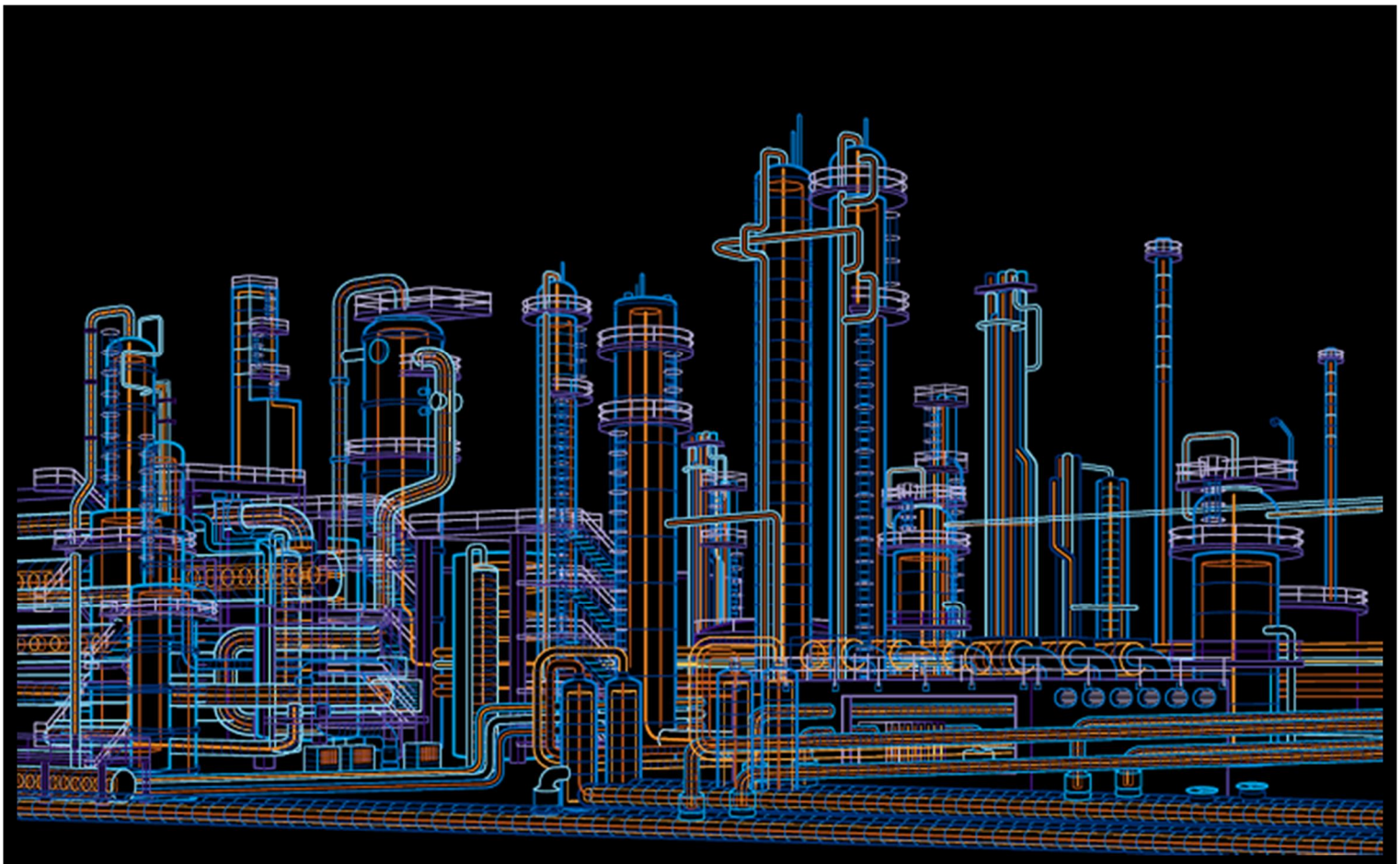

System 800xA
PC Toolkit Library for Melody Operations
User Manual

System Version 6.0

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1. Introduction

This manual covers one aspect of the complete operator control and monitoring functions of System 800xA. It describes only those functions that are provided by the software package "PC Toolkit Library for Melody" [1]..

Essentially, these are

- the representations of process values via faceplates and graphic elements
- the differences between the display modes "High Performance" and "Classic"

All other system functions available to a user are available, such as trending, SFC, alarm, logs, SMS, email, etc., are documented in the standard documentation of 800xA.

1.1 Terminology

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

Abbreviation	Description
Classic Style	Displays in classic style show a more or less representation of the P&I diagram with animated elements like spinning pumps, moving conveyors and brightly colored 3-D vessels. Maximum information of the process status is given any time. The operators are captured in a “colored picture”.
HP Style	The "High Performance Style Guide" is a different way of representing process values. In the "good" range the graphic images show little contrast and color. Gray backgrounds are used to minimize glare. Colors and animations are only used to highlight anomalous situations. For the operator, the special attention is paid in case of failure on the process.
HMI	Human Machine Interface - Synonymous with operator workplace via an operator operates and monitors the system.
PC	Process Control; Industry where the PC Toolkit Library for Melody is used

Table 1-1: Abbreviation

1.2 Document References

Document Number	Description
3BSE036904-600	800xA Operations (Standard product documentation)

Table 1-2: Document References

[1] „PC Toolkit for Melody“ is an 800xA System Extension. Development and product support is provided by DEATG/SO

2. General Operator Start-Up

2.1 Login

To log on the system every operator needs his user name and password. After a successful login, the operator has the possibility to change the password. This is described in chapter 2.2. The login window pops up with the Windows 8 Logo, like shown in the Figure below.

Figure 2.1: Login for Operator

After a successful login windows will start automatically the operator workplace with the user specific rights.

2.2 Change and reset password

2.2.1 After first login

After the first login every operator should change his password that nobody else can use his account. The password for guest or default user does not expire.

After pushing the keyboard keys Ctrl+Alt+Del the Windows security window pops up with the possibility to enter a new password.

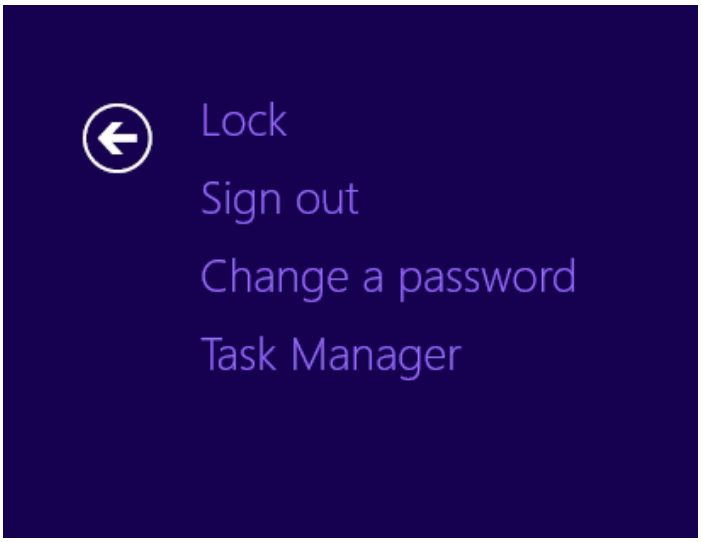


Figure 2.2: Windows Security Options

On pushing the button “Change Password” the actual user has to type in the old password and the new password. The new password has to be confirmed and acknowledged.

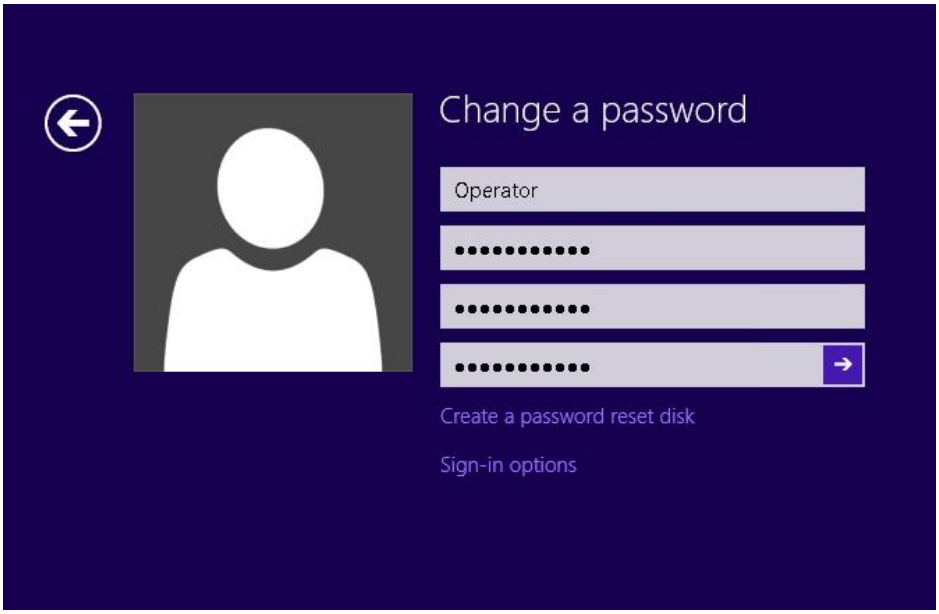


Figure 2.3: Change Password

2.2.2 Change and reset user accounts

In some factories a recurring change of the password is required for reasons of plant safety. If a user has not maintained his password change or a reset of the password is required, the utility to reactivate his account was available only at Windows level. As of PC Toolkit for Melody 5.1-4 and 6.0-0 the procedure is available also for operators. The tool is called via a button within the 800xA application bar or bottom right next to system date and time.

Figure 2.4: Calling the change-password-tool via the application toolbar

Password change

To change a password, the user's name and the last valid password must be known. The new password is subject to the conditions laid down in the Domain Password Policies and checks length, minimum password age, password history and complexity. The password can be changed at any time, taking into account the minimum password age.

