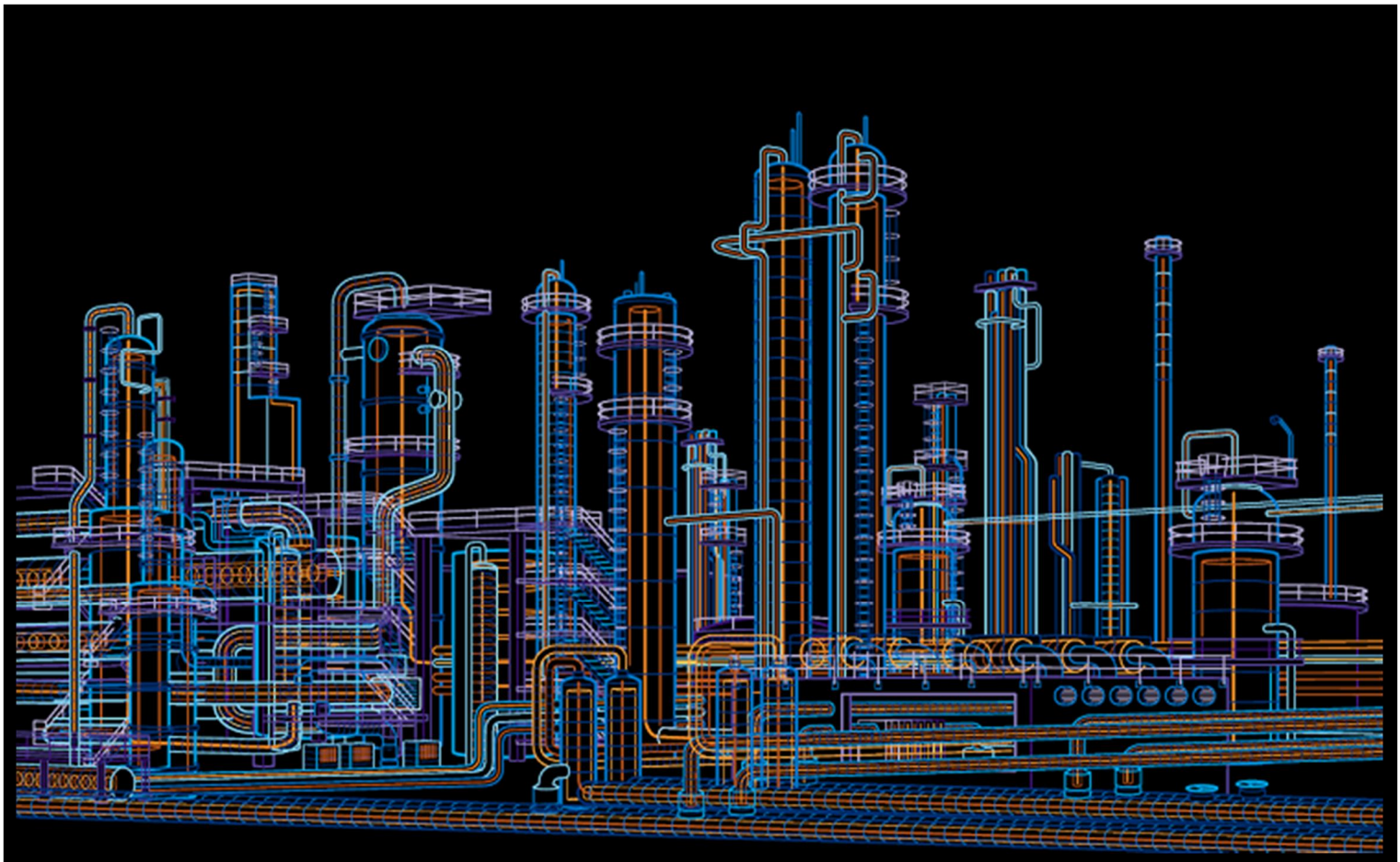

System 800xA
PC Toolkit Library for Melody
Human System Interface - Dosing Function
User Manual

System Version 6.0

Power and productivity
for a better world™

Purpose

The purpose of this document is to describe the Human System Interface with Faceplates and Graphic Elements of the System 800xA with connectivity to Melody/AC870P. All elements are part of an 800xA System Extension, which will be used mainly in the Petrochemical Industry but also in other Process industries. This document defines the ABB Control System standards for the Human Machine Interface (HMI).

