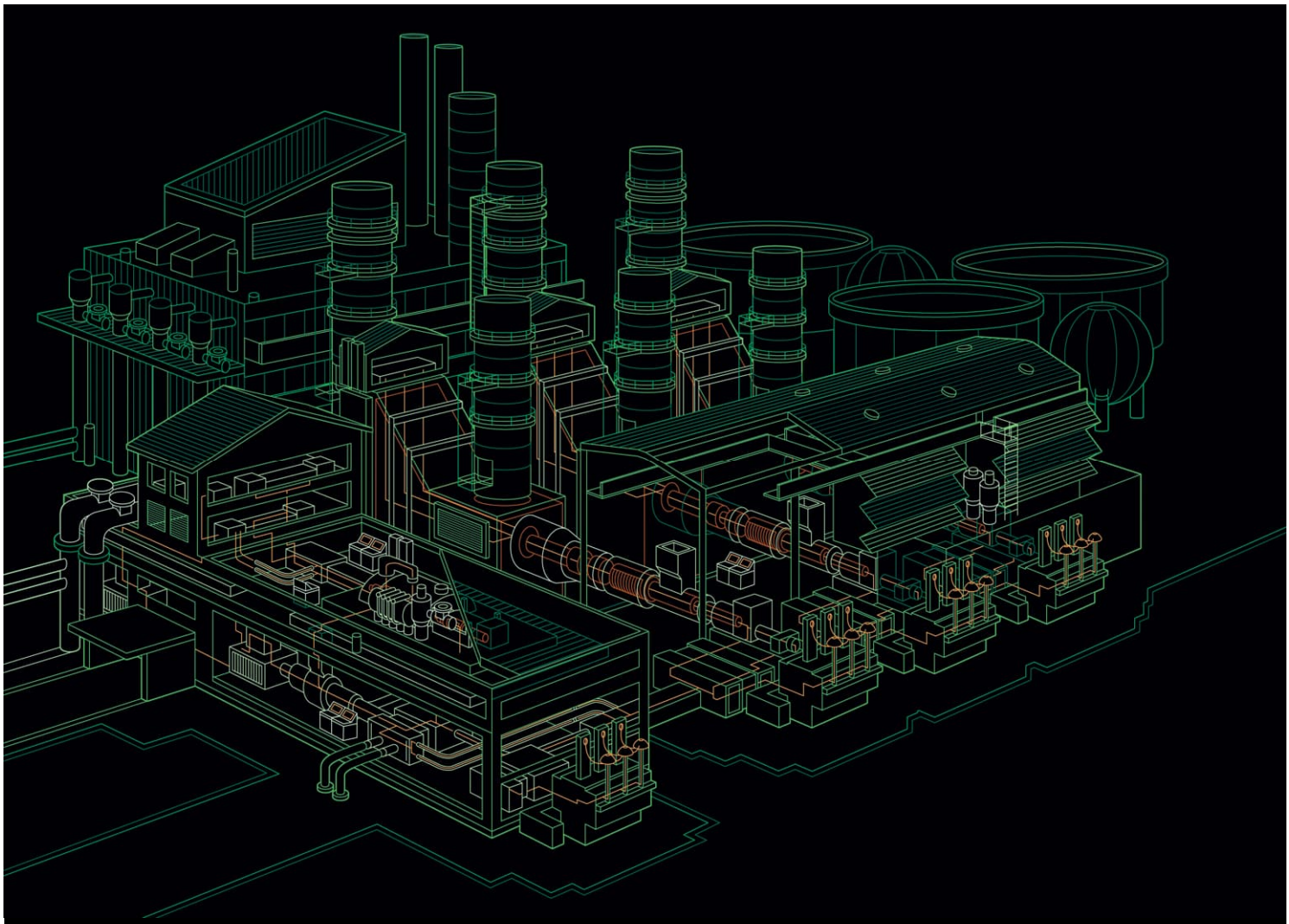

Release Note

System 800xA Extensions for Power Generation Utility Library 6.0.4.1– Release Notes

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Release: July 2022

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Table of Figures

1. INTRODUCTION

This document represents the release notes for Industrial IT Utility Library 6.0.4.1 used on Industrial IT Extended Automation System 800xA System Version 6.0.4 LTS (Long Term Support) with Multi System Integration support. This library version includes solutions for reported errors with Critical or High priority and some enhancements have been considered for this version. This document provides a brief overview on functionality and enumerates known problems encountered in the final testing of this product release. Where possible the document identifies workarounds that help to overcome the problem. The document also contains additional notes that may be valuable to customers and service personnel working with the product. This document is not intended to replace the existing product documentation, which is included on the product CD or DVD.

Note! No major changes in functional descriptions documents for Utility Library 6.0.4.1 compared to the previous version 6.0.4

1.1 New version designation

In the past the version of Utility Library was linked to the actual revision numbers of the libraries contained in the Utility Library package, e.g. Utility Library 2.1-1 for SV 5.0. This was not entirely correct since Utility Library is actually a system extension that contains a collection of libraries and graphic components.

Hence from 800xA SV 5.0 SP2 version onwards a new versioning for Utility Library is being followed. Now the extension version will be matched to the platform version of 800xA, so for 6.0.X-X the released version library extension will be 6.0.X. The Utility Library version will now refer to the Extension version that is visible in the System Extension aspect in the Admin Structure after loading the extension from the configuration wizard. The Utility Library will then contain a number of individual library versions.

In the Version Designation the individual library version numbers are listed that are released for the Utility Library 6.0.4.1 version.

1.2 Version Designation

Table 1-1. Version Designation

Product/Option	Article no.	Actual Revision	Release Date	Remark
ABB Utility Library	1KGF 100 789	6.0.4.1	25-July-2021	
sbFunctionLib		2.5-1	25-July-2021	
sbFunctionLibFDExt		2.5-1	25-July-2021	
sbFunctionLibGraphicPG2Ext		2.5-1	25-July-2021	
sbAlarmEventLib-		2.5-1	25-July-2021	
sbAlarmEventLibFDExt		2.5-1	25-July-2021	
seAlarmEventLib		2.5-1	25-July-2021	
seAlarmEventLibFDExt		2.5-1	25-July-2021	
seProcessObjLib		2.5-1	25-July-2021	
seProcessObjLibFDExt		2.5-1	25-July-2021	
seProcessObjLibGraphicPG2Ext		2.5-1	25-July-2021	
seSignalObjLib		2.5-1	25-July-2021	
seSignalObjLibFDExt		2.5-1	25-July-2021	
seSignalObjLibGraphicPG2Ext		2.5-1	25-July-2021	
sbCalculationLib		2.5-1	25-July-2021	
sbCalculationLibFDExt		2.5-1	25-July-2021	
sbCalcSupportLib		2.5-1	25-July-2021	
seControlLib		2.5-1	25-July-2021	
seControlLibFDExt		2.5-1	25-July-2021	

Table 1-1. Version Designation

Product/Option	Article no.	Actual Revision	Release Date	Remark
seControlLibGraphicPG2Ext		2.5-1	25-July-2021	
sbCommLib		2.5-1	25-July-2021	
sbCommLibFDExt		2.5-1	25-July-2021	
sbCommLibGraphicPG2Ext		2.5-1	25-July-2021	
seGrpCtrlLib		2.5-1	25-July-2021	
seGrpCtrlLibFDExt		2.5-1	25-July-2021	
seGrpCtrlLibGraphicPG2Ext		2.5-1	25-July-2021	
seSignalGroupLib		2.5-1	25-July-2021	
seTemplateLib		2.5-1	25-July-2021	
seTemplateLibGraphicPG2Ext		2.5-1	25-July-2021	

1.3 Compatibility

Software

The Utility Library runs in a client/server Windows® computer environment. Therefore Windows® and other third-party software must already be installed.

The Utility Library is an Add-On to 800xA and is compliant with following combination of releases of 800xA and IAPG Utility Add on Utility Setup.

Table 1-2. Compliant Combination of Versions

800xA Version	*Utility Setup Version*
6.1.0	6.0.4
6.1.1.0	6.0.4.1
6.1.1.1	**6.0.4.1**

NOTE: Projects using Function Designer need to consider the impact of below mentioned issues before deciding to use / upgrade Utility Library for 800xA 6.1.0. However, for Projects not using Function Designer will not have any impact of below mentioned issues.

Performing Configuration Data Generation for a Function Diagram having page connectors, connected to different pages (higher page to lower page), may lead to an error in 800xA 6.1.0 as mentioned in the Compliance issues of 800xA section of the release notes.
Projects upgrading to 800xA 6.1.0 require additional re-engineering effort to implement the workaround to clear all the page connector errors in function diagrams.
New Projects using 800xA 6.1.0 require additional engineering effort to implement the workaround to avoid/clear page connector errors in function diagrams.

Connected Libraries

The Utility Libraries are connected to the following Standard Libraries in 6.0.4-0:

Table 1-3. Libraries	*Version*
sbFunctionLib - AlarmEventLib - BasicLib	2.5-1 1.8-1 1.9-5
sbAlarmEventLib - AlarmEventLib - BasicLib - sbFunctionLib	2.5-1 1.8-1 1.9-5 2.5-0
seAlarmEventLib - AlarmEventLib - BasicLib - sbAlarmEventLib - sbFunctionLib	2.5-1 1.8-1 1.9-5 2.5-0 2.5-0
seProcessObjLib - sbAlarmEventLib - sbFunctionLib - BasicLib - SeqStartLib	2.5-1 2.5-1 2.5-1 1.9-5 1.5-0
seSignalObjLib - sbAlarmEventLib - sbFunctionLib - BasicLib	2.5-1 2.5-1 2.5-1 1.9-5

Table 1-3. Libraries	Version
sbCalculationLib - sbCalcSupportLib - BasicLib - ControlBasicLib - ControlExtendedLib - ControlStandardLib - ControlSupportLib - IconLib - AlarmEventLib	2.5-1 2.5-1 1.9-5 1.5-1 1.6-0 1.7-8 1.6-3 1.6-2 1.8-1
sbCalcSupportLib	2.5-1
seControlLib - sbAlarmEventLib - sbFunctionLib - BasicLib - ControlStandardLib - ControlSupportLib - ControlSimpleLib	2.5-1 2.5-1 2.5-1 1.9-5 1.7-8 1.6-3 1.5-1
seGrpCtrlLib - sbAlarmEventLib - sbFunctionLib - BasicLib	2.5-1 2.5-1 2.5-1 1.9-5
sbCommLib - sbAlarmEventLib - sbFunctionLib - IconLib - MMSCommLib	2.5-1 2.5-1 2.5-1 1.6-2 1.6-1
seTemplateLib - sbAlarmEventLib - sbFunctionLib	2.5-1 2.5-1 2.5-1

Hardware

The Utility Library runs in a client/server Microsoft Windows® and Industrial IT system 800xA computer environment. The hardware requirements of 800xA for the software environment specified in section 1.4 apply accordingly.

1.4 Restrictions

Software

This version of Utility Library requires Industrial IT 800xA System Software 6.1.1. Also due to additions to the library it is now required that the standard extensions of Function Designer as well as “Function Designer for AC800M Connect” must are now be added to the system.

1.5 Usage note

The released 800xA system version 6.1 addresses the life cycle issues such as 800xA SV 5.1 moves to classic phase, Windows XP reached end of life, stopping support to Visual Basic Process Graphics (VBPG), and phasing out Visual Basic based components since Microsoft stopped the support. To evolve Power Generation Utility Library (UL) to 800xA SV 6.1 the library standard object type Faceplates were migrated from Visual Basic Process Graphics (VBPG) to Process Graphics 2 (PG2) due to VB obsolescence. Before the existing projects upgrades to UL 6.0.4 version it is necessary to migrate the faceplates and Process graphics from VBPG to PG2 in 800xA SV 5.1 with UL 5.1.4 which contains PG2 faceplates as a part of release. Engineering data viz Permissive/IO/alarm signal descriptions & aspect view references stored in VB based ActiveX controls (sbgSignalTab2 aspect) needs to be migrated to PG2 General Properties using UL Data Migration Tool. UM-2VAA005840_en_ENG-UL_Data Migration Tool.pdf describes pre-requisites and workflow steps to accomplish the data migration by using the UL Data Migration Tool.

Latest library versions, starting from version 2.1-0 on SV 4.1, incorporate new improved display elements and improved/new alarm modules. Existing elements from the 2.0-0 libraries and modules that are replaced by these new elements were only included for backward compatibility and should be considered classic. Since library version 5.1.0 only the new elements are included and therefore only the new elements from the Utility Library 5.1.4 can be used.

Therefore, existing projects upgraded to the Utility Library 5.1.4 version should not only use the new elements and modules for new items but should also replace existing old classic items with the new elements.

Chapter 2.3 Classic elements and modules lists which elements and modules should no longer be used and must be replaced by new or improved elements and modules from the 2.2 library. Also chapter 2.2 Discontinued and Replaced Functions and Units list items that have been removed and can cause a problem in the application if they are not checked and adapted.

1.6 Related Documentation

Table 1-4. Valid manuals

Document	Article no.	Current revision
Utility Library Installation Manual Version 6.0.4	1KGF101037	6041
Utility Library User Manual Version 6.0.4	1KGF100649	6041
UL Data Migration Tool Version 1.0.3	2VAA005840	1.0.3

1.7 Abbreviations

Table 1-5. List of abbreviations

Term	Description
PG 2	Process graphics 2, new graphics engine starting from SV5.0 SP2A.
VBPG	Visual Basic 6 Process Graphics.
HSI	Human System Interface.
MSI	Multi System Integration
LTS	Long Term Service

2. FUNCTIONALITY

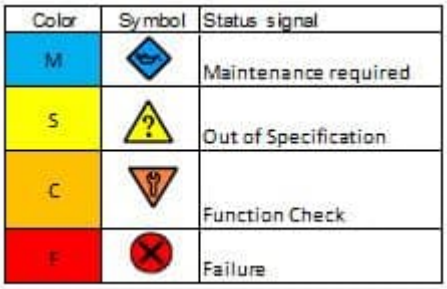
2.1 New Functions

Version 6.0.4.1

Same functions as 6.0.4

Version 6.0.4

Support for NE107 symbols



Support for Namur (NE107) in line with System 800xA has been adapted in Utility Library when the diagrams are added from Control Builder. (Control Builder -> Applications -> Diagram-> New Diagram). The status of the hardware is translated into one
out of four states: failed, out of specifikation, maintenance required or check function.
NE107 is indicated in Control Builder online (HW tree), alarms and on process objects that consumes signals from the affected hardware. For more information please refer to “2PAA111899-6100_en_System_800xA_Release_Notes_New_Functions_and_Known_Problems”.

Upgrade Consequences

Extra NLS texts were added resulting in update of the NLS Resource Manager of Utility Library (Library Structure-> Preferences and Customizations-> Utility Library-> NLS ResourceManager). So be sure to check any missing translations for your locale NLS support.

The following NLS Texts have been added:

NLS Resource ID	English
➔ NLSID_UL_Total	Total

Version 6.0.3

Same functions are available as in version 6.0.1

Version 6.0.1

Same functions are available as in version 6.0.0

Upgrade Consequences

Extra NLS texts were added resulting in update of the NLS Resource Manager of Utility Library (Library Structure-> Preferences and Customizations-> Utility Library-> NLS ResourceManager). So be sure to check any missing translations for your locale NLS support.

The following NLS Texts have been added for the two standard locales:

NLS Resource ID	English	German
-> NLSID_UL_EnHEv1	H	H
-> NLSID_UL_EnHHEv	HH	HH
-> NLSID_UL_EnHHHEv	HHH	HHH
-> NLSID_UL_EnLEv	L	L
-> NLSID_UL_EnLLEv	LL	LL
-> NLSID_UL_EnLLLEv	LLL	LLL
-> NLSID_UL_OutDecLim	OutDecLim	
-> NLSID_UL_OutIncLim	OutIncLim	

Version 6.0.0

UL Data Migration Tool

This version of the library comes with UL Data Migration tool. Before the existing projects upgrades to UL 6.0.0 version it is necessary to migrate the faceplates and Process graphics from VBPG to PG2 in 800xA SV 5.1 with UL 5.1.4 which contains PG2 faceplates as a part of release. As a part of VB to PG2 faceplate migration activity, Engineering data viz Permissive/IO/alarm signal descriptions & aspect view references stored in VB based ActiveX controls (sbgSignalTable2 aspect) needs to be migrated to PG2 General Properties using UL Data Migration Tool. UM-2VAA005840_en_ENG-UL_Data Migration Tool.pdf describes pre-requisites and workflow steps to accomplish the data migration by using the UL Data Migration Tool.

PG2 Aspect View Reference buttons

This version of the library comes with PG2 Aspect View reference buttons. For each Permissive / IO / Alarm signal a reference link (Ref) can be configured in sub-properties Ref VN, Ref OP and Ref AS present in the SignalDescriptionPermissive / SignalDescriptionIO / SignalDescriptionAlarm General Properties aspect. If a reference link is configured, the link can be activated from the Permissive / IO / Alarm Tab in the extended Faceplate.

Licensing with CLS

This version of the library comes with licensing feature implemented for Utility Library. Refer Installation manual (IM-1KGF101037-600_en_ENG_UtilityLibrary.pdf) for procedure to obtain a license.

Version 5.1.4

PG2 Faceplates

This version of the library offers new 40 PG2 faceplates for corresponding VB faceplates present in the library. The VB Faceplate Element aspect category has corresponding PG2 faceplate element aspect category. The sbgSignalTable2 aspect category belonging to VB functionality is replaced by SignalDescriptionAlarm, SignalDescriptionIO and SignalDescriptionPermissive which is of General Properties aspect category, please refer below table.

Table 2-1. VB Faceplate Aspect and its corresponding PG2 Faceplate Aspect

VB Aspect Name (Aspect Category)	**PG2 Aspect Name (Aspect Category)**
sbgTabAlarms2 (Utility Faceplate Element)	SignalDescriptionAlarm (General Properties)
sbgTabIO2 (Utility Faceplate Element)	SignalDescriptionIO (General Properties)

sbgTabPermissions2 (Utility Faceplate Element)	SignalDescriptionPermissive (General Properties)
Faceplate (Faceplate)	Faceplate (Faceplate PG2)
AlarmControl (Graphic Element)	AlarmControl (Graphic Element PG2)

UL Graphic elements have been added to seSignalObjLib 2.3-1 which are used in PG2 Faceplates. UL Graphic elements are also added in the PG2 Graphics Builder ToolBox.

The list of newly added UL Graphic elements used for PG2 faceplates is as below.

BinCtrl
UL_AlarmControl
UL_InputField
UL_Text
UL_TrimCurve
CalendarDay
UL_IBar

New UL Icon Resources have been added to Utility Library under Preferences and Customizations which are used in the PG2 Faceplates.

Version 5.1.3

PG2 Faceplates

This version of the library offers 13 new PG2 faceplates for corresponding VB faceplates present in the library. The VB Faceplate Element aspect category has corresponding PG2 faceplate element aspect category. The sbgSignalTable2 aspect category belonging to VB functionality is replaced by SignalDescriptionAlarm, SignalDescriptionIO and SignalDescriptionPermissive which is of General Properties aspect category. The sbgTaAlarms2, sbgTabIO2 and sbgTabPermissions2 which is of Utility Faceplate Element aspect category belonging to VB is replaced with Faceplate Element PG2 aspect category. The Faceplate aspect category belonging to VB has corresponding Faceplate PG2 aspect category. The AlarmControl which is of aspect category Graphic Element belonging to VB has corresponding AlarmControl which is of Graphic Element PG2.

The list of modules which have new PG2 faceplates is as follows.

1. sepBreakerM
2. sepDeviceM
3. sepMot1DirM
4. sepMotValveAnaM
5. sepMotValveM
6. sepMotVarM
7. sepValveAnaM
8. sepValveOpClM
9. sesAnaIn6M
10. sesAnaOutM
11. sesDigInM
12. sesDigOutM
13. sbfSelector

UL Graphic elements have been added to seSignalObjLib 2.3-0 which are used in PG2 Faceplates. UL Graphic elements are also added in the PG2 Graphics Builder ToolBox.

The list of newly added UL Graphic elements is as follows.

- BinCtrl
- UL_AlarmControl
- UL_InputField
- UL_Text
- UL_TrimCurve

New UL Icon Resources have been added to Utility Library under Preferences and Customizations which are used in the PG2 Faceplates.

New NLS Resource Id NLSID_UL_lblIOValue is added to NLS Resource Manager in Utility Library under Preferences and Customizations.

Version 5.1.2

Same functions are available as in version 5.0.4.

Version 5.1.1

Same functions are available as in version 5.0.4.

Version 5.1.0

Same functions are available as in version 5.0.4.

Version 5.0.4

secSelectorM

A new selector module has been added to the seGrpCtrlLib library, **secSelectorM**. This is a dedicated control module for 3 devices and is used to select a specific number of devices based on their availability. The interface to the devices is similar to the sbfSelector functionblock in the sbFunctionLib with the difference that there are now 3 fixed sets of parameters for On, Off, Available, Running and Runtime. The module supports the following modes:

- 0, Stoptime
- 1, Priority
- 2, Fixed
- 3, Runtime
- 4, Fist Priority device then fixed

See functional description “FD-1KGD400536R2205-ENG-secSelectorM” for more information.

secSelector6M

This new selector module has also been added to the seGrpCtrlLib library**, secSelector6M**. This module is similar to the secSelectorM module but it is suited for 6 devices and is also used to select a specific number of devices based on their availability. The interface to the devices is similar to the secSelectorM but there are now 6 fixed sets of parameters for On, Off, Available, Running and Runtime. The module supports the following modes:

- 0, Stoptime
- 1, Priority
- 2, Fixed
- 3, Runtime
- 4, Fist Priority device then fixed

See functional description “FD-1KGD400536R2205-ENG-secSelectorM” for more information.
This FD also contains the description for secSelector6M.

sec2XmitSel6M

The sec2XmitSel6M is a standard sec2XmitSel module combined with the 6 limit switches of the sesAnaIn6M. The module offers all functions of the standard sec2XmitSelM and the choice of 6 level alarms (HHH, HH, H, L, LL and LLL). The alarm texts can be individually set with a parameter. The levels can also be configured as an event with the option for no event, On, Off or OnOff eventtypes. The event texts are standard event texts for levels as defined in the cEventsMsg project constant for Hlimit, HlimitOK to LLLLimit and LLLLimitOK. When an eventtype is configured for a level the corresponding level alarm will be ignored.

See FD-1KGD400539R2205-ENG-sec2XmitSel6M for more information.

sec3XmitSel6M

The sec3XmitSel6M is a standard sec3XmitSel module combined with the 6 limit switches of the sesAnaIn6M. The module offers all functions of the standard sec3XmitSelM and the choice of 6 level alarms (HHH, HH, H, L, LL and LLL). The alarm texts can be individually set with a parameter. The levels can also be configured as an event with the option for No event, On, Off or OnOff eventtypes. The event texts are standard event texts for levels as defined in the cEventsMsg project constant for HLimit, HLimitOK to LLLLimit and LLLLimitOK. When an eventtype is configured for a level the corresponding level alarm will be ignored.

See FD-1KGD400540R2205-ENG-sec3XMitSel6M for more information.

Version 5.0.3

Process Graphics 2

This version of the library offers new PG2 graphic elements for each current VBPG graphic element present in the library. All basic graphic elements, such as the Element X and numeric (n) elements have been converted and offer the same functionality as their VBPG counterparts. The elements have the same name as the VBPG element but differ in aspect category, i.e. they are of the Graphic Element PG2 category. Legacy graphics as mentioned in the discontinued functions chapter have not been converted, be sure to read the upgrade consequence in this chapter.

The new PG2 graphics can only be used in PG2 graphic displays such as the UT Graphic Display PG2. If existing VBPG displays need to be extended with PG2 graphics they must be converted first to PG2 displays before PG2 graphics can be added.

Version 5.0.2

This version does not add any new functions

Version 2.2-0 (5.0.1)

sesDigIn2BasicM

A new basic digital signal object has been added to the SignalObjLib. The object is an extension of the sesDigInBasicM and supports 2 digital inputs (In1/In2). The module is implemented as a basic module without internal alarms, the possibility for adding external alarms is available. Forcing of I/O signals is only possible in the extended faceplate's IO tab.

sesPowerMeterM

This module is a representation of a general power meter (3 phase) and offers presentation possibilities for power, voltage and current for a power supply of an installation.

Standard presentations are available for:

Cosine Phi measurement
Frequency
Active Power / Apparent power
Voltage per phase (L1,L2,L3)
Current per phase (L1,L2,L3)
Difference voltage between phases (L1-L2, L2-L3, L1-L3)

The module is implemented as a basic type module, so no alarms are present but possibilities for external alarms exit. No operator buttons for forcing signals exist in the faceplate, the only forcing added is the standard forcing in IO tab of the extended faceplate.

Redirection aspect

A redirection aspect has been added to the library. This aspect can, when activated, redirect the default aspect of a module to an aspect of another module. The primary use of this aspect is calling the faceplate aspect of a parent object in case of external alarms.

The external alarm modules in Utility library were simple aspect object without any faceplate of graphic elements that were only defined as aspect object to be able to insert them as children of a parent in the functional structure. This however presented a certain lack in functionality since the external alarm was an independent object from the parent the default aspect of an external alarm was its own module. Function wise it should have been the faceplate of the object the alarm belonged to, e.g. the default aspect presented for internally defined alarms of an object is its faceplate. So when an alarm is selected in the alarm list the faceplate of the object belonging to this alarm can be called up directly.

The redirection aspect was primarily introduced to offer this functionality for external alarm modules from the sbAlarmEventLib. The aspect can be used as implicit (default mode), in which it searches up the tree in the functional structure for a parent object, or it can be used explicit were a user defined path is to be entered. The aspect has been added to all external alarm modules in the sbAlarmEventLib.

Version 2.1-1 (5.0.0)

No new enhancement functions were added in this version only new function needed to solve reported errors, see fixed problems for more information.

Version 2.1-0

Graphics structure

Display Element X (plmSymbolX)

A new Display element X has been added to objects that have a multiple graphical presentation, e.g. sepMot1DirM has a new element that supports motor, pump, fan and heater presentations. This new element uses the plmSymbolX component from the PLM process symbols 2. This component replaced all existing process components. The new plmSymbolX provides a single component from which all existing plm symbols can be selected using the Symbol property.

The new Display element X therefore offers a Symbol property to select the appropriate symbol to present. It replaces all existing single presentation elements such as Mot1Dir Pump display element.

The plmSymbolX component also supports the use of true type fonts for the presentation of status indicators in stead of wmf icons which further improves the reduction of the graphics load in the system by using the new Display Element X.

The following object are now equipped with a multiple presentation X element

sepBreakerM, sepBreaker Display Element X
sepMot1DirM, sepMot1Dir Display Element X
sepMot2DirM, sepMot2Dir Display Element X
sepMotValveAnaM, sepMotValveAna Display Element X
sepMotValveM, sepMotValve Display Element X
sepMotvarM, sepMotVar Display Element X
sepSamplerM, sepSampler Display Element
sepValveAnaM, sepValveAna Display Element X
sepValveOpClM, sepValveOpCl Display Element X
sesDigInM, sesDigIn Display Element X
sesDigInstrM, sesDigInstr Display Element X
sesDigOutM, sesDigOut Display element X
sesDigInbasic, sesDigInBasic Display Element X
secStationM, secStation Display Element X

Other display elements that have a single presentation also have the plmSymbolX, plmIndicatorFontBox or a plmEmpltyTemplate incorporated to take advantage of the True type font indicator symbols.

plmIndicatorFontBox

A new plmIndicatorFontBox has been created in PLM Process Symbols 2 using the UT Indicator symbol true type font to present a status symbol. This component is used in display elements where a single position for status indication is used, e.g. a numeric display, to replace any wmf icons used.

NLS support

All libraries now support NLS therefore a NLS resource manager has been added to each library that contains the texts.

The 2.0 libraries for SV 4.1 also support NLS, the NLS resource manager is located in the 2.1 libraries and the 2.0 libraries share this resource manager. If the 2.1 libraries need to be removed from the system the NLS resource manager first needs to be moved from the 2.1 library to the 2.0 library with the checkmark 'Keep Guid on copy/move' activated. This will move the resource manager with the same Guid so all references in the faceplates and display elements to this manager will remain unaffected. Not doing so will result in the loss of all NLS texts in the library.

Priority setting on alarms

Alarms now have a priority attached to them that determines their importance in the same manner as in the platform. The priority also determines the severity attached to the alarm. In the platform a number of priorities must be defined, this number determines how many severities belong to a priority group, e.g. if the system has 10 priorities each priority has 100 severity numbers.

The number of possible priority levels in Utility library is 20 standard, 1 being the most important and 20 being the lowest

This lead to 50 severities per group, i.e. priority 1 ranges from severity 951 to 1000 and priority 2 ranges from 901 to 950 etc.

This priority mechanism also replaces the Urgency setting on alarms. The priority can either be made for every single alarm or as one setting for all alarms in the object.

The priority level of an alarm is shown in the alarm detail tab of the faceplate. When switching from object priority to individual alarm priority all alarms will receive the current object priority level as a starting value. Switching back the object priority level will be equal to the highest individual priority level.

Severity setting on alarm

Alarm modules have a severity connection. This severity is now determined by the priority selected for the alarm. The InteractionPar datatype has been extended with a PrioLevel and a Severity element for this purpose. The alarm modules in the library have been adapted to calculate the new severity on priority change but also to calculate a new priority on changing the severity on an alarm.

When the priority of an alarm is changed the alarm module recalculates the severity of the alarm. By default the first available severity in the priority group is selected, e.g. if priority 1 is selected the severity is set to 951 (first of the 50 severities in priority group 1).

A different number can be selected by changing the SeverityOffset component in the alarms InteractionPar parameter. This offset will be added to the calculated severity.

Priority coloring

All objects now support the new priority colors, this means that the active alarm with the highest priority now determines the alarm color to be presented in the process display. Priority colors (max. 20) can be set in the 'PLM Alarm color' color definitions in the workplace structure

New alarm status

The previous sbfTotalAlSPar consisted of a number of counter elements that represented the number of alarms active. The total alarm counters are now packed in a single dword (AlarmStatus) to minimize the number of OPC items that have to be send, the bit position in the dword represents a certain alarm status for the object (alarms active, unacknowledged etc.).

