

Solis Display Messages

In this article, we will provide a comprehensive explanation for all messages generated by Solis inverters, ranging from operating messages to alarm messages. We'll not only decipher what these messages mean but also offer possible solutions to address them. For more in-depth troubleshooting guidance, you can explore the additional articles in this section.



Table of Contents:

1: Grid Tied inverters

- A) [Operating Status](#)
- B) [Warning Messages](#)
- C) [Alarm Messages](#)

2: Energy Storage inverters

- A) [Operating Status](#)
- B) [Warning Messages](#)
- C) [Alarm Messages](#)

3: Export Power Manager (EPM)

- A) [Operating Status](#)
- B) [Alarm Messages](#)

Grid Tied Inverters

Operating Status:

(Alphabetical order)

| Message: | Description: | Solution: |
|------------|---|--|
| Generating | Generating | No need to deal with, the inverter is in normal operation |
| Grid Off | Control inverter to turn off - Set the inverter to Grid ON | Set the inverter to Grid ON |
| LimByEPM | Inverter is under external control | 1. Confirm whether the inverter is connected to an EPM/meter to do export control. 2. Confirm whether the inverter is controlled by an external third-party device. 3. Confirm whether the power setting of the inverter Power Control is limited |
| LimByVg | Inverter is under Volt-Watt working mode | 1. Subject to local safety regulations, when the grid voltage is high, the Voltwatt working mode is triggered, which generally does not need to be dealt with; 2. The factory mistake may causes the mode to turn on. If you need to turn it off, you can turn it off in the LCD. Setting process: main menu→advanced setting→password 0010→STD mode setting→working mode →working mode: NULL→save and exit. |
| LimByVar | Inverter is under Volt-Var working mode | 1. Subject to local safety regulations, when the grid voltage is high, the Voltvar working mode is triggered, which generally does not need to be dealt with; 2. The factory mistake may causes the mode to turn on. If you need to turn it off, you can turn it off in the LCD. Setting process: main menu→advanced setting→password 0010→STD mode setting→working mode →working mode: NULL→save and exit. |
| LimByPlmt | Inverter is under P Factor working mode | If you need to turn this mode off, you can turn it off in the LCD. Setting process: main menu→advanced setting→password 0010→STD mode setting→working mode →working mode: NULL→save and exit. |

| | | |
|---------|---|---|
| OpenRun | Open loop operation - No need to deal with, the inverter is in open loop operation state, only appear in the internal test environment. | No need to deal with, the inverter is in open loop operation state, only appear in the internal test environment. |
| SoftRun | Wait to start generating - Try to restart the inverter, if it is still not resolved, please contact the manufacturer's customer service. | Try to restart the inverter, if it is still not resolved, please contact the manufacturer's customer service. |
| Waiting | Wait to operate - Test whether the DC input voltage of the inverter reaches the minimum starting voltage. | Test whether the DC input voltage of the inverter reaches the minimum starting voltage. |



Warning Messages:

(Alphabetical order)

| Message: | Description: | Solution: |
|-----------------|---|--|
| | | |
| DcSpdFail | DC SPD fault | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| Fan Alarm | Internal Fan fault | Check whether the internal fan of the inverter is abnormal and does not start; try to restart the inverter. |
| Fan_H Alarm | External Fan fault | Check whether the external fan is abnormal and does not start; try to restart the inverter; refer to the manual to replace the external fan/clean the fan. |
| FuseFail | Fuse alarm on 125K-EHV-5G and Korean 100K with fuse model | Restart the inverter and replace the fuse referring to the manual. If it is still not eliminated, please contact the manufacturer's customer service. |
| Surge Alarm | Gird has surge | Grid has surge. It is for after-sale information analysis, doesn't affect inverter operation. |

| | | |
|-----------|--------------|--|
| VgSpdFail | AC SPD fault | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
|-----------|--------------|--|



Alarm Messages:

