

TS001 – Sonnen eco 8 – Trouble Shooting Guide

This guide covers both the eco 8.2 single phase series products as well as the eco 8.03 three phase series, differences between each will highlighted within the points raised if necessary.

Issue	Reason	Solution																		
<p>No local internet connection.</p> <p>The storage system is not displayed on the local network (https://finde-meine.sonnenbatterie.de/)</p>	<p>No connection between the storage system and the local router.</p>	<ul style="list-style-type: none"> ▶ Make sure that the Ethernet line between the storage system and the Router of the home network is correctly connected. ▶ Make sure that the Ethernet lights are on at the PLC (rear of door) ▶ Remove Z-Wave USB (Short term solution) 																		
<p>No internet connection.</p> <p>(the storage system is not displayed at the Internet portal https://meine.sonnenbatterie.de)</p>	<p>No connection between the storage system and the server.</p>	<ul style="list-style-type: none"> ▶ Make sure that the Ethernet line between the storage system and the Router of the home network is correctly connected. ▶ Make sure that the Router of the home network allows connections on the following ports: <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">TCP-Port</th> <th style="text-align: left;">Service</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>SecureShell (ssh)</td> </tr> <tr> <td>37</td> <td>Time Server (ntp)</td> </tr> <tr> <td>80</td> <td>Online-Check (http)</td> </tr> <tr> <td>222 VPN</td> <td>Server Connection ssl</td> </tr> <tr> <td>232 VPN</td> <td>Backup</td> </tr> <tr> <td>443</td> <td>App-Control (https)</td> </tr> </tbody> </table> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">UDP-Port</th> <th style="text-align: left;">Service</th> </tr> </thead> <tbody> <tr> <td>1196</td> <td>Server Connection ssl</td> </tr> </tbody> </table>	TCP-Port	Service	22	SecureShell (ssh)	37	Time Server (ntp)	80	Online-Check (http)	222 VPN	Server Connection ssl	232 VPN	Backup	443	App-Control (https)	UDP-Port	Service	1196	Server Connection ssl
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<p>System will not start, F1 trips after 10-15 seconds</p>	<p>Internal safety function to protect battery modules</p>	<ul style="list-style-type: none"> ▶ Remove all orange power connectors ▶ Check if all DC connection cables and BMS cables are connected and plugged correctly ▶ Check the voltage of each module: measure the voltage between right contact of the opened orange power connector and the minus pole ensuring all modules in the system are in a range of 1V. 																		

		<ul style="list-style-type: none"> ▶ Connect all modules separately and restart system and to if it is working correctly to help identify faulty module ▶ Connect working modules and restart system ensuring that all modules in the system are in a range of 1V.
System logs out when in the Commissioning Assistant	Normally due to automatic firmware updates	<ul style="list-style-type: none"> ▶ Wait for 20 minutes and repeat the commissioning procedure as the firmware update will have taken affect.
System monitoring goes off line multiple times within the first 24-36 hours	Normally due to automatic firmware updates	<ul style="list-style-type: none"> ▶ No action is required; the updates may require the system to restart occasionally once an update has been automatically downloaded.
System monitoring has stopped	Monitoring and ceased but system is still working	<ul style="list-style-type: none"> ▶ Restart the sonnen system ▶ Restart the modem ▶ Switch off and restart the meter power supply ▶ Ensure the Modbus cable is screened and grounded at the meter If not then earth all additional cable into the negative terminal to reduce noise as this can interrupt the Ethernet port function.
System monitoring does not show my map location	Location of system on online User Portal will default to Germany	<ul style="list-style-type: none"> ▶ Please email support@sonnen.com.au with the unit serial number and system location for this to be amended manually.
Daily values on the Smartphone App seem too high or wrong	Values are inconsistent with previous values or expectation	<ul style="list-style-type: none"> ▶ The Smartphone App unlike graph display and the online User Portal show average values instead of instantaneous readings. These can take a while to settle down especially with a new installation.
System shuts down within 180 seconds of being initiated	Safety feature due to monitoring connection issue	<ul style="list-style-type: none"> ▶ Make sure that Batteries DC cables are connected correctly ▶ Make sure that Battery BMS is connected correctly ▶ Make sure that Battery voltage p/module is correct and each are within 1V of each other ▶ Make sure that Overall connected battery voltage is correct ▶ Make sure that Battery addresses are set correctly ▶ Make sure that Battery Modbus address is set correctly ▶ Make sure that the AC connection is wired correctly ▶ Make sure that Correct AC phasing is wired on 3-phase (eco 8.03) systems