AlarmStatus (dword):

Bit 0, Alarm active (all types) in object
Bit 1, Blocking alarm active
Bit 2, Unacknowledged alarm present

Bit 3, An alarm has been disabled
Bit 4, Auto disabled alarms present
Bit 5, Warning alarm present
Bit 6, Unacknowledged warning present
Bit 7, Forced status present

The Forced status bit is a new status compared to the previous counter type status; it offers the possibility to notify the object that in the external alarm chain a forced status is present.

The TotUrgxAl counters are replaced by the priority mechanism, a separate dword (PriorityStatus) is added in the status to indicate if an alarm from a priority group is active. An additional dword is added to convey the unacknowledged status in a priority group (UnAckPrioStatus).

Note! For a detailed overview of the changes also see the **Discontinued and replaced functions** chapter release 2.1-0 Alarm status, and the **Improvements / Changes** chapter on the sbFunctionLib 2.1-0.

Furthermore, the alarm status in the sbfAlarmSPar datatype of each alarm module has been extended with a 'Status' component that is directly linked to the Status parameter of the AlarmCondM or AlarmCondbasicM module. It provides the module status codes and makes it easier to track down configuration errors on alarm modules.

Condition name on alarms

The condition name of the alarm can now be set by means of a parameter. This eliminates the need for copies of a certain type of alarm module with different instance names for the AlarmCondM module. This parameter from the AlarmCond or AlarmCondBasic will be extended to the Utility library alarm modules.

This sets a path to the future where a limited number of alarm modules will be used, one for each basic type e.g. Bool, high level, Acof etc. As an intermediate step the existing modules in sbAlarmEventLib and seAlarmEventLib now have the new improved 'basic' alarm modules included in the current copies of alarm modules were possible. The condition name parameter will be set to the current instance name of the copy.

Internal alarms in the objects have all been replaced by the new base alarm modules with proper Condnames.

For the CondName parameter a new project constant has been added to the seAlarmEventLib, cUTCondNames, this includes all current condition names in the library.

Source name on external alarms

The external alarm modules have been extended with a SrcName parameter to set the alarm source name. The external alarm modules are aspect objects and the name parameter was previously used as source name. Since the condition name was fixed the alarm was made unique through the name. The introduction of the condition name makes it possible to set the condition name individually, setting the Name parameter to the parent object name causes problems if the name uploader is used, resulting in multiple aspects with the same name. To prevent difficulties with regards to object names a separate SrcName parameter has been added to set the Source/Condname combination independent from the object name.

AlarmCondBasicM

A new more efficient alarm module without SOE has been introduced in the platform. Of the basic alarm modules in the sbAlarmEventLib a new 'Basic' variant is added offering the possibility of memory reduction in the controller when SOE is not required. Existing alarm modules in the objects that do not use SOE have been replaced by the new basic alarm modules to improve performance.

New alarm modules with BoolIO or RealIO inputs

Alarm modules now have simple datatypes as alarm signals (bool, real). Some base alarm module variants have been added that have a BoolIO or RealIO type alarm signals. If an external alarm is added connected to an IO its forced status is now send to the main object by means of the sbfTotalAlSPar type and is included in the forced status of the object.

The following modules have been added:

sbfExtBoolIOAlM
sbfExtBoolBasicIOAlM
sbfExtHighIOAlM
sbfExtLowIOAlM

Suppression setting on alarms

Alarms are now divided into three groups, Static, running and feed alarms. The group defines how the alarm will be suppressed if a Main/motor/MCC/Cab feed is missing. E.g. if a Motor feed fails the Acof alarm will be suppressed since they are the result of the motor feed failure. This system proved too rigid for certain application programming, e.g. an external bool alarm was standard static and can not be set to another definition if desired. A extra ***Suppression*** parameter is added (set to the current setting for the module) to the alarm module that will provide the choice between static, running or no suppression.

Detection active alarm status on alarms

The alarm logic in an alarm module defines whether an alarm is active or not. It is sometimes desirable to detect if the alarm condition is present even if the alarm has not been defined (xxxAlDef=False). To provide this information an additional status parameter has been added that is set when the detection logic of the alarm module detect an alarm condition.

This change has been added to the following base module types:

sbfHighAlM
sbfLowAlM
sbfHCurrAlM
sbfChanErrAlM
sbfBoolAlM

New event modules

To provide event generation possibilities for application defined events some new events modules have been defined with or without SOE possibilities:

sbfExtEventM, event module with SOE modeled after alarm module layout.
sbfExtEventIOM, event module with SOE and BoolIO modeled after alarm module layout.
sbfExtEventBasicM, event module without SOE modeled after alarm module.
sbfEventM, general purpose event module with SOE.
sbfEventBasicM, general purpose event module without SOE.

The event modules modeled after the alarm modules are intended to be included as a child in a objects alarm chain and are able to convey information on the event (e.g., forced status) to the main object. Also, they are able to receive commands from the object such as disable all events or Tagout mode.

2.2 Discontinued and Replaced Functions and Units

Version 6.0.4

Same functions are available as in version 6.0.3.

Version 6.0.3

Same functions are available as in version 6.0.1.

Version 6.0.1

Same functions are available as in version 6.0.0.

Version 6.0.0

The released 800xA system version 6.0 addresses the life cycle issues such as stopping support to Visual Basic Process Graphics (VBPG) and phasing out Visual Basic based components since Microsoft stopped the support. Therefore, Utility Library in line with 800xA 6.0 has removed the following VB graphic extension libraries (that contained VB graphic elements and faceplates) and VB components from the UL 6.0.0 release.

Removed VB Graphic Extension Libraries:

sbFunctionLibGraphicVBExt 2-3-0
seControlLibGraphicVBExt 2-3-1
seProcessObjLibGraphicVBExt 2-3-2
seSignalObjLibGraphicVBExt 2-3-1
sbCommLibGraphicVBExt 2-3-0
seGrpCtrlLibGraphicVBExt 2-3-1
seTemplateLibGraphicVBExt 2-3-0

Removed VB Components:

VB Auto populating controls: Utility Faceplate elements sbgTabPermissions2, sbgTabIO2 and sbgTabAlarms2
Utility Library Signal Table Aspect System: sbgSignalTable2 aspect category.
Upgrade SignalTable.xls

To evolve Power Generation Utility Library (UL) to 800xA SV 6.0 the library standard object type Faceplates were migrated from Visual Basic Process Graphics (VBPG) to Process Graphics 2 (PG2) due to VB obsolescence. Before the existing projects upgrades to UL 6.0.0 version it is necessary to migrate the faceplates and Process graphics from VBPG to PG2 in 800xA SV 5.1 with UL 5.1.4 which contains PG2 faceplates as a part of release. Engineering data viz Permissive/IO/alarm signal descriptions & aspect view references stored in VB based ActiveX controls (sbgSignalTable2 aspect) needs to be migrated to PG2 General Properties using UL Data Migration Tool. UM-2VAA005840_en_ENG-UL_Data Migration Tool.pdf describes pre-requisites and workflow steps to accomplish the data migration by using the UL Data Migration Tool.

Version 5.1.4

Same functions are available as in version 5.1.0.

Version 5.1.3

Same functions are available as in version 5.1.0.

Version 5.1.2

Same functions are available as in version 5.1.0.

Version 5.1.1

Same functions are available as in version 5.1.0.

Version 5.1.0

The graphic upgrade extension libraries seControlLibUpgradeExt 2-2-5, seProcessObjLibUpgradeExt 2-2-5 and seSignalObjLibUpgradeExt 2-2-5 have been removed, so that only the symbolic graphic elements of type “Display Element X” can be used for symbolic presentation in displays.

The numerical graphic elements of type “* Numeric Display <x> Digits” (x = 2 – 7) have been removed, so that only numerical graphic elements of type “* Scalable Numeric Display” or “* Numeric Display X” can be used for numerical presentation in displays.

Version 5.0.4

Pre announcement discontinued graphic elements

A number of graphic elements in the 2.1 version of Utility library had become obsolete due to the implementation of the graphic element “Display element X”. To offer backwards compatibility and offer time to replace existing elements these old graphic elements are still included in current library versions. These elements will however be removed in the next library version (5.1) therefore should any elements remain in current projects or if you intent to upgrade older projects in the future please take note of this announcement.

The following graphic elements will be removed in the next version:

sepBreakerM

- SepSwitch Display Element
- SepBreaker Display Element

sepMot1DirM

- SepPump Display Element
- SepMotor Display Element
- SepHeater Display Element
- SepFan Display Element

sepMot2DirM

SepPump2Speed Display Element
SepPump2Dir Display Element
SepMot2Speed Display Element
SepMot2Dir Display Element
SepFan2Speed Display Element
SepFan2Dir Display Element

sepMotValveAnaM

SepMotValveAnaM Valve 3Way Graphic Element
SepMotValveAnaM Valve 2Way Graphic Element
SepFlapMotValveAnaM Display Element

sepMotValveM

- SepMotValve Display Element
- SepFlapMotValve Display Element
- Sep3WayValveMotValve Display Element

sepMotVarM

SepMotvarM Pump Graphic Element
SepMotVarM Motor Graphic Element
SepMotVarM Fan Graphic Element

sepValveAnaM

SepValveAnaM Valve 3Way Graphic Element
SepValveAnaM Valve 2Way Graphic Element

sepValveOpClM

SepValveOpCl Display Element
SepFlapOpCl Display Element
Sep3WayValveOpCl Display Element

secStationM

SecControlValve Display Element
SecControlFlap Display Element
SecControl3WayValve Display Element

sesDigInM

SesDigInM Valve Graphic Element
SesDigInM Triangle Graphic Element
SesDigInM Switch Graphic Element
SesDigInM StateText Graphic Element
SesDigInM Pump Graphic Element
SesDigInM Motor Graphic Element
SesDigInM Lamp Graphic Element
SesDigInM IndicatorBox Graphic Element
SesDigInM Flap Graphic Element
SesDigInM Flame Graphic Element
SesDigInM Fan Graphic Element
SesDigInM Breaker Graphic Element
SesDigInM Arrow Graphic Element

sesDigInstrM

SesDigInstrM Valve Graphic Element
SesDigInstrM Triangle Graphic Element
SesDigInstrM Switch Graphic Element
SesDigInstrM StateText Graphic Element
SesDigInstrM Motor Graphic Element
SesDigInstrM Lamp Graphic Element
SesDigInstrM IndicatorBox Graphic Element
SesDigInstrM Flap Graphic Element
SesDigInstrM Flame Graphic Element
SesDigInstrM Fan Graphic Element
SesDigInstrM Breaker Graphic Element
SesDigInstrM Arrow Graphic Element

sesDigOutM

SesDigOutM Valve Graphic Element
SesDigOutM Triangle Graphic Element
SesDigOutM Switch Graphic Element
SesDigOutM StateText Graphic Element
SesDigOutM Pump Graphic Element
SesDigOutM Motor Graphic Element
SesDigOutM Lamp Graphic Element
SesDigOutM IndicatorBox Graphic Element
SesDigOutM Flap Graphic Element
SesDigOutM Flame Graphic Element
SesDigOutM Fan Graphic Element
SesDigOutM Breaker Graphic Element
SesDigOutM Arrow Graphic Element

These elements are placed by:

sepBreaker Display Element X
sepMot1Dir Display Element X
sepMot2Dir Display Element X
sepMotValveAnaM Display Element X
sepMotValve Display Element X
sepMotVarM Graphic Element X
sepValveAnaM Graphic Element X

sepValveOpCl Display Element X
secStation Display Element X
sesDigIn Display ElementX
sesDigInstr Display Element X
sesDigOut Display Element X

Upgrade consequence:

These elements will no longer be available in the next version and therefore graphics containing these elements cannot be converted correctly. Before upgrading any graphic display or graphic containing these elements should first be adapted with the new elements mentioned.

Version 5.0.3

Discontinued Library versions

This release no longer contains the legacy library versions 2.0 and 1.1 that were marked as classic in previous releases. The following libraries are no longer supported in SP2B:

sbFunctionLib 2.0-0
sbAlarmEventLib 2.0-0
seAlarmEventLib 2.0-0
sbCommLib 1.0-0
seControlLib 2.0-0
seGrpCtrlLib 1.0-0
seProcessObjLib 1.1-0
seProcessObjLib 2.0-0
seSignalObjLib 1.1-0
seSignalObjLib 2.0-0

Version 2.2-0 (5.0.1)

Removal of simulation mode

In the 2.1 release the major portion of simulation code was already removed. Some elements in the alarm handling still remained, these have now also been removed. It concerns code that used the SimMode element from the sbfAlarmCPar datatype. Both code and element have been removed.

Version 2.1-1 (5.0.0)

Removal of simulation mode

The 2.1 library no longer supported the internal simulation mode, some code and variable structures were not removed from the library as a result of time constraints and backward compatibility. In the seProcessObjLib and the seSignalObjLib the variables and code concerning the simulation mode have now been removed. The following elements are no longer available

InteractionPar:

OpSimMode

Status:

SimMode
EnSimBtn

Upgrade consequence:

If these variables are still accidentally referenced to in the application a error will occur and the application needs to be adapted.

Release 2.1-0

Alarm handling

As mentioned in the New Functions chapter the alarm handling of Utility Library has been converted to priority status. This means that in the 'sbfTotalAlSPar' datatype a number of elements are no longer available such as alarm counter variables or variables relating to the urgency settings, the following elements are no longer available:

Parameter Name	Type	Function
MaxUrgLev	DINT	Maximum urgency level in object
TotActAl	DINT	Total of active alarms in object
TotAutoDisAl	DINT	Total of auto blocked alarms in object
TotBlkAl	DINT	Total of blocking alarms in object
TotDisAl	DINT	Total of disabled alarms in object
TotUnAck	DINT	Total of unacknowledged alarms in object
TotUnAckW	DINT	Total of unacknowledged warnings in object
TotUrg1Al	DINT	Total of active urgency level 1 alarms in object
TotUrg2Al	DINT	Total of active urgency level 2 alarms in object
TotUrg3Al	DINT	Total of active urgency level 3 alarms in object
TotUrg4Al	DINT	Total of active urgency level 4 alarms in object
TotUrg5Al	DINT	Total of active urgency level 5 alarms in object
TotUrg6Al	DINT	Total of active urgency level 6 alarms in object
TotUrgAl	DINT	Total of active urgent alarms in object
TotWarn	DINT	Total of active urgent warnings in object

These have been replaced by the following elements:

Parameter Name	Type	Function
AlarmStatus	dword	Active status of alarms in object
PriorityStatus	dword	Active status of alarms in priority group
UnAckPrioStatus	dword	Unacknowledged alarms in priority group
MaxPrioLev	dint	Highest set priority level
MaxAlSev	dint	Highest severity active alarms in object
MaxAlPriority	dint	Highest active alarm Priority in object

In the AlarmCtrl parameter of the sbfAlarmCPar type the following elements are no longer available:

Variable Name	Type	Function
ObjAlUrgent	BOOL	True: urgency per object ; False: urgency per alarm
UrgLevel	DINT	Current general urgency level

And have been replaced by the following variables:

Variable Name	Type	Function
ObjectAlPrio	BOOL	True: Priority per object ; False: Priority per alarm
PrioLevel	DINT	Current Object Priority level
DisEvents	BOOL	Disable all events
TotalPriorityLev	DINT	Total number of priority levels defined

The InteractionPar parameter of the sbfAlarmIPar no longer contains the following element:

Variable Name	Type	Function
UrgLevel	DINT	Urgency level 0-6

This element has been replaced by the following variables:

Variable Name	Type	Function
PrioLevel	DINT	Priority level set on alarm
Severity	DINT	Severity setting for alarm
SeverityOffset	DINT	Offset for severity calculation (severity+Offset)

Several objects have a BaseIPar type (e.g. sbfMot1DirIPar) located in the InteractionPar parameter.
The components relating to urgency are no longer available.

Parameter Name	Type	Initial Value	Function
ObjAlUrg	BOOL	true	Use ObjUrgLevel or use individual urgency level
ObjUrgLevel	DINT	1	Object urgency level

The following elements replace them:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL		Use ObjPrioLevel or use individual Priolevel
ObjPrioLevel	DINT	1	Object Priority level

Upgrade consequences:

In normal use there are no consequences since all changes are internal the objects and faceplates and display elements have been changes accordingly. For special situations were application code was added to a project to detect the urgency counters in the alarm status this code needs to be adapted. Depending on the definition of the priorities levels the appropriate bit in the priority status dword is set indicating that an alarm with a severity belonging to this priority group is active. A translation will have to be made between Urgency levels and priority levels and the code will have to be adapted accordingly. For an overview of the new elements see the Improvements and Changes chapter on the sbFunctionLib 2.1-0.

Note! For more information on this change also see the **Improvements / Changes** chapter on the sbFunctionLib 2.1-0 alarm status.

Simulation

Simulation mode is no longer supported in this library release. All GroupSim parameters have been removed from the objects and the faceplates no longer contain a simulation mode button. Certain datatypes still contain simulation mode elements, which are to be considered obsolete and should no longer be used. In further library versions these elements will be removed.

Upgrade consequences:

The GroupSim parameter is deleted and no longer available in the application. For simulation purposes alternative libraries can be used containing external simulation objects that can be loaded in the application while programming and can be removed before commissioning starts. This makes it possible to make more specific simulation modules that are more suited to the local BUU needs.

2.3 Classic elements and modules

A number of alarm modules have been made redundant due to the introduction of the Condname parameter in SV 4.1. The modules are included for backward compatibility but are considered classic and needs to be phased out in existing applications and BUU specific libraries using these objects.

The following modules are considered classic and need to be replaced with new base alarm modules since these classic modules will be removed in future library versions:

sbfMotorFeedAlM
sbfMCCFeedAlM
sbfBreakerFeedAlM
sbfCabFeedAlM
sbfAcofOpnAlM
sbfAcofClsAlM
sbfAcofOn1AlM
sbfAcofOn2AlM
sbfAcofOnAlM
sbfAcofStartAlM
sbfAcofStopAlM
sbfAcofADSFOnAlM
sbfAcofADSFOn1AlM
sbfAcofADSFOn2AlM
sbfAcofA2DSFOn1AlM
sbfAcofA2DSFOn2AlM
sbfHighHighAlM
sefPosDevAlM
sbfHHHAlM
sbfHCurrAlM
sbfExtHCurrAlM
sefCasHighAlM
sbfLowLowAlM
sbfLLLAlM
sefCasLowAlM
sefMPRAlM
sefAutoReqAlM
sefCyAlM
sefValveHAlM
sefProtStopAlM
sefProtTripAlM
sbfStartSeqAlM
sbfStopSeqAlM
sbfStopSeqAlM
sbfMemFltAlM
sbfErrorAlM
sbfSignalAlM
sbfChanAlM
sbfInstrErrAlM
sbfFCErrorAlM
sbfBoolHHAlM
sbfBoolHighAlM
sbfBoolLLAlM
sbfBoolLowAlM
sefTroubleAlM
sefDevAlM
sefFaultAlM
sefBadPvAlM
sefBadCoAlM
sefXtrm1DevAlM
sefXtrm2DevAlM
sefXtrm3DevAlM
sefSetManAlM
sefAnAcPosDevAlM
sefAnAcSPDevAlM
sefBadPvCasAlM
sefExtAcofAlM
sefExtAcPulseAlM
sefExtAnAcofAlM
sefExtBoolAlM
sefExtHCurrAlM
sefExtHighAlM
sefExtLowAlM
sbfSafClsAlM
sbfSafDeActAlM
sbfSafOffAlM
sbfSafOn1AlM
sbfSafOn2AlM
sbfSafOnAlM
sbfSafOpnAlM
sbfSafStopAlM
sefSPDevAlM (replaced by sbfSPDevAlM)

2.4 Improvements / Changes

The following improvements have been implemented; further improvements were added to resolve reported errors (see fixed problems for more information).

Version 6.0.4.1

Same functions are available as in version 6.0.3

Version 6.0.4

Same functions are available as in version 6.0.3

Version 5.1.4

Same functions are available as in version 5.1.3.

Version 5.1.3

Same functions are available as in version 5.1.2.

Version 5.1.2

Same functions are available as in version 5.1.1.

Version 5.1.1

Same functions are available as in version 5.1.0.

Version 5.1.0

Same functions are available as in version 5.0.4.

Version 5.0.4

Feedback terminated commands extended with maximum timer

This change concerns CR **APPL01.CH.ABB.COM_000089**. The pulsed command function 2 sets the output command until the feedback signal is received. When the signal fails and no feedback is received the output remained active until the reverse command was given or if the feedback was set after all. This posed a risk for certain types of motor drives and activation logic, especially breakers. To upgrade the pulsed on feedback function the CmdCutOffT timer, which is used in PulsedCmd=1 mode is also utilized in the feedback termination mode. If a time has been set the activated command will be terminated if this time expires without a feedback. If no time is set on this timer the pulsed mode 2 will behave as before i.e. the command output will remain active until a counter command is given or until the feedback is received.

Upgrade consequences:

The CmdCutOffT (InteractionPar.BaseIPar.CmdCutOffT and the CmdCutOffTInit INIT parameter) now also has a function for modules that support PulsedCmd=2 mode. Since this parameter is standard set for 2 seconds this will have an impact on the behavior of the feedback terminated command mode and may be too short for the motor drive or valve logic to respond to. When upgrading be sure to set the InteractionPar and INIT parameter to the correct value i.e.:

N seconds, the maximum time the command may be active without a feedback being received.
Set this time larger than the time needed by the logic to respond e.g. Acof time.
0 seconds, the output is not reset when the feedback is not received (original functionality).

Time pulse commands also terminated on feedback

This change concerns CR **APPL01.DE.ABB.COM_000974**. The pulsed command function 1 resets the output command when the CmdCutOffT has expired. Resulting from the CR mentioned the command is now for the sepValveOpClM also terminated when the feedback is received. Because of this change it was decided to also change the PulsedCmd=1 mode for a all other objects, i.e. they also terminate their command outputs if the feedback is received before the timer runs out. See description of CR APPL01.DE.ABB.COM_000974 in the fixed problems section for more information.

Possibility for alternative alarm text on Feed alarms

In the current library all objects that contain a Motor-, MCC- or Cab feed alarm were connected to the same project constant for alarm message and condition name. However for some objects such as valves the cabinet feed was required to have another description, such as Valve fault. Changing this however also changed the text on signal objects and the sampler, which also uses cabinet feed alarms.

To improve customization of feed alarms to customer specifications additional Motor, MCC and CabFeed text constants have been added to the cEventsMsg and cUTCondNames project constants in the sbAlarmEventLib. These constants have the same texts as the original constants for backwards compatibility. The project constants now offer a text for a functional group, e.g. Motors, Motor valves, valves, breakers and signal objects. The following constants have been added:

cEventsMsg

ValveCabFeed (sepValveOpCl, sepValveAna)
MotValveMCCFeed (sepMotValve, sepMotValveAna)
MotValveMotorFeed (sepMotValve, sepMotValveAna)
SamplerCabFeed (sepSampler)
SignalCabFeed (sesAnaInstr, sesDigInstr)
BreakerFeed (sepBreaker)
BreakerMCCFeed (sepBreaker)

cUTCondNames

ValveCabFeed (sepValveOpCl, sepValveAna)
MotValveMCCFeed (sepMotValve, sepMotValveAna)
MotValveMotorFeed (sepMotValve, sepMotValveAna)
SamplerCabFeed (sepSampler)
SignalCabFeed (sesAnaInstr, sesDigInstr)
BreakerMCCFeed (sepBreaker)

Upgrade consequence:

If alternative texts were used for MCC- or MotorFeed alarms, some additional changes will be needed in the project constant of the project, since all new constants have the original texts they will have to be adapted to the texts used in the project for MCC, Cabinet or MotorFeed.

Failsafe parameter on feed alarms

Feed signals were considered to be failsafe, however this proved to be an obstacle in projects which used Feed error type signals that were OK when false. To improve engineering for these kinds of signals and allow the use of the IO signals without any glue code or modules to set the proper value a FailSafe parameter was added to the alarm definition parameters for each Motor-, MCC-, cabinet- and Breaker Feed alarm. The default value is True, i.e. failsafe.

Sec2XmitSel freeze output on bad quality

The output signal of the sec2XmitSelM is frozen if both input signal show bad quality.
Its status is also set to Bad (hex C).

sec2XmitSel extra limit tab

An extra limit tab has been added to the extended faceplate to set the limits for the trouble alarm, deviation alarm and the high and low alarms on the output. A number of alarm limits exist in the sec2XmitSel and were difficult to separate. This limit tab will aid the operator in having a comprehensive overview of the settings. The Output limits section shows the limits used by the Trouble alarm of the sec2XmitSel, the deviation is used to check the deviation on the input signals and the last section Out defines the High and Low limit for the individual High and Low alarms in the sec2XmitSel.

An additional ‘Out’ tab is present to activate and set the values to limit the output value between a minimum and maximum value.

sec3XmitSel freeze output on bad quality

The output signal of the sec3XmitSelM is frozen if all 3 input signal show bad quality.
Its status is also set to Bad (hex C).

sec3XmitSel selection of input signals on bad quality

If an input signal went bad the sec3XmitSel used to select the higher of the remaining 2 good signals. This has been improved by calculating the average of these remaining signals. If another signal goes bad, the remaining input is selected and the output is set to uncertain (hex 55). If the last input also goes bad the output will be frozen and gives bad quality (hex C). If one input recovers the uncertain status (hex 55) is again given. If 2 inputs recover, the good status is again passed to the output (hex C0). This mechanism is implemented for median-, average- and manual selection.

sec3XmitSel extra limit tab

As in the sec2XmitSel the sec3XmitSel also has a number of alarm limits that can be misinterpreted. A similar limit tab as defined in the sec2XmitSel has been added to the extended faceplate with the same functions as in sec2XmitSel.

Variant sec3XmitSel module

In addition to all changes and bug solves for the sec3XmitSelM a variant module has been developed to meet requirements for an alternative deviation detection. In the sec3XmitSelVM the input signals are 2 by 2 compared to determine if a signal is outside the set deviation limit. A deviation for an input signal will then only be generated if it is outside the deviation limit with both other signals. The original sec3XmitSel compares the input to the calculated output signal which produces a different behavior for the deviation detection.

Intermediate state should be used in valve3way graphic element

APPL01.DE.ABB.COM_000741, the valve3way graphic element has been adapted in such a way that it only shows a fully filled valve at 100% and the intermediate half filled symbol at 0.1 - 99.9%.

Possibility for adding external IO of output type to Signaltable

APPL14.DE.ABB.COM_000079, in library version 5.0.1 (2.2-0) a possibility for the IOTab was created to add used defined IO's in the same manner as extra external alarm modules. A control module containing the IO signal, BoolIO or RealIO, was to be inserted in the functional structure as a child object of the parent. If the IOTab in the Signaltable was refreshed the IO signal would then be added to the IOTab.

However this was limited to Input type signals; outputs were not possible. An upgrade has been made to the Signaltable to allow the addition of output signals. Since the Signaltable can only identify modules with a BoolIO or RealIO parameter some kind of name resolution was necessary. For output signals a configuration field is added to the Signaltable Config View for the IOTab: 'Ext. Out. Suffix': In this field a character combination can be defined that identifies an output module; default '_O'. If a module name is found with this suffix and a BoolIO or RealIO parameter is present it will be added to the IOTab as before but a Output module will be selected in the faceplate element. For this output selection the same limitation exits as for input signals that only one parameter of the Bool- or RealIO type can be found and added to the Signaltable.

Example:

An output reset signal needs to be added to a motor object. For this purpose a module type is defined that includes this functionality and has a parameter named ‘ResCmd’ of the BoolIO type. This module is then connected to the motor and added to the functional structure of the motor object named M1000 and is named M1000Reset_O. After a refresh it will appear in the Signaltable as Signal Name ‘M1000Reset_O’ with property values ResCmd.Forced, ResCmd.Value, ResCmd.IOValue and ResCmd.Status. This is the same as before for user defined input signals. The difference is in the faceplate. Here an output presentation will be visible because the Signaltable now detects the output suffix of ‘_O’ in the module name.

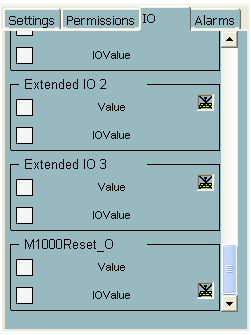
IO | Alarm | Permissive

Signals

	Auto	Signal Name	Signal Description	Permission
	Yes	iFBOn	On Feedback	Tune
	Yes	iFBOff	Off Feedback	Tune
	Yes	iCurrent	Motor Current	Tune
	Yes	iPanPOC	Panel POC	Tune
	Yes	iPanOn	Panel Set to On	Tune
	Yes	iPanOff	Panel Set to Off	Tune
	Yes	iPanMan	Panel Set to Man	Tune
	Yes	iPanAuto	Panel Set to Auto	Tune
	Yes	oOnCmd	On Command	Tune
	Yes	oOffCmd	Off Command	Tune
	Yes	iExtend1	Extended IO 1	Tune
	Yes	iExtend2	Extended IO 2	Tune
	Yes	iExtend3	Extended IO 3	Tune
▶	Yes	M1000Reset_O		
*				

Signal Property Mapping

	Property	Object Path	Object Property
▶	Forced	M1000Reset_O	ResCmd.Forced
	Value	M1000Reset_O	ResCmd.Value
	IOValue	M1000Reset_O	ResCmd.IOValue
	Status	M1000Reset_O	ResCmd.Status
	Fraction		



Other externally added modules that have a Bool or RealIO parameter and do not have the ‘_O’ suffix will be added with an Input presentation as before.

Basic external IO modules for general use

Together with the extension of the Signaltable for output type signals some general use modules have been added to the sbFunctionLib to provide some method for adding general external IO signals that are not an alarm or event. The new modules offer a simple BoolIO or RealIO interface and pass an application value to a BoolIO or RealIO as an output type module or copy a BoolIO or RealIO signal to a bool or real application value as input type modules. TotAlIn and TotAlOut parameters are provided so the modules can be linked to main objects along with external alarm modules. The forced status of the BoolIO or RealIO signals is conveyed via the sbfTotalAlSPar to the main object for presentation.