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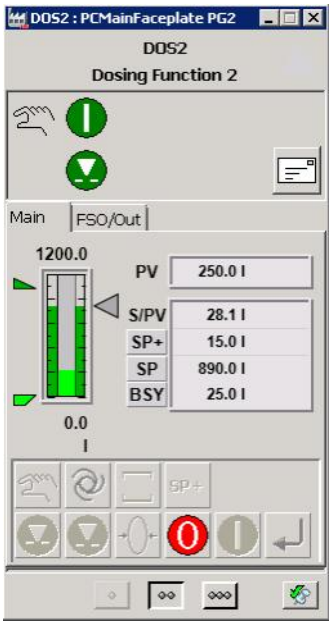
Human System Interface (Classic Style)

1. DOSING – Dosing Circuit



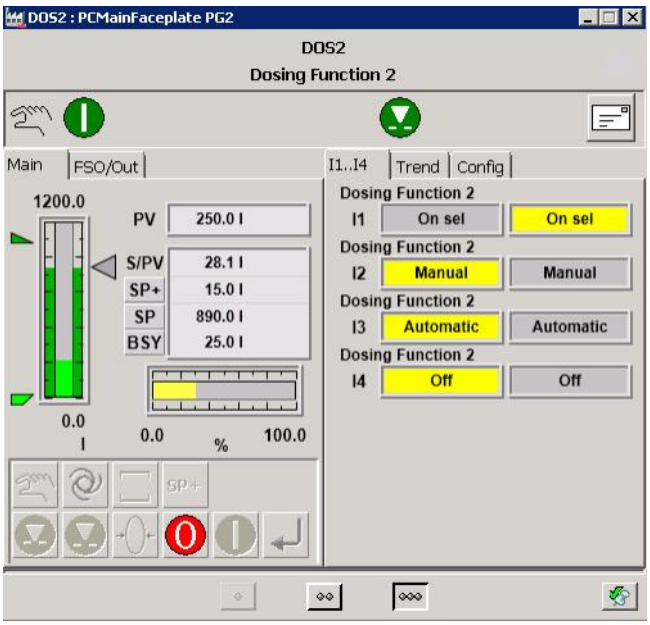


Figure: 1-1 Main View *Figure: 1-2 Extended View*

Basic information

Name:	PCMainFaceplate
Description:	PC MainFaceplate
Connect type:	Melody AC870P
Object type:	Dosing Function
Library:	-
Min. required 800xA version:	SV5.1RevA
Graphics Builder version:	PG2

Table: 1-1 Basic Information

Layout

Parameter	Value
Update rate (ms)	1000
Default view	Faceplate
Faceplate orientation	Horizontal

Table: 1-2 Layout information

Sizing information

Parameter in pixels	Main View	Ext. View
Width	250 px	500 px
Height	424 px	424 px
MaxNoOfIndicatorRows	2	1
MaxNoOfIndicatorsRerRow	6	12
MaxNoOfButtonRows	0	0
MaxNoOfButtonPerRow	6	12

Table: 1-3 Sizing Information

Indicator and button icons are displayed on dedicated positions. Position 1 is the upper left corner. Position 12 is the lower right corner. Position 0 is not shown.

Elements

View	Aspect	Tab	NLS-ID	User role
Main	dos_FE_Main PG2	1	NLSID_PC_Main	EveryOne
Main	dos_FE_Out PG2	1	NLSID_PC_FirstShutOff_Out	EveryOne
Ext	dos_FE_MainExt PG2	1	NLSID_PC_Main	EveryOne
Ext	dos_FE_OutExt PG2	1	NLSID_PC_FirstShutOff_Out	EveryOne
Ext	dos_FE_Binary PG2	2	NLSID_PC_I1_I4	EveryOne
Ext	dos_FE_Trend PG2	2	NLSID_PC_Trend	EveryOne
Ext	dos_FE_Config PG2	2	NLSID_PC_Config	EveryOne

Table: 1-4 Faceplate Aspect names

1.1 Faceplate elements

1.1.1 dos_FE_Main PG2, dos_FE_MainExt PG2

This is the main view for the Dosing Function object type faceplate. Operator input is possible based on access rights.

