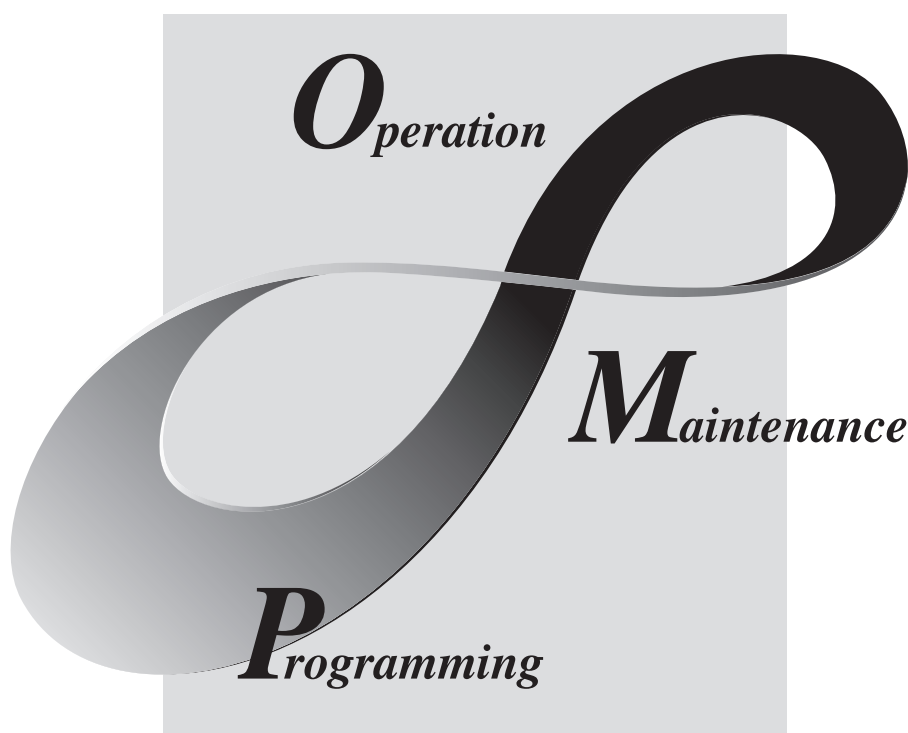


PX Developer Version 1

Operating Manual

(InTouch Interaction)

mitsubishi



MELSOFT
Integrated FA Software

SW1D5C-FBDQ-E
SW1DNC-FBDQMON-E

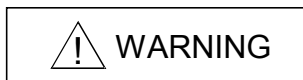
● SAFETY PRECAUTIONS ●

(Always read these instructions before using this product.)

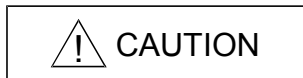
Before using this product, thoroughly read this manual and the relevant manuals introduced in this manual and pay careful attention to safety and handle the products properly.

The precautions given in this manual are concerned with this product. For the safety precautions of the programmable controller system, refer to the User's Manual for the CPU module.

In this manual, the safety precautions are ranked as "⚠WARNING" and "⚠CAUTION".



Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Note that the ⚠CAUTION level may lead to serious consequences according to the circumstances. Always follow the precautions of both levels because they are important for personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[Startup/Maintenance Precautions]

⚠ CAUTION

- The online operations have to be executed after the manual has been carefully read and the safety has been ensured.
Failure to do so may cause a miss operation which results in machine damage or an accident.

● CONDITIONS OF USE FOR THE PRODUCT ●

- (1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
- i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.

MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.

