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AUGUST, 2019

# Softstarter Firmware Upgrade

## Contents

<b>1</b>	<b>How to upgrade PSTX firmware</b>	<b>2</b>
1.1	Upgrade PSTX softstarter with CB FW version higher than 1.22.02	
1.1.1	Preparation	2
1.1.2	Upgrade firmware	3
1.2	Upgrade PSTX softstarter with CB FW version lower than 1.22.0	8
1.2.1	Preparation	8
1.2.2	Backup parameters	9
1.2.3	Upgrade firmware	9
<b>2</b>	<b>How to upgrade PSE firmware</b>	<b>13</b>
2.1	Preparation	13
2.2	Upgrade firmware	13

Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	2/16

## 1 How to upgrade PSTX firmware

The PSTX Softstarter has two firmware; one firmware for PSTX HMI and one firmware for the PSTX Control Board (CB). The two firmware are in one zip-package and can be found at ABB Library. It is only published internally ABB, but sharing to customers is approved. To upgrade the PSTX softstarter with the firmware, the SoftstarterCare is required. Use the hyperlinks below to download from the ABB library (only available for ABB personnel - intranet).

- [Firmware Package](#)
- [SoftstarterCare](#)

It is also possible to find the PSTX firmware and the SoftstarterCare under *Documents->Software* at [ABB Library - PSTX Softstarter](#).

In order to upgrade PSTX, there are two different instructions available depending on the CB firmware version used. The CB firmware version can typically be found using the HMI (*Menu->System info->Softstarter*). If the HMI cannot be used, connect SoftstarterCare to the PSTX softstarter and you will find the CB firmware version on *Information->DEVICE INFORMATION* sheet.

**IMPORTANT:** *If you use SoftstarterCare version 2.2.9 or newer and PSTX CB version 1.36.2 or older, you will not be able to upgrade if you are running in demo mode. Quit demo mode before upgrade.*

### 1.1 Upgrade PSTX softstarter with CB FW version higher than 1.22.0

**IMPORTANT:** *This instruction shall only be used for softstarters with CB firmware version higher than 1.22.0.*

#### 1.1.1 Preparation

a. You need a standard USB cable - "Mini-USB to USB".

b. Unzip and Install SoftstarterCare on your PC.

**Note:** *Please make sure to install the correct version of the Visual C++ Redistributable for Visual Studio 2015 package prior to installation of Softstarter Care. No matter what type of Windows computer you have, please install the x86 version (32-bits) as Softstarter Care is a 32-bits application. It also applies to 64-bits computers. The file name of the redistributable package to download and install from microsoft.com is **vc\_redist.x86.exe**.*

Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	3/16

- c. Unzip the PSTX Firmware Package.

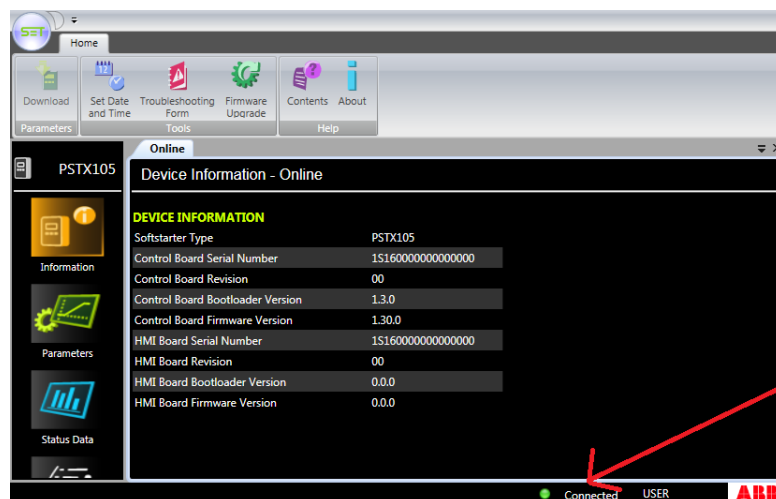
### 1.1.2 Upgrade firmware

- a. Ensure that the PSTX softstarter is disconnected from operational voltage and control supply voltage (100-250V). It only requires the power from the USB.
- b. Set the PSTX HMI in boot mode.



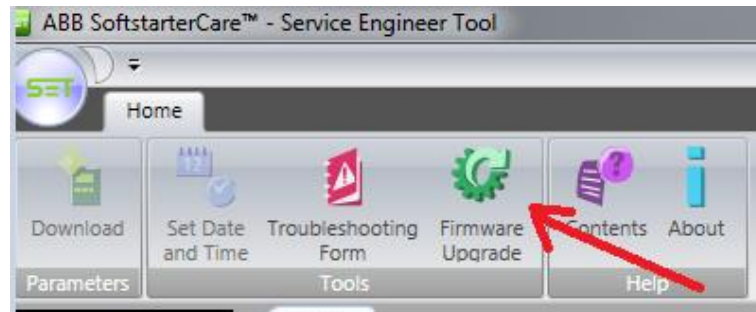
Hold both the stop and L/R button when connecting the USB cable between the PC and the PSTX HMI. This will set the HMI in boot mode and all four LEDs (Ready, Run, Protection and Fault) will be lit. Release the buttons and verify that all 4 LEDs still are lit.

