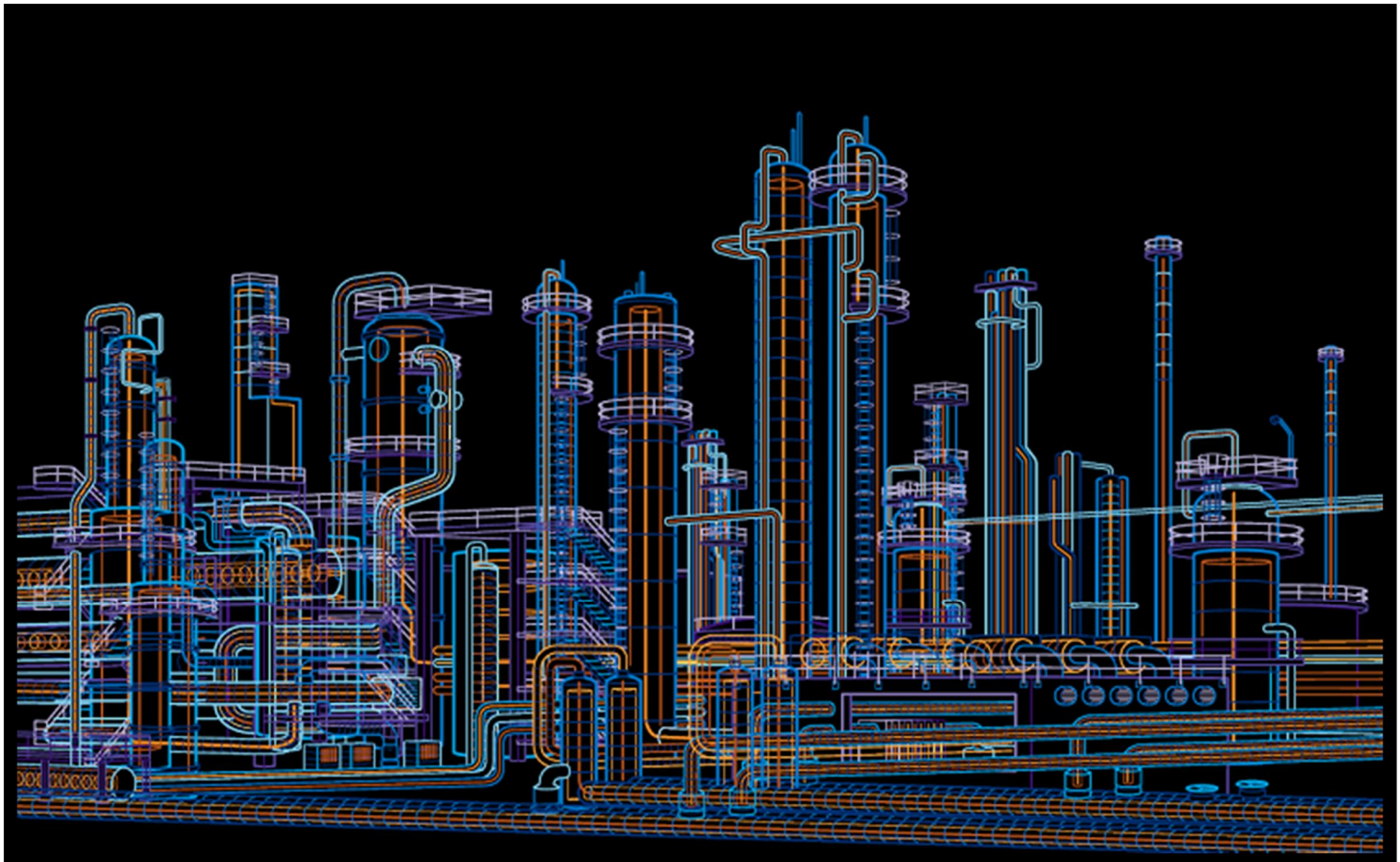

System 800xA
PC Toolkit Library for Melody
Installation and Configuration
User Manual

System Version 6.0

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1. Introduction

The purpose of this document is to describe the Installation of the PC Toolkit Library for Melody V6.0-0 and customizing the PC Workplace. A second section describes the restore procedure and the content of the PC Master Database.

PC Toolkit Library for Melody includes Graphic Elements and Faceplates which meet the requirements of the Petrochemical market and other Process Industries. Faceplates and Graphic Elements are also harmonized with the 800xA connects to AC800M and AC800F/Freelance.

This document is intended to be used for application engineers.

1.1 Use of Caution, Information, and Tip Icons

This publication includes **Caution** and **Information** where appropriate to point out safety related or other important information. It also includes **Tip** to point out useful hints to the reader. The corresponding symbols should be interpreted as follows:

Caution icon indicates important information or warning related to the concept discussed in the text. It might indicate the presence of a hazard which could result in corruption of software or damage to equipment/property.

Information icon alerts the reader to pertinent facts and conditions.

Tip icon indicates advice on, for example, how to design your project or how to use a certain function

Although **Caution** hazards are associated with equipment or property damage, it should be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process performance leading to personal injury or death. Therefore, comply fully with all **Caution** notices.

1.2 Terminology

A complete and comprehensive list of Terms is included in the Industrial IT, 800xA - System, Engineering Concepts instruction (3BDS100972R5001).

Abbreviation	Description
HMI	Human Machine Interface
HP HMI	High Performance Indication. Leverages the capabilities of traditional Graphic Elements and Faceplates. It provides technologies to make operator workplace safe and efficient
GE	Graphic Element
PC	Process Control; Industry where the PC Toolkit Library for Melody is used

Table: 1-1 Abbreviations

1.3 Document References

Category	ID	Document Number	Description
Operation	/1/	3BSE036904-600	800xA Operations (Standard product documentation)
	/2/	3BDA033439-600EN	PC Toolkit Library for Melody – Manual Operation
	/3/	3BDA033439-600DE	PC Toolkit Library for Melody – Handbuch Bedienung
Configuration	/4/	3BSE030322-600	System 800xA Operations 6.0 Operator Workplace Configuration
	/5/	3BSE049230-600	Engineering Graphics
	/6/	3BDA033478-600	HMI_Graphic Properties
Installation	/7/	3BSE034678-600	System 800xA SV6.0 Installation (Standard product documentation)
Brochure	/8/	3BDD017466-EN	PC_Toolkit_Library_Melody

Table: 1-2 Document References

2. Installation

The setup for the PC Toolkit Library for Melody consists of several system extensions.

System extension	Description
PC Graphic Object Types	Basic generic elements used in graphic elements and faceplates
PC Tools	Tools for the 800xA Melody Connect with Aspect Link and Link Generator
PC Workplace	The system extension contains the predefined one- and two-screen PC Operator Workplaces.
PC Setup for Melody	This Library contains faceplates and graphic elements in Classic style. (Faceplate and Graphic Element code is PG2)
PC Library for Melody HP-HMI Add On	This extension contains faceplates and graphic elements in High Performance style

Table: 2-1 System extension of the PC Toolkit Library

2.1 Prerequisites

Before installing the system extensions, other needed system extensions already must have been installed:

- 800xA Base Version 6.0
- 800xA for Melody Version 6.0

Install the PC Toolkit Library for Melody on all 800xA nodes (servers and clients).

Installation of the ABB PC Toolkit Library for Melody in a running system requires that node types have to be handled in the following order:

a. All Application Servers

b. All Connectivity Servers

c. All Aspect Servers - Primary Aspect Server shall be installed last

d. All Client Nodes

2.2 Program Installation

Open the “setup.exe” from the main installation directory. The ABB PC Toolkit Library for Melody/AC870P Installation wizard will open:

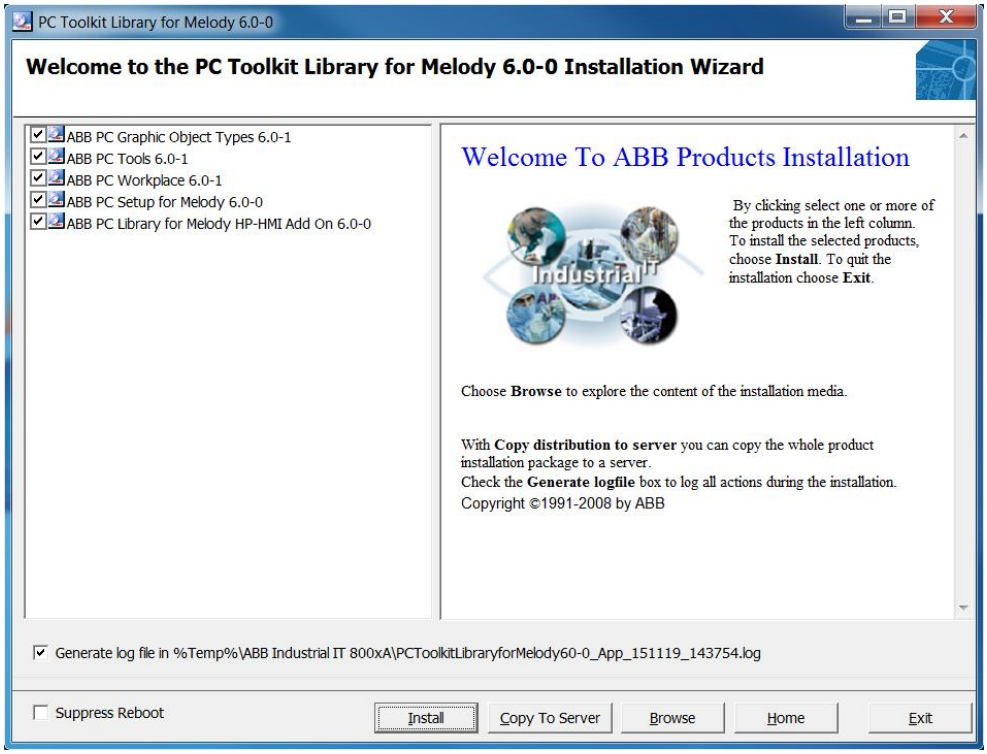


Figure 2.1 Installation Wizard

All required system extensions are already marked for installation. Start the installation by click the Install button and confirm the selection in the next window.

The installation wizard is starting the individual installation packages automatically and closes on completion. No user actions are required.

2.3 Loading system extension

When the ABB PC Toolkit Library for Melody/AC870P is installed on every node of the 800xA system the system extensions must loaded into 800xA.

The following base system extensions must have already been loaded before:

- 800xA Base Version 6.0
- Melody Connect Version 6.0

Open the Configuration wizard, select System Administration, select the system and select System Extension Load (in case of upgrade select System Extension Maintenance) and select the system extensions in the following order:

1. ABB PC Graphic Object Types
2. ABB PC Tools
3. ABB PC Workplace
4. ABB PC Melody Setup
5. ABB PC Toolkit Library for Melody HPHMI Add-On

The system extension can be loaded one by one or all together at the same time.

3. Upgrading

Older packages of the PC Toolkit Library for Melody has to be uninstalled manually before the new installation.

Modifications on elements are overridden when PC Toolkit Library for Melody is being loaded. It is therefore mandatory to either copy an element before modifying it or save all customer specific modified elements before reloading PC Toolkit Library.

It is recommend to use the Update Checker Tool which shows the standard objects that might be customized. Refer to Installation and Configuration when using this tool.

The aspect „PC Object Type Help“ is not used anymore. In new installations is does not exist. In case of upgrades this aspects can be deleted. Refer to chapter 5.20 PC Help Aspect: Melody Faceplate Status Icons

3.1 Updating 800xA SV4.x with Melody Faceplates

Graphic displays which were created under Visual Basic Editor (VB) require a migration, provided the graphics need to be modified.

The style of the Melody Faceplates in 800xA System version SV4.x was close to the faceplate style of Process Portal B and is different to the style now.

As of SV5.x the faceplates for AC800M, Freelance and Melody/AC870P were harmonized. Operators should therefore be instructed to get used to the new faceplates.

3.2 Update preparation steps

1. Backup the 800xA system.
2. All modified standard aspects like color definition, alarm list configuration, view class definitions and other settings aspects should be saved manually using the 800xA Import/Export tool. Especially take care that the following aspects (if modified) are exported before the update:
   - [Workplace Structure]Web System Workplace/PC Logical Color Definition
   - [Workplace Structure]Web System Workplace/PC HP HMI Color Definition
   - [Library Structure]Preferences & Customizations/PC Customizations (complete object)

   Export all modified standard graphic elements or export the whole path for Freelance in the [Object type structure]Control Systems.

   Uninstall every single software package of a PC Toolkit Library for Freelance prior to start installation.
3. Follow the instructions in chapter 2.2 Program Installation to complete the update.
4. Follow the instruction in chapter 3.3 Update Checker Tool
5. Follow the instruction in chapter 2.3 Loading system extension
6. Project specific modified aspects, which are overwritten during the system extension maintenance, should be imported again after loading the system extension.

3.3 Update Checker Tool

A new tool is available which makes a comparison between standard aspects and customized standard aspects. This gives one the opportunity to identify modified aspects in order to save them before loading the new system extension. The tool must be executed after installing the extensions but before loading it.

The PCUpdateCheckTool.exe is stored in the “Update Check Tool” folder of the installation media.

To perform the test, run the program on the aspect server. The tool lists those system extensions which can be loaded onto the target system. These are extensions that are not loaded or have a newer version.

During the check, the content of the afw.files, that are loaded with the system extension is listed and is compared with the aspects of the target system. The comparison routine is analyzing the aspects in the following way:

- The aspect is marked with a yellow warning symbol if the aspect exists and the modification user is different from any loaded system extension. In this case the aspect was potentially modified. This can also happen for aspects that are imported from an AFW file (as bug fix or new feature).
- The aspect is marked with a red error symbol if the aspect type has a limited number of aspects on the same object and there are already aspects of the same types but with a different id.

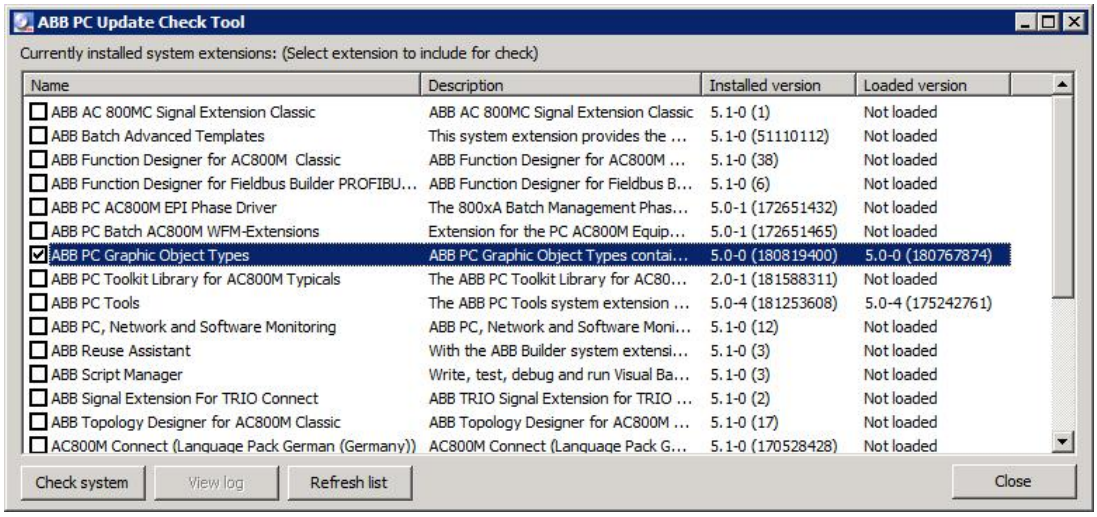


Figure 3-1 Update Check Tool –Main window

To start the check, check in minimum one of the system extension and click the “Check system” button.

The aspects that do not pass the comparison routine will be listed. Subsequently the aspects can be export to a single AFW file by click on the “Export aspects” button.

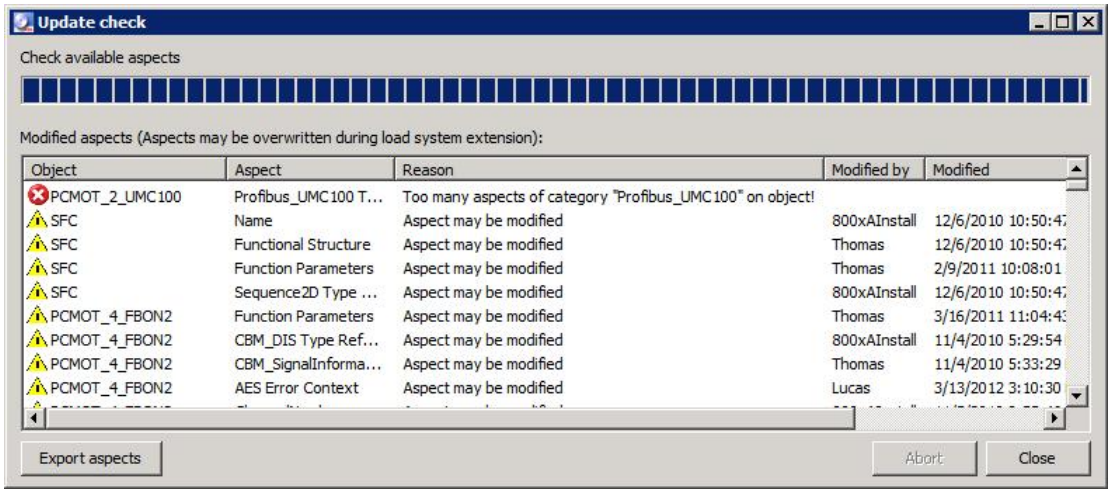


Figure 3-2 Update Check Tool – Check result example

4. Windows Settings for Client Nodes

This chapter describes the Windows settings for a client that is needed in order to make the Operator Workplace behave as intended for the Operators. The settings must be executed for each client.

	It is recommended to do most of all settings in the Domain Controller to avoid duplicate work and configuration errors.

4.1 Windows Theme

Set the Windows Theme to **Windows Theme**.

After that set the windows background to Solid color as shown on picture.

