

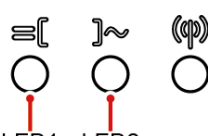
# HUAWEI SUN2000-50KTL-M0 Inverter Low Insulation Resistance Fault Indication Guide

HUAWEI three phase inverter SUN2000-50KTL-M0 inverter has followed the requirement of AS 4777.2:2020 to detect earth fault via check the insulation resistance value. This inverter complies with IEC 62109 2 clause 13.9 for earth fault alarm monitoring. If an Earth Fault Alarm occurs, LED 1 and LED 2 will go red and fault code will occur in the app. The fault is depicted in following table:

Alarm ID Alarm	Alarm Name	Alarm Severity	Possible Causes	Troubleshooting
2062	Low Insulation Resistance	Major	Cause ID = 1 <ul style="list-style-type: none"> <li>A short circuit occurs between the PV array and the ground.</li> <li>The PV array is in a moist environment and the power cable is not well insulated to ground.</li> </ul>	Check the output <ol style="list-style-type: none"> <li>impedance of the PV array to ground. If there is a short circuit or lack of insulation, rectify it.</li> <li>Check that the PE cable of the SUN2000 is correctly connected.</li> <li>If you are sure that the impedance is less than the preset protection threshold in a cloudy or rainy environment, log in to the mobile phone app, SmartLogger, or NMS and reset the insulation impedance protection threshold.</li> </ol>

The fault or alarm can be indicated through two different ways:

## 1. Inverter LED display:

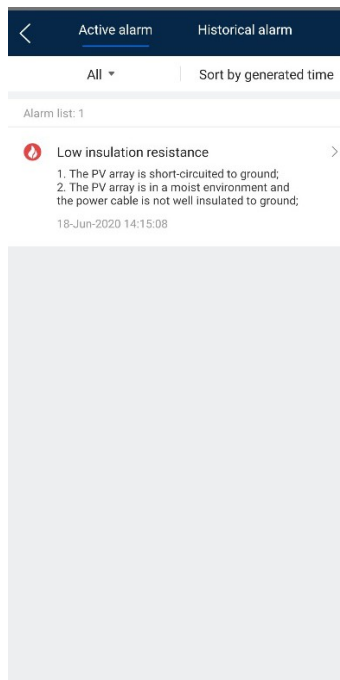
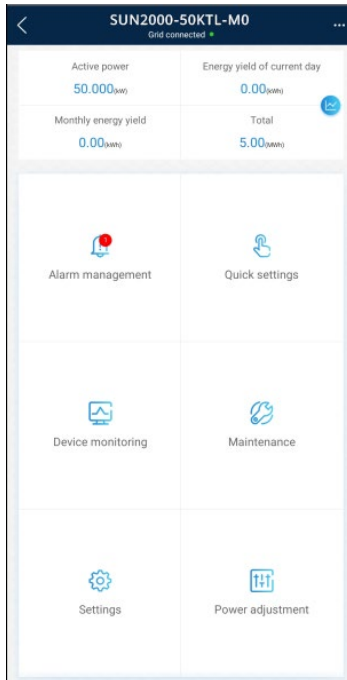
Category	Status		Description
Running indicator	<b>LED1</b>	<b>LED2</b>	
 LED1 LED2	Steady red	Steady red	Fault

## 2. FusionSolar App Indication :

- When connecting FusionSolar App to inverter via its built-in WLAN communication, low insulation resistance alarm or fault can be indicated via following interface by:

Click 'Alarm Management'

Select 'Low Insulation resistance' alarm



- When user monitoring the PV plant registered in FusionSolar App, the low insulation resistance alarm or fault can also be indicated via following interface by :

Clicking the inverter icon in power flow diagram → Select Alarm info tab → click 'Low Insulation



## Resistance' active alarm

< Smart Energy Center

al-time Info Device Info **Alarm Info** Historical Info

Active Alarm Historical Alarm

**● Low Insulation Resistance(Major)**

Occurrence Time: 18/06/2020 14:15:08

Confirm status: Activate

## < Alarm Details

### ● Low Insulation Resistance

Plant Name : huawei  
Alarm Severity: Major  
Alarm Status: Activate  
Alarm ID: 2062  
Cause ID: 1  
Device name: HV2050138102  
Device type: Smart Energy Center  
Local Time: 17/06/2020 20:00:27  
Occurrence Time: 17/06/2020 20:00:27  
Recovery Time: --

### Handling Suggestion Details

Possible cause:

1. The PV array is short-circuited to ground.
2. The PV array is in a moist environment and the power cable is not well insulated to ground.

Suggestion:

1. Check the impedance between the PV array output and PE, and eliminate short circuits and poor insulation points.
2. Check that the PE cable for the inverter is

Confirm

Clear

Recover