("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

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REVISIONS

*The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
Jun., 2008	SH(NA)-080773ENG-A	First edition
Jun., 2008	SH(NA)-080773ENG-B	<p>Correction</p> <p>Appendix 3.1</p>
Jan., 2009	SH(NA)-080773ENG-C	<p>Correction</p> <p>GENERIC TERMS, ABBREVIATIONS, AND TERMS, Section 2.1, Section 3.4</p>
Dec., 2009	SH(NA)-080773ENG-D	<p>Addition</p> <p>CONDITIONS OF USE FOR THE PRODUCT</p> <p>Correction</p> <p>SAFETY PRECAUTIONS , Section 2.1, Section 3.4, Appendix 2</p>
Dec., 2010	SH(NA)-080773ENG-E	<p>The manual name is changed from SCADA Interaction to InTouch Interaction</p> <p>Correction</p> <p>GENERIC TERMS, ABBREVIATIONS, AND TERMS, Section 2.3</p>
Oct., 2011	SH(NA)-080773ENG-F	<p>Addition</p> <p>Appendix 4, Appendix 5</p> <p>Correction</p> <p>HOW TO USE THIS MANUAL, Section 2.3, Section 3.4, Chapter 4, Appendix 2, Appendix 3.1, Appendix 3.2</p>

Japanese Manual Version SH-080747-J

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INTRODUCTION

Thank you for choosing the Mitsubishi MELSOFT series Integrated FA software.
Read this manual and make sure you understand the functions and performance of MELSOFT series thoroughly in advance to ensure correct use.

CONTENTS

SAFETY PRECAUTIONS	A-1
CONDITIONS OF USE FOR THE PRODUCT	A-2
REVISIONS	A-3
INTRODUCTION.....	A-4
CONTENTS.....	A-4
MANUALS	A-6
HOW TO USE THIS MANUAL.....	A-7
MANUAL ORGANIZATION.....	A-9
GENERIC TERMS, ABBREVIATIONS, AND TERMS.....	A-10
1 OVERVIEW.....	1-1
1.1 Overview.....	1-1
1.2 Features.....	1-1
2 SYSTEM CONFIGURATION.....	2-1
2.1 System Configuration	2-1
2.2 Software Configuration	2-2
2.3 Operating Environment.....	2-2
3 BASIC OPERATION.....	3-1
3.1 Operating Procedures for Monitoring on InTouch	3-1
3.2 Operation to Communicate using PX Developer Process Control Tag Names in InTouch	3-2
3.2.1 Registering access names	3-3
3.2.2 Defining tag source.....	3-4
3.2.3 Referring to and selecting tag names.....	3-8
3.3 Operation to Use Faceplates of PX Developer in InTouch	3-10
3.3.1 Installing ActiveX control.....	3-11
3.3.2 Checking installation.....	3-12
3.3.3 Setting/pasting faceplate control	3-13
3.4 Operation to Display PX Developer Alarm Information on InTouch Alarm Viewer control.....	3-15
3.4.1 Pasting Alarm Viewer control	3-19
3.4.2 Setting Alarm Query	3-20
4 TROUBLESHOOTING.....	4-1
APPENDIX	B-1
Appendix 1 Details of Dot Field Name in the Tag Name Reference Function	B-1
Appendix 2 Main Tag Items	B-1
Appendix 3 Correspondence Table for Items of Monitor Tool and InTouch.....	B-3
A-4	A-4

Appendix 3.1	Correspondence table for alarm items	B-3
Appendix 3.2	Correspondence table for event items.....	B-4
Appendix 4	Security of Monitor Tool and InTouch.....	B-5
Appendix 4.1	Operating environment for using security of monitor tool and InTouch.....	B-5
Appendix 4.2	Setting procedure for using security of monitor tool and InTouch	B-5
Appendix 4.3	Procedure for monitoring operation with security interaction between monitor tool and InTouch.....	B-10
Appendix 5	Functions Added to and Changed from Old Version	B-11
INDEX.....		C-1

MANUALS

The following manuals are also related to this product.
Refer to the following table for ordering a manual.


