



GDPD-505 Portable Partial Discharge Detector



Product Description

GDPD-505 is a portable multi-functional PD online detector, which is suitable for testing transformers, GIS, switch cabinet, power cables, lightning arrester and CT/PTs.

The system includes detector, software, HFCT(high frequency current transformer), calibration pulse generator, 40kHz ultrasonic sensor, 150kHz ultrasonic sensor, UHF sensors, TEV sensors, Acoustoelectric sensors and some connection cables.

It uses pulse current, ultrasonic and UHF technology, to detect and analyze HF electromagnetic signals and ultrasonic signals of internal transformers and GIS, so that to detect and evaluate the running status of GIS, transformers.

Features

- The main detector is portable design, robust and reliable.
- Using 14inch laptop, built-in 20Ah Li-battery. Working up to 4hours without external power supply.
- Strong anti-interference ability. Using digital filtering technology, effectively eliminate field interference.
- Multichannel data collection. Comprehensive analysis of electromagnetic wave and ultrasonic wave generated by partial discharge.
- Easy wiring. BNC port for sensors and detector.
- Strong software functions. With PD measurement and analysis, Measurement and analysis of PD repeat discharge times “n”, anti-fixed interference, anti-dynamic interference, display mode of ellipse, straight line and sine wave can be selected.
- The discharge result is accorded with IEC60720 standard. The display value unit is pc and mV.

Specifications

- Measurement channel: 2-4pcs independent measurement channel
- Sampling rate: Max. 100MHz of each channel.
- Sensitivity: 1pc.
- Measurement range: 1pc-10000pc.
- Dynamic range: >80dB.
- Bandwidth 3dB of measurement frequency band: 10kHz-30MHz.
- Digital filter: any setting within 50kHz-30MHz.

- Power Supply: AC 220V \pm 10%, 50Hz, power <50W.
- Environment temperature: -20°C-60°C
- Relative humidity: \leq 95%.
- Altitude: \leq 3000m.

Sensor specifications

1. Acoustic electric sensors

- Measurement mode: Non-contact type
- Transmission mode: optic fiber
- Measurement signal: Ultrasonic signal, electric signal

2. HFCT (High Frequency Current Transformer)

- Detected frequency band: 50kHz-20MHz
- Transmission mode of signal: 50 Ω coaxial cable
- Sensitivity: 10pc

3. Calibration pulse generator

- Voltage: 0.1V(10pc), 0.5V(50pc), 1.0V(100pc), 5.0V(500pc)
- Output frequency: 50Hz-1kHz(step 50)
- Injected capacitance: 100pF
- Rising time: <30ns
- Attenuation time: \geq 100 μ s
- Output impedance: <100 Ω
- Error of calibration charge: < \pm 15%
- Size and weight: 135*80*25mm, about 275g

4. 40kHz Contact Ultrasonic Sensor

- Frequency: center frequency 40kHz
- Sensitivity: >65dB
- Shell material: stainless steel

5. 150kHz Contact Ultrasonic Sensor

- Frequency: center frequency 150kHz
- Transmission mode of signal: 50Ω coaxial cable
- Sensitivity: 10pc (it is detected within 1meter inside 5mm thick steel oil tank.)

6. TEV sensor

- Signal collection: Capacitor coupling.
- Frequency range: 3-100MHz
- Measurement range: -20-60dB/mV

7. UHF sensor

- Frequency: 300MHz-600MHz
1000MHz-1500MHz
- Sensitivity: -75dBm-35dBm
- Power supply: 8V-15V, current 120mA