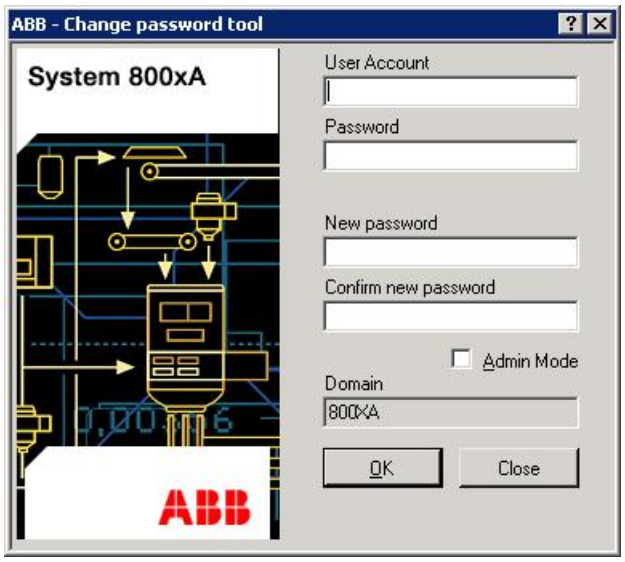


Figure 2.5: Authentication window

Intent of the fields:

User Account	enter your user name
Password	enter valid existing password
New password	enter new password
Confirm new password	confirm new password
Admin Mode	to be used with administrator rights to unlock and reactivate user account

Administrator Modus

The Admin Mode allows you to reset a password and reactivate a user account. The old password is not required. The use of the Admin mode is subject to the domain administrators or specially selected user accounts. The minimum password age and password history are ignored - password length and complexity are still evaluated. The 800xAService is excluded from a password change!

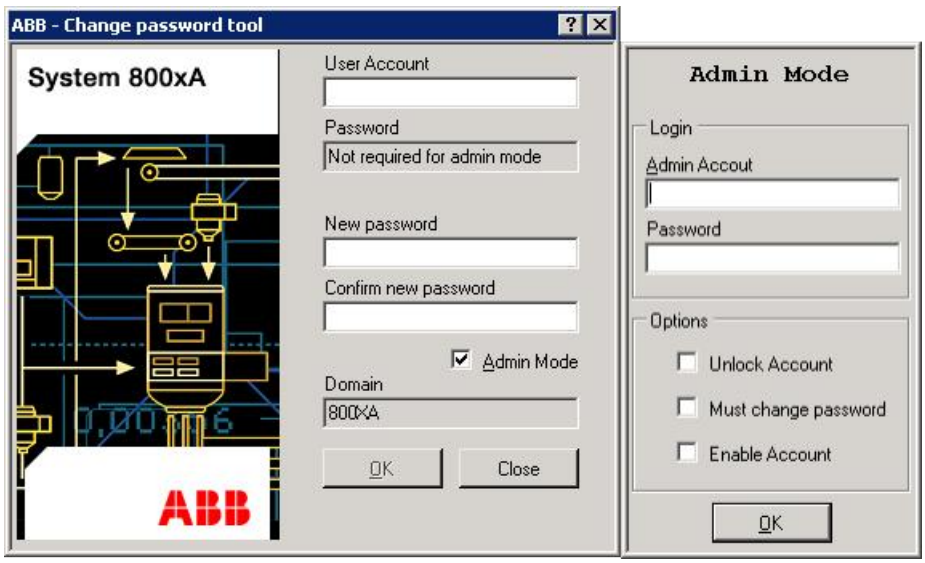


Figure 2.6: Authentication and Admin Mode

After setting the checkbox to Admin Mode, a second window will appear. After authentication the administrator has the ability to set a new temporary password for any user. Three further options are available.

Intent of the fields:

Unlock Account	The user account get unlocked if the password was expired of if the password has been repeatedly entered incorrectly.
Must change password	The user must change his password at next logon. Currently, this feature is always active, even if the checkbox is not selected.
Enable Account	The account of the specified user is reactivated, if it was previously disabled by the administrator on Windows level.

Status indication

Incorrect entries in the fields are acknowledged by the status messages. These messages appear only in the tool window and not in the 800xA Alarm page.

2.3 Logoff

If an operator wants to log off from system, he has also to open the windows security options (Ctrl+Alt+Del). There he can choose the option “Log Off”.

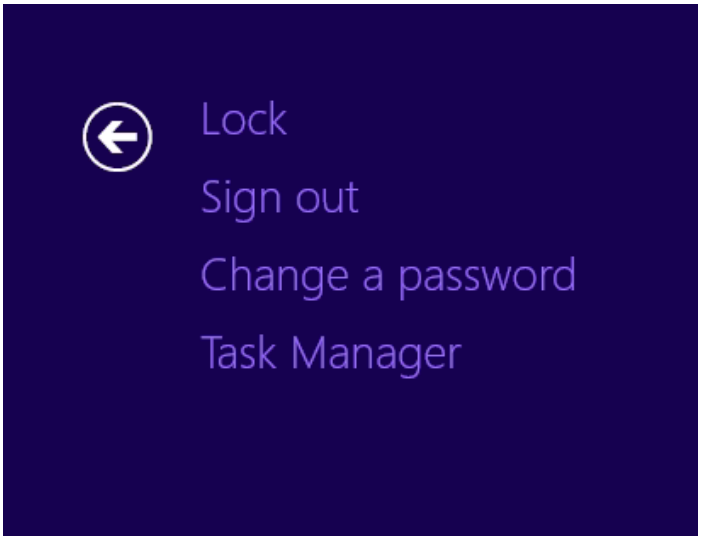


Figure 2.7: Authentication Window

2.4 Lock

The shown window with the Windows Security Options Option Lock (Lock) provides an operator the ability to terminate his job specifically. He can prevent served under his account, when he leaves his workstation temporarily.

For the renewed access to 800xA (unlock) to enter his password is required. He then returns directly to the display, which he had called immediately before activating Lock

3. Operator Workplace

3.1 Workplace overview

The PC Operator Workplace screen is divided into three main parts:

- The Application Bar contains information that must be visible at all time, and it provides a fast and easy way to switch between information areas.
- The Display Area is used to present information such as process displays, trend displays and alarm lists.
- The Status Bar shows information may be used for additional process call up buttons and shows date and time as well who the current user is.

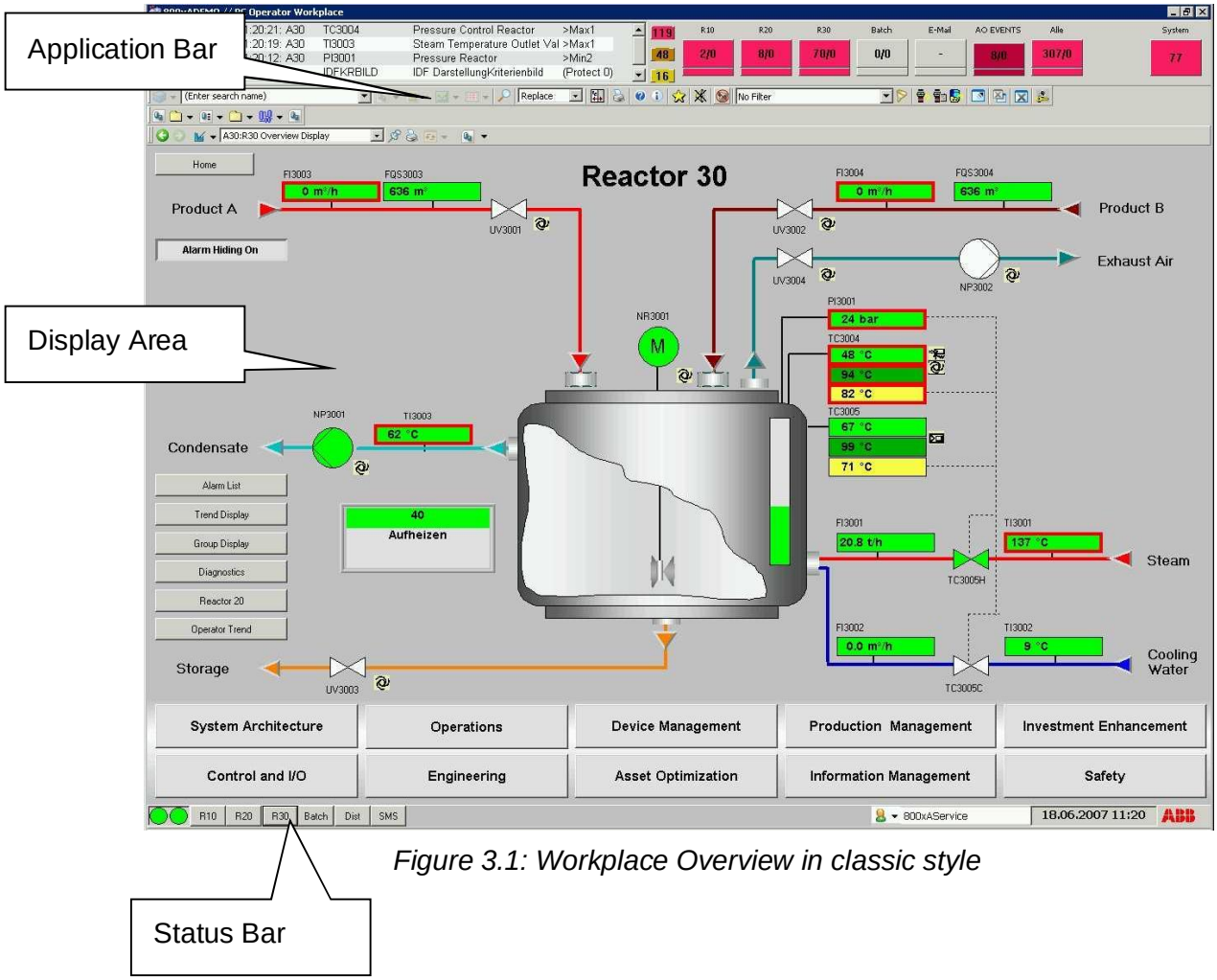


Figure 3.1: Workplace Overview in classic style

3.2 Application Bar

Overview

The Application Bar occupies the area at the top of the Operator Workplace window. It is used for showing important information about your system. The main use is to show the latest alarms, give easy access to the alarm situation for a process area as well as direct links to displays or other aspects and tools.