(ordered by Alarm Code)

| Message: | Alarm Code: | Description: | Solution: |
|--------------|-------------|---|--|
| OV-G-V 01 | 1010 | Grid voltage is higher than standard code's 1st level overvoltage limit for the set period of time. | 1. If it happens accidentally, it may be a short-term abnormality of the grid. The inverter will resume normal operation after detecting that the grid is normal, without manual intervention. 2. Check if the standard is set correctly. 3. If it occurs frequently, please check the grid voltage and the grid frequency if it is within the standard protection range of the inverter. If not, please check whether the AC side circuit breaker and the output cable are connected properly. 4. If the grid voltage and grid frequency are not within the standard protection range of the inverter, and the AC side wiring is confirmed to be correct, this alarm still appears frequently. After obtaining the approval from the local power operator, please contact customer service to modify the inverter grid Over and under voltage/frequency protection points. |
| OV-G-V 02 | | Grid voltage transient value is over 1.35 times of rated voltage peak value. | |
| OV-G-V 03 | | Grid voltage is higher than the 10min overvoltage limit in the standard code. | |
| OV-G-V 04 | | Grid voltage is higher than standard code's 2nd level overvoltage limit for the set period of time. | |
| OV-G-V 05 | | Grid voltage transient value is over 1.35 times of rated voltage peak value over 200ms. | |
| UN-G-V | 1011 | Grid voltage is lower than the limit. | |
| OV-G-F | 1012 | Grid frequency is higher the limit. | |
| UN-G-F | 1013 | Grid frequency is lower the limit. | |
| Backfeed_lac | 1014 | AC backfeed current | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |

| | | | |
|-------------|------|-----------------------------|---|
| | | | |
| NO-Grid | 1015 | No grid | <p>1. Confirm whether the power grid is properly connected.</p> <p>2. Confirm whether the connected power grid is normal.</p> <p>3. Check if the Grid Standard is set correctly.</p> <p>3. If the grid connection is normal, you need to contact manufacturer's customer service with information of AV Voltage details and where voltage was measured.</p> |
| G-PHASE | 1016 | Grid has unbalanced 3phase | <p>1. Confirm whether the power grid is properly connected.</p> <p>2. Confirm whether the connected power grid is normal.</p> <p>3. If the grid connection is normal, you need to contact manufacturer's customer service.</p> |
| G-F-FLU | 1017 | Grid frequency is abnormal | <p>1. Confirm whether the power grid is properly connected.</p> <p>2. Confirm whether the connected power grid is normal.</p> <p>3. If the grid connection is normal, you need to contact manufacturer's customer service.</p> |
| OV-G-I | 1018 | Grid output overcurrent | <p>1. Confirm whether the power grid is properly connected.</p> <p>2. Confirm whether the connected power grid is normal.</p> <p>3. If the grid connection is normal, you need to contact manufacturer's customer service.</p> |
| IGFOL-F | 1019 | Grid current tracking error | <p>1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service.</p> |
| PHASE-FAULT | 101A | Abnormal grid phase angle | <p>1. Check whether the AC side wiring is correct. 2. Check whether the grid phase angle is 120°. 3. Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service.</p> |
| OV-DC | 1020 | DC overvoltage | <p>1. Check whether the input voltage exceeds the maximum input</p> |

| | | | |
|----------|------|---|--|
| | | | voltage of the inverter; 2. Restart the inverter 3. If it is still not ruled out, please contact the manufacturer's customer service. |
| BoostFal | 1020 | DC boost circuit fault | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| OV-BUS | 1021 | DC bus overvoltage | 1. Check whether the input voltage exceeds the maximum input voltage of the inverter; 2. Restart the inverter 3. If it is still not ruled out, please contact the manufacturer's customer service. |
| UNB-BUS | 1022 | DC bus voltage and DC bus half voltage is not correct | 1. Check whether the inverter bus voltage and bus half voltage are correct, 2. Restart the inverter 3. If it is still not ruled out, please contact the manufacturer's customer service. |
| UN-BUS02 | 1023 | Abnormal display of DC bus voltage | |
| UN-BUS | 1023 | DC bus voltage is too low | 1. Check whether the input voltage is too low 2. Restart the inverter 3. If it is still not ruled out, please contact the manufacturer's after sales engineer. |
| DC-INTF. | 1027 | Abnormal DC input current | 1. Check whether the DC wiring is falsely connected or damaged. 2. Restart the inverter. 3. If it is still not resolved, please contact the manufacturer's customer service. |
| Reve-DC | 1028 | DC reversely connected. | 1. Check whether the DC wiring is reversed. 2. Check whether the wire has correct size. 3. Check if correct Grid Standard is set. 4. Restart the inverter 5. If it is still not resolved, please |