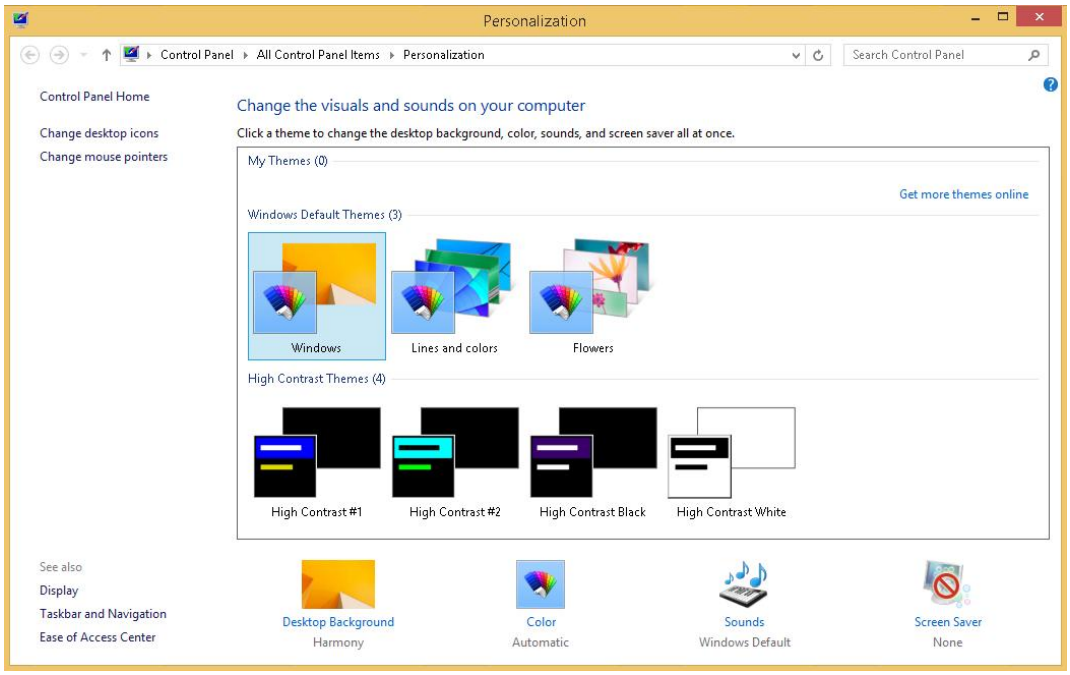


Figure 4.1 – Windows Theme

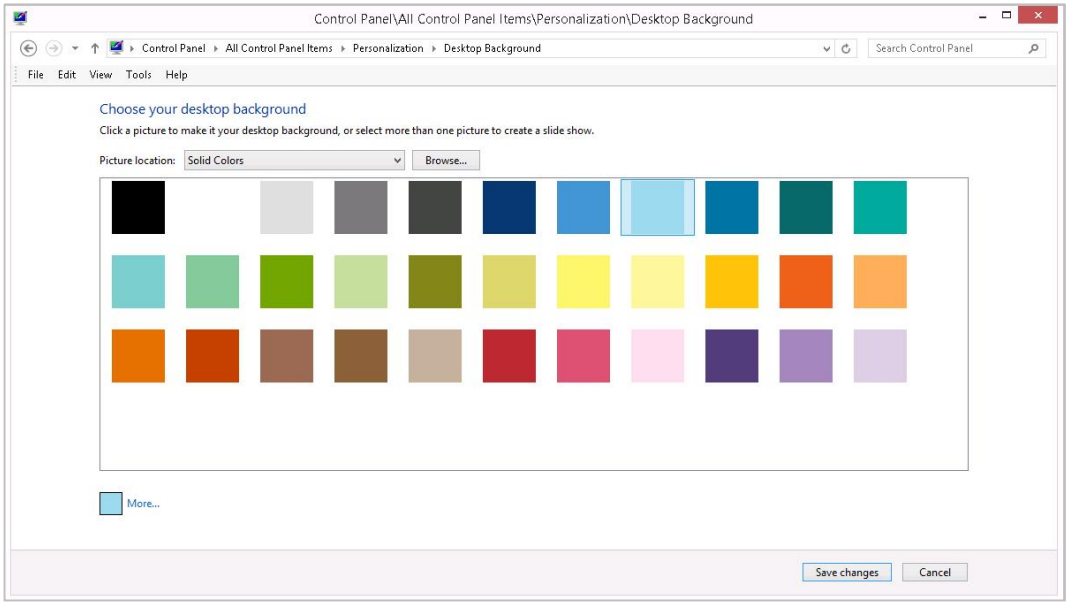


Figure 4.2 – Windows Background Color

4.2 ClearType

To get sharp Texts in Displays, Faceplates and Graphic Elements, turn on **ClearType**.

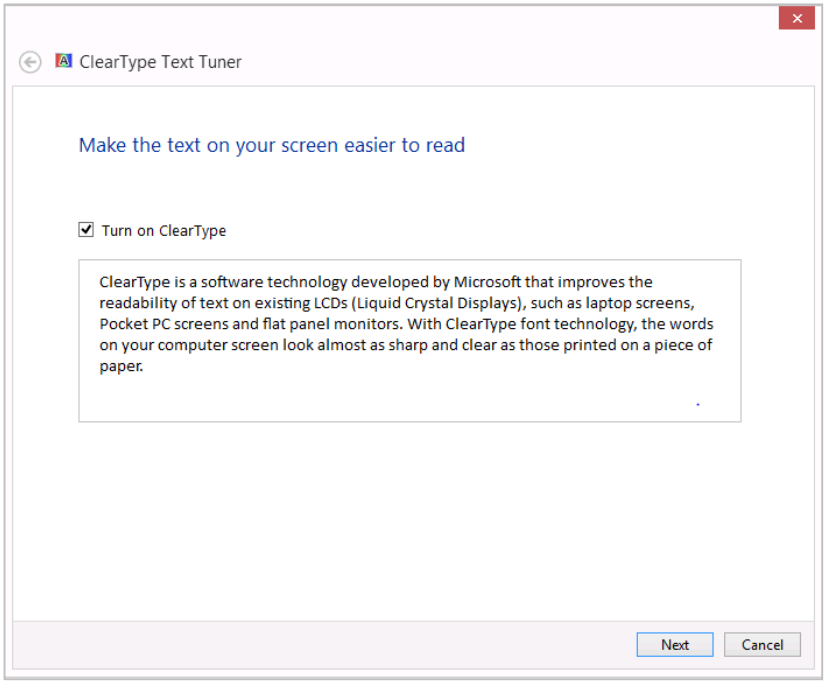


Figure 4.3 – ClearType

4.3 Screen Resolution

The PC Operator Workplace is made for 2 Screens, each with Screen Resolution of **1680x1050** pixels

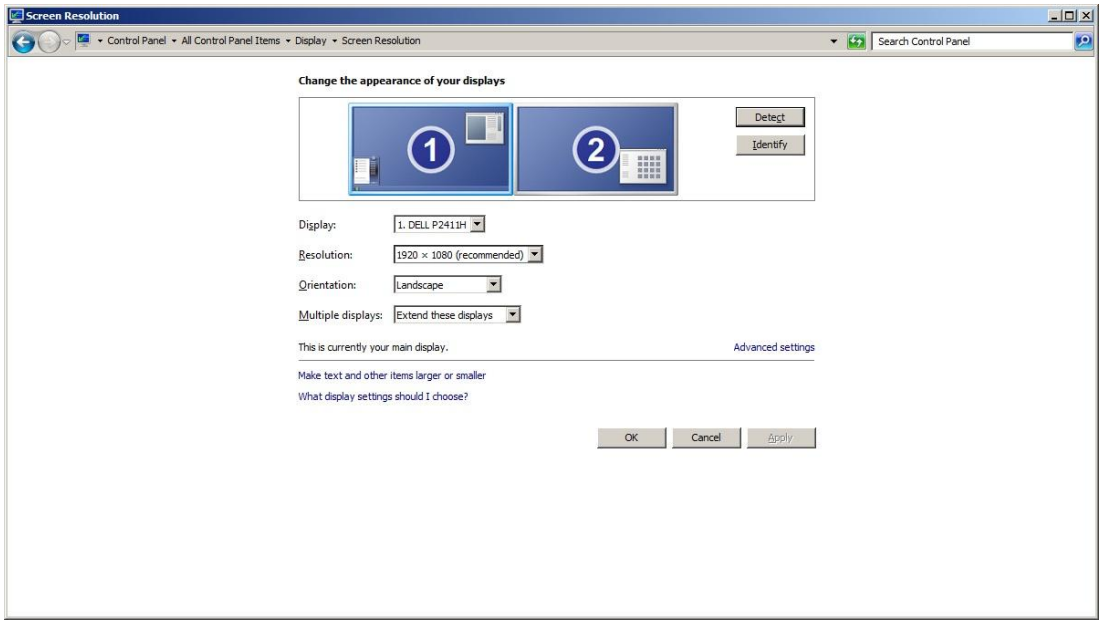


Figure 4.4 – Screen Resolution

4.4 Windows screen saver

Set the Windows screen saver to **[None]**.

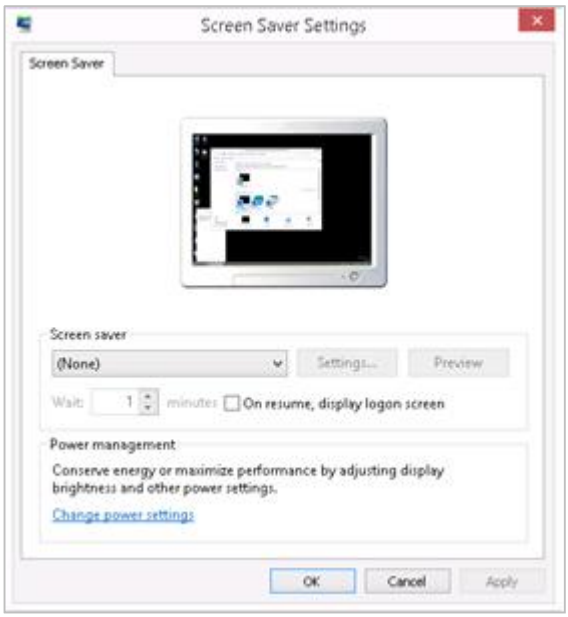


Figure 4.5 – Screen saver

4.5 Regional settings - Format

Set the Regional settings format to **English (United States)**

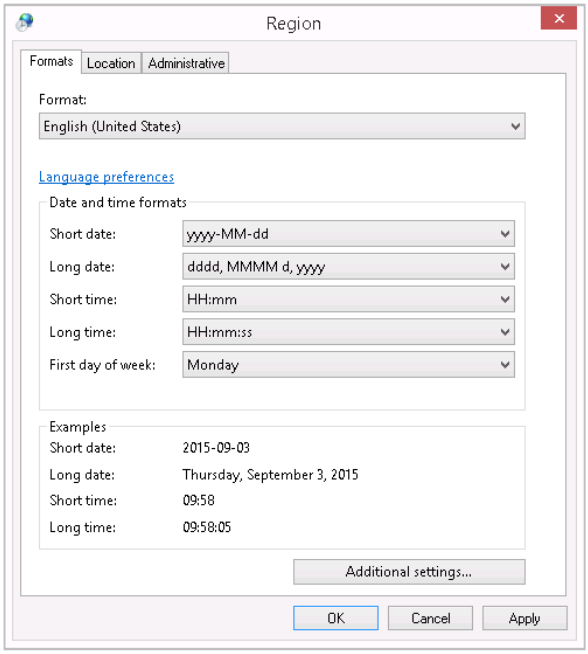


Figure 4.6 – Regional settings, format

4.6 Regional settings - Decimal

Set the Regional Settings decimal symbol to **'.'**

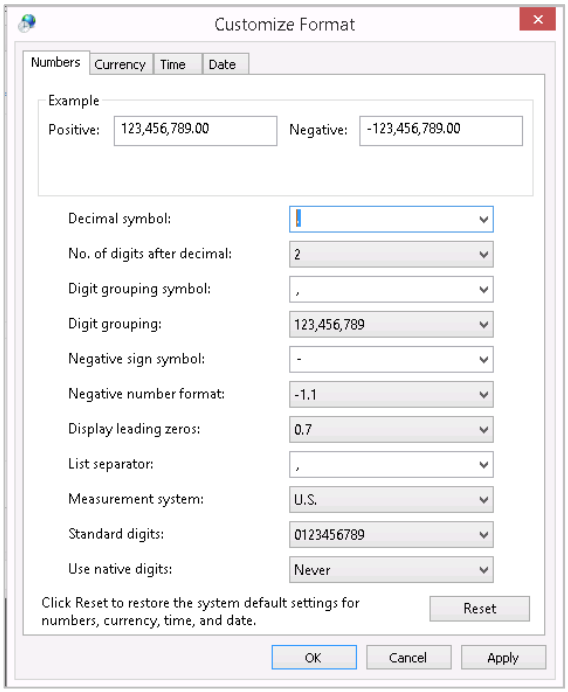


Figure 4.7 – Regional settings, decimal

4.7 Regional settings - Measurement system

Set the Regional Settings Measurement system to **Metric**.

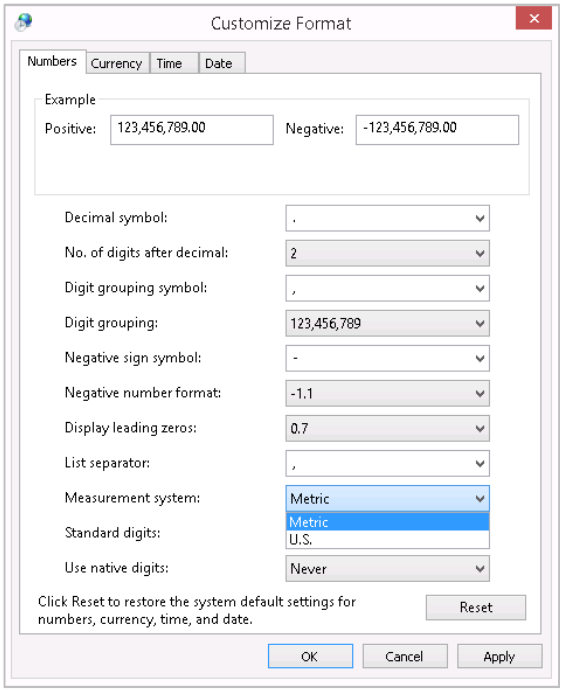


Figure 4.8 – Regional settings, measurement system

4.8 Regional settings - Date

Set the Regional setting for date to **yyyy-MM-dd**.

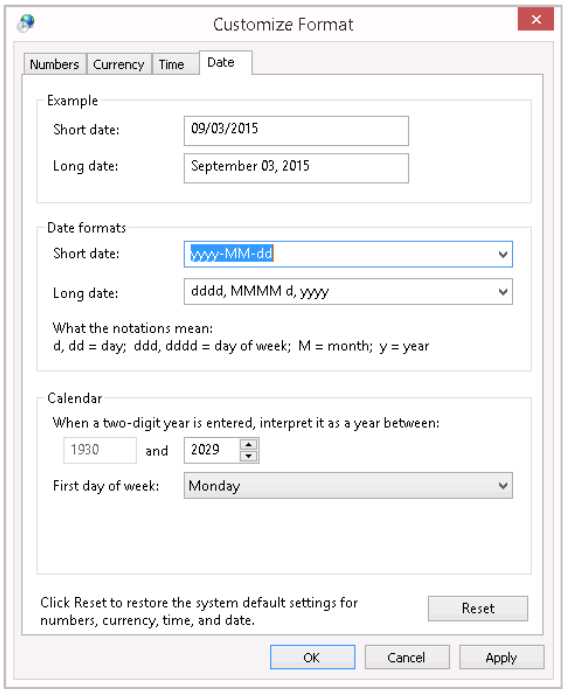


Figure 4.9 – Regional settings, date

4.9 Regional settings - Time

Set the Regional setting for time to **HH:mm:ss**.

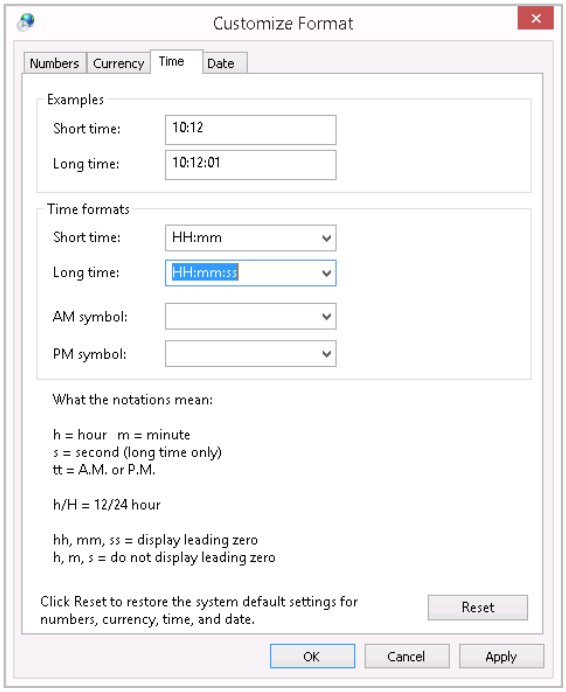


Figure 4.10- Regional settings, time

4.10 Regional settings - Apply for new users

If wanted press the button '**Copy settings**…' as shown in figure below:

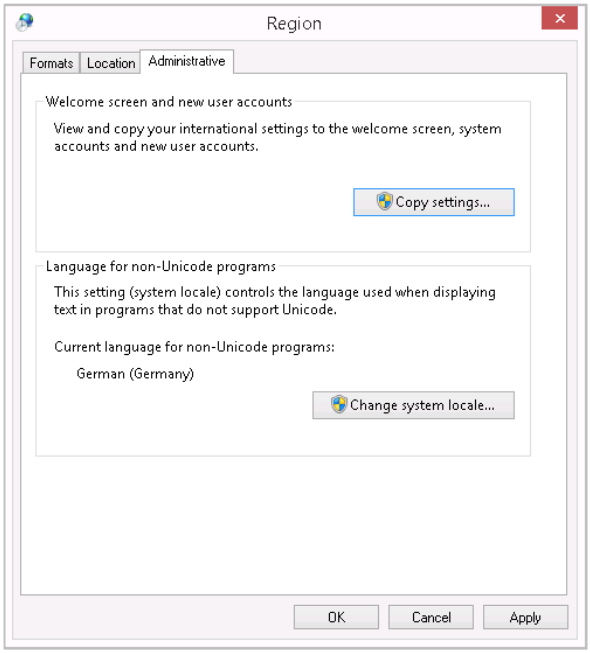


Figure 4.11 – Regional settings, 'Copy settings…'

4.11 Printer setup

Set the Printer orientation to always print with **Landscape**.

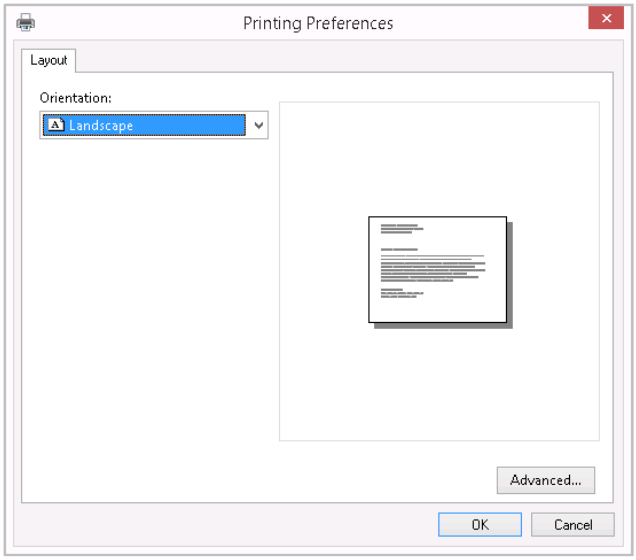


Figure 4.12- Printer orientation

4.12 Taskbar options

Deselect the Taskbar option: 'Lock the taskbar' and keep 'Auto-hide the taskbar' selected. To avoid problems with the Taskbar popping up on top of the Toolbar in the PC Operator Workplace, we recommend setting Taskbar location to 'Right'.