The following objects are provided:

sbfExtBoolOInM, input module
sbfExtBoolIOOutM, output module
sbfExtRealIOInM, input module
sbfExtRealIOOutM, output module

sepSeqExec compatible with Sequence2D

Change request **APPL01.DE.ABB.COM_000867** dealt with the fact that when the sepSEQExecM module was used together with the Sequence2D in function designer important information was not available in the faceplate. This was caused by the fact that the module was engineered to cooperate with normal standard sequencers in combination with the Utility Library sbfSFCViewer. In case of the Sequence2D however this information is supplied by two data structures, HeaderToSFC and SFCToHeader.

The sepSEQExecM has been extended with two parameters ToSFC and FromSFC of the before mentioned datatypes to provide an interface to the Sequence2D. A configuration parameter “UseSequence2D” decides which information and command structure is used. False: use standard parameters provided. True: use ToSFC and FromSFC.

The faceplate of the sepSEQExecM has been extended with the information provided by the FromSFC parameter and will be visible when the UseSequence2D parameter is set. The following information is provided:

- Step number (FromSFC.StepInfo1.StepNo)
- Step maximum time (FromSFC.StepInfo1.TRMax)
- Step minimum time (FromSFC.StepInfo1.TRMin)
- Step running time (FromSFC.StepInfo1.RunTS)

In the Indicator bar of the faceplate a “SFCViewer” button has been added. This button is connected to a Redirection Aspect named SFCViewer in the sepSeqExecM and can be configured to point to either the sbgSFCViewer of Utility Library or to the standard SFCViewer of the 800xA platform.

Upgrade Consequence:

The SFCToHeader and HeaderToSFC datatypes are located in the SeqStartLib of AC800M Connect. This library needed to be added to the seProcessObjLib and therefore must also be added to all application using the seProcessObjsLib. Together with the extension of the sepSEQExecM module extra NLS texts were added resulting in a update of the NLS Resource Manager of Utility Library. So be sure to check any missing translations for your locale NLS support.

The following NLS Texts have been added for the two standard locales:

	English (US)	German
UL_SeqStepNo	‘Step No’	‘Step Num’
UL_SeqStepMaxTime	‘Step Max.Time’	‘Step Max.Zeit’
UL_SeqStepMinTime	‘Step Min.Time’	‘Step Min.Zeit’
UL_SeqStepRunTime	‘Step Run Time’	‘Step Laufzeit’

sbfGasFlowCC suitable for temperatures lower than 0 °C

The sbfGasFlowCC module from the sbCalculationLib has been extended with a negative temperature range. It now also detects temperatures from -24 °C to 0°C.

sesAnaInBasicM extended with CC output

The sesAnInBasic module has been extended with a SigOutCC parameter of the ControlConnection type. This enables the module to be connected directly to other CC capable objects such as the sec2XMitSelM module. The parameter copies the value and settings of the Signal input parameter (RealIO).

Version 5.0.3

Presentation of deviation in secStationM faceplate

APPL01.CH.ABB.COM_000041, The SP-PV deviation was corrected in the previous release for the graphic element, but no indication in the faceplate was provided. This indication has been added to the faceplate of the secStationM as a numerical field with a ‘Dev’ label at the top of the faceplate. To create sufficient room the other elements on the faceplate were moved down a number of pixels. The deviation presentation can be made visible with a new object property named ‘DeviationVis’.

Upgrade consequence:

Since a new object property was added all existing instances need to be updated via an engineering tool such as BDM. A template sheet is provided in the Utility Library folder in UpgradeGeneralProperties (C:\Program Files\ABB Industrial IT\Operate IT\Utility Library AC800M). A functional description (1KGD400321R5020) is provided in the Doc folder of Utility Library.

Version 5.0.2

Stop event on sepMotValveM

APPL14.DE.ABB.COM_000043, The motor valve has been extended with a Stop event when the valve is stopped in an intermediate position. The event will only be raised when the valve type is set to Open/Close/Stop, in case of an Open/Close type the event will be suppressed.

Priority level visible on alarm tabs

ABB_CN01_SPK68_000071, The general property PrioLevelVis in the Object Property aspect has been set to True as default for all objects. There was a mix of settings in the library were some objects were set to true and others to false. The priority setting on alarms now deals with the actual priority of either the whole object or the individual alarms, in the past for the 2.0 library versions and earlier this was an urgency setting that was independent of the priority. To avoid further confusion and since the setting now directly involves changing the priority, and with it the severity, all properties have been set to true as default.

Function selection in sec2XmitSelM on-line change

ABB_CN01_SPK68_000066, The FunctionSel parameter of the sec2XmitSelM that determined the nature of the output signal (High, Low, Average or Operator) was of an INIT type. This meant that its value could only be changed with a coldstart. This proved to limiting in operational use so the code in the sec2XmitSel was changed in such a manner that the FunctionSel parameter can now be changed on-line. I.e. either by means of a constant connection if the function is fixed or with code in the application program if it is necessary to alter the function in certain situations.

Function selection in sec3XmitSelM on-line change

ABB_CN01_SPK68_000067, The AutoFctSel parameter of the sec3mitSelM that determined the nature of the output signal (Median or Average) was of an INIT type. This meant that its value could only be changed with a coldstart. This proved to limiting in operational use so the code in the sec3XmitSel was changed in such a manner that the AutoFctSel parameter can now be changed on-line. I.e. either by means of a constant connection if the function is fixed or with code in the application program if it is necessary to alter the function in certain situations.

Harmonize sec2XmitSelM with sec3XmitSelM for Auto button

ABB_CN01_SPK68_000073, the sec2XmitSelM is equipped with 3 manual buttons select, xmit 1, xmit 2 and select both. The last option is a pseudo automatic mode since in this mode the Function selection determined the input selected. The sec3XmitSelM has an Auto button and switches to manual as soon as one of the input buttons is selected.

This meant similar functionality but a different layout. The sec2XmitSel has now been harmonized with the sec3XmitSel. The following has been changed:

Faceplate:

The 1+2 button has been changed into an Auto icon button and moved to the auto button position (2). A automatic status indicator has been added to the indicator row of the faceplate on position 1 together with the manual icon. The function indicators of high, low or average are now only visible in automatic mode.

Parameters & datatypes:

In the Status datatype a SelMode element has been added that is set to automatic / manual value when the appropriate parameter or button is selected. The SetBothXmtr parameter has been renamed to SetAutoMode and the FunctionSel parameter to AutoFctSel.

Upgrade Consequence:

Since the parameters SetBothXmtr and FunctionSel have been changed this will mean some recoding in the application program if they are used and their connections need to be checked.

Added Inhibit increase or decrease on secPIDM

ABB_CN01_SPK68_000065, The secPIDM has been extended with a inhibit function for the output signal (CoOut). Two parameters have been added, InhibitInc and InhibitDec. They offer the following functions:

InhibitInc, True, the controller output is max limited to the current value.

InhibitDec, True, the controller output is min limited to the current value.

InhibitInc + InhibitDec, true, controller output is frozen on current value.

The parameters are wired into the LimitOutput element of the PIDCC's InteractionPar.Aux. The code uses the OutMaxLimit and OutMinLimit elements to set the values. During activation of the InhibitInc and InhibitDec parameters the LimitCo from the faceplate is disabled and the values ignored.

Performance improvement alarm modules

A code change was implemented in the alarm modules that eliminates the use of an internal state variable and thus reduces the number of state copy code blocks at the beginning of each scan resulting in a performance improvement.

New Signal groups for complex IO datatypes

A new library has been added for use with Function Designer. The library seSignalGroupLib contains signal groups for the complex I/O datatypes used in Utility Library, e.g. sepMot1DirIO. The library is open and not protected so it can be adapted to project requirements.

Hard coded limitations for alarm delay settings

APPL01.CH.ABB.COM_000049; There was a hard coded limitation in the InputFields of the alarm delays in several signal objects. Some were limited to 100 sec. (sesDigInM) others were limited to 1000 sec., this has been harmonized. The new maximum value has been set to the maximum value possible to present in the InputField, e.g. 9999 sec.

New torque configurations on sepMotValveM

APPL01.CH.ABB.COM_000035; The motor valve object has been extended with new torque configurations. These configurations conform to the Actuator settings from a UMC22 universal motor controller. The new possibilities for the TorqueConf parameter (options 3-5) are:

3, For both directions, first Feedback (Prepare) then Torque for selected position to terminate

4, For Close position, first Feedback (Prepare) then Torque to terminate, in opposite direction Feedback Open to terminate

5, For Open position, first Feedback (Prepare) the Torque to terminate, in opposite direction Feedback Close to terminate

If the Torque is received before the prepare feedback is received an alarm will be generated, the output command is terminated and the valve can only be operated in the opposite direction.

The original configurations have not been changed and the torque alarms only apply for the new configurations.

New torque alarms on sepMotValveM

APPL01.CH.ABB.COM_000035; In conjunction with the extra torque configurations two extra alarms have been added to alert the operator when a torque signal has been received before the prepare feedback. These alarms (Torque Open / Torque Close) are set as normal alarms and cannot be configured as blocking. The reason is that on receiving these alarms the object may not be blocked but it must still be possible to operate the valve in the opposite direction.

Updated Starting and Stopping indication in faceplates

The sepMot2DirM and sepMotVarM were not equipped with a starting and stopping arrow in the faceplate. The presentation of these objects has been harmonized with the presentation in the sepMot1DirM object.

New seTemplateLib

APPL01.CH.ABB.COM_000055, In addition to the changes done to the sepDeviceM described in the Fixed Problems section, a new seTemplateLib has been created to accommodate local adaptations for certain objects. At the moment the sepDeviceTM (T for template) is the only module included, however in the future more template like objects will be considered.

The library is setup as a single open library, without any protection, the modules included in this library can be copied to a project related library and adapted.

Version 2.2-0 (5.0.1)

sbgSignalTable performance and stability

The signaltable (sbgSignalTable/sbgSignalTable2) has been improved with respect to GDI count and general stability in case of OPC failure.

In the signaltable a number of icons are used for status presentation, e.g. forced icon on I/O tab and alarm status on alarm tab. These icons were of the standard windows .ico format, these icons have a poor performance with regards to GDI count and overall graphic performance. The icons have been replaced with icons of the .wmf format that have a better performance in GDI count. All 3 controls for alarm, I/O and permissive have been updated for both the old 1.0 type signaltable and the latest Signaltable2 version.

In test with multi system applications some undesirable behavior was discovered in case of OPC failure. When controls on a signaltable tab, such as the I/O tab, were operated it caused cascading errors in the workplace. All controls and the signaltable have been investigated and upgraded were necessary with respect to error trapping.

sbgIOControl extensible user I/O

The sbgIOControl from the sbgSignaltable2 has been enhanced with an external I/O function similar to the external alarm mechanism of the sbgAlarmControl2. This results in an extensible I/O tab on all objects that support a Signaltable2 aspect with I/O.

The new function uses the sbfxxxxxIOAlM and the sbfEventIOM modules. The new signaltable I/O tab searches the functional structure for child objects that contain a BoolIO or RealIO parameter and adds these to the signaltable for presentation in the faceplate.

User modules are also supported if they adhere to the design rules for external alarm modules.

The module type name should include the text ’Ext’ and ‘IO’ for none alarm modules and including ‘Al’ for alarm modules, e.g. MyExtModuleIOM, MyExtModuleIOAlM.
The connections for sbfTotalAlStat parameters In / Out should be present together with the code to copy the total alarm status information up the alarm chain and the module should convey it’s forced status to the parent object in the AlarmStatus. See also limitations in next paragraph and full understanding of the alarm principles in manual ‘1KGF 100 653R2200 Function description for alarm handling’.

⚠ Limitations! At present only IN signals are supported, i.e. if a module with an I/O signal is added as a child in the functional structure it will be presented as an input signal in the I/O tab. Output signals are presently not supported. Also only 1 I/O parameter is supported, modules with 2 I/O parameters are not correctly added and only the first parameter is detected.

Standard Utility library modules supported in extensible I/O tab:

sbfExtBoolIOAlM
sbfExtBoolBasicIOAlM
sbfExtHighCurrIOAlM
sbfExtHighIOAlM
sbfExtLowIOAlM
sbfExtEventIOM

sepMotValveM Alternative buttons

A ‘MotValveType’ general property has been added to the motor valve to choose between the Left and Right buttons (Cls/Opn) and Down and Up buttons. The Down and Up were added to further enhance the operator ergonomics for usage of the motor valve in vertical motion control applications.

sepMotVarM Alternative Speed text in faceplates

The general properties for the sepMotVarM have been extended with elements for alternative text for the measured value and the setpoint value. The following properties have been added:

AltSpeedText, alternative text for the measured speed value in the faceplate.
UseAltSpeedText, true, use AltSpeedText for presentation, false use default text.
AltSPSpeedText, alternative text for the speed setpoint in the faceplate.
UseAltSpeedText, true, use the AltSPSpeedText for presentation, false use the default text.

seSignalObjLib Additional visibility properties

For the analogue and digital signal objects general properties have been added to enhance presentation flexibility in the faceplates. Visibility properties have been added for the In and Out values, bars or indicators present in the faceplates. This enables the choice of presenting all information, no information or only the I/O input or the output to the application.

- Objects adapted:
- sesAnaIn6M (OutValueVis, InValueVis)
- sesAnaInBasicM (OutValueVis, InValueVis)
- sesAnaInM (OutValueVis, InValueVis)
- sesAnaInstrM (OutValueVis, InValueVis)
- sesAnaOutM (OutValueVis, InValueVis)
- sesDigInBasicM (InVis, OutVis)
- sesDigInM (InVis, OutVis, ExtVis)
- sesDigInstrM (InVis, OutVis)
- sesDigOutM (InVis, OutVis)

Version 2.1-1 (5.0.0)

sepBreaker

A number of improvements have been added to the Breaker object.

PulsedCmd

The first improvement concerns the output commands, these now offer the possibility to terminate on feedback. A PulsedCmd parameter has been added to select between the current (time pulse) and the new command type.

Upgrade consequence:

None, the PulsedCmd parameter has the current functionality as default, and no additional programming is necessary to hold current functionality.

Earth connection

A number of breakers offer the possibility to connect the breaker to a earth circuit. A new I/O and status has been added to implement this feature. The faceplate and the graphic element have been extended with a earth icon that will be visible if the earth contact is closed.

Upgrade consequence:

None, if the I/O is not used the presentation of the breaker remains as before.

Extra I/O

During the engineering of several projects it has become clear that the number of extra status items per breaker type varies. It usually exceeds the number of 3 extra I/O. Therefore it was decided to extend the breaker IO type with 3 extra Extended IO to offer more flexibility to the application programmer.

Upgrade consequences:

None, extra I/O were not present before and are an extension of the type.

Other improvements have been made to the breaker, these however are the result of errors and are described in the Fixed Problems chapter.

SecStationM

The sefSPDevAlM module has been replaced by the sbfSPDevAlM from the sbfAlarmEventLib. This module is functionally equal to the sefSPDevAlM module but is located in the main Utility AlarmEvent library. The seAlarmEventLib will be phased out in the future, the sbAlarmEventLib will be the base library for all alarm and event functions in Utility Library.

The sefSPDevAlM module was the last module used in the seControlLib 2.1 from the seAlarmEventLib, as a consequence the seAlarmEventLib has been removed from the seControlLib.

seProcessObjLib

APPL14.DE.ABB.COM_000005 (Congruency type not selectable)

A CyAlDType parameter has been added to provide extra possibilities for fault detection. Currently objects like the breaker only supported a congruency for both feedbacks set. If however both internal orders are reset on blocking alarms the object will be error free even if the feedbacks were not set. To provide the operator with an extra indication there is a problem the congruency type has been made selectable, so both feedbacks off can also generate a congruency alarm. In this case the operator will still be alerted to a problem if the opening/closing arrow is no longer visible.

The new parameter has been added to all objects in the seProcessLib that have a congruency alarm, were the default value is set to the standard for the object, e.g. 1 (both on) for a valve.

Upgrade consequences:

None, the parameters have a default setting of the value currently used in the hard-coded alarms. Only a new project constant connected to the new parameter would be advisable to minimize the memory impact.

Version 2.1-0

Signaltable

The sbgSignalTable aspect has been adapted to accommodate the new priority mechanism. To insure compatibility for the 2.0 library the 2.1 objects use a sbgSignalTable2 aspect with it's dependency aspects sbgTabAlarm2, sbgTabIO2 and sbgTabPermissions2. These elements replace the existing elements from the 2.0 library in all faceplate elements.

The alarm tab in the signaltable aspect has a changed property PrioLevel (UrgLevel) that now connects to the InteractionPar.<alarm>.PrioLevel element. A new property has been added NumberPrioUsed that connects to the Status.NumberPrioUsed element to convey the maximum number allowed to be set on the alarm priority.

Upgrade consequence:

A new Signaltable2 aspect will have to be copied to all object instances in an application. When the new Signaltable2 is present the information in the 'Old' Signaltable needs to be copied to the new table.

Object Properties

The object properties of objects in the library contained a UrgLevelVis visibility property that controlled the visibility of the urgency setting buttons in the alarm tab of the faceplate. This has been changed to a PrioLevelVis property to accommodate the new priority setting in the alarm tab.

Upgrade consequence:

All existing instances of the object properties aspect in an application need to be adapted to rename the existing property name UrglevelVis to PrioLevelVis.

Changed column in alarm and eventlists

Due to the change in Condname and SrcName the column Object Name has been exchanged with the Source Name column. When the object name was presented it showed the extensions made to the Name to make the object unique in the platform, e.g. M1000ExtAl1. Since the sourcename is now available as a separate parameter on external alarms it can now be set to the parent name (M1000) and the alarms and event will have the same appearance in the Alarm and Event lists.

Change in priority colors for alarm list.

The priority colors in the alarm lists have been linked to the priority colors in the PLM Alarm colors definition. The previous alarm lists had different logical colors attached.

Upgrade consequence:

Alarms may appear in a different color in alarm list depending on the definition in PLM Alarm colors, colors may have to be adapted in the PLM Alarm color definition to match application needs.

SbFunctionLib 2.1-0

Alarm status

The sbfTotalAlSPar datatype has been adapted regarding alarm counters. All alarm counter variables, e.g. TotActAl, have been transformed into one single dword 'AlarmStatus'. All relevant alarm control modules in the function library have been adapted to correctly process the new datatype.

As a consequence the counter variables are no longer available and should be replaced by the new status dword. Furthermore the priority mechanism used in the 800xA platform has been expanded in the library to replace the current Urgency mechanism used to prioritize alarms.

Upgrade consequence:

If the removed or changed elements are used in the application the code (CBM/PPA) it needs to be adapted. Instead of the counter elements a bit has to be checked so application code needs to be changed from a compare on dint's to a compare based on a bit.

sbfTotalSPar Old variables:

Parameter Name	Type	Function
MaxUrgLev	DINT	Maximum urgency level in object
TotActAl	DINT	Total of active alarms in object
TotAutoDisAl	DINT	Total of auto blocked alarms in object
TotBlkAl	DINT	Total of blocking alarms in object
TotDisAl	DINT	Total of disabled alarms in object
TotUnAck	DINT	Total of unacknowledged alarms in object
TotUnAckW	DINT	Total of unacknowledged warnings in object
TotUrg1Al	DINT	Total of active urgency level 1 alarms in object
TotUrg2Al	DINT	Total of active urgency level 2 alarms in object
TotUrg3Al	DINT	Total of active urgency level 3 alarms in object
TotUrg4Al	DINT	Total of active urgency level 4 alarms in object
TotUrg5Al	DINT	Total of active urgency level 5 alarms in object
TotUrg6Al	DINT	Total of active urgency level 6 alarms in object
TotUrgAl	DINT	Total of active urgent alarms in object
TotWarn	DINT	Total of active urgent warnings in object

SbfTotalAlSPar (new variables)

Parameter Name	Type	Function
AlarmStatus	dword	Active status of alarms in object
PriorityStatus	dword	Active status of alarms in priority group
UnAckPrioStatus	dword	Unacknowledged alarms in priority group
MaxPrioLev	dint	Highest set priority level
MaxAlSev	dint	Highest severity active alarms in object
MaxAlPriority	dint	Highest active alarm Priority in object

AlarmCtrl parameter sbfAlarmCPar type old variables:

Variable Name	Type	Function
ObjAlUrgent	BOOL	True: urgency per object ; False: urgency per alarm
UrgLevel	DINT	Current general urgency level

SbfAlarmCPar (new variables)

Variable Name	Type	Function
ObjectAlPrio	BOOL	True: Priority per object ; False: Priority per alarm
PrioLevel	DINT	Current Object Priority level
DisEvents	BOOL	Disable all events
TotalPriorityLev	DINT	Total number of priority levels defined

The InteractionPar parameter sbfAlarmIPar old variable:

Variable Name	Type	Function
UrgLevel	DINT	Urgency level 0-6

SbfAlarmIPar (new variable)

Variable Name	Type	Function
PrioLevel	DINT	Priority level set on alarm
Severity	DINT	Severity setting for alarm
SeverityOffset	DINT	Offset for severity calculation (severity+Offset)

SbfAlarmSPar (new element)

Variable Name	Type	Function
Status	DINT	Status from alarm module (AlarmCondM)

Several objects have a BaseIPar type (e.g. sbfMot1DirIPar) located in the InteractionPar parameter. The following old variables relating to urgency have been replaced.

Parameter Name	Type	Initial Value	Function
ObjAlUrg	BOOL	true	Use ObjUrgLevel or use individual urgency level
ObjUrgLevel	DINT	1	Object urgency level

New BaseIPar variables:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL		Use ObjPrioLevel or use individual Priolevel
ObjPrioLevel	DINT	1	Object Priority level

SbfTotalAlStatusM

New status module used in alarm modules to set correct status in new AlarmStatus dword.

SbfSeverityCalcM

A new calculation module created to translate changed severity into a priority number and visa versa.

SbAlarmEventLib 2.1-0

Disable all alarms

The Enable All Alarm button in faceplate is converted to a real disable (CondState=1) for all alarms on positive edge. The alarms can be individually enabled again in the alarms InteractionPar. An element will be added to the sbfAlarmCPar, DisAlarms.

On setting the disable all alarms from the faceplate the element will be set and reset when the button is enabled again.

In the alarm modules the disable on the alarm module will be set once and the corresponding DisAl in the alarms Ipar parameter will also be set. When the DisAl of the individual alarm is then reset again the disable code of the alarm module will then enable the alarm again.

When the AlarmCtrl.DisAlarm is reset the Enable alarm in the alarm module is set once to enable the alarm.

Upgrade consequence:

The behavior of the alarms in the list is changed, alarms will now be disabled and presented in the disabled status.

Extended functionality alarm modules

Some alarm modules have been extended with new parameters to offer new functionality.

Additional alarm module parameters:

Parameter Name	Type	Initial Value	Function
CondName	STRING[15]	'Alarm'	IN EDIT Condition name. If left empty the instance name will be used
SrcName	STRING[20]	'M1'	IN EDIT Sourcename of the alarm, must be unique in combination with CondName
Suppression	DINT	0	IN Alarm suppression type 0, Static; 1, Running; 2, None
CondActive	Bool		OUT The alarm condition is active (before suppress./disable)

The Severity parameter changed from a EDIT to a INIT parameter:

Parameter Name	Type	Initial Value	Function
Severity	DINT	951	IN INIT Initial value severity setting

Modules include:

sbfExtAcofAlM
sbfExtAcPulseAlM
sbfExtAnAcofAlM
sbfExtBoolAlM
sbfExtBoolBasicAlM
sbfExtChanErrAlM
sbfExtHCurrAlM
sbfHighAlM
sbfLowAlM
sbfExtOutOfRAlM
sbfExtHighIOAlM
sbfExtLowIOAlM
sbfExtBoolIOAlM
sbfExtBoolBasicIOAlM

Improved behavior Events 05/10/15 modules

The handling of multiple events has been improved with regards to the event time logged with the event. Due to the buffer inside the modules when simultaneous events occurred (only 1 event function) this meant that 1 event was processed in a task cycle, this resulted in the fact that when the last event was processed the time could differ from the actual time the event was detected. By adding multiple instances of the defined event detector in the code the event is immediately generated and no time difference occurs. This means that multiple events will be processed in a single task cycle.

SeProcessObjLib 2.1-0

All object types

All objects now support the new priority color mechanism, this means that the active alarm with the highest priority now determines the alarm color to be presented in the process display. Priority colors (max. 20) can be set in the 'PLM Alarm color' color definitions in the workplace structure.

BaseIPar new elements:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL	true	Use ObjPrioLevel or use individual priority level
ObjPrioLevel	DINT	1	Object priority level

The Status parameter (xxxSPar) of the object is extended with an element for the alarm auto populating control:

Parameter Name	Type	Initial Value	Function
NumberPrioUsed	DINT	6	Number of priority levels used

Numeric display element X

A universal Numeric display element X has been added to objects that have numeric display elements to replace the numeric elements 2, 3, 4, 5, 6. The element offers a Digits property to select the desired length of the display element.

FBConf disables congruency alarm

The congruency alarms are automatically disabled when a FBConf type makes them superfluous.

Upgrade consequence:

The discrepancy alarm of the objects now dependents on the chosen priority. In the former versions discrepancy was shown in blue color. To be compatible to the former versions the alarm color table of the chosen priority has to be changed to blue. Default priority is set to 5 (Severity Init of 751).

SeSignalObjLib 2.1-0

All object types

All objects now partly support the new priority color mechanism, this means that the active alarm with the highest priority now determines the alarm color to be presented in the process display. Priority colors (max. 20) can be set in the 'PLM Alarm color' color definitions in the workplace structure. For signal objects alarms relating to the signal quality such as channel error or instrumentation error are exception to this mechanism with regards to the Error mode set on these alarms, the current behavior for these alarms has been maintained, other alarms use the new priority mechanism.

IPar new elements:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL	true	Use ObjPrioLevel or use individual priority level
ObjPrioLevel	DINT	1	Object priority level

The Status parameter (xxxSPar) of the object is extended with an element for the alarm auto populating control:

Parameter Name	Type	Initial Value	Function
NumberPrioUsed	DINT	6	Number of priority levels used

SesAnaInBasicM
The sesAnaInBasicM is an analog input object like the sesAnaInM but without any alarms, error mode or manual value possibility. It is a simple indicator for presentation only. No alarms are present but the object does support the addition of external alarms if necessary.

See also functional description 1KGF400 007R2100

SesDigInBasicM
The SesDigInBasicM is a basic indicator module intended for the detection of a single digital condition. The module is intended for presentation only and offers no internal alarms, error mode or force possibilities. A general on and off delay is available for the switch condition to eliminate contact vibration.

No alarms are present but the object does support the addition of external alarms if necessary.

See also functional description: 1KGF400 008R2100.

Numeric display element X

A universal Numeric display element X has been added to objects that have numeric display elements to replace the numeric elements 2, 3, 4, 5, 6. The element offers a Digits property to select the desired length of the display element.

SeControlLib 2.1-0

All object types

All objects now support the new priority color mechanism; this means that the active alarm with the highest priority now determines the alarm color to be presented in the process display. Priority colors (max. 20) can be set in the 'PLM Alarm color' color definitions in the workplace structure.

Ipar new elements:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL	true	Use ObjPrioLevel or use individual priority level
ObjPrioLevel	DINT	1	Object priority level

The Status parameter (xxxSPar) of the object is extended with an element for the alarm auto populating control:

Parameter Name	Type	Initial Value	Function
NumberPrioUsed	DINT	6	Number of priority levels used

Numeric display element X

A universal Numeric display element X has been added to objects that have numeric display elements to replace the numeric elements 2, 3, 4, 5, 6, 7. The element offers a Digits property to select the desired length of the display element.

SeGrpCtrlLib 2.1-0

All object types

All objects now support the new priority color mechanism, this means that the active alarm with the highest priority now determines the alarm color to be presented in the process display. Priority colors (max. 20) can be set in the 'PLM Alarm color' color definitions in the workplace structure.

Ipar new elements:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL	true	Use ObjPrioLevel or use individual priority level
ObjPrioLevel	DINT	1	Object priority level

The Status parameter (xxxSPar) of the object is extended with an element for the alarm auto populating control:

Parameter Name	Type	Initial Value	Function
NumberPrioUsed	DINT	6	Number of priority levels used

plmObjectX

All modules are now equipped with a general plmObjectX graphic element. This graphic element offers possibilities for multiple presentations (if supported by object) and offers the use of true-type fonts for indicator icons reducing graphic load.

sbCommLib 2.1-0

All object types

All objects now support the new priority alarm mechanism.

Ipar new elements:

Parameter Name	Type	Initial Value	Function
ObjAlPrio	BOOL	true	Use ObjPrioLevel or use individual priority level
ObjPrioLevel	DINT	1	Object priority level

The Status parameter (xxxSPar) of the object is extended with an element for the alarm auto populating control:

Parameter Name	Type	Initial Value	Function
NumberPrioUsed	DINT	6	Number of priority levels used

2.5 Fixed Problems

Version 6.0.4.1

Bug ID/Case No	Component	Title
20210217-3854211	Sec2XmitSelM & Sec2XmitSel6M	SeControlLib- Sec2XmitSelxx and Sec3XmitSelxx- Tool Tip text on alarm limits are wrong
20210310-3947967	SecStationM	SecStationM – Not possible to reduce Min CO when Limit CO is enabled
20210517-4228776	SecSelectorM	SecSelectorM- Force Switch Over Does not work with DefSwFunc=3
20201026-3454788	SecStationM & SecPIDM	SecStationM and SecPIDM not possible for user permission operate to read values in Faceplate tab Param - Utility Library 6.0.4 for 800xA 6.1

Version 6.0.4

Bug ID	Component	Title
196945	sesDigOutM	When mode is changed to manual, object is not tracking the value from Auto mode.
205123	Sec2XmitSelM & Sec2XmitSel6M	When Deviation alarm is present and then if any one input goes to channel error, output behavior is wrong.
206898	Sec2XmitSelM & Sec2XmitSel6M	When Deviation alarm is activated, Output gets frozen to last good value and remains in last good value till alarm returns to normal. This behavior is corrected and now it will depend on “DevAlType” parameter. When “DevAlType = 0”, existing behavior as it is. When “DevAlType = 1 or 2”, Output will depend on “AutoFctSel” parameter.
165715	Display Element (All objects)	In almost every display element of utility library there are many migration errors appearing in graphic builder.
210867	sepMot1DirM, sepMotVarM, sepMot2DirM	The faceplate of the sepMot1DirM, sepMotVarM and sepMot2DirM present the wrong text when the selection is made to present the total Runtime. The calculation in PG2 of the previous runtime of the sepMot1DirM, sepMotVarM and sepMot2DirM isn’t correct.
139872	Display Element (All objects)	When using VB faceplate AlarmCtrol.AckAl was update with +1 when alarm was acknowledged by the AlarmControl in the faceplate but in PG2 this behavior is nonfunctional.
160693	SecStationM & secPIDM	Presentation problems in Faceplate.
159997	All objects	“All Alarms Enabled” button when disabled, there is no indication on the PG2 faceplate.

