Technical Brief

Enphase Enlighten Event Messages

Enlighten Messages and Alerts

The following event messages may appear in Enlighten or in the Envoy interface. If you have received an Enlighten alert in email, read the email through. It includes information on whether or not action is required and what that action should be.

AC Average Voltage Too High

Recommended Action: No action is required unless the condition persists.

Description: The microinverter reports that the average AC voltage coming from the utility over the past 10 minutes was too high for the configured grid profile.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN EUROPE ONLY

AC Frequency Changing Too Fast

Recommended Action: No action is required unless the condition persists.

Description: AC frequency is the frequency at which voltage varies on the utility grid. The microinverter reports that this value is changing more rapidly than allowed. Frequency Changing Too Fast events are usually transient, and self-correcting by the utility.

NOTE: APPEARS IN ITALY ONLY

AC Frequency Out of Range

Recommended Action: This condition should correct itself. No action is required.

Description: The microinverter reports that the frequency coming from the utility is either too low or too high as specified by applicable regional standards.

AC frequency is the frequency at which voltage varies on the utility grid. Frequency Out of Range events are usually transient and self-correcting by the utility.

When the microinverter detects an out of frequency condition, it must remain offline until the utility has been within acceptable limits continuously for a short period of time (seconds to minutes, varies by region). If, during that time, the utility again exceeds or falls short of acceptable limits, the timer must restart and the microinverter may not begin producing power for an additional short period following the last out-of-bounds condition.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN NORTH AMERICA ONLY

AC Voltage Out of Range

Recommended Action: This condition should correct itself. No action is required.

Description: The microinverter reports that the AC voltage coming from the utility is either too low or too high as specified by applicable regional standards.

When the microinverter detects a voltage out of range condition, it must remain offline until the utility has been within acceptable limits continuously for a short period of time (several minutes, varies by region). If, during those several minutes the utility again exceeds or falls short of acceptable limits, the timer must restart and the microinverter may not begin producing power for an additional short period following the last out-of-bounds condition.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN NORTH AMERICA ONLY

Critical Temperature

Recommended Action: This condition should correct itself. No action is required.

Description: This rare condition occurs if the microinverter reports an internal temperature that exceeds its rated range. It reacts by producing less power to reduce internal temperature. Once the internal temperature of the microinverter diminishes, the microinverter will resume full power production and this message will clear.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

DC Resistance Too Low

Recommended Action: No action is required unless the condition persists.

Description: A sensor in the microinverter measures the resistance between the positive and negative PV inputs and ground. If either resistance drops below a threshold, the microinverter raises this condition. This may indicate issues due to moisture, overload, defective circuit, live wires making contact with ground wire, etc.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN EUROPE ONLY

DC Too High

Recommended Action: Ask your installer to check that the solar module (panel) and microinverter are compatible. It may be that the solar module generates a higher voltage than is recommended for the microinverter. Your installer may refer to the Module Compatibility List for more information: http://www.enphase.com/support/downloads/.

Description: The microinverter reports that DC input voltage from the solar module is too high.

If the condition persists: If the solar module is compatible and the condition persists, contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

DC Voltage Too Low

Recommended action: Usually, this is a normal condition during hours of low light and at dawn and dusk.

Description: The microinverter reports that DC input voltage from the solar module (panel) is too low. If this condition does not clear during hours of full daylight, the microinverters may be shaded or covered by snow.

If the condition persists: If this event occurs and clears daily or often during hours of full daylight, check that the solar module and microinverter are compatible. Refer to the Module Compatibility List for more information: http://www.enphase.com/support/downloads/.

Envoy Not Reporting

Recommended Action: Check that your Envoy and Internet router are plugged in and that the site's Internet service is not experiencing an outage.

Description: The broadband Internet connection that the Enphase Envoy uses to communicate to the Enlighten servers is experiencing a problem.

This condition does not affect your system's ability to produce power. When the connection is restored, the Envoy will catch up with the transmission of any and all energy data it has stored.

If your Envoy displays a web status of "–Web", it is not currently communicating with the Enlighten servers. The Internet service may be down, or the router may be unplugged or turned off.

Internet connections often have temporary outages.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

Gateway Failure

Recommended Action: Unplug the Envoy from the electrical outlet and plug it in once again. Leave it plugged in and in place for at least 15 minutes.

Description: This message displays after the Envoy has tried unsuccessfully three times to start up.

This condition does not affect your system's ability to produce power. When the connection is restored, the Envoy will catch up with the transmission of any and all energy data it has stored.

If the condition persists: If the Envoy continues to display Gateway (or Envoy) Failure or if it never moves beyond the Initialization stage, contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

GFI Tripped

Recommended Action: The error can only be cleared via the Enphase Envoy after the ground fault condition has been remedied. The GFI can be cleared using the Device Conditions and Controls page unless the failure is permanent. Please contact Enphase Customer Service at 877.797.4743 or via email at support@enphaseenergy.com in any GFI condition.