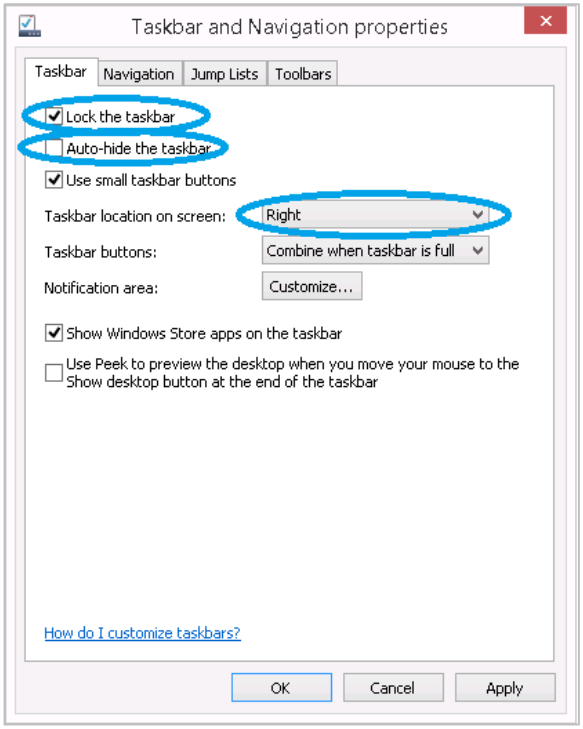


Figure 4.13 – Taskbar options

5. 800xA System Settings

The 800xA System is delivered with three predefined workplaces; the Operator Workplace (intended for operators), the Plant Explorer Workplace and the Two Screen Plant Explorer (intended for application engineers) in order to create, delete, and organize objects and aspects within the 800xA system.

The PC Toolkit Library for AC800M delivers additional predefined workplaces that are customized for use in Petrochemical Industry and other Process Industries.

The default PC Operator Workplaces can be used as they are.

Some of the following chapters describe various property names which have impact on the appearance of the graphic element. Read more about property configuration in document /7/.

5.1 Logical Color Definition

Some colors have a special meaning for an operator, for example the color on an active alarm, or a warning message. Other colors need to be the same on all places to give the system a user-friendly look (for example background colors). You also want to be able to change these colors with one operation for all occurrences. Logical color is the concept used to be able to fulfill these needs.

The PC Setup Solutions Library is delivered with a set of predefined Logical Colors for the Graphic Elements, as well as the trend trace colors. A logical color is defined once, and the user of the color refers to it by its name. You can always override a logical color and flashing rate by changing the color definition in the **PC Logical Color Definition** aspect, which is assigned to the Web System Workplace object in the Workplace Structure.

Use the following Logical Color Definition for graphics in Classic Style

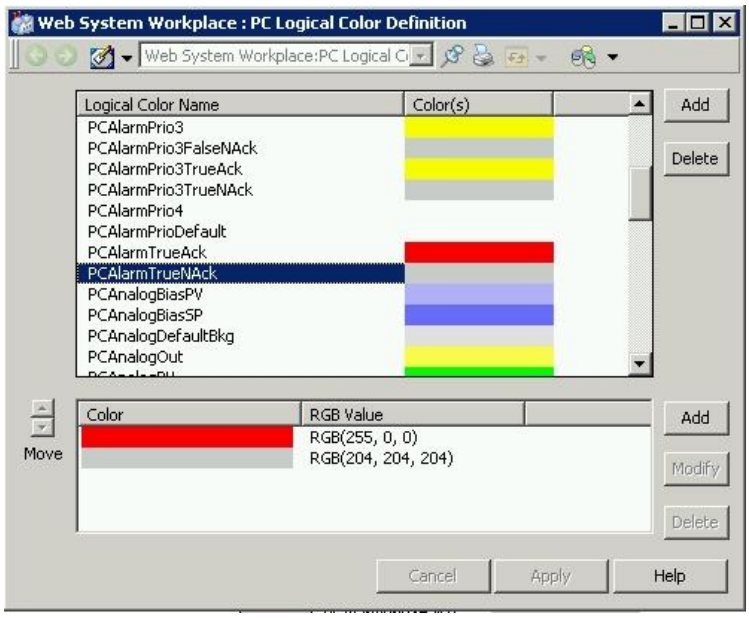


Figure 5-1: Logical color definition

For use with High Performance HMI elements and faceplates a second important color definition exists. In the **PC HP HMI Color Definition** aspect (also assigned to the Web System Workplace object) are basic colors for HP HMI faceplates and graphic elements defined.

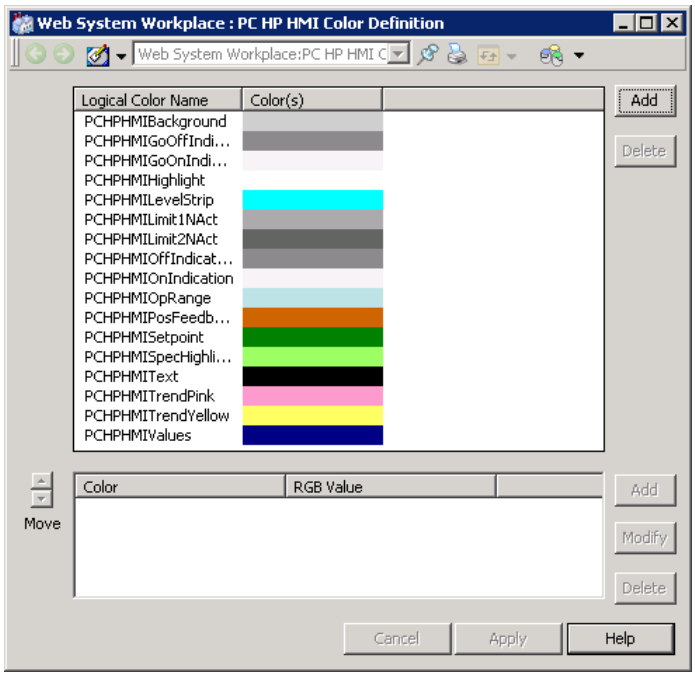


Figure 5-2: PC HP HMI color definition

5.2 Flashing rate setting

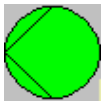
It is possible to modify the predefined logical color and flashing rate settings by changing the color definition in the **PC Logical Color Definition** aspect, which is assigned to the Web System Workplace object in the Workplace Structure.

	Flashing colors and flashing rates are achieved by adding different colors to each logical color. A single color entry means steady display. More than one color entry for a logical color means flashing. In this case, each color line of a logical color represents 250 ms.

Example: 2Hz flashing

250 ms in Red RGB (255,0,0)

250 ms in Background Color RGB (204,204,204)

Group	Logical Color Name	Description
Frame Color and Flashing Rates Example: 		The Graphic Element frame indicates the alarm status and its flashing rate the acknowledgement status
	PCAlarmFalesNAck	Alarm is not active (returned to normal) and non-acknowledged

Group	Logical Color Name	Description
	PCAlarmTrueAck	Alarm is active (initiated) and acknowledged
	PCAlarmTrueNAck	Alarm is active (initiated) and non-acknowledged

Table 5-1: Logical Color Names

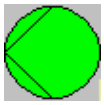
Group	Logical Color Name	Description
Process Object Fill Colors: Example: 		The icon fill color indicates whether the process objects are activated or de-activated.
	PCBinaryIsOff	Fill color for de-activated (Off, closed, etc.). Default: Green
	PCBinaryIsOn	Fill color for activated (Off, closed, etc.) Default: White
	PCBinaryIsStopped	Fill color for Stopped Default: Yellow
	PCBinaryIsGoingOff	Fill color for the transition from activated to de-activated.
	PCBinaryIsGoringOn	Fill color for the transition from de-activated to activated

Table 5-2: PC Templates and Definitions

The limit indicator text boxes display either the status text for the zero or the one state as defined in the graphic element's property. The indication colors are derived from the configured alarm priority. Alarm priority levels of the Melody tags range from 1 through 16. The default is red for priority 1, orange for priority 2, yellow for priority 3 and white for priority 4-16., as shown in the next table.

5.3 National Language Support (NLS)

The System 800xA supports translations, mainly the operator interface and the operator instructions. All texts in the graphic elements are National Language Support (NLS)-strings and available in English (United States) and German (Germany).

For translations into other languages, please enter the appropriate translations to the NLS aspect. Native Language Support (NLS) resources are available as **PC NLS Resource Manager** aspect of the PC Customization object in the Library Structure.

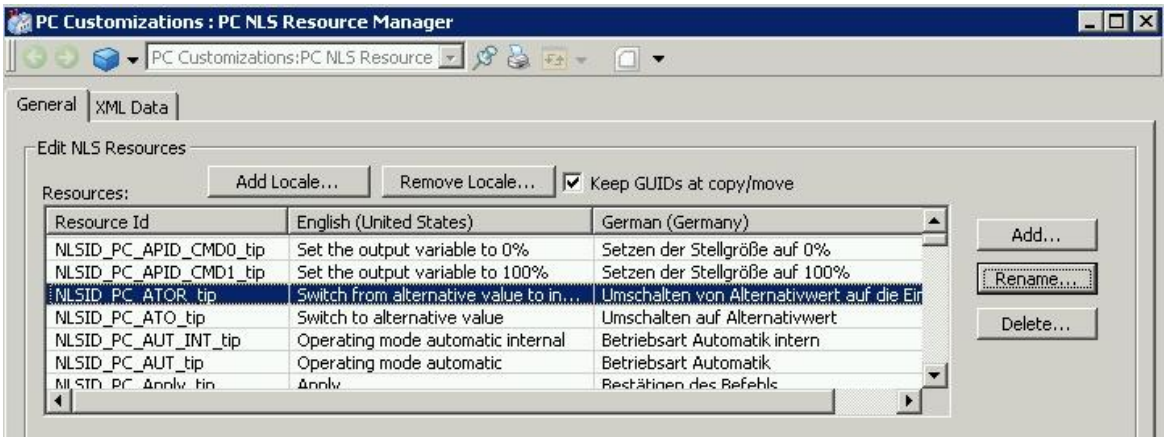


Figure 5-3: NLS Resource Manager

The NLS Resource Manager for the PC Toolkit Library for Melody faceplates is available as **NLS Resource Manager** aspect of the PC_Customization object in the Library Structure.

5.4 Date and Time Format

The Status Bar of the PC Operator Workplaces shows current date and time. The format can be changed in the General Properties aspect of the PC Customizations Object in the Library structure under Preferences & Customizations, called PC Settings. Open this General Property, select the DateTimeFormat property and change the value to the date time format it is preferred. After applying the changes, the affected workplaces need to be reopened.

Example:

German: dd.MM.yyyy HH:mm:ss

English: MM/dd/yyyy h:mm:ss tt

	This description does only refer to the Date and Time display in the PC Toolbar. In all other cases, the standard system settings apply.

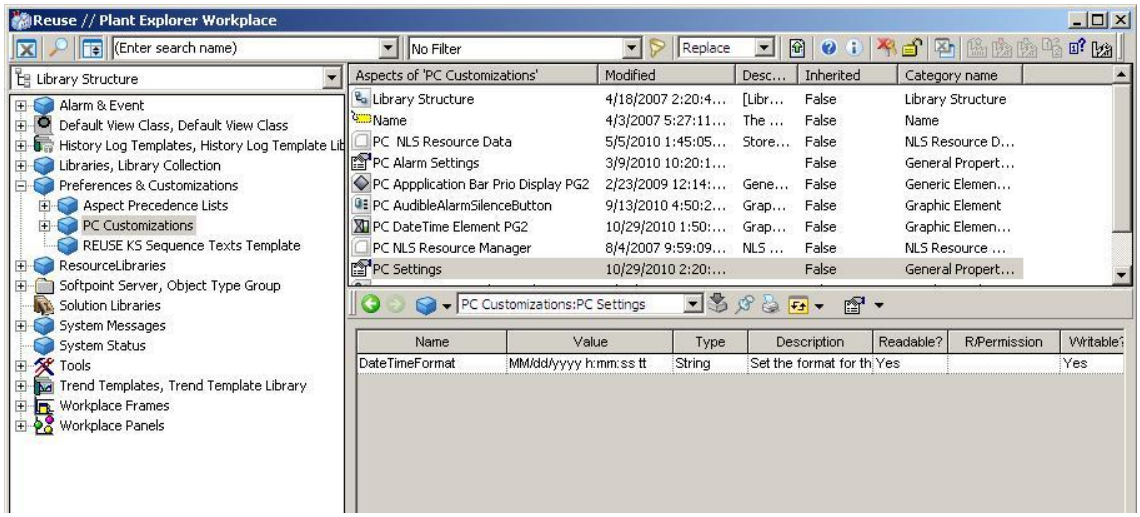


Figure 5-4: PC Customization for Date and Time Format

5.5 Preferences and Customization

The PC Toolkit Library for Melody includes templates and pre-settings in the Library structure under Preferences & Customizations.

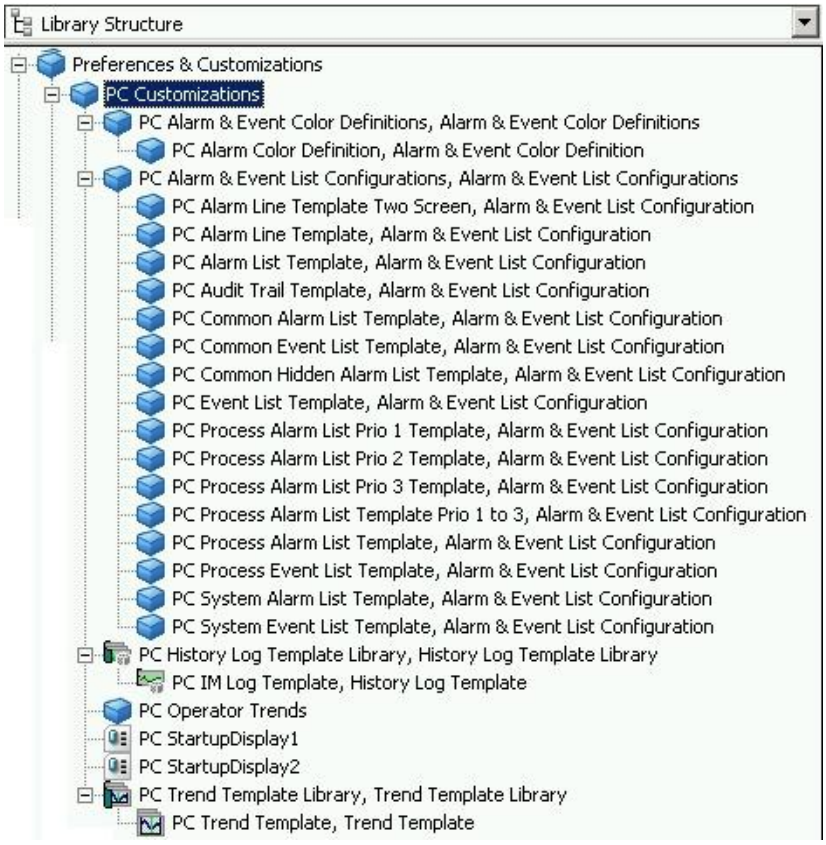


Figure 5-5: Library Structure with Preferences

The Library Structure > Preferences & Customizations > PC Customizations includes a number of preconfigured options:

- PC Alarm & Event Color Definitions
- PC Alarm and Event List Configurations
- PC History Log Template Library
- PC Operator Trends
- PC StartupDisplay1
- PC StartupDisplay2
- PC Trend Template Library

Object Name	Descriptions
PC Alarm & Event Color Definitions	PC Alarm & Event Color Definition, which applies to all PC Alarm and Event List Templates.
PC Alarm Line Template Two Screen	PC Alarm and Event List Configuration, which is customized for a complete screen width. Sets the filter for Melody process alarm type messages and the columns that are appropriate, for four lines of alarms and a width of 100%: Priority Level 1-32, unacknowledged alarms, not hidden.
PC Alarm Line Template	PC Alarm and Event List Configuration. Sets the filter for Melody process alarm type messages and the columns that are appropriate, for four lines of alarms and a width of 50% of the screen: Priority Level 1-32, unacknowledged alarms, not hidden.
PC Alarm List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 1-32, acknowledged and unacknowledged alarms, not hidden.
PC Audit Trail Template	PC Alarm and Event List Configuration, which is predefined to set the filter and columns suitable for audit events of the type tracking events generated from Security Definition aspects.
PC Common Alarm List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 1-32, acknowledged and unacknowledged alarms, not hidden.
PC Common Event List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all event type messages and the columns that are appropriate, for 500 lines of events.
PC Common Hidden Alarm List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority

Object Name	Descriptions
	Level 1-32, acknowledged and unacknowledged alarms, hidden.
PC Event List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for process and condition event type messages excluding system and tracking events and the columns that are appropriate, for the 500 lines of events: Priority Level 1-32, hidden and not hidden.
PC Process Alarm List Prio 1 Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all Melody process alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 1, acknowledged and unacknowledged alarms, not hidden.
PC Process Alarm List Prio 2 Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all Melody process alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 2, acknowledged and unacknowledged alarms, not hidden.
PC Process Alarm List Prio 3 Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all Melody process alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 3, acknowledged and unacknowledged alarms, not hidden.
PC Process Alarm List Prio 1 to 3 Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all Melody process alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 1-3, acknowledged and unacknowledged alarms, not hidden.
PC Process Alarm List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for all Melody process alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 1-32, acknowledged and unacknowledged alarms, not hidden.
PC Process Event List Template	PC Alarm and Event List Configuration, which is predefined to the set the filter for Melody process event type messages and the columns which are appropriate, for 500 lines of events: Priority Level 1-32, acknowledged and unacknowledged alarms, hidden and not hidden.
PC System Alarm List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for system alarm type messages and the columns that are appropriate, for the 500 lines of alarms: Priority Level 1-32, acknowledged and unacknowledged alarms, not hidden.

Object Name	Descriptions
PC System Event List Template	PC Alarm and Event List Configuration, which is predefined to set the filter for system event type messages and the columns that are appropriate, for 500 lines of events: Priority Level 1-32, acknowledged and unacknowledged alarms, hidden and not hidden.
PC IM Log Template	History Log Template that establishes the log hierarchies and data collection schemes for the property log which can be used for IM log configuration
PC Operator Trends	The object includes 10 pre-defined operator trend displays as aspects, each with 8 traces and using the PC Trend Template as default setting.
PC StartupDisplay1	The default Startup Display 1of the PC Operator Workplace and the left screen of PC Operator Workplace Two Screens.
PC StartupDisplay2	The default Startup Display 2 of the right screen of PC Operator Workplace Two Screens.
PC Trend Template	Re-usable template for building many similar trend displays with pre-defined colors and the columns which are appropriate, for 8 traces: Time scope 1 h. Treatment momentary Trend tracing colors reference to the PC Logical Color Definition Aspect.

