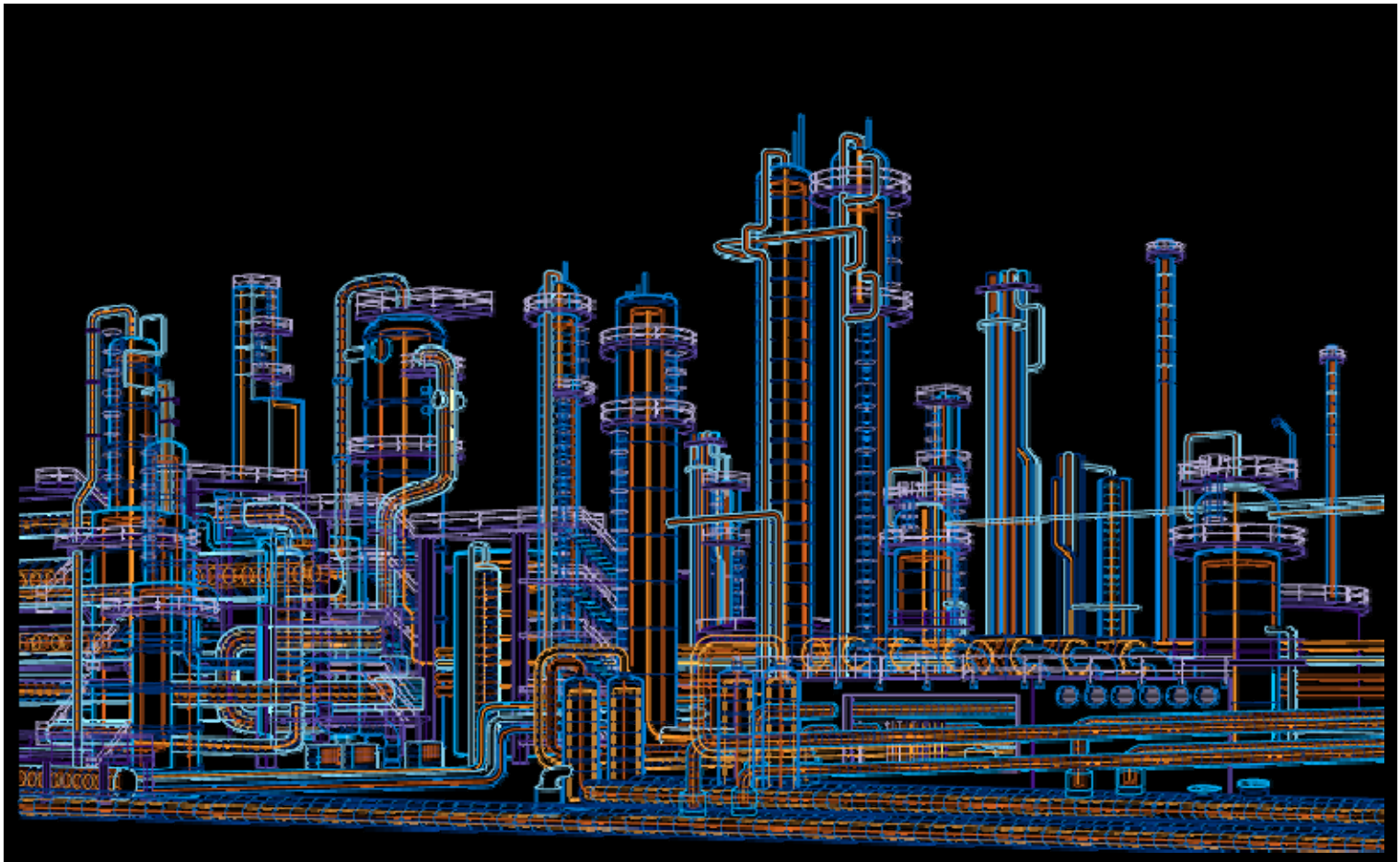

System 800xA
PC Toolkit Library for Freelance
Human System Interface - Batch
User Manual

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 FPX – Freelance PhaseX 5

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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 FPX – Freelance PhaseX

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

There are no classic graphic elements for this object type.

2.2 PLI – Phase Logic Interface

2.2.1 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.

2.2.2 Graphic Elements

There are no classic graphic elements for this object type.

