

K-3837 Ground Fault Locator



Bad insulation or grounding in the power system is a very big hazard and it can be very costly to repair upon power break-off. Therefore, it will be very significant to fast pinpoint and elimination of grounding faults. It is also required by DIN VDE 0100-410 (VDE 0100-410): 2007-06 chapter 411.6.3.1 and IEC 60364-4-41 chapter 413.1.5.4.

Kongter's K-3837 is developed to fast detect, trace and pinpoint virtual grounding faults on DC systems where electrical cables have breakage and current lost to ground. It will save you from long time unnecessary troubleshooting and helps to increase the stability of your electrical equipments. This device is widely used in different DC systems including power utilities, locomotive, telecom and etc.

Features

1. Safe to use

It could quickly pinpoint the ground fault without injecting signal to DC system. There is no interruption to DC system itself during signal fault location with its built-in model for current and voltage limitation.

2. High reliable designing

It adopts main system of 16-bit micro-processor. Hardware designing strictly follows EMC standard to ensure reliability of itself and its tested systems.

3. Precise measurement

It adopts high accurate current clamp for signal tracing and precise ADC for voltage sampling. This ensures the accurate measurement of voltage and resistance.

4. User-friendly interface

It has LCD display with vivid information indicating grounding status, waveform, insulation leveling, insulation resistance, leakage current, and direction of ground fault and so on. This user-friendly interface makes it easy and effective to use onsite.

5. Intelligent measurement function

- Signal analyzer can automatically identify system voltage leveling.
- When insulation resistance has any change, signal analyzer could quickly indicate the changes.
- Distance will not affect the signal detection once the signal analyzer and detector are synchronized.
- During fault location, current clamp could either clamp on single cable or multiple cables for faster and more effective signal tracing.
- Signal detector will indicate the direction of ground fault on screen once it detects any insulation problem.
- Complete measurement and trouble-shooting function
- Signal detector and analyzer have wireless communication. Complete measurement and info displaying function could handle different types of insulation problem in DC system.

Application

Railway and Transit: signal, communication, and locomotive electric equipment

Power Utility: DC system with faulty grounding

Industrial Facilities: electric safety equipment for general power distribution applications

Telecommunication: electronic equipment with faulty grounding

Functions

- Measures voltage between DC system and ground ranging from 0 to 300V.
- Measures grounding resistance up to 999K Ω for both busbars and each branch circuit
- It detects and measures AC voltage which interrupts in DC system. Detection range is from 0 to 288V.
- Fast signal positioning for the point of ground fault in branch circuit.
- It performs the function as accurate current meter with resolution up to 0.01mA.
- It could quickly pinpoint the ground fault without injecting signal to DC system.
- Arrow indication effectively helps users trace the signal and pinpoint the ground fault.

- Display of insulation index after signal detection on each tested branch circuit.
- Waveform display for tested circuit, indicating insulation status and current changes in tested circuit, it help users fast and effectively locate the point with grounding fault.

Technical Specification

Operation environment

- Temperature: -30 $^{\circ}$ C \sim +50 $^{\circ}$ C
- Humidity: \leq 95%

Wireless communication

- Signal power: \leq 10dbm
- Signal frequency: 433Mhz
- Sensitivity: -106dBm

Signal analyzer specification

- For DC system of 48V, 110V, 220V or customized voltage level.
- Voltage range of system to ground: 0-300V
- Measurement of DC voltage to ground: 0-300V
- Measurement of AC voltage to ground: 0-300V
- AC interruption warning: \geq 5V
- Voltage resolution: 0.1V
- Measurement range of system to ground: 0-999.9K Ω
- Grounding resistance resolution: 0.1K Ω
- Display: LCD
- Current detection signal: 0-2mA adjustable
- Voltage detection signal: 0-50V adjustable
- Signal frequency: 0.16Hz and optionally no-signal mode
- Anti-interference from DC distributed capacitance: 1000uF
- Power supply: powered by tested circuit
- Weight and dimension: 0.503kg, 200*117*55mm

Signal detector specification

- Insulation resistance (in signal mode)
 - In 220V system: 0 -600K Ω
 - In 110V system: 0 -300K Ω
 - In 48V system: 0 -60K Ω
- Resistance resolution: 0.1K Ω
- Insulation resistance (in no-signal mode)
 - In 220V system: 0 -50K Ω
 - In 110V system: 0 -25K Ω
 - In 48V system: 0 -10K Ω
- Resistance resolution: 0.1K Ω

Waveform display time: 12 seconds

Current measurement range: \pm 100mA

Current resolution: 0.01mA

Display: LCD

Direction indication: forward or reverse direction indicating in arrow



High sensitive current clamp

Kongter

Anti-interference from DC distributed capacitance: 1000uF
Distance from analyzer during signal tracing: no limitation
Clamp jaw size: Φ 30mm
Power supply: 5V by 4 pieces of AA standard battery
Weight and dimension: 0.332kg, 200*100*33mm

Kit Includes

- K-3837 Signal Analyzer
- K-3837 Signal Detector
- Qty. (1) Signal Testing Leads with clips
- Qty. (1) Current clamp with cable
- Qty. (4) Batteries (1.2V 2200mAh)
- Battery Charger
- Carrying Case



Signal Analyzer



Signal Detector

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