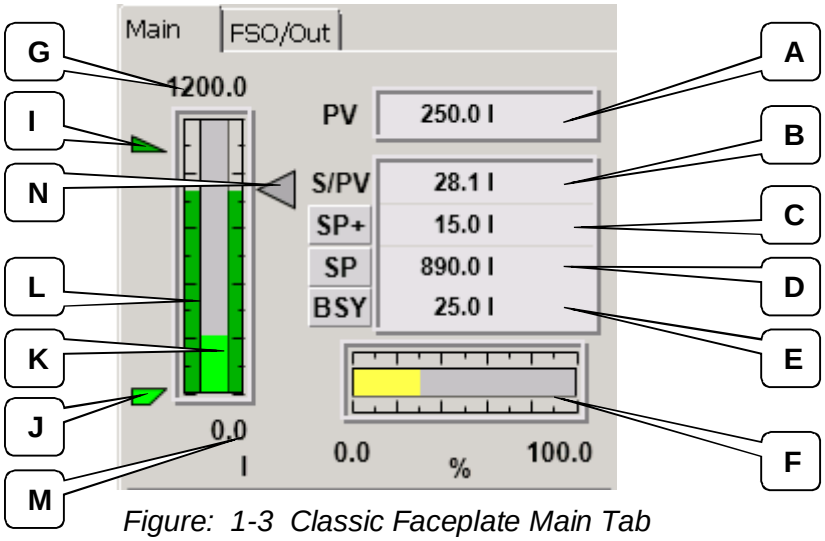


Figure: 1-3 Classic Faceplate Main Tab

ID	Comment	Property
A	Actual dosing value (process value)	CSY/SIG
B	Setpoint/process value ratio	RTY/PERCENT
C	Further dosing value	W+Y/SIG
D	Dosing setpoint	WY/SIG
E	Basic value for dosing	BSY/SIG
F	Output value in bargraph form (only in extended view)	Y/SIG
G	Maximum range of dosing value	CSY/HIGH
H	Setpoint value	WY/SIG
I	Pre-threshold value	SOY/SIG
J	Basic value for dosing	BSY/SIG
K	Actual dosing value	CSY/SIG
L	Setpoint value	WY/SIG
M	Minimum range and unit string of dosing value	CSY/LOW CSY/UNITS
N	Input of Setpoint value	WY/SIG

Table: 1-5 Classic Faceplate Main tab Description

1.1.2 dos_FE_Out PG2, dos_FE_OutExt PG2

This is the output value view for the Dosing Function object type faceplate. Operator input is possible based on access rights.

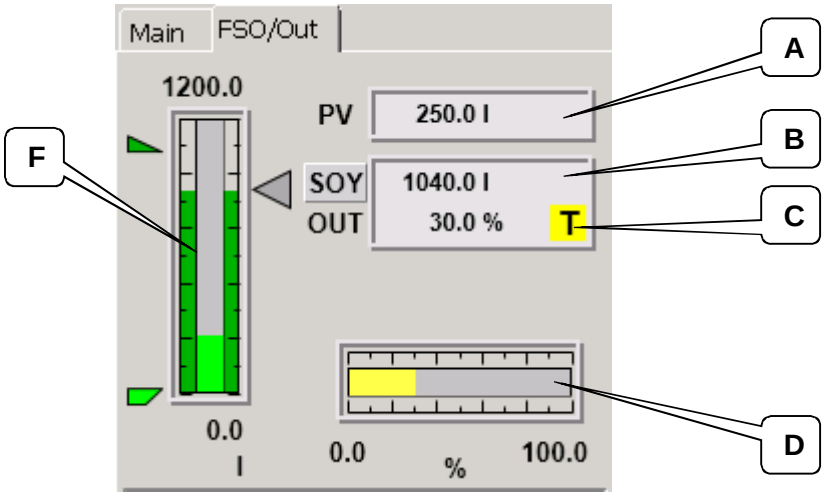


Figure: 1-4 Classic Faceplate OUT Tab

ID	Comment	Property
A	Actual dosing value (process value)	CSY/SIG
B	Basic value for dosing	BSY/SIG
C	Pre-threshold value	SOY/SIG
D	Output value in bar graph presentation	Y/SIG
E	Bargraph, refer to description of Main tab	

Table: 1-6 Classic Faceplate Out tab Description

1.1.3 dos_FE_Binary PG2

This is the Binary inputs view for the Dosing Function object type faceplate.

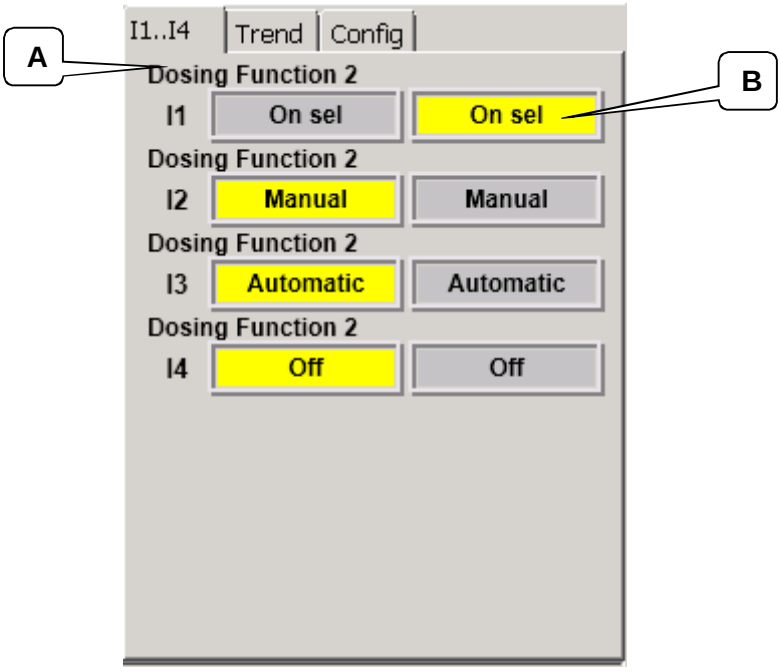


Figure: 1-5 Classic Faceplate Binary Tab

ID	Comment	Property
A	Description of binary input number ***X***	I***X***/DESCRIPTION
B	State of binary input number ***X***	I***X***/SIG

Table: 1-7 Classic Faceplate Binary tab Description

1.1.4 dos_FE_Trend PG2

This is the trend view for the Dosing Function object type faceplate.