3. Human System Interface (High Performance Style)

3.1 FPX – Freelance PhaseX

3.1.1 Faceplate

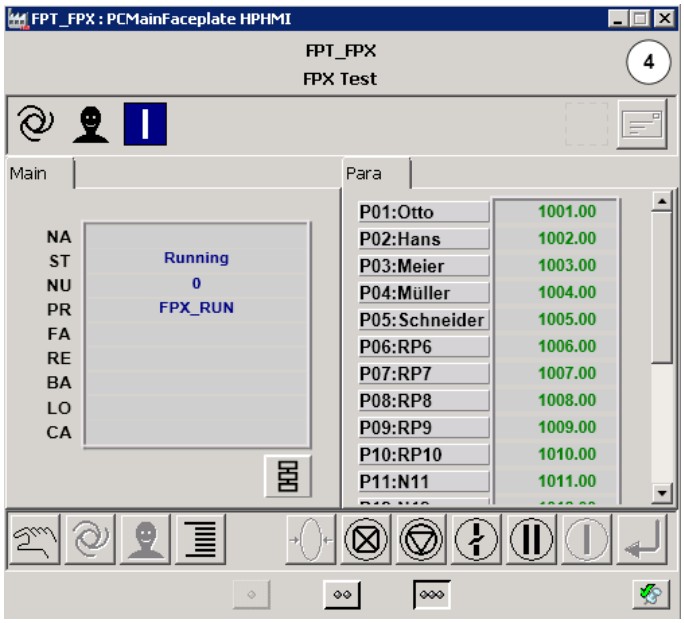


Figure: 3-1 Main View *Figure: 3-2 Extended View*

Basic information

Name:	PCMainFaceplate HPHMI
Description:	PC HPHMI Main Faceplate
Connect type:	Freelance AC800F
Object type:	FPX (Freelance PhaseX)
Function blocks group:	Batch
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	Ext View
Width	250 px	500 px
Height	424 px	424 px
MaxNoOfIndicatorRows	1	1
MaxNoOfIndicatorsRerRow	6	12
MaxNoOfButtonRows	2	1
MaxNoOfButtonPerRow	6	12

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_Para	1	NLSID_PC_Para	EveryOne
Ext	PC_FE_HPHMI_MainExt	1	NLSID_PC_Main	EveryOne
Ext	PC_FE_HPHMI_Para	2	NLSID_PC_Para	EveryOne

Table: 3-4 Faceplate Aspect names

3.1.2 Faceplate elements

PC_FE_HPHMI_Main

This is the main view for FPX object type faceplate. Operator input is not possible.

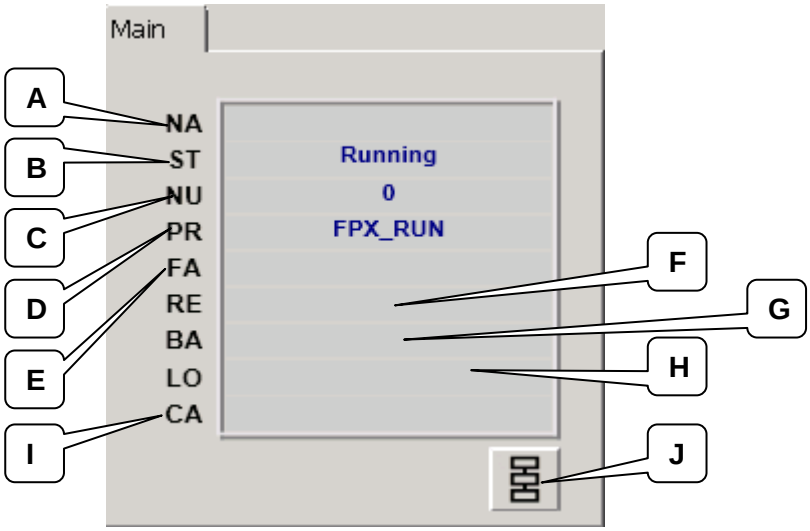


Figure: 3-3 HPHMI Faceplate Main Tab

ID	Comment	Property
A	Phase name	PhaseName
B	Phase status	Based on ST signal. Text comes from NLS
C	Phase numer	PhaseNo

D	Actual program name	if SFC_ABORTID = ActSFC then
		SFC_ABORT
		else if SFC_STOPID = ActSFC then
		SFC_STOP
		else if SFC_RESTAID = ActSFC then
		SFC_RESTART
		else if SFC_HOLDID = ActSFC then
		SFC_HOLD
		else if SFC_RUNID = ActSFC then
		SFC_RUN
		else
		""

E	Failure output	Based on F signal. Text comes from NLS
F	Recipe ID	RID
G	Batch ID	BID
H	Lot ID	LID
I	Campain ID	CAI
J	Link to active SFC (left click) Right click opens list of available SFCs	

Table: 3-5 HPHMI Faceplate Main tab Description

PC_FE_HPHMI_Para

This is batch parameters view for the FPX object type faceplate. Operator input is possible based on access rights and configuration in CBF.

