



<b>Product Name</b>	GAOTek DC Ground Fault Detection Device
<b>Product SKU</b>	GAOTek-GFL-129
<b>Product URL</b>	<a href="https://gaotek.com/product/gaotek-dc-ground-fault-detection-device/">https://gaotek.com/product/gaotek-dc-ground-fault-detection-device/</a>



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# GAO Tek DC Ground Fault Detection Device

## 1. Introduction

GAOTek DC Ground Fault Detection Devices are suitable for AC and DC ungrounded systems below 1000 V. They are often used in electric vehicle charging devices, UPS power supply systems, DC power supply systems in the communication industry, isolated medical power systems, and any AC and DC ungrounded systems.



Based in New York City & Toronto, GAO Tek Inc. is ranked as one of the top 10 global B2B technology suppliers. GAO ships overnight within the U.S. & Canada & provides top-notch support thanks to its 4 decades of experience.



## 2. Features

- Suitable for AC and DC ungrounded systems below 1000 V
- Adaptive system distributed capacitance, no need for bus voltage
- Measurement accuracy below 100  $\mu$ F is within 5%
- A set of digital input, a set of relay alarm output
- Optional RS-485 and CAN communication methods
- Wide range control power input

## 3. Technical Specifications

Measuring range	1 k $\Omega$ to 20 M $\Omega$
Testing Voltage	DC 0 V to 800 V AC 0 V to 600 V
Display Type	Analogue Only
Accuracy Class	5%
Operating Temperature	-4 °F to +140 °F (-20 °C to +60 °C)
Dimensions	5.19 in x 3.01 in x 2.26 in (131.8 mm x 76.5 mm x 57.3 mm) $\pm$ 0.03 in ( $\pm$ 1 mm)
Weight	2.2 lb (1 kg)

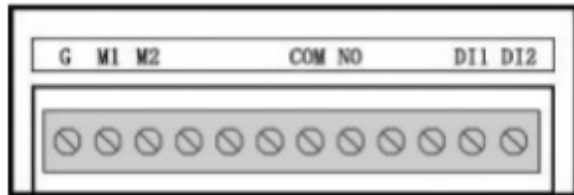
## 4. Application

- Electric Vehicle charging station
- UPS power supply system
- DC power supply system for communication industry
- Healthcare Isolated Power System
- Any AC or DC ungrounded System

## 5. Terminal Description



L1	DC+ Terminal of the system to be monitored
L2	DC- Terminal of the system to be monitored
KE	GND
DC+	DC+ Terminal of power supply
DC-	DC- Terminal of power supply



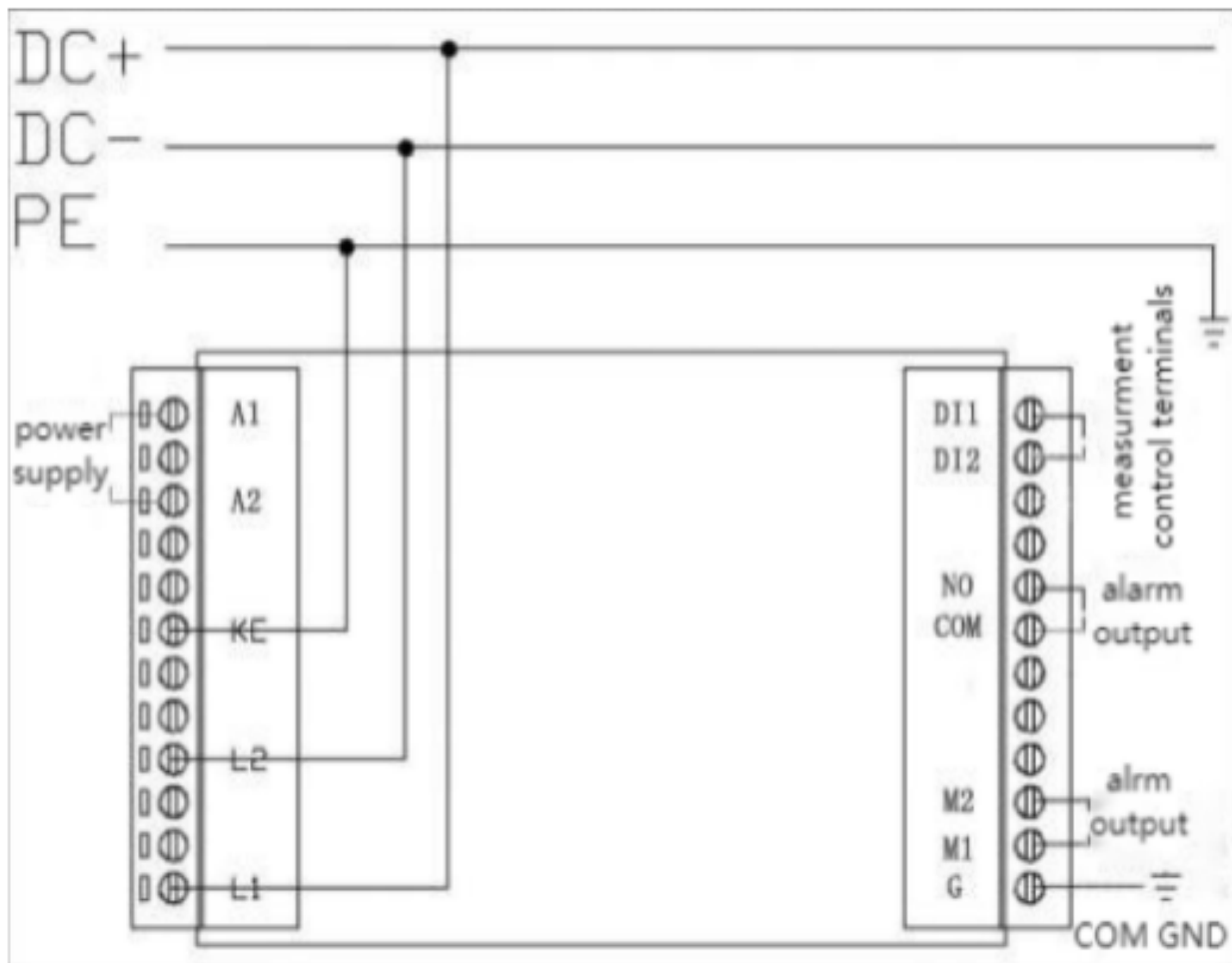
M1	RS485_B
M2	RS485_A
G	COM GND
NO	Insulation resistance alarm relay normally open contact
COM	Insulation resistance alarm relay common contact
D 1, D 2	Insulation measuring control terminal, start insulation measurement after short connection; Stop measuring after disconnecting. If using communication, do not short connect D 1, D 2