Table 5.3: PC Templates and Definitions

Modifications of the operator trends require the operator role.

	If you modify an existing Trend Template, the changes will not automatically affect existing Trend Displays that have been created using that PC Trend Template. If you click Reset to Template any changes made in the Trend Display will be overwritten with the changes made in the Trend Template.

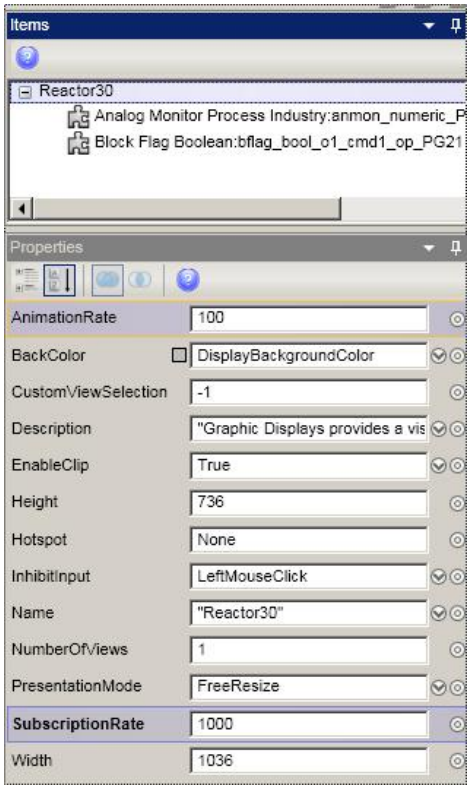
5.6 Changing the Update Rate in graphic display

It is possible to control the rate by which dynamic updates take place in graphic displays and elements. By default, the update rate is not controlled by graphics, but by the configuration of aspects representing the connection to the process. The default value of both properties (graphic display and graphic element) is 0. The interpretation of the zero value is that the update rate is not determined by graphics but by the underlying integration of the controller. This value can be up to 30 seconds.

Setting a value other than 0 on a graphic display overrides any settings of the update rate on graphic element instances of that graphic display. The unit for this property is milliseconds.

Changing the Update Rate in every graphic display:

- Select the graphic display object by selecting the top level item in the Graphic Items window or by clicking in the background of the graphic display.
- Modfy SubscriptionRate to e.g. 1000 (1000 ms)



Setting a value other than 0 on a graphic display overrides any settings of the update rate on graphic element instances, of that graphic display. The unit for these properties is milliseconds.

Figure 5-6: Process Graphic Editor's Property Window of a graphic display

5.7 Graphic Display Zoom

All Graphic Elements for Melody support that graphic displays can be zoomed from full to quarter size.

	The project specific graphic displays need to be designed to enable the resizing functionality. The text fonts used must be resizable, for example Arial or other Open Type or True Type Fonts.

5.8 Display Background Color

The background color of a graphics display can be changed by set the Backcolor property. This can be a fixed color or a reference to an existing color definition.

5.9 High Performance Display Settings

The PC Toolkit Library for Melody includes the possibility to adjust some HP-HMI settings. These settings can be configured by use of the 800xA PC Graphics Settings Editor, which can be opened by double-click on the “800xA PC Graphic Settings Editor” aspect at the Root object.

After changing the settings, especially if project defined settings are used, the settings can be stored as AFW file by use of the “Export settings …” menu item from the File menu.

5.9.1 Alarm Indication Settings

The HP-HMI Alarm Indication graphic elements (not the AlarmControl in faceplates) can be limited to indicate only the most important alarm priorities.

Property Name	Descriptions
Limit alarm indication to alarm with priority <= MaxPriority	Enables the priority limitation of indicated alarms.
Maximum alarm priority to show	This is the highest show alarm priority.
Display ‘C’ if no alarm is active or unacknowleged	Defines that the alarm element shows "C" instead of the priority if no alarm is active

Table 5.4: Alarm Indication Settings

5.9.2 Alarm priority mapping

Not used with Melody Connect

5.9.3 Alarm control setting

In this tab the icon type of the alarm control can be defined

Property Name	Descriptions
Use HPHMI alarm control in faceplates	If set the alarm control in the faceplates will be displayed in HPHMI style. Otherwise the 800xA default style is used. *Figure 5.1 Alarm Levels 1 – 4 (800A style)* Figure 5.2 Alarm Levels 1 – 4 (HPHMI style)
SFC Toolkit style	If True the feedback area in the SFC faceplate is filled during runtime (default: filled only in end position and an arrow indicates running state).
Display Track as IL	If True an active track is indicated with an interlock symbol instead of the track symbol (for controllers and flags).

Table 5.5: HPHMI Settings

	Changing these settings may require a workplace restart to see an effect.

5.9.4 Status Indication

The status indication used in faceplates and graphic elements can be adjusted to fit customer needs. Basically there are two predefined sets (Classic and HP HMI) which can be activated by selecting the ”Select predefined setting” combo box and click the Select button.

To use project defined settings, the texts and colors can be changed. The text can be changed by enter a new text in the associated text box. Be aware of the text length, recommended is one or maximal 2 characters. The text and background color can be changed by click in the FG or BG area and either select the “Transparent” item or the “Select color” item to select a color value.

5.10 External Alarms

The External Alarm function provides aspect systems and components to make it possible to activate and deactivate an external alarm notification. The user of the external alarm selects an alarm list and digital inputs and outputs in the configuration view.

The alarm list filter is used to subscribe for alarms and events from the alarm and event server. Setting the outputs and reading the inputs are done via Data Subscription. When active unacknowledged alarms, fulfilling the filtering criteria, are received by the external alarm function the Audible Alarm output is set.

The operator can silence the external alarm (resetting the Audible Alarm output) through the silence view. Silence can be done for all configured alarms or for one explicit external alarm.

The PC Toolkit Library for Melody includes basic aspects that are prepared to be filled out with the project specific configuration.

Object Path : Aspect Name	Descriptions
[Control Structure] Root : PC External Alarm Configuration	In the External Alarm Configuration View you select the Alarm List and by that which filter criteria the external alarm uses to subscribe alarms from. You also configure the digital inputs and outputs.
For Test Purposes	
[Control Structure] Root : PC External Alarm Test Read Properties	Flags (properties), which can be used to test the PC External Alarm Configuration. You can use them as source for the test of the PC External alarm configuration aspect.
[Control Structure] Root : PC External Alarm Test Expression	This aspect generates alarms for test purposes. The aspect monitors the PC External Alarm Test Read Properties. If true it generates an alarm.
[Control Structure] Root : PC External Alarm Test Write Properties	Flags (properties), which can be used to test the PC External Alarm Configuration. You can use them as destination for the PC External alarm configuration aspect.

Table 5.6: PC External Alarm Predefinitions

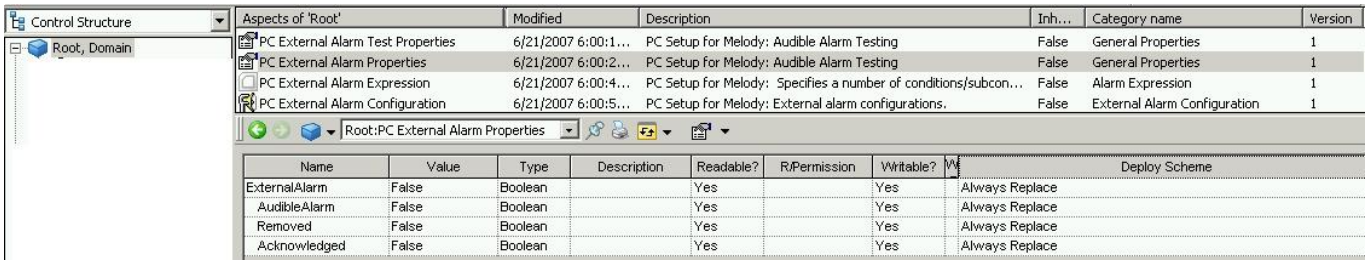


Figure 5-7: External Alarm Property

Test procedure:

1. Open the Configuration View of the PC External Alarm Configuration Aspect
2. Select Alarm List applicable from the pull down menu
3. At the Digital Output entries and fill out at least the audible alarm fields:
4. Audible Alarm Object: [Control Structure] Root
5. Audible Alarm Aspect: PC External Alarm Test Write Properties
6. Property: ExternalAlarm.AudibleAlarm
7. Push the Apply button
8. Open the aspect [Control Structure] Root: PC External Alarm Test Read Properties and set Prio 1, Prio 2 or Prio 3 to true for the testing purposes.

5.11 Audible and External Alarm Silence buttons

The 800xA system provides two different types of acoustic alarm indication:

Audible Alarms	Plays a sound on the client PC if an alarm matches the configured filter.
External Alarms	Sets a binary property if an alarm matches the configured filter. The property is typically connected to a hardware output in the automation system.

To silence the alarm indication the PC Toolkit Library for Melody provides 3 Alarm Silence Buttons. This buttons are intended to be placed in the application bar of a workplace. The button configuration is provided as template and should be copied and adjusted for project specific settings.

The Alarm Silence buttons are located under “[Library Structure]Preferences & Customizations/PC Customizations”.

5.11.1 PC External Alarm Global Silence

This button will silence all external alarms. This is the only alarm button that can be used as provided (no customization necessary).

5.11.2 PC External Alarm Single Silence

This button will silence one single specific external alarm by resetting the property, which is set by the External Alarm Definition. The button is enabled and colorized if the alarm property is set to true.

The button must be customized. Open the PC External Alarm Single Silence aspect in the graphic editor, open the Expression Variables window and insert the alarm property in the expression of the ExternalAlarmProp variable.

5.11.3 PC Audible Alarm Silence

This button will silence the audible alarm for a specific workplace.

The button must be customized. Open PC Audible Alarm Silence aspect in the graphic editor, select the button and replace the default verb (property VerbReference) with the “Silence Audible” verb of the Alarm Workplace Configuration aspect of the used workplace object. The default setting is: $'PC Operator Workplace:Audible Alarm Workplace Configuration:Silence Audible'.

5.12 Logical Security (800xA Software)

5.12.1 PC User Groups

The 800xA Security model is based on extensions to Windows security model. The 800xA System includes predefined user groups with predefined:

- Everyone:
  A group that contains all the 800xA users. View access only.
- Administrators
  A group with the security system disabled, i.e. a member of this group has full access to everything in the aspect system.
- Operators
  A group of all Operators. Performs process operations.
- Application Engineers
  A group of all application engineers. Performs application engineering.
- System Engineers
  A group for all system engineers. Performs system engineering.

A user can belong to a single or more user groups. The PC Setup Package provides two additional user group objects with referenced aspects.

[User Structure] User Groups / Object Name	Predefined User Roles
Advanced Operator	Operator Role The Operator Role should be held by all operators in a plant.
I&E Personnel	System Engineer Role, Application Engineer Role, Operator Role (and as preparation for eventual later extensions: Maintenance Technician, Maintenance Engineer, Maintenance Supervisor)

Table 5.7: PC User groups Advanced Operator and I&E Personnel

	Remember that user or user group specific settings can overwrite system settings.

5.12.2 Security Definition

In order to utilize the predefined PC User Group Settings and PC Melody Permissions it is necessary to add these to the Security Definitions aspect of the system (domain):

Call up the **Security Definition Aspect** assigned to the system domain object: [Admin Structure] Administrative Objects/Domains/ <System Name>.

Dependent on the requested security settings you may additionally assign the permission Tune to the User Groups Application Engineers, Advanced Operators and I&E Personnel.

Dependent on the requested security settings you may assign additional permissions to the User Groups Application Engineers, Advanced Operators and I&E Personnel. Example Permissions: Tune, Modify Alarm Hiding, Operator Configure.

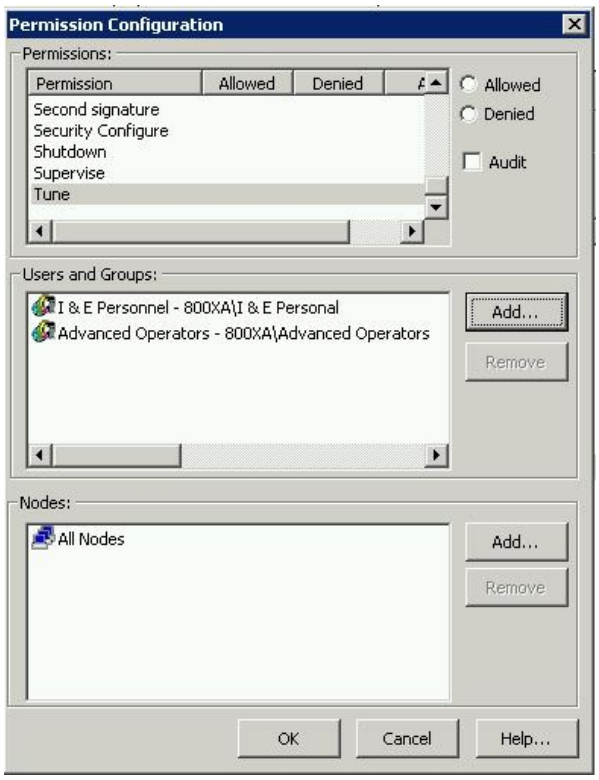


Figure 5-8: Security Settings

5.12.3 Security Operations

There are three security operations in graphic aspects. They are used to control whether the user is allowed or denied to see different views or configure the aspect.

- **Read:** The user has permission to see the graphic aspect dialogs in Plant Explorer.
- **Modify:** The user has permission to start the Graphics Builder to modify the aspect and save the changes.

The security of PC Melody Graphic Elements is set to Read. It is possible to create a copy and change and maintain project specifically.

	To be able to edit graphic aspects mentioned in this document and placed in Graphics Structure you must belong to the Industrial IT group Software Developers.

Projects that elect to create new versions of the PC Melody Graphic Elements, in order that they can edit the contained aspects, implicitly agree and accept that any modifications made may result in additional installation or site specific maintenance effort to accommodate future system and library releases.

5.13 Define Default Aspect

Each object contains several aspects (faceplates, graphic elements, etc.), but only one of these aspects is defined to be a default aspect.

The default aspect precedence list classifies the aspects by aspect type, aspect category, aspect key or another precedence list. The aspect listed in the default precedence list defines the default aspect.

The default aspect precedence list is located in “[Library Structure]Preferences & Customizations/Aspect Precedence Lists”. The main precedence list is the “Default Precedence List”. All other precedence lists may be included in the default list.

To edit the aspect precedence list, open the “Aspect Precedence List” aspect and change the order of the entries (with the arrow buttons, add new or delete existing entries.

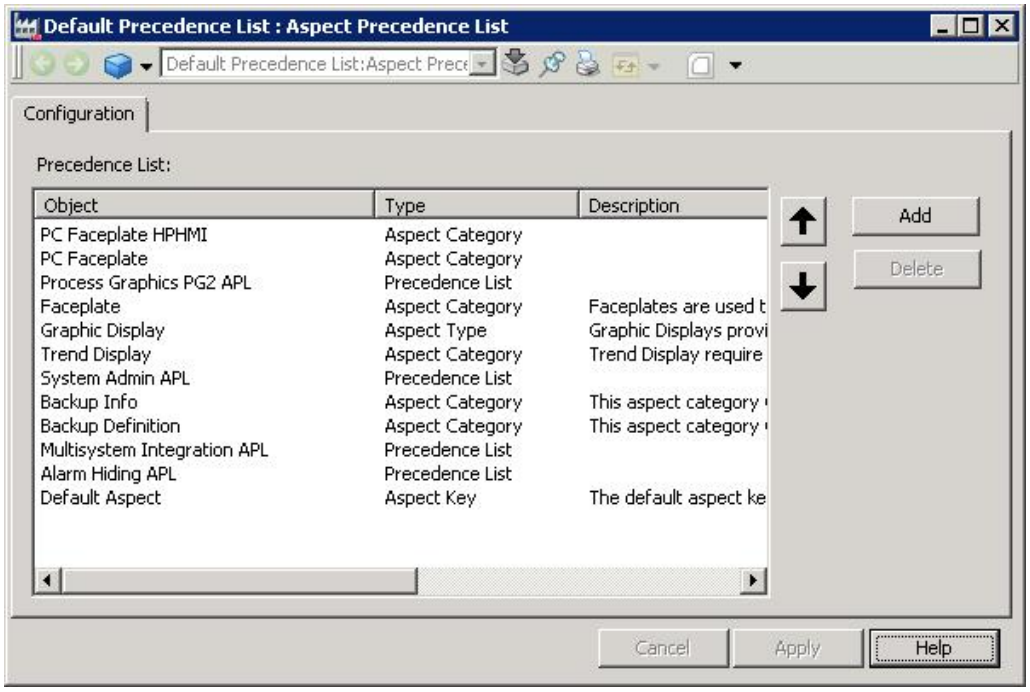


Figure 5-9: Default Precedence List

Example: Set the HPHMI faceplates as Default aspect of an object

Open the Aspect Precedence List aspect on the Default Precedence List object and take care that the aspect category “PC Faceplate HPHMI” is inserted in the list and in top position. If the aspect category is not included, click the add button, select “Aspect Category” in the Class combo box and browse to the “PC Faceplate HPHMI” item. Click OK.

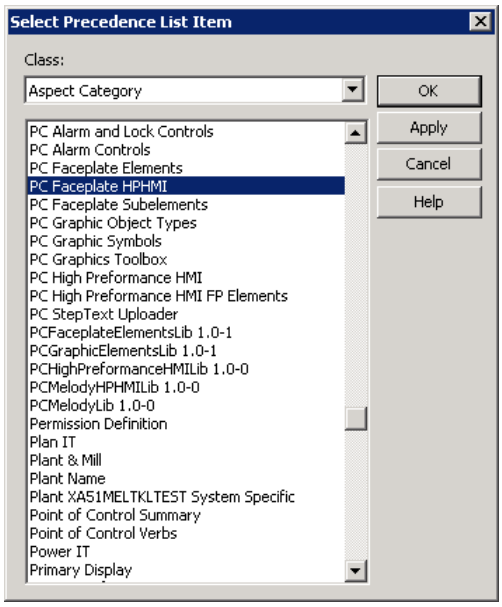


Figure 5-10: Select Precedence List Item

If the PC Faceplate HPHMI item is included, move it at top position using the arrow buttons.

Precedence settings for different faceplate types as default aspect

The table below shows the item order in the default precedence list for different settings of the default aspect. Only the needed items are listed (precedence list may contain more entries).

