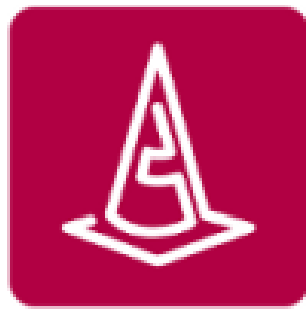


SoSafe Programmable V2.2

Release Notes



Software Version: 2.2.0.54

Release Date: 2017-09-01

This document contains important information about the SoSafe Programmable software. Please read the complete document before you run the product.

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

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Important Information

Documentation

Additional documentation is included in the software package. Some of the documents are in PDF format, and therefore require a compatible application, such as Adobe Reader™ to view them. Adobe Reader™ is not part of the SoSafe Programmable installation but can be downloaded from the website www.adobe.com.

Further information on Schneider Electric software products can also be found under www.schneider-electric.com.

Make sure that you received, read and understood the product manuals for the different hardware components. Strictly follow the instructions contained in those manuals when operating the devices, and pay particular attention to any and all safety information.

Product overview

SoSafe Programmable is used to develop safety-related applications for the Safety Logic Controller. SoSafe Programmable is based on the standard IEC 61131-3 and meets the applicable safety requirements of IEC 61508. SoSafe Programmable provides all the necessary tools for the different development phases of a Safety Logic Controller application:

Features

- Creating / editing an application project (safety-related application)
- Compiling the project
- Downloading the project to the Safety Logic Controller (SLC)
- Debugging the SLC (starting, stopping, resetting, etc.)
- Performing the functional tests
- Monitoring the SLC and debugging the safety-related application
- Project documentation
- Printing the project documentation
- Unused safety-related module protection
 - Each safety-related module be used in the application (e.g. declaration of minimum one channel)
- IEC 61131-3 Structured Text Editor available
- Highlighting of the defined safety-related path
- Diagnostic messages from Safety Logic Controller can be read with the SafeLogger in SoMachine Motion Logic Builder
- Extended EasySim (Simulator)
- POU verification
- Automatic type conversion
- Project translation management
- Preventa_SafeMotion Library for programming the safety drives and motors
- PLCopen_SF Library
- Library for the Schneider Electric Enable Switch
- Response Time Calculator
- Application download function block for remote access on the SLC
- Safety-related Drives: LXM62 safety-related single / double drive, ILM62 safety option module
 - Function safe torque off (STO) available
 - Function safe stop 1 (SS1) available
 - Function safe operating stop (SOS) available
 - Function safe stop 2 (SS2) available
 - Function safe limited speed (SLS) available
 - Function safe maximum speed (SMS) available
 - Function safe direction (SDI) available
- **Changed Feature** New version of SAFEPROG
- **Changed Feature** Improvements of default parameters for TM5CSLC100FS and

TM5CSLC200FS

- Parameter "SSDOCreation" set now by default "5 per cycle"
- Parameter "CycleTime" set valid range to 2000-20000 μ s
- **Changed Feature** Improvements of default parameters for Response Time Relevant Parameters
 - Parameter "Network Package Loss" set now by default 1
- **Changed Feature** Updated SoSafe Programmable help
- **New Feature** French translation of the Safe Logger user interface
- **New Feature** Project compare works now with modified names of TM5CSLCx00FS
- **New Feature** B+W AS-i Gateway (BWU2984) is now implemented
- **New Feature** OneLicensing mechanism is now used to activate the different SoSafe variants

Requirements

Supported operating systems

This software can be installed onto the following operating systems:

- Microsoft Windows 7 32/64 Bit (English/USA or German/Germany) with most current SP
- Microsoft Windows 8.1 32/64 Bit (English/USA or German/Germany) with most current SP
- Microsoft Windows 10 32/64 Bit (English/USA or German/Germany) with most current SP

The installation of SoSafe Programmable V2.2 requires an installed SoMachine Motion V4.4.

