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 Business Unit ABB Oy, Distribution Solutions
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 Date 11.12.2023

Firmware update release 1.3.2 for SSC600 1.0 Feature Pack 3

Scope

Firmware update release 1.3.2 is for the following product:

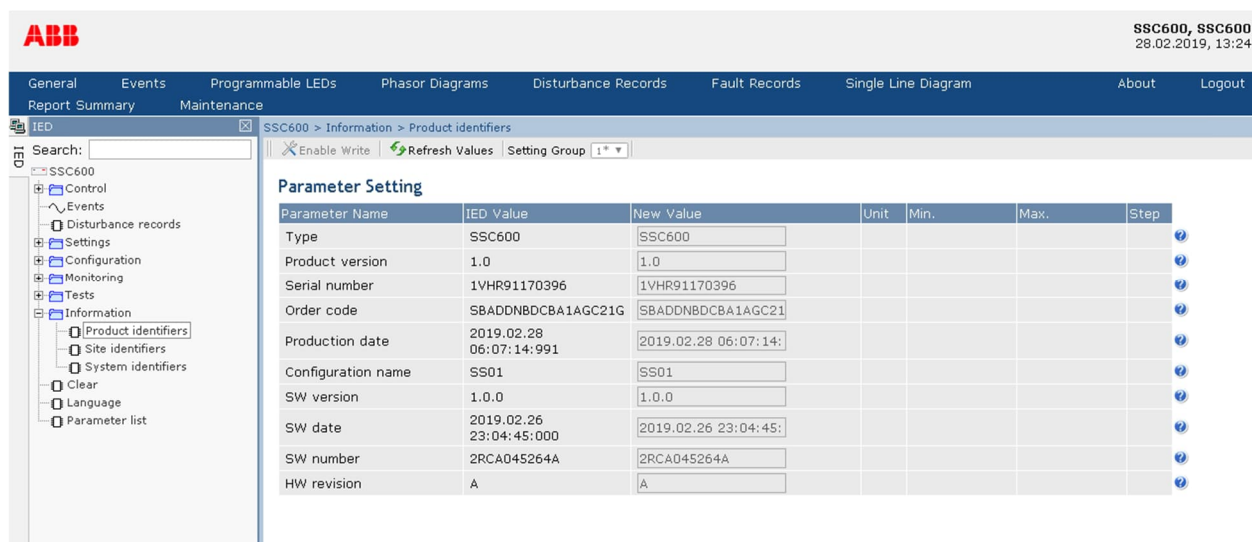
- SSC600 1.0 Feature Pack 3

To verify that the firmware update applies to the product version, ensure that the last two characters of the order code on the human-machine interface (WHMI) match the corresponding characters of the order code in Fig. 1.

SBAxxxxxxxxxxxx4G
 ↑↑

Fig 1. Order code of the SSC600 protection relays

To identify the current firmware revision of the SSC600, please refer to Fig. 2.



The screenshot shows the ABB WHMI interface for an SSC600 product. The 'Parameter Setting' table is visible, listing various parameters and their current values. The 'Order code' parameter is highlighted, showing the value 'SBADDNBDCBA1AGC21G'.

Parameter Name	IED Value	New Value	Unit	Min.	Max.	Step
Type	SSC600	SSC600				
Product version	1.0	1.0				
Serial number	1VHR91170396	1VHR91170396				
Order code	SBADDNBDCBA1AGC21G	SBADDNBDCBA1AGC21				
Production date	2019.02.28 06:07:14:991	2019.02.28 06:07:14:				
Configuration name	SS01	SS01				
SW version	1.0.0	1.0.0				
SW date	2019.02.26 23:04:45:000	2019.02.26 23:04:45:				
SW number	2RCA045264A	2RCA045264A				
HW revision	A	A				

Fig. 2 Current firmware revision of the SSC600 product

Implemented usability improvement

The firmware update release includes usability improvements but introduces no new functionality. Firmware updates are cumulative.

The following improvement has been implemented:¹

Firmware update release 1.3.2:

Protection

- Improve robustness of the application when multiple SPCGAPC instances are in use.

Performance

- Introduced support for a new communication card variant.

Communication

- Improved robustness in a scenario where misbehaving MMS client caused connection to fail.
- Improved robustness in a scenario where misbehaving IEC 60870-5-104 client caused unwanted behaviour in SSC600.

Engineering

- Avoided unnecessary reboot cycle when writing IEC 60870-5-104 configuration on big systems.

Firmware update release 1.3.1:

Engineering and monitoring

- Excess security events during configuration write was suppressed from the event recording.
- Robustness improved on firmware update. With large configurations it was possible that firmware update from Local port (LAN1) failed sometimes.

Communication

¹ The relay firmware update may also include some minor usability improvements not listed in this note.

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- Communication robustness for specific PRP networks. In some network topologies with specific switches and merging units, redbox supervision frames caused missing SMV samples in SSC600. Supervision frame handling is now fixed.
- IEC 60870-5-104 control mode changes for select-before-operate(SBO). It was possible to control switching objects with direct control mode even if SSC600 control mode was SBO.
- Improved network segregation of SSC600 accesspoints. Service port (LAN7) communicating with Rear port (LAN5) IP was disabled.
- Changed the MAC address of LAN B to match LAN A in PRP.

Update procedure

Firmware updates represent an integral part of ABB's life cycle management of distribution protection and control relays. The updates ensure optimized usability throughout the relay's entire life cycle by offering the latest improvements. The ideal time for a firmware update would be during periodical testing or a maintenance break.

All SSC600 1.0 Feature Pack 3 (4G) product deliveries dispatched later than December 12, 2023 include the stated relay firmware update 1.3.2. Process of updating the latest firmware to the SSC600 can be found in the Engineering Manual, Chapter 4.6 "IED Update".

Updating SSC600 1.0 firmware directly to 1.3.2 is not possible. It is necessary to first upgrade to FP1 or FP2 before updating to FP3.

Please note that ABB will not be liable for any direct or indirect costs related to the firmware update procedure. The update procedure shall be performed at the sole responsibility of the possessor of the devices.