

# READ ME

<b>Inverter</b>	<ul style="list-style-type: none"> <li>• STP 50-40 / STP 50-JP-40</li> <li>• STP 50-US-40 (Service only)</li> </ul>
<b>FW-Version</b>	3.11.04.R
<b>Release Date</b>	10/2021
<b>Update feature/reason</b>	<p><b>New/changed main functionality of version 3.11.04.R</b></p> <p>Improvement to ensure the stability of the WLAN communication interface.</p> <p>Due to product care and error prevention, we recommend updating your inverter with this new firmware version.</p> <p><b>Notes:</b></p> <p><u>Update of a version &lt;3.00.00.R</u></p> <ul style="list-style-type: none"> <li>• Step 1: Please update with basic version 3.01.17.R (mandatory).</li> <li>• Step 2: Please update with version 3.11.04.R</li> </ul> <p><u>Update of a version &gt;3.00.00.R</u></p> <ul style="list-style-type: none"> <li>• Please use Version 3.11.04.R directly for an update of inverters with already installed version &gt;3.00.00.R</li> </ul>
<b>Update medium</b>	<ul style="list-style-type: none"> <li>• Web Interface of the inverter (WebU/I)</li> <li>• Sunny Explorer (as from version 1.07.29.R)</li> <li>• SMA Cluster Controller</li> <li>• SMA Data Manager M (via USB)</li> </ul>
<b>File-Name</b>	FW3_11_04_R_STP50-40.zip
<b>Update manual</b>	<p><b>Web Interface of the inverter:</b></p> <p>Please go to the SMA download area and do as follows:  <a href="https://www.sma.de/service/downloads.html">https://www.sma.de/service/downloads.html</a>          Search for "STP50-US-40-IA" and select your preferred language.</p> <p><b>Sunny Explorer:</b></p> <p>Please go to the SMA download area and do as follows:  <a href="https://www.sma.de/service/downloads.html">https://www.sma.de/service/downloads.html</a>          Search for "Explorer-BA" and select your preferred language.</p> <p><b>SMA Cluster Controller:</b></p> <p>Please go to the SMA download area and do as follows:  <a href="https://www.sma.de/service/downloads.html">https://www.sma.de/service/downloads.html</a>          Search for "ClusterController-BA" and select your preferred language.</p>
<b>Important Notes</b>	The update process from a version < 3.00.00R to version > 3.00.00 via Web UI takes around 30 minutes.

	<p>Please ignore upcoming message about failed update processes, or lost connection during the update process.</p> <p>We recommend closing the browser for 30 minutes.</p> <p>After 30 minutes it is possible to login via the known log in window</p> <p>After login it is possible to change the grid code as you know from former version. If you choose an RfG Grid Code, it will take additional 10 minutes.</p>
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## Release notes of former FW-Releases

<b>Inverter</b>	<ul style="list-style-type: none"> <li>• STP 50-40 / STP 50-JP-40</li> <li>• STP 50-US-40 (Service)</li> </ul>
<b>FW-Version</b>	3.11.02.R
<b>Release Date</b>	11/2020
<b>Update feature/reason</b>	<p><b>New/changed main functionality of version 3.11.02.R</b></p> <p>This update contains minor product care updates of Sunny Tripower CORE1.</p> <ul style="list-style-type: none"> <li>• corrections of nomenclature of some country settings (Web UI)</li> <li>• Better handling of BCK files: <ul style="list-style-type: none"> <li>▪ Reduction of error messages during parameter import</li> <li>▪ Backup and restore with WLAN settings.</li> </ul> </li> <li>• Minor corrections of WEB UI e.g. display of used or unused module slots</li> <li>• Correction of known issues regarding the MODBUS interface</li> <li>• Stability improvement of "Q on demand 24/7" in case of high reactive power settings</li> <li>• Reduction of false event messages ("low DC power "or "low DC current") if string failure detection is activated. This occurs if the PV generator setup based on inhomogeneous strings, shaded areas or low irradiation conditions. With a new parameter (Nominal AC-Power) it is possible to define a start criterion for the string failure detection (Default 20% of nominal AC Power). With this criterion the algorithm starts to work if the power/irradiation condition is sufficient for correct measurement. This leads to a reduction of false error messages.</li> <li>• Enhanced lower setting of Cos Phi for low power from 0,8 to 0,4 (Austria requirement)</li> </ul> <p><b>Notes:</b>  <u>Update of a version &lt;3.00.00.R</u></p>