Microsoft .NET Framework

SoSafe Programmable requires Microsoft .NET Framework 3.5 Service Pack 1 with latest updates.

This package is not automatically installed with Windows 8.1 or Windows 10. To install it on those operating systems an Internet connection is required.

You will find instructions on various ways of installing the Microsoft .NET Framework 3.5 at <https://msdn.microsoft.com/en-US/library/hh506443>.

The .NET Framework 3.5 Service Pack 1 is included in Windows 7 Service Pack 1 or above.

PC-Hardware

COMPONENT	MINIMUM	PREFERRED
Processor	Pentium, 1 GHz x86-Architecture	Pentium, 2 GHz x86-Architecture
RAM	500 MB	1 GB
Free memory space on the hard drive	500 MB	1 GB
Drive	DVD Reader	DVD Reader
Display	Resolution: 1024 x 768 pixel	Resolution: 1280 x 1024 pixel
Peripheral devices	Keyboard, mouse or compatible pointing device.	
Internet connection	An Internet connection is required for the licensing process.	

Required access rights

For the execution of SoSafe Programmable no special access rights are required with the following exceptions:

- You have to login with administrator rights before you can start the installation of SoSafe Programmable.

In no case are you allowed to start the installation with normal access rights and then change your status during the course of the installation procedure.

Installation and activation of the software

Installation

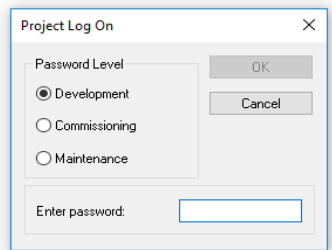
SoSafe Programmable V2.2 can be installed and operated in parallel to

- SoSafe Programmable V2.1
- SoSafe Programmable Maintenance V2.1
- SoSafe Programmable V2.0

No licenses are activated with the installation of SoSafe Programmable. The initial installation contains the activatable licenses “SoSafe Programmable Maintenance” and “SoSafe Trial”. To work with SoSafe Programmable, the licence “SoSafe Programmable Maintenance” must be activated during the first start of SoSafe Programmable. Afterwards, the user can utilize SoSafe Programmable with the license “SoSafe Programmable Maintenance”. Optionally the user can activate the license “SoSafe Trial” to test all features.

Modes

You can choose between the following modes during the start of SoSafe Programmable.



The available modes depend on the activated license. The following table shows what mode is available with which license.

Licences	Mode		
	Development	Commissioning	Maintenance
SoSafe Programmable	yes	yes	yes
SoSafe Programmable Maintenance ¹	no	no	yes
SoSafe Trial	yes	yes	yes

