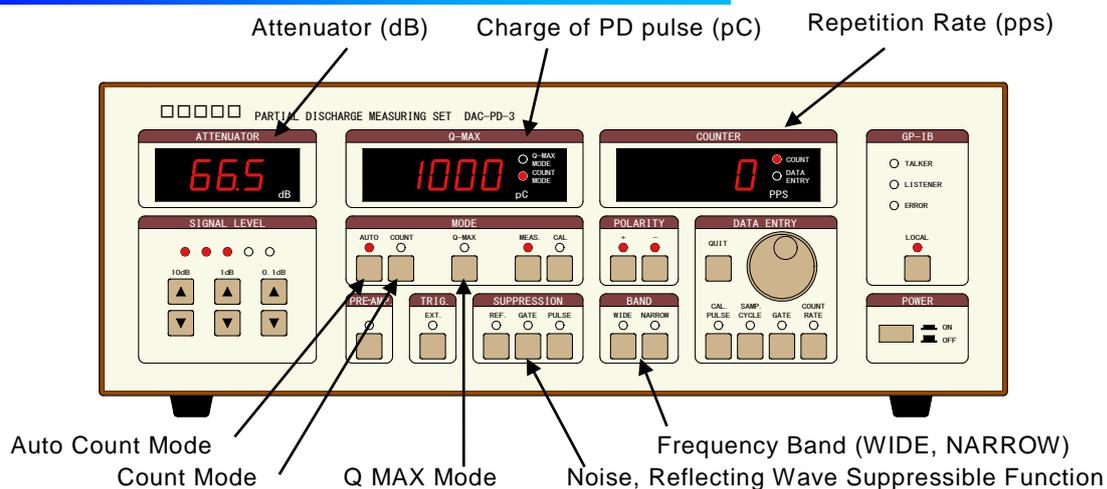
### Features

- Select bandwidth of frequency  
Narrow band: 10kHz - 200kHz  
Wide band: 10kHz - 4MHz
- Detects only partial discharge pulse by suppressing noises from testing source with a differential measuring circuit.
- Automatically measures Q-MAX at a specified repetition rate of partial discharge pulses per second (PPS).
- Possible to analyze “partial discharge – phase” since phase gate is set optionally.
- Noise suppressor circuit is controlled from outside through GP-IB.

## Specifications

- Attenuator : Attenuation 0.1dB~66.5dB(Input Resistance 50Ω)
- Amplifier : Frequency Band Wide Band 10kHz~4MHz  
Narrow Band 10kHz~200kHz
- Pulse Counter : Max. 99999 counts (Pulse Resolution 10μs)
- Q-MAX Display : 1pC - 100000pC
- Interface : GP-IB
- Analog Output : Linear, DC output by Log, Waveform monitor output
- Other Specs : Phase Gate 0 - 359°(set every 1°steps optionally)
- Power Source : AC100V±10% 50/60Hz
- Size & Weight : W430 x H150 x D385 (mm) 11kg
- Accessories : 1)Coaxial cable (BNC:20m x1, 2m x2)  
2)AC Cord 1 pc  
3)Grounding Cable 2 pcs  
4)Storage Bag 1 pc

## Front Panel



## ●Q-MAX Mode

This mode is suitable for detecting the magnitude at a single maximum partial discharge.

## ●COUNT Mode

N-q Characteristic can be obtained by measuring repetition rate of PD pulses for Charge of PD pulses.

## ●AUTO COUNT mode

In AUTO COUNT MODE, the maximum partial discharge magnitude for the specified repetition rate of partial discharge pulses can be measured.

(Partial discharge magnitude is output in Log and V-q Characteristic can be obtained.)

## ●Noise Suppressible Function

◆Periodicity noises can be masked.

◆Pulse noises can be masked by detecting the noises from CT and aerial wire.

◆Charge pulse can be masked for a given length of times to reflex waves after detection.

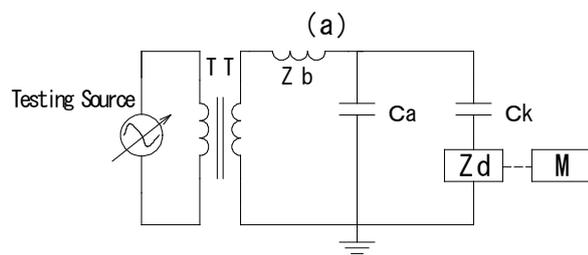
## ●Phase Gate Setup

Phase Gate can be set 0~359° at every 1° steps optionally.

