Release Note

Control IT Pulp and Paper Control Library

Version 5.X

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1. Introduction

1.1 Executive Summary

This document covers version 5 releases of the product Control IT Pulp and Paper Control Library.

2. Version Designation

2.1 Software version 5.1

2.1.1 Version 5.1/0

The CD-ROM containing Control IT Pulp and Paper Control Library 5.1/0 requires 800xA System version 5.1

2.1.1.1 Profibus Device Object type for UMC22

The function block in PP_UMCLib works together with the following Device Object Types. The afw files needed is stored on the CD.

- Profibus Device Object Type ABB PDP22-FBP Version 4.0. Release Notes for this object has document number 2PAA101570.
- Profibus Device Object Type ABB UMC22 Version 6.0. Release Notes for this object has document number 2PAA101575.
- The included Hardware library file ABBDrvUMCHwLib 1-0-0.afw **must be used together with the PP_UMCLib 5.1-0.afw**

2.1.2 Version 5.0/4

The CD-ROM containing Control IT Pulp and Paper Control Library 5.0.4 requires 800xA System version 5.1

2.1.2.1 Profibus Device Object type for UMC22

The function block in PP_UMCLib works together with the following Device Object Types. The afw files needed is stored on the CD.

- Profibus Device Object Type ABB PDP22-FBP Version 4.0. Release Notes for this object has document number 2PAA101570.
- Profibus Device Object Type ABB UMC22 Version 6.0. Release Notes for this object has document number 2PAA101575.
- The included Hardware library file ABBDrvUMCHwLib 1-0-0.afw **must be used together with the PP_UMCLib 5.1-0.afw**

2.2 Software version 5.0

2.2.1 Version 5.0/2

The CD-ROM containing Control IT Pulp and Paper Control Library 5.0/2 requires 800xA System version 5.0 with SP2 Rev B

2.2.1.1 Profibus Device Object type for UMC22

The function block in PP_UMCLib works together with the following Device Object Types. The afw files needed is stored on the CD.

- Profibus Device Object Type ABB PDP22-FBP Version 4.0. Release Notes for this object has document number 2PAA101570.
- Profibus Device Object Type ABB UMC22 Version 6.0. Release Notes for this object has document number 2PAA101575.
- The included Hardware library file ABBDrvUMCHwLib 1-0-0.afw **must be used together with the PP_UMCLib 5-0-2.afw**

2.2.2 Version 5.0/1

The CD-ROM containing Control IT Pulp and Paper Control Library 5.0/1 requires 800xA System version 5.0 with SP1. If new PG2 is used, then 800xA System version 5.0 with SP2 Rev A is required.

2.2.2.1 Profibus Device Object type for UMC22

The Function block in UMC Library working together with the following Device Object Types

- Profibus Device Object Type ABB PDP22-FBP Version 4.0. Release Notes for this object has document number 2PAA101570.
- Profibus Device Object Type ABB UMC22 Version 6.0. Release Notes for this object has document number 2PAA101575.
- The included Hardware library file ABBDrvUMCHwLib 1-0-0.afw **must be used together with the PP_UMCLib 5-0-1.afw**

2.2.3 Version 5.0/0

The CD-ROM containing Control IT Pulp and Paper Control Library 5.0/0 requires 800xA System version 5.0 with SP1

2.3 Revision History

Revision	Release date	Remarks
Control IT Pulp and Paper Control Library 5.0/0	Aug 05, 2007	
Control IT Pulp and Paper Control Library 5.0/1	Jan 24, 2009	
Control IT Pulp and Paper Control Library 5.0/2	Sept 18, 2009	
Control IT Pulp and Paper Control Library 5.0/4	Sep 27, 2010	
Control IT Pulp and Paper Control Library 5.1/0	Nov 8, 2010	

2.4 Compatibility Version 5.1

2.4.1 Version 5.1/0

This version is compatible with version 5.0/2 with minor modifications. See Upgrade procedure

2.4.2 Version 5.0/4

This version is compatible with version 5.0/0 with minor modifications. See Upgrade procedure

2.5 Compatibility Version 5.0

2.5.1 Version 5.0/2

This version is compatible with version 5.0/0 with minor modifications. See Upgrade procedure

2.5.2 Version 5.0/1

This version is compatible with version 5.0/0 with minor modifications. See Upgrade procedure

2.5.3 Version 5.0/0

This version is compatible with version 4.0/4 with minor modifications. See Upgrade procedure

3. Product Notes

3.1 Version 5.1/0

3.1.1 New or modified functions

3.1.1.1 Logical Color Definition

In previous versions, it's quite difficult for some project or region to change the logical to meet the customer requirement. Modification is needed on almost every aspect due to the way logical color is implemented.

A new logical color definition **Pulp & Paper Library Colors** is added in Workplace Structure. With this new color scheme, project will only need to change the RGB color to suit the requirement.

The new **Pulp & Paper Library Colors** is implemented only for all PG2 graphics. All VB graphics are still using the existing **Pulp & Paper Colors**.

3.1.1.2 NLS

In previous versions, NLS is defined on each object types. Changes must be done on each object type. A new NLS manager is introduced. It's located at the Library Structure > Preferences & Customizations > Pulp and Paper Library.

The new NLS is only implemented for the PG2 graphics. All VB graphics are still using existing NLS on each object types.

3.1.1.3 Substitute for the HSI Variable

A new datatype for each object type is implemented instead of using common datatype. Each object type will have 3 unique datatypes: **InPar**, **OutPar** and **Opr**. The variables in each datatype are using more understandable name.

