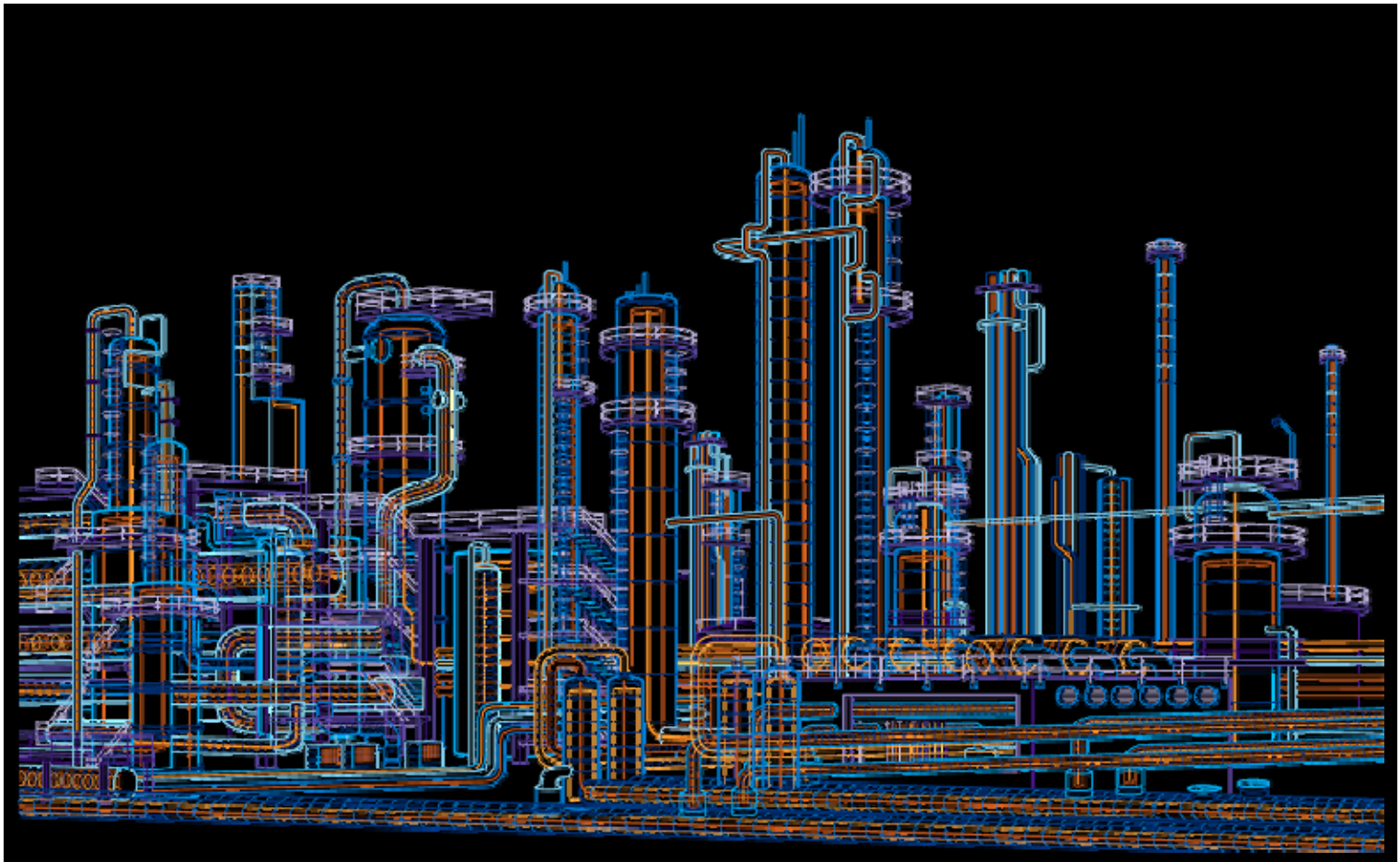

System 800xA
PC Toolkit Library for Freelance
Human System Interface - Sequence Control
User Manual

System Version SV5.1RevA

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Purpose

The purpose of this document is to describe the Human System Interface with Faceplates and Graphic Elements of the System 800xA. 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).