Maximum 20 parameters is shown depending on configuration. Unused parameters are invisible.

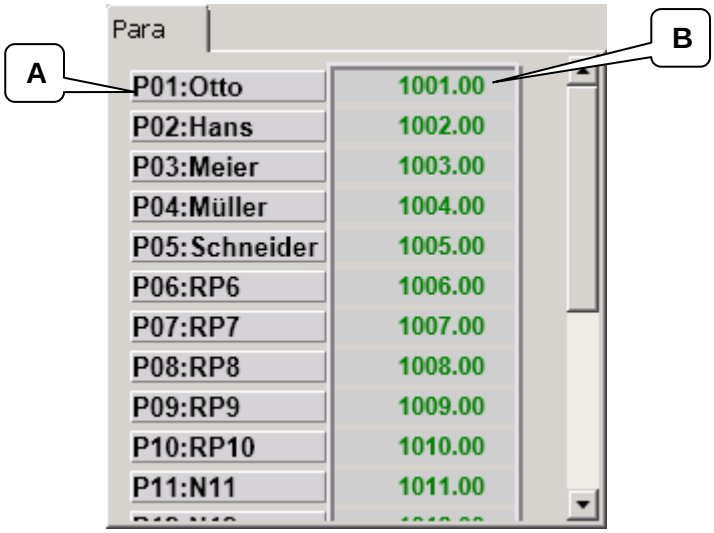


Figure: 3-4 HPHMI Faceplate Para Tab

ID	Comment	Property
A	Parameter name	Sx where x is 1 to 20
B	Parameter value	Vx where x is 1 to 20

Table: 3-6 HPHMI Faceplate Para tab Description

3.1.3 Indicators

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Automatic mode	SMA (True)	-	1	1
	Manual mode	SMA (False)	-	1	1
	Operating mode Operator	SOP (False)	-	2	2
	Operating mode Program	SOP (True)	-	2	2
	Completed	ST (50)	-	3	3

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Running	ST (70)	-	3	3
	Stop state	ST (30)	-	3	3
	Stopping	ST (80)	-	3	3
	Aborted	ST (10)	-	3	3
	Aborting	ST (90)	-	3	3
	Holding	ST (20)	-	3	3
	Held	ST (60)	-	3	3
	Paused	ST (110)	-	3	3
	Pausing	ST (120)	-	3	3
	Module disabled (module is not processed)	ENO	-	4	4
	Operator note available	Operator Note:HoldsData	-	5	5

Table: 3-7 Indicators

3.1.4 Aspect Links

Icon	Description	Aspect	Position		
			Red	FP	Ext
	Operator note	Operator note	-	6	12

Table: 3-8 Aspect Links

3.1.5 Buttons

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set manual mode	Pha (0)	-	1	1
	Set automatic mode	Pha (1)	-	2	2

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set Operator mode	Pm (False)	-	3	3
	Set Program mode	Pm (True)	-	4	4
	Reset	Ors (True)	-	6	6
	Set command ABORT	Oab (True)	-	7	7
	Set command STOP	Osp (True)	-	8	8
	Set command HOLD	Ohd (True)	-	9	9
	Set command PAUSE	Opa (True)	-	10	10
	Set command Start	Ost (True)	-	11	11
	Set command Restart	Ort (True)	-	11	11
	Set command Resume	Orm (True)	-	11	11
	Apply the selected action	-	-	12	12

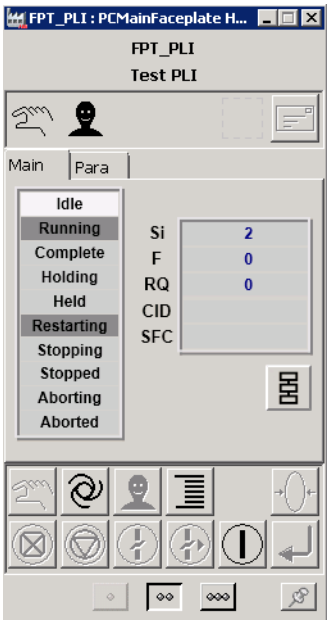
Table: 3-9 Buttons

3.1.6 Graphic Elements

There are no available graphic elements for this object type.