While HSI is hidden inside the function blocks, those new datatypes are exposed as parameters. **InPar** is defined as in parameter and **OutPar** and **Opr** are out parameter. It's now possible to write the configuration parameter from the logic, and also to read the values which previously not available. It makes easier task to wrap the object type into specified object type with some additional logic implemented.

The **InPar** and **OutPar** parameters are defined as by_ref parameters. Value of **InPar** parameter can be changed from the Interaction Window but also from the application program.

For PID01A, there is a warning ‘Parameter with direction 'in by_ref' may be modified through parameter PID01A_In1.InPar’. This is due the design in PID parameter on auto tuning and changed parameter is not automatically transferred as active parameter unless ‘Apply’ button is activated.

HSI variable is now no longer used / available except for variables which normally used for trending in previous versions.

3.1.1.4 PG2 graphics

The expression in PG2 graphics is improved and optimized. A number of new graphic elements are added.

3.1.1.5 Init Mode

It's now possible to define the initial mode when first downloading to controller. Objects will go to the mode defined in init mode when cold download is performed. Default init mode is Man or E1 depending on the object types. Init mode is internally limited to Man (5), Auto (6), E1 (7), E2 (8) and E3 (9). If any other value than those is entered, it will internally set Man as default init mode.

3.1.1.6 Additional interlocks

Interlocks in Valve01, Motval01, Motval02, UMC22_Act and UMC22_Act02 are expanded with 2 IC, 8 IB and 2 IA. Man01, PID01, PID01A, Ratio01 are added with 2 new IB.

3.1.1.7 Text configuration

Text configuration is now stored in **Text Configuration** aspect. It was stored in **Text Properties** aspect in the version 5.0/1 and 5.0/2. Text for M1 to M5 inputs showed in the faceplate is now configurable in **Text Configuration** aspect.

3.1.1.8 Alarm limit in faceplate element

Previously, alarm limit in faceplate is limited by the value of the higher and lower alarm limit. Ex: H1 is limited by H2 and L1. This is now changed. Alarm limit is now only limited by the range.

3.1.1.9 Alarm limit

Each alarm limits are now has own configuration (AlarmPar data type). It consists of AEConfig, AlarmDelay, Hyst, Limit, Severity and Block. It's now possible to have separate alarm delay and hysteresis for each alarm limit.

This applies to MVAlarms (MV alarms), DevAlarms (Deviation alarms), MCAlarms (motor current alarms), ActPosAlarms (Actuator position alarms). All these are exposed as parameters.

3.1.1.10 Motor Current

In previous versions, motor current alarm is triggered when Curr is more than 100%. It's now possible to set the alarm limit other than 100%. The value set is in the same unit as the MC input.

3.1.1.11 Motval interlocks

Previously when interlock occurred, the valve will move either to open or close position. This was defined in **ForceOpen** variable for IB interlock. IA and IC have one force open and one force close. It's now possible for valve to remain/stay in its position if interlock occurred.

A new property **Direction** is replacing the **Force Open** in IB. This also implemented in both IA and IC.

Direction = 0, means valve will remain in its position, unable to open/close

Direction = 1, means valve will move to open position

Direction = 2, means valve will move to close position

3.1.1.12 Event Name

It's not possible to change the event name before. **EventName** is now available as in parameter, making it possible for each object to have unique event translator. If **EventName** is changed from the default value, user will need to create own AE Translator on the object instance itself. This will also make easy for user to create own object type

3.1.1.13 Alarm and Event List Configuration

Alarm List, **Event List**, **Hidden Alarm List** and **Shelved Alarm List** aspects are now configured with the PP Library Alarm & Event List Configurations.

3.1.1.14 Trend Template

Object Trends Display aspect is now configured with the PP Library Trend Templates. There are 3 different template available :

a. PP Library Control Object Trend : used for all control valve objects
b. PP Library Motor Object Trend : used for all motor controlled objects
c. PP Library Standard Object Trend : used for all standard objects.

3.1.1.15 PP_ElementLib, PP_FunctionLib and PP_UMCLib

Issue	Correction or Fix
COMP_R Low limit is not working	Corrected
AOC01, AOS01 When OUT limit is not enabled, the Low and High Limit will follow the range of the signal	The Low and High Limit will not follow the range of the signal when OUT limit is not enabled
DIC01, DIS01 No indication of blocked alarm state in Graphical element	Corrected
DInt02, Real02 When the range is changed, the value entered is not automatically limited by the new range	Corrected
Motval01, Motval02, UMC22_Act, UMC22_Act02 Indication in faceplate for Interlock state is not showed correct.	Corrected

PID01A Deviation has been calculated as Dev = (MV - WSP) * 100 / (HSI.Max - HSI.Min)	Corrected to Dev = (MV - WSP) * (HSI.PO_Max - HSI.PO_Min) / (HSI.Max - HSI.Min)
Mot02 and UMC22 Indication of interlock in faceplate and GE element is not good for the following case. You have an interlock for Forward direction. Indication in Faceplate is OK, showing that you can only start in Rev direction. You start the motor in reverse direction and the motor is started. Still Yellow X is showed. The Yellow X should be removed as the motor is running and the interlocks is only valid in Forward direction	Corrected
Mot01, Mot02, MotFreq, Dricon_S and UMC22 Reason for last stop in Maintenance tab is not correctly showed.	Corrected
SEQ01 If the sequence is used for continuous control, no red indication for Max Step time and Max Sequence time exceeded should be showed	If Max SeqTime and Max StepTime parameters is set to 0, red indication will not be shown for Sequence Time Out and Step Time Out
Valve01 Give a Close order. OPN limit switch is released but no signal is coming from CLS limit switch. In the faceplate both indications first PEC and then PEO. There should not be any indication of PEO	Corrected

3.2 Version 5.0/4

Version 5.0/4 has the same functionality as version 5.0/2 rollup 1, but is generated to allow installation of the library in a System version 5.1 of 800xA.