Default Aspect	Precedence list item order
HPHMI faceplate	PC Faceplate HPHMI (Aspect Category) PC Faceplate (Aspect Category) Process Graphics PG2 APL (Precedence List) Faceplate (Aspect Category) …
Classic Faceplate (PG2 version)	PC Faceplate (Aspect Category) Process Graphics PG2 APL (Precedence List) Faceplate (Aspect Category) PC Faceplate HPHMI (Aspect Category) *) …

Table 5-8: Global and Local settings

*) Items can be removed from the list if not needed

5.14 Object Lock and Object Highlight

Object Lock is enabled if the Lock Server function is configured. Object lock will give the user the sole right to operate an object. If Autolock is enabled the object will be locked from the moment the user opens up the faceplate. If the object lock function is controlled manually, the user has to take the lock by clicking the Object Lock button to be able to operate the object. The graphic element (in the graphic display) is surrounded by a white frame to indicate that the object is locked.

The Object Highlight function will indicate all graphic elements on a graphic display that corresponds to the active faceplate. All corresponding elements will be surrounded by corner brackets (when using the default configuration). The Object Highlight is operator specific and is only visible on the current workplace. See Industrial IT 800xA, Engineering Graphics 3BSE049230-600 for more information.

	The default indication colors and frame widths can be customized. Refer to the Industrial IT 800xA, Engineering Graphics (3BSE049230-600) instructions for more detailed information.

5.15 Frame color settings

A graphic element can be surrounded by a colored frame which indicates the alarm priority (only for Classic Style).

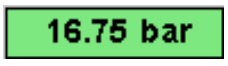
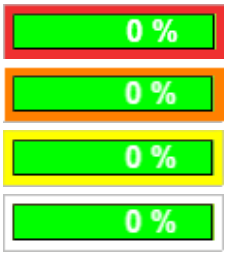
Frame color	Property
	NoPriorityColor
	PriorityColor 1 to 4

Table 5-9: Property configuration for frame color

5.16 Position of the Status Indication

Show status indication left, middle, right and outside with the Property StatusIndicationPos.

5.17 Alternative Input Window

Bar graphs and numeric objects have the ShowInputWindow Property. When enabled, the operator gets an input window to enter a new value via the numeric pad or with the mouse clicking on the up and down arrow (instead of the default aspect).

5.18 Horizontal Bar Graph

The Bar Graph element features now several orientations. It views the live value from bottom to top, top to bottom, left to right or right to left with the Orientation Property.

5.19 Further Aspect

Each graphic element is able to open a further aspect besides the faceplate. This aspect can be defined with ViewReference Property.

5.20 PC Help Aspect: Melody Faceplate Status Icons

Each melody object with a faceplate is equipped with a help aspect with contains the description of the icons for operation buttons and indications.

The PC Toolkit Library for Melody installs different version of these help aspect:

- Classic HMI and High Performance HMI English
- Classic HMI and High Performance HMI German
- Classic HMI only English
- Classic HMI only German
- High Performance HMI only English
- High Performance HMI only German

As default the “Classic HMI and High Performance HMI English” will be installed. After loading the system extensions, the version can be changed by importing the one of the afw files from the “C:\Program Files (x86)\ABB Industrial IT\Control IT\ABB PC Setup for Melody\PC Help - Melody Status Icons” folder.

	Changing the language of the contents of the help aspect based on the operator’s language isn’t possible.

6. Customizing PC Operator Workplace

The default PC Operator Workplaces can be used as they are. This section describes how to modify the pre-defined settings or add functionality for your project.

	Refer to Operator Workplace Configuration (3BSE030322-600) for more detailed information on Workplace configuration that also applies to the PC Operator Workplaces.

Before you start customizing the workplace, consider the main purpose with the workplace you are going to design. The list below contains relevant questions that should be considered before you start to customize the workplace.

1. Which links to Alarm Lists for the specific process areas shall the Alarm Band provide?
2. What should the startup display look like?
3. In which mode shall the Workplace run, Operator or Windows mode?
4. Do you want to use the standard user groups and/or additional user groups? What are settings for the Windows user administration and System 800xA user administration?
5. What are the security settings? Do you want to enable log-over or advanced access control?
6. Should the most important and/or frequently used displays be available through shortcuts?
7. Should additional Aspect filter be defined?
8. Do you want to add Favorites and/or Hot Keys?
9. Should additional tools be available in the toolbar?
10. Do you want to add links to graphic displays and other aspects in the status bar?

	If you want to significantly change the pre-defined workplace, please consider creating the new settings as new Operator Workplace. Otherwise your changes will disappear with the next system upgrade, when the new default PC Operator Workplace settings may override the old default settings.

6.1 Operator Workplace Mode and Auto Start

Choose the PC Operator Workplace as default (opens when double-clicking on My ePlant) in the default:

Open the ABB Workplace Login dialog (Programs -> ABB Industrial IT 800xA -> System -> Workplace) and select the PC Operator Workplace or PC Operator Workplace Two Screen in the **Available workplaces** list and then select **Set as Default**.

To make the Operator Workplace starting automatically when logging in, select the PC Operator Workplace or PC Operator Workplace Two Screen in the **Available workplaces** list and then select **Set as autostart**.

The Operator Mode is a full screen mode and the title bar is not visible. Pop-up windows are always placed on top. The Application Bar and the Status Bar cannot be covered by a pop-up window. To run the PC Operator Workplaces in Operator Mode:

Select the user object in the User Structure and select the Workplace Profile Values->Workplace Mode

Select **Local** in the **Data source** area, open the drop down list the Workplace Modes and choose Operator Workplace Mode (Refer to paragraph 6.3 for detailed information on the PC Setup.)

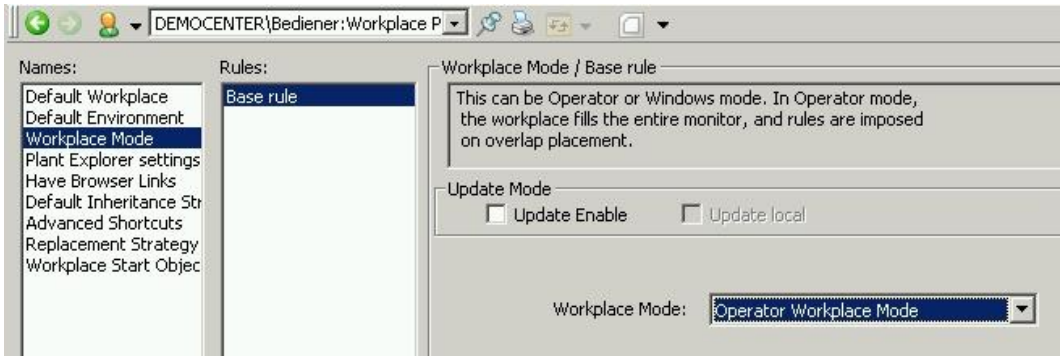


Figure 6-1: Workplace mode

	Refer to the Industrial IT, Operator Workplace Configuration (3BSE030322) for more detailed information on general Workplace Settings.

	In the Operator Workplace Mode: Please test all printer settings. Examples: Print screen, print window, print trend, print alarm list, export alarm hiding configuration masks etc. It shall not be possible for the operator to get to the Windows Operating System through the standard Microsoft printing dialogs!

	Remember to assign the Operator Workplace Mode in the Workplace Profile Value Aspect of the operator's user objects in the User Structure!

6.2 Customizing the Workplace Layout

To change the predefined settings of the **Application Bar, Status Bar** and **Panel** for a PC Workplace, you need to modify the Workplace object.

Follow the steps below:

1. Select the Workplace Structure.
2. Click on the PC Workplace object you want to customize.
3. Select the Workplace Layout aspect.
4. Select the layout you want by selecting the Enabled check box to which Item you want. Select 'Yes' in the visible drop-down menu if you want the item to be visible.
5. In the Replacement Strategy drop-down menu you can switch to 'Preserve' to be the startup value for the workplace.
6. In the Selection Strategy drop-down menu you select what action the workplace should perform when the selection is set on the workplace.

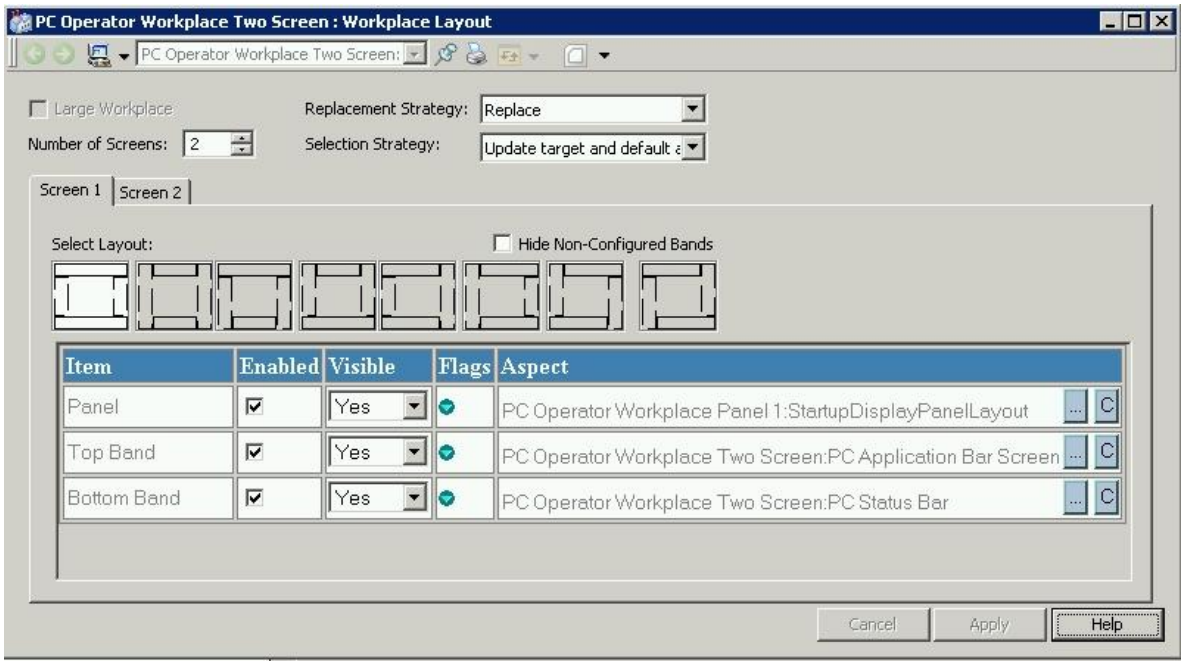


Figure 6-2: Workplace Layout

[Structure] Object Path : Aspect Name	Predefined Settings
[Workplace Structure] PC Operator Workplace : Workplace Layout	Number of Screens: “1” Layout: Default (1st selection on the left side) Aspects for Panel, Top Band and Bottom Band: PC Operator Workplace Panel 1: StartupDisplayPanelLayout PC Operator Workplace: PC Application Bar PC Operator Workplace: PC Status Bar Replacement Strategy: “Replace” Selection Strategy: “Update target and default aspect”
[Workplace Structure] PC Operator Workplace Two Screen : Workplace Layout	Number of Screens: “2” Layout: Screen 1- Aspects for Panel, Top Band and Bottom Band: PC Operator Workplace Panel 1: StartupDisplayPanelLayout PC Operator Workplace Two Screen: PC Application Bar 1 PC Operator Workplace Two Screen: PC Status Bar Screen 2- Aspects for Panel, Top Band and Bottom Band: PC Operator Workplace Panel 2:StartupDisplayPanelLayout PC Operator Workplace Two Screen: PC Application Bar 2 PC Operator Workplace Two Screen: PC Status Bar Replacement Strategy: “Replace” Selection Strategy: “Update target and default aspect”

Table 6.1: PC Operator Workplace Objects

6.2.1 Application Bar

Application Bar aspects are placed on the PC Workplace objects. To modify the Application Bar layout, open the configuration view of the Application Bar aspect.

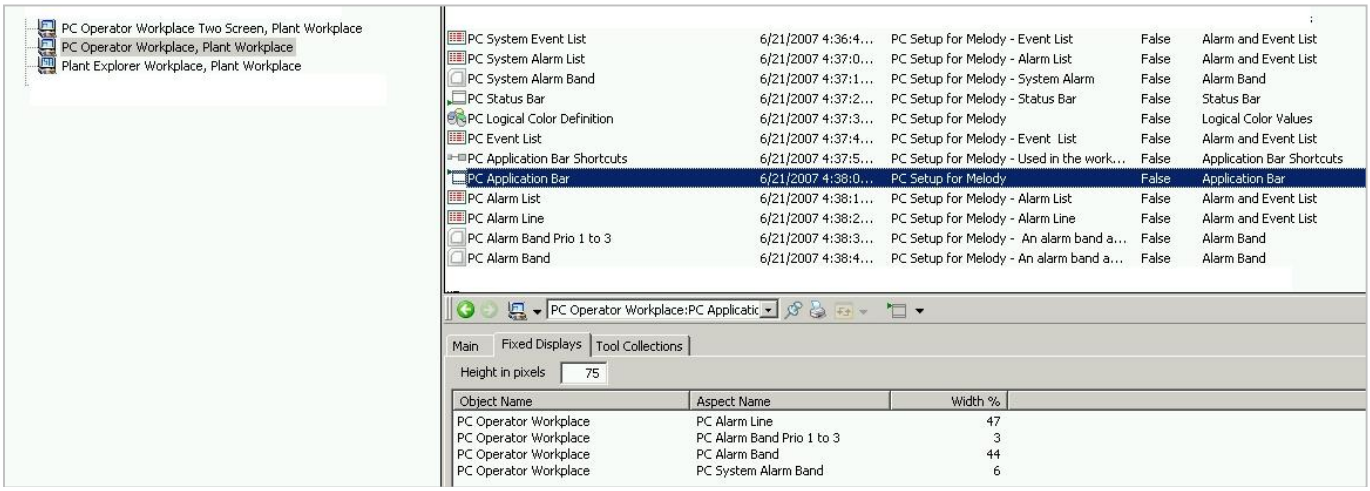


Figure 6-3: Workplace – Application Bar

[Structure] Object Path : Aspect Name	Application Bar - Predefined Settings
[Workplace Structure] PC Operator Workplace : PC Application Bar	Main Tab: ☒ Show fixed displays ☐ Show short cuts ☒ Show tools collection ☒ Show favorites Fixed Displays: PC Operator Workplace: PC Alarm Line (Width 48%) PC Operator Workplace: PC Alarm Band Prio 1 to 3 PC Operator Workplace : PC Alarm Band PC Operator Workplace : PC System Alarm Band Tool Collection ☒ Object Shortcut Toolbar ☒ Find Toolbar ☒ Replacement Toolbar ☒ Toggle Browser Toolbar ☒ Print Screen Toolbar ☒ Operator Help Toolbar ☒ External Alarm Direct Silence Toolbar ☒ Audible Alarms Toolbar ☒ Close All Overlaps Toolbar

[Structure] Object Path : Aspect Name	Application Bar - Predefined Settings
[Workplace Structure] PC Operator Workplace Two Screen : PC Application Bar Screen 1	Main Tab: ☒ Show fixed displays ☐ Show short cuts ☒ Show tools collection ☒ Show favorites Fixed Displays: PC Operator Workplace: PC Alarm Line PC Operator Workplace: PC Alarm Band Prio 1 to 3 Tool Collection ☒ Object Shortcut Toolbar ☒ Find Toolbar ☒ Replacement Toolbar ☒ Toggle Browser Toolbar ☒ Print Screen Toolbar ☒ Operator Help Toolbar ☒ External Alarm Direct Silence Toolbar ☒ Audible Alarms Toolbar ☒ Close All Overlaps Toolbar
[Workplace Structure] PC Operator Workplace Two Screen : PC Application Bar Screen 2	Main Tab: ☒ Show fixed displays ☐ Show short cuts ☒ Show tools collection ☒ Show favorites Fixed Displays: PC Operator Workplace / PC Alarm Band Screen 2 PC Operator Workplace: PC System Alarm Band Tool Collection ☒ Object Shortcut Toolbar ☒ Find Toolbar ☒ Replacement Toolbar ☒ Toggle Browser Toolbar ☒ Print Screen Toolbar ☒ Operator Help Toolbar ☒ External Alarm Direct Silence Toolbar ☒ Audible Alarms Toolbar ☒ Close All Overlaps Toolbar

Table 6.2: PC Application Bar Aspects

	If you modify an existing Application Bar, all workplaces that use this Application Bar will be affected by the changes. The Workplace Window has to be restarted for any changes in the Application Bar to take place.

A Shortcut in the Application Bar is created to get fast access to any viewable aspect associated with a particular object. When you have added a shortcut to a workplace, it will be displayed as a button with a drop-down menu. It will appear on the left-hand side in the Application Bar.

Open the PC Application Bar Shortcut aspect on the Workplace object.

Open the configuration view and click add.

Select structure, object and aspect in the Add/Edit Display Shortcut dialog box.

[Structure] Object Path : Aspect Name	**Application Bar Shortcuts – Prepared Aspect**
[Workplace Structure] PC Operator Workplace / PC Application Bar Shortcuts	Display Shortcuts Config: (Object) : (Aspect) Inherited Display Shortcuts: (Object) : (Aspect)
[Workplace Structure] PC Operator Workplace Two Screens / PC Application Bar Shortcuts	Display Shortcuts Config: (Object) : (Aspect) Inherited Display Shortcuts: (Object) : (Aspect)

Table 6.3: PC Application Bar Shortcut Aspects

6.2.2 Status Bar

The predefined PC Status Bar will appear at the bottom of the workplace. The Status Bar aspect is placed on the PC Workplace object. It is possible to reconfigure the Status Bar in the same way as the Application Bar. To modify the layout of the existing Status Bar, select the Status Bar aspect and its configuration view.

[Structure] Object Path : Aspect Name	Status Bar - Predefined Settings
[Workplace Structure] PC Operator Workplace: PC Status Bar	Main Tab: ☒ Show fixed displays ☐ Show short cuts ☐ Show tools collection ☐ Show favorites Fixed Displays (Object / Aspect): PC Customizations : PC System Status Viewer PC Customizations : PC Status Bar Graphic Display Screen Bar Tools : Current User Tool PC Customizations : PC DateTime Display Element Web System Workplace: ABB Logo Small
[Workplace Structure] PC Operator Workplace Two Screen : PC Status Bar	Main Tab: ☒ Show fixed displays ☐ Show short cuts ☐ Show tools collection ☐ Show favorites Fixed Displays (Object / Aspect): PC Customizations : PC System Status Viewer PC Customizations : PC Status Bar Graphic Display Screen Bar Tools : Current User Tool PC Customizations : PC DateTime Display Element Web System Workplace: ABB Logo Small

Table 6.4: PC Status Bar Aspects

The PC Status Bar references to fixed displays that are defined as aspects of the PC Customizations Object in the Library structure.