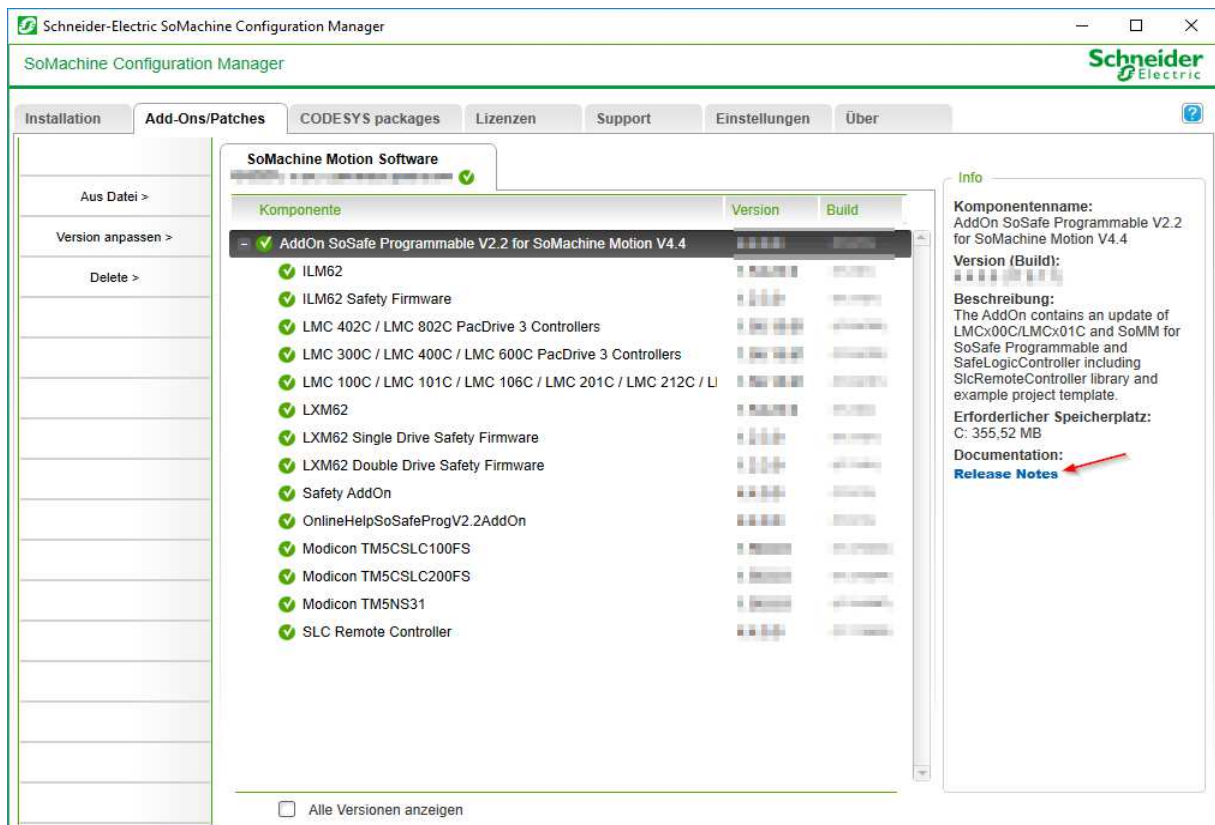
¹ The dialog “Project Log On” will not appear.

Addon “AddOn SoSafe Programmable V2.2 for SoMachine Motion V4.4”

To integrate SoSafe Programmable into the licensed version of SoMachine Motion, an additional Addon is necessary. This Addon will be available after the installation of SoSafe Programmable via Schneider Electric Software Update.

Note: After installing this Addon, SoMachine Motion must be restarted.
Each SoMachine Motion version needs a corresponding Addon for Safety. It can be checked in the Configuration Manager if the Addon is installed.

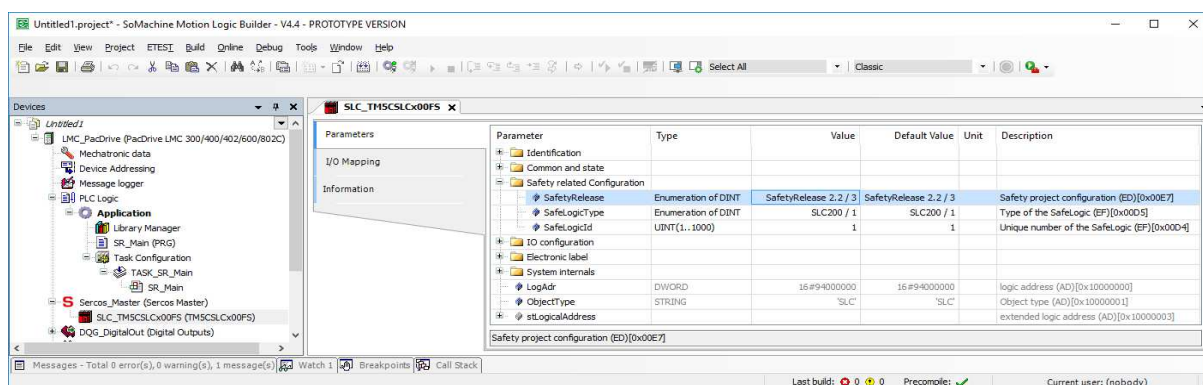
The Addon contains additional release notes with mandatory information. These release notes can be obtained as shown.