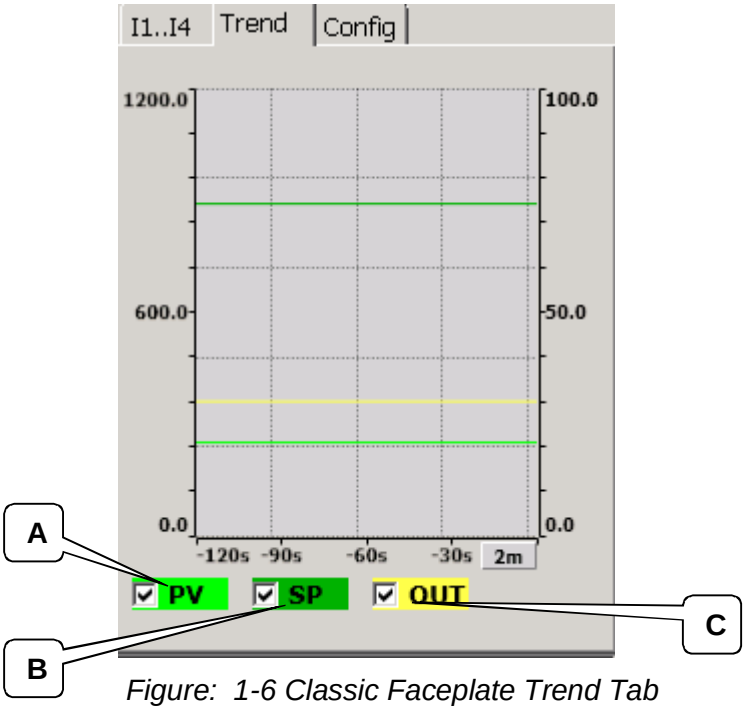


Figure: 1-6 Classic Faceplate Trend Tab

ID	Comment	Property
A	Process value (actual dosing value) (“PV”)	CSY/SIG
B	Dosing setpoint value (“SP”)	WY/SIG
C	Output value (“OUT”)	Y/SIG

Table: 1-8 Classic Faceplate Trend tab Description

1.1.5 dos_FE_Config PG2

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. Refer to document 3BDA033456R51xx Installation and Configuration in order to change the default write permission.

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

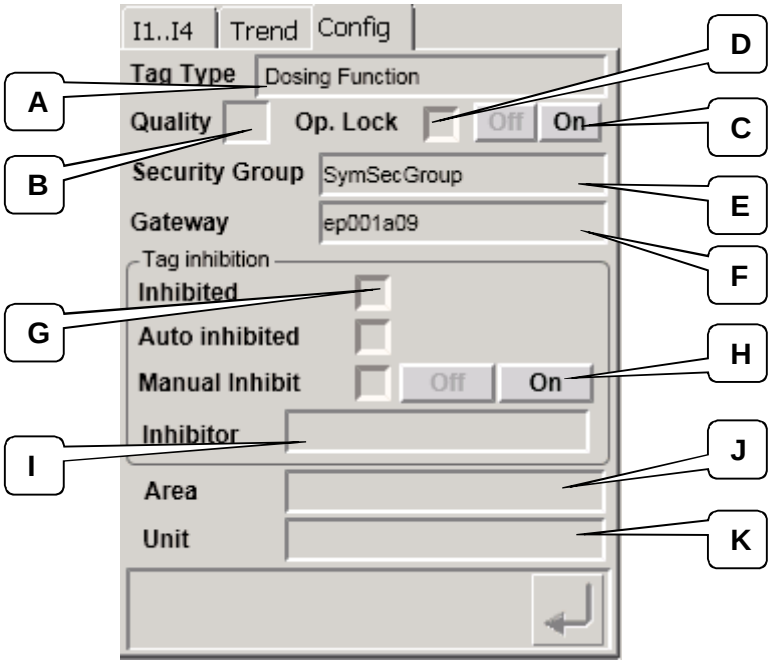


Figure: 1-7 Classic Faceplate Config Tab

ID	Comment	Property
A	Text describing the type of the tag	TYPE
B	Character which is providing Melody quality information	QUALITY
C	Buttons allow to switch Operating Lock on and off	LOPO/SIG
D	Binary indicator Yellow color: Op. Lock is On Gray color: Op. Lock is Off	LOPO/SIG
E	Text describing the Melody security group to which this tag belongs	SECNAME
F	Text describing the Melody gateway to which this tag belongs	GATEWAY
G	Binary indicators are showing inhibition status (Yellow color = On)	INHB INHBAUTO INHBMAN
H	Buttons allow to manually inhibit the tag	INHBMAN

ID	Comment	Property
I	Information about inhibitor	INHBTAG
J	Text describing Melody area to which tag belongs	AREA
K	Text describing Melody unit to which tag belongs	UNIT

