

Service information firmware update 7SA510 V3.23B

1. Overview

This service instruction describes the procedure of the firmware update for the SIPROTEC devices. It is part of the update packages for updating

Please follow the steps as described below:

- Check operating system. The update operates only with Windows 95/98 and Win NT4.0.
- Check whether your devices are hardware-wise suitable for this firmware update. Corresponding information can be taken from chapter 2. Here you can find the Order information too.
- Save the actual parameter set in your device using DIGSI. Corresponding information can be taken from chapter 3.
- Install the firmware load program at your PC as described in chapter 4.
- Isolate the trip contact of your device electrically.
- Proceed with updating the firmware as described in chapter 5 and download the parameter set (updated if necessary) into your device (chapter 5).
- Perform a commissioning test and, if successful, switch the device back into operation.

2. Ordering informationen

The hardware version has to be known in order to check whether the devices are suitable for a firmware update. The hardware version is indicated by /ZZ, with ZZ being letters which are incremented for hardware updates starting with /BB. (Example: 7XXXXXX-XXXXX-XXXX/**BB**) The following table contains the possible HW/SW-combinations. If your update is impossible, then please contact your local SIEMENS partner.

For ordering the following details are required:

- Quantity of devices
- Ordering code and serial number of devices.
- Actual firmware version (e.g. V1.23)
- New firmware version (e.g. V2.34)
- Ordering Code of loading disc (see following table)

| devicetyp | requirement | | new SW-Version | language | Floppy | Order-#. | P-# |
|-----------|-------------|----------|----------------|----------|-----------------|--------------------|------------------|
| | SW | HW | | | | | |
| 7SA510 | from V3.xx | from /BB | V03.23.05 | Germ. | 3,5" DS HD Disk | C53207-A319-W182-1 | P73509-B1-W179-1 |
| 7SA510 | from V3.xx | from /BB | V03.23.55 | Engl. | 3,5" DS HD Disk | C53207-A319-W192-1 | P73509-B1-W181-1 |

Connecting cable to the protection device <-> PC, e.g. Order-#. 7XV5100-0, 7XV5100-1 (PC-Side 25-pin), 7XV5100-2 (PC-Side 9-pin)

| | | | | | | |
|------|-------------|----------|------|----------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|
| | | | | Datum | 05.07.01 | Service-Information Firmwareupdate 7SA510 /BB V3.**B* -> V3.23B* |
| | | | | Bearb. | Zachariae | |
| | | | | Gepr. | Claus | |
| | | | | Norm. | | |
| | | | | (readme.doc) | | |
| | | | | SIEMENS AG PTD PA D SI Power Transmission and Distribution | | Blatt |
| 3A | First issue | 05.07.01 | ZC | C53000-A1000-X038-3A-7620 | | 1 / 6 |
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The available update packages can be ordered from your local SIEMENS representative or from

Siemens AG
 PTD PA PSL
 Wernerwerkdammm 5
 13623 Berlin

3. Save the parameter set with DIGSI

When downloading a new firmware version into the device, all parameters will be in basic settings.

The existing parameter will be erased. Therefore it is essential that the actual parameter set is saved on a PC using DIGSI. After the firmware update you need DIGSI to download the parameter into the device. If the firmware version was changed by the first number behind the dot (e.g. from V1.23 to V1.30) then a DIGSI-Update is required. When the version was only changed by the second number (e.g. from V1.23 to V1.24), then no DIGSI update is required.

4. Installing the firmware load program

The firmware load program has to be installed on your computer before loading. This installation should always be executed even if one version of the load program had previously been installed on your computer. The procedure for installation is:

The following files are on the disk: (the file names can differ depending on the device type and the firmware version):

| Dateiname | Größe | Typ | Geändert am | Attribute |
|----------------------|--------|-----------|----------------|-----------|
| 7XXXXX_VYY.YY.YY.PCK | 582 KB | PCK-Datei | 14.10.99 11:08 | A |
| FirmwareUpdate.DE_ | 10 KB | DE_-Datei | 14.10.99 11:08 | A |
| FirmwareUpdate.EN_ | 10 KB | EN_-Datei | 14.10.99 11:08 | A |
| FirmwareUpdate.EX_ | 341 KB | EX_-Datei | 14.10.99 11:08 | A |
| Readme.txt | 2 KB | Textdatei | 14.10.99 11:08 | A |
| Setup.EXE | 199 KB | Anwendung | 14.10.99 11:08 | A |
| liesmich.doc | 64 KB | Word | 14.10.99 11:08 | A |
| readme.doc | 64 KB | Word | 14.10.99 11:08 | A |

Please read the notes in the file "Readme.txt" before continuing the installation.