| | | | |
|----------|------|---|---|
| | | | contact the manufacturer's customer service. |
| PvMidIso | 1029 | PV middle point low insulation protection | <p>1. Check the time when the error is reported. If the error is reported in the early morning or late afternoon or on a rainy day, it is a normal phenomenon. The moisture in the air increases, the impedance becomes low, and it is easy to report the ISO;</p> <p>2. Use the resistance level of the multimeter to measure the resistance of the PV string to the ground , and the resistance should be above 20kΩ; if the impedance is too low, please check the insulation between the PV string and the ground, or make a new cable between panel and the inverter</p> <p>3. Use a multimeter to measure the resistance of the N wire and the ground wire. This value should be close to zero. Otherwise, there is a problem with the connection between the AC N wire and the ground wire. Please check the AC wiring;</p> <p>4. Please check whether the software version is the latest. You can try to update the software (due to the continuous changes in regulations, the ISO detection threshold is also changed along with version upgrade)</p> <p>5. If the above is normal, please contact after-sales service.</p> |
| PVGndRun | 1029 | The PV terminal of the inverter is grounded during operation. | 1. Check that the PV string connected to the inverter is grounded, and use a multimeter to check the DC gear. |
| Vbus-Sam | 102A | DC bus voltage and DC bus half voltage is not correct. | <p>1. Check whether the inverter bus voltage and bus half are correct</p> <p>2. Restart the inverter</p> <p>3. If it is still not ruled out, please contact the manufacturer's customer service.</p> |

| | | | |
|---------------|------|--|---|
| GRID-INTF. | 1030 | Grid interference | <p>1. Multiple inverters installed in line and the grid voltage wave is non-ideal.</p> <p>2. Grid filters need to be set. Changing the grid filter in the "Special Setting" may solve the problem.</p> <p>3. Downstream equipment needs to be changed or repaired.</p> <p>Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service.</p> |
| INI-FAULT | 1031 | DSP initializing fault. | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| OV-TEM | 1032 | <p>The internal temperature near IGBTs is beyond the limitation.</p> <p>Typically 90°C for 1P inverters 115°C for 3P inverters</p> | <p>1: Check whether the installation location of the inverter meets the requirements of the user manual. (Installation in direct sunlight? Inverter mounted incorrectly (angle)? Faulty temperature probe? Loose connection of temperature probe?)</p> <p>2: Try to lower the ambient temperature</p> <p>3: Turn off the inverter and restart it after 15 minutes</p> <p>4: If the error still exists, please contact the manufacturer's customer service.</p> |
| PV ISO-PRO 01 | 1033 | Low PV insulation protection | <p>1. Check the time when the error is reported. If the error is reported in the early morning or late afternoon or on a rainy day, it is a normal phenomenon. The moisture in the air increases, the impedance becomes low, and it is easy to report the ISO;</p> <p>2. Use the resistance level of the multimeter to measure the resistance of the PV string to the ground , and the resistance should be above 20kΩ; if the impedance is too low, please check the insulation between the PV string and the ground, or make a new cable between panel and the inverter</p> |
| PV ISO-PRO 02 | 1033 | Low PV insulation protection | |