- c. Start SoftstarterCare and confirm that the softstarter is connected.  
*Windows Start->All programs->ABB-> ABB SoftstarterCare™ - Service Engineer Tool-> SoftstarterCare™ - Service Engineer Tool.*

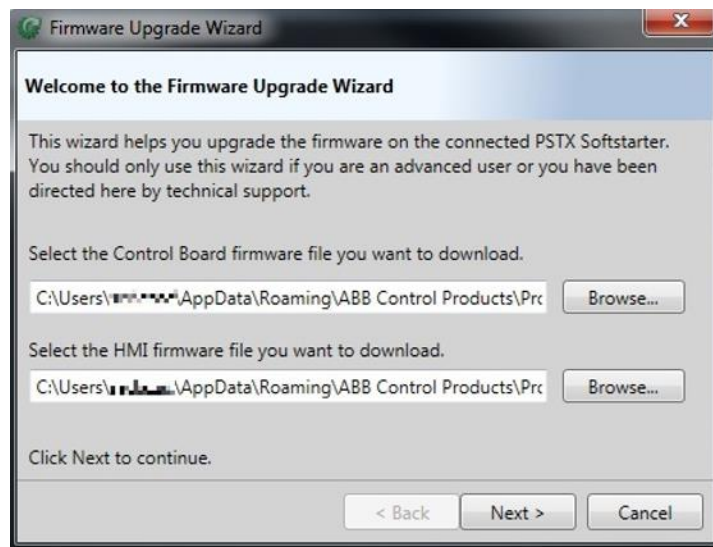


Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	4/16

- d. Click on *Firmware upgrade* to start the firmware upgrade wizard.

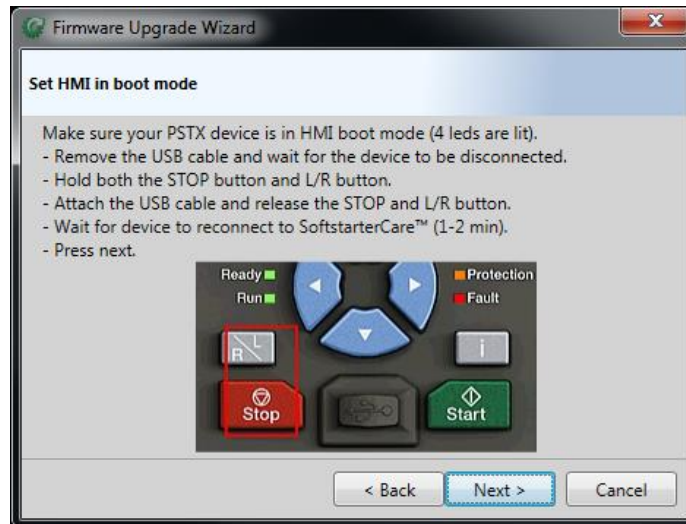


- e. Select the firmware (.cab) files previously unzipped during the preparation and then click *Next*.



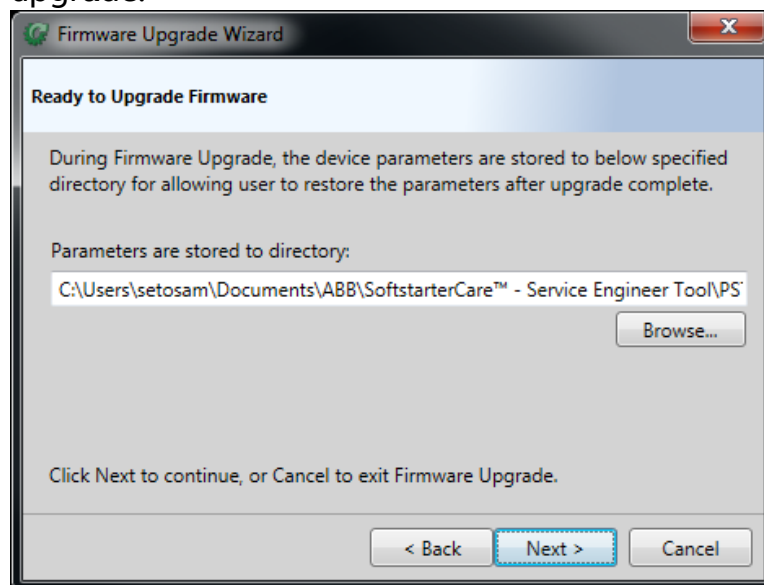
- f. Your PSTX softstarter is already in boot mode so click *Next* to proceed with the upgrade.

Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	5/16



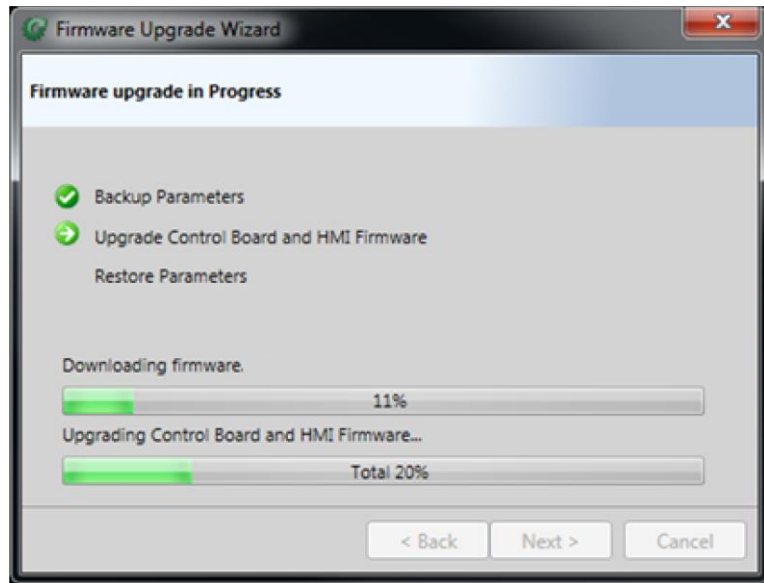
- g. The softstarter parameters are stored to a specified directory for allowing user to restore parameters after upgrade.

Click *Next* to use the default directory and start the firmware upgrade.



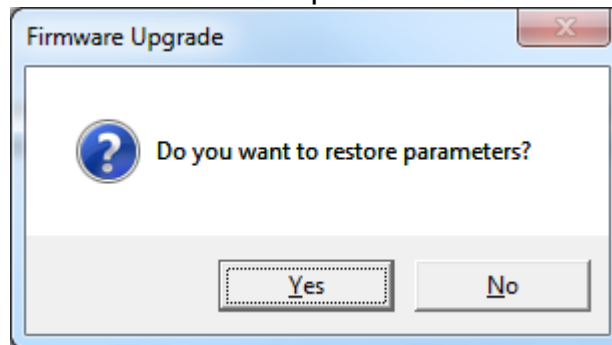
- h. The firmware upgrade is now in progress. The upgrade takes up to 15 minutes.

Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	6/16

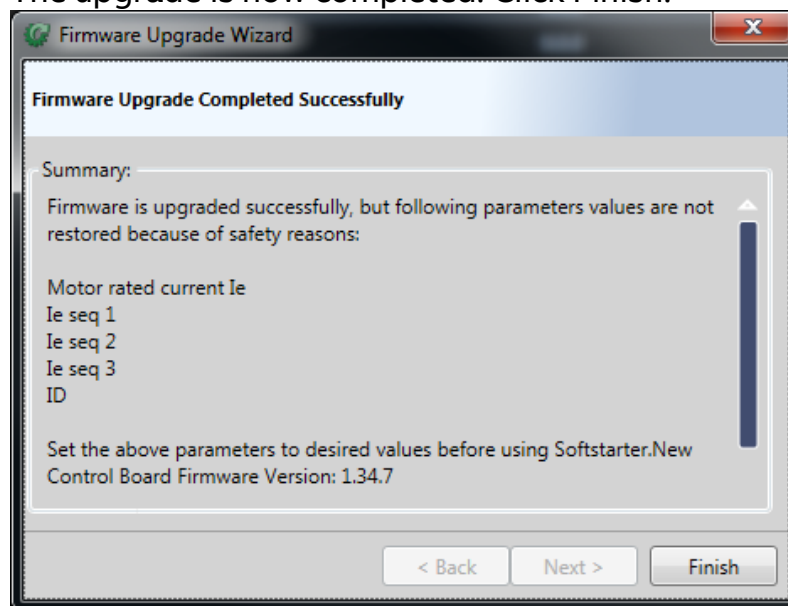


Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	7/16

- i. Message box asks whether you want to restore parameters or not. Click **Yes** to restore parameters.



- j. The upgrade is now completed. Click **Finish**.



Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	8/16

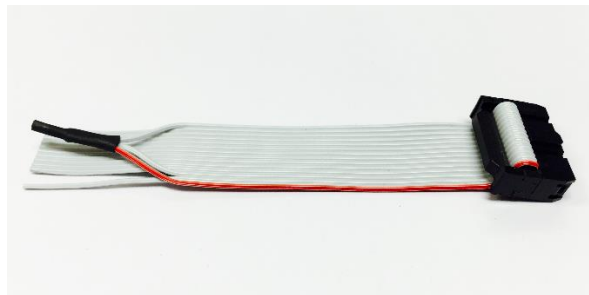
## 1.2 Upgrade PSTX softstarter with CB FW version lower than 1.22.0

**IMPORTANT:** *This instruction shall only be used for softstarters with CB firmware version lower than 1.22.0.*

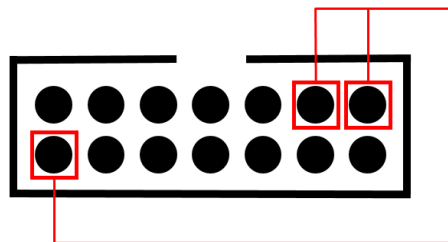
SoftstarterCare has very limited support for softstarters with old CB firmware, i.e. parameters backup/restore is not supported, only firmware upgrade is supported. In addition to the firmware upgrade instruction of softstarters with new CB firmware, two additional steps is needed for old CB firmware in order to not lose parameter setting during firmware upgrade.

### 1.2.1 Preparation

- a. You need a standard USB cable - “Mini-USB to USB”.
- b. You need to connect a jumper cable to the COM2 port in order to set it in boot mode. Contact softstarters support ([se-softstarters-support@abb.com](mailto:se-softstarters-support@abb.com)) to order one.



If you don't have the cable it's still possible to get into boot mode by connecting the 3 pins shown in the picture below.



- c. Unzip and Install SoftstarterCare on your PC  
**Note:** *Please make sure to install the correct version of the Visual C++ Redistributable for Visual Studio 2015 package prior to installation of Softstarter Care. No matter what type of Windows computer you have, please install the x86 version (32-bits) as Softstarter Care is a 32-bits application. It also applies to 64-bits*



Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	9/16

*computers. The file name of the redistributable package to download and install from microsoft.com is **vc\_redist.x86.exe**.*

- d. Unzip the PSTX Firmware Package CB1.34.7/HMI1.16.6.

### 1.2.2 Backup parameters

Write down all modified parameters. These parameters must be manually restored after firmware upgrade.

To list the modified parameters, use the HMI and navigate to *Menu->Parameters->Modified*. If the HMI cannot be used for some reason, then it is possible to connect another HMI to the PSTX softstarter to list the modified parameters.

### 1.2.3 Upgrade firmware

- a. Ensure that the PSTX softstarter is disconnected from operational voltage and control supply voltage (100-250V). It only requires the power from the USB.
- b. Attach jumper cable to Control Board (Jumper cable will force PSTX CB to boot mode when it is power on)
- c. Set the PSTX HMI in boot mode.

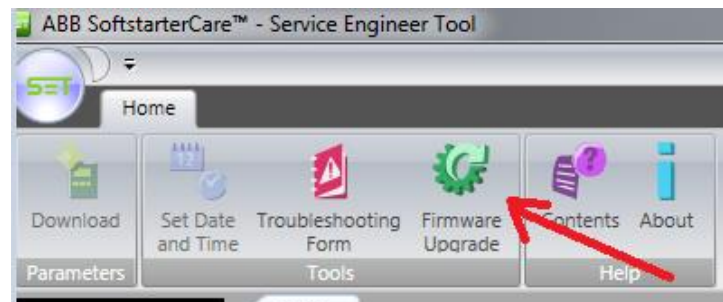
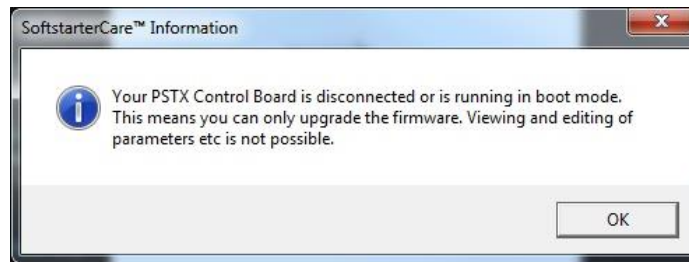


Hold both the stop and L/R button when connecting the USB cable between the PC and the PSTX HMI. This will set the HMI in boot mode and all four LEDs (Ready, Run, Protection and Fault) will be lit. Release the buttons and verify that all 4 LEDs still are lit.