3.2.1 Modified functions

Issue	Correction or Fix
DIC01, DIS01 No indication of blocked alarm state in Graphical element	Corrected
Mot02 Reason for last stop is not correctly presented for M5 parameter	Corrected
PID01A Deviation has been calculated as Dev = (MV - WSP) * 100 / (HSI.Max - HSI.Min)	Corrected to Dev = (MV - WSP) * (HSI.PO_Max - HSI.PO_Min) / (HSI.Max - HSI.Min)
Valve01 Give a Close order. OPN limit switch is released but no signal is coming from CLS limit switch. In the faceplate both indications first PEC and then PEO. There should not be any indication of PEO	Corrected
Motval01 Indication in faceplate for Interlock state is not showed correct.	Corrected
Mot02 and UMC22 Indication of interlock in faceplate and GE element is not good for the following case. You have an interlock for Forward direction. Indication in Faceplate is OK, showing that you can only start in Rev direction. You start the motor in reverse direction and the motor is started. Still Yellow X is showed. The Yellow X should be removed as the motor is running and the interlocks is only valid in Forward direction	Corrected
Mot01, Mot02, MotFreq, Dricon_S and UMC22 Reason for last stop in Maintenance tab is not correctly showed if stopped by	Corrected

Operator, RunInt1 or RunInt2	
SEQ01 If the sequence is used for continuous control, no red indication for Max Step time and Max Sequence time exceeded should be showed	If Max SeqTime and Max StepTime parameters is set to 0, red indication will not be shown for Sequence Time Out and Step Time Out
COMP_R Low limit is not working	Corrected

3.3 Version 5.0/2

3.3.1 New or modified functions

The indication of Selected Object and Blocked Object has been moved to the border line of the select area.

A new graphical element without unit is available for AOC01,AOS01,AIC01,AIS01 and Flow

The parameters for setting alarm handling for Deviation alarm in PID01 and PID01A is now available in parameter ExtCtrl

This revision includes also error corrections

Note: If upgrading from older version , version 5.0-0 or older versions, to version 5.0-2 a special tool is needed to retrieve and store text properties. See chapter Upgrading.

3.3.1.1 PP_FunctionLib and PP_UMCLib

Issue	**Correction or Fix**
PID01	ExtCtrl data type has been expanded with the functionality of control Deviation Alarms in the same way as for the MV Limits.
PID01	Gain scheduling is corrected
PID01A	The initial value on Controller Type is now set to PI
PID01A	ExtCtrl data type has been expanded with the functionality of control Deviation Alarms in the same way as for the MV Limits.
PID01A	Gain scheduling is corrected
PID01A	Correction of the functionality of FeedForward. In previous version the FeedForward value was calculated as FeedForward = Par FeedFwd /(MV Max–MV Min) and the value of FeedForward was limited to 0 to 100

	The calculation has now been changed to FeedForward = Par FeedFwd and with no limitation of the value
PID01A	The imbedded PidCC object has been given the name of the PID01A plus "_CC "
Motval01	If Limit Switch Close/Open is not released right after an Open/Close command, it will trigger an alarm. This error is now corrected, T3 is used as alarm delay parameter.
Motval02	An OPN or CLS command was send when a trip signal was activated in Auto Mode. This error is now corrected. No OPN or CLS command is send. If Limit Switch Close/Open is not released right after an Open/Close command, it will trigger an alarm. This error is now corrected , T3 is used as alarm delay parameter.
Ratio01	Selection of Mult or Div in Interaction Window is not possible. Corrected.

3.3.1.2 PP_ElementLib

Function	
Reg-R	Internal data is defined as retain
Reg-IL	Internal data is defined as retain
Comp_R	Internal data is defined as retain
DeMux_MI_IL and DeMux_MI_R	Internal data is defined as retain
Mux_MI_IL and Mux_MI_R	Internal data is defined as retain

3.3.1.3 Graphic elements for process displays and Faceplate aspects

Issue	**Correction or Fix**
AOC01,AOS01,AIC01,AIS01 and Flow	New presentation element: Value without unit and unit as two separate GE elements
PID01A Faceplate element Tab: Param Tab: Feed forward	The function of Apply and Undo buttons has been corrected. If a new value is entered the Apply and Undo buttons are activated. When Apply button is activated the values are send to the control algorithm. At this point it is not possible to make an Undo. If the Apply button has not been activated and the Undo button is pressed the original value of all the changed values will be displayed.
PID01A	After an successful tuning the selected values will be