| | | | |
|---------------|------|----------------------------|---|
| | | | <p>3. Use a multimeter to measure the resistance of the N wire and the ground wire. This value should be close to zero. Otherwise, there is a problem with the connection between the AC N wire and the ground wire. Please check the AC wiring;</p> <p>4. Please check whether the software version is the latest. You can try to update the software (due to the continuous changes in regulations, the ISO detection threshold is also changed along with version upgrade)</p> <p>5. If the above is normal, please contact after-sales service.</p> |
| ILeak-PRO 01 | 1034 | Leakage current protection | <p>1. Connect each string of components individually in turn to determine whether it is caused by a single string problem. If there is no error when inserting one of the string, it can be determined that it is caused by the string problem. Check whether the problematic string has broken insulation or other problems.</p> <p>A: Damaged PV wire insulation. B: PV wire is incorrect gauge. C: Faulty transformer downstream. D: Incorrect wiring of RSD. E: Buried AC wires are saturated with Wire F: AC Wire is low quality</p> <p>2. If this error occurs only on a rainy day or in the morning, the leakage current is too large due to the aging of the module. The error will be automatically cleared when it is sunny or when the air humidity decreases.</p> <p>3. This issue may be solved by remotely upgrading the software. Please contact our customer support team.</p> |
| ILeak-PRO 02 | | | |
| ILeak-PRO 03 | | | |
| ILeak-PRO 04 | | | |
| RelayChk-FAIL | 1035 | Relay selfcheck protection | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |

| | | | |
|---------------|------|--|---|
| DSP-B-Sam-Fau | 1036 | Missing or error from DSP software | 1. Check whether the inverter's DSP software version number exists, and try to restart the inverter. If it is still not ruled out, please contact the manufacturer's customer service. |
| DSP-B-FAULT | 1036 | fault between master DSP and slave dsp | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| DSP-B-Com-Fau | 1036 | DSP software is missing | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| DCInj-FAULT | 1037 | DC injection component too large. | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| 12Power-FAULT | 1038 | 12V power supply fault | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| ILeak-Check | 1039 | RCMU Selfcheck protection | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| UN-TEM | 103A | Low temperature | Check whether the ambient temperature is too low and restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| AFCI-Check | 1040 | AFCI selfcheck protection | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| ARC- FAULT | 1041 | Detected DC arc in the DC circuit | <p>Check if there is an arc in the inverter DC connection.</p> <ol style="list-style-type: none"> 1. Are the MC4 Heads loose? 2. Are the MC4 heads broken? 3. Check Connection in inverter terminal or fuse block. 4. Check if connection in J-Box is bad/loose. 5. Are any PV panels cracked/damaged? 6. Check Firmware. 7. Check sensitivity level. 8. Try restarting the inverter. |

| | | | |
|---------------|------|--|---|
| | | | If it is still not resolved, please contact the manufacturer's customer service. |
| IG-AD | 1047 | Grid current sampling error. | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| IGBT-OV-I | 1048 | IGBT overcurrent | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| Failsafe | 2010 | EPM communication fail | Check the communication connection between the inverter and EPM/meter. |
| L&PE FAULT | F017 | The three phases on the AC side are connected to the ground. | Restart the inverter, if it is still not resolved, please contact the manufacturer's customer service; check the AC side wiring; check whether there is a ground fault on the AC side. |
| DSP-SelfCheck | 1058 | DSP firmware does not match the hardware | 1. Check whether the software version burned by the inverter is correct, and whether the software model number is consistent with the model number. |
| Vg-Sample | 1059 | The grid voltage sampling value is deviated | 1. Check whether there is an error between the AC voltage displayed by the inverter and the AC voltage detected by the multimeter. If there is an error, try to restart the inverter. If it is still not eliminated, please contact the manufacturer. |



Energy Storage Inverters

Operating Status:

(Alphabetical order)

| Message: | Description: | Solution: |
|------------|---|---|
| | | |
| Off | Control inverter to turn off - Set the inverter to Grid ON | Set the inverter to Grid ON |
| GridToLoad | The loads are support by Grid directly | No need to deal with it. |
| LmtByDRM | DRM Function is Enabled | No need to deal with it. |
| LimByEPM | Inverter is under external control | 1. Confirm whether the inverter is connected to an EPM/meter to do export control. 2. Confirm whether the inverter is controlled by an external third-party device. 3. Confirm whether the power setting of the inverter Power Control is limited |
| LmtByFreq | The output power is limited by frequency | The output power is limited by frequency |
| LimByVg | Inverter is under Volt-Watt working mode | 1. Subject to local safety regulations, when the grid voltage is high, the Voltwatt working mode is triggered, which generally does not need to be dealt with; 2. The factory mistake may causes the mode to turn on. If you need to turn it off, you can turn it off in the LCD. Setting process: main menu→advanced setting→password 0010→STD mode setting→working mode →working mode: NULL→save and exit. |
| LmtByTemp | The output power is limited by temperature | No need to deal with, the inverter is in normal operation |
| LimByVar | Inverter is under Volt-Var working mode | 1. Subject to local safety regulations, when the grid voltage is high, the Voltvar working mode is triggered, which generally does not need to be dealt with; 2. The factory mistake may causes the mode to turn on. If you need to turn it off, you can turn it off in the LCD. Setting process: main menu→advanced setting→password 0010→STD mode |

| | | |
|---------------|--|--|
| | | setting→working mode →working mode: NULL→save and exit. |
| LmtByVg | Inverter is under Volt-Watt working mode | 1. Subject to local safety regulations, when the grid voltage is high, the Voltwatt working mode is triggered, which generally does not need to be dealt with; 2. The factory mistake may causes the mode to turn on. If you need to turn it off, you can turn it off in the LCD. Setting process: main menu→advanced setting→password 0010→STD mode setting→working mode →working mode: NULL→save and exit. |
| LmtByUnFr | The output power is limited by the low frequency. | No need to deal with it. |
| Normal | Normal Operation | |
| OpenRun | Open loop operation | No need to deal with, the inverter is in open loop operation state, only appear in the internal test environment. |
| SoftRun | Wait to start generating | Try to restart the inverter, if it is still not resolved, please contact the manufacturer's customer service. |
| Standby | Inverter is operating in Off-Grid Mode. | No need to deal with, the inverter is in normal operation. |
| StandbySynoch | The inverter operation status is turned to Grid-tied from Off-Grid mode. | No need to deal with it. |
| Waiting | Wait to operate. | Test whether the DC input voltage of the inverter reaches the minimum starting voltage. |



Warning Messages:

(Alphabetical order)

| Message: | Description: | Solution: |
|-------------|--------------------|--|
| | | |
| Fan Alarm | Internal Fan fault | 1.Check whether the internal fan of the inverter is abnormal and does not start; 2. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| Over-Load | Overload Fault | 1.The Backup load power is too large or some inductive loads have large temporary start-up power. 2.Please turn off some backup loads or the inductive backup loads. |
| Surge Alarm | Grid has surge | Grid has surge. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |



Alarm Messages:

(ordered by Alarm Code)

| Message: | Alarm Code: | Description: | Solution: |
|-----------|-------------|---|--|
| | | | |
| OV-G-V 01 | 1010 | Grid voltage is higher than standard code's 1st level overvoltage limit for the set period of time. | 1. Confirm whether the connected power grid is normal. 2. Confirm whether AC cables of power grid are properly connected. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-G-V 02 | | Grid voltage transient value is over 1.35 times of rated voltage peak value. | |
| OV-G-V 03 | | Grid voltage is higher than the 10min overvoltage limit in the standard code. | |