Version 6.0.3

Bug ID	Component	Title
160391	SepBreakerM	In “SignalDescriptionIO” aspect, when "iExtend3" visibility is False, there is some mismatch between "Value" & "IOValue" indications of anyone IO in IOtab of Faceplate.
170338	SepDeviceM	When more than 3 External alarm is configured, last external alarm is not visible in Faceplate.
160693	SecStationM & secPIDM	Presentation problems in Faceplate.
165715	sec2XmitSel6M	Out Value of transmitter is not shown correctly
129624	sbfExtBoolAlm and sbfExtAnACOFAlm	sbfExtBoolAlm: Path of Redirection Aspect (Implicit) is wrong. sbfExtAnACOFAlm: Redirection Aspect is not set us "Default Aspect"
135316	secStationM	Missing crossline at extended faceplate when PV error for secStationM.
135316	secStationM	Indication of bad status for secStationM

		Issue fixed: Graphic Element PG2 "secControlElement DisplayElement" – Quality Status was earlier connected to SpIn. Now it is connected to SpOut, [i.e. In the same way as "secManualStation DisplayElement long/middle/short"
187433	Sepmot2dirM	Value of PPermOn2 shows the Value of PPermOn1
166753	Sepmot2dirM	problem with the alarm indication for sepMot2Dir Display Element X
30837	sepSEQExecM	Permission text for Sequence Start is shown in Off_Perm Frame, Permission text of Sequence Stop is shown in On_Perm Frame. Mapping is now corrected in "SignalDescriptionPermissive" General Property ["Process On Perm_Frame" connected to "Sequence Start Perm" & "Process Off Perm_Frame" connected to "Sequence Stop Perm"]
166755	sec3XMitSelVM	Graphic elements of process object sec3XMitSelVM are missing
187434	sec3XmitSelM and sec3XMitSelVM	Alarms Tab not present for sec3XmitSelM and sec3XMitSelVM
170339	sesPowerMeterM	Unit of Apparent Power is wrong & difficult to control Fraction
178898	SepDeviceM	When there are 4 or less command buttons used, the command button size is same as when more are used.Resizing does not happens.
178889	sepDeviceM	Permissions Tab does not show permissions. SignalDescriptionPermissive aspect is not present.

160391 (SepBreakerM)

In “SignalDescriptionIO” aspect, when "iExtend3" visibility is False, there is some mismatch between "Value" & "IOValue" indications of anyone IO in IOtab of Faceplate.

170338 (SepDeviceM)
When more than 3 External alarm is configured, last external alarm is not visible in Faceplate.

160693 (SecStationM & secPIDM)

Presentation problems in Faceplate.

The following Presentation issues are fixed:

a) In secPIDM, Parameter Tab-> Value of "Td" shows Value of "Ti"
b) In secPIDM, Parameter Tab-> Tooltip of "OutDecLim" is wrong
c) In secStationM,When changing CO in manual mode with mouse scroll wheel the value is inverted.
d) In secStationM,Limits Tab -> Tooltip of MaxSp & MinSp is wrong.

165715 (sec2XmitSel6M)

Out Value of transmitter is not shown correctly

“FilterTime” parameter is now exposed in the block. If the user desires, “FilterTime” can be decreased inorder to track the value immediately and avoid overshooting.

129624 (sbfExtBoolAlm & sbfExtAnACOFAlm)

sbfExtBoolAlm: Path of Redirection Aspect (Implicit) is wrong.
sbfExtAnACOFAlm: Redirection Aspect is not set us "Default Aspect".

135316 (secStationM)
When channel error on PV for secStationM there is no red crossline in extended faceplate.
The line is shown in both Reduced and Normal faceplate.

135316 (secStationM)

Indication of bad status for Graphic Element PG2 "secControlElement DisplayElement" is connected to SpOut.

Graphic Element PG2 "secControlElement DisplayElement" –

Quality Status was earlier connected to SpIn. Now it is connected to SpOut,

[i.e. In the same way as "secManualStation DisplayElement long/middle/short".

187433 (Sepmot2dirM)

Value of PPermOn2 shows the Value of PPermOn1.

166753 (Sepmot2dirM)

Problem with the alarm indication for sepMot2Dir Display Element X. When the fan or pump symbol is used, the lines inside the circle always use the Prio 4 color without flashing.
This results in two different colors when there is an alarm different from prio 4.

30837 (sepSEQExecM)

Permission text for Sequence Start is shown in Off_Perm Frame, Permission text of Sequence Stop is shown in On_Perm Frame. Mapping is now corrected in "SignalDescriptionPermissive" General Property
["Process On Perm_Frame" connected to "Sequence Start Perm" & "Process Off Perm_Frame" connected to "Sequence Stop Perm"]

166755 (sec3XMitSelVM)
Process Object sec3XMitSelVM, 3 Transmitters Selector, has no Graphic elements PG2 for graphic displays.

187434 (sec3XmitSelM and sec3XMitSelVM)
In objects, "sec3XmitSelM" and "sec3XMitSelV", Alarms Tab is not present.

170339 (sesPowerMeterM)

Unit of Apparent power is wrong, coming from Active power instead.
Fraction is not determined by input signal as described in the manual, it can not be adjusted at all.

178898 (SepDeviceM)

When there are 4 or less command buttons used, the command button size is the same as when more are used.
There is more space available to extend the size of the commend buttons when they have 4 or less command buttons.

178899 (SepDeviceM)
Permissions Tab does not show permissions.SignalDescriptionPermissive aspect is not present.

Version 6.0.1

The following bugs are solved. All bugs are stored in TFS. The Bug ID"s mentioned in the table correspond with TFS database, Product (Level 2): Utility Library 800xA.

Bug ID	Component	Title
101201	SepValveAnaM	SignalDescriptionIO Aspect is not instantiated when instantiating sepValveAnaM
110690	SesAnaInM, SesAnaIn6M, SesAnaInBasicM	Unit Presentaion in Scalable Numeric Display is not showing > 4 letters; TC Present in 5.1 not integrated in 6.0
101679	sbfExtBoolIOInM, sbfExtBoolIOOutM, sbfExtRealIOInM, sbfExtRealIOOutM	Function Aspect missing in Control modules of sbFunctionLibrary

106323	sbfGasFlowCC	Manual for 1KGF100508 sbfGasFlowCC, shown with "track changes"
103794	sbfExtEventBasicM & sbfExtEventM	External Alarm is not Supported in these modes. Document to be corrected
75525	secStationM & secPIDM	There are too large steps in value input field when value is increased using mouse
101696	SecPIDM	Parameters for bumpless change are not available in secPIDM
72950	SesPowermeterM	SesPowerMeterM: Alarm Tab does not opens
72953	SepMotValveAnaM	SepMotValveAnaM:-In IO tab,When u click on "on feedback" force Symbol to enable force button, Force button is hidden
92396	SepBreaker	Display Element has no earthing image connected
115114	SesAnaIn	Visualization error Utility library sesAnaIn faceplate Limit tab (seSignalObjectLib 2.3-1)
59609	sepMotValveM	Suppression of Valve "Stop" message in the event list
105848	sepValveAnaM and sepValveOpClM	Problem with the background color for BgHorizRectangle and BgVerticRectangle it is set to plgDisplayBg
89682	SesAnaInM, SesAnaIn6M	No NLS tags defined for 'Event' in Limit tab of sesAnaInM & sesAnaIn6M
95626	Data Migration Tool	UL DataMigration Tool: 'Overflow' Error while writing PermGenData to PPA
92586	Data Migration Tool	UL Data Migration Tool is not copying PERMDATA to PERMGENDATA. Excel is not responding.
96553	Data Migration Tool	UL DataMigration Tool: Frame Descriptions in Faceplates are not getting migrated
97714	Data Migration Tool	UL Data Migration Tool : When we open the tool , recover error pop up appearing all time
107006	Data Migration Tool	After Copying value of Permission 30 is same as in Permission 27
109987	sepValveAnaM, SepBreaker M	Document corrections required
74234	SepSeqExecM	SepSeqExecM: When sepSeqExecM is configured along with Sequence2D as a Diagram in Function Designer, the error “Configuration Data Generation Stopped! Unable to proceed!” may occur during Code Generation.

101201 (SepValveAnaM)

When an instance for SepValveAnaM is configured, SignalDescription IO Aspect is not getting instantiated.

110690 (SesAnaInM, SesAnaIn6M, SesAnaInBasicM)

Unit Presentaion in Scalable Numeric Display is not showing > 4 letters; TC Present in 5.1 not integrated in 6.0

101679 (sbfExtBoolIOInM, sbfExtBoolIOOutM, sbfExtRealIOInM, sbfExtRealIOOutM)

Function Aspect missing in Control modules of sbFunctionLibrary

106323 (sbfGasFlowCC)

Manual for 1KGF100508 sbfGasFlowCC, shown with "track changes"

103794 (sbfExtEventBasicM & sbfExtEventM)

External Alarm is not supported in these modes. Document to be corrected

75525 (secStationM & secPIDM)

There are too large steps in value input field when value is increased using mouse. Value jumps while incrementing/decrementing

101696 (secPIDM)

Parameters for bumpless change are not available in secPIDM

72950 (SesPowermeterM)

SesPowerMeterM: Alarm Tab does not opens

72953 (SepMotValveAnaM)

SepMotValveAnaM:-In IO tab, When "on feedback" force Symbol is clicked, to enable force button, Force button is hidden

92396 (SepBreaker)

Display Element has no earthing image connected

115114 (SesAnaIn)

Visualization error Utility library sesAnaIn faceplate Limit tab (seSignalObjectLib 2.3-1).Text "H" appears for Low limit when limit is disabled. It should show "L" instead

59609 (SepMotValveM)

Motval is configured with the ValveType parameter set to 1. Customer uses SO.BaseSO.AutoOpn, SO.BaseSO.AutoCls and SO.BaseSO.AutoStop to give the valve the right position for the process.
The result is the event list is filled with message Valve "Stop". Valve "Stop" event message filled in the event list needs to be suppressed.

105848 (sepValveAnaM and sepValveOpClM)

Problem with the background color for BgHorizRectangle and BgVerticRectangle it is set to plgDisplayBg. Valve looks different because of plgDisplayBg

89682 (SesAnaInM, SesAnaIn6M)

No NLS tags defined for 'Event' in Limit tab of sesAnaInM & sesAnaIn6M

95626 (Data Migration Tool)

'Overflow' Error while writing PermGenData to PPA

92586 (Data Migration Tool)

UL Data Migration Tool is not copying PERMDATA to PERMGENDATA. Excel is not responding.

96553 (Data Migration Tool)

Frame Descriptions in Faceplates are not getting migrated.

97714 (Data Migration Tool)

When we open the UL Data Migration tool, recover error pop up appearing all time

107006 (Data Migration Tool)

After Copying value of Permission 30 is same as in Permission 27

109987 (sepValveAnaM, SepBreaker M)

AutoOpn and AutoCls are not Orders on this Object, must be deleted from the figure.ProcSP, ProcCls and ProcOpn are not shown on the figure, must be added to the figure and description.

74234 (SepSeqExecM)

When sepSeqExecM is configured along with Sequence2D as a Diagram in Function Designer, the error “Configuration Data Generation Stopped! Unable to proceed!” may occur during Code Generation. This issue was referred to BU-CT and now it is fixed.

Version 6.0.0

The following bugs are solved. All bugs are stored in TFS. The Bug ID"s mentioned in the table correspond with TFS database, Product (Level 2): Utility Library 800xA.

Table 2-1. Corrected errors in Version 6.0.0

Bug ID		Component	Title
44825	N.A	sepDeviceTM	Operator Note is not opening when we click on Operator Note Symbol; this behavior is same in all views of faceplates.
44826	N.A	secSelectorM secSelector6M	Sometimes in reduced view requested objects is not updating properly in case of object in Auto Mode.
59606	ABB20140128-0032	sesDigInM sesDigInstrM	Incorrect behavior of Signal Alarm
59609	ABB20140127-0901	sepMotValveM	Suppression of Valve "Stop" message in the event list
61089	N.A	sbfOnOffTCtrl	VB Faceplate Element needs to be migrated to PG2
49965	N.A	All PG2 IO tabs and Permissive tabs	Security Permissions for IO tab and Permissive tab not working
64754	N.A	sesAnaOutM	In Parameter Tab, If we enter more than 5 digits of numerical value in Error alarm filter parameter ,the values are exceeding box
62224	N.A	All PG2 Trim tabs	When Curve Start Relative time is Higher, Performance issue arises
62336	N.A	sesPowerMeterM	PG2 Alarm Tab does not opens
62886	N.A	sepMotValveAnaM	In IO tab, When u click on "on feedback" force Symbol to enable force button, Force button is hidden
62222	N.A	All PG2 Trim tabs	Timestamp invisible when Curve Start Relative time is kept at higher value

44825 (sepDeviceTM - Operator Note is not opening when we click on Operator Note Symbol, this behavior is same in all views of faceplates)

Operator Note is not opening when we click on Operator Note Symbol, this behavior is same in all views of faceplates

44826 (secSelectorM/secSelector6M - Sometimes in reduced view requested objects is not updating properly in case of object in Auto Mode)

Sometimes in reduced view requested objects is not updating properly in case of object in Auto Mode

59606 (sesDigInM/sesDigInstrM - Incorrect behavior of Signal Alarm)

When sesDigInM is configured with AckRstRule = 0 and SigAlConf = 1 and downloaded to the controller and following steps are executed

1) SO.EnDetSigAl is set to false
2) IO.iIn.Value is set to true
3) SO.EnDetSignal is set to true
the sesDigInM is in alarm
Status.AlSignal.Condstate is 5 and Status.AlSignal.Signal is true
4) SO.EnDetSigAl is set to false
Status.AlSignal.Constate is 3 and Status.AlSignal.Signal is true
5) IO.iIn.Value is set to false
6) Acknowledge this alarm on the face plate

Status.AlSignal.Constate is 2 and Status.AlSignal.Signal is true
7) Reset this alarm on the face plate
Nothing happens.
When SO.EnDetSigAl is changed to true the AlSignal.CondState goes to 5. But there is no reason because the input signal iIn.Value is false.

Expected behavior is as follows:
After setting SO.EnDatSigAl to false (step 4) the Status.AlSignalConstate remains 5 and Status.AlSignal.Signal remains true.
After acknowledgement and reset & input signal is false again the Status.AlSignalConstate becomes 2 and Status.AlSignal.Signal becomes false.

59609 (sepMotValveM - Suppression of Valve "Stop" message in the event list)

Motval is configured with the ValveType parameter set to 1
Customer uses SO.BaseSO.AutoOpn, SO.BaseSO.AutoCls and SO.BaseSO.AutoStop to give the valve the right position for the process.
The result is the event list is filled with message Valve "Stop".
Valve "Stop" event message filled in the event list needs to be suppressed.

61089 (sbfOnOffTCtrl: VB Faceplate Element needs to be migrated to PG2)

Function block sbfOnOffTCtrl belonging sbFunctionLib 2.3-3 contains a VB Faceplate Element that needs to be migrated to PG2.

49965 (All PG2 IO tabs and Permissive tabs - Security Permissions for IO tab and Permissive tab not working)

It is possible that an operator with Operator rights or a viewer with Read rights can manipulate the IO of an object.
Logged on as operator it's not possible to see the permissive, because the read permissions of the general property variable is Tune. This has to be changed; otherwise the operator cannot see the permissive text.

64754 (sesAnaOutM: In Parameter Tab, If we enter more than 5 digits of numerical value in Error alarm filter parameter, the values are exceeding box)

In Parameter Tab, if we enter more than 5 digits of numerical value in Error alarm filter parameter, the values are exceeding the box

62224 (All PG2 Trim tabs: When Curve Start Relative time is Higher, Performance issue arises)

Performance issue when Curve start relative time is more than 2days

62336 (sesPowerMeterM: Alarm Tab does not opens)

PG2 Alarm Tab is not Opening

62886 (sepMotValveAnaM: In IO tab, when u click on "on feedback" force Symbol to enable force button, Force button is hidden)

In IO tab, when u click on "on feedback" force Symbol to enable force button, Force button is hidden.

62222 (All PG2 Trim tabs: Timestamp invisible when Curve Start Relative time is kept at higher value)

When Value of Curve Start Relative time is increased, timestamp in trend is almost invisible.

Version 5.1.4

The following bugs are solved. All bugs are stored in TFS. The Bug ID"s mentioned in the table correspond with TFS database, Product (Level 2): Utility Library 800xA.

Table 2-2. Corrected errors in Version 5.1.4

Bug ID	Component	Title
23231	secStationM	Utility Library - SPBias button cannot input value
23300	sesAnaIn6M, sesAnaInM	Utility Library - Limits not visible for events
23308	Process objects	Utility Library – The running arrow size differs from one object to another object in case of Process objects
23830	sesAnaInstrM	Utility Library - sesAnaInstrM : Cab Feed Alarm filter time not working
25393	secFgCtrlM	Utility Library - secFgCtrlM : Force indicator appears in the faceplate status tab instead of All Alarms disabled icon
25398	secSelectorM	Utility Library - secSelectorM : Delay time DY Alarm not working
25399	secSelector6M	Utility Library - secSelector6M : Delay time DY Alarm not working
25402	sbfSelector	Utility Library - sbfSelector : Delay time DY Alarm in Times tab working for first time and for later instances it.s not working
43918	secSelectorM & secSelector6M	secSelectorM - In reduced view Requested no. of objects is not updating properly in SecSelectorM & SecSelector6M
43919	secSelectorM	secSelectorM - In reduced view Active Objects is not updating properly compared to Normal & Extended View
23931	sesDigInstrM	Utility Library - sesDigInstrM : Cab Feed Alarm filter time not working
28606	sbfBoolBasicAlM	Utility Library - sbfBoolBasicAlM : For Internal alarms that use sbfBoolBasicAlM, faceplate alarm tab shows empty rows when its alarm definition is set false
23233	secStationM	Utility Library - secStationM - Not possible to block external SP selection
23304	sepMot1DirM	Utility Library –sepMot1DirM- Feed signals are not included in Available status of motors

23231 (Utility Library - SPBias button cannot input value)

When we used secStationM as Set point bias station(SPBias, station type=1), the SPB input button cannot input value.

23300 (Utility Library - Limits not visible for events)

The Limit in the bar graph has disappeared as well as all settings when limits were configured to create an event instead of an alarm in sesAnaIn6M and sesAnaInM.

23308 (Utility Library – The running arrow size differs from one object to another object in case of Process objects

The running arrow size differs from one object to another object in case of Process objects for example SepMot1DirM is small whereas SepMotValve of running arrows in process objects. Harmonize size of running arrows for all the process objects)

23830 (Utility Library - sesAnaInstrM : Cab Feed Alarm filter time not working)

Cab Feed Alarm filter time is not working even though it is set to value in Parameter tab of extended faceplate.

Cab feed alarm must be generated without any filter time delay hence the filter setting for this particular alarm is now removed from parameter tab.

25393 (Utility Library - secFgCtrlM : Force indicator appears in the faceplate status tab instead of All Alarms disabled icon)

In Faceplate when All Alarms Enabled button is toggled in settings tab to disable the alarms, the Force indicator appears in the faceplate status tab instead of All Alarms disabled icon.

25398 (Utility Library - secSelectorM : Delay time DY Alarm not working)

Delay time DY Alarm filter time is not working even though it is set to value in Times tab of extended faceplate.

25399 (Utility Library - secSelector6M : Delay time DY Alarm not working)

Delay time value for DY Alarm filter time is not working even though it is set to value in Times tab of extended faceplate.

25402 (Utility Library - sbfSelector : Delay time DY Alarm in Times tab working for first time and for later instances it.s not working)

Delay time value for DY Alarm filter time in Times tab of faceplate only works for first time and after that for later instances of DY Alarm it is not working.

43918 (secSelectorM - In reduced view Requested no. of objects is not updating properly in SecSelectorM & SecSelector6M)

When we enter requested number of objects in Normal or extended view then these No. of requested objects is not updating properly in respective reduced view of faceplates of SecSelector M and SecSelector6M objects.

43919 (secSelectorM - In reduced view Active Objects is not updating properly compared to Normal & Extended View)

When an object is active but not available then Active object presentation is not correct in reduced view of faceplate.

23931 (Utility Library - sesDigInstrM : Cab Feed Alarm filter time not working)

Cab Feed Alarm filter time is not working even though it is set to value in Parameter tab of extended faceplate.

Cab feed alarm must be generated without any filter time delay hence the filter setting for this particular alarm is now removed from parameter tab.

28606 (Utility Library - sbfBoolBasicAlM: For Internal alarms that use sbfBoolBasicAlM, faceplate alarm tab shows empty rows when its alarm definition is set false.)

Some objects use sbfBoolBasicAlM for generating internal alarms. When the alarm definition of the internal alarm that use sbfBoolBasicAlM is set false, it results in faceplate alarm tab showing empty rows for corresponding internal alarm. The internal alarm appears in the alarm tab of sbgsignaltable but does not appear in the alarm tab of the faceplate.

23233 (Utility Library - secStationM - Not possible to block external SP selection)

It's not possible to remove/dim the Faceplate button for selecting external SP. When there is no external SP is used; we then get a 0.0 as reference value.

23304 (Utility Library –sepMot1DirM- Feed signals are not included in Available status of motors)

The motor objects in Utility Library have a Available status which tells the application if the object is available for automatic control, e.g. Auto mode, no blocking alarms, no safety mode active and permission to switch on or off. This status is primarily used by selector object to check how many objects are available for control. Recently it was noticed that the Feed status, MainFeed, LineFeed and the object feeds Motor and MCC are not included in the Available status, the Motor and MCC could be included via their alarm by making them blocking but the general main and Line feed are not, so if the MainFeed is reset the objects becomes powerless and cannot be controlled but its Available status is still set, so this can lead to errors in the selector. The power status of the motor must also be included in Available so the selector modules can make the right decisions.

Version 5.1.3

No fixes were made in version 5.1.3. The fixes made in version 5.1.2 Rollup 1 are included in version 5.1.3.

Version 5.1.2 Rollup 1

The following bugs are solved. All bugs are stored in TFS. The Bug IDs mentioned in the table correspond with TFS database, Product (Level 2): Utility Library 800xA.

Table 2-3. Corrected errors in Version 5.1.2 Rollup 1

Bug ID	Component	Title
11828	sepValveOpCIM,	ABB Utility Library sepValveOpCIM Opening/Closing status
23389	sepMotValAnaM	Utility Library - sepMotValAnaM : Faceplate does not update the changes in POC and setpoint in Monitor mode
23390	sepMotValAnaM	Utility Library - sepMotValAnaM : Indication of false process permissive stop not displayed in faceplate
23391	sepMotValAnaM	Utility Library - sepMotValAnaM : Faceplate does not update Panel Setpoint when POC is All and Safety permissive in not present
25400	sesPowerMeterM	Utility Library - sesPowerMeterM : Apparent Power and Active Power values not updating in reduced and normal Faceplate view.
27935	sesPowerMeterM	Utility Library - sesPowerMeterM : Bad Status of iApparentPower IO triggers the error indicator for

Table 2-3. Corrected errors in Version 5.1.2 Rollup 1

Bug ID	Component	Title
		Apparent Power as well as error indicator for Active Power in extended faceplate
23325	sepMot2DirM	Utility Library - sepMot2DirM : Running arrow missing in graphic element
23309	sesDigInBasicM	Utility Library - Tune write permission is missing on OPDisAlarms in sesDigInBasicM
23306	sepValveAnaM	Utility Library - sepValveAnaM:Pressing of the Open button is going to close the valve instead of open
23307	sepMotVarM	Utlity Library - Running arrow missing in graphic element
23305	Alarm and event list	Filter settings missing on Alarm list configuration.

11828 (ABB Utility Library sepValveOpClM Opening/Closing status)

The sepValveOpClM typical of the Utility Library has a Opening and Closing status that are set when a command is activated but it's corresponding feedback has not been set yet. However there is a bug in this typical, when the Opening/Closing is active and the valve is switched to Local monitor (IO.iCtlMode is reset) the status is not reset together with the commands so a green color and a running arrow remains active. This problem also occurred in the motor objects but here it was corrected. A similar correction should be done for the Valve and the Breaker object which is also affected.

23389 (Utility Library - sepMotValAnaM : Faceplate does not update the changes in POC and setpoint in Monitor mode)

When in Monitor mode, by selecting Panel / central Mode event is getting generated but faceplate does not get updated and when monitor mode get deselected then it gets updated to respective POC and its setpoint.

- **23390** (Utility Library - sepMotValAnaM : Indication of false process permissive stop not displayed in faceplate)

When Process Permissive Stop is not present, indication of missing process permissive not appearing in faceplate.

- **23391** (Utility Library - sepMotValAnaM : Faceplate does not update Panel Setpoint when POC is All and Safety permissive in not present)

When SafetyOpen permissive is not present and POC is 0(All), If Manual SP is given a value higher than Panel SP then the Panel SP which is lower is considered but not displayed instead of that Manual SP is displayed on faceplate and in case of safety close permissive not present and POC is 0 (All) ,If Manual SP is given a value lower than Panel SP then the Panel SP which is higher is considered but not displayed instead of that Manual SP is displayed on faceplate.

- **25400** (Utility Library - sesPowerMeterM : Apparent Power and Active Power values not updating in reduced and normal Faceplate view.)

Apparent Power and Active Power values not updating in reduced and normal Faceplate view.

- **27935** (Utility Library - sesPowerMeterM : Bad Status of iApparentPower IO triggers the error indicator for Apparent Power as well as error indicator for Active Power in extended faceplate)

In sesPowerMeterM extended faceplate view, Bad Status of iApparentPower IO triggers the error indicator for Apparent Power as well as error indicator for Active Power. Bad Status of iActivePower IO does not show the error indicator for Active Power in extended faceplate view. The error indicators are working fine in reduced and normal faceplate view.

- **23325** (Utility Library - sepMot2DirM: Running arrow missing in graphic element)

The sepMot2DirM is missing a running arrow in the graphic element for starting and stopping, the Mot1Dir is equipped with an arrow (although a small one) so please harmonize.

- **23309** (Utility Library - Tune write permission is missing on OPDisAlarms in sesDigInBasicM)

In the sbsDigInBasicIPar datatype of the sesDigInBasicM the Write property is missing on the OPDisAlarms in the InteractionPar parameter. This means that the Disable alarms button in the settingstab of the sesDigInBasic can be activated by the operator. This could lead to accidentally disabling important alarms. Therefore Tune permission needs to be added to this datatype element.

- **23306** (Utility Library - sepValveAnaM: Pressing of the Open button is going to close the valve instead of open)

Malfunction in controlling of sepValveAnaM Control Module Type. When Safestate = 2, after pressing of the Open button (right arrow) the SP is changed to 100% for a short time and then to 0% again. The valve is going to close instead of open.

- **23307** (Utility Library - Running arrow missing in graphic element)

The sepMotVarM is missing a running arrow in the graphic element for starting and stopping, the Mot1Dir is equipped with an arrow (although a small one) so please harmonize.

- **23305** (Filter settings missing on Alarm list configuration.)

A previously solved error has been reintroduced into the 5.1.2 version of Utility Library, in the Alarm list configurations in UT Default Configurations; no Categories settings are present in the Filter tab. In the 5.0.4 version for SV 5.0 the settings are present, e.g. uncategorized events and Process alarms for the Object alarm list. It is observed that the aspect in the 5.1.2 version is of the date 30-7-2009 while the 5.0.4 version has the date 22-3-2010. This error was previously reported in APPL14.DE.ABB.COM_000076 and was solved, as is the case in the 5.0.4 version.

Version 5.1.2

The following CR's are solved. All Change Requests (CR's) are stored in a CRM tool. The case numbers mentioned in the table correspond with CRM database, Product: Utility Library.

Table 2-4. Corrected errors in Version 5.1.2

Request No	Component	Title
APPL01.DE.ABB.COM_001037	Other	Direction and FD Port column in Control Modules are default.
APPL01.DE.ABB.COM_001081	Other	Connection between diagrams not working, because direction for in, out and in-out parameter is not specified.
APPL14.DE.ABB.COM_000104	Other	MaxAlPriority status component in sbfSumAlStat not written.
APPL14.DE.ABB.COM_000110	sepMotValveAnaM	Unit graphic (PG2) does not support alternative background color.
APPL14.DE.ABB.COM_000112	sesDigInM	Blink frame in PG2 always visible when InactUnackAlBlk property is set.
APPL14.DE.ABB.COM_000113	sbAlarmEventLib	Alarms generated after Disable/Enable alarm when alarm condition is OK
APPL01.DE.ABB.COM_001097	All Faceplates	German text does not always fit into Faceplate tab.
APPL01.DE.ABB.COM_001101	Other	sesAnaInBasicM: No AlarmColor of Out bar graph in normal faceplate.
APPL01.DE.ABB.COM_001107	sepMotVarM	SO.SafSP and SO.ProcSP not overtaken into ManSP in manual mode.

- **APPL01.DE.ABB.COM_001037** (Direction and FD Port column in Control Modules are default)

The new Direction and FD Port columns had not been adapted for SV 5.1, so all parameter were Function Designer ports and since the direction is Unspecified they will show up on the left side. This could be a problem in FD diagrams. Also new engineering guide lines state that new modules must not use the Unspecified direction, however since this was not done yet in Utility Library application programmers were forced to use the Unspecified direction in their new projects.