Conditions

The HMI standards consider the object types for Freelance. The System Extension supports System 800xA SV5.1RevA

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3.1 SFC – Sequential Function Chart 5

1. General

The following standard faceplates and graphic elements apply to the object types for Freelance. For both styles, all available faceplates and graphic elements are listed and described. For information regarding property configuration refer to document 3BDA033478R5102EN_HMI_Graphic Properties.doc

2. Human System Interface (Classic Style)

2.1 SFC – Sequential Function Chart

2.1.1 Faceplates

The faceplates for Freelance object types in classic style come along with the software package “800xA for Freelance”. Refer to the 800xA standard documentation 3BDD011811-510 for more information.

2.1.2 Graphic Elements

Graphic Elements based on Freelance object type SFC

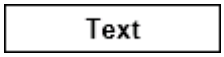
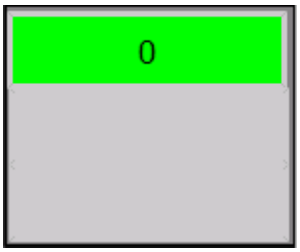
Example	Graphic Element Name	Description
	sfc_mode_PG2	Operating mode indication
	sfc_step_ind_PG2	Indication (by color change) if configured SFC step is currently active
	sfc_step01_PG2	Text element indicating actual step number, text and description

Table: 2-1 GE – SFC object type

3. Human System Interface (High Performance Style)

3.1 SFC – Sequential Function Chart

3.1.1 Faceplate

Figure: 3-1 Main View

Basic information

Name:	PCMainFaceplate HPHMI
Description:	PC HPHMI Main Faceplate
Connect type:	Freelance AC800F
Object type:	SFC (Sequential Function Chart)
Function blocks group:	Sequence Control
Min. required 800xA version:	SV5.1RevA
Graphics Builder version:	PG2

Table: 3-1 Basic Information

Layout

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

Table: 3-2 Layout information

Sizing information

Parameter in pixels	Main View
Width	250 px
Height	424 px
MaxNoOfIndicatorRows	1
MaxNoOfIndicatorsRerRow	6
MaxNoOfButtonRows	1
MaxNoOfButtonPerRow	6

Table: 3-3 Sizing Information

Elements

View	Aspect	Tab group	NLS-ID	User role
Main	PC_FE_HPHMI_Main	1	NLSID_PC_Main	EveryOne
Main	PC_FE_HPHMI_Time	1	NLSID_PC_Time	EveryOne

Table: 3-4 Faceplate Aspect names

3.1.2 Faceplate elements

PC_FE_HPHMI_Main

This is the main view for the SFC object type faceplate. Operator input is possible for next start time and repeat time (based on access rights and operating mode).

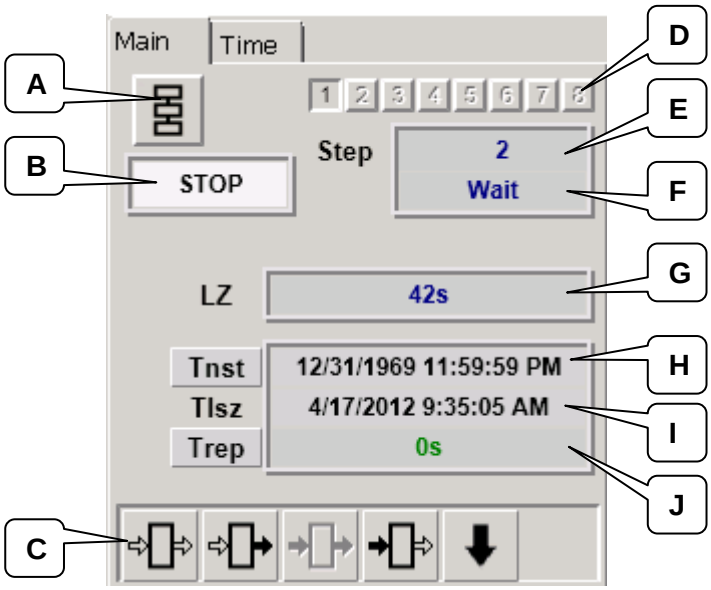


Figure: 3-2 HPHMI Faceplate Main Tab

ID	Comment	Property
A	Link to SFC Viewer aspect	
B	Indication of STOP state	OPM
C	SFC jog mode buttons	Refer to 'Buttons' section
D	SFC branch selection	-
E	Actual step number indication	ASPx where x = 0..7 (depending on selected branch)
F	Actual step text indication	Step Comments:x where x is actual step number
G	SFC run time	TRC
H	New start time	TNS
I	Last run time	TLS
J	Repeat time	TRE

Table: 3-5 HPHMI Faceplate Main tab Description

PC_FE_HPHMI_Time

This is the time view for the SFC object type faceplate. Operator input is not possible.