| | | | |
|-----------|------|--|---|
| OV-G-V 04 | | Grid voltage is higher than standard code's 2nd level overvoltage limit for the set period of time. | |
| OV-G-V 05 | | The RMS value of Grid voltage is higher than the setting value. | |
| UN-G-V01 | 1011 | Grid voltage is lower than standard code's 1st level overvoltage limit for the set period of time. | |
| UN-G-V02 | | Grid voltage transient value is under 0.85 times of rated voltage peak value. | |
| OV-G-F01 | 1012 | Grid frequency is higher than standard code's 1st level over-frequency limit for the set period of time. | |
| OV-G-F02 | | Grid frequency is higher than standard code's 2nd level over-frequency limit for the set period of time. | |
| UN-G-F01 | 1013 | Grid frequency is lower than standard code's 1st level over-frequency limit for the set period of time. | |
| UN-G-F02 | | Grid frequency is lower than standard code's 2nd level over-frequency limit for the set period of time. | |
| NO-Grid | 1015 | No grid | 1. Confirm whether the power grid is properly connected. 2. Confirm whether the connected power grid is normal. 3. Check if the Grid Standard is set correctly. 3. If the grid connection is normal, you need to contact manufacturer's customer |

| | | | |
|---------|------|---------------------------------|--|
| | | | service with information of AV Voltage details and where voltage was measured. |
| G-PHASE | 1016 | Grid has unbalanced 3phase | <ol style="list-style-type: none"> 1. Confirm whether the connected power grid is normal. 2. Confirm whether AC cables of power grid are properly connected. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| G-F-FLU | 1017 | Grid frequency is abnormal | <ol style="list-style-type: none"> 1. Confirm whether the connected power grid is normal. 2. Confirm whether AC cables of power grid are properly connected. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-G-I | 1018 | Phase A current RMS overcurrent | <ol style="list-style-type: none"> 1. Confirm whether the connected power grid is normal. 2. Confirm whether AC cables of power grid are properly connected. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| IGFOL-F | 1019 | Grid current tracking error | <ol style="list-style-type: none"> 1. Confirm whether the connected power grid is normal. 2. Confirm whether AC cables of power grid are properly connected. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-DC01 | 1020 | DC1 overvoltage | <ol style="list-style-type: none"> 1. Confirm whether the PV voltage is abnormal. (maybe too many modules in series?) 2. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-DC02 | 1020 | DC2 overvoltage | <ol style="list-style-type: none"> 1. Confirm whether the PV voltage is abnormal. (maybe too many modules in series?) 2. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-BUS | 1021 | DC bus overvoltage | <ol style="list-style-type: none"> 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |

| | | | |
|-------------|------|--|---|
| UNB-BUS | 1022 | DC bus voltage and DC bus half voltage is not correct. | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| UN-BUS01 | | DC bus undervoltage | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| UN-BUS02 | 1023 | Abnormal display of DC bus voltage | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-DCA-I | 1025 | DC1 current average overcurrent | 1. Check the string for faults. (polarity) 2. Try to remove the faulty string from the MPPT. Otherwise, it might be some internal fault. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-DCB-I | 1026 | DC2 current average overcurrent | 1. Check the string for faults. (polarity) 2. Try to remove the faulty string from the MPPT. Otherwise, it might be some internal fault. 3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| DC-INTF. | 1027 | Abnormal DC input current | 1. Check whether the DC wiring is falsely connected or damaged. 2. Restart the inverter. 3. If it is still not resolved, please contact the manufacturer's customer service. |
| GRID-INTF. | 1030 | Grid interference | 1. Multiple inverters installed in line and the grid voltage wave is non-ideal. 2. Grid filters need to be set. Changing the grid filter in the "Special Setting" may solve the problem. 3. Downstream equipment needs to be changed or repaired. Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| GRID-INTF02 | | Grid interference 02 | 1. Check whether the Grid is severely distorted. 2. Check whether the AC cables has reliable connection. |