Start the program "Setup.exe" and follow the instructions of the installation program. We recommend to save all Updates in the same directory „C:\Siemens“. The Updateprogram structures all updates later on. You will find the following files in the installation directory (the file names can differ depending on the device type and the firmware version).

| | | | | | | |
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| Dateiname | Größe | Typ | Geändert am | Attribute |
|----------------------|--------|-----------------|----------------|-----------|
| 7XXXXX_VYY.YY.YY.PCK | 582 KB | PCK-Datei | 16.03.00 17:10 | A |
| FIRMWAREUPDATE | 2 KB | Kurzwahleintrag | 16.03.00 17:10 | A |
| FirmwareUpdate.DE | 10 KB | DE-Datei | 16.03.00 17:10 | A |
| FirmwareUpdate.EN | 10 KB | EN-Datei | 16.03.00 17:10 | A |
| FirmwareUpdate.EXE | 341 KB | Anwendung | 16.03.00 17:10 | A |

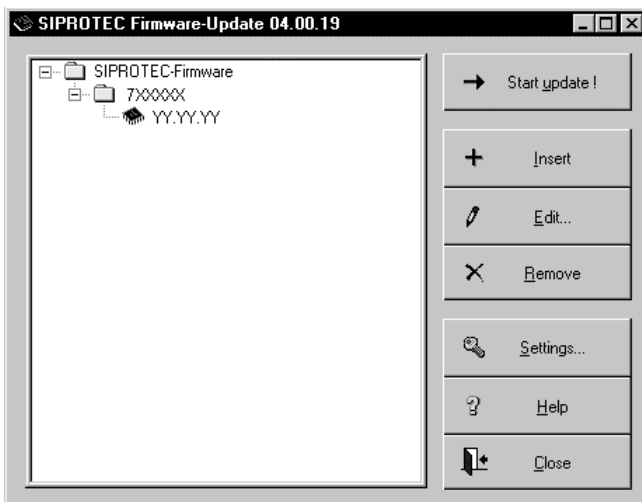
The installation of the firmware load program is now complete.

5. Loading the firmware

The device trip contact shall be isolated electrically and the device has to be connected to the PC. Please connect then RS232-Port on the front side of the device with the RS232-Com-Port of your PC. The program "FirmwareUpdate.EXE" can now be started from the directory where the load program has been installed.

Note: When loading the firmware the parameter set in the device will be erased. Therefore it should first be stored using DIGSI!

The firmware load program starts with the following menu:



The left-hand window on the screen shows all firmware versions which are actually available on the PC. First the firmware which shall be loaded has to be selected. This is done by selecting the required firmware under the device type (e.g. „01.23.45“ for V1.23). Depending on the device type not only one device firmware is offered.

Before starting the loading procedure, please select under "Settings" the serial interface of your PC which is connected with the device by the connection cable. This is done in the following menu:

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Further information is given under "Help". Now the loading procedure for the firmware can be started by "Start Update".

Please pay attention to the written text in the load program during the loading procedure.