Description: A microinverter has detected ground fault current greater than one amp on the DC side.

A GFI sensor in the microinverter detects changes in electrical current by measuring the amps traveling through a circuit and quickly opens (breaks) the circuit when there is a small loss or ground fault. These losses or ground faults can be due to moisture, overload, defective circuit, live wires making contact with ground wire, etc.

If the condition persists: If GFI events persist after clearing the condition from the Envoy, contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN NORTH AMERICA ONLY

Grid DC Current Too High

Recommended Action: No action is required unless the condition persists.

Description: The average current to the grid is too high for the configured grid profile.

When the microinverter is operating normally, no DC current is injected into the grid. If the DC current is too high, this may indicate an issue with the microinverter.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN EUROPE ONLY

Grid DC Current Too Low

Recommended Action: No action is required unless the condition persists.

Description: The average current to the grid is too low for the configured grid profile.

When the microinverter is operating normally, no DC current is injected into the grid. If the DC current is too low (negative), this may indicate an issue with the microinverter.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

NOTE: APPEARS IN EUROPE ONLY

Grid Gone (Module detects no power coming from the local Utility)

Recommended Action: In most cases no action is required. If there is a power outage in your area and the system has stopped production, solar production will resume when the utility restores power to your area.

Verify that the solar circuit breaker(s) are on in your electrical service panel (load center). If all breaker(s) are on, the condition should clear itself.

Description: The microinverter reports that power from the utility is no longer present.

Enphase microinverters are utility interactive and require a connection to the utility. Please read the whitepaper called The Meaning of Utility Interactive at http://www.enphase.com/downloads/ for more information.

If the condition persists: If Grid Gone events persist, contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

Microinverter Failed to Report

Recommended Action: Occasional instances of this error may be ignored. Microinverter communications will usually recover on the next reporting cycle.

If communications do not recover immediately, make sure that the Envoy is plugged in very near to your electrical service panel (load center). Also, if other devices are sharing the receptacle with the Envoy, remove those devices from the receptacle to improve communication signal strength.

If the Enphase Envoy was recently relocated or if new devices or appliances were added to the circuit, it is possible that the new situation is not suitable for power line communications. The Envoy may need to be relocated to improve signal strength and reduce interfering noise on the power lines.

To determine the quality of the Envoy's location for communication, please run a Communication Check by holding down the Envoy's menu button until the LCD display reads "Enable Communication Check". Release the menu button at this point. The Envoy will then broadcast a signal to the inverters,

and within 5 minutes a "Comm Level" indication of 0 to 5 bars will display on the Envoy LCD display. The Envoy requires a minimum of 3 bars to communicate effectively with the inverters.

Description: The Envoy reporting this condition is unable to communicate with the microinverters over the AC power lines.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

No Grid Profile

Recommended Action: Use the Envoy Gateway web interface to select a grid profile for this system. For more information refer to the Envoy Manual at http://www.enphase.com/support/downloads/.

Description: The Envoy has not been set up with a grid profile for the microinverters. Microinverters must be configured with the appropriate grid profile before they will produce energy.

NOTE: APPEARS IN EUROPE ONLY

Over Temperature

Recommended Action: No action is required unless the condition persists.

Description: This rare condition occurs if the microinverter reports an internal temperature that exceeds its rated range. It reacts by producing less power to reduce its internal temperature. Once the internal temperature of the microinverter diminishes, it will resume full power production and this error message will clear.

If the condition persists: Contact your installer or refer to the Troubleshooting Guide at http://www.enphase.com/support/downloads/.

Transient Grid Profile

Recommended Action: No action is required. This condition will clear once the grid profile test is complete.

Description: This system is currently in test mode.

NOTE: APPLIES IN ITALY ONLY

ZigBee Device Failed to Report

Recommended Action: Make sure the Envoy ZigBee USB stick is plugged in. Occasional instances of this error may be ignored, as a temporary interference to the radio signal may cause this condition. In these cases, the device will recover when the interference is gone.

Description: The device reporting this condition has experienced an interruption in its communication with the Envoy gateway.

For more information, refer to the Environ Installation and Operation Manual at http://www.enphase.com/support/downloads/.

If this condition persists: it may be necessary to add a ZigBee repeater to boost signal strength between ZigBee devices.

ZigBee USB Stick Removed

Recommended Action: Make sure that the ZigBee USB stick is present and fully seated in the Envoy USB port.

Description: The Envoy Communication Gateway no longer detects the presence of the ZigBee USB stick.

For more information, refer to the Environ Installation and Operation Manual at http://www.enphase.com/support/downloads/.