- d. Remove jumper cable. The Control Board will need to restart itself into application mode during the upgrade, and that's not possible if the jumper cable remains connected to the COM2 port.
- e. Start SoftstarterCare, *Windows Start->All programs->ABB-> ABB SoftstarterCare™ - Service Engineer Tool-> SoftstarterCare™ - Service Engineer Tool.*

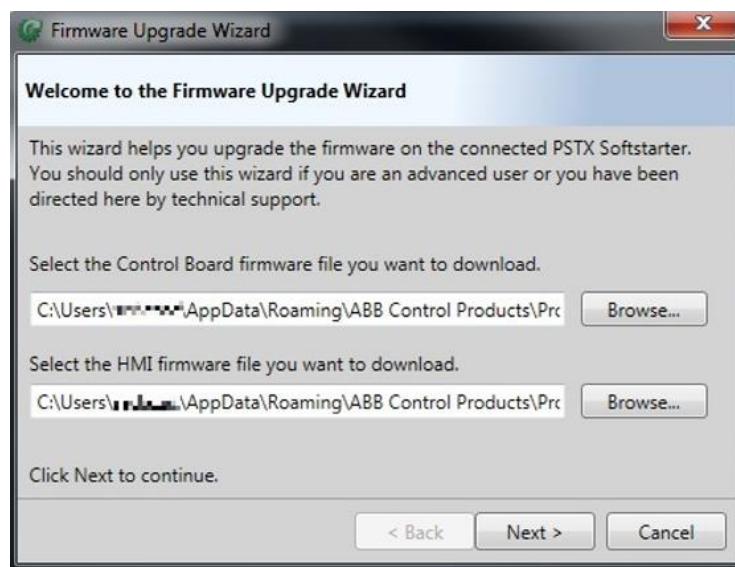
Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	10/16

You will get the following information dialog. Click *OK*.



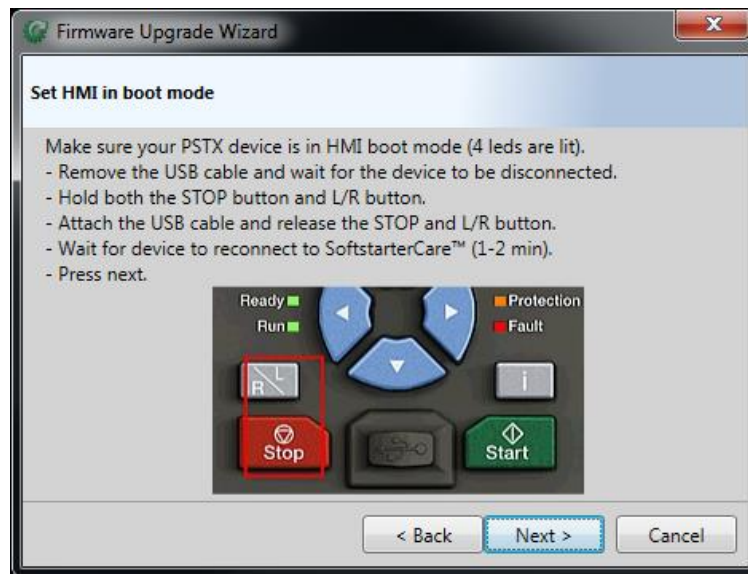
f. Click on Firmware upgrade

g. Select the firmware (.cab) files previously unzipped during the preparation and then click *Next*.

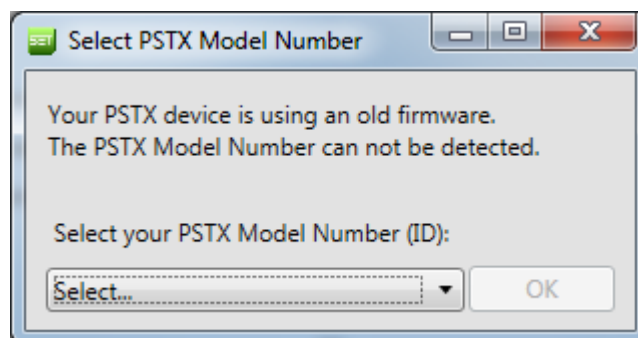


h. Your PSTX softstarter is already in boot mode so click *Next* to proceed with the upgrade.

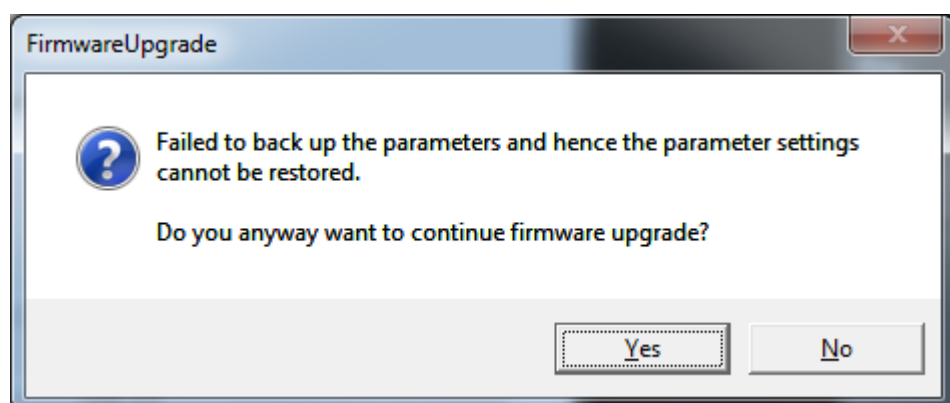
Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	11/16



- i. Since parameters cannot be read from device, you will have to set the PSTX model number manually. Click *Select* and choose the correct model number. Then click *OK* to start the firmware upgrade.