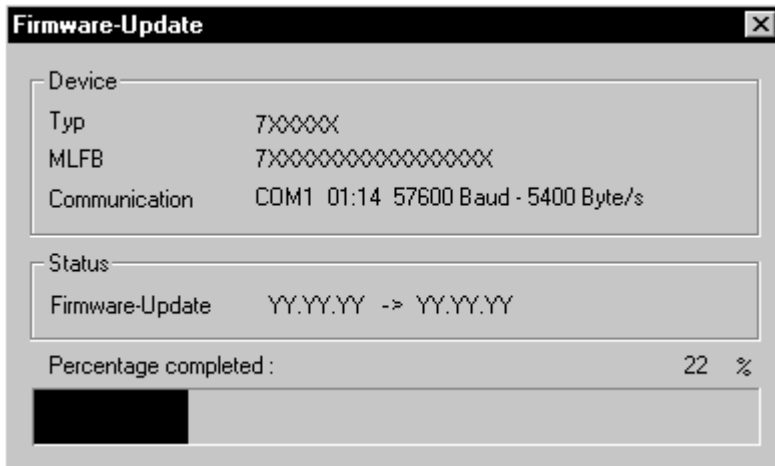
WARNING!

The auxiliary voltage of the protection device must not be interrupted during the load process.

Note:

In the event of an auxiliary voltage failure during the installation the loading procedure should be attempted again. Depending on the instant of voltage failure this might be impossible. In case of failure the device has to be returned to the factory. If this is the case or if unexpected problems occur, please contact your SIEMENS partner.

The load program monitors the correct data transfer between PC and protection device. During the loading procedure the following picture is displayed on the screen.



| | | | | | | |
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After the loading procedure, the protection device automatically performs a check sum test in order to ensure that the new firmware has correctly been transferred to the device. After the successful update the green "RUN" LED is on and the red "EROR" LED is off. Than the update will start an original start. At this moment the red "EROR" LED goes on. When the original start is finished the red "EROR" LED goes off durable.

6. Load Parameterset into the device

After completion of the loading procedure all parameters will be in basic settings. To down load the correct parameter set into the device, please use DIGSI.

| | | | | | | | |
|------|-------------|----------|------|----------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|-------|
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WARNUNG

Beim Betrieb können in Geräten und Baugruppen je nach Ausführung und Anwendung gefährliche elektrische Spannungen auftreten. Unsachgemäßer Umgang mit diesen Geräten kann deshalb zu schweren Körperverletzungen oder erheblichen Sachschäden führen.

Nur entsprechend qualifiziertes Personal sollte an diesem Gerät arbeiten.

Der einwandfreie und sichere Betrieb dieses Gerätes setzt sachgemäßen Transport, fachgerechte Lagerung, Aufstellung und Montage sowie sorgfältige Bedienung und Instandhaltung voraus.

Sollten Sie weitere Informationen wünschen, oder sollten besondere Probleme auftreten, die in der Anleitung nicht ausführlich genug behandelt werden, können Sie die erforderliche Auskunft über die örtliche Siemens-Niederlassung anfordern.

QUALIFIZIERTES PERSONAL

sind Personen, die mit Aufstellung, Montage, Inbetriebsetzung und Betrieb des Produktes vertraut sind und über entsprechende Qualifikationen verfügen, wie z.B.:

- Ausbildung oder Unterweisung bzw. Berechtigung Geräte/Systeme gemäß den Standards der Sicherheitstechnik für elektrische Stromkreise zu betreiben und zu warten.
- Ausbildung oder Unterweisung gemäß den Standards der Sicherheitstechnik in Pflege und Gebrauch angemessener Sicherheitsausrüstung
- Schulung in Erster Hilfe



WARNING

Dangerous voltages may occur in devices and modules during operation depending on the design and application. Incorrect use of these devices can therefore result in severe personal injury or substantial damage to property.

Only suitably qualified staff should work on this device.

Correct and safe operation of this device is dependent on proper handling, installation, operation and maintenance.

Should you require further information, or should particular problems occur which are not handled in sufficient depth in the Instructions, help can be requested through your local Siemens Office or representative.

QUALIFIED PERSON

A "qualified person" is one who is familiar with the installation, construction and operation of the device and who has the appropriate qualifications, e.g.

- is trained and authorised to operate and maintain devices/systems in accordance with established safety practices for devices with electrical circuits.
- is trained in the proper care and use of protective equipment in accordance with established safety practices.
- is trained in first aid.

Änderungen vorbehalten !

Subject to change without prior notice !

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