Table: 1-9 Classic Faceplate Config tab Description

1.2 Indicators

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Automatic mode set	OAUT/SIG	1	1	1
	Manual mode set	OMAN/SIG	1	1	1
	Automatic mode locked	OAUT/SIG and OLK/SIG	1	1	1
	Manual mode locked	OMAN/SIG and OLK/SIG	1	1	1
	Dosing Stopped	DSTO/SIG	2	2	2
	Dosing Running state	DRO/SIG	2	2	2
	Dosing Reset	DRSO/SIG	2	2	2
	Protection stop	PST/SIG	3	3	3
	Dosing reset lock	LRSO/SIG	4	4	4
	Dosing stop lock	LSTO/SIG	5	5	5
	Dosing release lock	LRO/SIG	6	6	6
	Inhibit from the process	INHP/SIG	7	7	7
	Full dosing	FULL/SIG	8	8	8
	Partial dosing	PART/SIG	8	8	8
	Leakage	LEAK/SIG	9	9	9
	Operator lock	LOPO/SIG	11	11	10
	Test mode	TEST/SIG	11	11	10

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Operator note available		-	-	11

Table: 1-10 Indicators

1.3 Aspect Links

Icon	Description	Aspect	Position		
			Red	FP	Ext
	Operator note	Operator note	-	12	12

Table: 1-11 Aspect Links

1.4 Faceplate Buttons

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set manual mode	OMAN/SIG	1	1	1
	Set automatic mode	OAUT/SIG	2	2	2
	Set/Reset operation mode lock	OLK/SIG	3	3	3
NLS text (SP+)	Set Further dosing	RW+O/SIG	4	4	4
	Set/reset partial dosing	PART/SIG	7	7	8
	Set/reset full dosing	FULL/SIG	7	7	8
	Reset	DRSE/SIG	9	9	9
	Stop dosing in manual mode	DSTO/SIG	10	10	10
	Start dosing in manual mode	DRO/SIG	11	11	11
	Apply the selected action	-	6	6	12

Table: 1-12 Faceplate Buttons

1.5 Graphic Elements

The following Graphic Elements have the following standard properties and enumeration.

Standard properties

Property	Data type	Default value	Description
EnableInput	Boolean	True	Enables input handling of the element, if false the element it self can't selected.
Name	String	-	Name of the element instance in a graphic display. Is set automatically by the Graphics Builder (Name of the element + index).
Rotation	Rotation	0	Rotation angle
SubscriptionRate	Integer	0	Update rate for all properties subscribed for
Transform	Transform	Empty	Enables animation like scaling, moving and rotation. It is intended only for dynamic values.
Visible	Boolean	True	Visibility of the element in the graphic display.
XPos	Float	-	X position of the upper left corner of the element
YPos	Float	-	Y position of the upper left corner of the element

Table: 1-13 Standard Properties for all Graphic Elements

Graphic Elements based on Melody object type DOSING

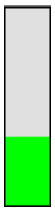
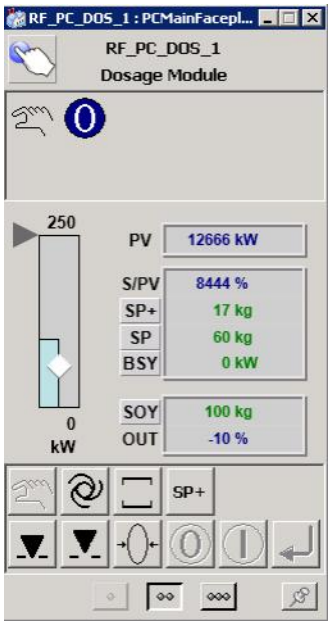
Example	Graphic Element Name	Description
	dos_csy_bargraph_PG2	Bargraph for actual counter value.
	dos_wy_bargraph_PG2	Bargraph for Set point value.
	dos_csy_numeric_PG2	Indicator text box with numeric formatting displaying the actual counter value.
	dos_wy_numeric_PG2	Indicator text box with numeric formatting displaying the Set point value.
	dos_wy_numeric_op_PG2	Operable indicator text box with numeric formatting displaying the Set point value.
	dos_mode_PG2	Mode icon showing the current dosing circuit operating mode.
	dos_mode_extended_PG2	Like dos_mode but with extended info or

Table: 1-14 Melody Dosing GE

Human System Interface (High Performance Style)

