

## HUAWEI SUN2000-100KTL-M1 Inverter Low Insulation Resistance Fault Indication Guide

HUAWEI single phase residential inverter SUN2000-100KTL-M1 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 Name	Alarm	Possible Causes	Troubleshooting
Alarm		Severity		
2062	Low Insulation	Major	Cause ID = 1	1. Check the impedance of
2002	Resistance	Major	1. The PV string is short-	the PV string to PE. If a
			circuited to PE.	short circuit occurs or the
			2. The PV string has	insulation is insufficient,
			been in a moist	rectify it.
			environment for a	2. Check that the PE cable
			long time and the	of the solar inverter is
			circuit is not well	correctly connected.
			insulated to ground.	3. If you are sure that the
				impedance is less than the
				default value in a cloudy or
				rainy environment, reset
				Insulation resistance
				protection.



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

## 1. Inverter LED display:

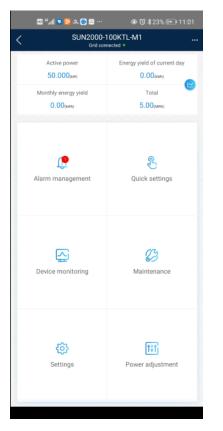
Category	Status		Description
Running indicator	LED2	LED4	
	Off	Steady red	Fault

## 2. FusionSolar App Indication:

• When connecting FusionSolar App to inverter via external WLAN adaptor, low insulation resistance alarm or fault can be indicated via following interface by:

 $\rightarrow$ 

## Click 'Alarm Management'



Select "Low Insulation Resistance" alarm

11:00 @ ♂ ¥22% 匝 11:00
Alarm details
Alarm information
Alarm name Low insulation resistance
Alarm generation time 16-Jun-2020 07:58:29
Alarm ID Cause ID 2062 1
Alarm severity Major
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 connected correctly. 3. 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.

• 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  $\rightarrow$  Select Alarm Info tab