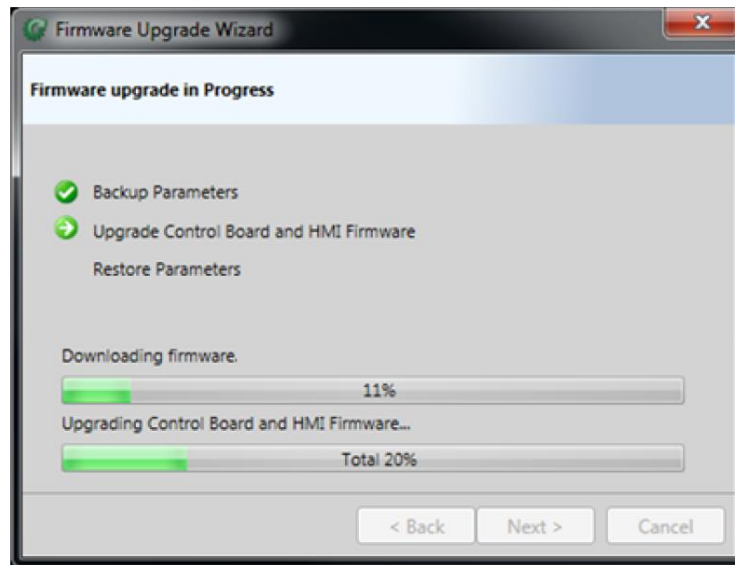


- j. A message box will show up because of the parameters that cannot be saved. Click *Yes* to continue with firmware upgrade.

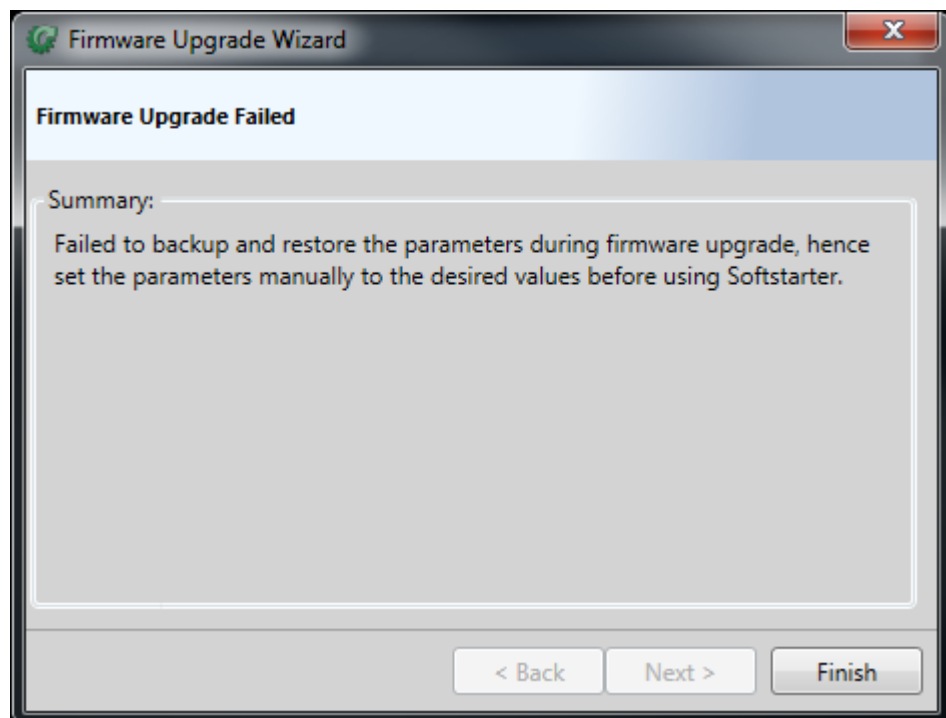


Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	12/16

- k. The firmware upgrade is now in progress. The upgrade takes up to 15 minutes.



- l. The upgrade is now completed, click *Finish* to exit upgrade wizard.



- m. Restore all *modified parameters* by setting each parameter to the value stored before firmware upgrade, see section *1.2.2 Backup parameters*.
- n. Done, firmware update completed.

Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	13/16

## 2 How to upgrade PSE firmware

The PSE firmware can be found at ABB Library. It is only published internally ABB, but sharing to customers is approved. To upgrade the PSE softstarter with the firmware, the SoftstarterCare is required. Use the hyperlinks below to download from the ABB library (only available for ABB personnel - intranet).

- [SoftstarterCare](#)

It is also possible to find the PSE firmware and the SoftstarterCare under *Documents- >Software* at [ABB Library - PSE Softstarter](#).