3.2 PLI – Phase Logic Interface

3.2.1 Faceplate



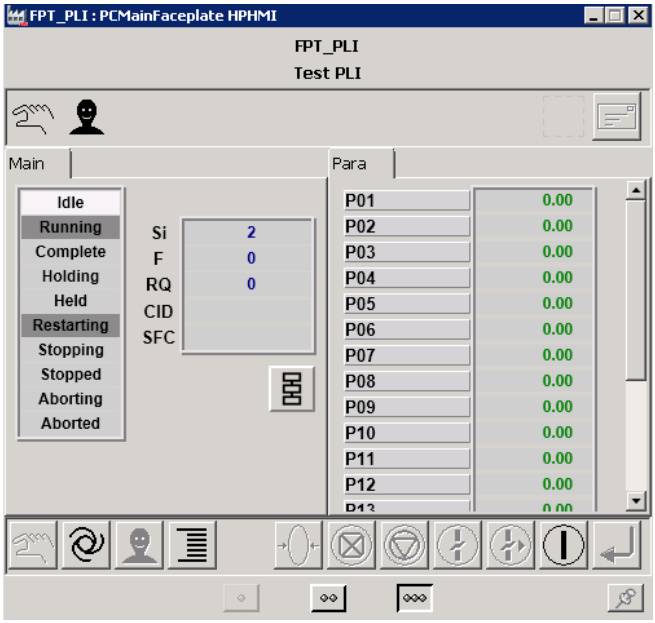


Figure: 3-5 Main View *Figure: 3-6 Extended View*

Basic information

Name:	PCMainFaceplate HPHMI
Description:	PC HPHMI Main Faceplate
Connect type:	Freelance AC800F
Object type:	PLI (Phase Logic Interface)
Function blocks group:	Batch
Min. required 800xA version:	SV5.1RevA
Graphics Builder version:	PG2

Table: 3-10 Basic Information

Layout

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

Table: 3-11 Layout information

Sizing information

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

Table: 3-12 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_Para	1	NLSID_PC_Para	EveryOne
Ext	PC_FE_HPHMI_MainExt	1	NLSID_PC_Main	EveryOne
Ext	PC_FE_HPHMI_Para	2	NLSID_PC_Para	EveryOne

Table: 3-13 Faceplate Aspect names

3.2.2 Faceplate elements

PC_FE_HPHMI_Main

This is the main view for PLI object type faceplate. Operator input is not possible.

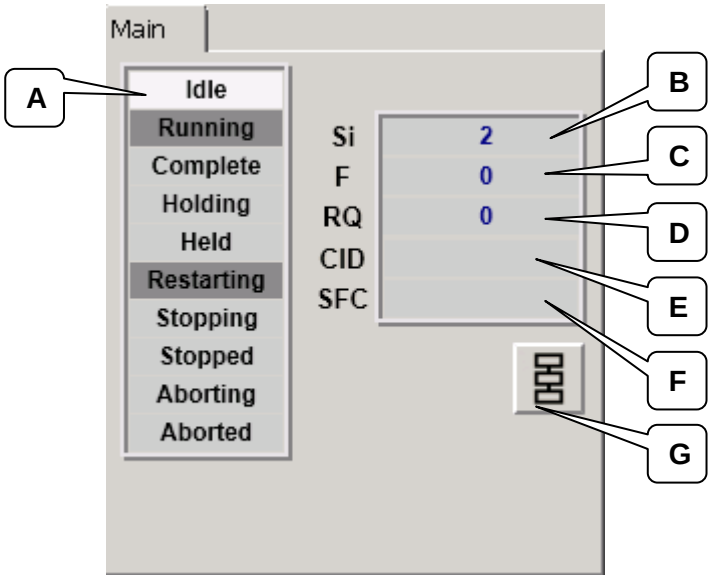


Figure: 3-7 HPHMI Faceplate Main Tab

ID	Comment	Property
A	Indication of status of phases Gray background – not configured Dark gray background – not active White background - active	IdlePos, IsIdle RunningPos, IsRunning CompletePos, IsComplete HoldingPos, IsHolding HeldPos, IsHeld RestartingPos, IsRestarting StoppingPos, IsStopping StoppedPos, IsStopped AbortingPos, IsAborting AbortedPos, IsAborted
B	Step number	SI
C	Failure output	F
D	Request from program	RQ
E	Batch ID	CID