Faceplate element Tab: Tune result	copied to the tab Param
PID01A Faceplate element Tab: Limits 1/ Limit 2	Deviation Alarm limits has been moved from Tab Limits 2 to Limits 1 Output limits has been moved from Tab Limits 1 to Limits 2
PID01A Object Display	The PID parameters showed under Parameters display the current values used by the control algorithm.
PID01A Faceplate	The indication of Output Limit has been corrected. The Yellow X is only presented in the faceplate when the Output Signal is in limit and external limitation control is selected
PID01A Faceplate	The Output Signal limits were showed in the Actuator Position bargraph. Is now corrected.
PID01A Faceplate	The Man Output bargraph now allows the possibility to use the handle to spec new value
PID01 Faceplate	The Output Signal limits were showed in the Actuator Position bargraph. Is no corrected.
PID01 Faceplate	The indication of Output Limit has been corrected. The Yellow X is only presented in the faceplate when the Output Signal is in limit and external limitation control is selected
PID01 Faceplate	The Man Output bargraph now allows the possibility to use the handle to specify new value
Man01 Faceplate	The Man Output bargraph now allows the possibility to use the handle to specify new value
MOT01 Faceplate	Presentation of Interlock signal ICs.IC1 in Interlock Display has been corrected
Mot01 GE aspect	The presentation of Fan and Pump GE elements has been corrected.
DIS01 Event text	If event handling of the input signal was selected the Message text was not correct. This is now corrected
DIC01 Event text	If event handling of the input signal was selected the Message text was not correct. This is now corrected
UMC22 GE aspect	The presentation of Fan and Pump GE elements has been corrected.
Bool02 GE aspect	Text indication is now corrected
Motval01 Faceplate	Bargraph presentation of ActPos is now corrected
Motval02 Faceplate	Bargraph presentation of ActPos is now corrected

AOC01,AOS01,DIC01,DIS01,DOC01,DOS01 Faceplate	When accessing aspects from Faceplate they are showed in Configuration mode. Corrected
DriconS Faceplate	Alarm handling has an error. Alarm icon is showing a ? Corrected
Flow01 Faceplate	Aspect link for Operator Note and Event list is dimmed in Faceplate. Corrected
Valve01 Faceplate	Interlock tab is showed in Faceplate. Corrected
All GE elements	The Selected and blocked status of an object is now presented at the boarder of the select area
All Graphic Element PG2	GE elements that show Numeric or Text values has been modified to support correct resizing of the Graphical Element

3.4 Version 5.0/1

3.4.1 New or modified functions

3.4.1.1 Interlocks

The Interlock functionality has been changed to support an Interlock display. The interlock display contains status for the interlocks, interlock text and configuration data for the interlocks.

Access to the interlock display is from an Aspect link in the faceplate or by right click on the object.

With the correct permission the user can change interlock texts and configuration data directly in the interlock display. It is now possible to override each interlock separately.

For a number of object types, the number of interlocks has been expanded.

Data that is presented in the Interlock display have been removed from Faceplate tabs and Object display

3.4.1.2 Storage of text

Text that is used by the Function Block for presenting data in Graphic elements, Faceplate and Object display has been removed from the Controller and is now stored in a new aspect in the Aspect system.

Note: If upgrading from older version to version 5.0-1 a special tool is needed to retrieve and store text properties. See chapter Upgrading.

3.4.1.3 Support for New Graphic.

A new System extension library containing theexisting VB6 based aspects converted to support the New Graphic is available.

This library contains the Graphic elements used for Process Graphic display, Faceplate aspect and Object display aspect.

3.4.1.4 Engineering tools

Together with the library is delivered the following engineering tools.

Object Duplication Checker 1.0-0

PP CRT Tools 2.0-2 with manual PP CRT Manual 3AST001792D0013

PP Status List 1.0-0
Variable Duplication Checker 1.0-0

3.4.1.5 PP_FunctionLib and PP_UMCLib

Function	
SEQ01	The activation of the start interlocks when Hold is activated is corrected
All	Events or alarms is only generated from objects which has the enable input parameter set to True
Mot01, Mot02, MotFreq, Dricons, Motval01, Motval02, UMC22, UMC22_Act, UMC22_Act02	For these object it is possible to select Jog Mode via an input parameter on the block
PID01	The gain constant used in the transfer function for the PID controller is now based in the range for the MV and the PO as they are defined in the interaction window. **NOTE :** Upgrade from older versions to this version will require recalculation of PID parameters if the PID controller was tuned with values differs from 0 to 100 on MV and PO. See status report Upgrade to version 5.0-1 of PID01 3AST00263D0007 rev A Change of Beta factor in when running in Auto mode caused a disturbance to the output signal. This is error is corrected. A new function has been added to support 2 or more PID controllers which share a common output
Man01	A status tab included in the faceplate to support diagnostic if PA instruments are used A possibility to control output signal after a release of process interlock is added.
DIS01, DIC01	A possibility to define a message field with data from the parameter in the controller is added to the interaction windows
UMC22_Act, UMC22_Act02	New parameter TRevLockOut is added to able change to other direction in a single step
DriconS	DriconS aspect Diagnostic Translation is modified to support Function Designer.
Time01	Operator entered time value via faceplate is now cold retained.
Total01	The handling of Signal error in Total01 has been corrected

Motval01, Motval02	If the valve stops on closed torque limit (ie. closes) and then looses the torque limit switch, only the indication changes from closed to intermediate. Now an alarm is added for this situation.
Motval01, Motval02, UMC22_Act, UMC22_Act02	The order of priority for the M-inputs is change to the some priority as for Motors. With the IB1 interlock active and set as closing interlock, the output for closing remains on even on M-input fail. This error is corrected.
Mot 01, Mot02, MotFreq, Motval 01, Motval02, UMC22, UMC22_Act, UMC22_Act02	All trip signals status is showed in faceplate signal tab and Object Display. Only highest signal will give alarm.

3.4.1.6 PP_ElementLib

Function	
Data type HSI….	The data types have been changed.