### 2.1 Preparation

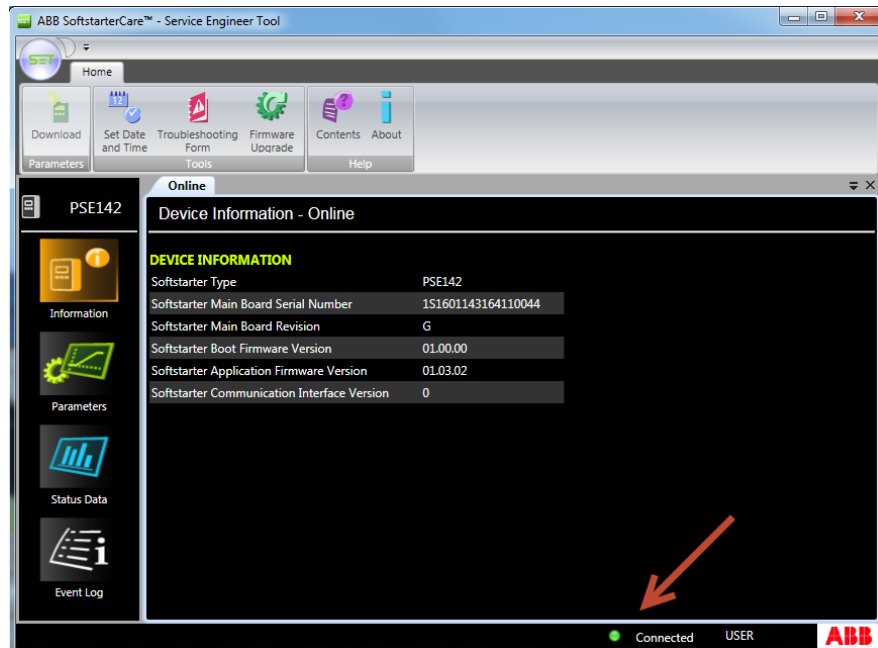
- a. You need a USB cable for ABB SoftstarterCare - Service Engineer Tool
  - Type code: PSECA
  - Order code: 1SFA897201R1001
- b. Unzip and Install ABB SoftstarterCare - Service Engineer Tool on your PC.

**Note:** Please make sure to install the correct version of the Visual C++ Redistributable for Visual Studio 2015 package prior to installation of Softstarter Care. No matter what type of Windows computer you have, please install the x86 version (32-bits) as Softstarter Care is a 32-bits application. It also applies to 64-bits computers. The file name of the redistributable package to download and install from microsoft.com is **vc\_redist.x86.exe**.

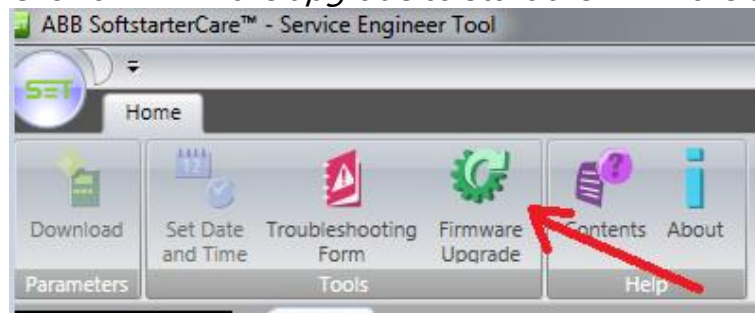
### 2.2 Upgrade firmware

- a. Ensure that the PSE softstarter is disconnected from operational voltage and control supply voltage (100-250V). It only requires the power from the USB.
- b. Start SoftstarterCare and confirm that the softstarter is connected.  
*Windows Start->All programs->ABB-> ABB SoftstarterCare™ - Service Engineer Tool-> SoftstarterCare™ - Service Engineer Tool.*

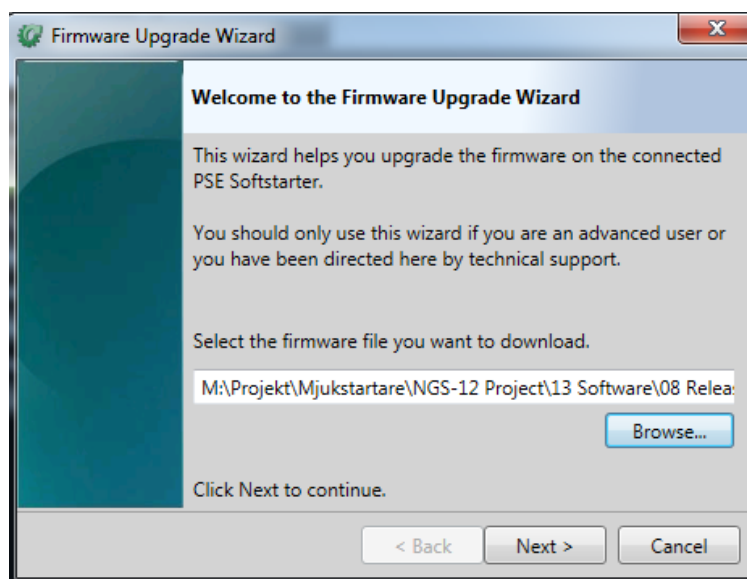
Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	14/16



c. Click on *Firmware upgrade* to start the firmware upgrade wizard.