SafetyRelease

With the SoMachine Motion Logic Builder the TM5CSLCLx00FS parameter “SafetyRelease” can be configured to the requested SoSafe Programmable version.

Note: Downgrade of SafetyRelease is not supported!



Following table shows which software is referenced by the SLC parameter “SafetyRelease” (as configured in the SoMachine Motion Logic Builder).

COMPONENT	Referred Software for SafetyRelease			
	V1.2	V2.0	V2.1	V2.2
SoSafe Programmable	1.0	2.0	2.1	2.2 ²
SoSafe Programmable Maintenance	n.a. ¹	n.a. ¹	2.1	2.2 ²

¹ Not available for this version.

² Handled by license feature.

Version Compatibility

Not each SoMachine Motion version supports each SoSafe Programmable version. The following table give an overview about the possible configurations.

COMPONENT	Supported SoSafe Programmable			
	V1.0	V2.0	V2.1	V2.2
SoMachine Motion Version 3.1 SP1	Yes	No	No	No
SoMachine Motion Version 4.0	Yes	No	No	No
SoMachine Motion Version 4.1	Yes	Yes	No	No
SoMachine Motion Version 4.2	Yes	Yes	No	No
SoMachine Motion Version 4.3	Yes	Yes	Yes	No
SoMachine Motion Version 4.3 SP1	Yes	Yes	Yes	No
SoMachine Motion Version 4.4	No	Yes	Yes	Yes

OneLicensing licenses

Following table provides an overview about all available licenses and features for SoSafe Programmable V2.2.

Licenses	Part Number	Single licenses	Team licenses	Entity licenses	Delivery - Virtual	Delivery - Print delivery	Non-copy-protected full license	Commercial full license	Physical Machine	Virtual Machine Node locked	Virtual Machine floating
SoSafe Prg Maintenance ¹	-	Yes	No	No	Yes	No	Yes	No	Yes	Yes	n. app. ²
SoSafe Programmable	SOMSASCZZEPA22	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	n. app. ²
SoSafe Trail	-	Yes	No	No	Yes	No	No	Yes	Yes	Yes	n. app. ²
option for Asi Gateway	SOMSADCZZEPA10	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	n. app. ²

¹ Project cannot be compiled in SoSafe Programmable Maintenance version

² not applicable

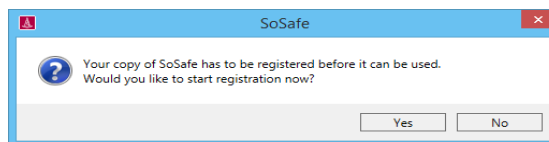
Notice that most licenses are protected against duplication. Multiplication of systems, e.g., Virtual Machine, will be detected and invalidates the license.

If there are any questions or problems, please contact the licensing support team:

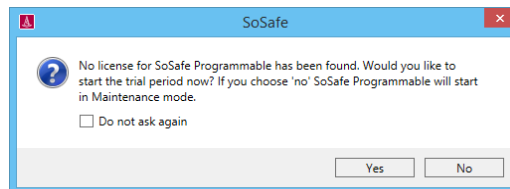
support-licensing@schneider-electric.com