[Library Structure] Object Path : Aspect Name	Descriptions
Preferences & Customizations / PC Customizations : PC DateTime Display Element	Preconfigured Graphic Element that displays the date and time in the PC Status Bar. It

[Library Structure] Object Path : Aspect Name	Descriptions
	references the date and time format defined in the PC Settings aspect of the same object.
Preferences & Customizations / PC Customizations : PC Settings	PC Setting Property WorkplaceDateTimeFormat defines the format of the date and time display.
Preferences & Customizations / PC Customizations : PC Status Bar Graphic Display	The PC Status Bar Graphic Display aspect can be configured and customized in the Graphics Builder. For example, navigation buttons with aspect links can be added.
Preferences & Customizations / PC Customizations : PC System Status Viewer	The graphic element calls up the System Status Viewer.

Table 6.5: Status Bar Customization Aspects

6.2.3 Panels

The Panels describe the basic layout of the screens, and are referenced by the PC Operator Workplace objects. The PC Operator Workplace Panels define the startup displays that show up after the start of the PC Operator Workplaces.

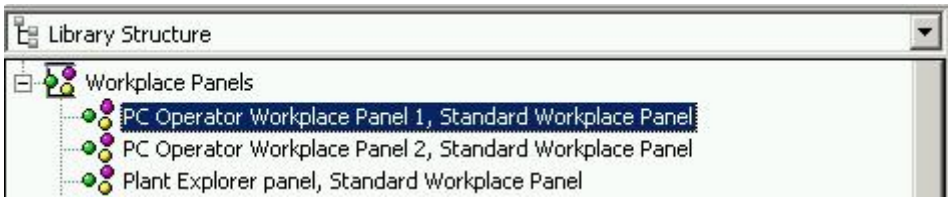


Figure 6-4: Workplace panels

[Structure] Object Path	Panel Layout Aspects - Predefined Settings
[Library Structure] Workplace Panels / PC Operator Workplace Panel 1	StartupDisplayPanelLayout with reference to the GUIDs of PC StartupDisplay 1 : PC StartupDisplay 1
[Library Structure] Workplace Panels / PC Operator Workplace Panel 2	StartupDisplayPanelLayout with reference to the GUIDs of PC StartupDisplay 2 : PC StartupDisplay 2

Table 6.6: PC Operator Workplace Panels

There are two ways to change the start up displays: The preferred method is to modify PC StartupDisplays 1 and 2 with the Graphics Builder.

The other option for users of the user group Software Developer is to replace the reference to {Object GUID}:{Aspect GUID} in the StartupDisplayPanelLayout Aspect. Example:

```
src="ao://{5B2961E8-2007-4C55-BAA8-D5B674D1740F}:{650652D9-8AE7-4DAB-8AD0-44C6F3EA972E}">
```

In the second case, you may also replace the reference by the paths, e.g. as object path [LibraryStructure]Preferences&Customizations/PCCustomizations/PCStartupDisplay1] and aspect name PCStartupDisplay1.

6.2.4 View Classes

With the View Class configuration for faceplates and graphic displays you can for example configure that faceplates will appear in the upper half of the display area and graphic displays in the bottom part of the display area.

In the Data source area you can select which settings you want for your profile. Select Default to use the default settings defined in the system's Profile Definition. If you want to define and use your own settings, select the Local radio button in the Data source area for system specific configurations that deviate from the Default system settings.

[Structure] Object Path / Aspect Name	**View Class Configuration** **Recommended Local Settings**
[Library Structure] Default View Class / ABB System / Faceplate: Config View	X Position: Local – Update Mode -/-; Value 0 Y Position: Local – Update Mode -/-; Value 700 Resizable: Local – Update Mode -/-; Boolean Value Yes Additional settings see chapter 6.2.5 "Faceplate call-up in a predefined area (optional)"
[Library Structure] Default View Class / ABB System / Faceplate: View Class Config	Max number of windows: 4
[Library Structure] Default View Class / ABB System / GraphicDisplay: Main View	X Position: Local – Value 0 Y Position: Local –Value 548 X Offset: Local – Value 640 Window Height: Local – Value 446 Window Width: Local – Value 640 Override: Local –General properties: Frame.DisplayBar.Visible, Value true Resizable – Local – Boolean Value Yes

[Structure] Object Path / Aspect Name	View Class Configuration Recommended Local Settings
[Library Structure] Default View Class / ABB System / GraphicDisplay: View Class Config	Max number of windows: 4

Table 6.7: View Class Configuration for Faceplates and Displays

6.2.5 Faceplate call-up in a predefined area (optional)

The placing of a faceplate can define by changing the faceplate view class definition.

This view class definition is located at [Library Structure] Default View Class / ABB System / Faceplate: Default

To open the faceplates in a defined area on the right side of the screen (start on top of the workplace area), set the view class values as follows (based on a screen resolution of 1600 x 1200):

Position	Size	Description
X	1350	size of the screen [1600] – width of the faceplate [250]
Y	103	height of the application bar (typically 75) + 28 pixel for the button bar
X	0	
Y	486	Height of the faceplate including extra space for the faceplate window display bar (value belongs to Windows Aero style, classic style = 482)

Table 6.8: Values for positioning and offset

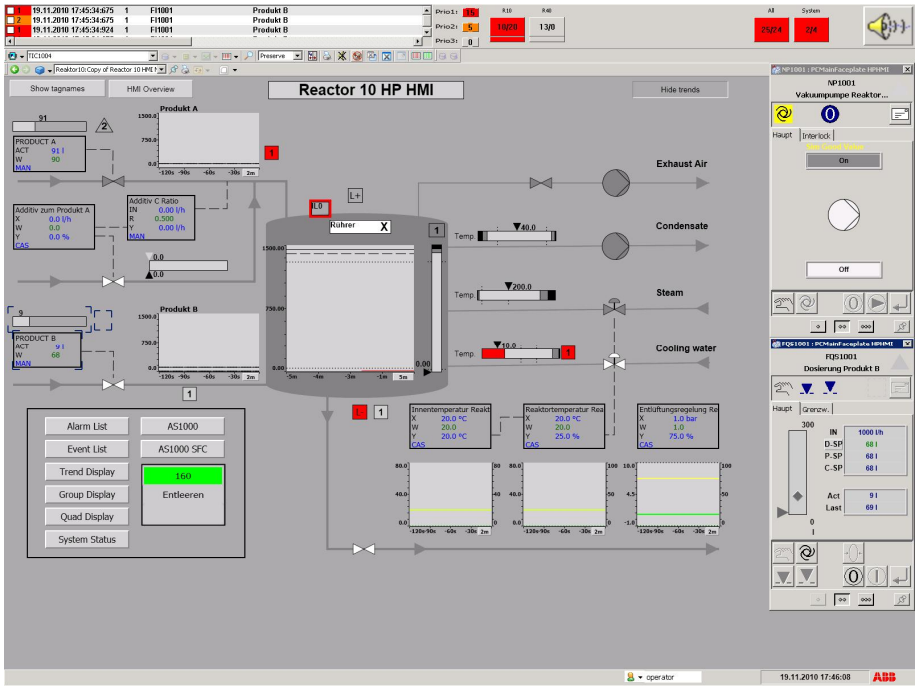


Figure 6-5: Graphic display with faceplates

To avoid that the faceplate hide contents of the current graphic display, each graphic display needs an unused space of 250 pixels at the right side.

The easiest way to prevent using this space is to add a rectangle in each graphic at this place, which is only visible at design time. This can be done by set the Visible property of the rectangle to the expression “BuilderLevel() >= 0”.

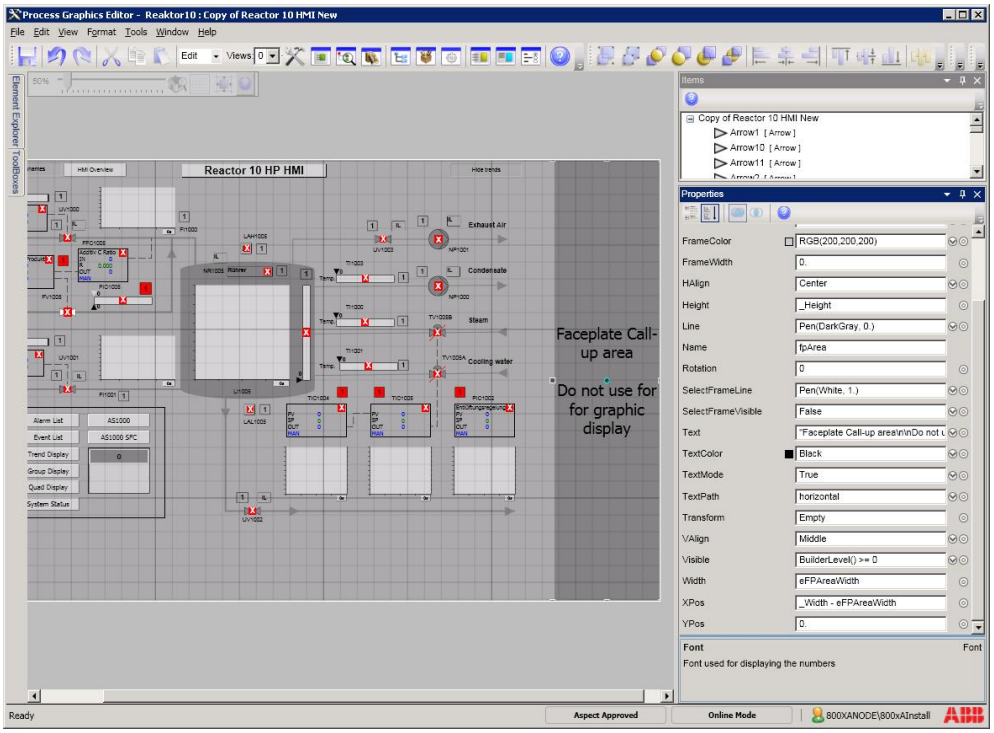


Figure 6-6: Graphic display in design mode

In the same way it is possible to define a navigation bar at the bottom of each graphic display. This navigation bar can defined as separate graphic element to use in more than one graphic display.

For a workplace navigation bar the status bar can be used (see chapter 6.2.2 Status Bar)

	Dependent on the final Workplace configuration, the system may be set to use an alternative location of the faceplates.

6.3 User Profiles and Favorites

To make it easier for each user to access the information he or she needs, you can set up individual profiles for each user. These decide which type of information that will be displayed. This means that all users can get fast access to the information they need frequently.

The User Profile values are set on the Profile Values aspects for each user in the User Structure.

6.3.1 Graphics Profile Values

It is recommended to use the default setting of the Graphics Profile Values aspect for the different users with the single modification for the object highlight width.

[Structure] Object Path / Aspect Name	Profile Values Suggested Local Settings
[User Structure] User Groups / Everyone / … : Graphic Profile Values	HighlightBorderWidth: Value 2

Table 6.9: Object Highlight Border Width

6.3.2 Workplace Profile Values

The Guest user shall view information but shall not be able to operate, engineer or administrate.

In the Data source area you can select which settings you want for your profile. Select Default to use the default settings defined in the system's Profile Definition. If you want to define and use your own settings, select the Local radio button in the Data source area for system specific configurations that deviate from the Default system settings.

[Structure] Object Path / Aspect Name	Workplace Profile Values Suggested Local Settings
[User Structure] User Groups / Everyone / Guest : Workplace Profile Values	Default Workplace: Local – PC Operator Workplace Two Screen (Or Default Workplace: Local – PC Operator Workplace) Workplace Mode: Local - Operator Workplace Mode Plant Explorer Settings: Local – Guest Operation Replacement Strategy: replace
[User Structure] User Groups / Everyone / Operator : Workplace Profile Values	Default Workplace: Local – PC Operator Workplace Two Screen

[Structure] Object Path / Aspect Name	Workplace Profile Values Suggested Local Settings
	(Or Default Workplace: Local – PC Operator Workplace) Workplace Mode: Local - Operator Workplace Mode Plant Explorer Settings: Local – Process Operation Replacement Strategy: replace
[User Structure] User Groups / Everyone / Advanced Operator : Workplace Profile Values	Default Workplace: Local – PC Operator Workplace Two Screen (Or Default Workplace: Local – PC Operator Workplace) Workplace Mode: Local - Operator Workplace Mode Plant Explorer Settings: Local – Process Operation Replacement Strategy: replace
[User Structure] User Groups / Everyone / I&E Person : Workplace Profile Values	Default Workplace: Default – Plant Explorer Workplace Workplace Mode: Default - Windows Workplace Mode Plant Explorer Settings: Default – No Filter Replacement Strategy: replace

Table 6.10: Example User Profiles (Guest, Operator, Advanced Operator, I&E Person

„Guest Operation“ is an example for an Aspect Category Filter which is predefined for the Guest user. This aspect is assigned to the Web System Workplace object in the Workplace Structure and defines the available aspect categories for the Guest user: E.g. Alarm and Event list, Faceplate, Graphic Display, Operator Note, Operator Trend, Trend Display.

If a Replacement Strategy is defined in the User Structure it demands the workplace behavior for this user – even if it is different than the workplace setting in the Workplace Structure.

6.3.3 Favorites

With the Favorite aspect it is possible to group and organize the most visited aspects for fast access. The Favorite aspect system is a function similar to the Favorites function in Internet Explorer. In a PC Workplace, the Aspect Favorites can be accessed from the Application Bar.

Typically project specific alarm and event aspects and graphic aspects are added to the predefined favorite groups. It is also possible to define specific Favorites for a user or a user group.

[Structure] Object Path	Predefined Favorite Aspects
[User Structure] User Groups / Everyone / Favorites	Home Reference: [Library Structure]Preferences & Customizations/PCCustomizations/PCStartupDisplay1: PCStartupDisplay1
[User Structure] User Groups / Everyone / Favorites / Alarm Lists	All Alarms Reference: Root: Alarm List (PC Alarm List Template) All Hidden Alarms Reference: Root: Hidden Alarm List (PC Common Hidden Alarm List Template)
[User Structure] User Groups / Everyone / Favorites / Event Lists	All Events Reference: Root: Event List (PC Event List Template) Audit Trail Reference: Root: Audit List (PC Audit Trail Template)
[User Structure] User Groups / Everyone / Favorites / Graphics	Startup Display 1 Reference: [Library Structure]Preferences & Customizations/PCCustomizations/PCStartupDisplay1: PCStartupDisplay1 Startup Display 2 Reference: [Library Structure]Preferences & Customizations/PCCustomizations/PCStartupDisplay2: PCStartupDisplay2
[User Structure] User Groups / Everyone / Favorites / Group Display	
[User Structure] User Groups / Everyone / Favorites / Operator Trends	Operator Trend 1, Operator Trend 2, Operator Trend 3, Operator Trend 4, Operator Trend 5, Operator Trend 6, Operator Trend 7, Operator Trend 8, Operator Trend 9, Operator Trend 10 References: [Library Structure]Preferences & Customizations/PCCustomizations/Operator Trends: Operator Trend 1-10
[User Structure] User Groups / Everyone / Favorites / Trends	

Table 6.11: Predefined PC Favorite Groups

After System Extension load, please check the links and eventually update the references!

6.4 Password Change Tool within the workplace

In some factories a recurring changing the password is required for reasons of plant safety. To make the Password Change Tool accessible for operators it must be include to the workplace.

There are to possible locations for the button to open the Password Change Tool from inside of a workplace:

- as tool in the application bar
- nearby the current user tool (also used for log over), normally located in the status bar

Change Password Tool built into the application bar

To include the Password Change Tool into an application bar, open the application bar aspect (located at the workplace object in the Workplace Structure), select the tab “Tool Collections” and set the check mark at the “PC Password Change Tool Collection” entry.

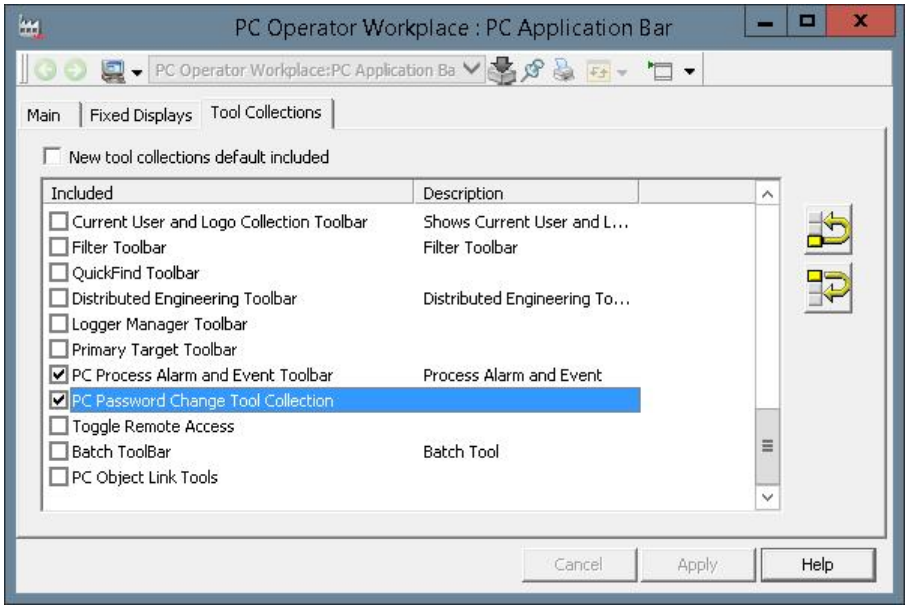


Figure 6-7: Password Change Tool application bar configuration

This must be done for each application bar of the workplace, if the tool should be available on each screen.

After applying, the tool button is available in the application bar:

Figure 6-8: Password Change Tool included in application bar

Change Password Tool built next to the Current User Indication

To include the Password Change Tool nearby the Current User indication open the status bar aspect on the workplace object (or application bar if it is located there) and navigate to the Fixed Display tab. Click the Add button and select the Workplace Structure in the Structure combo box, select the “Web System Workplace” object in the object list and select the “PC Password Change Tool GE” in the aspect list. Check the Display Width entry. Recommended is 2% on screen resolution width of 1920 pixels.

Use the Move up / Move Down buttons to move the element on the right position.