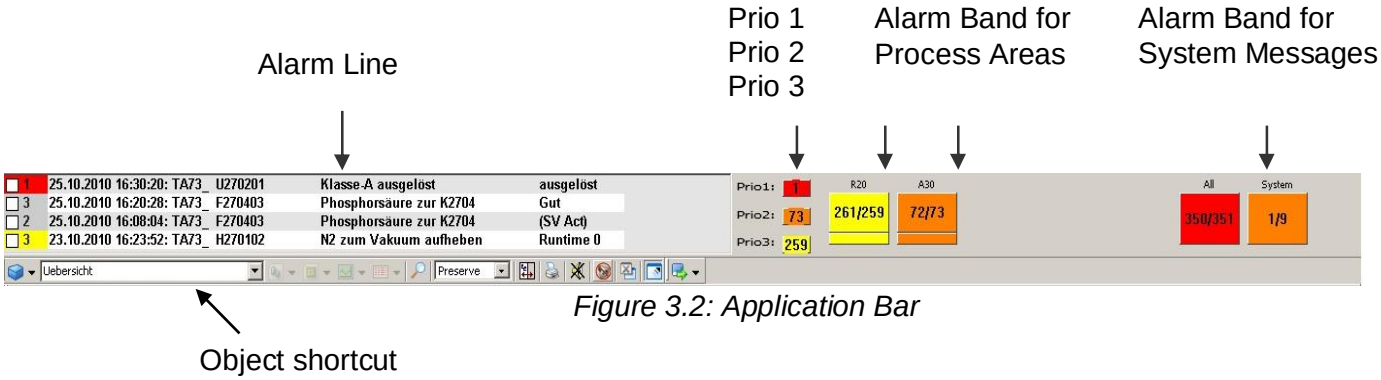


Figure 3.2: Application Bar

Alarm Line

The Alarm Line is an Alarm List, with special configuration. It shows the four latest process alarms with priory 1 to 3 which are not acknowledged.

Figure 3.3: Alarm Line

Priority Indication

The Prio 1, Prio 2 and Prio 3 buttons call up the filtered alarm pages. The number on the buttons show the number of not acknowledged alarms of corresponding priority.

Figure 3.4: Priority Indication

Alarm Band

The Alarm Band provides a summary display for selected alarm lists and provides a link to the corresponding alarm list display. The numbers on a button represent the number of currently active and unacknowledged alarms.

Figure 3.5: Alarm Band

It is also possible to hide alarms in the system. If an alarm is hidden and active, then the rectangle for the hidden alarms changes to defined color (e.g. white). A mouse click onto the field brings up a list of all hidden alarms.

Figure 3.6: Alarm Band with hidden alarms

System Alarms

The System Alarm Band provides a summary of the control system alarms. The number also shows the currently active and not unacknowledged alarms.

Figure 3.7: System Alarms

3.3 Status Bar

The Status Bar occupies the lower part of the Operator Workplace window.

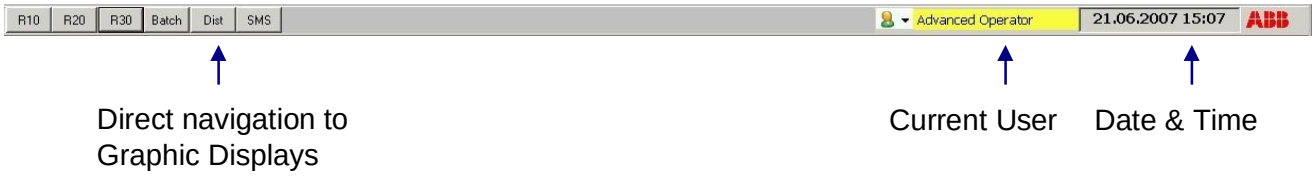


Figure 3-8 Status Bar

It shows individual configured navigation buttons, the current user, includes the log over functionality and the system date/time.

4. Process Graphics

The PC Toolkit Library for Melody provides Faceplates and Graphic Elements to create operator workplaces following both classic HMI and High Performance HMI style.

Styles for process graphics

High Performance HMI expands the capabilities of traditional HMIs of distributed control systems in many aspects. It reduces risks of human errors and decreases operator-related incidents by improving situation awareness and leading to better handling of abnormal conditions. Using High Performance HMI can help operators to make better decisions and so improve process safety and process uptime.

Some of the main factors to improve the classic HMI are deliberate color definitions and the usage to maximize visibility of abnormal situations.

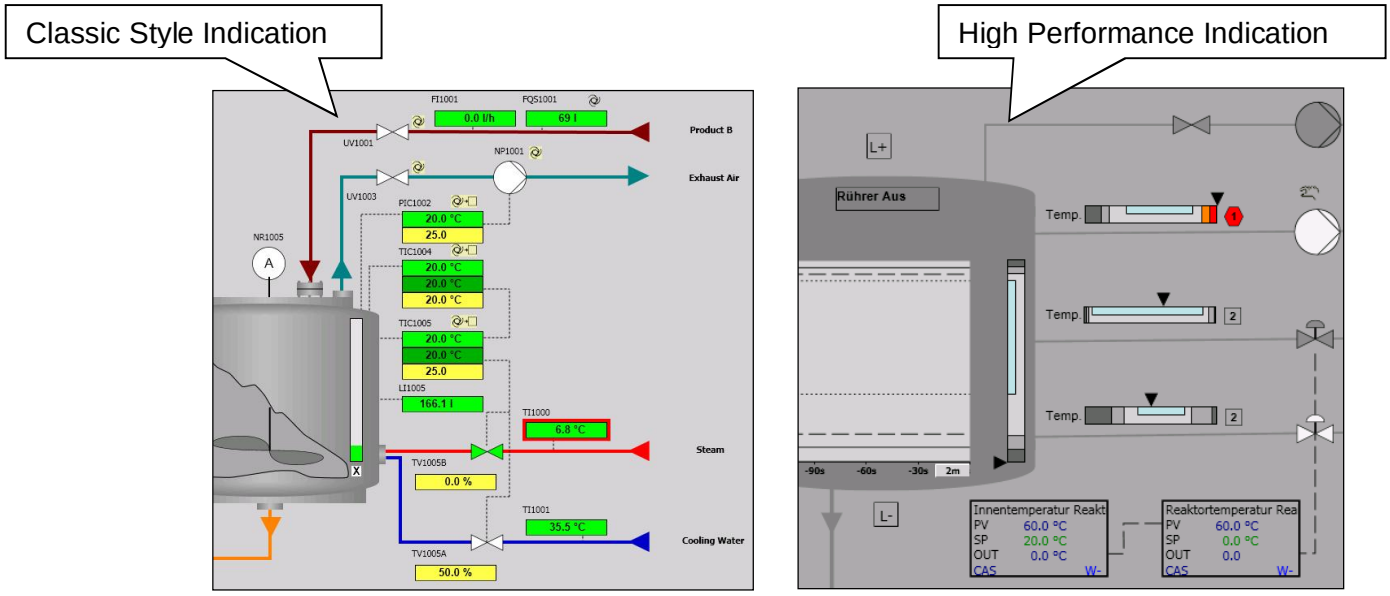


Figure 4.1: Classic & High Performance HMI

Figure 4.1 shows the differences of the color definitions and how High Performance HMI can be used to increase the visibility of an abnormal situation.

High Performance HMI does not only mean the usage of gray scales but also a modified way to display information (e.g. using bargraphs instead of numeric values when it makes sense). Another difference to classic HMI is the usage of color changeover (e.g. for limit values in bargraphs).

Styles for Faceplates

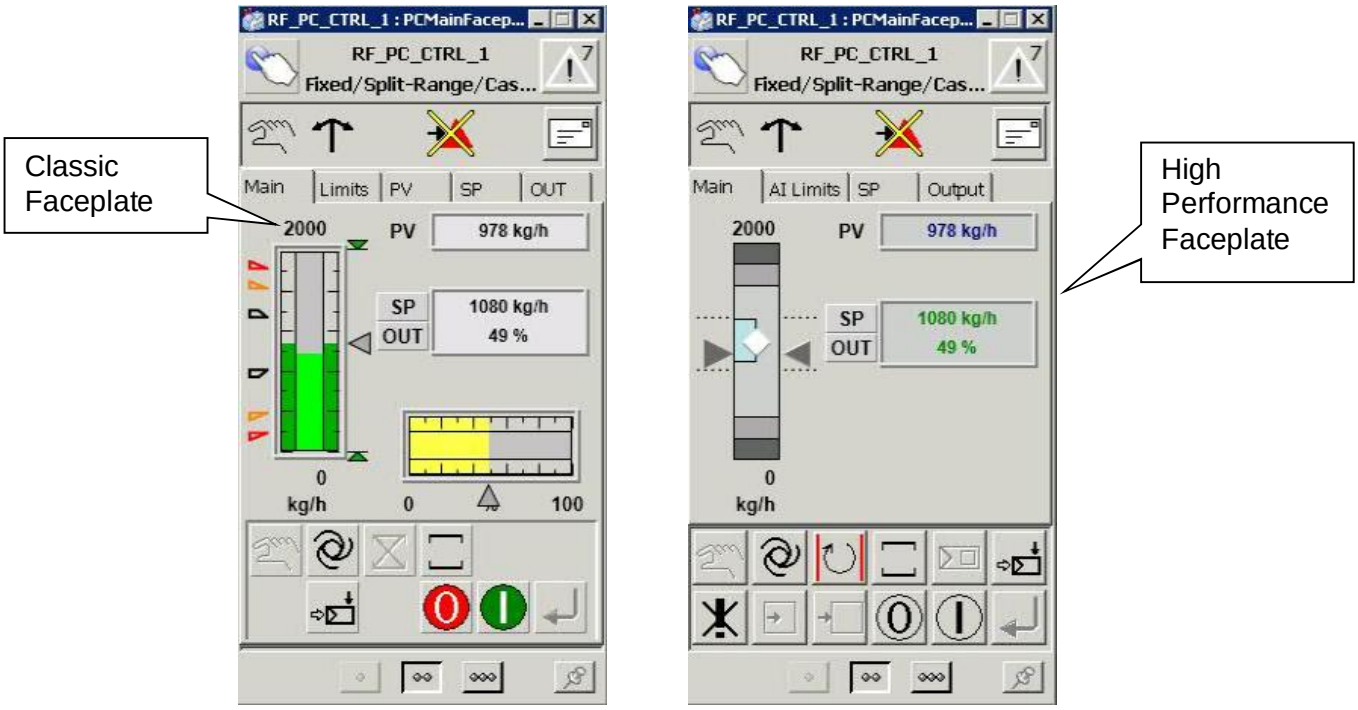


Figure 4.2: Classic & High Performance HMI Faceplate

Figure 4.2 shows the comparison of an analogue value faceplate in classic and a High Performance style. As shown in the screenshots the classic analog value faceplate has three limit value pairs HH/LL, H/L respectively the tolerance alarm limits GH and GL. The HP HMI faceplate uses the tolerance limits to define the good range. This allows the operator to simply recognize if the process value leaves the normal range before the occurrence of an alarm.