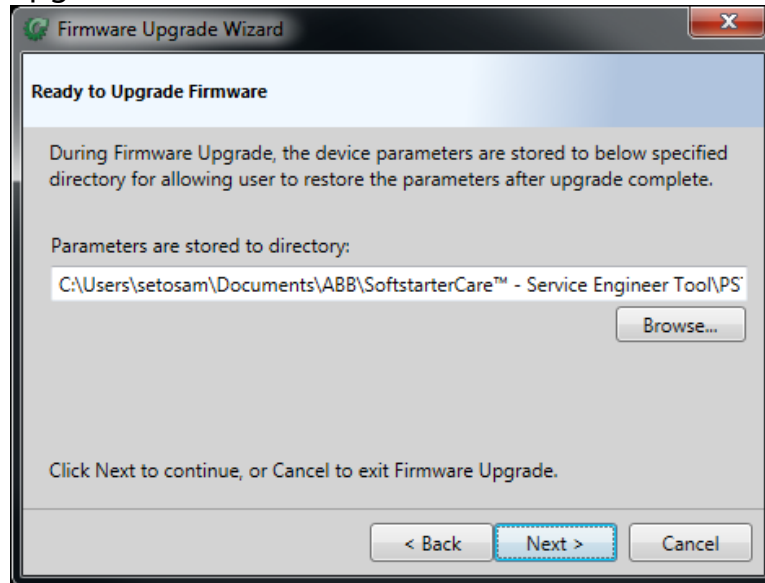
d. Select the firmware (.cab) file and then click *Next*.



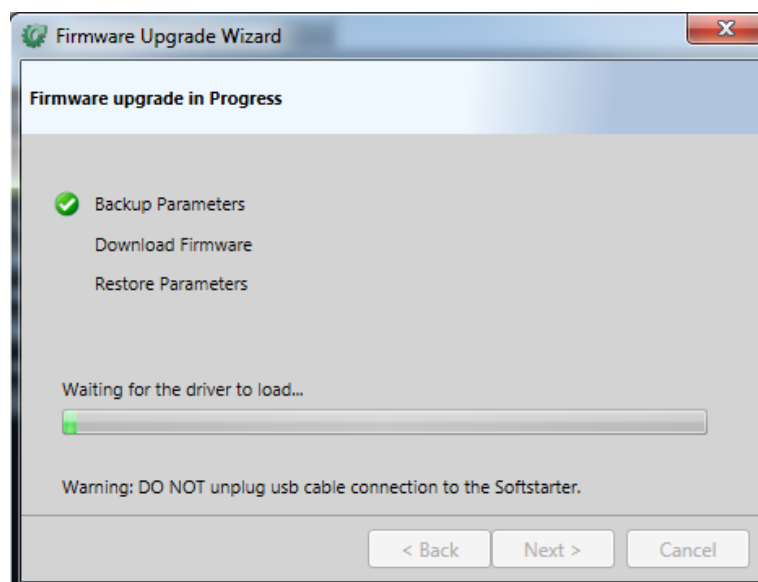
Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	15/16

- e. The softstarter parameters are stored to a specified directory for allowing user to restore parameters after upgrade.

Click *Next* to use the default directory and start the firmware upgrade.

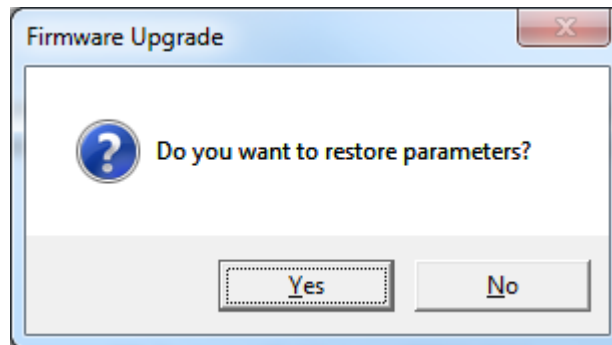


- f. The firmware upgrade is now in progress. The upgrade takes up to 1 minute.



Technical Instruction	Released		
Softstarter Firmware Upgrade Instruction		2019- August- 27	16/16

- g. Message box asks whether you want to restore parameters or not. Click *Yes* to restore parameters.



- h. The upgrade is now completed. Click Finish.