3.4.1.7 Graphic elements for process displays and Faceplate aspects

Function	**Process Display Elements/Faceplate**	
All	Process Display elements	If the Auto Disable function in the Controller gets activated the alarm state in the Process Display element was removed. This error is corrected.
DIS01, DOS01, AOS01	Process Display elements	The presentation of signal error is corrected
MOT01	Process Display elements	The OPC error status in presentation elements MOTPD11,MOTPD12,MOTPD13 is corrected
All	Process Display elements and faceplate	Presentation of OPC error is changed

3.4.1.8 Object type aspects

Function	**Aspect type**	
SEQ01	Object display	The area for presenting text is Activity / Transition / Jump Window has been made larger.

3.5 Version 5.0/0

3.5.1 New or modified functions

3.5.1.1 Alarm configuration

For all values that generate an alarm in pervious versions of the PP Function Lib a new possibility for configuration is available. With the new configuration one can select if:

1/ Alarm and Event are send. AE Config = 1

2/ Only Event is send. AE Config = 2

3/ No Alarm and Event are send. AE Config = 0

This change has also required changes in Interaction window, Faceplate aspect and Object Display aspect.

3.5.1.2 Alarm acknowledge from logic

A new parameter (AlarmAck) has been added to the FB for acknowledge alarms from program.

3.5.1.3 Alarm block

Alarm block from program will be presented with a Yellow Bx in the faceplate and a dotted yellow line in process graphic elements

Alarm block from Operator will be presented with a Yellow B in the faceplate and a dotted yellow line in process graphic elements

3.5.1.4 Input parameter Param

The Input parameter Param has been removed from all blocks.

3.5.1.5 PP_FunctionLib

Function	
Dricon_S	New presentation of diagnostic data from the Drive and extended events handling Panel mode is added Current, Torque and Temperature is read from the Drive and also available as output parameters in function block. **Note 1:** In previous version of the library scaling of parameters Current and Torque have been done in the object. Now the scaling has to be done in the Drive unit and in the Interaction window one enter the scaling data. Current , Torque and Temperature is individual parameters in the PPO Type 5 data type. Panel Mode and SO1 is also output parameters in function block The data type ASC600Std_par is now supporting PPO Type 5
Mot01,Mot02 and Motfreq	M1 to M5 is removed from status of output parameter NoInt
Valve01	OPNL = OPN and LSOPN and not LSCLS CLSL = CLS and LSCLS and not LSOPN

3.5.1.6 PP_ElementLib

No changes

Function	
Data type HSI….	The data types have been changed to reduce memory consumption.
ACS600Std_Par	Change to support PPO type 5
Data Type Param…	Is removed from the library

3.5.1.7 Graphic elements for process displays and Faceplate aspects

The following elements have been modified or added.

Function	Process Display Elements/Faceplate	
All	Process Display elements	Modified to support new alarm handling

3.5.1.8 Object type aspects

Function	Aspect type	
All	Faceplate	Adaptation for alarm/event configuration
All	Object display	Adaptation for alarm/event configuration

4. Installation

4.1 Installation of version 5.1/0

New installation of the software included on the Control IT Pulp and Paper Control Library is described in the following section:

4.1.1 System Software

Import the afw file using Import Export Tool in the following order

1. PP Library NLS
2. PP Library Trend Templates
3. PP Library Alarm & Event List Configurations
4. PP_ElementLib 5.1-0
5. PP_FunctionLib 5.1-0
6. PP_UMCLib 5.1-0 (only when UMC motors are used)
7. If PG2 graphics is used, import the following afw :
    a. Pulp & Paper Library Colors
    b. PP_FunctionLibGrapExt 1.1-0
    c. PP_UMCLibGraphExt 1.1-0 (only when PP_UMCLib 5.1-0 is used)
8. If VB graphics is used, AC800 VB Graphic Extension must be loaded before importing the following afw :
    a. Pulp & Paper Colors
    b. PP_FunctionLibVBGrapExt 1.1-0
    c. PP_UMCLibVBGraphExt 1.1-0 (only when PP_UMCLib 5.1-0 is used)
9. ABBDrvUMCHwLib 1.0-0 (only when UMC motors are used)

Documentation:

Copy the documentation files on the CD-ROM to a directory of your choice.

4.1.2 Loading of Function Aspect

If Function Designer is used, then load the following extension library

a. PP_ElementLib_FD 1.1-0
b. PP_FunctionLib_FD 1.1-0
c. PP_UMCLib_FD 1.1-0 (only when PP_UMCLib 5.1-0 is used)

4.2 Installation of version 5.0/4

Follow the same prodecure as for 5.0/2

4.3 Installation of version 5.0/2

New installation of the software included on the Control IT Pulp and Paper Control Library is described in the following section:

4.3.1 System Software

Import the afw file using Import Export Tool in the following order

1. Pulp and Paper Colors
2. PP_ElementLib 5.0-2
3. PP_FunctionLib 5.0-2
4. PP_UMCLib 5.0-2 (only when UMC motors are used)

5. PP Function NG extension library (when new graphic is used)
6. PP UMC NG extension library (when new graphic is used)
7. ABBDrvUMCHwLib 1-0-0.afw (only when UMC motors are used)

Documentation:
Copy the documentation files on the CD-ROM to a directory of your choice.