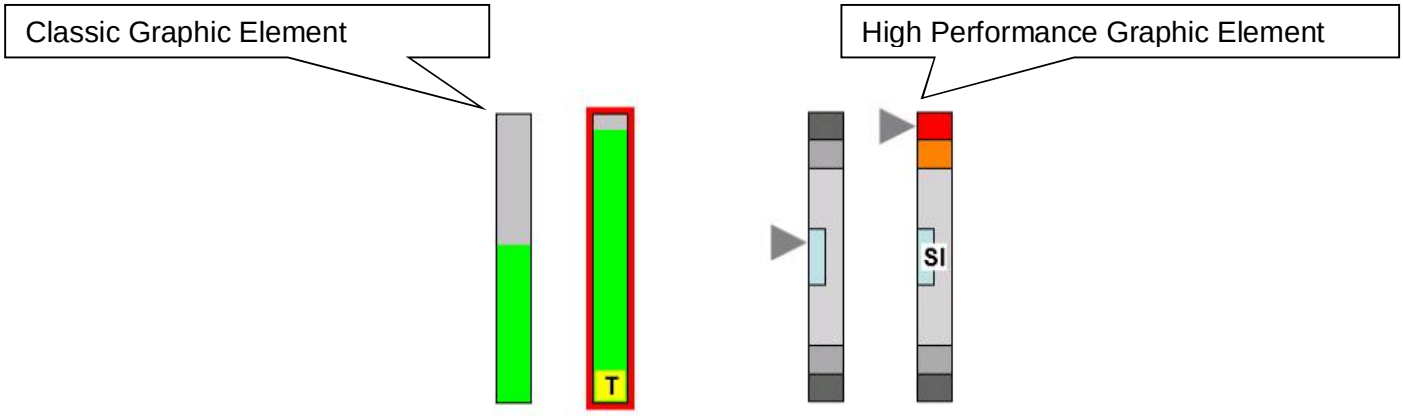


Figure 4.3: Classic Style & High Performance Style

Figure 4.3 shows the comparison of an analog value bargraph in classic and High Performance HMI style. In both cases an alarm limit is reached (classic HMI: red alarm frame / HP HMI: color changeover) and the value is forced (classic HMI: black ‘T’ on yellow background / HP HMI: black ‘SI’ on white background).

4.1 Faceplate Elements

The faceplate is divided into several areas. All faceplates have the same layout and size. The different areas and how to use them are described in this section. The part in the middle, which is named indication area, varies to all faceplates and depends on the object type.

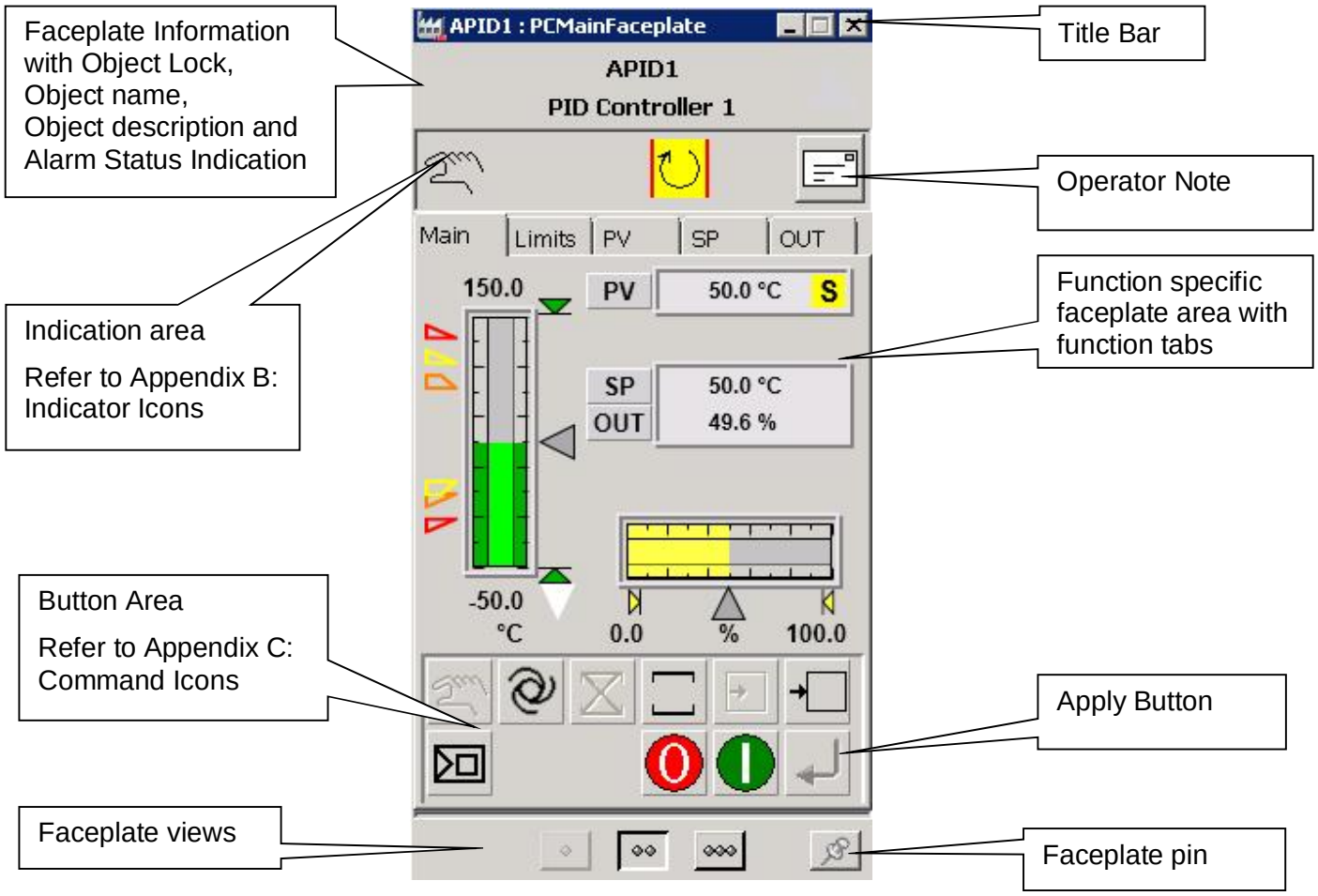


Figure 4.4: Main Faceplate (classic style)

Titel Bar

With a mouse click on ☒ closes the faceplate. Minimize and full size icon is not available for operators.

Object name

Object Name displays the primary name of the object. If the width of the Name area is not wide enough to display the full name this is indicated by three dots, "...", at the end of the visible text. A tooltip will always show the whole name, when the pointer is positioned above the name.

Object description

The object text describes the object in a few words. The display of long texts is analogous to the representation of the object name. See above.

Indication Area

Figure 4.5: Indication area

This area shows the current status of the object. Space is, however, limited. Only 5 status icons can be displayed in the standard view, beside the operator icon on the outmost right side. If more icons should be displayed at the same time you can see it by switching the faceplate to extended view.

Common Indication icons for all object types

Classic Style	HP Style	Description
		Automatic mode set
		Manual mode set
		Operation locked
		Force set

Table 4-1: Common icons for the most object types

Refer to Chapter Appendix B: Indicator Icons to get a complete list of the symbols for every object type.

Operator note

An Operator Note is a message to another operator or a note about an object, in order to remember information about it. Clicking on the symbol, in the faceplate, opens a window where you can read and write notes regarding the object. The dialog for Operator Note is a basic text editor. You can also access the Operator Note from the context menu.

If the object does not have a note, you can add one from the context menu by choosing Add Note. Write the note and click Apply.

This symbol indicates that there is a note for this tag. It is only indicated in the extended faceplate view.

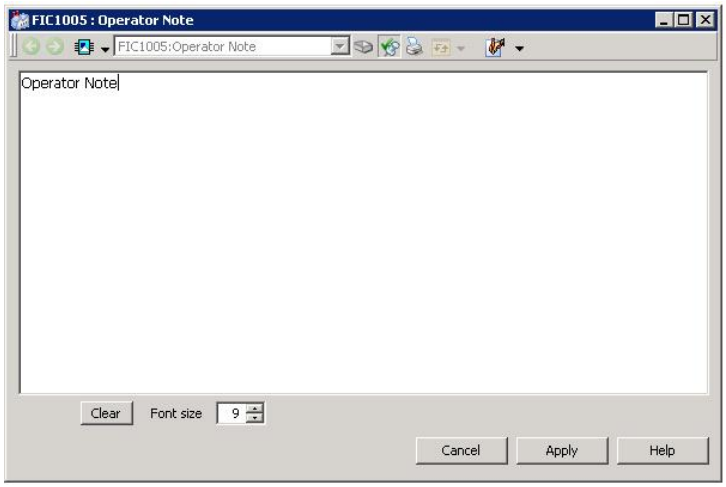


Figure 4.6: Operator Note

4.1.1 Alarm Status Indication

For each tag the alarm state indicates and displays one of six possible alarm states. The alarm state color shown is based upon the system configuration for the tag and the alarm priority color configured in the **PC Color Definition Aspect**.

A mouse click on the icon button opens the Alarm List.

Classic	HPHMI	Alarm State	
		There is no alarm. Overall alarm status of tag is normal but not active and has been acknowledged.	Inactive and acknowledged
?	?	Illegal Alarm configuration	Inactive and acknowledged
1	1	Alarm is active but not acknowledged. Priority level is indicated on the icon top right. The number indication on the icon top right is the priority level	Active but not acknowledged

Classic	HPHMI	Alarm State	
		Alarm is active and acknowledged.	Active and acknowledged
		Alarm is neither active, nor acknowledged	Neither active, nor acknowledged
		Alarm has been inhibited by the user or by the defined inhibit signal	Alarm manually or by inhibit signal disabled
		Alarm has been automatically inhibited by the 800xA system	Alarm disabled by system (active)
		A white rectangle covering an alarm symbol, shows that there are hidden alarms for the object.	Hidden Alarm
		A white circle appearing to the right of the alarm symbol shows that there are shelved alarms for the object.	Shelved Alarm

Table 4-2: Alarm Symbols and States

The Alarm Status with examples for alarm priority 1, 2, 3 and 4 indicates the alarm state and allows acknowledging the object alarms from the faceplate by clicking the alarm status button. Alarm priority levels of the Melody tags range from 1 through 16. 1 through 3 is red, orange and yellow while 4 through 16 can be configured.