- **APPL01.DE.ABB.COM_001081** (Connection between diagrams is not working because direction for in, out, in_out is not specified)

This CR describes the same problem as CR APPL01.DE.ABB.COM_001037.

- **APPL14.DE.ABB.COM_000104** (MaxAlPriority status component in sbfSumAlStat not written)

The function sbfsumAlStat collects the total alarm status of a number of objects and converts it into a single summation status for further processing or presentation. Of the components in the Out parameter of the sbfTotalAlSPar type, the MaxAlPriority status is not written, it remains at 1000. This status is used to determine the highest active alarm priority.Code should be added to the sbfsumAlStat function to correctly determine the status.

- **APPL14.DE.ABB.COM_000110** (Unit graphic (PG2) does not support alternative background color)

The Unit and the NumericX of the sepMotValveAnaM support an alternative color for the number / text and their background. (UseAltNumColors, AltNumFG and AltNumBG). The Unit element is not working properly since it does not show the background color. This error only concerns the PG2 element, the VB element behaves correctly.

- **APPL14.DE.ABB.COM_000112** (Blink frame in PG2 always visible when InactUnackAlBlk property is set)

When the InactUnackAlBlk property is set on the DigIn to activate a blinking frame on the graphic element to show the alarrm inactive, unacknowledged state, then the frame is always visible whether an unacknowledged alarm exits or not. The problem is caused by a logic error in the visible property of the shape element. The problem exists only in the PG2 graphic element, the VB graphic element is ok.

- **APPL14.DE.ABB.COM_000113** (Alarms generated after Disable/Enable alarm when alarm condition is OK)

The problem was detected with a sesAnaInstr object with alarm reset function enabled. To do some maintenance the L and LL alarms were disabled from the faceplate, the level then dropped to 0, the L and LL alarm conditions were activated but no alarm was given which was OK. Then the level was brought back to safe levels and the L and LL alarm conditions become normal again but when the alarms were enabled again in the faceplate the alarms were generated anyway, which was not OK.

A change was necessary in the Alarm modules of Utility Library, if the alarm is disabled the alarm Signal should not be set. Because when the reset mechanism is active this signal will be latched. In the alarm code for setting the Signal the statement for checking whether the Signal should be set is extended with the Disabled state, e.g. CondState = 1. This prevents the Signal becoming active while the alarm is in Disabled state.

Since this is a general mechanism in the sbAlarmEventLib other objects were also affected, e.g. the sesDigIn.

- **APPL01.DE.ABB.COM_001097** (German text does not always fit into Faceplate tab)

With German operator settings some German texts do not always fit into the faceplate tabs.

Note: the German texts are unsupported feature of the Utility Library installation.

- **APPL01.DE.ABB.COM_001101** (sesAnaInBasicM: No AlarmColor of Out bar graph in normal faceplate)

If the sesAnaInBasicM is in alarm state (e.g. configured with an external alarm sbfExtHighAlM), then the OUT bar graph in normal faceplate is not shown in alarm priority color like is it done in extended faceplate. Additionally the color of the OUT bar graph in normal state is not the same as the color of the IN bar graph in the extended faceplate.

APPL01.DE.ABB.COM_001107 (SO.SafSP and SO.ProcSP not overtaken into ManSP in manual mode)

SepMotVarM: While SO.SafOn or SO.ProcOn is set (=true), the speed output is set to SO.SafSP or SO.ProcSP. If SO.SafOn or SO.ProcOn is reset (=false) and object is in manual mode, then the speed output is set to the last ManSP, i.e. the ManSP does not overtake SafSP or ProcSP.

Version 5.1.1

The following CR's are solved. All Change Requests (CR's) are stored in a CRM tool. The case numbers mentioned in the table correspond with CRM database, Product: Utility Library.

Table 2-5. Corrected errors in Version 5.1.1

Request No	Component	Title
APPL01.DE.ABB.COM_001048	Faceplates	The faceplates of some object types, e.g. sepMot2DirM, show gray areas instead the faceplate elements.
APPL01.DE.ABB.COM_001049	seSignalObjLibGraphicPG2Ext	The PG2 bar graphic elements of sesManAnaInM are not shown correctly.
APPL01.DE.ABB.COM_001050	seSignalObjLibGraphicVBExt seSignalObjLibGraphicPG2Ext	The VB graphic elements of type "* Scalable Numeric Display" are not resized correctly.
APPL14.DE.ABB.COM_000107	seSignalObjLibGraphicVBExt	Numeric X graphic element has resize issues.
APPL14.DE.ABB.COM_000108	Auto Populating Controls (IO)	Wrong module selected on empty suffix field IO tab in sbgSignalTable2.
APPL03.US.ABB.COM_000004	Auto Populating Controls (Alarm)	Workplace closes caused by sbg Table.

- **APPL01.DE.ABB.COM_001048** (The FPs of some object types, e.g. sepMot2DirM, show gray areas)

By setting the “New Reference Handling” flag in all faceplates in the 5.1.0 version (as recommended in SV 5.1), some references to faceplate elements got lost. In the 5.1.1 version these references were re-assigned.

- **APPL01.DE.ABB.COM_001049** (The PG2 bar graphic elements of sesManAnaInM are not shown correctly)

The PG2 graphic elements "sesManAnaInM HBar Graph Display" and "sesManAnaInM VBar Graph Display" are not shown correctly, e.g. the bar frame is not shown. The related PG2 graphic elements are corrected in the 5.1.1 version.

- **APPL01.DE.ABB.COM_001050** (The VB graphic elements "* Scalable Numeric Display" are not resized correctly)

The VB graphic elements of type "* Scalable Numeric Display" are not resized correctly: the indicator is stretched or truncated and the space of the unit string is not released, if no unit is configured ("UStyle = No Unit"). The 2nd problem occurs for the PG2 graphic elements too. The related VB and PG2 graphic elements are corrected in the 5.1.1 version.

- **APPL14.DE.ABB.COM_000107** (Numeric X graphic element has resize issues)

The VB graphic elements of type "* Numeric Display X" in the library seSignalObjLibGraphicVBExt are not shown correctly, when they are new deployed. This will for example be done, when the related objects are uploaded during a MSI upload (Multi System Integration). As result, the "* Numeric Display X" are wrongly shown e.g. as white boxes. The related VB graphic elements are corrected in the 5.1.1 version.

- **APPL14.DE.ABB.COM_000108** (Wrong module selected on empty suffix field IO tab in sbgSignalTable2)

If the suffix field for external output signals is empty or not available in the sbgSignalTable2 ("IO" tab, field "Ext.Out. Suffix"), then the wrong signal type is chosen as default by the sbgTabIO2 faceplate element. The signal is handled as "output" instead as "input" in this case. The sbgIOControl.ocx and the related faceplate element sbgTabIO2 are corrected in the 5.1.1 version.

- **APPL03.US.ABB.COM_000004** (Workplace closes caused by sbg Table)

The sbg table sbgAlarmControl2.ocx is throwing exceptions when accessed. This can cause the workplace to close if the diagnostics are turned on. The workplace closing is perceived by a customer as a workplace crash. The problem was caused by three variables NumberPrioUsedProp, UrgOfObject, and UrgUseObject. If the variables are activated with a null value (= not configured in the signal table), an exception will occur. The sbgAlarmControl2.ocx and the related faceplate element sbgTabAlarms2 are corrected in the 5.1.1 version.

Version 5.1.0

No fixes were made in version 5.1.0.

Version 5.0.4

CRM reported issues

The following CR's are solved. All Change Requests (CR's) are stored in a CRM tool. The case numbers mentioned in the table correspond with CRM database, Product: Utility Library.

Table 2-6. Corrected errors in Version 5.0.4 SV 5.0SP2D

Request No	Component	Title
APPL01.CH.ABB.COM_000074	secStationM	After warm restart Interaction parameters OPSp, OpSpRi reset to ini value
APPL01.CH.ABB.COM_000076	Events	Disable events is not propagated to external event modules
APPL01.CH.ABB.COM_000078	sesDigInM	Alarm and event disabling not consistent with other modules
APPL01.CH.ABB.COM_000085	sepValveAna	Interlock ProcCls doesn't work
APPL01.CH.ABB.COM_000091	secStationM	CoOut is set to 0 after warm application download
APPL01.CN.ABB.COM_000077	secStationM	Station switch to manual from auto mode automatically
APPL01.CN.ABB.COM_000080	sepMot1DirM	There is something wrong with starting and stopping status
APPL01.DE.ABB.COM_000685	secStationM	secStation changes mode to ModeInit and CasModeInit after warmstart
APPL01.DE.ABB.COM_000717	Redirection aspect	Redirection aspect can't find parent object in functional structure[1]
APPL01.DE.ABB.COM_000723	sepValveAnaM	Wrong color for forced symbol in Vbar display element
APPL01.DE.ABB.COM_000724	sepValveAnaM	Wrong color for forced symbol in numericX display element
APPL01.DE.ABB.COM_000725	sepMotValveAnaM	Wrong color for forced symbol in numericX display element
APPL01.DE.ABB.COM_000739	sepBreakerM	Indicator 'Forced' not visible on iMCC, iBreakerFeed, iProtTrip, iPanXXX
APPL01.DE.ABB.COM_000740	sec3XmitSelM	Value not visible in display element if alarm ack. without reset
APPL01.DE.ABB.COM_000766	sepMotValveM	Parameter TorqueConf doesn't work
APPL01.DE.ABB.COM_000818	sesAnaIn6M	Problem with display element while displaying priority 3 alarms
APPL01.DE.ABB.COM_000878	sepMotVarM	Button FC reset in faceplate is connected with AckRstRule
APPL01.DE.ABB.COM_000881	sbfSelector	Selector creates two different sbgTabAlarm2 aspects in the object
APPL01.DE.ABB.COM_000890	seSignalObjLib	Resize of text in sesDigIn for showing more than 3 letters not possible
APPL01.DE.ABB.COM_000891	seSignalObjLib	sesAnaIn6M scalable numeric display does not show more than 4 letters
APPL01.DE.ABB.COM_000947	sepValveAnaM	sepValveAnaM does not support slope < 1
APPL01.DE.ABB.COM_000955	sesDigInM	Wrong alarm in DigInM when inverted input with external timestamp
APPL01.DE.ABB.COM_000970	sepValveOpCl	Safety command has less priority than CmdCutOffT
APPL01.DE.ABB.COM_000971	sepBreakerM	Safety command has less priority than CmdCutOffT
APPL01.DE.ABB.COM_000972	sepMot1DirM	Safety command has less priority than CmdCutOffT
APPL01.DE.ABB.COM_000974	sepValveOpClM	sepValveOpCl does not set OpnCmd or ClsCmd
APPL01.DE.ABB.COM_000975	sbfGasFlowCC	Problem with last value and equivalent value
APPL14.DE.ABB.COM_000067	seProcessObjLib	Erroneous status for Opening/Closing in monitor mode after coldstart
APPL14.DE.ABB.COM_000068	ModeSel	Wrong behavior mode selection with short pulses on SetManMode
APPL14.DE.ABB.COM_000071	sec2XmitSelM	Wrong priority text color for priority 3
APPL14.DE.ABB.COM_000072	sec3XMitSelM	Wrong priority text color for priority 3
APPL14.DE.ABB.COM_000073	Documentation	Wrong parameter description on runtime status for motor objects
APPL14.DE.ABB.COM_000074	sbfAlarmCtrlBM	Reset of Linefeed causes increase of Ack/Rst counters
APPL14.DE.ABB.COM_000075	seControlLib	Some modules produce 2 sbgTabAlarm aspects in control structure
APPL14.DE.ABB.COM_000076	AlarmLists	Alarm filter settings missing on AlarmLists
APPL14.DE.ABB.COM_000077	Auto pop. control	Refresh problem AlarmTab with Object Priority
APPL14.DE.ABB.COM_000080	sbAlarmEventLib	SourceName on External IO Alarms connected to wrong parameter
APPL14.DE.ABB.COM_000081	ModeSel	One shot command on SetManMode has no effect
APPL14.DE.ABB.COM_000082	sesDigInM	Incorrect DelayOn and Off behavior
APPL14.DE.ABB.COM_000083	seSignalObjLib	No additional Forced status information on signal objects
APPL14.DE.ABB.COM_000084	sesAnaInBasicM	Scalablenumeric VB graphic has no unit
APPL14.DE.ABB.COM_000085	sesAnaInstrM	Status icon not properly aligned in PG2 graphic elements
APPL14.DE.ABB.COM_000086	sepMot1DirM	Wrong severity parameter connected to congruency alarm
APPL14.DE.ABB.COM_000087	sbAlarmEventLib	Alarms cannot be disabled from alarmlist
APPL14.DE.ABB.COM_000088	sepSamplerM	Graphic element generates VB overflow error
APPL14.DE.ABB.COM_000089	sesAnaInstrM	Limit tab does not show priority 3 correctly
APPL14.DE.ABB.COM_000090	sesAnaInstrM	Limits on Out bar in normal faceplate have wrong color
APPL14.DE.ABB.COM_000091	sesAnaInM	Numeric value not clearly shown on Prio3 alarms
APPL14.DE.ABB.COM_000092	sesAnaIn6M	Numeric value not clearly shown on Prio3 alarms
APPL14.DE.ABB.COM_000094	sepMotVarM	Incorrect Numeric X test graphic element in motvar

[1] Since the version 5.0.3 the Redirection aspect is part of the Utility Setup version 5.0.4.
This CR is solved in the update_100428 for Utility Setup 5.0.4.

Table 2-6. Corrected errors in Version 5.0.4 SV 5.0SP2D

Request No	Component	Title
APPL14.DE.ABB.COM_000095	sepMotValveM	Acof alarm not generated 2nd time if timer has not run out
APPL14.DE.ABB.COM_000098	sepValveOpClM	Safety and Process commands not properly processed with block alarms
APPL14.DE.ABB.COM_000099	sepBreakerM	Safety and Process commands not properly processed with block alarms
APPL14.DE.ABB.COM_000100	All control modules	Information lost on restart after power failure
APPL14.DE.ABB.COM_000101	All Faceplates	Problems with standard indicators after override
APPL14.DE.ABB.COM_000102	sepSamplerM	Time deviation with time proportional modes using long cycle times

- **APPL01.CH.ABB.COM_000074** (After warm restart Interaction parameters OpSp, OpSpRi are reset to init values)

This problem was caused by a bug in the code for the coldstart copy of initial values, due to this bug this code was executed after each warmstart and resulted in the initial value parameters to be copied into the module. This code has been repaired in a way it now only copied the values in case of a coldstart download.

- **APPL01.CH.ABB.COM_000076** (Disable events is not propagated to external event modules)

The OPDisEvents command from the Interactionpar was not copied to the DisEvents element in the AlarmCtrl parameter so externally added event modules were not disabled along with the internal events. The sbfAlarmCtrl(B)M alarm control distribution modules were adapted to also include the OpDisEvents command.

- **APPL01.CH.ABB.COM_000079** (Alarm and event disabling not consistent with other modules)

The sesDigInM has been harmonized with other Utility Library modules with regards to the disabling of alarms and events. Although the module contained OPDisAlarms and OPDisEvents commands they were located in the BaseIPar component and not in the InteractionPar root. Also the faceplate contained two disable alarm buttons in stead of one. The commands were moved to the InteractionPar root and the faceplate was changed to support the standard single disable alarm button.

- **APPL01.CH.ABB.COM_000085** (Interlock ProcCls doesn't work)

The SO command ProcCls in the sepValveAnaM had no effect, the valve has been adapted to correct this.

Upgrade consequence:

Check application for use of ProcCls, workaround code may exist that can now be replaced with the ProcCls, also if code is present on ProcCls it will take effect after the upgrade, be sure to check its functionality.

- **APPL01.CH.ABB.COM_000091** (CoOut is set to 0 after warm application download)

This problem is related to other CR's (APPL01.CH.ABB.COM_000074, APPL01.CN.ABB.COM_000077 & APPL01.DE.ABB.COM_00685) and is caused by a bug in the code for the coldstart copy of initial values. The same comment applies as with APPL01.CH.ABB.COM_000074.

- **APPL01.CN.ABB.COM_000077** (Station switch to manual from auto mode automatically)

This CR is related to other CR's (APPL01.CH.ABB.COM_000074, APPL01.CH.ABB.COM_000091 & APPL01.DE.ABB.COM_00685) all relating to unwanted effects in the secStation after a warmstart. The problems were related to faulty Initialize code in the modules start code. The initialize code has been repaired accordingly.

- **APPL01.CN.ABB.COM_000080** (There is something wrong with starting and stopping status)

When a motor is started (OnCmd) and the feedback has not been set the status element starting is set, likewise for Stopping. However, if the motor was running and the feedback failed the Starting or Stopping status of the motor became active again. This is in essence incorrect, since the starting or stopping phase has passed and it now is in failure. A code update is added so the Starting or Stopping status is only set when a rising edge is detected on the command and is reset when the feedback has been received.

- **APPL01.DE.ABB.COM_000685** (secStation changes mode to ModeInit and CasModeInit after warmstart)

CR related to APPL01.CH.ABB.COM_000074, APPL01.CH.ABB.COM_000091 and APPL01.CN.ABB.COM_000077, deals with same warmstart code bug, same comment applies.

- **APPL01.DE.ABB.COM_000717** (Redirection aspect can't find parent object in functional structure)

The implicit mode of the Redirection aspect looked for the parent object in the Control structure and not in the Functional structure. The problem is that in the Control structure the parent object and child (e.g. external alarm module) are parallel in the structure while in the functional structure there is a clear parent and child structure. Therefore changing over from explicit to implicit mode caused problems with the path to the parent object.

- **APPL01.DE.ABB.COM_000723** (Wrong color for symbol forced in Vbar display element)

When the forced status was activated the icon in the sepValveAna Vbar graphic showed a black and white color instead of a back and yellow color.

- **APPL01.DE.ABB.COM_000724** (Wrong color for symbol forced in NumericX display element)

When the forced status was activated the icon in the sepValveAna numericX graphic showed a black and white color instead of a back and yellow color.

- **APPL01.DE.ABB.COM_000725** (Wrong color for symbol forced in NumericX display element)

When the forced status was activated the icon in the sepMotValveAna numericX graphic showed a black and white color instead of a back and yellow color.

- **APPL01.DE.ABB.COM_000739** (Indicator forced not visible on iMCC-, iBreakerFeed, iProtTrip, iPanXXX)

Some forced status components were missing in the ForcedMode status of the sepBreaker, the code was adapted so all IO signals are now included.

- **APPL01.DE.ABB.COM_000740** (Value not visible in display element if alarm ack. without reset)

If an alarm was acknowledged with AckRstRule=0 the number had the same color as the background. This has been changed so now contrasting colors are used for number and background.

- **APPL01.DE.ABB.COM_000766** (Parameter TorqueConf doesn't work)

The configuration setting for torque opener, i.e. one torque signal for both directions, did not function as intended. In this configuration the TqOpn input is used for both open and close. When the TqOpn was set the command, e.g. OpnCmd was terminated correctly however if the counter command was given e.g. close the output was not activated but also remained reset. However in the opener case the counter command is intended to be used to release the torque signal so now the torque had to be released by other means to allow the valve to be operated again.

The valve code has been adapted in such a fashion that a delay time is activated (default 2 sec.) when the counter command is given so the torque signal is temporarily suppressed. This allows the activation of the counter command so the torque is released. If, after this delay, the torque still persists the command will again be terminated.

- **APPL01.DE.ABB.COM_000818** (Problem with display element while displaying priority 3 alarms)

In priority 3 a yellow background and a yellow hue for the number was selected, making the number nearly unreadable. The numeric element has been harmonized for the use of priority 3 colors. This means a yellow plaPrio3Symbol and plaUnackPrio3 color will be used for the background and the plaPrio3NumericalBG color will be used for the number resulting in a dark colored number on a yellow background.

- **APPL01.DE.ABB.COM_000878** (Button FC reset in faceplate in connected with AckRstRule)

The FC reset button was only available if the parameter AckRstRule was set correctly, however it serves a special function for the FC Error only so it should not be dependant on the AckRstRule setting but on the presence of the FC error only. The faceplate expressions have been adapted likewise.

- **APPL01.DE.ABB.COM_000881** (Selector creates two different sbgTabAlarms2 aspects in the object)

The sbfSelector created two alarm tab aspects when it was instantiated. This was caused by a error in the aspect details of the sbgTabAlarms2 aspect added to the sbfSelector, it was set to Inheritance Enabled and a override was present on the aspect. This is all deleted since the sbgTabAlarms2 aspect is a child aspect of the sbgSignalTable2 and is automatically added when this aspect is used.

- **APPL01.DE.ABB.COM_000890** (Resize of text in sesDigInM for more than 3 letters not possible)

The PG2 graphic element textbox in the sesDigIn and other digital signal objects did not allow for more than 3 characters to be shown, even if the graphic width was increased. In this case the text was stretched. A solution in the current element X was not possible so a new graphic element, Text Display Element, was added to the digital signal objects that supported the textbox option. If a graphic textbox element is required that needs more than 3 characters this new element needs to be used, also if current displays need to be corrected the original Element X needs to be exchanged with the new element, e.g. the sesDigIn DisplayElementX with the sesDigIn Text Display Element.

- **APPL01.DE.ABB.COM_000891** (sesAnaIn6M scalable numeric display does not show more than 4 letters)

The PG2 and VB scalable numeric display of the sesAnaIn6 and other analogue signal object did not allow for more than 4 characters in the unit presentation even if the width of the graphic was increased. All VB and PG2 scalable numeric elements have been corrected so more than 4 characters are possible.

- **APPL01.DE.ABB.COM_000947** (sepValveAnaM does not support slope < 1)

The sepValveAnaM and sepMotVarM support a slope function to gradually increase or decrease the output Setpoint command. The function for decreasing, SlopeNeg, was coded in such fashion that the SlopeNeg was intended to be a negative number. It was found that accidentally entering a positive number for the SlopeNeg resulted in increasing the SPOut value continuously. No fault was found with slope values < 1. The code in the modules has been altered in such a way that it will also accept a positive number for SlopeNeg. If a positive number is entered by mistake it will not result in a SPOut increasing without end. Since the sepMotvarM uses the same slope function as the sepValveAna it has been adapted likewise.

- **APPL01.DE.ABB.COM_000955** (Wrong alarm in DigInM when inverted input with external timestamp)

When the SOE (sequence of events) functionality was used in the sesDigInM a problem occurred when the signal to monitor was inverted. In this case the alarm was generated when the IOValue was true and not when false as intended. The problem was caused by a missing status from the SOE capable IO module, these modules also offer a NormalPosition of the IO signal. In case of an external timestamp the AlarmCondM module needs to be connected with the necessary signals for SOE, e.g. SignalID, but also the normal position. In case of SOE the IO module will handle the alarm generation and it also needs to have the inverted info. In the current case the inversion is solely handled inside the DigIn module and this information was not passed on to the SOE IO module. This has now been corrected, also the Event module has been upgraded to correctly support SOE.

- **APPL01.DE.ABB.COM_000970** (Safety command has less priority than CmdCutOffT)

In case of PulsedCmd=1 mode, time pulsed commands a command pulse was always finished before a counter command was activated, i.e. if for a valve the open command was given and shortly after that the close command, the valve will first activate the oOpnCmd for x seconds before it activated the oClsCmd output. This behavior was undesirable in cases where the command pulsed were set relatively long, e.g. 15 seconds. If a counter command was given such as a safety command from the SO the valve would take some time before it responded to this command. Therefore all modules that support PulsedCmd=1 command mode have been modified in such a way that they now respond directly to a counter command. E.g. If a open command is given and 1 second after this a close command is activated the valve will now terminate the oOpnCmd output and immediately activate the 0ClsCmd.

The following modules have been adapted:

sepBreakerM
sepMot1DirM
sepMot2DirM (Note! The delay times from On1-On2 and visa versa are not affected, only when no delays are used does the module respond immediately)
SepMotVarM (Note! The slope function is not affected i.e. if a On command is in progress with the slope activated, the SPCmd it will first ramp down to minimal output before activating the OffCmd)
sepValveOpClM

- **APPL01.DE.ABB.COM_000971** (Safety command has less priority than CmdCutOffT)

Same as APPL01.DE.ABB.COM_000970, explanation from that CR also applies.

- **APPL01.DE.ABB.COM_000972** (Safety command has less priority than CmdCutOffT)

Same as APPL01.DE.ABB.COM_000970, explanation from that CR also applies.

- **APPL01.DE.ABB.COM_000974** (sepValveOpCl does not set output OpnCmd or ClsCmd)

In rare cases it was noticed that a deadlock occurred in the ValveOpCl object were neither command output was activated anymore in time pulsed command mode (PulsedCmd=1) in combination with Acof alarms. Investigation revealed that in rare cases the internal command flags could both be true resulting in an inability for the module to detect positive edge changes in commands. To avoid this case a safety feature was added to the valve that also resets all internal command flags when the corresponding feedback has been received, thus enabling the module to always detect command request changes. This results in the following change for pulsed commands, the command output and its internal helper flag will be reset when either the timer expires or when the feedback has been received.

For reasons of uniformity in behavior other modules that also support time pulsed command mode have also been adapted in this fashion that both the internal command helper flag and the output command are reset when the corresponding feedback is received The following modules have been adapted:

sepBreakerM
sepMot1DirM
sepMot2DirM
sepMotVarM
sepValveOpClM

Upgrade consequence:

No extra programming is required, the change is based on existing parameters, the only item that is different is the time a output might be active, e.g. if the pulse was set for 2 seconds and the feedback is received after 1 second in the new code the output is terminated while in the old logic it was set for another second.

- **APPL01.DE.ABB.COM_000975** (sbfGasFlowCC problem with last value and equivalent value)

In case of a disturbed input signal the module supplied the last valid value, but the equivalent value should be given. The module has been adapted to reflect this change. A similar change has been done in the sbfSteamFlowCC so it also gives the equivalent value.

- **APPL14.DE.ABB.COM_000067** (Erroneous status for Opening/Closing in monitor mode after coldstart)

If an object such as the sepValveOpCl is in monitor mode (iCtlMode I/O reset) while the application is coldstarted it could in some cases select an opening or closing status. The reason for this was the fact that the monitor mode was transferred in the object after 1 scan while going on-line. This caused the object to be in manual mode for 1 scan and execute its Coldstart mode code. After 1 scan it would switch to monitor mode but the opening/closing status would remain. Changes have been added to the mode selection code that copies the correct mode in the first scan so the module responds correctly.

- **APPL14.DE.ABB.COM_000068** (Wrong behavior mode selection with short pulses on SetManMode)

Same issue as CR APPL14.DE.ABB.COM_000081, for this CR same comment applies.

- **APPL14.DE.ABB.COM_000071 / 72** (Wrong priority text color for priority 3)

The numerical n graphic elements selected the wrong color combination for priority 3 making the number difficult to read. The colors have been harmonized to show a yellow background (plaPrio3Symbol / plaUnackPrio3) and a dark number (plaPrio3NumericalBG) in case of a priority 3 alarm.

- **APPL14.DE.ABB.COM_000073** (Wrong parameter description on runtime status for motor objects)

The parameter description in the functional descriptions of the motor objects still listed the runtime status as being of the sbfTimePar type instead of the Time type. Also the name of the status variables still had the 'TI' addition whereas they now only have the 'T' added.

- **APPL14.DE.ABB.COM_000074** (Reset of Linefeed causes increase of Ack/Rst counters)

The sbfAlarmCtrlBM module used in signal objects contained obsolete code only used if the module supported Tag-out mode. This code caused the Ack and Rst counters in the sbfAlarmCPar datatype to increase constantly if the Linefeed parameter on a signal object was reset. The obsolete code has been removed.

- **APPL14.DE.ABB.COM_000075** (Some modules produce 2 sbgTabAlarm aspects in control structure)

The secStationM and sec2XmitSelM produced a 2nd sbgtabAlarm aspect when instantiated. This problem was caused by some erroneous settings on the aspects in the object type. These settings have been corrected so only the auto instantiated TabAlarm aspect from the sbgSignalTable2 is added to the control structure instance.

- **APPL14.DE.ABB.COM_000076** (Alarm filter settings missing on Alarm lists)

Some Utility library alarm list configurations, e.g. the Object alarms, were missing a filter setting for object alarms. The filter settings have been corrected and added to the install package.

- **APPL14.DE.ABB.COM_000077** (Refresh problem AlarmTab with Object Priority)

If the object priority selection was made in the alarm tab of a object it shows the priority buttons only at the top alarm, with these buttons all alarms are set to the same priority (Object) and can no longer be set individually. However when the extended faceplate was called a 2nd time the buttons for the other alarms incorrectly appeared again but could not be operated. The sbgAlarmTab2.ocx binary has been adapted to prevent this effect so the buttons are only shown at the top alarm in the tab when object priority is selected.

- **APPL14.DE.ABB.COM_000080** (Sourcename on external IO alarms connected to wrong parameter)

The SrcName parameter of the AlarmCondM modules in the external alarm modules of the IO type has been connected to the wrong parameter, Name. It should have been connected to the SrcName parameter as is the case in the other external alarm modules. This caused a wrong tag name to appear in the alarmlist when such a module was used, the correct parameter has now been added.

Upgrade Consequence:

If this module was used in applications be sure to check the SrcName parameter value. In the new code this will be shown in the alarm lists and lines as the name of the object and it could contain a wrong value if it was not configured correctly.

- **APPL14.DE.ABB.COM_000081** (One shot command on SetManMode has no effect)

The SetManMode command in an object's SO parameter is used to force the mode of an object to manual. In cases where this command was set for 1 task cycle in a trigger type of configuration it did not work correctly, it required several task cycles before the mode was stable. Although the command was originally designed to be set continuously until the mode force should be lifted it is adapted to also functions in a trigger type of situation, especially since the counter force command SetAutoMode does work in trigger type of applications and this would only lead to confusion with application programmers.

Upgrade consequence:

The pulse behavior on SetManMode now functions the same as on SetAutoMode, any delay code used as a workaround to make SetmanMode also function on pulses can now be removed, although it will not inhibit the function if it remains.