2. DOSING – Dosing Circuit



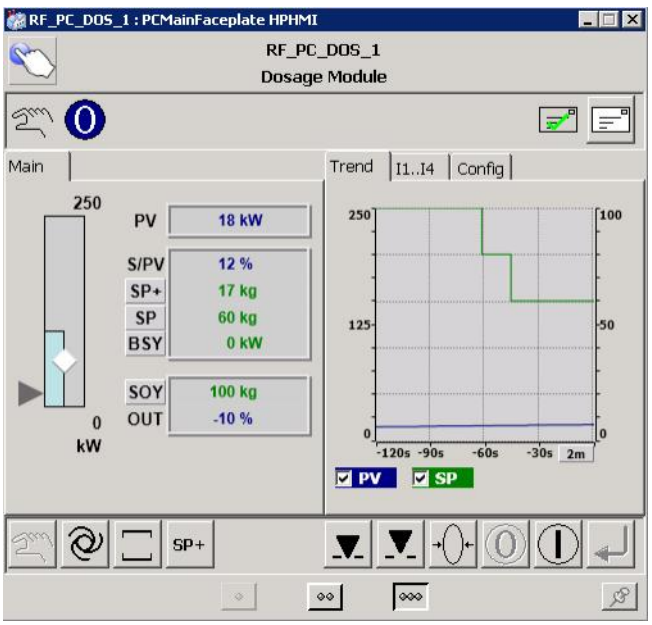


Figure: 2-1 Main View *Figure: 2-2 Extended View*

Basic information

Name:	PCMainFaceplate HPHMI
Description:	PC HPHMI Main Faceplate
Connect type:	Melody AC870P
Object type:	Dosing Function
Library:	PCHighPerformanceHMILib 1.0-0
Min. required 800xA version:	SV5.1RevA
Graphics Builder version:	PG2

Table: 2-1 Basic Information

Layout

Parameter	Value
Update rate (ms)	1000
Default view	Faceplate
Faceplate orientation	Horizontal
Reduced View	Not available

Table: 2-2 Layout information

Sizing information

Parameter in pixels	Main View	Ext. View
Width	250 px	500 px
Height	424 px	424 px
MaxNoOfIndicatorRows	2	1
MaxNoOfIndicatorsRerRow	6	12
MaxNoOfButtonRows	2	1
MaxNoOfButtonPerRow	6	12

Table: 2-3 Sizing Information

Indicator and button icons are displayed on dedicated positions. Position 1 is the upper left corner. Position 12 is the lower right corner. Position 0 is not shown.

Elements

View	Aspect	Tab	NLS-ID	User role
Main	dos_FE_HPHMI_Main	-	NLSID_PC_Main	EveryOne
Ext	dos_FE_HPHMI_Main_ext	1	NLSID_PC_Main	EveryOne
Ext	dos_FE_HPHMI_Trend	2	NLSID_PC_Trend	EveryOne
Ext	dos_FE_HPHMI_Binary_ext	1	NLSID_PC_I1_I4	EveryOne
Ext	dos_FE_HPHMI_Config	2	NLSID_PC_Config	EveryOne

Table: 2-4 Faceplate Aspect names

2.1 Faceplate elements

2.1.1 dos_FE_HPHMI_Main, dos_FE_HPHMI_Main_ext

This is the main view for the Dosing Function object type faceplate. Operator input is possible based on access rights.

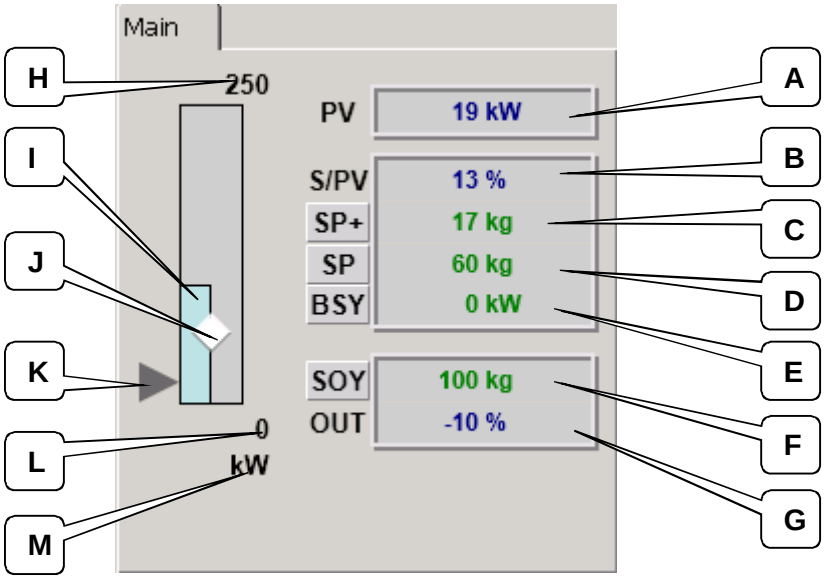


Figure: 2-3 Main Tab

ID	Comment	Property
A	Actual dosing value (process value)	CSY/SIG
B	Setpoint/process value ratio	RTY/PERCENT
C	Further dosing value	W+Y/SIG
D	Dosing setpoint	WY/SIG
E	Basic value for dosing	BSY/SIG
F	Pre-threshold value	SOY/SIG
G	Output value	Y/SIG
H	Maximum range of dosing value	CSY/HIGH
I	Normal range	Normal max: SOY/SIG Normal min: BSY/SIG
J	Setpoint value	WY/SIG
K	Actual dosing value	CSY/SIG
L	Minimum range of dosing value	CSY/LOW
M	Unit string of dosing value	CSY/UNITS

Table: 2-5 HPHMI Faceplate Main tab Description

2.1.2 dos_FE_HPHMI_Trend

This is the trend view for the Dosing Function object type faceplate.

