



## GD-610B Insulator Faults Detector



### General Information

In High Voltage Distribution Network, it usually cause the faults of flashover, grounding or porcelain explosion because of insulators degradation. So it is important to detect and eliminate the faults of insulators, to ensure safe running of transmission and distribution line.

The model GD-610B is used to detect faults of insulators and locate the faults in power station, substation without cutting power. It also can be used for PD detection, corona discharge detection, discharge detection of electric equipment.

Detection Items is as following:

1. Unknown flashover fault of live insulators (trip and switch on for many times)
2. Leak current to the ground of live insulators (responsible sensitivity is no less than 1mA)
3. Composite fault of insulators.
4. Oxidation discharge detection of HV connectors.

5. Bad switch contact discharge detection of HV equipment.
6. Corona discharge detection.
7. Pollution flashover detection.

### Work Principle

When the insulator in the power transmission line of the power plant or substation has a flashover failure due to deterioration, a high-frequency ultrasonic wave will occur, which is not heard by the human ear. The wave collector of GD-610B will receive and enlarge the sound, inputs it into the host. After shaping, enlarging and processing the weak signal, the weak signal is converted to an audio signal by using unique microcomputer processing mode. So that the user can hear these sounds through the earphone and see the intensity indication of the sound on the LCD to judge the deterioration of the insulator. GD610B has strong directionality (laser locking the sound source, detecting the specific location of deteriorated insulators), provides technical support for condition-based maintenance, improves work efficiency, and achieves the ultimate goal of fault detection.

### Features

1. Small size, light weight, novel and beautiful structure, full function, simple and fast operation, safe and reliable.
2. For low or zero value insulators can automatically alarm. It is able to detect the insulator with leakage, but has not yet broken down at critical damage.
3. Long-distance detection, laser aiming, accurate positioning of the deteriorated insulator and the specific location of its equipment failure, the accuracy rate is 100%.
4. Dual indication of stereo headphone and LCD display, the effect is obvious.
5. Strong anti-interference ability.
6. High degree of intelligence:
  - Ø With data locking function.
  - Ø Under-voltage function(If low voltage, the instrument will shut off automatically).
  - Ø Constant current charging, auto stops by itself after full charge.
7. Lithium-ion battery with 1000 charging times, equipped with intelligent charging system to extend battery life.
8. Equipped with measurement plug-in for working environmental humidity, easy to understand the real working environment of the insulator.

### Specifications

Range: 6-500kV

Host	Center frequency	40KHz±2Hz
------	------------------	-----------

	Sensitivity	Discharge mode: pinpoint arc discharge  Discharge interval: 4mm
		Voltage:  AC 10kV      distance 18M  AC 35kV      distance 25M  AC 110kV      distance 50M  AC 220-500kV      distance 50M
	Operating voltage	7.4V (lithium-ion batteries*2pcs)
	Dimension	250*125*140mm
Aluminum alloy bracket	Laser	Output wave length: 650nm  Divergency degree of light beam: 0.4mrad  Output power: ≤ 50mw  Dimension: 16*0mm
	Telescopic sight/Detachable handle/Tripod standard mounting screw hole	
	High frequency sensor	Center frequency (fo): 40kHz±2Hz  Center capacitance (Co): 2500±20%pF

		Use temperature: -20-60°C Weight: 2.17kg
Headphone	Rated impedance (Z)	125Ω
	Frequency range	100Hz-10kHz
	Sensitivity	(1W/1m) 60dB
Charger	Input voltage	AC 220V±10%
	Input frequency	50Hz±5%
	Output DC voltage	DC 8.4V
	Current	1A
Packing dimension of whole set: 470*340*420mm		
Working temperature: -30-60°C; Humidity: (0~100)%RH		
Complete packing weight: 7.18kg		