## 6. LED state description

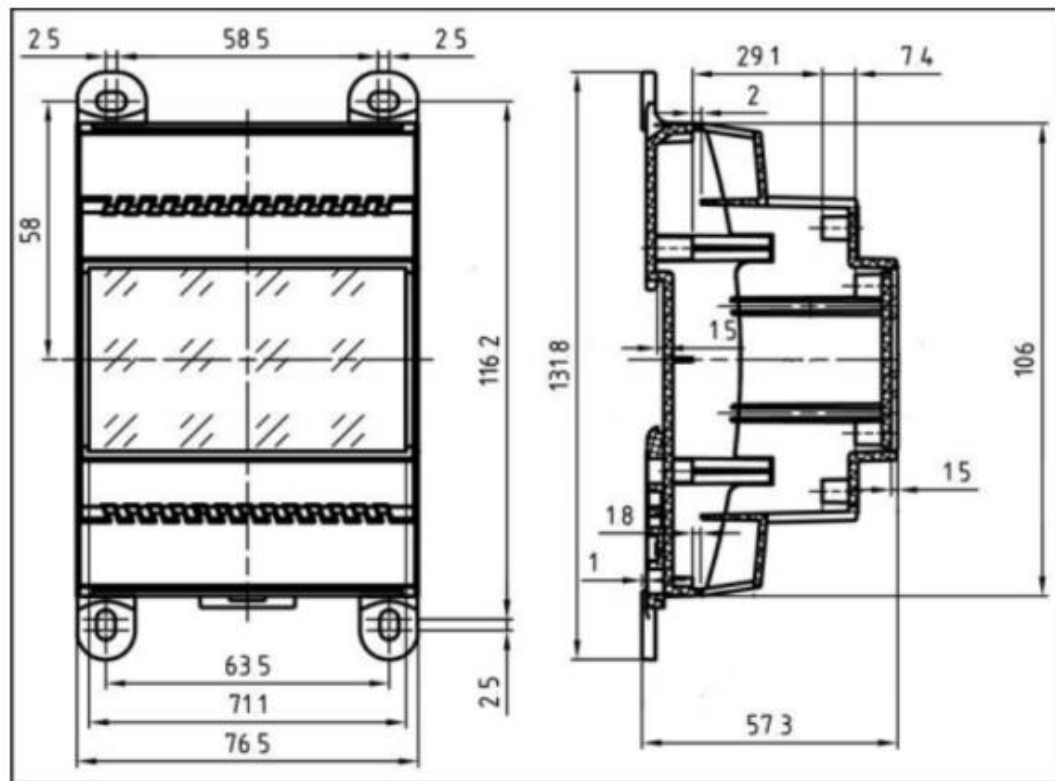
N°	Logo	Colour	Meaning	Description
1	RUN	Green	Operating state	<b>ALWAYS ON:</b> High Voltage relay opens after powered off <b>1Hz FLASH:</b> High voltage relay closes after powered on <b>OFF:</b> Program crash or System Failure
2	ALM1	Yellow	L1 Resistance to the ground is higher than the set value, alarm	<b>OFF:</b> Normal Operation <b>ON:</b> The detected L1 Resistance value is less than the set value
3	ALM2	Yellow	L2 Resistance to the ground is higher than the set value , alarm	<b>OFF:</b> Normal Operation <b>ON:</b> The detected L2 Resistance value is less than the set value
4	COM	Green	Communication Status	<b>FLASH:</b> Normal Operation <b>OFF:</b> Shutdown

## 7. Operating Circuit



**Figure 1 Applies to DC ungrounded systems up to 1000V**

## 8. Overall Dimensions



1. Unit: mm
2. L\*W\*H: 131.8×76.5×57.3 (±1mm)
3. Bottom hole diameter: 4mm
4. 35mm standard DIN rail or M4 screw





## 9. Technical Parameters

### 9.1 Power supply

Input voltage - DC 9~36V

Normal consumption- About 4VA

### 9.2 System to be monitored

System voltage : DC 0~1000V or AC 0~600V

Alarm set value : Default 80k $\Omega$

Internal AC resistance : > 400 K $\Omega$

Internal DC resistance : > 400 K $\Omega$

Internal test voltage : +/- 24V

Maximum test current(R=0) : < 0.1mA

Accuracy : 5%

contact : 1 set of independent alarm signal output

Maximum power supply capacity: AC 125V, 2A or DC 30V 2A

Operation mode : continuous

Operating temperature : -20...+60 °C

Class of pollution : II



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