- **APPL14.DE.ABB.COM_000082** (Incorrect Delay On and off behavior)

A problem existed in the sesDigIn when both the on and off delay times for the In signal were used. If the In signal was reset before the delay time expired the Out of the module was set for the defined DelayOff time, which it should not since the input was reset before it should be copied to the output. A code change has been made to rectify this problem so the output will remain false if the input was reset before the delay time expired. A similar problem existed in all DigIn type objects so also the sesDigInstrM, sesDigInBasic and the sesDigIn2Basic have been adapted.

- **APPL14.DE.ABB.COM_000083** (No additional forced status information on signal objects)

In the process object library all objects have a ForcedMode status in the status datatype indicating that an IO channel connected to the object has a forced status. For the signal object library this was only partially implemented, although the objects present a forced status in the faceplate this does not always cover all connected signals. A ForcedMode implementation has now been carried out for all objects in the seSignalObjLib that provides a ForceMode status element as in the ProcessObjLib. This signal also includes forced signal connected to external alarms (if the correct alarm IO module is used) and custom made modules connected to the external alarm connection if the module supports handling of the forced status.

- **APPL14.DE.ABB.COM_000084** (Scalablenumeric VB graphic has no unit)

The scalable numeric graphic element of the sesAnaInBasic did not show the unit setting of the realio signal. The element has been corrected to show the unit.

Upgrade consequence:

Graphic displays should be checked since the graphic will now show a unit value, make sure it does not interfere with surrounding graphics. Any graphics that were added to compensate for the lack of a unit presentation can now be removed.

- **APPL14.DE.ABB.COM_000085** (Status icon not properly aligned in PG2 graphic element)

The numeric and bar graphic elements in the sesAnaInstr suffered from a misalignment of the status icon, this resulted in the icon being presented slightly large which caused clipping of the icon by the graphic borders so the icon was only 80 % visible. The alignment has been corrected and the icon is now 100 % visible in the correct size.

- **APPL14.DE.ABB.COM_000086** (Wrong severity parameter connected to congruency alarm)

The congruency alarm of the sepMot1DirM had an incorrect initial parameter connected for severity making it impossible to set the severity with an initial value, the correct CyAlSev parameter has now been connected.

- **APPL14.DE.ABB.COM_000087** (Alarms cannot be disabled from alarmlist)

It was not possible to disable an alarm from the standard context menu in an alarmlist. It was only possible to disable an alarm with the Disable all alarm button in the faceplate or with the DisAl setting in the InteractionPar of the alarm. The code in the alarm modules has been adapted in such a way that now also disabling from the context menu is possible.

- **APPL14.DE.ABB.COM_000088** (Graphic element generates VB overflow error)

When a display was called containing a sepSampler graphic element a VB overflow error was logged in the event list. This error was caused by a VB function that was used in the expressions for the element. This function used together with the Status element of a BoolIO was not suited to handle all possible values that the status dword could contain, hence the overflow. The function has been removed and replaced by alternative logic.

- **APPL14.DE.ABB.COM_000089** (Limit tab does not show priority 3 correctly)

In the limit tab a priority 3 was presented as a dark green square without a number, this has been harmonized with the priority 3 color definition of plaPrio3Symbol for background and the plaPrio3NumericalBG for the priority number.

- **APPL14.DE.ABB.COM_000090** (Limits on Out bar in normal faceplate have wrong color)

The L and LL limits in the bar have the wrong priority color compared to the number set and the other faceplate views. This problem was caused by a type in the color selection statement and has been corrected.

- **APPL14.DE.ABB.COM_000091** (Numeric value not clearly shown on Prio3 alarms)

The number was shown with a yellow color on a different yellow hue background making the number poorly readable. The elements have been harmonized with the color use for priority 3 meaning a plaPrio3Symbol or plaUnackPrio3 color for background and a plaPrio3NumericalBG color for the number.

- **APPL14.DE.ABB.COM_000092** (Numeric value not clearly shown on Prio3 alarms)

Related to APPL01.DE.ABB.COM_000818, see comment for that CR.

- **APPL14.DE.ABB.COM_000094** (Incorrect Numeric X test graphic element in motvar)

A numeric graphic element that was added during development for testing purposes was not deleted before the library was released. This graphic has now been removed.

- **APPL14.DE.ABB.COM_000095** (Acof alarm not generated 2nd time if timer has not run out)

A oversight existed in the code of the motvalve in case an acof alarm was generated and the feedback did activate afterwards, if the alarms was then acknowledged and reset it was not generated again if within the defined acof time the feedback failed for a 2nd time. This was introduced in the last version as a result of a bug fix for unwanted acof alarms, this specific situation, were an acof alarm should be generated, was overlooked. The code has been adapted to correct this oversight.

- **APPL14.DE.ABB.COM_000098** (Safety and Process commands not properly processed with block alarms)

The SO commands for safety and process interlock, e.g. SafOpn, were not properly processed in the sepValveOpClM in case of a blocking alarm. In Utility Library blocking alarms take priority over all other commands and force the module to the defined process state for blocking alarms. However for the sepValveOpClM it was still possible to issue a safety or process command while in blocking alarm state. For the continuous command mode this could lead to the situation that both command outputs were set. The output code of the valve has been revised so the module conforms to the Utility Library standard.

Upgrade consequence:

The valve now follows the Utility Library standard for Process and Safety commands, be sure to check the logic used in applications in case of a blocking alarm.

- **APPL14.DE.ABB.COM_000099** (Safety and Process commands not properly processed with block alarms)

For the sepBreakerM a similar problem existed for the Safety and Process interlocks in blocking alarm state. Although no continuous command mode is available the issued safety or process commands was processed and caused a command to the breaker object that was not expected due to the settings for blocking alarm mode. The code of the breaker has been adapted so that it also conforms to the Utility Library standard for blocking alarms.

Upgrade consequence:

The breaker now follows the Utility Library standard for Process and Safety commands, be sure to check the logic used in applications in case of a blocking alarm.

APPL14.DE.ABB.COM_000100 (Information lost on restart after power failure)

After a power failure the AC800M controller performs a warm start, however it does not execute the Start_ code as in a regular warm start. This caused some status elements to revert to their initial value since they were not retained and got their value from a copy in Start_Code. The elements concerned have been adapted by adding a retain attribute in the status datatype definition. The following elements have been adapted:

AckRstRule
EnManInAuto
ValveTyp
NumberPrioUsed

Also in the Digital signal objects the internal string that contained the event texts that were compiled in Start_Code were not retained, this has also been corrected.

APPL14.DE.ABB.COM_000101 (Problems with standard indicators after override)

A problem occurred when the faceplate aspect of an object in the control or functional structure was put in override to add an instance specific custom item to the faceplate indicator area, e.g. a trend curve button. When an extra line was added in the indicator aspect link table all other aspect links would become corrupt and needed to be re-linked to their aspects. This was probably caused by an upgrade of the faceplate layout from a earlier platform version. Newly created faceplates did not exhibit this phenomenon. As a result all aspect links in all faceplates have been re-designated to correct the link info to the latest faceplate framework format so in the future when a faceplate is override the information will remain intact and the extra aspect can be added without problem.

APPL14.DE.ABB.COM_000102 (Time deviation with time proportional modes using long cycle times)

A deviation was noticed on time proportional modes in the sampler module. This deviation was caused by the fact that the sample pulse was generated 1 cycle time after the timer expired. This was especially noticeable when a long cycle time was used, e.g. 1000 ms, and a prolonged period of sampling, 1 day or more. Typically a 5 minute interval with a cycle time of 1000 ms would result in 1 sample less after 1 day. The problem is corrected by including the current task cycle time in the sample interval time so the end of the timer interval is detected in the same cycle as the sample pulse is generated, thus eliminating the cycle time overshoot.

Other issues

Sec3XmitSelM

Deviation alarm after coldstart

When a sec3XmitSel is coldstarted sometimes a deviation alarm exits and the output of the module is 0, even if the input signals have a value. This is caused by the fact that an internal value is reset to 0 due to the coldstart situation. This results in a deviation from the input signals and since the module reacts immediately to the detected deviation no values are copied anymore to the internal output value. Also if the status components of the inputs show a no good status in the first scan it will also lead to a deviation and a 0 on the output.

A new parameter - CSIgnoreDev – has been added to improve the startup behavior of the sec3XmitSel. This parameter contains a number of task cycles after a coldstart where the detection of the deviation should be suppressed. If a valid deviation exits after this delay the module will generate an alarm as before.

Selection of bad input in manual
It was possible to select a bad input when in manual mode; this has been corrected in such a way that the button will be disabled when its input signal gets a bad quality.

Inconsistent alarm disable icon
The faceplate of the sec3XmitSel showed the wrong icon when all alarms were disabled.

SecStationM

Connection of standard modules on PosFB

Standard modules such as SignalInReal, SignalSimpleInReal and AnalogInCC could not transfer their values to the PosFB parameter of the station. Investigation showed that these modules expect the Backward.Connected signal to be set before they copy values to their Out parameters. Although other modules exists that can be connected to the port a line has been added to the Initialize code of the station setting the PosFB.Backward.Connected to True after each application start or start after power failure.

Co track issue

In manual mode when the Co track was activated the Co would start to increase or decrease to the intended track value. However if the Co track was disabled before this value was reached the Co immediately jumped to this intended value. The module has been changed in such a way that the Co will remain at its current value when the Co track is reset.

sesDigIn2Basic

The event generation for In2 was not OK, e.g. no event was generated. This was caused by a bug in the eventtype code for the In2 events. The code has been corrected and the event for In2 now works as expected.

SesAnaOutM

A number of issues have been resolved in the sesAnaOutM. The channel error alarm on the Signal RealIO output was only generated when the SigInCC parameter was not connected (Connected status in the Forward). But since the AnaOut has a SigInCC as input and a choice of Signal or SigOutCC as output this should be the connected status of the SigOutCC and has been changed likewise.

Furthermore a problem existed with the setting of Min, Max and Unit in the Status.BaseStatus.Out component. In code the SigOutCC.Backward range was copied when the Signal was not connected and the SigOutCC.Forward connected was set. However the Backward range should only be used if the SigOutCC.Backward is connected. The module has been changed likewise.

There was also a problem in the faceplate for the IN signal. When the Signal parameter was not connected to an IO or RealIO variable the IN value was presented as bad quality; red field with white cross. But the Signal is an output and should therefore not influence the presentation of the SigInCC value. The bad quality status has been changed to the bad quality of the SigInCC signal.

Version 5.0.3 MSI

Multi System Integration support

The 5.0.3 release, sans MSI, incorporates closed Visual Basic graphics. These graphics cannot be redeployed because of a security feature. In Multi System Integration applications however it is necessary to deploy uploaded composite graphics on the subscriber level, which is not possible due to the fore mentioned issue. This version of the library contains open VB variants of the process graphics of the Utility Setup package that can be redeployed. These graphics will replace the existing closed graphics on adding the Utility Library system extension, see installation manual. The resulting Utility Library is then fully compatible with the Multi System Integration environment.

Version 5.0.3

CRM reported issues

The following CR's are solved. All Change Requests (CR's) are stored in CRM tool. For more information please have a look into CRM database on Lotus Notes. Product: Utility Library.

Table 2-8. Corrected errors in Version 5.0.3 SV 5.0SP2B

Request No	Component	Title
APPL14.DE.ABB.COM_000071	Sec2XmitSelM	wrong priority color for prio 3 in sec2XmitSel numeric elements
APPL14.DE.ABB.COM_000072	Sec3XmitSelM	wrong priority color for prio 3 in sec3XmitSel numeric elements
APPL01.CH.ABB.COM_000065	sepValveAnaM	Status component never written in sepValveAna
APPL01.CH.ABB.COM_000066	seProcessObjLib	difference in presentation between sepMot1DirM and sepMotvarM

APPL14.DE.ABB.COM_000071 (Wrong priority color for Prio 3 in sec2XmitSelM numeric elements)

In the Numeric Display x Digits graphic elements a TextPrioColor statement determined the text foreground color when in alarm. For all priorities, except for Prio3, the Numerical color was used. For Prio3 the Symbol color was selected by mistake, resulting in the same color being selected for the text and the background and making the number unreadable. The Symbol color has been replaced by the Numerical background color for Prio3, plaPrio3NumericalBG, to contrast with the plaPrio3Symbol color. All other priorities use the correct plaPrioxNumericalFG color.

APPL14.DE.ABB.COM_000072 (Wrong priority color for Prio 3 in sec3XmitSelM numeric elements)

This CR describes the same problem and has the same solution as for APPL14.DE.ABB.COM_000071.

APPL01.DE.ABB.COM_000065 (Status component never written in sepValveAna)

The Status.BaseStatus.AutoSP was never written in the valve. Code has been added to update this status element with the actual automatic SP value from the SO.

APPL01.DE.ABB.COM_000066 (Difference in presentation between sepMot1DirM and sepMotVarM)

The presentation of the actual status in the faceplate showed some differences in case of an Acof Stop alarm. The color statements have been checked and corrected to comply with the power generation HSI standard.

Other issues

PLM Alarm Colors

Since the SV4.1 version of the library 20 priority colors for alarms are supported. Since the base PLM Alarm Colors of Utility Setup only supports 5 colors Utility Library provided an own version of the color definition. Since SV 5.0 a number of colors were added to the base definition in Utility Setup that had not been added to the Utility Library version. These colors have now been added to the local copy of Utility Library. The following colors have been added:

plaAlarmListSingleBg1 (255,255,255)
plaAlarmListSingleBg2 (240,240,240)
plaAlarmListSingleText (0,0,0)
plaEventListSingleBg1 (255,255,255)
plaEventListSingleBg2 (240,240,240)
plaEventListSingleText (0,0,0)
plaPrio3NumericalFg (255,255,0)

Version 5.0.2

CRM reported errors

All Change Requests (CR's) are stored in CRM tool. For more information please have a look into CRM database on Lotus Notes. Product: Utility Library.

Table 2-9. Corrected errors in Version 5.0.2 SV 5.0SP2

Request No	Component	Title
APPL14.DE.ABB.COM_000038	All Faceplates	Mode change not possible in safety mode when dimmed buttons activated
APPL14.DE.ABB.COM_000044	sepMotValveM	FBOn status was not updated with IO status
APPL14.DE.ABB.COM_000054	seProcessObjLib	Reset of mainfeed does not reset command output
APPL14.DE.ABB.COM_000057	sesDigin2BasicM	AlarmControl aspect contains incorrect AckAlarm reference
APPL14.DE.ABB.COM_000059	sepMot2DirM	Strange behavior switch-over delay on pulsed commands
APPL14.DE.ABB.COM_000060	sepMot2DirM	Off command set for 1 scan with 0 sec. delay on continuous commands
APPL14.DE.ABB.COM_000061	sec2XMitSelM	Possibility for disabling alarms in XMitSel objects
APPL14.DE.ABB.COM_000062	sepValveOpClM	Problem with Opening/Closing status when using pulsed commands
APPL14.DE.ABB.COM_000063	sepMotValveAnaM	Reset button dimmed on active alarms
APPL14.DE.ABB.COM_000064	sec3XMitSelM	Forced status of Out is not properly updated
APPL14.DE.ABB.COM_000066	sesAnaOutM	Applied action doesn't work when mouse click is used on the sesAnaOutM
APPL01.DE.ABB.COM_000410	secStationM	Value of deviation (PV/SP and Co/PosFB) always 0.0 in AlarmTab and Display Elem
APPL01.DE.ABB.COM_000498	secStationM	Value of SP Bias setpoint can not be entered in faceplate
APPL01.DE.ABB.COM_000534	sesDigInM	sesDigIn faceplate InValue error
APPL01.DE.ABB.COM_000591	sbfSelector	sbfSelector not upgraded correctly
APPL01.DE.ABB.COM_000036	Redirection aspect	Problems with BDM and operator messages
APPL01.CH.ABB.COM_000044	sbAlarmEventLib	Alarm handling for not defined alarms
APPL01.CH.ABB.COM_000045	sesAnaInM	AnaIn faceplate does not handle InValueVis property
APPL01.CH.ABB.COM_000046	seProcessObjLib	Pulsed command with Acof AlType=1 does never restart the object
APPL01.CH.ABB.COM_000051	sepMotValveM	Deadlock in Faceplate
APPL01.CH.ABB.COM_000052	Sec2XMitSelM	Timedelay = 0, jams output
APPL01.CH.ABB.COM_000055	sepDeviceM	Optional real values not visible, general update of flexibility
APPL01.CH.ABB.COM_000056	sepMot1DirM	Not possible to stop object if locally started
APPL01.CH.ABB.COM_000059	sepMotValveM	Incorrect Acof alarm after Stop command
APPL01.CH.ABB.COM_000071	sbCalculationLib	Wrong Error calculation for signal status

APPL14.DE.ABB.COM_000038 (Mode change not possible in safety mode when dimmed buttons active)

The dimmed button code prevented the switch over from Auto to Manual or visa versa when the object was in safety mode (active safety command). The code in the object did not prevent this change in safety mode since the safety commands only concern object states such as Open, Close, On, Off etc.

This lead to the operational situation that an object with dimmed buttons turned off could change it's mode but an object with dimmed buttons turned on could not. The expression code in the faceplates has been changed for all manual and auto buttons to allow operation in safety mode.

APPL14.DE.ABB.COM_000044 (FBOn status was not updated with IO status)

The FBOn variable in the BaseSPar of the sepMotValveM was never updated with the IO status, this has been corrected in the status code of the sepMotValveM.

APPL14.DE.ABB.COM_000054 (Reset of MainFeed does not reset command output)

When the general MainFeed fails the activation command was not reset and the module remained in the active state, for continuous command output mode this meant that the object automatically switched on again when the Mainfeed was restored. For pulsed commands the on command was not issued again but internally it was still active.

To remedy this situation the command outputs are reset on loss of Mainfeed or LineFeed and the internal order is reset to the safe position, e.g. off for a motor. This means that the object will start from its safe position (e.g. off) when the feed returns and the logic of the object will only respond again when a manual or automatic activation command is issued and respond accordingly.

The general LineFeed has also been included in this CR since loss of this signal means that the MCC unit will be powerless and also result in the deactivation of the motor.

APPL14.DE.ABB.COM_000057 (AlarmControl aspect contains incorrect AckAlarm reference)

The sesDigIn2Basic module contained a faulty AlarmControl aspect, its code referred to an AckAl signal in the InteractionPar but it should refer to the BaseIPar. The aspect has been adapted to refer to the correct location

APPL14.DE.ABB.COM_000059 (Strange behavior switch-over delay on pulsed commands)

The switch over delay for a sepMot2Dir on pulsed command mode did not function correctly. There was only a delay in activating the command output after issuing the reverse command but not first an additional OffCmd to stop the motor. This is different from the continuous command mode, where the off command is given and then after a delay the command output is activated. The OffCmd is necessary on two direction motors to prevent mechanical damage.

The pulsed type command code was rewritten to include the OffCmd so it will be issued right after the reverse command is given if a delay has been defined.

APPL14.DE.ABB.COM_000060 (OffCmd set for 1 scan with 0 sec. delay on continuous command)

The OffCmd in the Mot2Dir was set for 1 cycle when switching from On1 to On2 even if the delay times were set to 0.This problem was traced to the delay timers which are set with the On1Cmd and On2Cmd outputs. When the command is set the timer output is set as well which is wired into the opposite commands output for the delay. However when switching to the opposite command with a delay time of 0 the nature of the Timer function resulted in the timer output being set and immediately reset (delay time=0) but this took 1 cycle to process meaning that in 1 cycle both command outputs are 0 and thus activating the OffCmd output.

To remedy this problem the delay time was wired into the timer code so that if the time is 0 the timer input will never be set and therefore not activating the timer output

APPL14.DE.ABB.COM_000061 (Possibility for disabling alarms in XMitSel objects)

The alarms in a sec2XmitSelM and sec3XMitSelM object were fixed, e.g. they were always used. A possibility to skip certain alarms was missing. To solve this a SO parameter was added to the 2XMit and 3XMit objects containing EnDetect elements for each alarm and a AlDef parameter was added in the object parameters per alarm.

APPL14.DE.ABB.COM_000062 (Problems with Opening/Closing status when using pulsed commands)

When pulsed commands were used on the sepValveOpClM the Opening and Closing status was only active for the duration of the command output pulse. This status needed to be active until the corresponding feedback was set. The control module status code has been adapted to correct this problem.

APPL14.DE.ABB.COM_000063 (Reset button dimmed on active alarms)

The reset button in the sepMotValveAnaM faceplate was dimmed when an active alarm was present. This posed a problem when the reset function was activated since it was not possible to reset an active alarm. The expression code in the faceplate has been changed to activate the button while active alarms exit.

APPL14.DE.ABB.COM_000064 (The Forced status of Out is not properly updated)

The Forced status of the Out CC connection was not always updated. When a input was forced this did not always update the Out in certain situations and alternatively the forced status of the Out was sometimes not reset when the inputs no longer had a forced status. The cause of this was twofold, when all 3 inputs were selected in Auto mode the statement that set the Out status had a typo for the 2nd input so it's forced status was never copied. The second concerned the case of a deviation alarm on all 3 inputs were the forced code was never executed. This has been solved by correcting the typo and adding extra code in automatic so the force status of the Out was reset in deviation when there was no longer any force status on the 3 inputs.

APPL14.DE.ABB.COM_000066 (Applied action doesn't work when mouse click is used on sesAnaOutM)

The Normal faceplate of the sesAnaOutM did not respond to the Apply button when a manual value was entered. Only the keyboard Enter button worked. This was caused by a omitted statement in the normal faceplate that processed the Dew when the apply button was clicked. This has been corrected in both the 2.0-0 and 2.2-1 library versions. The extended faceplate functioned correctly

APPL01.DE.ABB.COM_000410 (Value of deviation (PV/SP and Co/PosFB) always 0.0 in AlarmTab and Display Elem)

In the secStationM 2 deviation alarms are present (PV-SP and Co-FB) and a Deviation (PV-SP) is presented in the secControlElement graphic element. However these values were always 0 even if a alarm was triggered. The alarms used did not copy the deviation value in the .Value component of the alarm status, hence they were not presented in the alarm tab. The alarm value was also connected to the graphic element and therefore its value was also 0. For the graphic element a extra status variable was added to the secStationSPar definition, SPDeviation. In the secStationM additional status code was added to calculate the PV-SP deviation to provide the additional status variable with a value.

Note! This error was also reported in part in CR APPL01.CH.ABB.COM_000041 (Missing presentation of deviation in secStationM)

APPL01.DE.ABB.COM_000498 (Value of Bias setpoint can not be entered in faceplate)

If the secStationM was configured as Bias Station the value SPB could not be modified in the faceplate. In this case the station presented an input field in the faceplate that showed the SPBias status and its Enable property was False. This field has been changed to enable it when the StationType is 1 (SpBias) and the Status.Mode is active. The property reference was changed from the SPBias status to the InteractionPar.OpSp variable.

APPL01.DE.ABB.COM_000534 (sesDigInM faceplate InValue error)

In the sesDigInM faceplate the Out value to the application and the In value from the field is presented by 2 bincontrol objects that show the actual value by means of a 'O' and '1'. The presentation for the In value is linked to the IOValue component of the In parameter. The inverted state was also included in the expression code of the value, this meant that the value of the Out and the In were always the same since the value of the IOValue was then presented in a inverted manner. However this is incorrect since the In value needs to represent the actual value of the IO, so in case of a inverted signal it should be the inverse of the Out value. This presentation has been corrected for all faceplate elements of the sesDigInM.

APPL01.DE.ABB.COM_000591 (sbfSelector not upgraded correctly)

The selector function block experienced a problem when used in SP2. A internal index variable was overwritten due to a change in the system. Optimizations were made in the internal code to prevent this. The function itself remains unchanged and functions the same as in previous versions.

Be sure to use only the SP2 version of the sbFunctionLib since library versions for older platform versions, e.g. SP1a and before, will contain modules not optimized for SP2.

APPL01.CH.ABB.COM_000044 (Alarm handling for not defined alarms)

A problem existed with activated alarms that were set as not defined during a code adaptation in the application, xxxAlDef parameter. If an alarm e.g. the valve not healthy for the motor valve was activated and the ValveAlDef parameter was reset later on, because the alarm is not used, the activated condition of the alarm was never reset. All alarm modules have been adapted to include code that reset any active alarms when the define parameter becomes false.

APPL01.CH.ABB.COM_000036 (Problems with BDM and operator messages)

The redirection aspect generated some error messages when operated or configured when logged on as operator, this was caused by some calls to functions that were not necessary and have been corrected, also the operator should not configure the aspect so now the config view is disabled when logged on as operator and is only available for Application engineers and Administrators.

When using BDM to set the paths the apply button was activated suggesting that an apply was needed, this was not the case since the path was actually changed internally and the apply button was activated by mistake. When the config view is open during a DBM change it will not show the new path but is has actually changed internally, the effect is caused by a missing refresh.

Also the [Direct] prefix and [<Structure>] part is added to the path, which will increase the performance of the aspect since the platform does not need to perform a search for the intended aspect in the structure.

APPL01.CH.ABB.COM_000045 (AnaIn faceplate does not handle InValueVis property)

The signal objects are equipped with visibility properties for the In and Out values in the faceplate. The sesAnaInM is also equipped with these properties but they were not properly connected in the faceplate elements. This has been corrected.

APPL01.CH.ABB.COM_000051 (Deadlock in Faceplate)

When the function dimmed buttons was activated and the Acof alarms were set as normal none blocking type alarms (AlarmType = 1), it could occur that the faceplate was locked when the valve was given a command but did not leave its position. This was caused by an oversight in the dimming code of the motor valves buttons and has been corrected so the Stop button is no longer dimmed when opening or closing so the valve can be stopped and thus bring the valve into its original state.

APPL01.CH.ABB.COM_000071 (Wrong Error calculation in signal status)

In a number of modules form the sbCalculationLib the error status for the D, P or DP signals was calculated by comparing the Status with the Good status 16#C0. The CC connection status can however contain more status elements combined with the Good status and thus a error status could be detected incorrectly. By isolating the last byte containing the Good status the other status elements were excluded in the compare and improved the error detection.

The following modules were adapted:

- sbfLevelRelCC
- sbfLevelAbsCC
- sbfGasFlowCC
- sbfEnthalpyCC
- sbfSteamFlowCC
- sbfSatSteamTempCC
- sbfSatSteamPressCC

APPL01.CH.ABB.COM_000052 (Timedelay = 0, jams output)

When the Interaction parameter SignalFltDelay was set to 0 a Signal fault alarm was immediately raised and the Out signal was locked into a 16#55 error state. This was caused by the method used to detect if the delay time was passed on the alarm, this method caused the alarm output to be set on a delay of 0. Extra code has been added to prevent the output from being set on a delay of 0 if the alarm condition for a Fault alarm is not active.

APPL01.CH.ABB.COM_000055 (Optional real values not visible, general update of flexibility)

The sepDeviceM has a number of configuration parameters, for the number of Digital input and the number of real value inputs. This is however limited to a total of 8 in the faceplate, where digital inputs have priority over the real values. Since the seProcessLib is released this can not be changed easily. For this reason a new template object has been introduced in the new seTemplateLib, see Improvements and Changes section.

To accommodate more flexibility in the standard sepDeviceM 8 additional digital inputs and 8 additional command outputs have been defined. Although the faceplate has not been upgraded the command outputs are fully functional if the correct command number is entered in the InteractionPar, also the status BoolInd has been adapted to accommodate the additional 8 inputs.

APPL01.CH.ABB.COM_000046 (Pulsed command with Acof AlType=1 does never restart the object)

APPL01.CH.ABB.COM_000056 (Not possible to stop object if locally started)

These two CR's basically concern the same problem, the behavior of time pulsed commands (PulsedCmd=1) in case of acof alarms set to none blocking mode. Because of this the internal command flag is not affected by the acof. The solution for these CR's is in the behavior of the pulsed command code and is given here for both CR's.

If an object was locally started without the iCtlMode input being reset the internal command flag is different from the field status, although this leads to an Acof alarm if properly configured, it required some extra handling to get the object in line with the field status. E.g if a motor is locally started the internal command flag is still set to Off since this is the last command given from the control system. If the operator concluded the Acof was not a feedback failure but a deliberate action the Off command could not be given anymore because if this internal command status, even though the Off button was activated due to the On feedback status. This was especially a problem for the time pulsed commands, the continuous output level mode would have the OffCmd output activated, but the pulsed commands mode would have none activated and can not reissue a pulse.

Also if the object is started and the Off feedback remains active the object cannot be started again, since the internal flag is still set to On. The logical action of giving the Off command also was not possible because the Off button was dimmed due to the Off feedback status.

To give operators more possibilities to work these kinds of situations some changes have been made to the command code for time pulsed commands (PulsedCmd=1). First a change was made in the dimming code of the objects in the seProcessObjLib. The Discrepancy status is set when an Acof alarm occurs. The dimming code of the faceplate buttons for On/Off/Close.. etc. has been changed that in a discrepancy status the dimming of these buttons is temporarily disabled so the operator has the choice between giving the command again or give the counter command to bring the object back into the prior state.

To be able to retrigger a command some changes were also necessary in the command code of the objects that support PulsedCmd=1. If the manual command is given again the internal command order is reset for one scan so it will create a rising edge in the pulsed command code and thus reissue a pulse.

APPL01.CH.ABB.COM_000059 (Incorrect Acof alarm after Stop command)

When an Open or Close command was issued on a sepMotValveM and a Stop command was given before the object left its position a Acof alarm was generated. This alarm is incorrect since the command was terminated and the object is still in the close position. The problem was caused by the fact that a stop command terminates both Open and Close orders, this meant that the internal command flag to the Acof alarm for the close position was still reset and this caused a normal timeout on the Acof alarm (no command and still a Feedback). To solve this issue some code was added to the internal command flags that in case of a command termination, while still in position, the corresponding flag is set again so the Acof module again matches a set command and feedback preventing the alarm.

Version 2.2-0 (5.0.1)

CRM reported errors

All Change Requests (CR's) are stored in CRM tool. For more information please have a look into CRM database on Lotus Notes. Product: Utility Library.

