

Alarm Codes For All US Inverters



Subject: Alarm Codes For All US Inverter Products

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1. Alarm Codes for Solis 1P(1-6)K-4G-US and Solis-(6-10)K-4G-US

<p>No Information (Blank Screen)</p>	<ul style="list-style-type: none"> • Input voltage low/missing • Polarity reversed • Main board damaged 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check PV connections • Check polarity • Check voltage >120V Single, >350V three <p>Test – DC Switch ON</p> <ul style="list-style-type: none"> • Check voltage >120V Single, >350V three • If DC voltage is “0” replace inverter
<p>Initializing (Inverter stuck in this mode)</p>	<ul style="list-style-type: none"> • Inverter is waiting for driving signal 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check PV connections • Check polarity • Check voltage >120V Single, >350V three <p>Test – DC Switch ON</p> <ul style="list-style-type: none"> • Check voltage >120V Single, >350V three • A cable may have been damaged or loosened in shipping replace inverter
<p>OV-G-V: Over Grid Voltage</p>	<ul style="list-style-type: none"> • Inverter detects grid voltage as too high 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check AC at the inverter • If AC measures high, adjust upper limit with permission from utility <p>Test – DC Switch ON, full power</p> <ul style="list-style-type: none"> • Check AC at inverter test points • Compare with LCD • If AC measures high, cables between inverter and interconnect are too small • Check ampacity and voltage drop calculations
<p>UN-G-V: Under Grid Voltage</p>	<ul style="list-style-type: none"> • Inverter detects grid voltage as too low 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check AC at the inverter test points • If AC measures low, adjust lower limit with permission from utility <ul style="list-style-type: none"> • Check LCD voltage reading, may be a bad measurement circuit <p>Test – DC Switch ON</p> <ul style="list-style-type: none"> • Check grid standard • Replace inverter
<p>OV-G-F: Over Grid Frequency</p>	<ul style="list-style-type: none"> • Inverter detects grid Frequency as too high 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check frequency at the inverter test points • If Frequency measures high, adjust upper limit with permission from utility <ul style="list-style-type: none"> • Check LCD reading, may be a bad measurement circuit <p>Test – DC Switch ON</p> <ul style="list-style-type: none"> • Check grid standard • Replace inverter
<p>NO-GRID</p>	<ul style="list-style-type: none"> • Inverter does not detect the grid 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check AC at the inverter test points • L-L, L-GND • Do NOT tell me 240VAC • Check LCD reading, may be a bad measurement circuit <p>Test – DC Switch ON</p> <ul style="list-style-type: none"> • Check grid standard • Replace inverter
<p>OV-DC: DC voltage is too high</p>	<ul style="list-style-type: none"> • Inverter detects High DCV 	<p>Test – DC switch OFF</p> <ul style="list-style-type: none"> • Check DC at the inverter test points • If DCV is high, too many panels in the string <p>Test – DC Switch ON</p> <ul style="list-style-type: none"> • Check LCD reading, may be a bad



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		measurement circuit <ul style="list-style-type: none"> • Replace inverter
OV-BUS: DC BUS voltage is too high	<ul style="list-style-type: none"> • Inverter detects High DCV on internal bus 	Test <ul style="list-style-type: none"> • Measure DC and AC voltages • Compare with LCD • Replace inverter • Internal damage • Wire came loose during shipping
UN-BUS: DC BUS voltage is too low	<ul style="list-style-type: none"> • Inverter detects low DCV on internal bus 	Test <ul style="list-style-type: none"> • Measure DC and AC voltages • Compare with LCD • Replace inverter • Internal damage • Wire came loose during shipping
GRID-INTF: Grid unstable	<ul style="list-style-type: none"> • Inverter detects grid instability, internal fault current high 	Test – With DC Switch OFF <ul style="list-style-type: none"> • Measure AC voltage • Test AC line for THD • Test – With DC Switch ON Test AC line for THD <ul style="list-style-type: none"> • Multiple inverters/turn one off • Impedance matching adjustment or box • Internal damage • Wire came loose in shipping
INI-FAULT: Initialization Protection	<ul style="list-style-type: none"> • Master and Slave DSP have different values 	Reset Inverter <ul style="list-style-type: none"> • DC switch OFF • Wait until all lights/LCD turn off • DC switch ON • Replace inverter
OV-TEM: Temperature Protection	<ul style="list-style-type: none"> • Inverter detects high ambient temperature >60C 	Inspect installation <ul style="list-style-type: none"> • Check heatsink for obstructions/ventilation • Is inverter in direct sunshine • Measure ambient temperature near inverter • If temp is in range replace inverter
PV ISO-PRO 01/02: Ground Protection	<ul style="list-style-type: none"> • Inverter detects low DC insulation resistance 	Inspect installation <ul style="list-style-type: none"> • Reset inverter • Note weather conditions when alarm occurs • Measure insulation resistance • If normal, measure in SAME weather as alarm • Physically check cables • Replace inverter
AFCI Check FAULT	<ul style="list-style-type: none"> • AFCI module self check fault 	Reset Inverter <ul style="list-style-type: none"> • DC switch OFF • Wait until all lights/ LCD turn off • DC switch ON • Replace inverter
ARC-FAULT	<ul style="list-style-type: none"> • Inverter detects arc in DC circuit 	Inspect installation <ul style="list-style-type: none"> • Physically check cables • Inspect panel junction boxes • Inspect cable connections • Reset inverter • Replace inverter