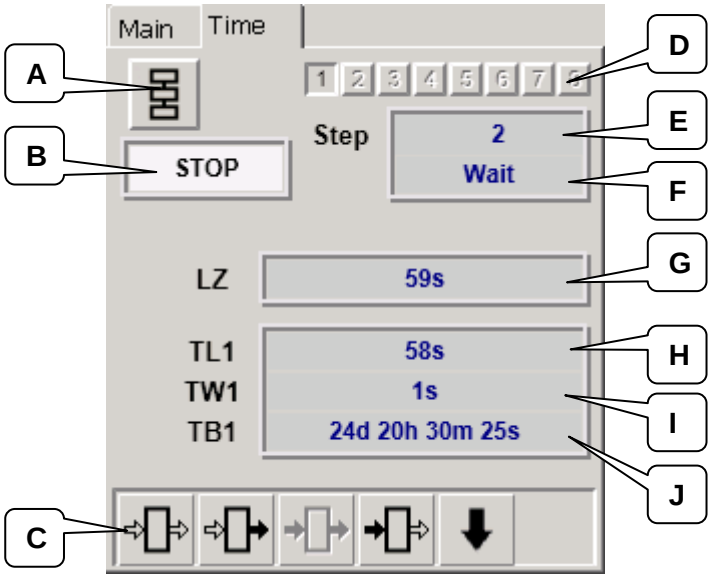


Figure: 3-3 HPHMI Faceplate Time Tab

ID	Comment	Property
A	Link to SFC Viewer aspect	
B	Indication of STOP state	OPM
C	SFC jog mode buttons	Refer to 'Buttons' section
D	SFC branch selection	-

ID	Comment	Property
E	Actual step number indication	ASPx where x = 0..7 (depending on selected branch)
F	Actual step text indication	Step Comments:x where x is actual step number
G	SFC run time	
H	Elapsed time branch X	TRSx where x = 0..7 (depending on selected branch)
I	Waiting time branch X	TRWx where x = 0..7 (depending on selected branch)
J	Monitoring time branch X	TRMx where x = 0..7 (depending on selected branch)

Table: 3-6 HPHMI Faceplate Time tab Description

3.1.3 Indicators

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Automatic mode	OPM (False)	-	1	-
	Manual mode	OPM (True)	-	1	-
	Jog mode 1	not CTR and SZU	-	2	-
	Jog mode 2	not CTR and not SZU	-	2	-
	Jog mode 3	CTR and not SZU	-	2	-
	Jog mode 4	CTR and SZU	-	2	-
	SFC running	ENA (True)	-	3	-
	Module disabled (module is not processed)	ENO	-	4	-
	Operator note available	Operator Note:HoldsData	-	5	-

Table: 3-7 Indicators

3.1.4 Aspect Links

Icon	Description	Aspect	Position		
			Red	FP	Ext
	Operator note	Operator note	-	6	-

Table: 3-8 Aspect Links

3.1.5 Buttons

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set manual mode	OISTA1 (16)	-	1	-
	Set automatic mode	OISTA1 (32)	-	2	-
	Reset	OISTA1 (26214)	-	4	-
	Start SFC	OISTA1 (130)		5	-
	Set Jog mode 1	OISTA1 (268435971)	-	-	-
	Set Jog mode 2	OISTA1 (536871427)	-	-	-
	Set Jog mode 3	OISTA1 (1073742339)	-	-	-
	Set Jog mode 4	OISTA1 (4294966266)	-	-	-
	Execute command	GSP (True)	-	-	-
	Apply the selected action	-	-	12	-

Table: 3-9 Buttons

3.1.6 Graphic Elements

Graphic Elements based on Freelance SFC object type

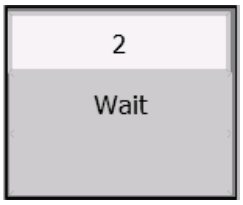
Example	Graphic Element Name	Description
	sfc_HPHMI_AlarmInd,	Alarm indication
	sfc_HPHMI_mode	Operating mode indication
	sfc_HPHMI_step_ind	Text indication of active step (true state means defined step is active)
	sfc_HPHMI_step01	Indication of active step number and relevant step text

Table: 3-10 GE – SFC object type

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