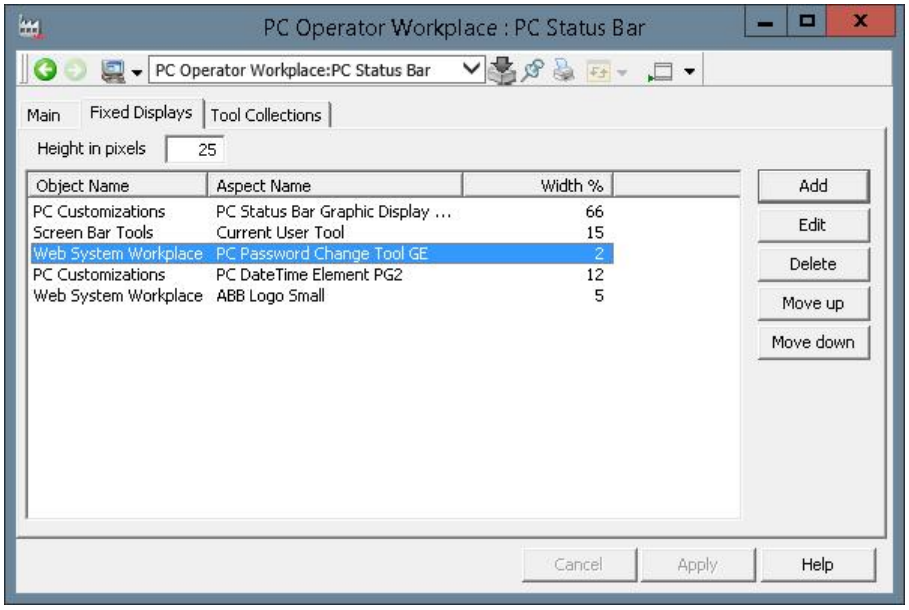


Figure 6-9: Password Change Tool status bar configuration

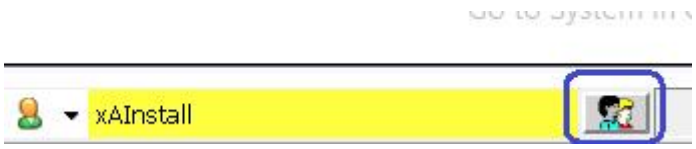


Figure 6-10: Password Change Tool included in status bar

7. PC Tools supported features

PC Tools facilitates interoperability configuration through the automated generation during engineering. The functionality includes:

Aspect Link

Aspect Link adds multiple aspect references to its objects context menu. Aspect Link is an aspect that allows to manually configuring additional links to any object aspect of the same or different objects.

Link Generator

1. Faceplate, Trend and Group display links	The tool analyses the selected objects of the Functional Structure. The tool adds Aspect Links to all other objects with faceplates that are inserted under the same Function Designer Diagram object.
2. User-defined links	The tool adds user defined links. These links are available in the context menu under “Reference links”.

7.1 Aspect Link

The PC Toolkit Library extension includes the Aspect Link category. The PC Tool is used to automatically add aspect references to the Aspect Link aspect. If aspect references already exist, they will be updated or - if new- a new Aspect Link aspect will be added. For example: Faceplate or Trend Display aspect links of other objects.

- Go to Functional Structure
- Insert the aspect **Aspect Link** to the object applicable
- Push **Add Link** to manually add or change reference links

	The loading of the PC Setup extension adds the Aspect Link category to the system.

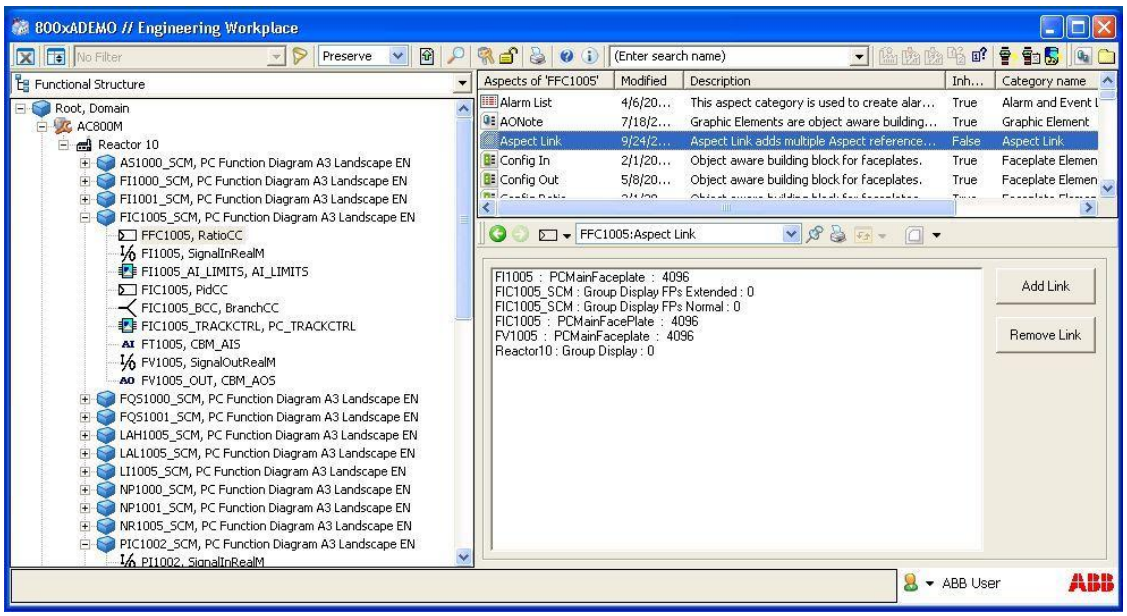


Figure 7-1: Engineering Workplace - Aspect Link aspect

7.2 Link Generator

The Link Generator tool automatically generates aspect links. The tools must be started to initially generate information and to update data after configuration changes.

The tool logs all actions and reports the changes performed. The log is saved to the log file on the client node. This log file will be overwritten on every program start.

[Structure] Object Path	Windows Application Aspect
[Functional Structure] Root, Domain	PC FaceplateLink Generator (-> Open)

Table 7.1: PC Tools – Link Generator

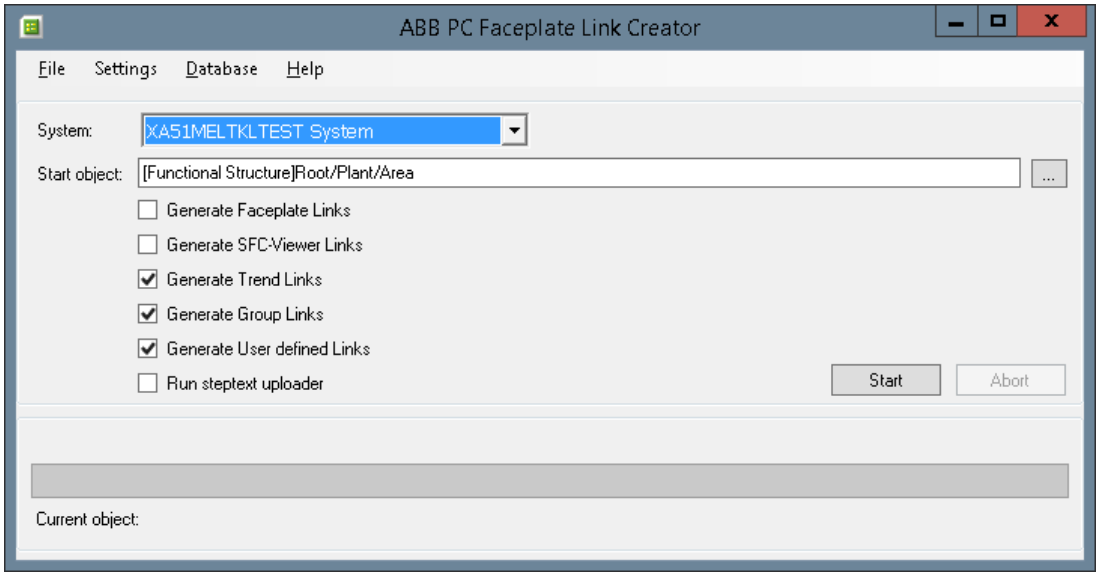


Figure 7-2: PC Link Creator Tool

- Go to Functional Structure
- Open the **PC Faceplate Link Generator** aspect, which is located at the Root object
- Enter the **StartObject** and select the object or object tree in Functional Structure, which shall be analyzed
- Check the functionality required
- Push the **Start** button
- Push the **View Log** button, in order to verify which changes were made

	The loading of the PC Setup extension adds the Faceplate Link Creator aspect to the Root object.

	The Link Creator shall be started only once at a time.

7.2.1 Run Faceplate Links

The PC Link Generator tool analyses the selected part of the object tree in Functional Structure. It adds faceplate links to other objects of the same level, e.g. if used in the same Function Designer Diagram.

Faceplate link references will be added to all object children of the same level, which do have either a MainFaceplate or a PC MainFaceplate aspect. The PC MainFaceplate aspect will be added as reference, if available. Otherwise the MainFaceplate aspect will be added.

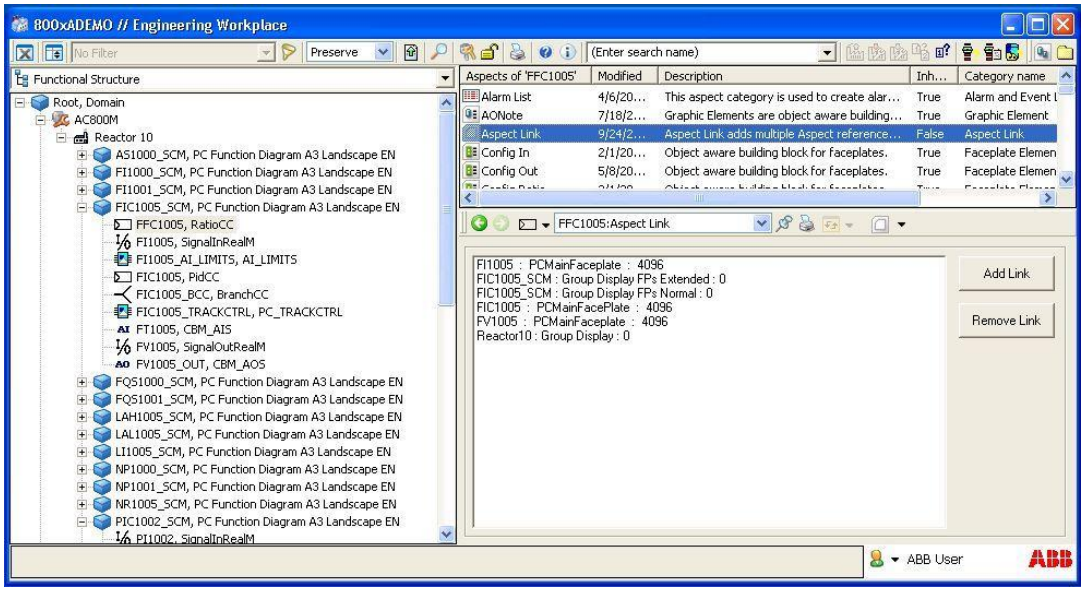


Figure 7-3: Engineering Workplace – Faceplate Links

7.2.2 Run Trend Display Links

The PC Link Generator tool creates for each object in the selected part of the Functional Structure a link to one or more trend displays, if the trend displays contains the actual object. During the analysis, all trend displays in the Functional Structure will be checked (not only in the selected object tree).

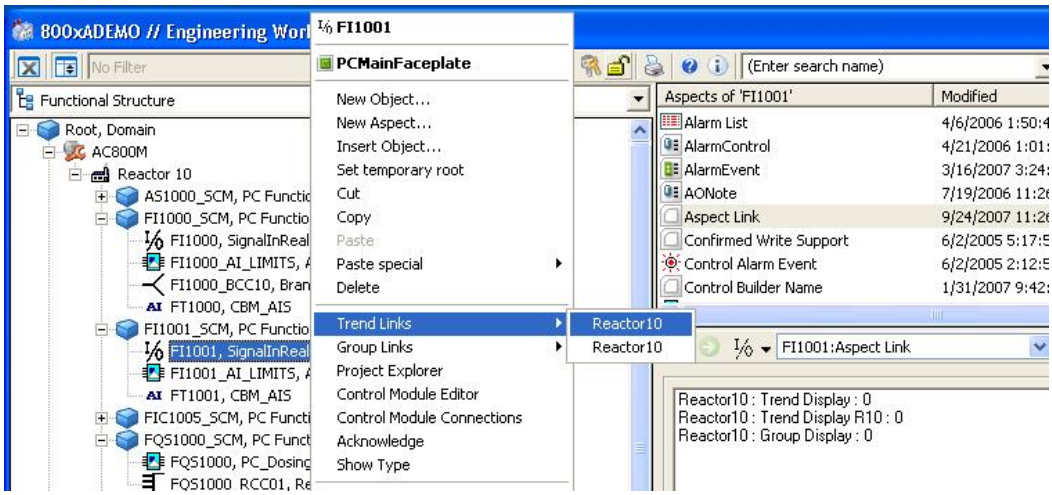


Figure 7-4: Engineering Workplace – Trend Links

7.2.3 Run Group Display Links

The PC Link Generator tool creates a link to one or more group displays for every object in the selected part of the Functional Structure, if the group displays contains the actual object. During the analysis, all group displays in the Functional Structure will be checked (not only in the selected object tree).

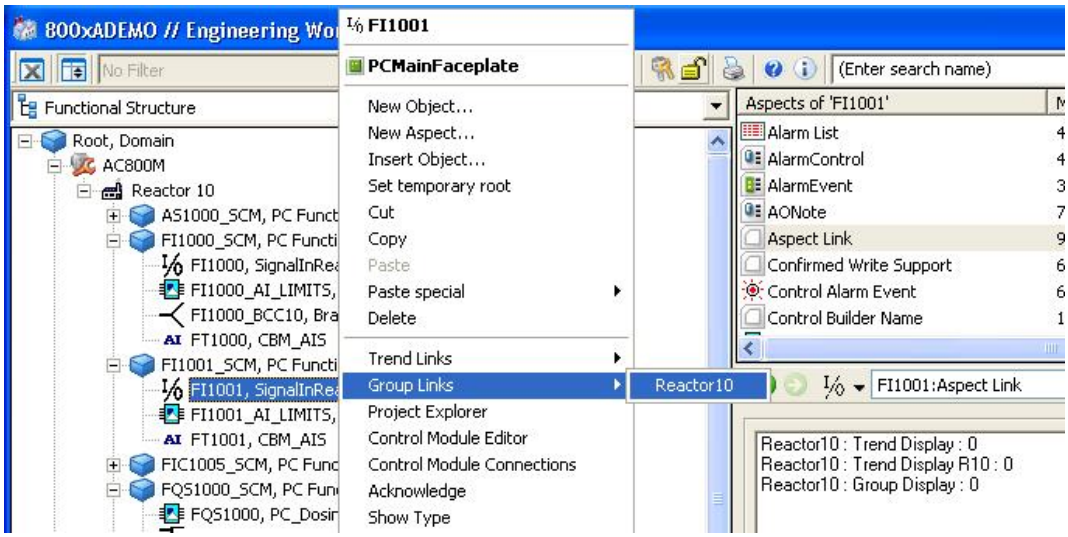


Figure 7-5: Engineering Workplace – Group Links

7.2.4 Run User Defined Links

The PC Link Generator tool also provides the possibility to create user defined links. These links are available in the context menu under “Reference links”.

To setup these links, create a CSV (comma separated file) file with Microsoft Excel with four columns (column headers are not required):

- Object Name: Name of the object where the link should be added (required)
- Link Object: Name of the object which should be linked
- Link Aspect: Aspect name which should be linked (if empty the default aspect is used)
- View ID: View ID that should be displayed (if empty the default view will used)

The entries in the CSV file can be separated by comma or semicolon.

The CSV file must be imported to the internal link database by select the “Import user defined links” menu item in the Database menu and selection of the CSV file (a preview of the selected file is shown). Click OK to start the import.

All existing user defined links can be deleted from the database by use the Show link menu item from the Database menu. A window with all available links stored in the internal database will show. In this window the existing links can be deleted.

7.2.5 Run Step Text Uploader

Not used with Melody Connect

7.2.6 Run Interlock Display Uploader

Not used with Melody Connect

8. PC Master Database

8.1 General

The PC Master database is an optional software package of the PC Toolkit Library for Melody. It is not included in the installation and loading procedure of the Toolkit. It has to be loaded in a separate step.

8.2 Document References

Category	ID	Document Number	Description
Engineering	/9/	2VAA000580-530	S+ Engineering: Function Blocks Operation
	/10/	2VAA000587-530	S+ Engineering: Composer Melody User Manual
	/11/	2VAA000568-530	S+ Engineering: Composer Melody – Library User Manual
	/12/	3BDA033930R5101EN_xyz	xyz=Function diagram template
Installation	/13/	2VAA000564-530	Installation Manual

Table 8.1: Document References

8.3 Restore of the PC Master Database

Document 2VAA000564-530 is the comprehensive manual which describes the installation procedure of a Composer. Refer to section 1.5 Restoring a backup.

The PC Master database is stored on the product DVD of the PC Toolkit Library for Melody in a predefined folder structure.

- Copy folder structure onto the Composer server
- Extract zip-file with PC Master database onto Composer server
- Rename the existing project name pc530
- Restore the data base using the newly defined project name
- Use the command Start → Run → cmd in the DOS box

Figure 8-1: Restore database via cmd window

8.4 Alarm templates

Refer to standard product documentation 2VAA000580-530

8.5 Archive Templates

The following archive templates are defined in depicted PC Master database.

Name	SN	ZAVG	OZDAU	ZYCARC	ZMIN	ZMAX	TOL	EXKAN	Comment
Fast_1d	VFT1	0:00:05.000	24:00:00	0:00:05.000	0:00:05.000	00:15:00	1.0	false	1 day, 5s
Med_1d	VMD1	0:00:15.000	24:00:00	0:00:15.000	0:00:15.000	00:15:00	1.0	false	1 day, 10s
Slow_1d	VSL1	0:00:30.000	24:00:00	0:00:30.000	0:00:30.000	00:15:00	1.0	false	1 day, 30s
Vslow_1d	VVS1	0:01:00.000	24:00:00	0:01:00.000	0:01:00.000	00:15:00	1.0	false	1 day, 1min
Fast_3d	VFT2	0:00:05.000	72:00:00	0:00:05.000	0:00:05.000	00:15:00	1.0	false	3 days, 5s
Med_3d	VMD2	0:00:15.000	72:00:00	0:00:15.000	0:00:15.000	00:15:00	1.0	false	3 days, 10s
Slow_3d	VSL2	0:00:30.000	72:00:00	0:00:30.000	0:00:30.000	00:15:00	1.0	false	3 days, 30s
Vslow_3d	VVS2	0:01:00.000	72:00:00	0:01:00.000	0:01:00.000	00:15:00	1.0	false	3 days, 1min
Fast_7d	VFT3	0:00:05.000	168:00:00	0:00:05.000	0:00:05.000	00:15:00	1.0	false	7 days, 5s
Med_7d	VMD3	0:00:15.000	168:00:00	0:00:15.000	0:00:15.000	00:15:00	1.0	false	7 days, 10s
Slow_7d	VSL3	0:00:30.000	168:00:00	0:00:30.000	0:00:30.000	00:15:00	1.0	false	7 days, 30s
Vslow_7d	VVS3	0:01:00.000	168:00:00	0:01:00.000	0:01:00.000	00:15:00	1.0	false	7 days, 1min
Med_14d	VMD4	0:00:15.000	336:00:00	0:00:15.000	0:00:15.000	00:15:00	1.0	false	14 days, 10s
Slow_14d	VSL4	0:00:30.000	336:00:00	0:00:30.000	0:00:30.000	00:15:00	1.0	false	14 days, 30s
Vslow_14d	VVS4	0:01:00.000	336:00:00	0:01:00.000	0:01:00.000	00:15:00	1.0	false	14 days, 1min
Slow_30d	VSL5	0:00:30.000	720:00:00	0:00:30.000	0:00:30.000	00:15:00	1.0	false	30 days, 30s
Vslow_30d	VVS5	0:01:00.000	720:00:00	0:01:00.000	0:01:00.000	00:15:00	1.0	false	30 days, 1min

Table 8.1: Archive templates

Header Name	Description	Presentation
Name	Unique name of the template in the project	12 characters
SN	Short name or symbol in the function diagram	5 characters
ZAVG	Time constant	h:mm:ss.sss
OZDAU	Online storage time	hhhh:mm:ss
ZYCARC	Archive cycle time	h:mm:ss.sss
ZMIN	Minimum time for next value	h:mm:ss.sss
ZMAX	Maximum time for next value	hhhh:mm:ss
TOL	Tolerance band	Value in%)
EXKAN	External archive	
Comment	Description text for the user	

Table 8.1: Explanation of the templates header

8.6 Physical dimensions

The following physical dimensions are defined in depicted PC Master database.