| | | | |
|---------------|------|--|---|
| INI-FAULT | 1031 | AD zero-drift overlimit | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-TEM | 1032 | <p>The internal temperature near IGBTs is beyond the limitation.</p> <p>Typically 90°C for 1P inverters 115°C for 3P inverters</p> | <p>1: Check whether the installation location of the inverter meets the requirements of the user manual. (Installation in direct sunlight? Inverter mounted incorrectly (angle)? Faulty temperature probe? Loose connection of temperature probe?)</p> <p>2: Try to lower the ambient temperature</p> <p>3: Turn off the inverter and restart it after 15 minutes</p> <p>4: If the error still exists, please contact the manufacturer's customer service.</p> |
| PV ISO-PRO 01 | 1033 | PV Negative to ground fault | <p>1. Check the time when the error is reported. If the error is reported in the early morning or late afternoon or on a rainy day, it is a normal phenomenon. The moisture in the air increases, the impedance becomes low, and it is easy to report the ISO;</p> <p>2. Use the resistance level of the multimeter to measure the resistance of the PV string to the ground , and the resistance should be above 20kΩ; if the impedance is too low, please check the insulation between the PV string and the ground, or make a new cable between panel and the inverter</p> <p>3. Use a multimeter to measure the resistance of the N wire and the ground wire. This value should be close to zero. Otherwise, there is a problem with the connection between the AC N wire and the ground wire. Please check the AC wiring;</p> <p>4. Please check whether the software version is the latest. You can try to update the software (due to the continuous changes in regulations, the ISO detection threshold is also changed along with version upgrade)</p> <p>5. If the above is normal, please contact after-sales service.</p> |
| PV ISO-PRO 02 | 1033 | PV Positive to ground fault | |
| ILeak-PRO 01 | 1034 | Leakage current protection 01(30mA) | 1. Connect each string of components individually in turn to determine whether it is caused by a single string problem. If there is no error when inserting one of the string, it can be determined that it is |

| | | | |
|---------------|------|---|---|
| ILeak-PRO 02 | 1034 | Leakage current protection 02(60mA) | <p>caused by the string problem. Check whether the problematic string has broken insulation or other problems.</p> <p>A: Damaged PV wire insulation. B: PV wire is incorrect gauge. C: Faulty transformer downstream. D: Incorrect wiring of RSD. E: Buried AC wires are saturated with Wire F: AC Wire is low quality</p> <p>2. If this error occurs only on a rainy day or in the morning, the leakage current is too large due to the aging of the module. The error will be automatically cleared when it is sunny or when the air humidity decreases.</p> <p>3. This issue may be solved by remotely upgrading the software. Please contact our customer support team.</p> |
| ILeak-PRO 03 | 1034 | Leakage current protection 03(150mA) | |
| ILeak-PRO 04 | 1034 | Leakage current protection 04(300mA) | |
| RelayChk-FAIL | 1035 | Relay Fault | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| DSP-B-FAULT | 1036 | Abnormal communication between Master and Slave DSP | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| DCInj-FAULT | 1037 | DC components of AC current exceeds limitation. | <p>1. Confirm whether the connected power grid is normal.</p> <p>2. Confirm whether AC cables of power grid are properly connected.</p> <p>3. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service.</p> |
| 12Power-FAULT | 1038 | 12V power supply fault | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| UN-TEM | 103A | Low temperature | Check whether the ambient temperature is too low and restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| ILeak_Check | 1039 | Leakage current sensor Failure | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |

| | | | |
|---------------------|------|--------------------------------------|---|
| AFCI-Check | 1040 | AFCI selfcheck protection | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| ARC- FAULT | 1041 | Detected DC arc in the DC circuit | Check if there is an arc in the inverter DC connection. 1. Are the MC4 Heads loose? 2. Are the MC4 heads broken? 3. Check Connection in inverter terminal or fuse block. 4. Check if connection in J-Box is bad/loose. 5. Are any PV panels cracked/damaged? 6. Check Firmware. 7. Check sensitivity level. 8. Try restarting the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| IG-AD | 1047 | Grid current sampling error. | 1. Check whether the Grid is severely distorted. 2. Check whether the AC cables has realliable connection. |
| IGBT-OV-I | 1048 | IGBT overcurrent | Restart the inverter. If it is still not resolved, please contact the manufacturer's customer service. |
| OV-IgTr | 1050 | Grid current temporarily overcurrent | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-Vbatt-H/OV-BUS-H | 1051 | Battery hardware overvoltage/Vbus | 1. Check whether the battery circuit breaker has triggered. 2. Check whether the battery was damaged. |
| OV-ILLC | 1052 | LLC hardware overcurrent | 1. Check whether Backup load is overloaded. 2. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| OV-Vbatt | 1053 | Battery overvoltage | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| UN-Vbatt | 1054 | Battery undervoltage | 1. Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| NO-Battery | 1055 | Battery is not connected | 1. Check whether the battery has been well connected. |