4.3.2 Loading of Function Aspect

If Function Designer is used, then load the extension library after the base library is loaded. Import PP_ElementLib_FD 1.0-2.afw, PP_FunctionLib_FD 1-0-2.afw, and PP_UMCLib_FD 1.0-2.afw (if PP_UMCLib is used)

4.4 Installation of version 5.0/1

New installation of the software included on the Control IT Pulp and Paper Control Library is described in the following section:

4.4.1 System Software

Import the afw file using Import Export Tool in the following order

1. Pulp and Paper Colors
2. PP_ElementLib 5.0-1
3. PP_FunctionLib 5.0-1
4. PP_UMCLib 5.0-1 (only when UMC motors are used)
5. PP Function NG extension library (when new graphic is used)
6. PP UMC NG extension library (when new graphic is used)

Documentation:
Copy the documentation files on the CD-ROM to a directory of your choice.

4.4.2 Loading of Function Aspect

If Function Designer is used, then load the extension library after the base library is loaded. Import PP_ElementLib_FD 1.0-1.afw, PP_FunctionLib_FD 1-0-1.afw, and PP_UMCLib_FD 1.0-1.afw (if PP_UMCLib is used)

4.5 Installation of version 5.0/0

New installation of the software included on the Control IT Pulp and Paper Control Library is described in the following section:

4.5.1 System Software;

The software is loaded from the PP_FunctionLib 5-0-0.afw, PP_ElementLib 5-0-0 and Pulp and Paper Colors.afw file into the 800xA system using the Import Export tool function. Import the .afw file in the following order

1. Pulp and Paper Colors
2. PP_ElementLib 5-0-0
3. PP_FunctionLib 5-0-0

Documentation:
Copy the documentation files on the CD-ROM to a directory of your choice.

4.5.2 Loading of Function Aspect

If Function Designer is used the function aspect is loaded for Function for PP_FunctionLib_FD 1-0-0.afw and Function for PP_ElementLib_FD 1.0-0.afw.

5. Upgrading

5.1 Version 5.1/0

5.1.1 System upgrade

The existing system must be upgraded to SV5.1 including the Control Project. Follow system upgrade procedure as describe in **3BSE036342-510 System 800xA 5.1 Upgrade** from 800xA SV5.1 Documentation.

5.1.2 Library upgrade

The system should be a SV5.1 system with the old version of the library installed.

1. Make a system backup.
   It's recommended also to make backup of Functional Structure, Control Project, and Libraries (export from Library Structure).

2. Make a back up of the parameters values of PP Library objects with the provided tool. Select the Excel tool based on the existing library.

Library version	Tool name
5.0-4	Upgrade from PP Library 5.0-2 to PP Library 5.1-0.xls
5.0-2	Upgrade from PP Library 5.0-2 to PP Library 5.1-0.xls
5.0-1	Upgrade from PP Library 5.0-1 to PP Library 5.1-0.xls
5.0-0	Upgrade from PP Library 5.0-0 to PP Library 5.1-0.xls
4.0-5	Upgrade from PP Library 4.0-5 to PP Library 5.1-0.xls
4.0-4	Upgrade from PP Library 4.0-4 to PP Library 5.1-0.xls
4.0-3	Upgrade from PP Library 4.0-3 to PP Library 5.1-0.xls
4.0-2	Upgrade from PP Library 4.0-2 to PP Library 5.1-0.xls
4.0-1	Upgrade from PP Library 4.0-1 to PP Library 5.1-0.xls
4.0-0	Upgrade from PP Library 4.0-0 to PP Library 5.1-0.xls
3.1-2	Upgrade from PP Library 3.1-2 to PP Library 5.1-0.xls
3.1-1 (1.1-1)	Upgrade from PP Library 3.1-1 to PP Library 5.1-0.xls
3.1-0 (1.1-0)	Upgrade from PP Library 3.1-0 to PP Library 5.1-0.xls

The projects must be downloaded to controllers and live data can be seen in 800xA system before retrieving the parameters value from the projects.

a. Open Excel file. Choose the correct tool.

b. Click on 'Retrieve Objects' button to open the *Retrieve Objects* dialog box
- Click on 'Browse Object' button to define the object path. The *Object Path* dialog box will pop-up. Expand the browser to browse for the specific Control Project or Application. Select the desired path and click 'OK' button to confirm. The selected path can be seen in *Retrieve Objects* dialog menu.
- Click on 'Append Existing Data' option if new data will be added to the next available row. Click on 'Clear Existing Data' option if existing data to be removed before starting to retrieve the objects.

c. Click on 'Read Parameters' button to open the *Read Parameters* dialog box

- If local host is a connectivity server, click on ‘Local Host’ option. Otherwise, user needs to select the ‘Remote Host’ option and select the correct node where the connectivity server resides. It will take a while to populate the available remote nodes
- Click on ‘Read Parameters’ button to read the existing parameters value

d. Verify if parameters has been retrieve successfully.

e. Save the Excel with specific name.

f. Repeat for other projects or applications.

Make sure no error is generated when retrieving objects and its parameters before proceeding to next step.