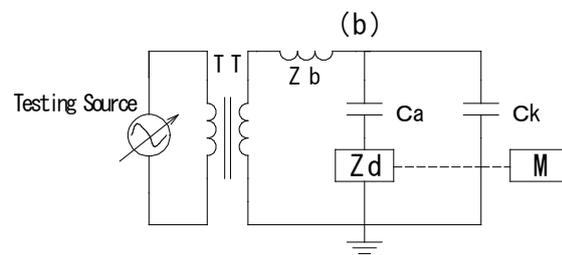
## Function Explanation

- In Narrow Frequency (NARROW BAND), since PD pulses at 10kHz - 200kHz can be detected and amplified. Narrow Band mode is suitable for specimen constructed distribution contract circuit and can measure generators, motors, transformers, cables and capacitors.
- In wide band (WIDE BAND), since PD pulse at 10kHz~4MHz can be detected and amplified, thus is superior for pulse resolution. Wide band mode is suitable for specimen constructed focused constant circuit and can measure power devices, compact high frequency transformers.
- N-q characteristic test can be performed with COUNT mode since Pulse Counter is built-in. (N: repetition rate of PD pulse, q:partial discharge magnitude)
- Possible to analyze "partial discharge-phase" since phase gate is set optionally.
- Periodicity noise can be masked.(External control is also possible.)

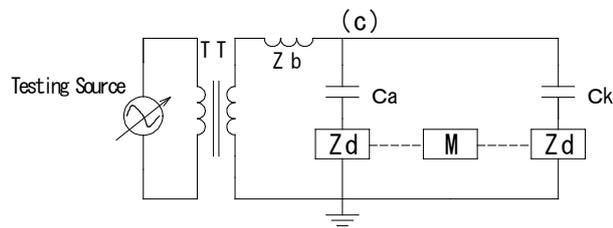
## Connecting Diagrams



(a) Grounded Specimen



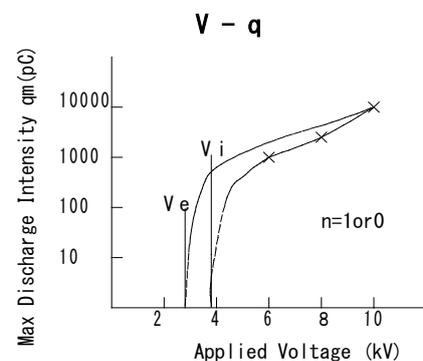
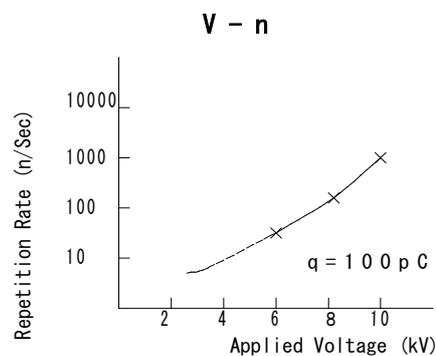
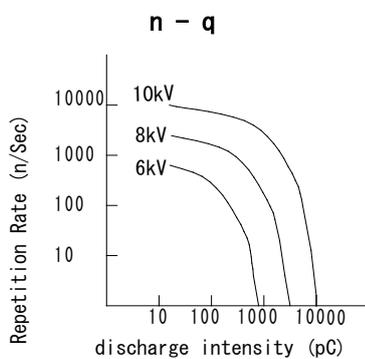
(b) Ungrounded Specimen



(c) Ungrounded Specimen (Balanced Circuit)

Ca : Specimen  
 Ck : Coupling Capacitor  
 Zb : Blocking Coil  
 Zd : Detecting Impedance  
 M : Partial Discharge Measuring Set

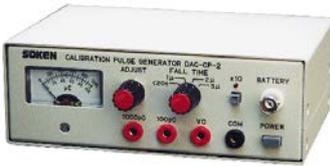
## Characteristic Observed



# DAC-PD-3 PARTIAL DISCHARGE MEASURING SET

## Option Accessories

### ■ Calibrator [Model DAC-CP-2](#)



- Output Voltage : 5V, 50V
- Lamp Time : <20nS
- Generating Pulses : 0~10000pC
- Repetition Frequency : 50Hz
- Power Source : Battery 7.2V
- Size : W170xH60xD110(mm)
- Weight : 800g, approx.

### ■ Detector [Model PDE-2](#)



- Applicable Frequency Band : 10kHz - 4MHz
- Max. Applicable Current : Balance Circuit 5A  
: Un-balance Circuit 1A
- Size : W170xH70xD110(mm)
- Weight : 1kg, approx.

### ■ PD Detecting Box [Model DAC-PDB-2](#)

Blocking Coil, Coupling Capacitor and Detector (DAC-PDE-2) are built-in one box.

- Rated Voltage : AC12kV
- Rated Current : 3A
- Capacitance : 2000pF
- Size & Weight : W260xH340xD230(mm) 7kg



### ■ Blocking Coil & Coupling Capacitor [Model DAC-LCC series](#)

High Inductive Blocking Coil and Coupling Capacitor are built-in one unit. Select a suitable model according as test voltages.

	DAC-LCC-15	DAC-LCC-30	DAC-LCC-50
Rated Voltage(kV)	15	30	50
Rated Current(A)	3	3	3
Capacitance(pF)	1000	1000	600
Hight(mm)	512	702	912
Weight(kg)	8	13	15



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