Table 2-10. Corrected errors in Version 2.2-0 for SV 5.0

Request No	Component	Title
ABB_NLSUP_SPK02_000083	sbgTablO	redundant I/O causes error status in IO tab
ABB_NLSUP_SPK02_000087	sesDigInM	No possibility to reset detection on Signal alarm
APPL01.CH.ABB.COM_000001	sepBreakerM	Unused component in IO datatype
APPL01.CH.ABB.COM_000020	sesAnaInM	TabLimits contains Debug code and unnecessary subs
APPL01.DE.ABB.COM_000154	sepMotvalveAnaM	Value in graphic elements partly right justified, partly centered
APPL01.DE.ABB.COM_000155	sepValveAnaM	No unique concept of value presentation in display elements
APPL01.DE.ABB.COM_000156	sepMotVarM	No unique concept of value presentation in display elements
APPL01.DE.ABB.COM_000409	Alarm priority	Alarm priority mapping aspect needs to be adapted for Utility Library
APPL03.DE.ABB.COM_000030	sepMotValveAnaM	ManSP does not work
APPL01.US.ABB.COM_000023	secStationM	Initial value for Ipar
APPL01.US.ABB.COM_000028	secStationM	Drop to Manual when Define PV Alarm not enable
APPL01.US.ABB.COM_000029	secStationM	Drop to Manual when Define CO Alarm is not enabled
APPL14.DE.ABB.COM_000004	seSignalObjLib	Background color remote POC arrow indication missing on dig signal objects
APPL14.DE.ABB.COM_000014	UL_InputField	Difference in presentation of UL_Inputfield for setpoint values
APPL14.DE.ABB.COM_000019	sepSeqExecM	Step numbers are not properly presented
APPL14.DE.ABB.COM_000026	NLS	Ambiguous use of NLSID's in Utility library
APPL14.DE.ABB.COM_000029	sesAnaIn6M	Force status results in channel error
APPL14.DE.ABB.COM_000030	sepMotvarM	Running status is set for one scan when stopping the motor and FBOn is reset
APPL14.DE.ABB.COM_000033	sesAnaInstrM	Freeze option does not work for broken wire
APPL14.DE.ABB.COM_000035	CalendarDay	A dependency exits in Utility library to Utility Setup Workplace
APPL14.DE.ABB.COM_000036	Graphic elements	Background color remote POC arrow has wrong color in auto mode
APPL14.DE.ABB.COM_000037	sepMotvalveM	Wrong priority color in Extended Faceplate
APPL14.DE.ABB.COM_000039	sepValveAnaM	Behavior during blocking alarm must be selectable
APPL14.DE.ABB.COM_000040	sbgTablO	Forcing in I/O autopopulating control for DO/AO signals prevents setting of value
ABB_NLSUP_SPK02_000084	UL_Inputfield	Make UL_InputField behavior consistent with platform InputField

ABB_NLSUP_SPK02_000083 (Redundant I/O causes Error Status in I/O tab)

When redundant I/O (16#200C0) was present in an installation, this would appear in the I/O tab as an error. The IOValue component would be presented with a red square. This was caused by a filter bug in the sbgIOControl2.ocx file that builds the IO tab in the faceplates. The complete status word was compared and not the last byte that contains the quality information, this lead to the error that the redundant component of 16#200xx was seen as a channel error. The status word is now first traded to isolate the last byte before it is compared.

The new ocx file has been given the 1.0.0.1 file version.

ABB_NLSUP_SPK02_000084 (Make UL_InputField behavior consistent with platform InputField)

The UL_InputField selected the Max component of a signal (e.g. maximum limit of a measurement signal) if the value entered in the Dew was bigger than the Max signal. This behavior differed form the platform InputField, which did not accept the value and left the Dew in view. The danger in the UL_InputField lay in the fact that a value was passed on that could escape the attention of the operator whereas in the platform version the operator would be alerted to the fact that the value entered was incorrect. The behavior of the UL_InputField has been harmonized with the platform in this respect and will now also not accept the value and leave the Dew in view.

ABB_NLSUP_SPK02_000087 (No possibility to reset detection on Signal alarm)

The sesDigInM did not have Enable alarm parameters to switch the alarm detection on or off. A SO parameter (sesDigInSO) has been added that contains enable elements for all alarms present in the DigIn.

- EnDetErrorAl
- EnDetSignalAl
- EnDetExtErrAl

APPL01.CH.ABB.COM_000001 (Unused component in IO Datatype)

The sepBreakerIO contained an unused component (iMPRFault) this has been removed form the datatype.

APPL01.CH.ABB.COM_000020 (TabLimits contains Debug code and unnecessary subs)

The limits faceplate element in the sesAnaIn contained some debug code left over from the development phase. This has been removed.

APPL01/DE.ABB.COM_000154 (Value in graphic elements partly right justified, partly centered)

The numeric graphic elements 3..7 Digits were partly centered partly right justified. This has been corrected to right justification for all numeric graphic elements, basis for this correction is the HSI specification for Utility objects as defined by the PTSP-PRU. Other connectivity's also follow this rule.

APPL01.DE.ABB.COM_000155 (No unique concept of value presentation in display elements)

The numeric graphic elements 3..7 Digits were partly centered partly right justified. This has been corrected to right justification for all numeric elements, basis for this correction is the HSI specification for Utility objects as defined by the PTSP-PRU. Other connectivity's also follow this rule.

APPL01.DE.ABB.COM_000156 (No unique concept of value presentation in display elements)

The numeric graphic elements 3..7 Digits were partly centered partly right justified. This has been corrected to right justification for all numeric elements, basis for this correction is the HSI specification for Utility objects as defined by the PTSP-PRU. Other connectivity's also follow this rule.

APPL01.DE.ABB.COM_000409 (Priority mapping aspect needs to be adapted for Utility Library)

In the Library structure the definition of the Alarm Priority Mapping aspect in the OPC AE Server for AC800M is wrong for Utility Library. It contains the 4 standard platform priorities and not the 20 standard priorities of Utility library. This caused an incorrect priority number to appear in the Alarm list with an incorrect color. The definition has been adapted and included in the Utility Library installation.

APPL01.US.ABB.COM_000023 (Initial value for Ipar)

Some elements in the secStationIPar (e.g. ObjAlPrio) did not have an initial value, this has been corrected.

APPL01.US.ABB.COM_000028 (Drop to Manual when Define PV Alarm not enable)

The Station did not trip to manual when the PVBad alarms were not defined, the trip code pane has been changed that when both PV bad alarms (PvHigh, PvLow) are not defined, Def parameter false, the station will trip to manual.

APPL01.US.ABB.COM_000029 (Drop to Manual when Define CO Alarm not enable)

The Station did not trip to manual when the COBad alarm is not defined, the trip code pane has been changed that when the CO bad alarm is not defined, Def parameter false, the station will trip to manual.

APPL03.DE.ABB.COM_000030 (ManSP does not work)

When a manual setpoint was entered in the MotValveAna extended faceplate it was reset to 0 when the apply button was clicked. When the enter button on the keyboard was used there was no problem. The Extended faceplate has been adapted to rectify the problem.

APPL14.DE.ABB.COM_000004 (Background color remote POC arrow indication missing on dig signal objects)

On digital signal objects such as the sesDigInM the remote point of control indication arrow did not have a background color. The indication color statement has been changed to show a white background color for the arrow.

APPL14.DE.ABB.COM_000014 (Difference in presentation of UL_InputField for setpoint values)

The presentation of setpoint values with the UL_Inputfield was not consistent. Some fields showed a black border line and others didn't. The fields have been harmonized without the black border line.

APPL14.DE.ABB.COM_000019 (Step numbers are not properly presented)

The step numbers in the seSeqExecM faceplate were not properly presented, the faceplate and the ocx file of the Utility Library SFC viewer have been updated.

APPL14.DE.ABB.COM_000026 (Ambiguous use of NLSID's in Utility library)

The implementation of NLS in Utility library was done in a non standard way, each library was equipped with a NLS Resource manager that contained the texts for the library objects. This mechanism made it possible to have multiple NLS tags, e.g. TAB_Alarms. New information on NLS states that double tags can cause ambiguous results in the platform since it is not clear which tag should be used. Also the platform has defined better rules for the definition of NLS resource managers and one of the rules is that these should not defined in objects subject to versioning e.g. libraries.

This has lead to the following change in NLS, all NLS Id's have been collected into one Utility library NLS resource manager located in the Library structure under 'Preferences & Customizations\Utility Library'. Also all Id's have been extended with a 'UL_' prefix to avoid double names with other resource managers in the future.

APPL14.DE.ABB.COM_000029 (Force status results in channel error)

The detection of the channel error was checked in a too simple manner. It did not take into account that status codes could occur that were other than good but not an error, such as the code for forced signal. The code has been changed to check for the individual error codes that should result in a channel error, e.g. Channel Error, Unit Error, Overflow, Underflow, VeryLow and VeryHigh.

APPL14.DE.ABB.COM_000030 (Running status set for one scan in stopping the motor when FBOn is reset)

When a feedback configuration was set for the sepMotVar with only FBOn it could occur that the Running status was set for one scan. This situation occurred when the ramp function was active and the motor was stopped. If the Off command was given the running status was reset but when the motor had ramped down and the OffCmd to the field was given the Running status was set for one scan when the FBOn I/O was reset. This caused problems for functions using the running status of the motor, such as the selector function. The timing of the internal signals has been changed in such a way that the problem no longer exists.

APPL14.DE.ABB.COM_000033 (Freeze option does not work for broken wire)

The Error mode code in the analogue signal objects offers a freeze option when a channel error is detected. In case of a broken wire this value was always 0 since the input had dropped off before the error mode code was activated. The analogue signal objects such as the sesAnaInstrM that support the freeze option have been adapted to include a small buffer that retains the last value from 3 scans earlier. In case of the freeze option this value will be passed on to the application as the value at the moment of the wire break.

APPL14.DE.ABB.COM_000035 (A dependency exits in Utility Library to Utility Setup workplace)

There was a dependency in Utility Library to the Utility Setup PLM Miscellaneous Symbols that is only created when the Utility Setup Workplace option is installed. The CalendarDay element was placed in this graphic category and therefore resulted in a failure when the library was installed without the workplace. The CalendarDay has been moved to the AC800M Subelements that is created by the library.

APPL14.DE.ABB.COM_000036 (Background color remote POC arrow has wrong color in auto mode)

The remote point of control arrow indicator on the graphic elements did not have the white background color when the object was in automatic mode. The color statement on all graphic elements has been checked and corrected if necessary.

APPL14.DE.ABB.COM_000037 (Wrong priority color in Extended Faceplate)

The color statement for the unacknowledged priority color contained a typing error that resulted in the wrong priority color.

APPL14.DE.ABB.COM_000039 (Behavior during blocking alarm must be selectable)

When a blocking alarm occurs in a sepValveAnaM the valve was closed. In certain situations it is necessary to freeze the output on a blocking alarm. For this reason the valve has been extended with a SafeState parameter as is also the case for the ValveOpCl. The parameter can be set to 0, closed (default), 1, Open or 2, freeze (retain the current value for SPOut).

In case of conflicting command the safestate parameter will determine which command has the highest priority, or will ignore the commands in case of freeze.

APPL14.DE.ABB.COM_000040 (Forcing in I/O autopopulating control for DO/AO signals prevents setting of value)

This bug is related to the ABB_NLSUP_SPK02_000083 CR problem and is caused by filter bugs in the sbgIOControl2.ocx file. When a signal is forced it assumes a status of 16#8000D8 (good and forced) this also caused a channel error status on the IOValue. As an added problem for I/O signals that are defined as Analogue or Digital out was that this also meant that the input field for the force value was blocked, since this is the IOvalue for output signals.

The filter code has been optimized so only the last byte is compared for bad status and the forcing does not cause a channel bad status anymore.”

secFgCtrlM

A problem was detected in the secFgCtrlM module from the seGrpCtrlLib. In the dimmed buttons function a link to the central mode was incorrectly coded, e.g. the module dimmed all buttons in central mode instead of dimming only those that should be dimmed. The dimmed buttons code has been harmonized with the code used in other process objects.

Version 2.1-1 (5.0.0)

CRM reported errors

All Change Requests (CR's) are stored in CRM tool. For more information please have a look into CRM database on Lotus Notes. Product: Utility Library.

Table 2-11. Corrected errors in Version 2.1-1 for SV 5.0

Request No	Component	Title
01.DE.ABB.COM_000123	sepMotValveM	No indication for torque open in faceplate
01.DE.ABB.COM_000207	SesAnaIn6M	Status of alarm active for LL and LLL with wrong connections
01.DE.ABB.COM_000223	sepBreakerM	Project As Samra: Wrong Local Mode indication in Display Element
01.DE.ABB.COM_000225	SepMot1DirM	Project As Samra: Operator User can operate Preset Button
01.DE.ABB.COM_000226	sepBreakerM	Project As Samra: Unclear behavior of Alarming/Command output
01.DE.ABB.COM_000234	SeProcesObjLib	No System Ext. available to use Utility Library 2.1 with Function Designer
01.CH.ABB.COM_000013	sepValveAnaM	Missing display element on sepValveAna
01.CH.ABB.COM_000019	SesAnaIn6M	Events do not work
02.DE.ABB.COM_000093	seProcessObjLib	Process Commands ProcOn, ProcOff, ... still not supported
14.DE.ABB.COM_000003	sbAlarmEventLib	Source name parameter missing on IO type external alarms
14.DE.ABB.COM_000009	sepBreakerM	No alarm presentation when feedbacks fail
14.DE.ABB.COM_000010	sbfPulseCounter	Coldretain attribute missing on counter values
14.DE.ABB.COM_000019	sepSEQExecM	Step numbers not properly presented
14.DE.ABB.COM_000023	sepValOpClM	Safety command not issued after return from monitor mode
14.DE.ABB.COM_000024	sesDigOut	Permissive Operate and Tune incorrectly used in faceplate
01.US.ABB.COM_000019	secStationM	CoOutForward.BactrackingPossible
01.US.ABB.COM_000020	secStationM	SecStation Cold restart
01.US.ABB.COM_000021	secStationM	Initialize vs. Start_Code code plane
01.US.ABB.COM_000022	secStationM	CO Limit Auto/Manual mode
14.DE.ABB.COM_000028	SepMot1DirM	OffCmd.Forced is missing in the forced status

14.DE.ABB.COM_000003 (Source name parameter missing on IO type external alarms)

The source name parameter on some new external alarms was missing, this parameter is needed to correctly present the parent object name in the alarm list. The following modules were adapted:

sbfExtBoolIOAlM

sbfExtBoolBasicIOAlM

sbfExtHighIOAlM

sbfExtLowIOAlM

14.DE.ABB.COM_000009 (No alarm presentation when feedbacks fail)

If a alarm occurred in the breaker and after it was acknowledged it could occur that the breaker did not show the alarm state anymore if both feedbacks were missing, this was due to the fact that the graphic element did not detect the 'No feedbacks' present status, as do the other process objects. The breaker has been harmonized with the other process object and will show the closed alarm state when both feedbacks are missing during a alarm.

14.DE.ABB.COM_000010 (Coldretain attribute missing on counter values)

The Cumulative values of the sbfPulseCounter function were reset to 0 on a coldstart of the controller. The code of the counter has been changed so that the Coldretain attribute could be added to the Cumulative and period outputs. The 2.0 and 2.1 library versions have been adapted.

14.DE.ABB.COM_000019 (Step numbers not properly presented)

When the sequence step property was activated the step numbers and names were not properly presented in the faceplate. This has been corrected. A further change has been made in the sepSEQExecM to solve a VB error that was still present in the module. The normal and extended faceplates of the 2.0 and 2.1 library versions have been adapted.

14.DE.ABB.COM_000023 (Safety command not issued after return from monitor mode)

There was a problem for pulsed type commands on returning from monitor mode to auto or manual, a safety command that was set during monitor mode was not executed when monitor mode was reset, this was due to a problem with edge detection for pulsed commands when returning from monitor mode. The control module has been adapted so that any safety or auto command set during monitor mode that differs from the current status will be executed on returning to manual or auto.

This error also concerned other pulse capable process objects such as breaker, mot1di, mot2dir and motvar. These modules have also been adapted likewise.

14.DE.ABB.COM_000024 (Permissive Operate and Tune incorrectly used in faceplate)

All objects in seSignalObjLib have tune permissions for changing the force value, the sesDigOutM had a connection error in the faceplate that incorrectly set Tune and operator permissions. The sesDigOut has been adapted so its behavior is now harmonized with the other signal objects in the library.

This CR also concerned the sesDigInstrM that also had the Operate permission for the force value and not Tune, the module has also been corrected.

APPL01.DE.ABB.COM_000123 (No indication for torque open in faceplate)

The sepMotValveM object only had a indication for torque close in the faceplate, the indication for torque open was missing. Both 2.0 and 2.1 Utility library objects have been updated with a torque open symbol. The symbol becomes active when the open torque is active without the open status, similar to the conditions for torque close.

APPL01.DE.ABB.COM_000207 (Status of alarm active for LL and LLL with wrong connections)

The 2.0 library version of the sesAnaIn6M contained a connection error for the LL and LLL level active parameters. This has been reconnected to the proper parameter, the 2.1 version is OK.

01.DE.ABB.COM_0000223 (Wrong Local Mode indication in Display Element)

The Monitor mode indicator in the breaker in library version 2.0 had the wrong background color, this has been adapted for the breaker and switch display elements.

01.DE.ABB.COM_0000225 (Operator User can operate Preset Button)

The sepMot1Dir only had POC permission connected to the preset buttons for runtime. This has been changed to also include the Tune permission since a operator should not be able to preset the runtime.

If operators need to change the runtime a security aspect should be added to the instance to change the permissions for the operator.

This change also affect the sepMot2DirM and the sepMotVarM, these modules have also been updated regarding the runtime settings.

APPL01.DE.ABB.COM_000226 (Unclear behavior of Alarming/Output command in Discrepancy)

The default behavior of a breaker on blocking alarms was to reset both internal open and close command flags. This lead to a situation that after a Acof open was acknowledged and reset the breaker was error free since no command was active anymore due to the reset of the internal orders. However the opening or closing status was still active, visible as an flashing arrow. This leads to a confusing situation for the operator.

The Opening and Closing status is now reset when both internal orders are reset and place the breaker in a intermediate state.

A SafeState parameter has been added to be able to choose the safe position of the breaker on blocking alarms. This provides the possibility to set the desired state on blocking alarms so a open or close command will be issued on Acof and the breaker will be in a correct state or generate an additional Acof alarm.

01.CH.ABB.COM_000013 (Missing display element on sepValveAna)

The sepValveAnaM only had a 2way and 3way valve graphic element, all other valve objects also had a flap presentation. A Flap graphic has been added to both 2.0 and 2.1 versions of the library

01.CH.ABB.COM_000019 (Events do not work)

The 2.1 library version of the sesAnaIn6M did not generate a event when a alarm limit was set to event. To solve this error the sbfHighAlM and sbfLowAlM alarm modules were adapted since they incorrectly did not set the level active output when only the alarm was disabled.

The events are now generated when the EventType parameter for the limit is set other than 0. The internal define parameter for the alarm is automatically reset. The detection of the limit remains active unless the EnDetect parameter for the limit is reset.

The 2.0 library version has also been adapted since it did not include the delay time for the limit, which was the initial reason for the update in 2.1.

02.DE.ABB.COM_000093 (Process Commands ProcOn, ProcOff, ... still not supported)

The control modules in the seProcessLib contain ProcOn/Off/Cls/Opn process command parameters that function like safety commands but are of a lower priority than safety commands. They are of a higher priority than manual or automatic commands and also bypass the permission logic. Up until now these commands were not made available to the application.

The commands are included in the SO.BaseSO datatype with the safety commands. They are represented in the faceplate and graphic element with a mesh symbol like the safety commands but with a gray background.

01.US.ABB.COM_000019 Disable Station Backtracking

This CR was described in 01.US.ABB.COM_000009 where a change was made to be able to disable backtracking in manual mode, however the change was also implemented in the CoForward code, which is incorrect. The CoForward code has been restored to its original code before the adaptation.

01.US.ABB.COM_000020 secStation Cold restart

This CR concerns CR 01.US.ABB.COM_000016, which concerned adding Cold restart code to the Start code to initialize OpSp, OpCo, OpMode and OpCasMode during Cold restart. This CR was not yet implemented in the 2.1-1 library version.

01.US.ABB.COM_000021 Initialize vs. Start_Code plane

After a power failure the Start code is not executed, therefore a number of CC elements were not properly initialized. In CR 01.DE.ABB.COM_000141 a change was proposed to solve this and move the code from the Start_Code to a Initialize code plane that is triggered by a applicationstart (Start_Code functionality) and a PowerUp (power failure initialize). This change was not yet implemented in the 2.1-1 library version.

01.US.ABB.COM_000022 CO limit Auto/Manual mode

An enhancement to CO limit was made in the local US library. This change concerns the limitation in both manual and auto mode in the CoBackward/CoForward code planes. This change has been taken over in the current Utility library version.

14.DE.ABB.COM_000028 (OffCmd.Forced missing in ForceMode status)

In the sepMot1Dir the OffCmd.Forced was missing in the ForceMode status. The element has been included in the status. Both 2.0 and 2.1 motor have been adapted.

Other issues

Besides the CR's some other issues that were noticed during testing are solved.

sbCommLib

The Read and WriteVar modules in the communication library did not properly write to the Done parameter, also a unnecessary wait cycle has been removed so the next command will be executed 1 cycle faster.

UL_TrimCurve

It was possible to set the minimal time range to a implausible value, e.g. 1 second. In this case the time area of the trim curve was not related to the shown value and the grid. A change was made to the UL_TrimCurve limiting the minimal value to 2 minutes. All values below this value will be ignored.

Extended Faceplate apply and focus

Together with the trim curve it was noticed that the trim curve DEW lost focus after the first typed character, also it was not possible to use the apply button in the faceplate. This problem was caused by the extended faceplate definition of the object the trim curve belonged to.

To solve this a m_sc.RequestApply function was added to the OkButton code to handle other inputs in other tabs besides the extended faceplate and the m_sc_DoEnableApplyButton function in each extended faceplate was adapted. Some lines of code for the DefaultButton and SetFocus was moved to a If statement for the OwnSession. This solves both focus and apply button problems.

Unused variables

In the InteractionPar of the sepSEQExec, sec2XmitSel and sec3XmitSel 2 old variables have been removed 'ObjUrgLevel' and 'ObjAlUrg', these variables have been replaced in the 2.1 library by the priority mechanism and no longer serve any purpose.

In the Status of the sepValveAnaM the variable ObjAlUrg has been removed, this variable was no longer served any purpose.

Upgrade consequence:

If these variables are still accidentally referenced to in the application a error will occur and the application needs to be adapted.

sbgTabAlarms2 causes system events

In some modules the selection of the sbgTabAlarms2 caused some events in the system eventlist indicating problems with write errors and/or VB errors. This was caused by the fact that the signaltable and the sbgTabAlarms faceplate reference to the Control Module InteractionPar.BaseIPar as standard, however some objects do not have a BaseIPar or are a function block (selector).

As a result of this error the selection between Object alarm priority or individual alarm priority was no longer possible since the property referenced to did not exist. For the modules concerned the sbgTabAlarms2 has been overridden and adapted to the correct variables. The following modules have been adapted:

- sepDeviceM
- sepSEQExecM
- sec2XmitSelM
- sec3XmitSelM
- secStationM
- sbfSelector

Version 2.1-0 Rollup 2

Rollup 2 addresses some problems in the process and signal library and was imported on top of the 2.1-0 installation. These changes are included in newer versions of the library.

seProcessObjLib 2.1-0

sepMotValveAnaM

The Extended faceplate had a problem with the input of the manual setpoint. When the apply button on the faceplate was used the value was reset to 0. If the <enter> button on the keyboard was used there was no problem. The extended faceplate element has been updated to correct the problem. (CR APPL03.DE.ABB.COM_000030)

seSignalObjLib 2.1-0

sesAnaIn6M

A problem existed with the generation of events when the switchpoints were configured as an event (xxEventType parameter 1, 2 or 3). The error was caused by the fact that a different alarm module was used in the AnaIn6 than in the AnaIn. This required different detection code for the event settings and was overlooked in the first release. This code has now been adapted.

Version 2.1-0 Rollup 1

A number of problems with the NLS resource managers were addressed in this version but they have been omitted in this overview since they have become obsolete with the NLS solution in the 2.2-0 release. This rollup version was only released for beta users of the library and is included in the final release.

seControlLib 2.1-0

SecStationM

A CR was solved for the station, APPL01_DE_ABB_COM_000208 Operator cannot operate Co and SP.

Version 2.1-0

All Change Requests (CR's) are stored in CRM tool. For more information please have a look into CRM database on Lotus Notes. Product: Utility Library.

Table 2-12. Corrected errors in Version 2.1 for SV 4.1

Request No	Component	Title
ABB_NLSUP_SPK02_000081	SepMot1Dir	coldstart on FBConf causes AcofStop
ABB_NLSUP_SPK02_000063	seProcessObjLib	Short changes in auto commands, one scan, produce Acof alarm
APPL01.DE.ABB.COM_000166	sepBreakerM	ColdstartMode=3 not described in docu and parameter
02.DE.ABB.COM_000019	Other	Artificial object for event generation

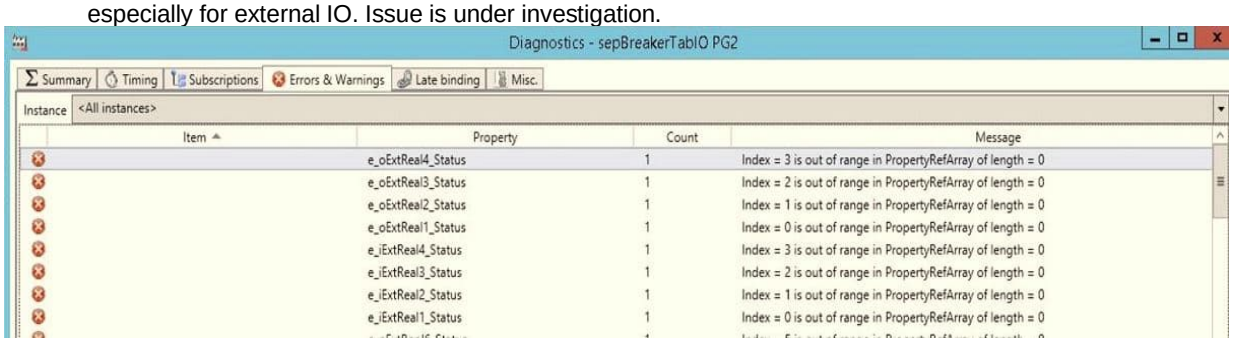
Table 2-13. Corrected errors in Version 2.0 (SV4.0 / SV4.1)

Request No	Component	Title
DE.ABB.COM_000067	sbfSelector	Switch Over of sbfSelector starts the next object after stopping the previous object
DE.ABB.COM_000061	sbfSelector	Undefined state of sbfSelector after forced switch over
01.CA.ABB.COM_000023	sepBreakerM	sepBreakerM Safety commands not being reset
02.DE.ABB.COM_000029	sepMotValveM	Object can not be started in Auto Mode by cold start
CH01-APP01_000026	sepValveOpClM	Open and Close command for Valve 2Coil
CH01-APP01_000013	sepValveOpClM	Unused parameter and incorrectly named local variables in sepValveOpClM
02.DE.ABB.COM_000074	seSignalObjLib	seSignalObjLib objects have a malfunction of blocking error alarms
01.DE.ABB.COM_000080	SFCViewer	Name of system extension SFC Viewer
DE01-SPK24_000244	sepBreakerM	sepBreakerM in simulation mode doesn't work correctly
DE01-SPK24_000241	sepMot1DirM	Simulation doesn't work correctly
DE01-SPK24_000243	sepMot2DirM	sepMot2Dir in simulation mode doesn't work correctly
DE01-SPK24_000246	sepMotValveM	sepMotValveM doesn't work correctly in simulation mode
DE01-SPK24_000246	sepMotValveM	sepMotValveM doesn't work correctly in simulation mode
DE01-SPK24_000242	sepValveOpClM	sepValveOpClM in simulation mode doesn't work correctly
01.US.ABB.COM_000016	secStationM	secStationM Cold Restart
02.DE.ABB.COM_000080	sepValveOpClM	EnManInAuto parameter has no influence in Status record

2.6 Known Problems and Workarounds

Known Issues of Utility Library 6.0.4 & 6.0.4.1 for AC800M:

1. TFS Bug 159725: In all the objects where latebinding is used, there are clutter of errors appearing in Diagnostics section of “TabIO” aspect as shown below. It is doubted that this is causing slowness in update of certain symbols especially for external IO. Issue is under investigation.



Solution: Currently no solution is available for this issue for the projects which are using the external IO feature. However, projects not using external IO can be in touch with in-pw-librarysupport@abb.com for possible solutions.

2. 20220608-6128899: sesAnaInstrM: When “All alarm Enabled” button is disabled from Faceplate, if any of the limit alarms from “Alarm” Tab are selected, those alarms popoulate in the alarm list. At present there is no workaround available. This issue would be addressed in the next release.

2. TFS Bug 11829: sbfExtBoolAlM / sbfBoolAlM: The Status.Signal component of the sbfExtBoolAlM module of the sbAlarmEventLib (and its basic module sbfBoolAlM) remains active if the Enable Detect of the alarm is reset. Also when the AlSignal input is reset and an Acknowledge and Reset is given the Signal components remains active. The status of the AlarmCondM module returns to the inactive and acknowledged state.

Solution: Currently no solution is available for this issue.

3. TFS Bug 11827: sepMotValveM: The sepMotValveM resets its command when the corresponding feedback/torque input is received. However it does not reactivate the command output when the position is lost afterwards.

   Workaround: This issue can be solved by introducing an extra module between the IO.oClsCmd / oOpnCmd signals and the IO on the interface that reactivated the Cls and Opn signals if the corresponding feedback was reset.

4. TFS Bug 59603: PG2 Faceplate IO tab does not support addition of IO Signal of sbfExtBoolIOAlm control module and other similar control modules belonging to sbAlarmEvent Library. If sbfExtBoolIOAlm with end with _EA is added, it appears in the PG2 alarm tab of the faceplate. But it does not appear in the PG2 IO tab. However it appears in the ‘old’ signaltable in both the IO tab as well as the alarm tab.