3. Import the new PP Library into the system. When prompted to override during import, select *Yes*.
   If the upgrade is from version 5.0-0 or newer, the new library will override the existing library. If upgrade from 4.0-5 or older, the new library will coexist with the old library in the system.
   Import the afw file using Import Export Tool in the following order
   1. PP Library NLS
   2. PP Library Trend Templates
   3. PP Library Alarm & Event List Configurations
   4. PP_ElementLib 5.1-0
   5. PP_FunctionLib 5.1-0
   6. PP_UMCLib 5.1-0 (only when UMC motors are used)
   7. If PG2 graphics is used, import the following afw :
      a. Pulp & Paper Library Colors
      b. PP_FunctionLibGrapExt 1.1-0
      c. PP_UMCLibGraphExt 1.1-0 (only when PP_UMCLib 5.1-0 is used)
   8. If VB graphics is used, import the following afw :
      a. Pulp & Paper Colors
      b. PP_FunctionLibVBGrapExt 1.1-0
      c. PP_UMCLibVBGraphExt 1.1-0 (only when PP_UMCLib 5.1-0 is used)
   9. If Function Designer is used, then load the following extension library
      a. PP_ElementLib_FD 1.1-0
      b. PP_FunctionLib_FD 1.1-0
      c. PP_UMCLib_FD 1.1-0 (only when PP_UMCLib 5.1-0 is used)
4. Open Control Builder
   If the upgrade is from version 5.0-0 or newer, the new library is automatically updated in the Project and Applications. If upgrade from 4.0-5 or older, insert the new library to the Project and Applications
5. Update the control logic for the following if applicable
   a. Mot01, Mot02, Motval01, Motval02, MotFreq, Dricon_S, UMC22, UMC_Act, UMC22_Act02 and Valve01

The parameter OrdBlk and OprOrder have been removed. Replace the connection with InPar and Opr accordingly.

b. Motval01, Motval02, UMC_Act and UMC22_Act02
IC1Opn, IC2Cls, IA1Opn and IA2Cls are replaced with IC1, IC2, IA1 and IA2. No functional changes will be seen after upgrade procedure followed completely.

c. PID01 and PID01A
HotInit parameter is removed as it's never been in used.

d. Correct any other error prompted in Control Builder

6. Download to controller
Make a cold download of the project

7. Repeat step 4 to 6 for all projects.

8. Load the parameters value of the projects.
a. Open the Excel file saved in step 2
c. Click on 'Write Parameters' button to open the *Write Parameters* dialog box
   - If local host is a connectivity server, click on 'Local Host' option. Otherwise, user needs to select the 'Remote Host' option and select the correct node where the connectivity server resides. It will take a while to populate the available remote nodes
   - Click on 'Write Parameters' button to write the existing parameters value

c. Repeat for other projects or applications.

9. If any project specific aspects have been added to the library object type, the aspect should be loaded back at this step. Correct error in the aspects if any.
The Object Trend Display at the instance level will be using the new templates and not using HSI variables for traces. If customized trend template and log configuration is used and traces pointing to the old HSI variables, Object Trend Display in object type structure should be corrected by changing those manually or import Object Trend Display aspect only from Library backup in step 1.
Note that all HSI variables from previous versions are available, only those commonly used for trending. It's recommended to use the new parameter for trending.

10. For VB graphics, use **Display Tool** to re-deploy all the VB graphic display

11. Run **VB Graphics Migration Tool** to migrate the graphics from VB to PG2 if applicable. It's recommended to migrate the VB graphic to PG2 graphics in SV5.1.

12. Removed the old library from system if upgrading from 4.0-5 or older.

13. Changes in PID01
If upgrading from 5.0-1 or older, modify tuning parameters for PID01 according to the status report Upgrade to version 5.0-1 of PID01 3AST00263D0007 rev A. If upgrading from 5.0-2, no changes need to be done in the PID01

14. Changes in PID01A

If upgrading from 5.0-1 or older and Feed Forward function in used, see Chapter 3.2.1.1. If upgrading from 5.0-2, no changes need to be done in the PID01A

5.2 Version 5.0/2

5.2.1 Upgrade procedure from version 5.0/1 to version 5.0/2

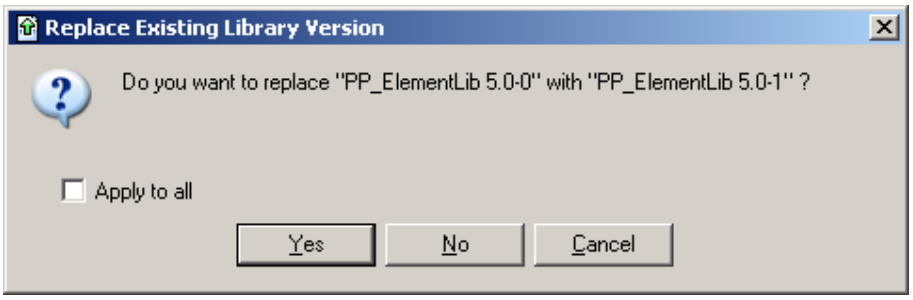
NOTE: If project specific aspects have been added to a library object or if modifications have been done on aspects in the standard library these aspects have to be back up before you start the upgrade procedure. After the upgrade is completed this aspects have to be loaded to the objects.

1. Make a backup with dependencies of the applications using instances of object types in PP Libraries, like Control applications, Process graphics etc. This step is to secure the possibility to recover if the upgrade procedure fails.
2. Import the new PP Library 5.0-2 into the system.
   When prompted with the dialog box “Replacing Existing Library Version and the question “Do you want to replace “xxx” with “xxx” ?”, always answer “Yes”. Alternatively, check on “Apply to all” checkbox and answer “Yes” when first prompted that question.
3. If Function Designer is used, the function aspect must be loaded for PP Function_FD, Function for PP Element_FD and PP_UMCLib_FD (if PP_UMCLib is used)
4. Open project in the Control Builder.
5. Download to the controllers. During this phase a number of Warnings will appear. Press ”Continue”
6. Cold start all controllers.
7. If Feed Forward function in PID01A has been used see Chapter 3.1.1.1
8. Use the Display Tool to deploy the graphic displays only for VB graphics.