F	Actual program name	if IsAborting then
		SFC_ABORT
		else if IsStopping then
		SFC_STOP
		else if IsRestarting then
		SFC_RESTART
		else if IsHolding then
		SFC_HOLD
		else if IsRunning then
		SFC_RUN
		else
		""

G	Link to active SFC Right click opens list of available SFCs	

Table: 3-14 HPHMI Faceplate Main tab Description

PC_FE_HPHMI_Para

This is batch parameters view for the PLI object type faceplate. Operator input is possible based on access rights and configuration in CBF.

Maximum 20 parameters is shown depending on configuration. Unused parameters are invisible.

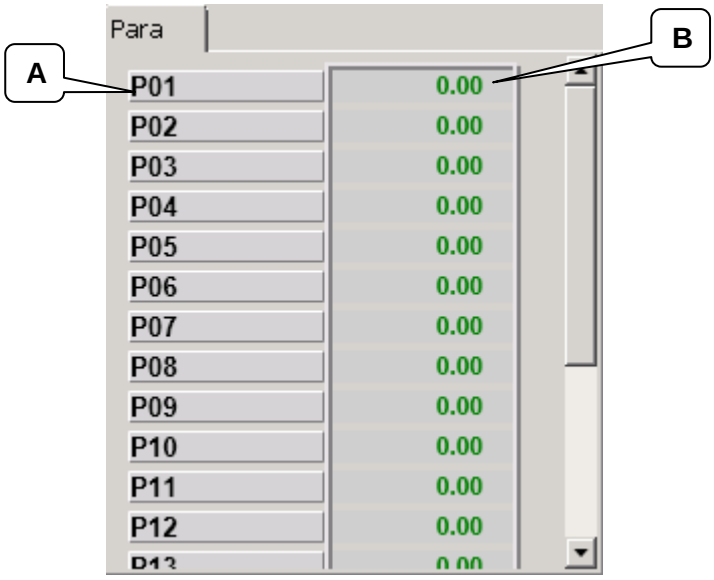


Figure: 3-8 HPHMI Faceplate Para Tab

ID	Comment	Property
A	Parameter name	fixed to parameter index
B	Parameter value	Vxx where xx is 01 to 20

Table: 3-15 HPHMI Faceplate Para tab Description

3.2.3 Indicators

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Automatic mode	SMA (True)	-	1	1
	Manual mode	SMA (False)	-	1	1
	Operating mode Operator	SOP (False)	-	2	2
	Operating mode Program	SOP (True)	-	2	2
	Completed	IsCompleted	-	3	3

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Running	IsRunning	-	3	3
	Stop state	IsStopped	-	3	3
	Stopping	IsStopping	-	3	3
	Aborted	IsAborted	-	3	3
	Aborting	IsAborting	-	3	3
	Holding	IsHolding	-	3	3
	Held	IsHeld	-	3	3
	Paused	IsPaused	-	3	3
	Pausing	IsPausing	-	3	3
	Module disabled (module is not processed)	ENO	-	4	4
	Operator note available	Operator Note:HoldsData	-	5	5

Table: 3-16 Indicators

3.2.4 Aspect Links

Icon	Description	Aspect	Position		
			Red	FP	Ext
	Operator note	Operator note	-	6	12

Table: 3-17 Aspect Links

3.2.5 Buttons

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set manual mode	Pha (0)	-	1	1
	Set automatic mode	Pha (1)	-	2	2

Icon	Description	Property (Value)	Position		
			Red	FP	Ext
	Set Operator mode	Pm (False)	-	3	3
	Set Program mode	Pm (True)	-	4	4
	Reset	Prs (True)	-	6	6
	Set command ABORT	Pab (True)	-	7	7
	Set command STOP	Psp (True)	-	8	8
	Set command HOLD	Phd (True)	-	9	9
	Set command Start	Pst (True)	-	11	11
	Set command Restart	Prt (True)	-	11	11
	Apply the selected action	-	-	12	12

Table: 3-18 Buttons

3.2.6 Graphic Elements

There are no available graphic elements for this object type.

3BDA035397R5102EN_HMI_Batch function blocks Germany 2012-05-22

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