Figure 4.7: Alarm Levels 1 – 4 (800A style)

Figure 4.8: Alarm Levels 1 – 4 (HPHMI style)

	Depending on the HPHMI setting “HPHMI Alarm Control” (see document 3BDA033456-600_Installation and Configuration) it is possible to display the alarm indication either in 800xA style (classic) or High Performance style. Melody maintains maximum 16 alarm priority levels.

The Element provides information of the most important actual alarm.

- Alarms are resolved in following order:

1. Highest priority active unacknowledged alarm
2. Highest priority active acknowledged alarm
3. Highest priority inactive unacknowledged alarm
4. No alarm

- Active alarm state is shown by different shapes and colors. Alarm level is presented by number and color.
- Blink frequency for incoming and unacknowledged alarm is 4 Hz
- Blink frequency for gone alarms but not acknowledged is 2 Hz
- Active and acknowledged alarms are with steady alarm indication icon

Alarm shelving and Alarm hiding

Indication of the hidden and shelved alarms via the alarm control (800xA Style). A mouse click on the icon opens the Hidden or Shelved Alarm List.

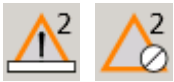


Figure 4.9 Alarm Level 2 with hidden and shelved alarms (800A style)

An “H” or “S” indicates that there are hidden or shelved alarms. A mouse click on the icon opens the Hidden or Shelved Alarm List.

Figure 4.10 Alarm Level 2 with hidden and shelved alarms (HPHMI style)

4.1.2 Function specific faceplate area with tabs

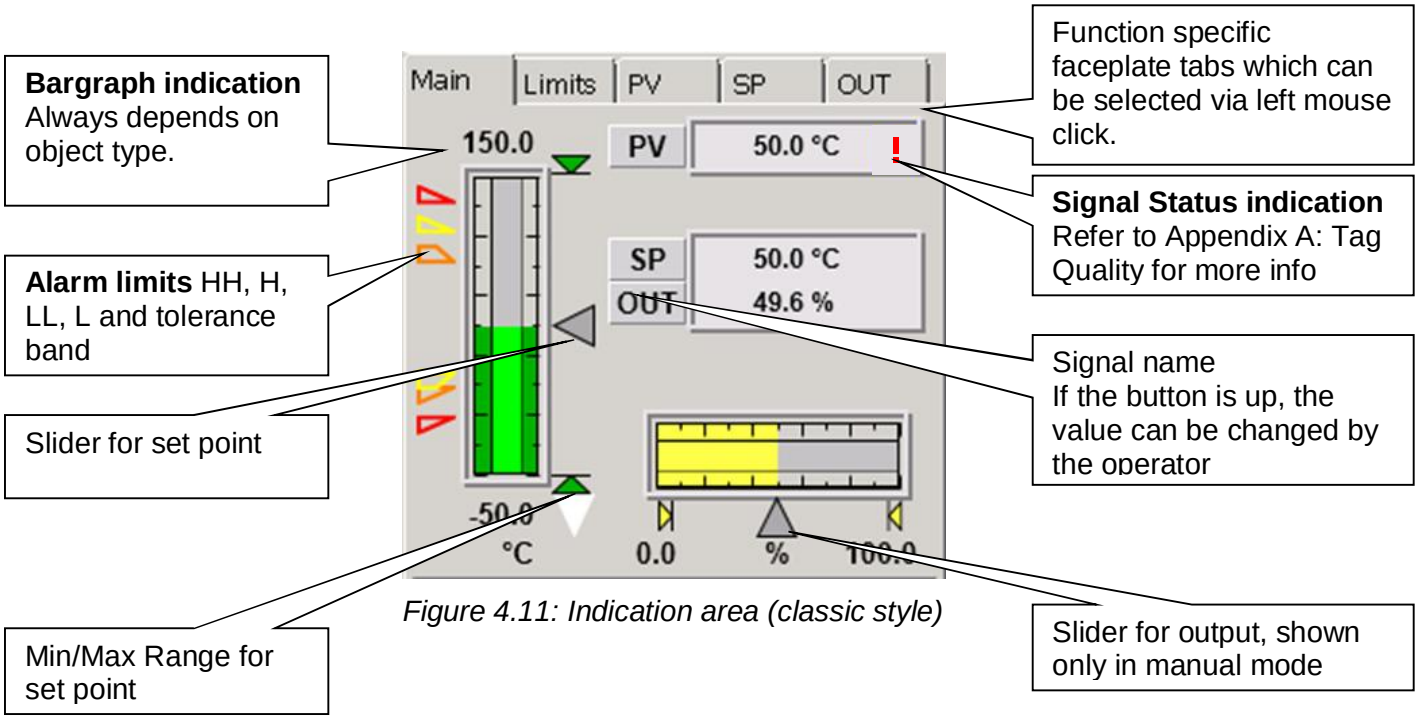


Figure 4.11: Indication area (classic style)

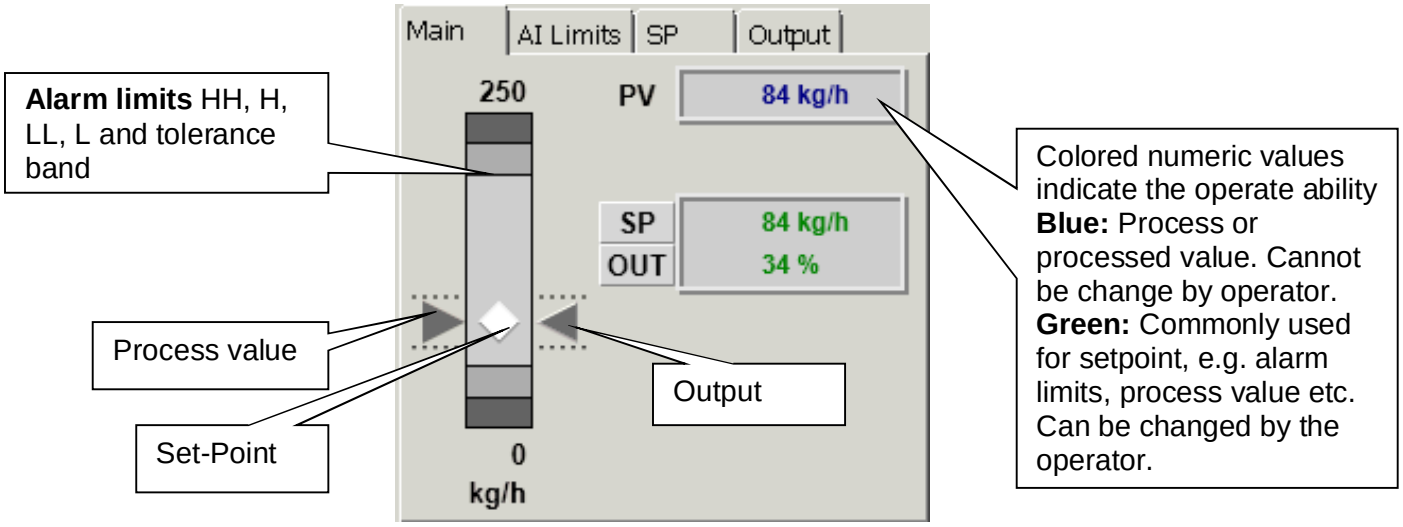


Figure 4.12: Indication area (HP HMI style)