Activation

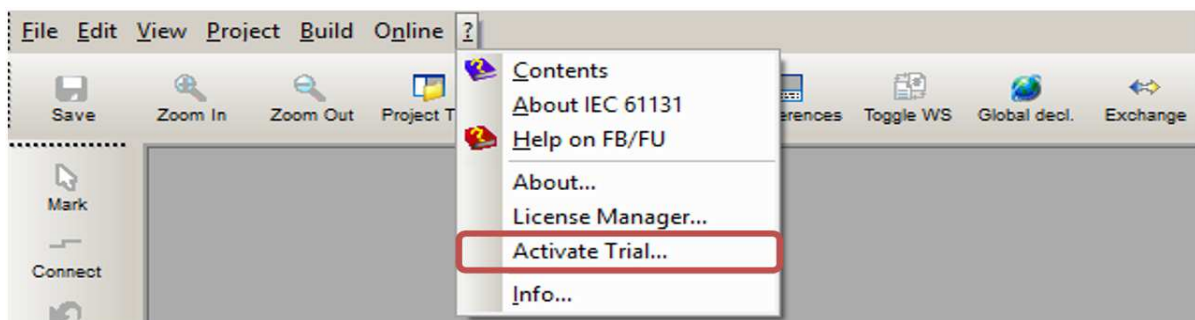
During the first start-up of SoSafe Programmable, the software must be activated as SoSafe Programmable Maintenance.



Afterwards you have the choice to use the software as SoSafe Programmable Maintenance or to start a fully functional trial period.

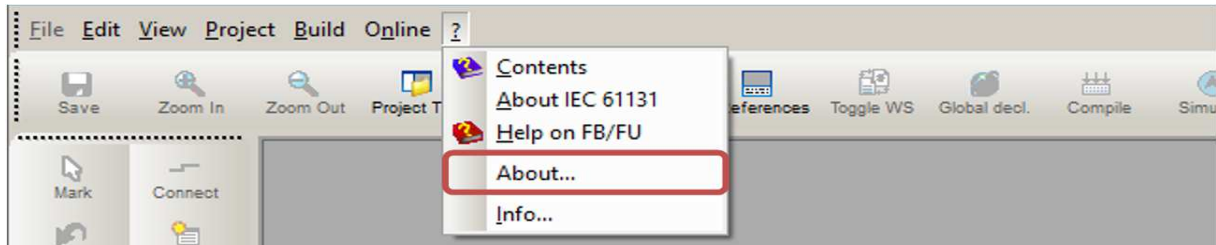


The trial period can be activated during start-up of SoSafe Programmable Maintenance or if SoSafe Programmable Maintenance is already opened, by selecting the menu point "Activate Trial...".



Using the trial license the software must only be used for evaluation purposes. It is strictly forbidden to use the SoSafe Programmable in a production environment during trial license runtime. The evaluation period expires 30 days after the activation.

The currently used license can be checked in the menu "About...".



Note: After changing the license the software must be restarted to use the new license.

The License Manager shows an overview of all licenses being used.

After the software is activated as SoSafe Programmable Maintenance, it is possible at any time to add a license for a full version of SoSafe Programmable in the License Manager and to activate it.

To use the activation method "By web" for SoSafe Programmable or SoSafe Programmable Maintenance, an active Internet connection is necessary. If no Internet connection is available, the License Manager provides alternative ways of activating your license. For example, the software may be activated "By phone" following these steps:

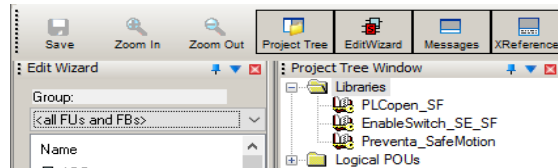
- Start the License Manager, e.g. from the Start Menu via All Programs ► Schneider Electric ► License Manager ► License Manager
- Click on "Activate", which makes a dialog pop up that allows you to select the "Activation Method"
- Select "By phone" and click on "Next"
- Select the SoSafe Programmable component you wish to activate
- Call the Software Registration Center
- Click on "Next"
- Enter the "Short Code Response" that you receive from the Software Registration Center to complete your software registration.

Uninstall the Software

To uninstall SoSafe Programmable, you must use the Windows Control Panel for the de-installation process.