Category	Unit	Description
Electrical values	A	ampere
Electrical values	kV	[Kilovolt]
Electrical values	kW	kilowatt
Electrical values	mA	[Milliampere]
Electrical values	MW	megawatt
Electrical values	Ohm	[Resistance]
Electrical values	V	volt
Electrical values	W	watt
Electrical values	µS/cm	microsiemens per centimetre
General	(pH)	pH value (no dimension!)
General	%	percentage value
General	Hz	hertz
General	ppm	parts per million
Length, Speed	1/min	turns per minute
Length, Speed	cm	centimetre
Length, Speed	dm	decimetre
Length, Speed	km	kilometre
Length, Speed	m	metre
Length, Speed	m/s	metre per second
Length, Speed	mm	millimetre
Pressure	bar	bar
Pressure	bar_a	bar absolute
Pressure	hPA	hectopascal
Pressure	kPa	kilopascal
Pressure	mbar	millibar
Pressure	mbar_a	mbar absolute
Pressure	mmWS	mm water column
Pressure	MPa	megapascal
Pressure	Pa	pascal
Quantity, Flow	%vol	[Volumenprozent]
Quantity, Flow	kg/h	kilogramme per hour
Quantity, Flow	kg/s	kilogramme per second
Quantity, Flow	l	litre

Category	Unit	Description
Quantity, Flow	l/h	litre/hour
Quantity, Flow	l/s	litre per second
Quantity, Flow	m^3	Cubic meter
Quantity, Flow	m^3/h	Cubic meter per hour
Quantity, Flow	ml	[Milliliter]
Quantity, Flow	Nm^3	[standard cubic meter]
Quantity, Flow	Nm^3/h	[standard cubic meter per hour]
Quantity, Flow	t/h	tons per hour
Quantity, Flow	t/W	- invalid -
Temperature	°C	degree centigrade
Temperature	°F	degree Fahrenheit
Temperature	K	kelvin
Time	a	[year]
Time	d	day
Time	h	hour
Time	min	minute
Time	s	second
Time	w	week
Weight, Density	g	gramme
Weight, Density	g/cm^3	gramme per cubic centimetre
Weight, Density	kg	kilogramme
Weight, Density	kg/l	kilogramme per litre
Weight, Density	kg/m^3	kilogramme per cubic centimetre
Weight, Density	t	metric tonne

Table 8.1: List of the physical dimensions

8.7 Tasks

The following tasks are defined in depicted PC Master database.

Task Name	Cycle time	Comment
TK01	100 ms	Task01
TK02	500 ms	Task02
TK03	1000 ms	Task03
TK04	1000 ms	Task04
TK05	1000 ms	Task05
TK06	1000 ms	Task06
TK07	2000 ms	Task07
TK08	2000 ms	Task08
TK09	2000 ms	Task09
TK10	2000 ms	Task10
TK11	4000 ms	Task11
TK12	4000 ms	Task12
TK13	4000 ms	Task13
TK14	6000 ms	Task14
TK15	6000 ms	Task15
TK16	8000 ms	Task16

Table 8.1: List of used tasks

8.8 PC Composer Templates

Refer to document 3BDA033930R5101EN_xyz. [xyz] is the name of the function diagram template.

Process Point	Description	Plant Area	Function Unit	MR-Start	MR-End	Dim	Function Diagram
PC_AI_1	Analog Input Module	PC_TOOLKIT	PC_TKIT	0	100	%	PC_AI_1
PC_AO_1	Analog Output Module basic	PC_TOOLKIT	PC_TKIT	0	100	%	PC_AO_1
PC_AO_2	Analog Output Module mode	PC_TOOLKIT	PC_TKIT	0	100	%	PC_AO_2
PC_B_BO_1	Batch Binary Output Module	PC_TOOLKIT	PC_TKIT				PC_B_BO_1
PC_B_BO_1V	Batch Binary Output Module	PC_TOOLKIT	PC_TKIT				PC_B_BO_1
PC_B_HVFC_1	Batch On/Off Valve (FC)	PC_TOOLKIT	PC_TKIT				PC_B_HVFC_1
PC_B_HVFC_1V	Batch On/Off Valve (FC)	PC_TOOLKIT	PC_TKIT				PC_B_HVFC_1
PC_B_HVFO_1	Batch On/Off Valve (FO)	PC_TOOLKIT	PC_TKIT				PC_B_HVFO_1
PC_B_HVFO_1V	Batch On/Off Valve (FO)	PC_TOOLKIT	PC_TKIT				PC_B_HVFO_1
PC_B_MOT_1	Batch Motor Module MOT-1	PC_TOOLKIT	PC_TKIT				PC_B_MOT_1
PC_B_MOT_1V	Batch Motor Module MOT-1	PC_TOOLKIT	PC_TKIT				PC_B_MOT_1
PC_B_MOT_2	Batch Motor Module MOT-2	PC_TOOLKIT	PC_TKIT				PC_B_MOT_2
PC_B_MOT_2V	Batch Motor Module MOT-1	PC_TOOLKIT	PC_TKIT				PC_B_MOT_2
PC_BI_1	Binary Input Module basic	PC_TOOLKIT	PC_TKIT				PC_BI_1
PC_BI_2	Binary Input Module sim	PC_TOOLKIT	PC_TKIT				PC_BI_2
PC_BO_1	Binary Output Module	PC_TOOLKIT	PC_TKIT				PC_BO_1
PC_BO_1V	Binary Output Module	PC_TOOLKIT	PC_TKIT				PC_BO_1
PC_CNT_1	Analog Input time base	PC_TOOLKIT	PC_TKIT	0	10000	kg	PC_CNT_1
PC_CNT_2	Analog Input endless	PC_TOOLKIT	PC_TKIT	0	10000	kg	PC_CNT_2
PC_CNT_3	Pulse Input time base	PC_TOOLKIT	PC_TKIT	0	10000	kg	PC_CNT_3
PC_CNT_4	Pulse Input endless	PC_TOOLKIT	PC_TKIT	0	10000	kg	PC_CNT_4
PC_CNT_5	Time counting function	PC_TOOLKIT	PC_TKIT	0	100	h	PC_CNT_5
PC_CNT_6	Period counting function	PC_TOOLKIT	PC_TKIT	0	100		PC_CNT_6
PC_CTRL_1	Fixed/Split-Range/Cas-Master	PC_TOOLKIT	PC_TKIT	0	100	%	PC_CTRL_1
PC_CTRL_2	Slave Controller	PC_TOOLKIT	PC_TKIT	0	100	%	PC_CTRL_2
PC_CTRL_3	Ratio Controller	PC_TOOLKIT	PC_TKIT	0	100	%	PC_CTRL_3
PC_DOS_1	Dosage Module	PC_TOOLKIT	PC_TKIT	0	100	kg	PC_DOS_1
PC_HVFC_1	On/Off Valve (FC)	PC_TOOLKIT	PC_TKIT				PC_HVFC_1
PC_HVFC_1V	On/Off Valve (FC)	PC_TOOLKIT	PC_TKIT				PC_HVFC_1
PC_HVFO_1	On/Off Valve (FO)	PC_TOOLKIT	PC_TKIT				PC_HVFO_1
PC_HVFO_1V	On/Off Valve (FO)	PC_TOOLKIT	PC_TKIT				PC_HVFO_1

Process Point	Description	Plant Area	Function Unit	MR-Start	MR-End	Dim	Function Diagram
PC_MOT_1	Motor Module MOT-1	PC_TOOLKIT	PC_TKIT				PC_MOT_1
PC_MOT_1V	Motor Module MOT-1	PC_TOOLKIT	PC_TKIT				PC_MOT_1
PC_MOT_2	Motor Module MOT-2	PC_TOOLKIT	PC_TKIT				PC_MOT_2
PC_MOT_2V	Motor Module MOT-1	PC_TOOLKIT	PC_TKIT				PC_MOT_2
PC_S88_PI1	Integer value 1 from batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_PI2	Integer value 2 from batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_PR1	Real value 1 from batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_PR2	Real value 2 from batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_RI1	Integer value 1 to batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_RI2	Integer value 2 to batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_RR1	Real value 1 to batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_RR2	Real value 2 to batch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_S88_SFC	S88 SFC 5-Branch	PC_TOOLKIT	PC_TKIT				PC_S88_SFC
PC_SFC_1	SFC 2-Branch	PC_TOOLKIT	PC_TKIT				PC_SFC_1

Table 8.1: List of the PC Composer templates

9. Appendix A: Tag Quality

Indicators

The controller communication status is used as overlay and displays the error state. The indication is shown if a value is bad, uncertain, simulated, alarm suppressed or forced. When the value is good, the indication is invisible.

	Refer to document Melody Configuration (3BDD011741-510) instruction for more detailed information on the tag property qualities in 800xA for Melody.

Additional quality is reported by the tag and is indicated with ASCII characters or icons. The quality indicator appears in several functions such as faceplate and graphic element. For project defined adaption see also chapter 5.9.4 Status Indication.

Condition	State	Signal status	Back Color	Fore Color	Icon
Good Quality	Normal state	--			none
	Alarms inhibited	200	UserControl. BackColor	Red	\
	Alarms disabled	201	UserControl. BackColor	Red	=
	Alarms suppressed (Classic Style)	--	White	Yellow	X
	Alarms suppressed (High Performance Style)	--	White	Black	X
	Simulated (Classic Style)	--	Yellow	Black	S
	Simulated/Forced (High Performance Style)	--	White	Black	SI
	Forced (Classic Style)	--	Yellow	Black	T
	Interlocked (Classic Style)	--	UserControl. BackColor	Black	X
	Interlocked (High Performance Style)	--	White	Black	I
Bad Quality	Non specific	0	Red	White	X
	Device Failure	12	Red	White	X
	Sensor failure	16	Red	White	X

Condition	State	Signal status	Back Color	Fore Color	Icon
	Configuration Error	4	Red	Black	.
	Not Connected	8	Red	Black	?
	Not connected	128	Red	Black	?
	Last known value	20	Red	Black	/
	Communication Failure	24	Red	Black	@
	Out of service	28	Red	Black	~
Uncertain	**Note:** Uncertain Quality is only visible when not simulated.	64	UserControl. BackColor	Red	!
	Last usable value	68	UserControl. BackColor	Red	!
	Sensor failure	80	UserControl. BackColor	Red	!
	Engineering units exceeded	84	UserControl. BackColor	Red	!
	Sub-normal	88	UserControl. BackColor	Red	!
	Unknown OPC quality	Other	UserControl. BackColor	Red	*

Table 9.1: Quality Indications for graphic elements

A graphic element shows the most important quality indication. The Order of displaying the quality indication is (in precedence order):

1. Bad Quality
2. Uncertain Quality and not simulated
3. Alarms inhibited or disabled
4. Alarms suppressed
5. Local override (Forced)
6. Simulated
7. Interlocked

10. Appendix B: Security

In 800xA for Melody the different OPC items are set to default access permission depending on the semantic of the item. 800xA for Melody provides basic settings for read, write, and operate permission.

	Refer to document 800xA for Melody, Configuration (3BDD011741-510) instruction for more detailed information on Security settings in 800xA for Melody.

An OPC item can be represented by a faceplate key. Faceplate keys are sensitive if the operation is allowed for the user, which is logged in. If a user does not have the permission the faceplate keys are grayed out. For example: Guest User. The guest user can just view and not operate at all. This means the guest user will have the permission to see the faceplates but not operate. All faceplate keys are grayed out for the guest user.

Operation Lock and Manual Inhibit Write Permissions

The Melody faceplates' Configuration Tab allows checking **Operation Lock** in order to inhibit operator inputs. All buttons will be grayed out.

Manual Inhibit can be selected to manually inhibit all alarms of this Melody tag.

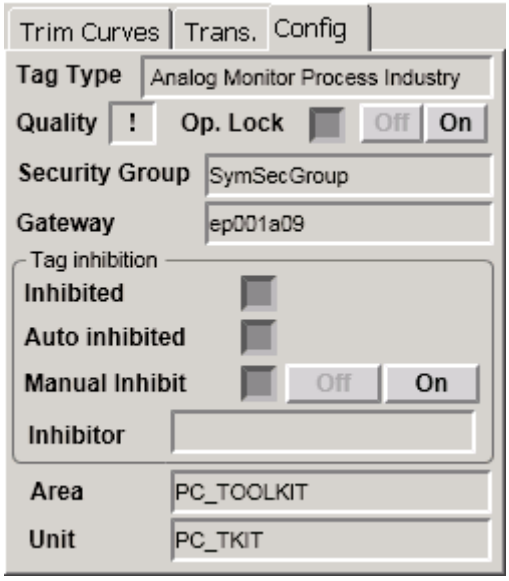
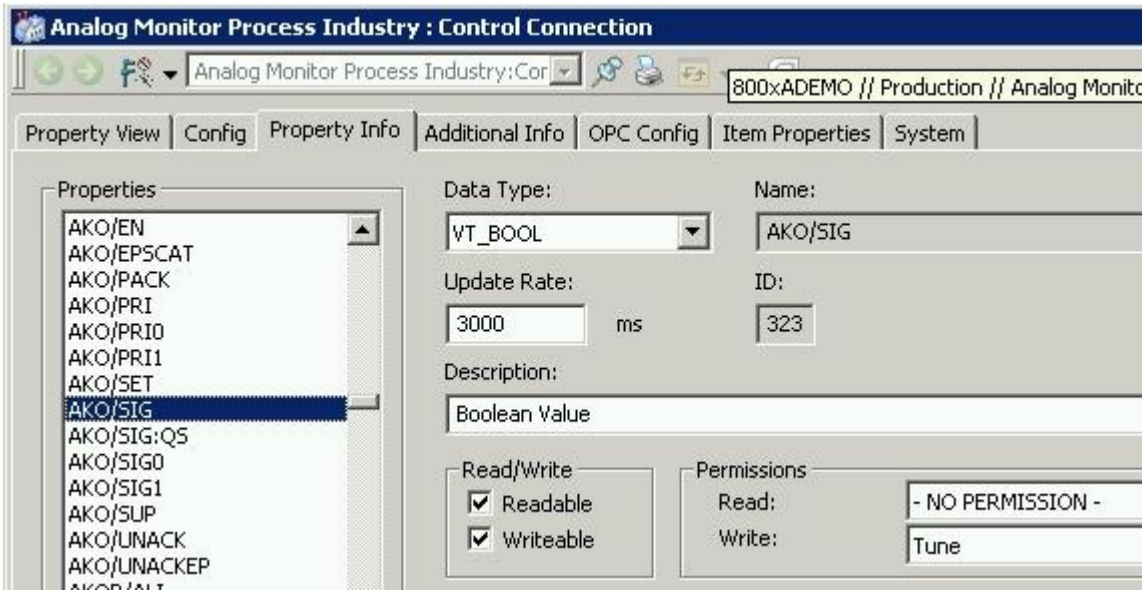


Figure 10-1: Config Tab

In order to change the default write permission, call up the Object Type Structure in the Plant Explorer. For each Melody object type, check or change the OPC property write permission in the Control Connection aspect of each Melody object type.



The following table directs you to the property names that are relevant to set and reset **Manual Inhibit** and **Operation Lock** for the Melody object types. Change the Write Permission from Operate to **Tune** for the listed object types (lines) and the relevant properties (columns).

Melody Object Type	**Manual Inhibit Alarms**	**Lock Operator Input Operator Access Lock**			
	INHBMAN	**AKO/SIG and AKOR/SIG**		**OPL/SIG**	**LOPO/ SIG**
Analog Monitor Process Industry	*Tune*	*Tune*	*Tune*	*N/A (not Applicable)*	*N/A*
Analog Out	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Binary Monitor	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Block Flag Boolean	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Block Flag Clock	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Block Flag Duration	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Block Flag Integer	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*

Melody Object Type	Manual Inhibit Alarms	Lock Operator Input Operator Access Lock			
	INHBMAN	AKO/SIG and AKOR/SIG		OPL/SIG	LOPO/ SIG
Block Flag Long Duration	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Block Flag Packed Boolean	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Block Flag Real	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Calendar and Timing Function	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Change Over Automatic	*Tune*	*N/A*	*N/A*	*Tune*	*N/A*
Counter	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Dosing Function	*Tune*	*N/A*	*N/A*	*N/A*	*Tune*
PID Closed Loop Controller	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Individual Drive Function	*Tune*	*N/A*	*N/A*	*N/A*	*Tune*
Sequential Function Chart	*Tune*	*N/A*	*N/A*	*N/A*	*Tune*
Single Flag Boolean	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Single Flag Clock	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Single Flag Duration	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Single Flag Integer	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Single Flag Long Duration	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Single Flag Packed Boolean	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*
Single Flag Real	*Tune*	*N/A*	*N/A*	*N/A*	*N/A*

Melody Object Type	Manual Inhibit Alarms	Lock Operator Input Operator Access Lock			
	INHBMAN	AKO/SIG and AKOR/SIG		OPL/SIG	LOPO/ SIG
Time and Pulse Counter	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*
Totalizer	*Tune*	*Tune*	*Tune*	*N/A*	*N/A*

Table 10-1: Melody Property Write Permissions

Derivative Action Gain Write Permissions

The following table directs you to the property names that are relevant to change the write permission for the **Derivative Action Gain** properties for the object type MelodyAPID:

Melody Object Type	Derivative Action Gain (German: Vorhalteverstärkung)		
	VD+Y/ SIG	VD-Y/SIG	VDY/SIG
PID Closed Loop Controller	*Tune*	*Tune*	*Tune*

Table 10-2: Melody Property Write Permissions

Change the Write Permission from Operate to **Tune** for the listed object types (lines) and the relevant properties (columns).

Alternative Value Write Permissions

The following table directs you to the property names that are relevant to change the write permission for the **Alternative Value** properties for the Melody object types Analog Monitor, Analog Out and APID Closed Loop Control. Change the Write Permission from Operate to **Tune**.

Melody Object Type	ATV/SIG
Analog MonitorProcess Industries	*Tune*
Analog Out	*Tune*
PID Closed Loop Controller	*Tune*

Table 10-3: Melody Property Write Permissions

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