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FLD-902D

# HV BRIDGE/EHV CABLE SHEATH FAULT GENERATOR

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## FLD-902D signal generator



Transmitter

## 1.Introduction:

#### Overview:

Good solution of the pinpointing of single phase to earth fault as signal transmitter and it can also matched with FLD-903P EHV cable sheath fault pinpointer to do sheath fault pinpointing.

#### 1.1 Feather

- Auto testing. Big LCD displays the distance directly. Easy operation and solute the difficulty of HV Bridge balance adjusting.
- Overcome the HV bridge disadvantage that can't locating because lack of good insulation sheath in site.
- Built-in HV continuous current. Output voltage and current is continuously adjustable and period optional.
- Inject signal to reappear the fault, easy pinpointing with stable current signal.
- VLF signal to avoid effect of system distributed capacitance and easy to pinpoint the high resistance fault.
- Support both power supply and storage battery supply
- Light weight and easy to portable.

### 1.2 Specification

Output frequency:1Hz
Open circuit voltage: effective value of fundamental wave 0~2800V
Pulsating DC: peak 8kV,amount to 10kV phase voltage peak

#### FLD-902D HV BRIDGE/EHV CABLE SHEATH FAULT GENERATOR

Shirt circuit DC: effective value of fundamental wave 0~35mA (pulsating DC,peak 100mA)

- Max. Power:900W
- Dimension: transmitter 417mmx234mmx318mm

Weight: transmitter 16.8kg

## **2.Equipment Composition**

It is used to inject ultralow frequency pulsating DC signal to the fault line.

The transmitter panel as below:



Fig.1 transmitter panel

Power socket: contact with 220V power

Protective tube: change protective tube if needed

### Power switch: turn on/off the device

**HV on**: when turn on the device, press this button when output adjustment on the ZERO position to output HV signal.

HV off: Stop HV output

Zero: indicate that the output voltage on the zero position

**Protect**: when the device become protect mode, this indicator will be bright to show the device is in protect blocking state. Adjust the Output adjust button to Zero position to reset the indicator.

**Output adjust**: adjust the output current and voltage. When it on the Zero position, to press HV on button to start the transmitter signal output function.

**Protect current**: indicate the input current value. If current is over default max. 4A,the device will be stopped. Then it is needed to zero the output adjustment button to set protective circuit to readjustment the current.

Output voltage: indicate the value of output voltage

Earth: earth terminal to contact with the earth line to connect the earth mat.

**HV out**: connect the fault line. According the local state to clip the switchgear wire or connect the faulty line with rod of patch board

**Test ground**: connect with earth mat.

## 3. Method of application

### 3.1 Work principle

Transmitter output is impulse DC signal which frequency is 1Hz.Low frequency less impact by the system division capacitance. It is proved the 1Hz signal can satisfy most requirements from the testing site.

The limited voltage of the transmitter is 8kV.It is equal the phase voltage peak value of 10kV line. If the voltage too high, it will bring line major insulation broken. If it's too low, the fault can't be reappeared. This value could be adjusted when production.

Hanging the sensor along with the line to test the current. Sensor test the current on the line and automatic zero setting then converse analog signal into the digital signals to transmit by wireless mode.

### 3.2 Operation of the transmitter

#### 3.2.1 Wiring

First beak the fault line, then connect the it with utility power(220V).Connect the earth line with Protect ground terminal and the earth grid.

Wire the earth test line (HV line with black clip) to the earth test grounding and earth gird.

We could wire the output line of the fault line according the site conditions. Connect the short line which has a red clip with the line terminal and the line side of the switchgear. If must connect it on the overhead line ,we suggest to use the long line. Connect its high voltage outlet with the line terminal, and then connect the other line on the insulation hanging rod, then hang the rod on the fault line.

#### 3.2.2 Power supply

Open the power switch. Now the transmitter still doesn't transmit.

### 3.2.3 Start and output

First adjust the output adjust button to ZERO.Now the Zero is bright.

Then press HV on button to begin the output. Now the HV indicator is light.

Turn up the output adjust button slowly to rise the current but make sure the protective indicator doesn't light. If this indicator light, it indicates the faulty line has small resistance so the input current is too high. Now it's needed to adjust the output adjust button to ZERO anticlockwise and readjust to suitable position.

3.2.4 Stop output.

If need to stop the output, press HV off button

3.2.5 After test, turn off power and disconnect the wiring.