	<ul style="list-style-type: none"> <li>• Step 1: Please update with basic version 3.01.17.R (mandatory).</li> <li>• Step 2: Please update with version 3.11.02.R</li> </ul> <u>Update of a version &gt;3.00.00.R</u> <ul style="list-style-type: none"> <li>• Please use Version 3.11.02.R directly for an update of inverters with already installed version &gt;3.00.00.R</li> </ul>
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<b>Inverter</b>	<ul style="list-style-type: none"> <li>• STP 50-40 / STP 50-JP-40</li> <li>• STP 50-US-40 (Service)</li> </ul>
<b>FW-Version</b>	3.10.08.R
<b>Release Date</b>	05/2020
<b>Update feature/reason</b>	<p><b>New/changed main functionality of version 3.10.08.R</b></p> <p>This update contains a BugFix regarding following error indication:</p> <ul style="list-style-type: none"> <li>• Sporadic communication interrupts between Inverter and all connected communication systems e.g. SMA Cluster Controller/SMA Data Manager M/Sunny Portal</li> <li>• Access via Web UI is possible but there is no display of instantaneous values, e.g. AC Voltage, DC Voltage. Display shows "----".</li> <li>• Inverter feeds the grid, but inverter sends no data via communication interface.</li> <li>• All LEDs are off, (in some cases, only the blue LED is lightning)</li> <li>• After reset (disconnection of AC and DC) the inverter communication is back up running.</li> </ul> <p>(error indications occur together)</p> <p>Please note:</p> <p>The installation of the update is strongly recommended because of solving and preventing failures which are showing exactly the above-mentioned indication.</p> <p><b>Notes:</b></p> <p><u>Update of a version &lt;3.00.00.R</u></p> <ul style="list-style-type: none"> <li>• Step 1: Please update with basic version 3.01.17.R (mandatory).</li> <li>• Step 2: Please Update with version 3.10.08.R</li> </ul> <p><u>Update of a version &gt;3.00.00.R</u></p> <ul style="list-style-type: none"> <li>• Please use Version 3.10.08.R directly for an update of inverters with already installed version &gt;3.00.00.R</li> </ul>

	There are no further changes to previous version 3.10.06.R
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<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (Sunny Tripower CORE1)
<b>FW-Version</b>	3.10.06.R
<b>Release Date</b>	03/2020
<b>Update feature/reason</b>	<p><b><u>Update of a version &lt;3.00.00.R</u></b>  Step 1: Please update with basic version <b>3.01.17.R (mandatory)</b>.  Step 2: Please Update with version <b>3.10.06.R</b></p> <p><b><u>Update of a version &gt; 3.00.00.R</u></b>  Please use Version <b>3.10.06.R</b> directly for an update of inverters with already installed version &gt;<b>3.00.00.R</b>.</p> <p><b>Changes:</b></p> <ul style="list-style-type: none"> <li>• The displayed text of the country settings of the Web U/I is translated to the selected language.</li> </ul> <p>There are no further changes to previous version 3.10.05.R  An update from 3.10.05 to 3.10.06 is recommended but not mandatory</p>
<b>Update medium</b>	<ul style="list-style-type: none"> <li>• Web Interface of the inverter (WebU/I)</li> <li>• Sunny Explorer (as from version 1.07.29.R)</li> <li>• SMA Cluster Controller</li> <li>• SMA Data Manager M (via USB)</li> </ul>
<b>File-Name</b>	FW3_10_06_R_STP50-40.zip

