

HUAWEI SUN2000-2-6KTL-L1 and SUN600-5/6KTL-L0 Inverter Low Insulation Resistance Fault Indication Guide

HUAWEI single phase residential inverter SUN2000-2/3/4/4.6/5/6KTL-L1 and SUN600-5/6KTL-L0 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	Р	ossible Causes	Troubleshooting
2062	Low Insulation	Major	Cause ID = 1		Check the output
2002	Resistance		•	A short circuit occurs	1. Impedance of the PV array
				between the PV array	to ground. If there is a short
				and the ground.	circuit or lack of insulation,
			•	The ambient air of the	rectify it.
				PV array is damp and	2. Check that the PE cable of
				the insulation between	the SUN2000 is correctly
				the PV array and the	connected.
				ground is poor.	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.
					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.



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

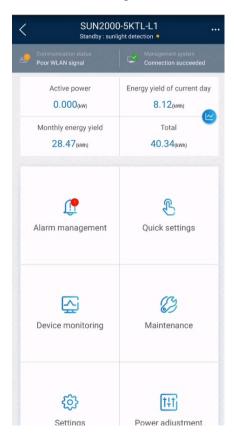
1. Inverter LED display:

Category	Stat	Description	
Running indicator	LED1	LED2	
□ □ (♥) □ □ □ LED1 LED2	Steady red	Steady red	Fault

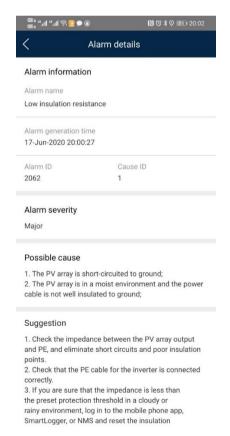
2. FusionSolar App Indication:

 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





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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

Clear