Libraries

The installation of SoSafe Programmable contains three libraries



Library PLCopen_SF

The safety-related function blocks/functions described inside this library are solely intended for use in the SoSafe Programmable software for creating safety-related code for suitable Safety Logic Controllers. You can only meet your safety-relevant tasks within the safety-related control system if they were integrated into the execution process in a correct and functionally safe manner.

For more information consult the SoSafe Programmable Help.

Library EnableSwitch_SE_SF

The safety-related SF_EnableSwitch function block evaluates the signals of a manually actuated three-stage enable switch (in accordance with EN 60204) to identify its switching stage and direction.

For more information consult the SoSafe Programmable Help.

Library Preventa_SafeMotion

The safety-related SF_SafeMotionControl function block acts as an interface between the Safety Logic Controller and the Safety Module (option module) which is the safety-related component of the ILM62 or LXM62 standard drive.

For more information consult the SoSafe Programmable Help.

Third party devices

B+W AS-i 3.0 Sercos Gateway with integrated Safety Monitor compatible with Schneider Electric Embedded Safety Offer, 2 AS-i Master (BWUxxxx)

For using the device there is an additional license necessary.

Device	License
BWU2984	option for Asi Gateway

During the SoSafe Programmable trial period this license is available as trial. After expiration of the trial version you must activate a full version of the Bihl+Wiedemann feature to continue using the device with SoSafe Programmable.

Activation steps

- start the Schneider Electric License Manager
- in the Local tab click the Activate button
- choose one of the proposed activation methods and follow the detailed instructions that are displayed
- enter Activation IDs on request
- complete the procedure by clicking "Finish"

More information can be found in Bihl+Wiedemann Integration Guide, compact manual of Sercos Gateways and Release Notes of Safety AddOn.

Documentation	Obtained by
Bihl+Wiedemann Integration Guide	www.schneider-electric.com
Compact manual of Sercos Gateways	www.bihl-wiedemann.de
Release Notes of Safety AddOn	Available after installing the AddOn for Safety

Known Problems

Project Compare

During the runtime of SoSafe Programmable, the TM5CSLCx00FS can be renamed in SoMachine Motion Logic Builder. In case of a changed SLC name, the SoSafe Programmable application needs to be restarted to use the Project Compare. This information is provided to the user with a message.

Safety Logic Controller cycle time vs. Sercos III cycle time

The following rule must be applied for the cycle times:

The Safety Logic Controller cycle time must be a multiple of the Sercos III cycle time.

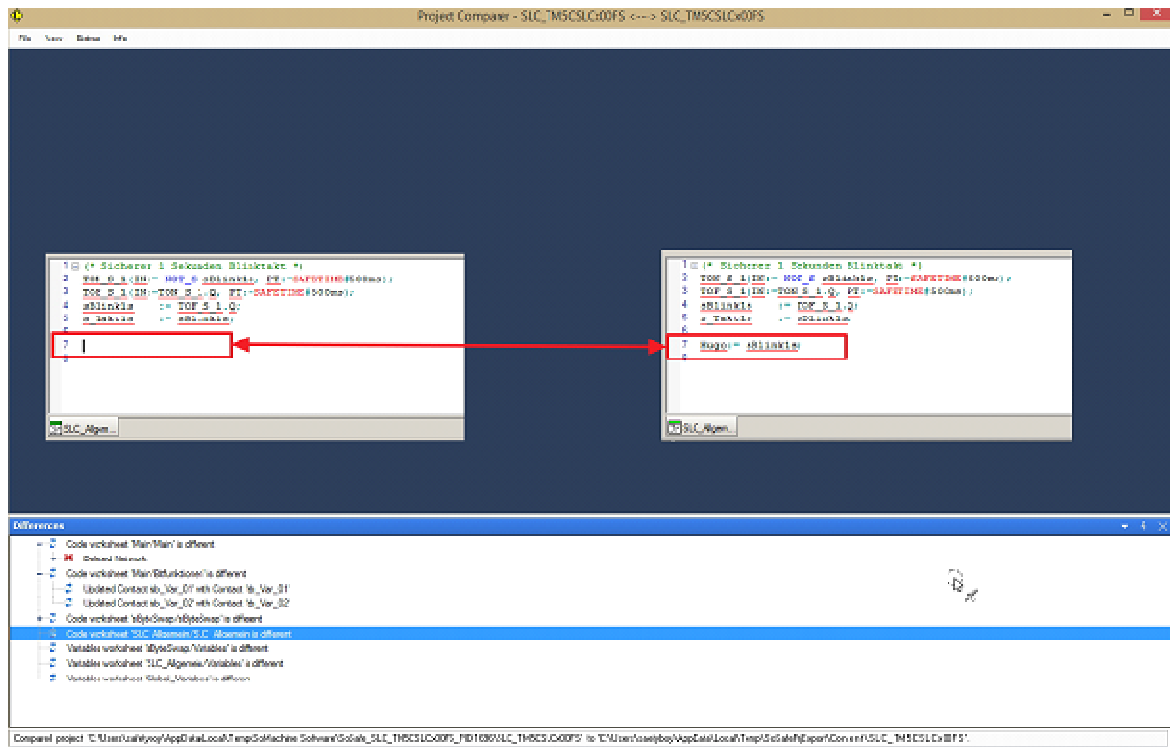
No 'Local Cross Reference' available for ST Function Block in Printout