2. Alarm Codes for Solis-(1-5)K-2G-US

OV-G-V	OVER GRID VOLTAGE
UN-G-V	UNDER GRID VOLTAGE
OV-G-F	OVER GRID FREQUENCY
UN-G-F	UNDER GRID FREQUENCY
G-IMP	HIGH GRID IMPEDANCE
NO-GRID	NO GRID VOLTAGE
OV-DC	OVER DC VOLTAGE
OV-BUS	OVER DC BUS VOLTAGE
UN-BUS	UNDER DC BUS VOLTAGE
GRID-INTF	GRID INTERFERENCE
INI-FAULT	INITIALIZATION SYSTEM FAULT
OV-TEM	OVER TEMPERATURE
GROUND-FAULT	GROUND FAULT
ILEAK-FAULT	HIGH GRID LEAKAGE CURRENT
RELAY-FAULT	RELAY CHECK FAULT
DCINJ-FAULT	HIGH DC INJECTION CURRENT
AFCI CHECK FAULT	AFCI MODULE SELF CHECK FAULT
ARC-FAULT	ARC DETECTED IN DC CURRENT





3. ALARM CODES FOR Solis-(25-40)K-US and Solis-(50-66)K-US

Alarm Message	Failure Description	Solution
No Power	Inverter No Power on LCD	1.Check PV input connections 2.Check DC input voltage (single phase >120V, three phase >350V) 3.Check if PV+/- is reversed
LCD show initializing all the time	can not start-up	1.Check if the connector on main board or power board are fixed. 2.Check if the DSP connector to power board are fixed.
OV-G-V	Over grid voltage	1.Resistant of AC cable is too high. Change bigger size grid cable 2.Adjust the protection limit if it's allowed by electrical company
UN-G-V	Under grid voltage	1.Use user define function to adjust the protection limit if it's allowed by electrical company.
OV-G-F	Over grid frequency	1.Use user define function to adjust the protection limit if it's allowed by electrical company.
UN-G-F	Under grid frequency	1.Use user define function to adjust the protection limit if it's allowed by electrical company.
G-IMP	High grid impedance	1.Use user define function to adjust the protection limit if it's allowed by electrical company.
No-Grid	No grid voltage	1.Check connections and grid switch. 2.Check the grid voltage inside inverter terminal.
OV-DC	Over DC voltage	1.Reduce the module number in series
OV-BUS	Over DC bus voltage	1.Check inverter inductor connection 2.Check driver connection
UN-BUS	Under DC bus voltage	1.Check inverter inductor connection 2.Check driver connection
GRID-INTF	Grid interference	1.Restart inverter 2.Change power board
OV-TEM	Over Temperature	1.Check inverter surrounding ventilation. 2.Check if there's sunshine direct on inverter in hot weather.
INI-Fault	Initialization system fault	1.Restart inverter or contact installer.
Ground-Fault	Ground fault	1.Measure the insulation resistance and locate and check isolation of PV cable. 2.Change the main board if the resistance are higher than 1MΩ
lLeak-Fault	High Grid leakage current	1.Check AC and DC connection 2.Check inverter inside cable connection.
Relay-Fault	Relay check fault	1.Restart inverter or contact installer.
DCinj-Fault	High DC injection current	1.Restart inverter or contact installer.
AFCI Check Fault	AFCI module self check fault	1.Restart inverter or contact installer.
Arc Fault	ARC detected in DC circuit	1.Check if there's arc in PV connection and restart inverter.