   Workaround: Current workaround would be to configure an additional external IO control module in the application instance to support the IO signal addition in the PG2 IO tab.

Known Issues of Utility Library 6.0.3 for AC800M :

1. TFS Bug 11829: sbfExtBoolAlM / sbfBoolAlM: The Status.Signal component of the sbfExtBoolAlM module of the sbAlarmEventLib (and its basic module sbfBoolAlM) remains active if the Enable Detect of the alarm is reset. Also when the AlSignal input is reset and an Acknowledge and Reset is given the Signal components remains active. The status of the AlarmCondM module returns to the inactive and acknowledged state.

   Solution: Currently no solution is available for this issue.

2. TFS Bug 11827: sepMotValveM: The sepMotValveM resets its command when the corresponding feedback/torque input is received. However it does not reactivate the command output when the position is lost afterwards.

   Workaround: This issue can be solved by introducing an extra module between the IO.oClsCmd / oOpnCmd signals and the IO on the interface that reactivated the Cls and Opn signals if the corresponding feedback was reset.

3. TFS Bug 59603: PG2 Faceplate IO tab does not support addition of IO Signal of sbfExtBoolIOAlm control module and other similar control modules belonging to sbAlarmEvent Library. If sbfExtBoolIOAlm with end with _EA is

added, it appears in the PG2 alarm tab of the faceplate. But it does not appear in the PG2 IO tab. However it appears in the 'old' signaltable in both the IO tab as well as the alarm tab.

Workaround: Current workaround would be to configure an additional external IO control module in the application instance to support the IO signal addition in the PG2 IO tab.

Known Issues of Utility Library 6.0.1 for AC800M:

1. In the last step of installation of Utility Library for AC800M 6.0.0, readme file may not launch in Windows Server 2012 R2 when "Show the readme file" check box is selected.

   Solution: In such cases readme file can be viewed in the following path C:\Program Files (x86)\ABB Industrial IT\Operate IT\Utility Library AC800M.

   Note: Readme file will get launched in Windows 8.1

2. TFS Bug 11829: sbfExtBoolAlM / sbfBoolAlM: The Status.Signal component of the sbfExtBoolAlM module of the sbAlarmEventLib (and its basic module sbfBoolAlM) remains active if the Enable Detect of the alarm is reset. Also when the AlSignal input is reset and an Acknowledge and Reset is given the Signal components remains active. The status of the AlarmCondM module returns to the inactive and acknowledged state.

   Solution: Currently no solution is available for this issue.

3. TFS Bug 11827: sepMotValveM: The sepMotValveM resets its command when the corresponding feedback/torque input is received. However it does not reactivate the command output when the position is lost afterwards.

   Workaround: This issue can be solved by introducing an extra module between the IO.oClsCmd / oOpnCmd signals and the IO on the interface that reactivated the Cls and Opn signals if the corresponding feedback was reset.

4. TFS Bug 59603: PG2 Faceplate IO tab does not support addition of IO Signal of sbfExtBoolIOAlm control module and other similar control modules belonging to sbAlarmEvent Library. If sbfExtBoolIOAlm with end with _EA is added, it appears in the PG2 alarm tab of the faceplate. But it does not appear in the PG2 IO tab. However it appears in the 'old' signaltable in both the IO tab as well as the alarm tab.

   Workaround: Current workaround would be to configure an additional external IO control module in the application instance to support the IO signal addition in the PG2 IO tab.

5. TFS Bug 64732: sec3XmitSelM: Format_Numeric and Format_Scale are not working.

   Solution: Currently no solution is available for this issue.

6. sbfExtBoolAlm: Path of Redirection Aspect (Implicit) is wrong.

   Solution: Temporary correction is available for this issue. Please contact in-pspppru.supportline@in.abb.com

Known Issues of Utility Library 6.0.0 for AC800M :

1. SepSeqExecM: When sepSeqExecM is configured along with Sequence2D as a Diagram in Function Designer, the error "Configuration Data Generation Stopped! Unable to proceed!" may occur during Code Generation.

   Solution: Currently no solution is available for this issue. This issue is being investigated in association with BU-CT in order to find a resolution.

   Note: When sepSeqExecM is configured along with Sequence2D as a Single Control Module in Function Designer, Code Generation is successful without any errors.

2. In the last step of installation of Utility Library for AC800M 6.0.0, readme file may not launch in Windows Server 2012 R2 when "Show the readme file" check box is selected.

   Solution: In such cases readme file can be viewed in the following path C:\Program Files (x86)\ABB Industrial IT\Operate IT\Utility Library AC800M.

Note: Readme file will get launched in Windows 8.1

3. TFS Bug 11829: sbfExtBoolAlM / sbfBoolAlM: The Status.Signal component of the sbfExtBoolAlM module of the sbAlarmEventLib (and its basic module sbfBoolAlM) remains active if the Enable Detect of the alarm is reset.
   Also when the AlSignal input is reset and an Acknowledge and Reset is given the Signal components remains active. The status of the AlarmCondM module returns to the inactive and acknowledged state.

   Solution: Currently no solution is available for this issue.

4. TFS Bug 11827: sepMotValveM: The sepMotValveM resets its command when the corresponding feedback/torque input is received. However it does not reactivate the command output when the position is lost afterwards.

   Workaround: This issue can be solved by introducing an extra module between the IO.oClsCmd / oOpnCmd signals and the IO on the interface that reactivated the Cls and Opn signals if the corresponding feedback was reset.

5. TFS Bug 59603: PG2 Faceplate IO tab does not support addition of IO Signal of sbfExtBoolIOAlm control module and other similar control modules belonging to sbAlarmEvent Library. If sbfExtBoolIOAlm with end with _EA is added, it appears in the PG2 alarm tab of the faceplate. But it does not appear in the PG2 IO tab. However it appears in the ‘old’ signaltable in both the IO tab as well as the alarm tab.

   Workaround: Current workaround would be to configure an additional external IO control module in the application instance to support the IO signal addition in the PG2 IO tab.

6. TFS Bug 64732: sec3XmitSelM: Format_Numeric and Format_Scale are not working.

   Solution: Currently no solution is available for this issue.

7. TFS Bug 62226: UL Faceplates: Special Symbol entry is allowed after numerals for input fields used for entering time. No Red box appears around dew for special symbols entered after numerals.

   Solution: Since this an inherent issue of PG2 input field, this has been referred to BU-CT for providing a resolution.

8. VSM ABB2015110400002:

   UL Data Migration Tool will not copy from PERMDATA to PERMGENDATA. Excel is not responding.

   Solution: Temporary correction (TC) is available to resolve this issue.

9. TFS Bug 72953:

   SepMotValveAnaM:-In IO tab,When u click on "on feedback" force Symbol to enable force button, Force button is hidden

   Solution: Temporary correction (TC) is available to resolve this issue.

10. TFS Bug 92396/VSM ABB2015110500101:

    SepBreaker: Display Element has no earthing image connected

    Solution: Temporary correction (TC) is available to resolve this issue.

11. TFS Bug 89682/VSM ABB2015100800030:

    sesAnaIn6M: No NLS tags defined for 'Event' in Limit tab of sesAnaInM & sesAnaIn6M

    Solution: Temporary correction (TC) is available to resolve this issue.

12. TFS Bug 75525/VSM ABB2015090900082:

    secStationM & secPIDM: There are too large steps in value input field when value is increased using mouse

    Solution: Temporary correction (TC) is available to resolve this issue.

13. TFS Bug 72950:

    SesPowerMeterM: Alarm Tab does not opens

    Solution: Temporary correction (TC) is available to resolve this issue.

14. TFS Bug 101201/VSM ABB2016012700009:

    SignalDescriptionIO Aspect is not instantiated when instantiating sepValveAnaM

    Solution: Temporary correction (TC) is available to resolve this issue.

15. TFS Bug 101679/VSM ABB2016012800497:

    Function Aspect missing in Control modules of sbFunctionLibrary

    Solution: Temporary correction (TC) is available to resolve this issue.

Known Issues of Utility Library 5.1.4 for AC800M :

Following issue occurs in Utility Library for AC800M 5.1.4 for 800xA SV5.1 64 Bit Rev.D / FP4 Rev.D / Rev.C

1) Problem: TFS Bug 52210: sbfCalendarM: After MSI upload in the subscriber system days of each month are not visible in faceplate elements.

   Problem description: After configuring the Provider (Remote Access Server) and Subscriber (Remote Access Client) in a MSI environment and if sbfCalendarM is configured in the Provider system, the presentations of the sbfCalendarM faceplate elements are correct in the provider system. However after upload is executed in the subscriber system the days of each month are not visible in faceplate elements in the subscriber system.

   Solution: Temporary correction (TC) is available to resolve this issue.

   TC should be used with Object properties configured as Weekdays = False and firstDayOfWeek=1 in order for faceplate to work properly after callup. Since Power Generation Utilities & Water industry operates on the weekends there is a change in the functional requirement for weekends (Saturday and Sunday) to be always enabled for selection therefore Object property Weekdays has to be configured only as False.

   Refer Recommendations section of the release notes for contact information in order to get the TC for the above issue.

2) Problem: TFS Bug 52789: sbfCalendarM: When the Object Property firstDayOfWeek=2, the first day of the month is starting a day later in the faceplate elements.

   Workaround: Configure the Object property firstDayOfWeek as 1 (1=Sunday). After implementing the workaround the days and date will be aligned correctly after the first call of the faceplate.
   Also this issue is not appearing after clicking the increase/decrease month button and navigating back to the current month. Hence the above issue can be managed by using the increase/decrease month button and navigating back to the current month after which the issue will not appear.

Note on upgrade of Utility Library AC800M with MSI support:

Note: If an upgrade of Utility Library AC800M with MSI support is done (e.g. Utility Library AC800M 5.0.2 MSI), then during “Add System Extension” with the 800xA Configuration Wizard Visual Basic pop-up windows will be shown. This is done even in the case, when the “Support for MSI” option is selected in the installation. This is normal behavior, because as 1st step the standard graphic extension libraries will be loaded, where some graphic aspects are re-deployed, showing the Visual Basic pop-up windows. Then, as 2nd step, the “MSI support” graphic extension libraries of the “Support for MSI” option will be loaded, overwriting the standard libraries.

Note on AC800M projects to be upgraded to SV 5.1:

To upgrade AC800M projects to SV 5.1, it is necessary to correct all functions and applications **before** making a system backup. In detail following problems may exist and must be solved before the system backup:

It is not allowed, that a library is already connected to an application, which does not more exist.

External alarms **must** be used from sbAlarmEventLib, not from seAlarmEventLib. That means, reengineering of application is necessary in this case. When the reengineering is done, the seAlarmEventLib has to be deleted from the application.

Note: If the functions and applications are not corrected before the system backup, the upgrade procedure will fail!

Known CR's of Utility Library for AC800M:

The remaining CR's will be considered in the next Utility Library revision or release

Table 2-13. Known CR's in Version 5.1.4

Request No	Component	Title
APPL01.CH.ABB.COM_000077	Auto Populating Controls	Number of decimals must be used for analog signal in IO and Alarm tab
APPL01.DE.ABB.COM_000868	sbgSFCViewer	Closing the SFCViewer closes the workplace too
APPL01.DE.ABB.COM_001024	sepSEQExecM	sepSEQExecM and Sequnce2D cannot be downloaded to AC800M controller

- **APPL01.DE.ABB.COM_000868** Closing SFCViewer closes workplace too

A solution for this problem is not immediately available, if problems with sbgSFCViewer occur it is advised to no longer use the sbgSFCViewer but to use the standard 800xA SFCViewer instead.

- **APPL01.DE.ABB.COM_001024** sepSEQExecM and Sequence2D cannot be downloaded to AC800M controller

Problem: sepSEQExecM and Sequence2D cannot be downloaded to AC800M controller if engineered in Function Designer 5.1. If planned in Function Designer 5.0 SP2 Rev. C/D and imported in Function Designer 5.1, no problems occur.

The sepSEQExecM was extended with ToSFC and FromSFC parameters to improve connection to a Sequence2D function. However a specific working order needs to be followed to avoid a Syntax error in XML when using the module in a default aspect Diagram and causing the problem described above.

Create an object of Function Diagram object type according to your project specific template in Function Structure, e.q. Function Diagram A3 Landscape, name = <object name>_FD
Add new Single Control Module aspect
Open Function Diagram with double click on Function aspect
Insert seProcessObjLib:sepSEQExecM, name = <object name>
Unhide all needed ports, at least the ports UseSeq2D, ToSFC and FromSFC
Insert Sequence2D, name = <object name>_SFC
Connect the parameters ToSFC and FromSFC of sepSEQExecM and Sequence2D
Add additional logic and engineer the sequence
Input/output references are by default of variable type DiagramVariable. During connect input/output references choose variable type CommunicationVariable
Allocate Function Diagram to application and generate code for CBM
Configure SFCViewer redirection aspect of object <object name> to open SFCViewer aspect in parent object <object name>_FD
Use Function Diagram tool Allocation -> Define Data Flow Order -> Generate -> Apply to configure Data Flow Order

2.7 Compliance issues of 800xA

Following types of Function Designer errors occur in 800xA 6.0.4

1. "Out ports are not allowed to be connected to an in_out port if there are more invocations connected to the out port."

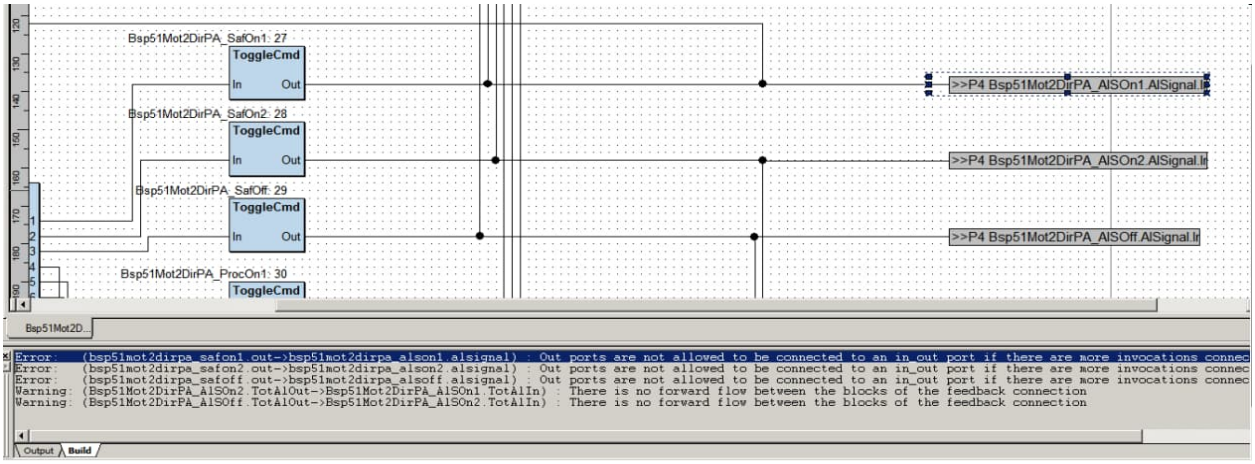


Figure 1: Error: "Out ports are not allowed to be connected to an in_out port if there are more invocations connected to the out port."

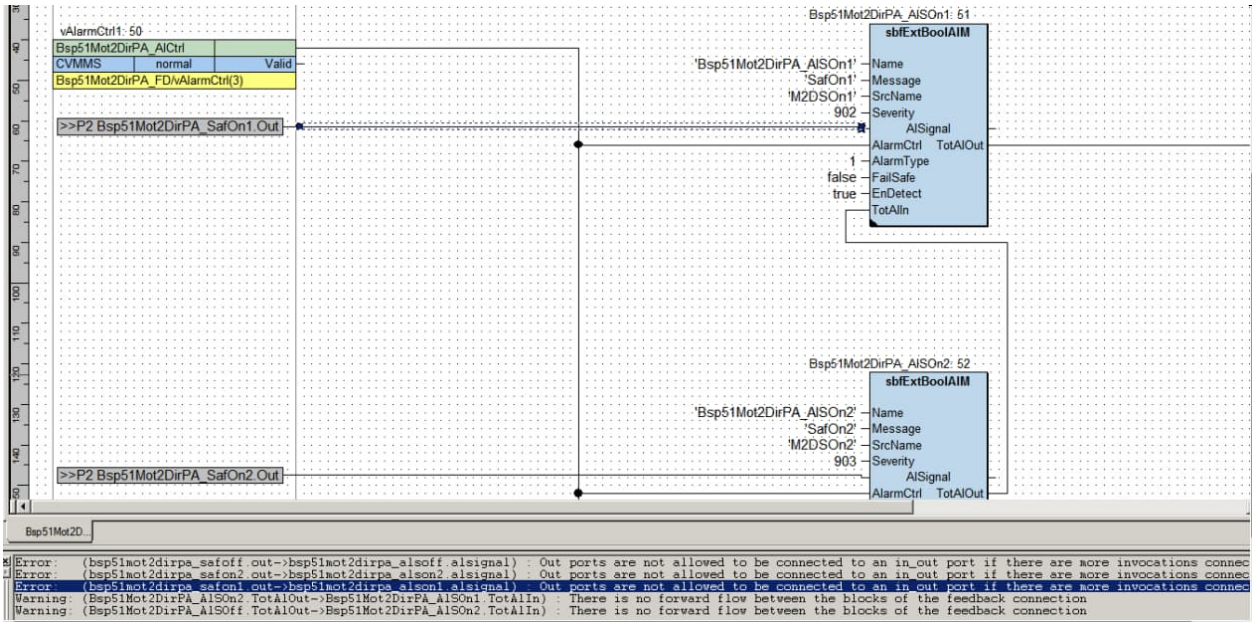


Figure 2: Error: "Out ports are not allowed to be connected to an in_out port if there are more invocations connected to the out port."

Workaround: Add Variable for Out port and connect to Page connector. Refer Figure 3 to Figure 6 for workaround.

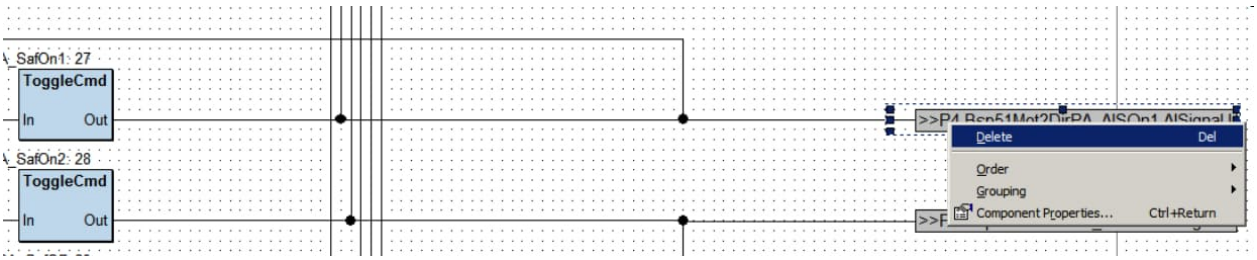


Figure 3: Delete the page connector

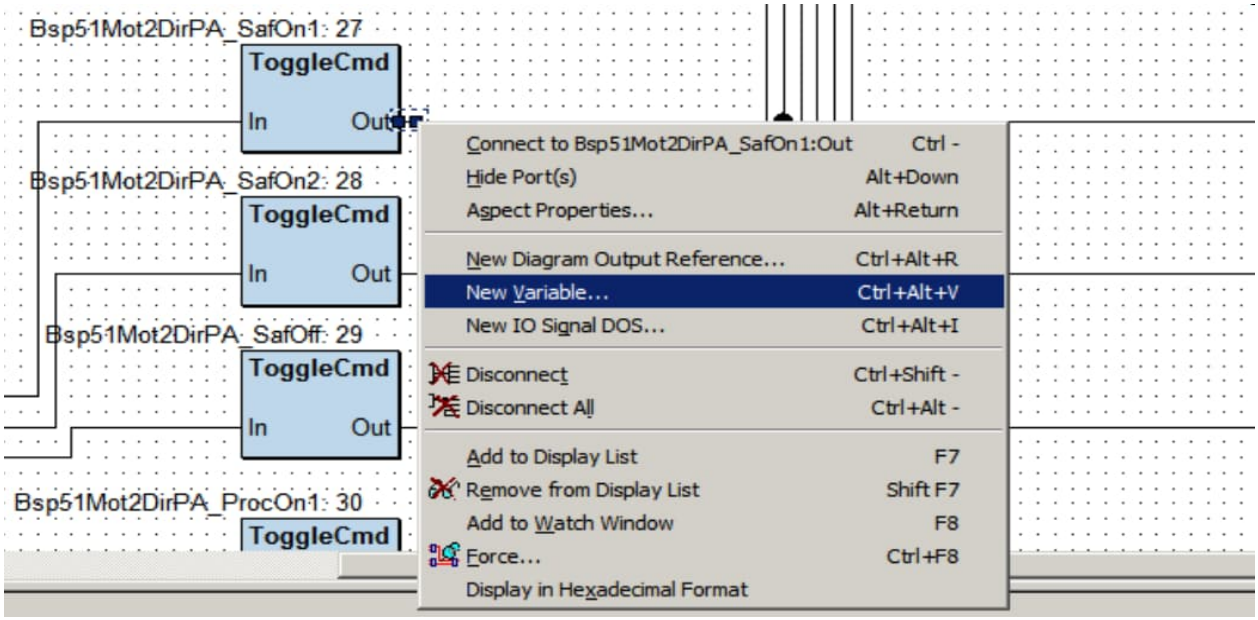


Figure 4: Add Variable for Out port

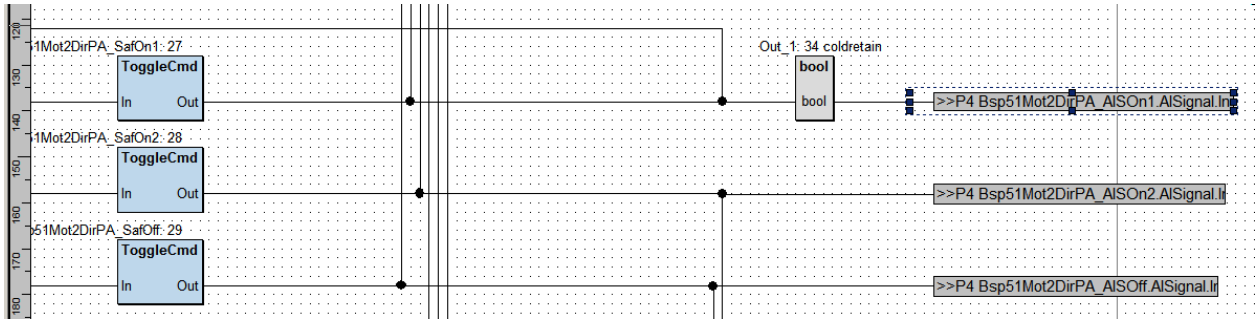


Figure 5: Connect the page connector

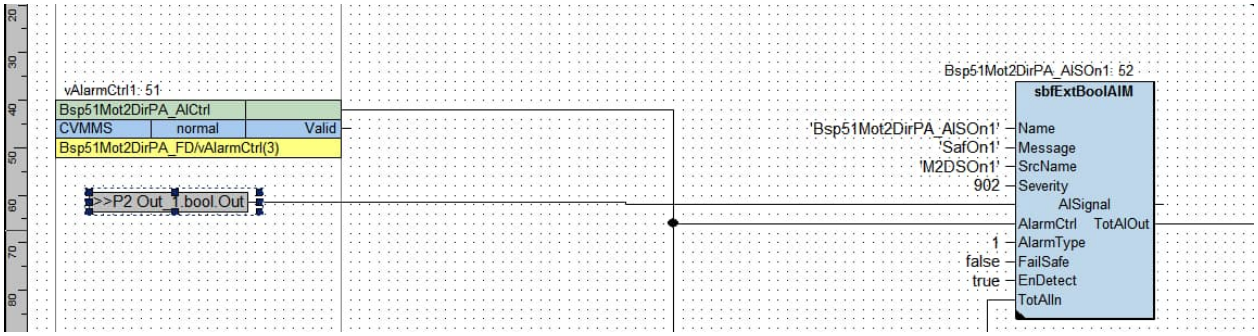


Figure 6: Connect the page connector

2. TFS Bug 62226: UL Faceplates: Special Symbol entry is allowed after numerals for input fields used for entering time. No Red box appears around dew for special symbols entered after numerals.

   Solution: Since this an inherent issue of PG2 input field, this has been referred to IA-CT for providing a resolution. Since the input field validation is not working with special characters, users are cautioned not to enter any invalid or special characters.

2.8 Recommendations

The issues mentioned in the Compliance issues of 800xA section of the release notes are related to function designer part of 800xA System. If any project coming across these issues should contact the concerned 800xA Level 3 Supportline for issue resolution and Temporary correction if any.

2.9 Installation

See Utility Library Installation Manual 1KGF101037-6041

2.10 Backup and Restore

Backup and restore of the Utility Library project data is embedded in the general project backup and restore strategy by considering the data storage path used in the product installation procedure.
It is recommended to produce a complete Backup.

3. MISCELLANEOUS

N/A

REVISION HISTORY

Rev.			Date / Initial
07/2022	6.0.4.1	Release for System 800xA 6.1.1.1	08/07/2022
07/2021	6.0.4.1	Release for System 800xA 6.1.1	25/07/2021 SG
06/2019	6.0.4	Release for System 800xA 6.1.0	30/06/2019 KM
05/2018	6.0.3	Release for System 800xA 6.0.3-1 & 800xA 6.0.3-2	14/05/2018 MSS
01/2017	6.0.1 A	Release for System 800xA 6.0.3	13/01/2017 MSS
09/2016	6.0.1	Release for System 800xA 6.0	09/10/2016 MSS
02/2016	6.0.0	Release for System 800xA 6.0.1-0	02/16/2015 MSS
05/2015	6.0.0	Release for System 800xA 6.0	05/15/2015 MSS
05/2014	5.1.4	Release for System 800xA SV 5.1 64 bit Revision D Refer Compatibility→Software, Known Problems and Workarounds and Recommendations sections of the release notes which are updated for this release.	05/19/2014 MSS
03/2014	5.1.4	Release for System 800xA SV 5.1 64 bit Feature Pack 4 Revision D	03/19/2014 MSS
10/2013	5.1.4	Release for Utility Library 5.1.4, System 800xA 5.1 64 bit Revision C	10/07/2013 CH
08/2013	5.1.2 RU 1 5.1.2	Release for System 800xA SV 5.1 64 Bit Feature Pack 4	08/23/2013 CH
04/2013	5.1.2 RU 1 5.1.2	Release for System 800xA SV 5.1 64 Bit Revision C	04/30/2013 CH
04/2013	5.1.3	Release for Mina Abdullah WDC II and Koudiat Acerdoune, Release for Utility Library 5.1.3, System 800xA SV 5.1 32 Bit Revision A with Feature Pack 1, 13 New PG2 Faceplates included in Faceplates and Graphic Elements PG2 installation option	04/05/2013 CH
11/2012	5.1.2 RU 1	Release for Utility Library 5.1.2, System 800xA SV 5.1 64 Bit Revision B	11/21/2012 CH
09/2012	5.1.2	Release for System 800xA SV 5.1 64 Bit Revision B	09/07/2012 CH
03/2012	5.1.2	Release for System 800xA SV 5.1 64 Bit Revision A with Feature Pack 1	03/14/2012 CH
02/2012	5.1.2	Release for System 800xA SV 5.1 Revision A with Feature Pack 1	02/16/2012 CH
12/2011	5.1.2	Release for System 800xA SV 5.1 64 Bit	12/23/2011 CH
06/2011	5.1.2	Release for System 800xA SV 5.1 Revision A	06/30/2011 CH
03/2011	5.1.1	Release for System 800xA SV 5.1 with process graphic 2 (PG2) VB graphic elements included as installation option	03/18/2011 CH
11/2010	5.1.0	Release for System 800xA SV 5.1 with process graphic 2 (PG2) VB graphic elements included as installation option	11/30/2010 WT
11/2010	5.0.4	Release for System 800xA SV 5.0 SP2D with process graphic 2 (PG2) MSI version included as installation option	11/12/2010 WT
10/2010	5.0.4	Release for System 800xA SV 5.0 SP2C with process graphic 2 (PG2) MSI version included as installation option	10/29/2010 WT
01/2010	5.0.3 MSI	Upgrade for VB compatibility issue with Multi System Integration environments	01/20/2010 ECL
10/2009	5.0.3	Release for System 800xA SV 5.0 SP2C with process graphic 2 (PG2)	10/27/2009 WT
07/2009	5.0.3	Release for System 800xA SV 5.0 SP2B with process graphic 2 (PG2)	07/31/2009

			WT
07/2009	5.0.2	Release for System 800xA SV 5.0 SP2B	07/15/2009 WT
02/2009	5.0.2	Release for System 800xA SV 5.0 SP2A	01/28/2009 WT
01/2009	5.0.2	Original Issue	02/03/2009 FG
	2.2-0	Release for System 800xA SV 5.0 SP1a (5.0.1) Includes: New VB Priority graphics 2.2-0 New VB Priority graphics 2.1-1 New VB Priority graphics 1.1-0 'Old' VB legacy graphics 2.0-0 'Old' VB legacy graphics 1.0-0	11/29/2007 WT
	2.1-1	Release for System 800xA SV 5.0 (5.0.0) Includes: New VB Priority graphics 2.1-1 New VB Priority graphics 2.1-0 New VB Priority graphics 1.1-0 'Old' VB legacy graphics 2.0-0 'Old' VB legacy graphics 1.0-0	10/03/2006 WT
	2.1-0	Release for System 800xA SV 4.1 Includes: New VB Priority graphics 2.1-0 New VB Priority graphics 1.1-0 'Old' VB legacy graphics 2.0-0 'Old' VB legacy graphics 1.0-0	02/06/2006
	2.0-0	Release for System 800xA SV 4.1	11/11/2005
	4.2.0	Release 4.2.0 on SV4.0	04/13/2005
	3.2.0	Release 3.2.0 on SV3.1SP2RU1	11/05/2004
	3.1.1	Release 3.1.1 on SV3.1	07/01/2004
	1.1	Release 1.1 on SB2.1	01/22/2004
	1.0	Release 1.0 on SB2.1	09/12/2003

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