5.2.2 Upgrade procedure from version 5.0/0 to version 5.0/2

NOTE: If project specific aspects have been added to a library object or if modifications have been done on aspects in the standard library these aspects have to be back up before you start the upgrade procedure. After the upgrade is completed this aspects have to be loaded to the objects.

1. Make a backup with dependencies of the applications using instances of object types in PP Libraries, like Control applications, Process graphics etc. This step is to secure the possibility to recover if the upgrade procedure fails.
2. Retrieve the text properties of each project with the provided tool (Text Transfer for Library Upgrade from 5.0-0 to 5.0-X). This tool is stored on the CD. Make sure there sure no duplicated object name in the 800xA system. Use the Object Duplication Checker to verify.
3. Import the new PP Library 5.0-2 into the system.
   When prompted “Do you want to replace “xxx” with “xxx” ?”, always answer “Yes”. Alternatively, check on “Apply to all” checkbox and answer “Yes” when first prompted that question.



4. If Function Designer is used, the function aspect must be loaded for PP Function.afw and Function for PP Element.afw.
5. Open project in the Control Builder.
6. Download to the controllers. During this phase a number of Warnings will appear. Press ”Continue”
7. Load the text properties which have been retrieved in step 2 back into the system.
8. Repeat step 5 to 7 for other projects.
9. Cold start all controllers.
10. Modify tuning parameters for PID01 according to the status report Upgrade to version 5.0-1 of PID01 3AST00263D0007 rev A.
11. If Feed Forward function in PID01A has been used see Chapter 3.1.1.1
12. Use the Display Tool to deploy the graphic displays.

5.2.2.1 Special issues at upgrade

- The text properties must be retrieved first before proceeding with the upgrade.
- There should not be any duplicate object name in the system. Any object with duplicated name will cause failure in restoring the text properties of the duplicated object back into the system.
- The PP Library 5.0-2 will replace PP Library 5.0-0. Only one library version will exist in the 800xA system.

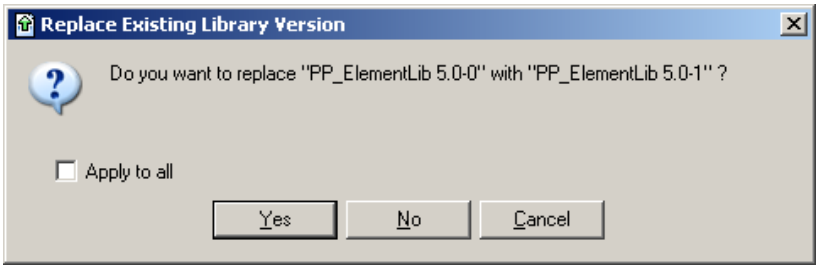
5.3 Version 5.0/1

5.3.1 Upgrade procedure from version 5.0/0 to version 5.0/1

NOTE: If project specific aspects have been added to a library object or if modifications have been done on aspects in the standard library these aspects have to be back up before you start the upgrade procedure. After the upgrade is completed this aspects have to be loaded to the objects.

1. Make a backup with dependencies of the applications using instances of object types in PP Libraries, like Control applications, Process graphics etc. This step is to secure the possibility to recover if the upgrade procedure fails.
2. Retrieve the text properties of each project with the provided tool (Text Transfer for Library Upgrade from 5.0-0 to 5.0-1). Make sure there sure no duplicated object name in the 800xA system. Use the Object Duplication Checker to verify.
3. Import the new PP Library 5.0-1 into the system.

4. When prompted “Do you want to replace “xxx” with “xxx” ?”, always answer “Yes”. Alternatively, check on “Apply to all” checkbox and answer “Yes” when first prompted that question.



5. If Function Designer is used, the function aspect must be loaded for PP Function.afw and Function for PP Element.afw.
6. Open project in the Control Builder.
7. Download to the controllers. During this phase a number of Warnings will appear. Press ”Continue”
8. Load the text properties which have been retrieved in step 2 back into the system.
9. Repeat step 5 to 7 for other projects.
10. Cold start all controllers.
11. Modify tuning parameters for PID01 according to the status report Upgrade to version 5.0-1 of PID01 3AST00263D0007 rev A
12. Use the Display Tool to deploy the graphic displays.

5.3.1.1 Special issues at upgrade

- The text properties must be retrieved first before proceeding with the upgrade.
- There should not be any duplicate object name in the system. Any object with duplicated name will cause failure in restoring the text properties of the duplicated object back into the system.
- The PP Library 5.0-1 will replace PP Library 5.0-0. Only one library version will exist in the 800xA system.

5.3.2 Upgrade from SB2, PP_Lib 1.1/1, version 3.1/1, version 4.0/X to version 5.0-1

All previous libraries must be upgraded to PP Library 5.0-0 first before upgrading to PP Libarry 5.0-1.

When upgrading to version 3.1/2 you must follow the work flow described in document 3AST0011792D0050revB Upgrade Application for PP_Lib which you find on the CD

6. Known problems

There is no known issue.

7. How to Report Errors

Please send a mail with the following address pulpandpapersupportocs@se.abb.com for reporting errors.

In all communication with us regarding questions or complains about the functions in the Pulp & Paper libraries please add a printout from the elements PP_ElementVersion, PP_FunctionVersion and PP_UMCVersion (if used).