| | | | |
|---------------|------|--|---|
| | | | 2. Check whether the circuit breaker or fuse have been triggered. |
| OV-Vbackup | 1056 | The backup voltage exceeds the setting value | 1. Check whether the Backup terminal wiring is normal. 2. Restart the whole system, if it is still not ruled out, please contact the manufacturer's customer service. |
| Over-Load | 1057 | The backup load is overloaded | 1. Check whether the backup load is overloaded. 2. Restart the whole system, if it is still not ruled out, please contact the manufacturer's customer service. |
| DspSelfChk | 1058 | Abnormal Self-detection of DSP | 1. Restart system and confirm whether the fault still exists. |
| Failsafe | 2010 | EPM communication cables aren't connected. | 1.Check the communication connection between inverter and Meter, confirm whether the internal EPM function has been enabled. 2.Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| MET_Comm_FAIL | 2011 | Meter communication cables aren't connected | 1.Check Meter communication cables. 2.Confirm whether the Meter brand has been selected correctly in the inverter LCD. 3.Restart the inverter, if it is still not ruled out, please contact the manufacturer's customer service. |
| CAN_Comm_FAIL | 2012 | Battery Communication Failure | 1. Check whether the communication cable of meter is damaged. |
| DSP_Comm_FAIL | 2014 | DSP Communication Failure | 1. Restart DSP to ensure whether the fault is existing. |
| Alarm1-BMS | 2015 | Battery BMS Alarm | 1. Restart the Battery to ensure whether the fault is existing. |
| BatName-FAIL | 2016 | Wrong selection of battery brand | 1. Please confirm whether the selected battery brand is the same as actual battery. |
| Alarm2-BMS | 2017 | Battery BMS Alarm 2 | 1. Restart the Battery to ensure whether the fault is existing. |
| DRM_LINK_FAIL | 2018 | DRM Connection Failure | Confirm whether DRM cable connection is reliable. |

| | | | |
|--------------|------|----------------------------------|--|
| LG-BMS-Fault | 2019 | LG Battery BMS Fault | Restart the battery and contact battery manufacture for handling if the fault still exists. |
| LG-Comm-FAIL | 2021 | LG Battery Communication Failure | 1. Restart the battery and contact battery manufacture for handling if the fault still exists. |



Export Power Manager (EPM)

Operating Status:

| Message: | Description: | Solution: |
|----------|------------------|---|
| Normal | Normal operation | 1. No need to deal with it, EPM is in normal operation. |

Alarm Messages:

(Alphabetical order)

| Message: | Description: | Solution: |
|---------------|---|--|
| CT-Failsafe | CT lost the connection with EPM | 1. Check the CT cables of EPM, the secondary side of CT is not allowed to be disconnected before the primary side of CT has been disconnected. |
| M-ComFailSafe | Abnormal Meter communication | 1. Restart the EPM, if it is still not ruled out, please contact the manufacturer's customer service. |
| M-VFailSafe | Abnormal Meter voltage | 1. Restart the EPM, if it is still not ruled out, please contact the manufacturer's customer service. |
| RS485AllFail | EPM lost the RS485 connection with all inverters in the whole system. | 1. Check all communication connection between EPM and inverters. |

| | | |
|------------|---|--|
| RS485 Fail | EPM lost the RS485 connection with one or more inverters. | 1. Check the communication cables between EPM and inverters. |
|------------|---|--|



Connect with Solis