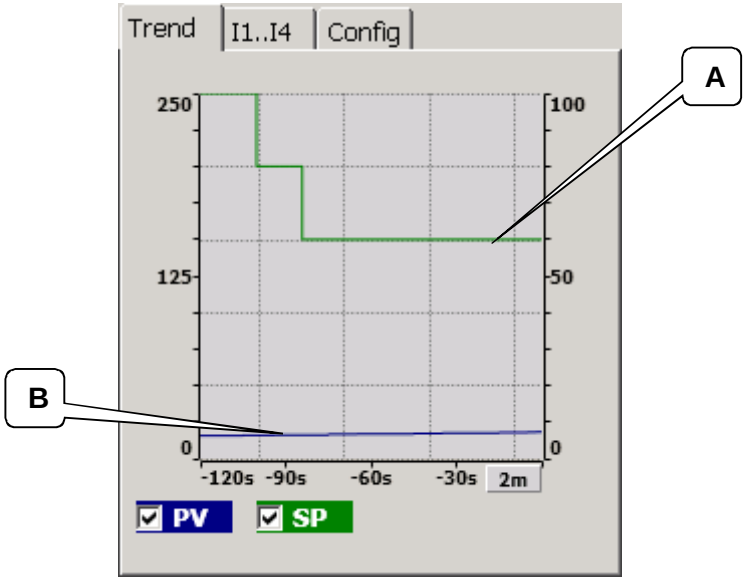


Figure: 2-4 Trend Tab

ID	Comment	Property
A	Process value (actual dosing value) curve (“PV”)	CSY/SIG
B	Dosing setpoint value curve (“SP”)	WY/SIG

Table: 2-6 HPHMI Faceplate Trend tab Description

2.1.3 dos_FE_HPHMI_Binary

This is the Binary inputs view for the Dosing Function object type faceplate.

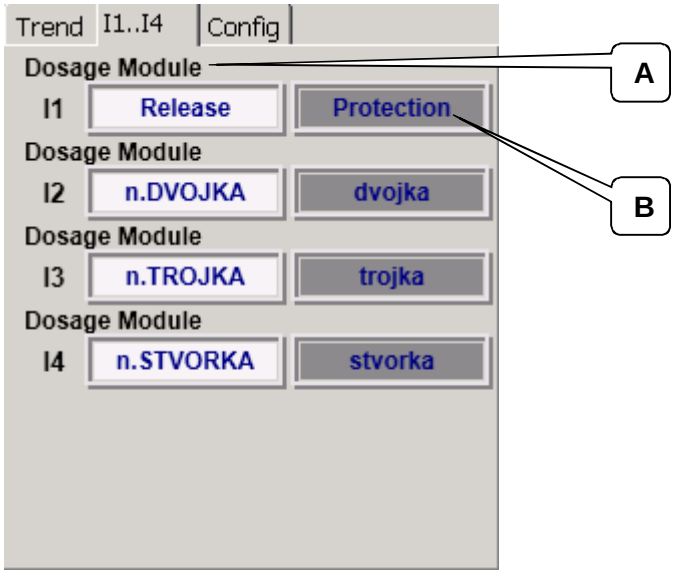


Figure: 2-5 HPHMI Faceplate Binary Tab

ID	Comment	Property
A	Description of binary input number ***X***	I***X***/DESCRIPTION
B	State of binary input number ***X***	I***X***/SIG

Table: 2-7 HPHMI Faceplate Binary tab Description

2.1.4 dos_FE_HPHMI_Config

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. Refer to document 3BDA033456R51xx Installation and Configuration in order to change the default write permission.