4.1.3 Bargraph indication

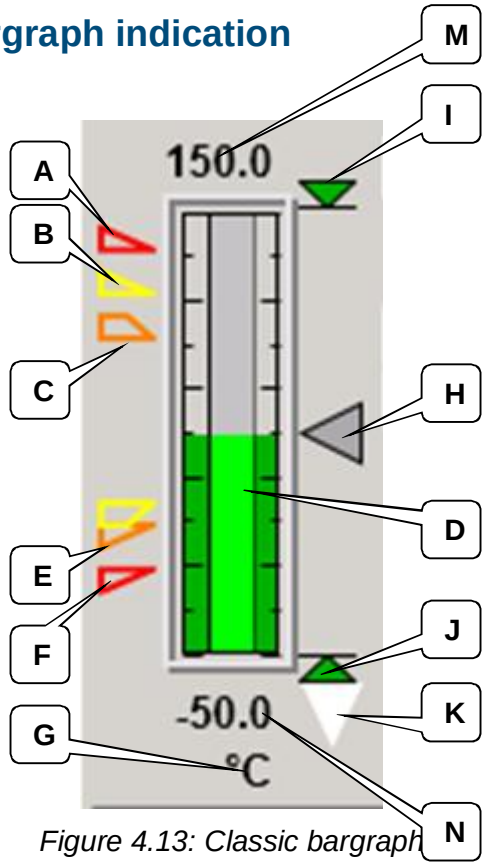


Figure 4.13: Classic bargraph

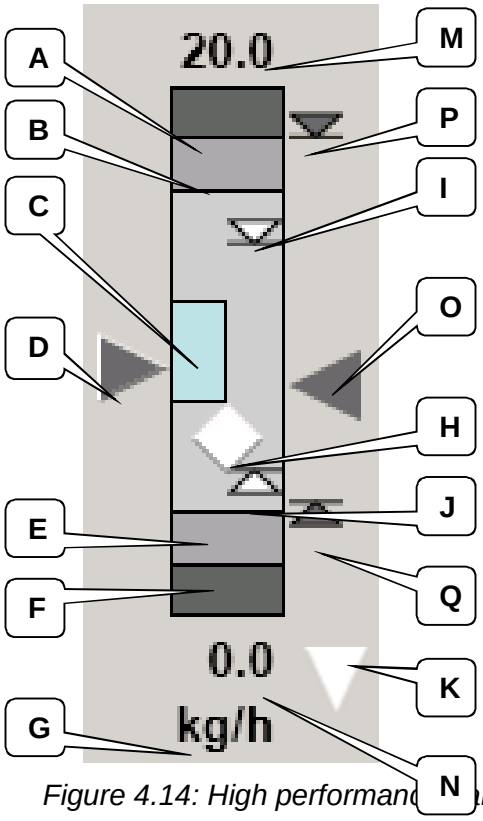
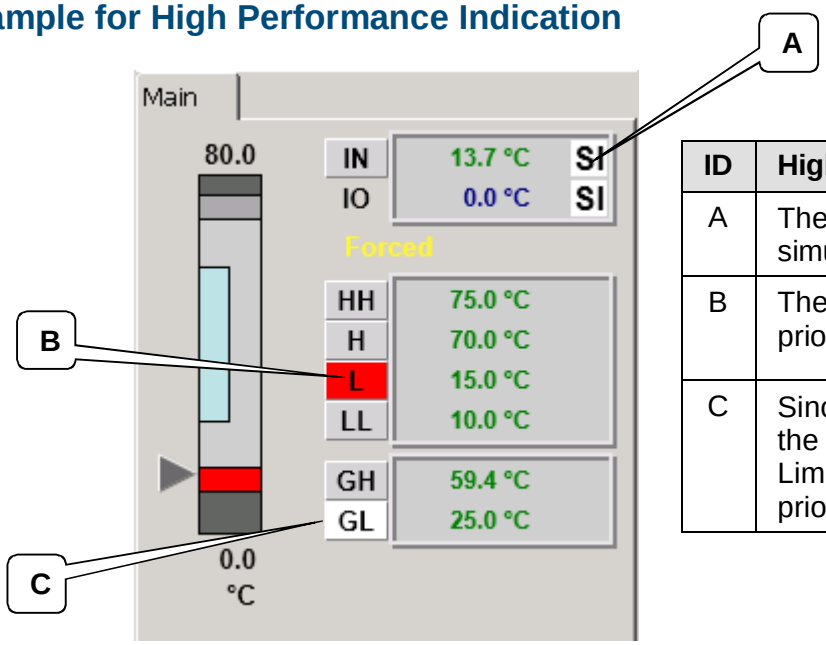


Figure 4.14: High performance bargraph

ID	Discription
A	Limit HH
B	Limit H
C	Value in good condition
D	Process value (cannot be forced in manual mode)
E	Limit L
F	Limit LL
G	Unit string for process value and setpoint
H	Setpoint
I	Maximum range indication
J	Minimum range indication
K	Maximum and minimum Transient
M	Measuring range end
N	Measuring range start
O	HPHMI Style only: Value of the open loop control output. Can be modified in manual mode. Classic style view: Output value of the closed loop controller respectively the max and min value limits is displayed in a horizontal bargraph under the numeric indication area.
P	HPHMI Style only: Max Limit of the output Classic indication: refer to ID O
Q	HPHMI Style only: Min Limit of the output Classic indication: refer to ID O

Example for High Performance Indication



ID	High Performance bar graph
A	The process value PV is forced / simulated [SI] and shows 13.7Cel.
B	The Low Limit L is reached. The priority of this limit is high (red).
C	Since the process value is out of the “Signal good condition”, the GL Limit indicated alarm with low priority (white)

Figure 4.15: Example HP bargraph

Button area

The button area is the place where the operator can control the modes of the object types.

Figure 4.16: Button area

If more than 5 buttons plus the acknowledge key must be displayed the view switches to two lines above.

Common buttons to most of the object types

Classic Style	HP Style	Description
		Simulate (Alternative value)
		Reset Simulation
		Resetting the alternative value. As soon as the condition for switching to an alternative value is no longer present, the current actual value is activated by selecting the key.
		Set manual mode
		Set automatic mode

Classic Style	HP Style	Description
		Set command Close
		Set command Stop
		Set command Open
		Apply the selected action

Table 4-3: Common buttons to most of the object types

Refer to Appendix C: Command Icons to get a complete list of the symbols for every object type.

Faceplate view options

Figure 4.17: View selection

If a faceplate is called so it appears as shown in the main view as seen in the picture at the bottom left. An expanded view is shown on the 3-point button. This view contains tabs with additional process information and functions. The left 1-dot button is not used.

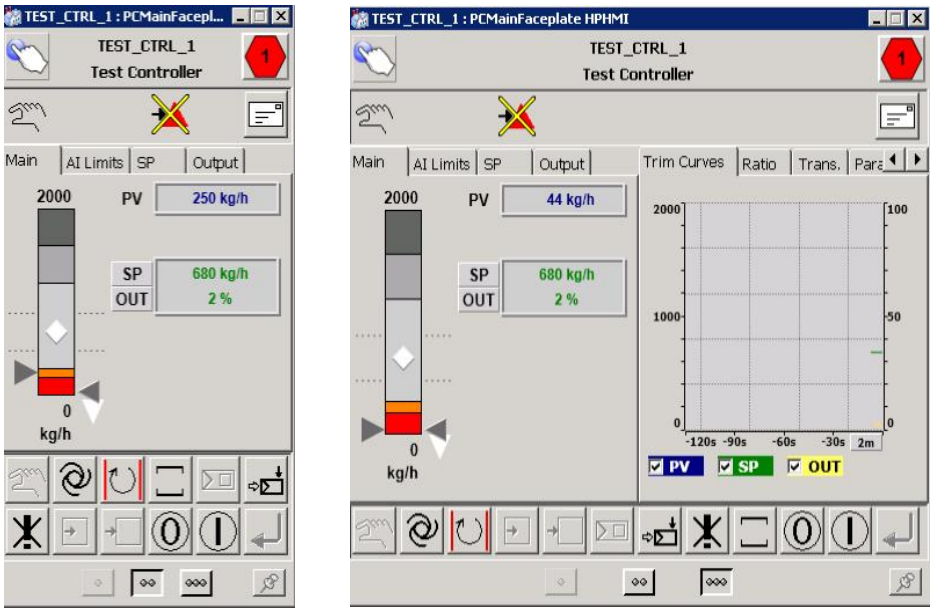
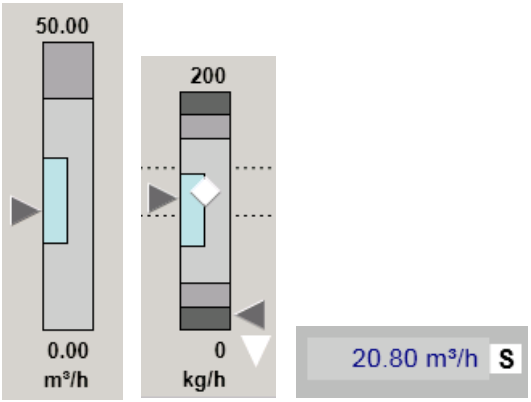


Figure 4.18: Main and extended Faceplate view

4.1.4 Indication of decimal places

The representation of the decimal is subject to strict rules. It cannot be changed by the operator. A change requires action in the regulations and results in an upload of the configuration data.



Scale range < 1 => 3 decimal places

Scale range < 10 => 2 decimal places

Scale range < 100 => 1 decimal places

Scale range >= 100 => decimal places

Figure 4.19: indication example of decimal places

4.2 Graphic Element

Graphics elements are dynamic icons that represent real process objects, such as a motor or a valve, see Figure 4.20: Valve. In the centre of the element there is a symbol representing the object, for example a symbol of a valve, motor, or tank. There may also be text.

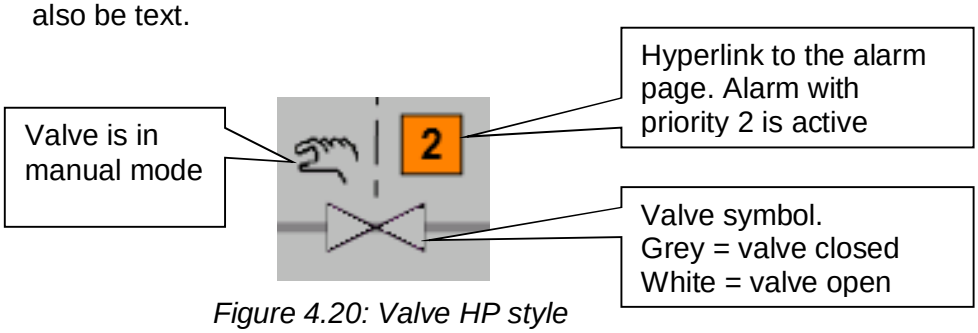


Figure 4.20: Valve HP style

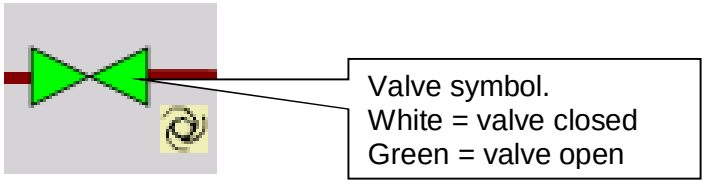


Figure 4.21: Valve classic style

The symbols next to the graphic element show object alarms, object mode, object status and other information about the object, for example if there are any Operator Notes for the object. If there is more than one alarm for the object, then only the most severe alarm state will be shown.

Refer to section 4.2.2 for available device icons.

4.2.1 Tag quality

The tag quality displays the error state of the signal. The indication is shown if a value is bad, uncertain, simulated, alarm suppressed or forced. When the value is good, the indication is invisible. The quality indicator appears in several functions such as faceplate and graphic element.

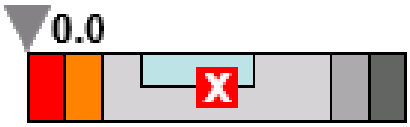


Figure 4.22: Graphic Element with tag quality indication

The position of the quality status is shown up in the center of the element but can also be customized to be indicated left, center, right or outside of the element. Only the most important quality indication is shown. The Order of displaying the quality indication is (in precedence order)

- Forced
- Bad Quality
- Uncertain Quality
- Alarms Suppressed
- Alarms Inhibited
- Interlocked

A comprehensive list of the quality tags shows Appendix A: Tag Quality

4.2.2 Icons for Process Objects

Icons present the current states of a process objects. They are available for the device types Bucket Wheels, Compressors, Fans, Flaps, Motors, Pumps, Valves and Lamp. Arrow and Return icons complement this set.