<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (Sunny Tripower CORE1)
<b>FW-Version</b>	3.10.05.R
<b>Release Date</b>	01/2020
<b>Update feature/reason</b>	<p><b><u>Update of a version &lt;3.00.00.R</u></b>  Step 1: Please update with basic version <b>3.01.17.R (mandatory)</b>.  Step 2: Please Update with version <b>3.10.05.R</b></p> <p><b><u>Update of a version &gt; 3.00.00.R</u></b>  Please use Version <b>3.10.05.R</b> directly for an update of inverters with already installed version &gt;<b>3.00.00.R</b>.</p> <p><b>Changes:</b></p> <p>The new firmware 3.10.5.R is updated with new grid standards (country settings). An update from former version 3.01.20.R or 3.01.22.R is only</p>

	<p>mandatory, if one of the following grid standards is required by your electrical utility.</p> <p>New country settings:</p> <p>Austria:  [AT] TOR Erzeuger Typ A V1.0:2019  [AT] TOR Erzeuger Typ B V1.0:2019 Anlage &gt;250 kW</p> <p>Belgium:  [BE] Synergrid C10/11:2019 LV Erzeuger int. EKS  [BE] Synergrid C10/11:2019 LV Erzeuger ext. EKS  [BE] Synergrid C10/11:2019 MV Erzeuger int. EKS  [BE] Synergrid C10/11:2019 MV Erzeuger ext. EKS</p> <p>Italy:  [IT] CEIO-21:2019 Anlage&gt;11,08 kW ext. EKS  [IT] CEIO-16:2019 Anlage ≤6 MW</p> <p>Denmark (Type A, Low Voltage)  [DK] Dansk Energi West 2019  [DK] Dansk Energi Ost 2019</p>
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<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (CORE1)
<b>FW-Version</b>	3.01.20.R
<b>Release Date</b>	10/2019 (Download)
<b>Update feature/reason</b>	<p><b><u>Update of a version &lt;3.00.00.R</u></b></p> <p>Step 1: Please update with basic version <b>3.01.17.R (mandatory)</b>.  Step 2: Please Update with version <b>3.01.20.R</b></p> <p><b><u>Update of a version &gt;3.00.00.R</u></b></p> <p>Please use Version <b>3.01.20.R</b> directly for an update of inverters with already installed version &gt;<b>3.00.00.R</b></p> <p><b>BugFix</b></p> <ul style="list-style-type: none"> <li>• This update contains an important BugFix regarding sporadic interrupts of communication interface</li> </ul> <p>This release contains all changes of the former version 3.00.10.R  This release contains all changes of the former version 3.00.17.R/18.R</p>

<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (CORE1)
<b>FW-Version</b>	3.01.17.R / 3.01.18.R
<b>Release Date</b>	08/2019 (Download)
<b>Update feature/reason</b>	<p>Please use version <b>3.01.17.R</b> for an update of a version &lt;3.00.00.R  Please use Version <b>3.01.18.R</b> for an update of inverters with already installed version &gt;3.00.00.R</p> <ul style="list-style-type: none"> <li>• With this release it is applicable to realize the simplified grid and PV system protection, complies with the German VDE AR-N-4105:2018 (German: NA-Schutz). More information about installation requirements and commissioning you will find in the "Technical Information": Vereinfachte Realisierung des Netz- und Anlagenschutzes in PV-Anlagen nach VDE AR-N-4105:2018.</li> <li>• stability improvements regarding the communication interface</li> <li>• corrections of wrong error messages relating to external energy meter</li> <li>• Enhanced Web Connect support of special Internet Service Provider (ISP) due to TCP connection with Sunny Portal (no SIP communication anymore)</li> </ul> <p>This release contains all changes of the former version 3.00.10.R</p>

<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (CORE1)
<b>FW-Version</b>	3.00.10.R
<b>Release Date</b>	07/2019 (Download)
<b>Update feature/reason</b>	<p>New/changed main functionality</p> <p><b>New grid codes</b></p> <p>With the new firmware release 3.00.10.R the STP 50-40/STP 50-JP-40 comply to the European regulation (EU) 2016/631 ("RfG", Requirements for Generators"). Following new grid codes are implemented:</p> <p>Germany:  Low voltage: VDE-AR-N 4105:2018-11  Medium voltage: VDE-AR-N 4110:2018-11</p>