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

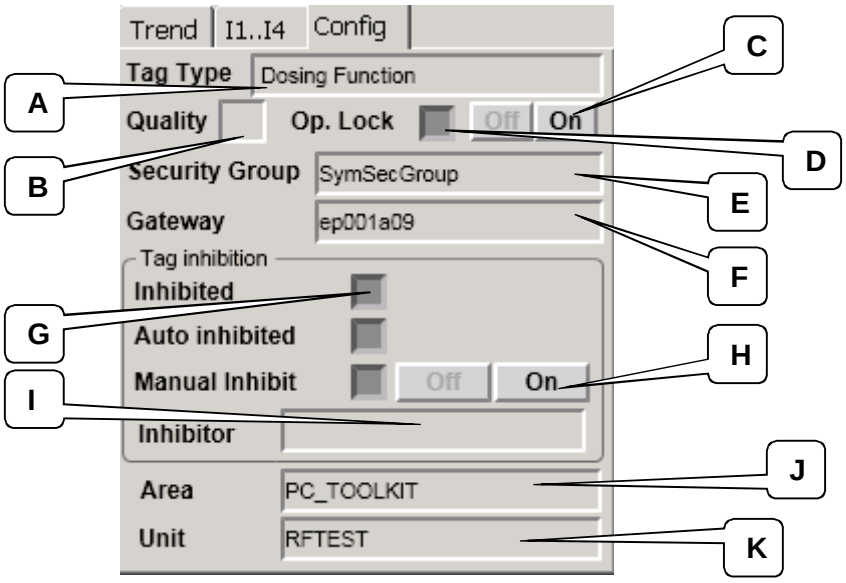


Figure: 2-6 HPHMI Faceplate Config Tab

ID	Comment	Property
A	Text describing the type of the tag	TYPE
B	Character which is providing Melody quality information	QUALITY
C	Buttons allow to switch Operating Lock on and off	LOPO/SIG
D	Binary indicator White color: Op. Lock is On Gray color: Op. Lock is Off	LOPO/SIG
E	Text describing the Melody security group to which this tag belongs	SECNAME
F	Text describing the Melody gateway to which this tag belongs	GATEWAY

ID	Comment	Property
G	Binary indicators are showing inhibition status (white color = On)	INHB INHBAUTO INHBMAN
H	Buttons allow to manually inhibit the tag	INHBMAN
I	Information about inhibitor	INHBTAG
J	Text describing Melody area to which tag belongs	AREA
K	Text describing Melody unit to which tag belongs	UNIT

Table: 2-8 HPHMI Faceplate Config tab Description

2.2 Indicators

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Automatic mode set	OAUT/SIG	-	1	1
	Manual mode set	OMAN/SIG	-	1	1
	Automatic mode locked	OAUT/SIG and OLK/SIG	-	1	1
	Manual mode locked	OMAN/SIG and OLK/SIG	-	1	1
	Dosing Stopped	DSTO/SIG	-	2	2
	Dosing Running state	DRO/SIG	-	2	2
	Dosing Reset	DRSO/SIG	-	2	2
	Protection stop	PST/SIG	-	3	3
	Dosing reset lock	LRSO/SIG	-	4	4
	Dosing stop lock	LSTO/SIG	-	5	5
	Dosing release lock	LRO/SIG	-	6	6
	Inhibit from the process	INHP/SIG	-	7	7
	Full dosing	FULL/SIG	-	8	8
	Partial dosing	PART/SIG	-	8	8
	Leakage	LEAK/SIG	-	9	9

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Operator lock	LOPO/SIG	-	11	10
	Test mode	TEST/SIG	-	11	10
	Operator note available		-	-	11

Table: 2-9 Indicators

2.3 Aspect Links

Icon	Description	Aspect	Position		
			Red	FP	Ext
	Operator note	Operator note	-	12	12

Table: 2-10 Aspect Links

2.4 Faceplate Buttons

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set manual mode	OMAN/SIG	-	1	1
	Set automatic mode	OAUT/SIG	-	2	2
	Reset	DRSE/SIG	-	9	9
	Stop dosing in manual mode	DSTO/SIG	-	10	10
	Start dosing in manual mode	DRO/SIG	-	11	11
	Set/reset partial dosing	PART/SIG	-	7	8
	Set/reset full dosing	FULL/SIG	-	7	8
	Set/Reset operation mode lock	OLK/SIG	-	3	3
NLS text (SP+)	Set Further dosing	RW+O/SIG	-	4	4
	Apply the selected action	-	-	6	12

Table: 2-11 Faceplate Buttons

2.5 Graphic Elements

The following Graphic Elements have the following standard properties and enumeration.

Standard properties

Property	Data type	Default value	Description
EnableInput	Boolean	True	Enables input handling of the element, if false the element it self can't selected.
Name	String	-	Name of the element instance in a graphic display. Is set automatically by the Graphics Builder (Name of the element + index).
Rotation	Rotation	0	Rotation angle
SubscriptionRate	Integer	0	Update rate for all properties subscribed for
Transform	Transform	Empty	Enables animation like scaling, moving and rotation. It is intended only for dynamic values.
Visible	Boolean	True	Visibility of the element in the graphic display.
XPos	Float	-	X position of the upper left corner of the element
YPos	Float	-	Y position of the upper left corner of the element

Table: 2-12 Standard Properties for all Graphic Elements

Graphic Elements based on Melody object type DOSING

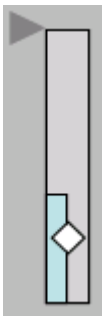
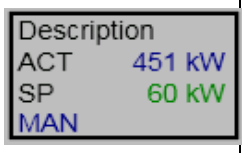
Example	Graphic Element Name	Description
	dos_HPHMI_AlarmInd	Alarm indication
	dos_HPHMI_bargraph	Bar graph indication
	dos_HPHMI_csy_numeric	Numeric indication (process value signal CSY)
	dos_HPHMI_mode	Operating mode indication
	dos_HPHMI_mode_extended	Extended operating mode indication
	dos_HPHMI_status	Dosing values overview
	dos_HPHMI_wy_numeric	Numeric indication (setpoint signal WY)

Table: 2-13 Melody Dosing GE

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