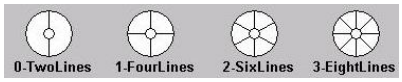
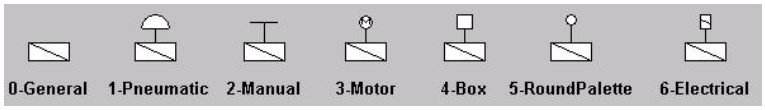
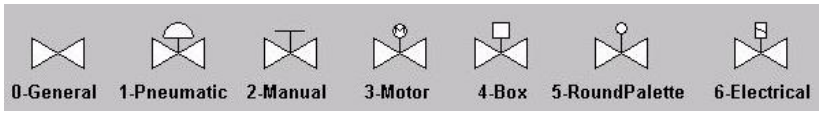
Devices	Device Types
Bucket Wheels	
Compressors	
Fans	
Flaps	
Motors	
Pumps	
Valves	
3 Way Valve	
Return	
Lamp	
Arrow	
Switch	

Table 4-4: Process Object Icons

The error presentation, alarm and acknowledgement status is used in all mode icons except lamp and arrow.

Status and error presentations include:

- Controller and object status indication
- Line style, width and color
- Fill color

The icons include controller and object status indication like bad or uncertain communication, simulated or forced values or alarm indication suppressed. For detailed information on the status indication refer to Appendix B: Indicator Icons.

5. Process Object Navigation

5.1 Calling up Faceplates

If you want to call up faceplate which shows an alarm, you can do that in three ways:

- Double click on the alarm in the Alarm Line or List
- Choosing the faceplate aspect over the alarm aspects (right click on the alarm)
- Enter the function name in the object information area

5.2 Calling up graphic displays

The easiest way to call up a graphic display a function belongs to is, to right click in the general faceplate information area and choose References. There are hyperlinks for all graphic displays where the function is included.

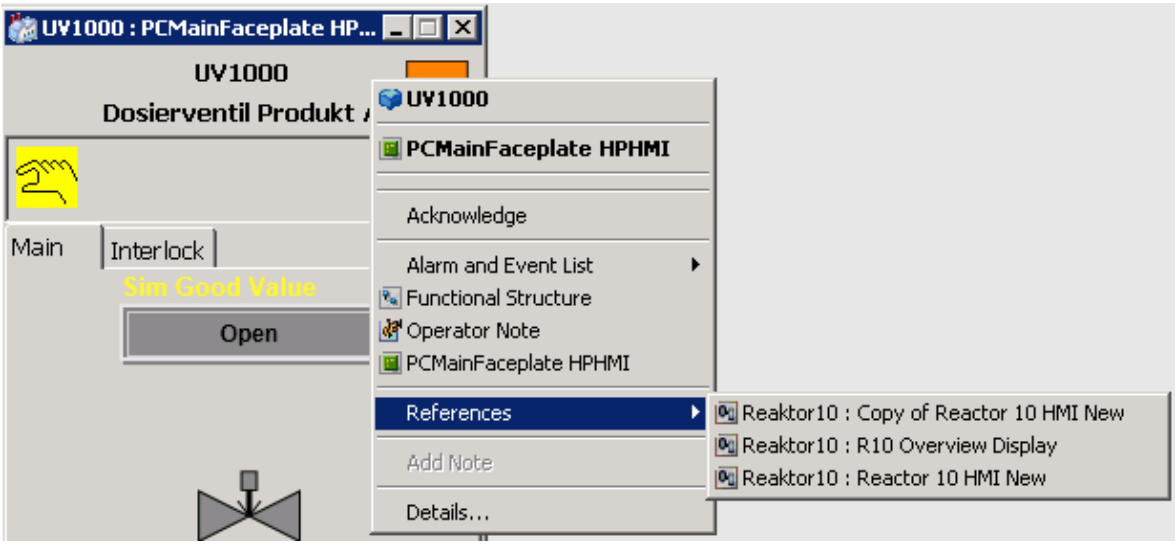


Figure 5.1: graphic call up via faceplate

After opening the graphic display, the function is indicated via a blue frame.

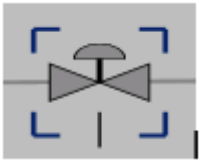


Figure 5.2: Function indication in graphic displays

5.3 Operating

Depending on the user rights, the operator can take action into the process by modifying process set points, limits, output values etc.

Modifying values via direct entry window

Open the handle via a mouse click in the bargraph, or in the numeric field. Modify the data in the direct entry window by:

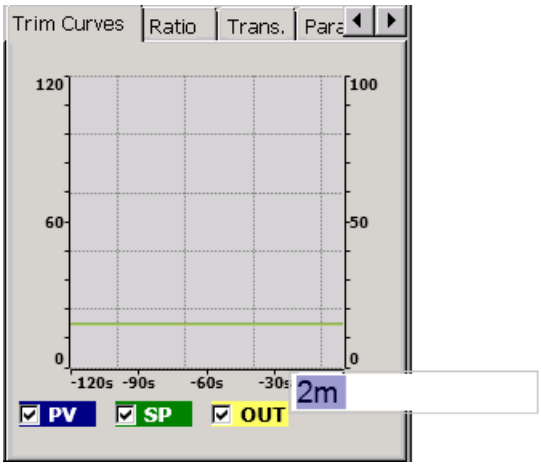
- Enter the value manually
- Click the Up and Down arrows in the direct entry window. This changes the value with an increment of 1% of the measuring range
- Use the up and down arrow keys on the keyboard. This changes the value with an increment of 1% of the measuring range
- Use the arrow keys by pushing the STRG Key with an increment of 0,1%
- Use the arrow keys by pushing the SHIFT Key with an increment of 10%
- Use the up and down arrow keys for pictures on the keyboard. This changes the value with an increment of 10% of the measuring range

Click the Apply button, or press Enter on the keyboard.

Press the Esc key on the keyboard, or click in a neutral area on the side, within the faceplate if you want to cancel the action. The direct entry window will be closed.

Determining the temporal resolution in the trend image of faceplates

The resolution in trend faceplate can be varied from 4 seconds up to 24 hours. Incorrect entries are indicated by a red frame in the input window.



Inputs:

s = Seconds

m = Minutes

h = Hours

d = Days – max. 2 days allowed

Figure 5.3: Trend window

Check boxes

Some tab cards in the main and extended faceplates show check boxes or drop down lists where the user is able to interfere into the process.

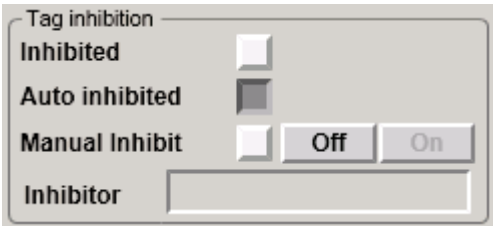
	HH Alarm/Event is enabled and can be disabled by mouse click on Off button
	show / hide check boxes for trend indication

Table 5-1: Check boxes

5.4 Alarm Status Indication

An abnormal status of an object is being indicated on the screen in various displays.

Alarm Band

The summary display of an alarm lists indicates that an alarm was generated. An Alarm Band can cover several alarm headers and also an alarm list for system alarms.

Figure 5.4: Alarm Band with several alarm headers

Alarm List

The alarm list indicates detail information of the objects and what has caused the alarm to come up. An alarm list can cover alarms of different areas, units.

1	25.10.2010 16:30:20: TA73_	U270201	Klasse-A ausgelöst	ausgelöst
3	25.10.2010 16:20:28: TA73_	F270403	Phosphorsäure zur K2704	Gut
2	25.10.2010 16:08:04: TA73_	F270403	Phosphorsäure zur K2704	(SV Act)
3	23.10.2010 16:23:52: TA73_	H270102	N2 zum Vakuum aufheben	Runtime 0

Figure 5.5: Alarm List

Alarm Control

The upper right corner of the faceplate shows up the alarm control with a certain priority shape and color.

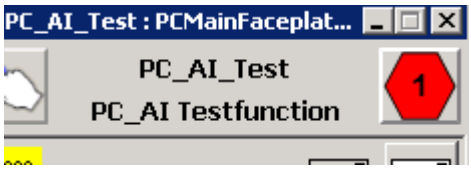


Figure 5.6: Faceplate's alarm control

An alarm control can be placed next to the graphic element indicating a certain priority shape and color (High Performance Style)

Figure 5.7: Example Alarm control next to the graphic element

Frame of a graphic element

The frame of the graphic element can be surrounded by a frame which indicates the alarm priority and color (Classic Style). The priority colors are red=Prio1, orange=Prio2, yellow=Prio3 and white=Prio4.

Figure 5.8: Alarm frame

Blinking Indication

An abnormal status, it is indicated in the following ways:

1. Blinking text or alarm control in order to highlight the acknowledge status
2. Priority color of the value or objects frame

Common to both style guides is the presentation of arriving, acknowledged and gone alarms.

Blinking indication	Description
Fast blinking (2Hz):	Alarm is initiated. Operator attention is needed!
Steady light:	Alarm has been acknowledged by an operator but is still active
Slow blinking (0.5HZ)	Alarm status returned to normal, but still to be acknowledged

Table 5-2: Blinking alarm indication

5.5 Acknowledging Alarms

When a new alarm is indicated in the Operator Workplace, the operator has following options to acknowledge the alarm.

- Acknowledge in the Alarm Line by mouse click in the white acknowledge field

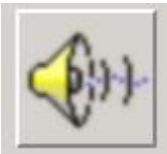
66	☒	1	18.10.2012 10:49:29:505	0	RF_PC_SFC_1	SFC 2-Branch
67	☒	2	18.10.2012 10:51:08:229	0	PC_AI_1	Analog Input Module
68	☒	2	18.10.2012 10:51:08:230	0	RF_PC_AI_1	Analog Input Module
69	☒	2	18.10.2012 10:51:08:231	0	RD_T_SFLAGBO	Binary Input Modul (BI-1)
70	☒	2	18.10.2012 10:51:08:232	0	RF_PC_CTRL_1	Fixed/Split-Range/Cas-Master
71	☒	3	18.10.2012 10:51:08:232	0	RF_PC_CNT_5	Time counting function

- Acknowledge via the Faceplate alarm indication
- Right click on the alarm and select “Acknowledge Selected”
- Acknowledge via the alarm list

5.6 Silencing acoustic signals

An acoustic signal in addition to an alarm message on the screen makes the operator sensitive that a high priority alarm was generated. It can be an internal system message or an alarm from the field. Not every alarm triggers the acoustic signal. In general it is only the high priority alarms. There are various options to configure acoustic alarms. The alarm can be silenced locally which means that alarms have to be silenced on every single workplace. If the configuration is set to globally, the silencing on one workplace applies for all other workplaces.

