



### GENERAL

The ground fault of DC system in power system is a kind of fault which is easy to happen and is harmful to power system. Whether it is positive or negative ground, it may cause the protection to be mis-operated or the protection to resist, endangering the normal operation of the power system.

DC system ground fault locator, is used for power station and transformer substation DC power system ground fault locating and pinpointing.

The Metravi DCGFL-999 adopts isolate programmable constant flow source to insert small current single to find the faulty point quickly, accurately and safely.

The waveform analysis method real-time calculate and display the resistive current value, the current direction and check the ground current waveform directly.

Device effectively gets rid of the system distributed capacitance interference and solves the locating of high resistance ground, low resistance ground, AC in DC ground, instant ground, impulse interference, loop ground, single-point, multiple point ground and so on.

### FEATURES

- No need system power off, power on to locate the system ground fault on-line to rise the system safety.
- AC crossing into system checking function to avoid the device damage of AC in
- Auto test the DC system voltage and auto adjust output voltage
- Intelligent distinguish the ground state and auto alarm when grounding.
- The transmitter detects fault information such as positive and negative bus voltage, fault resistance, grounding capacitance and balance resistance in real time.
- The transmitter supports DC and AC power supply modes; DC power supply without external power supply, direct power from the DC system, simple and convenient wiring.
- The transmitter can measure the DC system grounding resistance and distributed capacitance to the ground, and automatically calculate the optimal frequency of the output signal.
- In the current difference location mode, the receiver calculates and displays the resistive current in real time through the difference between the injected current signals, so as to determine the fault points in real time. The test sensitivity is greatly improved and can measure up to 1M insulation faults.
- Under the current waveform positioning mode, the receiver adopts waveform analysis digital signal processing technology to calculate and display the resistive current waveform in real time, so as to determine the fault point in real time.
- Using wireless communication technology, real-time data transmission, convenient and fast.
- Low battery indicator function of receiver: the instrument will automatically alert when the battery is under voltage.
- Receiver automatic power off function: within 60 minutes without operation or battery low voltage to a certain extent can be automatically power off.



## SPECIFICATION

### Transmitter:

- Applicable DC system voltage grade 220V, 110V, 48V, 24V.
- Power supply mode of the transmitter : DC screen power supply (220V, 110V) or AC 220V power supply. If AC 220V power supply is used, the transmitter will automatically cut off the DC power supply loop, and AC 220V power supply is preferred.
- DC system voltage measurement range : DC 0~500V.
- DC voltage measurement resolution : DC 1V, accuracy : 5%±5V.
- The system for ground impedance measurement range: 0~1 m Ω, accuracy: 10% plus or minus 3k Ω.
- The system insulation resistance measuring range : 0~1 m Ω, accuracy: 10% plus or minus 3k Ω.
- AC crossing in voltage measurement range : AC 0~280V.
- AC voltage measurement resolution : AC 1V, accuracy: 5%±5V.
- Resistance to ground distributed capacitance value : branch ≤ 47UF, system total capacitance to ground ≤150 UF.
- Maximum current of transmitter output : 5mA.
- Transmitter output signal frequency:
  - Receiver positioning mode in current difference : 0.1Hz~0.25Hz adaptive frequency.
  - Receiver in current waveform locating mode : 0.5Hz/0.2Hz/0.1Hz.

### Receiver:

- The insulation resistance measuring range : 0 ~ 600 kΩ.
- Insulation impedance measurement resolution : 1 kΩ .
- The resolution of earth leakage current detection : 0.1mA.
- Clamp dynamic range: clamp double wire (positive and negative bus clamp together) range: 0~40A (load) Single wire clamp range : -5A to +5A .
- Receiver power supply : built-in rechargeable lithium battery. It can work for 20 hours, and the battery can be fully charged in 3~4 hours.
- Clamp power supply : 2 AA (No.5) alkaline dry batteries. Continuous working time of 10~20 hours (depending on battery quality).
- Wireless communication technology indicators ISM frequency band : 433MHz
  - Air speed : 2.4 KBPS.
  - Wireless communication signal power : 30dBm.

### Other:

<b>Power consumption</b>	: Transmitter <15W. Receiver <2W.
<b>Conditions of use</b>	: Temperature :-10°C~40°C; Humidity 10~90% RH; < 4500m elevation.
<b>Size</b>	: Transmitter 280mm × 220mm × 90mm. Receiver 220mm × 125mm × 55mm. Signal Calipers 180mm × 60mm × 35mm. Current Sensor 180mm × 130mm × 30mm.
<b>Weight:</b>	: Transmitter 2.00kg. Receiver 0.90kg. Signal clamp 0.21kg. Current sensor 0.18kg.



\*Technical Specifications & Appearance are subject to change without prior notice