		<ul style="list-style-type: none"> ▶ Make sure that Connections into PLC (rear of door) are all correct and connected ▶ Remove the Z-Wave USB (Short term solution) <p>Advanced Options to identify the cause – To be conducted with the involvement of Sonnen Support Department</p> <ul style="list-style-type: none"> ▶ Remove Modbus-cable for the meter and try to restart ▶ Check LED at battery modules (orange bar). This should not be on, because this would indicate an error ▶ Turn on the system with only one battery module if it fails to stay on then restart procedure with the additional modules individually to identify faulty module. ▶ If single battery modules will allow system to stay on then add each adjacent module until fault module is identified. ▶ Remove relay K1 (this will indicate whether the PLC has initiated shutdown) ▶ Remove relay K2. If the system stays on after removing K1, K2 our service team should be able to remotely connect into the system and check settings and measurements as we will also get a log entry for the cause for the shut-off and advise the next steps for support.
<p>Solar production is different to inverter reading</p>	<p>The instantaneous or daily kWh values are not the same</p>	<ul style="list-style-type: none"> ▶ The Sonnen system uses a Class 1 utility grade meter and CT combination, this often creates a measurement discrepancy with inverters, additionally the measurement point is located after PV system loses. No action is required.
<p>No Consumption or Production values</p>	<p>Values on the App or Online Portal are on zero</p>	<ul style="list-style-type: none"> ▶ Restart meter, turn off and on the MCB/s supplying the units power ▶ Make sure that the CT's are in the correct position as per the installation manual ▶ Make sure that the lines connecting the CT transducers to the Meter are connected correctly ▶ Make sure that Modbus connection on the green WAGO strip is seated correctly in the bottom of the meter ▶ Make sure that the meter is powered correctly: <ul style="list-style-type: none"> • N = 15 for eco 8.2 (single phase) • L = 16 for eco 8.2 (single phase) • N = 13 for the eco 8.03 (3-phase)

		<ul style="list-style-type: none"> • L1 = 14 for the eco 8.03 (3-phase) • L2 = 15 for the eco 8.03 (3-phase) • L3 = 16 for the eco 8.03 (3-phase) <ul style="list-style-type: none"> ▶ Make sure that the meter LED is on ▶ Make sure that the RS485 connections within the CAT.5e Inline Coupler are seated correctly ▶ Make sure that the Modbus cable from the Inline Coupler to the Sonnen Modbus (XMOD) connection port is connected correctly ▶ If the Inline Coupler has not been used then ensure that the correct connections have been made into the green WAGO strip connector on the meter is wired as: <ul style="list-style-type: none"> • A- = White/blue • B+ = Blue • GND = Brown
<p>Battery is not discharging</p>	<p>Values on the App or Online Portal are on zero or a static SOC value</p>	<ul style="list-style-type: none"> ▶ Make sure that the Meter is operating correctly ▶ Make sure that the CT's are located in the correct positions and are facing the correct power flow direction ▶ Make sure that Batteries DC cables are connected correctly ▶ Make sure that Battery BMS is connected correctly ▶ Make sure that Battery voltage p/module is correct and each are within 1V of each other ▶ Make sure that Overall connected battery voltage is correct ▶ Make sure that Battery addresses are set correctly ▶ Make sure that Battery Modbus address is set correctly ▶ Make sure that the AC connection is wired correctly ▶ Make sure that Correct AC phasing is wired on 3-phase (eco 8.03) systems
<p>Battery stopped discharging and re-charging</p>	<p>Values on the App or Online Portal are static</p>	<ul style="list-style-type: none"> ▶ Restart the Sonnen unit, follow shutdown and startup procedure as the unit may require a physical restart after a firmware update (uncommon). ▶ Make sure that the Meter is operating correctly ▶ Make sure that the CT's are located in the correct positions and are facing the correct power flow direction



Battery is discharging and not re-charging	Values on the App or Online Portal are declining until they reach zero SOC	▶ Make sure that the Meter is operating correctly ▶ Make sure that the CT's are located in the correct positions and are facing the correct power flow direction
How do I know that I have wired the phases correctly on the eco 8.03 (3-ph system)	Supplied cable has 4 black cores and an earth	▶ Make sure that the connections have been made as follows <ul style="list-style-type: none">• L1 = Line 1• L2 = Line 2• L3 = Line 3• N = Line 4• PE = GNYE

If you have any further questions or require support or assistance, please contact us at support@sonnen.com.au.

Yours faithfully,

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