The way how silencing is configured is defined by filter functions. Please ask your system administrator how the silencing is configured in your plant.



The big horn icon on the top right corner of the screen is the button for silencing the hard wired external horn. This horn is in general connected to an I/O module of the system.

The small sound icon in the application bar is silencing the sound of the local client.

Appendix A: Tag Quality

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. The quality indicator appears in several functions such as faceplate and graphic element. When the value is good, the indication is invisible.

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

Condition	State	Signal status value	Back Color	Fore Color	Icon
Good Quality	Normal state	--			none
	Alarms inhibited	200	Transparent	Red	\
	Alarms disabled	201	Transparent	Red	=
	Alarms suppressed (Classic Style)	--	White	Yellow	X
	Alarms suppressed (High Performance Style)	--	White	Black	X
	Simulated (Alternative value, Classic Style)	--	Yellow	Black	S
	Simulated (Alternative value, High Performance Style)	--	White	Black	SI
	Forced (Simulated in Composer, Classic Style)	216	Yellow	Black	T
	Forced (Simulated in Composer, High Performance Style)	216	White	Black	SI
	Interlocked (Classic Style)	--	Transparent	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 value	Back Color	Fore Color	Icon
	Configuration Error	4	Red	Black	.
	Not Connected	8, 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	Transparent	Red	!
	Last usable value	68	Transparent	Red	!
	Sensor failure	80	Transparent	Red	!
	Engineering units exceeded	84	Transparent	Red	!
	Sub-normal	88	Transparent	Red	!
	Unknown OPC quality	Other	Transparent	Red	*

Table A1: 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. Simulated (Alternative value)
4. Forced (Simulated in Composer)
5. Alarms inhibited, disabled or suppressed
6. Interlocked

Appendix B: Indicator Icons

The indicator icons are presenting the current state or mode of a process object in the faceplates indication area. For example, a process object that is automatic mode would be indicated by the automatic mode icon.

The maneuver icons should be used together with interaction, or objects for maneuvering process objects. The icons look like the actual buttons, for example to call up an operator note.

The table lists the standardized icons for status and mode indication.

Classic Style	HP Style	Description
		Operator Note
		Operator Note containing information (only visible in extended faceplate view)
		Alarm suppressed (by logic)
		Object runs with forced value (Simulated in Composer)
		Object runs with simulate value (Alternative value)
		Operation mode manual
		Operation mode automatic
		Operation mode change is locked or Operation is locked by “Higher priority operation”
		Local operation active
		Operation mode manual (locked)

Classic Style	HP Style	Description
		Operation mode automatic (locked)
		Normal operation interrupted, current operating mode no longer valid. Manual action by operator required to select operating mode.
		State ON / OPEN
		State ON / OPEN 22 (two direction ON with IDF2) or State Paused (SFC)
		State OFF / CLOSED
		State Stopped
		State Aborted
		State Held
		State Pause
		State Running (SFC) or status change to ON / OPEN (IDF)
		State Aborting (SFC) or status change to OFF / CLOSE (IDF)
		State change to ON /OPEN 2 (IDF2)
		State Stopping (Status change to Stop)
		State Aborting (Status change to Abort)

Classic Style	HP Style	Description
		State Holding (Status change to Held)
		State Pausing (Status change to Pause)
		Operation locked
		Protective action active in On/Open direction
		Protective action active in Off/Closed direction
		Protective action stop (SFC) or Protection 0 and Protection 1 active at the same time (IDF)
		Protection stop (Dosing function)
		Protective action hold (SFC Phase)
		No release in Open/On direction
		Control action in Open/On direction active
		No release in Closed/Off direction
		Control action in Off/Closed direction active
		Torque monitoring is signaling a blockade of the drive Blockade 1
		Torque monitoring is signaling a blockade of the drive Blockade 0
		Functional fault, input variables and their connections are determined by the function in Melody

Classic Style	HP Style	Description
		External fault/disconnection on faults Reset command outputs
		Reset command outputs for the duration of the fault action
		Testmode / Testposition active
		Run time error 0, End position (IDF) or next step (SFC) not reached in the configured monitoring time
		Run time error 1, End position (IDF) or next step (SFC) not reached in the configured monitoring time
		End position error 0, leaving a controlled End position without command or defined end position criteria not fulfilled (SFC)
		End position error 1, leaving a controlled End position without command or defined end position criteria not fulfilled (SFC)
		Operation mode Cascade (Automatic with external setpoint)
		Operation mode DDC (direct digital control) The output value of the controller is specified directly by an external computer.
		Operation mode SPC (set point control) The controller works with a set point specified by an external computer.
		Operation mode Cascade (locked)
		Operation mode DDC (Locked)
		Operation mode SPC (Locked)
		Override Control. Division of control range for the application of other control algorithms into extreme ranges.

Classic Style	HP Style	Description
		Control action on control output
		Control action on set point
		Control action on timer function
		The controller is ready to accept the control (specification of set point or control variable) from the external computer
		Synchronization of slave and master controller; the master controller control variable is adjusted to match the set point of the slave controller.
		Controller is working with internal set point
		Controller is working with external set point The combination of “Automatic” and “External set point” corresponds to “Cascade”.
		Jog mode 1 No checking of criteria, no active command output
		Jog mode 2 No checking of criteria, active command output
		Jog mode 3 Checking of criteria, active command output
		Jog mode 4 Checking of criteria, no active command output
		Restart time reached
		Yearly repeat (Calendar and Timer)
		Monthly repeat (Calendar and Timer)

Classic Style	HP Style	Description
		Weekly repeat (Calendar and Timer)
		Daily repeat (Calendar and Timer)
		Hourly repeat (Calendar and Timer)
		Minute repeat (Calendar and Timer)
		Second repeat (Calendar and Timer)
		Output active (Calendar and Timer)
		Repeat function active
		New start time elapsed
		Reset Counter inhibited
		Enable dosing inhibited
		Stop dosing inhibited
		Full charge dosing
		Partly charge dosing
		Leakage
		Reset active

Classic Style	HP Style	Description
S<A	S<A	Number of units exceeded
S>A	S>A	Number of units not reached
Poff	Poff	First up unit off

Table B1: Status and Mode Icons

Appendix C: Command Icons

A command icon is used together with an interaction object. If the operator clicks on this type of icon, some function will be activated.

The table lists the standardized icons for command buttons.

Classic Style	HP Style	Description
		Confirm the action (control command)
		Switch object into manual mode. APID: The OUTPUT can be changed by the operator.
		Switch object into automatic mode. APID: The controller is working with an internal set point.
		Lock/Unlock operating mode. The current operating mode cannot be changed for as long as the lock is active.
		Unlock operating mode
		IDF: Direction command 1 APID: Set control variable to 100 % SFLAG Boolean: Set value BFLAG Boolean: Set selected value DOSING: Dosing enabled SFC: Activate Sequence program On, Resume, Restart (depends on current state) Within the key modes, the button can also be used for inching forwards in the off program or backwards in the on program.
		IDF2: Direction command 2

Classic Style	HP Style	Description
		IDF: Direction command 0 Direction command APID: Set control variable to 0 % SFLAG Boolean: Reset value BFLAG Boolean: Reset selected value. DOSING: Stop dosing SFC: Start off program Within the key modes, the button can also be used for inching forwards in the off program or backwards in the on program.
		SFC: Command Abort
		SFC: Command Stop SFC
		SFC: Command Hold
		SFC: Command Pause
		IDF and SFC: Acknowledge runtime or feedback errors
		TOTALIZER: Reset TPCOUNT: Reset DOSING: Processing reset SFC: Reset sequence to initial step (step 0)
SP+	**SP+**	DOSING: Further dosage set point
		DOSING: Part charge dosing
		DOSING: Full charge dosing
		Resetting the alternative value. As soon as the condition for switching to an alternative value is no longer present, the current actual value is activated by selecting the key.
		Activate alternative value

Classic Style	HP Style	Description
		Reset alternative value
		COA: Set priority to following unit. Command must be completed with OK and will be active after e. g. T=5 sec.
		COA: Set priority to preceded unit. Command must be completed with OK and will be active after e. g. T=5 sec.
		Cascade mode or automatic external Controller is working with external set point (if connected).
		Computer mode, sets the requirement for accepting control from the external computer
		Controller can be switched to internal set point
		Controller can be switched to external set point The combination of “Automatic” and “External set point” corresponds to “Cascade”.
		Key mode 1 No checking of criteria, no active command output
		Key mode 2 No checking of criteria, active command output
		Key mode 3 Checking of criteria, active command output
		Key mode 4 Checking of criteria, no active command output
		Switch to yearly repeat
		Switch to monthly repeat
		Switch to weekly repeat
		Switch to daily repeat

Classic Style	HP Style	Description
h	h	Switch to hourly repeat
m	m	Switch to minute repeat set
s	s	Switch to second repeat set

Table C1: Command Buttons

Appendix D: 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 the Industrial IT, 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.

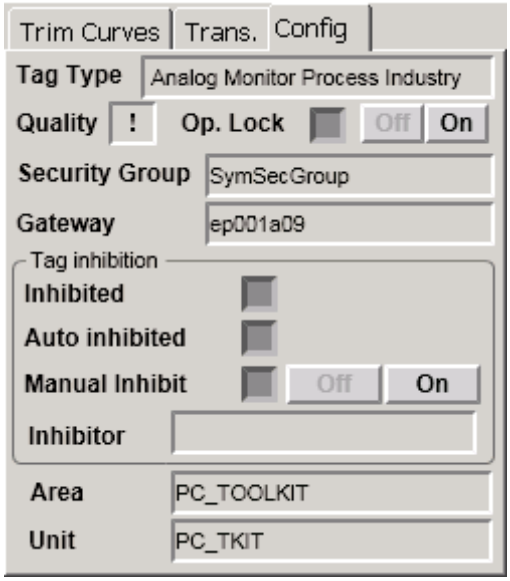


Figure D1 Config Tab

Refer to document 3BDA033456R5107EN Installation and Configuration in order to change the default write permission.

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