	<p>EU (general):  Low voltage: EN50549-1:2018  Medium voltage: EN50549-2:2018</p> <p>UK: *  Low voltage: EREC G99:2018  Medium voltage: EREC G99:2018</p> <p>Belgium: *  Low voltage: C10/11 LV2:2018  Medium voltage: C10/11 MV1:2018</p> <p style="color: red;">*) Please note the new grid codes for UK and Belgium are preliminary and not yet certified (verification is still in process). It is recommended to choose the previous grid codes until the manufacturer declaration for the new grid code will be available (manufacture declarations can be found on <a href="http://www.sma.de">www.sma.de</a>).</p> <p><b>Changes in the Web UI</b></p> <ul style="list-style-type: none"> <li>• The new firmware provides some improvements of the Web UI</li> <li>• Enhanced password restrictions for higher security (Information will be displayed in the Web UI)</li> </ul> <p><b>Grid Guard 10.0 (For RfG Setting)</b></p> <p>“Grid Guard 10.0” is a new solution to realize the grid management and control functions of the inverter. It contains new parameters and enhanced methods to realize e.g. Q(U), P(f) cos Phi(P) functions. SMA will use this new solution to realize future grid standards beginning with the European RfG standards.</p> <p>You will find a detailed description of the Grid Guard 10.0 capabilities in the zip file of the firmware package or under <a href="http://www.sma.de">www.sma.de</a>.</p> <p>Please search for:  NSM-GG10-TI-en-10.pdf (Technical Information SMA GRID GUARD 10.0, Grid Management Services through SMA Inverters)</p> <p><b>Bug Fixes</b></p> <p>With this firmware version the data exchange between inverter and Sunny Portal is improved thus the data volume is significant reduced.</p>
<p><b>Update medium</b></p>	<ul style="list-style-type: none"> <li>• Web Interface of the inverter (WebU/I)</li> <li>• Sunny Explorer (as from version 1.07.29.R)</li> <li>• SMA Cluster Controller</li> <li>• SMA Data Manager M (via USB)</li> </ul>

<b>File-Name</b>	FW3_00_10_R_STP50-40.zip
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<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (CORE1)
<b>FW-Version</b>	1.05.09.R
<b>Release Date</b>	02/2019 (Download)
<b>Update feature/reason</b>	<ul style="list-style-type: none"> <li>• stability improvements regarding the communication interface</li> </ul>
<b>Update medium</b>	<ul style="list-style-type: none"> <li>• Web Interface of the inverter</li> <li>• Sunny Explorer (as from version 1.07.29.R)</li> <li>• SMA Cluster Controller</li> </ul>

<b>Inverter</b>	STP 50-40 / STP 50-JP-40 (CORE1)
<b>FW-Version</b>	1.05.05.R
<b>Release Date</b>	08/2018 (Download)
<b>Update feature/reason</b>	<ul style="list-style-type: none"> <li>• stability improvements regarding the communication interface</li> <li>• New predefined country settings for: <ul style="list-style-type: none"> <li>○ Brazil (ABNT NBR 16149:2013)</li> <li>○ South Africa (NRS97-2-1)</li> <li>○ Chile (NT_LEY 20571)</li> </ul> </li> </ul>
<b>Update medium</b>	<ul style="list-style-type: none"> <li>• Web Interface of the inverter</li> <li>• Sunny Explorer (as from version 1.07.29.R)</li> <li>• SMA Cluster Controller</li> </ul>

<b>Inverter</b>	STP 50-40 (CORE1)
<b>FW-Version</b>	1.03.04.R
<b>Release Date</b>	11/2017 (Download)
<b>Update feature/reason</b>	<ul style="list-style-type: none"> <li>• initial firmware version for certificate for German BDEW guideline "Generating Plants connected to the Medium-Voltage Network"</li> <li>• initial firmware version for certificates for Italian standards CEI 0-16 and CEI 0-21</li> <li>• Implementation of Integrated Plant Control 2.0 for CORE1 inverter (see "Technical Information - Integrated Plant Control and Q on Demand 24/7")</li> <li>• stability improvements</li> </ul>