The printout of a complete SoSafe Programmable application shows no Local Cross Reference for Function Blocks created in Structured Text. The printout shows only an empty page.

Project Compare: Differences of ST Worksheets are not shown in the 'Comparative code view'

The comparative code view of the Project Compare shows no differences of the Structured Text worksheets.

The differences list states the Structured Text worksheets with differences but the differences are not shown in the code view of the Project Compare.



German umlauts in variable names are not supported in the Structured Text editor

An error is detected if German umlauts are entered as part of the naming of a variable in SoSafe Programmable. It is not possible to ignore or cancel this exception. The program must be terminated by the windows task manager. After restarting SoSafe Programmable, the umlauts can be deleted.

Activation of SoSafe Programmable Maintenance by Phone

Activation of SoSafe Programmable Maintenance by phone is currently not possible when trying to activate during the start-up of SoSafe Programmable Maintenance. If activation by phone is required, please activate SoSafe Programmable Maintenance directly from the License Manager following the steps described at the end of the chapter "Activation" before launching SoSafe Programmable Maintenance for the first time.

Uninstalling SoSafe Programmable

Uninstalling SoSafe Programmable V2.0 and V2.1 can destroy the installation of SoSafe Programmable V2.2. So, first uninstall older versions and afterward install SoSafe Programmable V2.2.

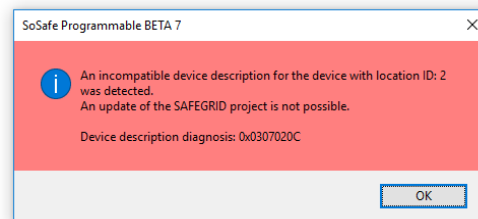
If an installation is corrupted, the installation of the corrupted version can be fixed with a new installation of the required version.

SoSafe Programmable installation

Be sure that during the installation of SoSafe Programmable no other version of SoSafe programmable is running.

Device update not possible

During the update process of SoSafe Programmable V2.0 (or lower) to V2.1 (or higher) some parameter settings and declarations can be lost. SoSafe Programmable will inform about this problem with the following dialog.



To resolve this issue, save the project before updating and compare the updated version with the not updated version.

Logic Builder Parameter "Exclude from build"

You cannot use the Logic Builder Parameter "Exclude from build" on any safety device, otherwise the assignment of safety-related modules to the logical objects in the controller configuration may become incongruent. The incongruent configuration is detected by the safety system and will be shown as a module exchange on the SLC.

