



# HUAWEI SUN2000-2-6KTL-L1 Inverter Low Insulation Resistance Fault Indication Guide

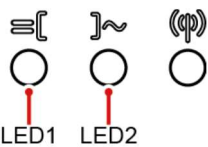
HUAWEI single phase residential inverter SUN2000-2/3/4/4.6/5/6KTL-L1 inverter has followed the requirement of AS 4777.2:2015 to detect earth fault via check the insulation resistance value. This inverter complies with IEC 62109-2 clause 13.9 for earth fault alarm monitoring. If an Earth Fault Alarm occurs, 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	<p>Cause ID = 1</p> <ul style="list-style-type: none"><li>• A short circuit occurs between the PV array and the ground.</li><li>• The ambient air of the PV array is damp and the insulation between the PV array and the ground is poor.</li></ul>	<p>Check the output</p> <ol style="list-style-type: none"><li>1. Impedance of the PV array to ground. If there is a short circuit or lack of insulation, rectify it.</li><li>2. Check that the PE cable of the SUN2000 is correctly connected.</li><li>3. If the impedance is lower than the specified protection threshold in rainy and cloudy days, set Insulation resistance protection using the mobile app, SmartLogger, or NMS.</li></ol> <p>Current insulation resistance: x MΩ, possible short circuit position: x%. The short circuit position is valid for a single PV string. If there are multiple PV strings, check the PV strings one by one.</p>

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

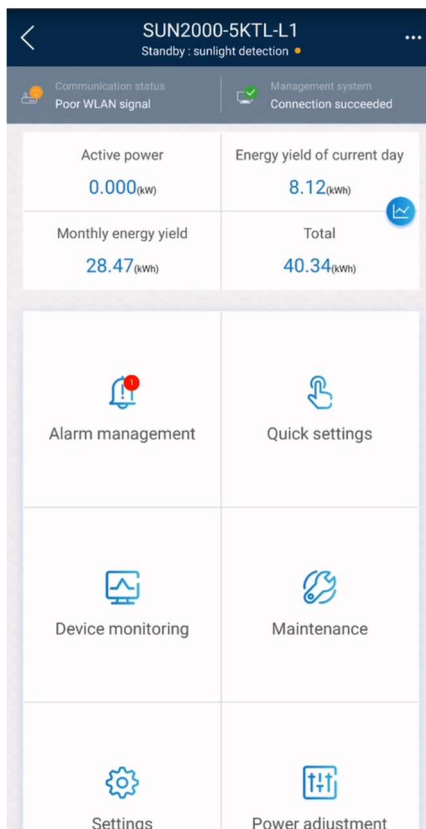
## 1. Inverter LED display:

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

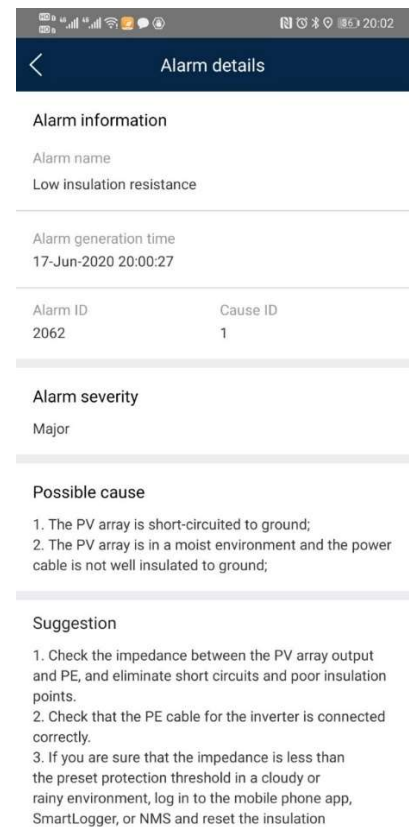
## 2. FusionSolar App Indication :

- 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



20:40



## 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