Related manuals

Manual name	Manual number (model code)
PX Developer Operating Manual (Programming Tool) Explains FBD language programming, compilation, online operations, and debug methods with PX Developer. (Sold separately.)	SH-080369E (13JU38)
PX Developer Operating Manual (Monitor Tool) Explains the operation methods of the monitor tool and methods for monitoring and controlling DDC processing with tag FB. (Sold separately.)	SH-080370E (13JU39)
PX Developer Programming Manual Explains details of programming with PX Developer, lists of FB parts, and the PID instructions. (Sold separately.)	SH-080371E (13JW00)

CAUTION


- Please note that we do not guarantee commercially available software compatible with Microsoft® Windows® Operating System introduced in this manual.
- The software copyright of this product belongs to Mitsubishi Electric Corporation.
- No contents in this manual can be reproduced or duplicated in any form or by any means without permission.
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- Please note that we are not responsible for any influence resulting from operating this product (including this manual).
- The contents of this manual are subject to change without notice.


HOW TO USE THIS MANUAL


 **PURPOSE**
Describes the purpose of operations for each chapter or section.

 **Setting on InTouch WindowMaker**
Describes operating procedures.


3.2 Operation to Communicate using PX Developer Process Control Tag Names in InTouch

 **PURPOSE**
Register tag variables using process control tag names defined in PX Developer and read/write the process control tag data of the monitor tool in InTouch.


 **Setting on InTouch WindowMaker**

Procedure 1) Register an access name for communicating with the PX Developer monitor tool. ( Section 3.2.1)^{*1}


↓

Procedure 2) Create tag variables. ( Section 3.2.2)


↓

Procedure 3) Define a tag source in the Tag Browser. ( Section 3.2.2)^{*1}

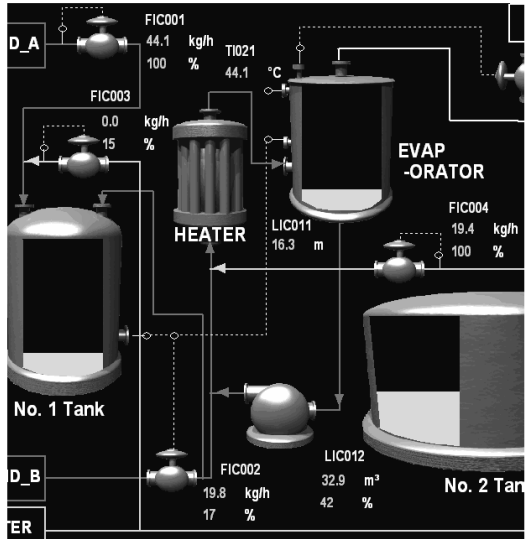
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Procedure 4) Refer/select tag names on the Tag Browser. ( Section 3.2.3)

^{*1}: Required only when using InTouch application for the first time.


 **Execution on InTouch WindowViewer**

The process control tag data can be read/written by executing WindowViewer after starting the monitor tool.



<Example of InTouch WindowViewer monitor screen>

 **Execution on InTouch WindowViewer**
Describes functions to be executed.

Reference location
 leads to the reference location.

There are also the following types of explanations.



BASIC OPERATION

Explains operation methods.



DISPLAY/SETTING SCREEN

Screen to display/set items.



DISPLAY/SETTING DATA

Explains items in DISPLAY/SETTING SCREEN.

POINT	
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Informs items to be noted and useful functions relevant to the contents in the chapter or section.

The following table explains symbols in this manual and their description.

Symbol	Description
[]	Expresses an item in a window or dialog box, or a menu on the menu bar. []→[] expresses the drop-down menu. Example: [Special] → [Configure]
()	Expresses a corresponding button. Example: "Define Tag Source" button (...)
" "	Expresses a command button. Example: "OK" button
<< >>	Expresses dialog box tab. Example: <<General>> tab

MANUAL ORGANIZATION

This manual consists of four chapters and APPENDIX.

This manual is organized assuming that the interaction function of the PX Developer monitor tool and SCADA software are utilized in the following procedure.

< Procedure for leveraging the interaction function with InTouch >

Operating procedure 1: Using the tag name reference function of InTouch WindowMaker, assign process control tags of PX Developer to the tag variables.	Reference
• Set an access name.	Section 3.2
• Refer to tag names and assign process control tags.	



Operating procedure 2: Paste a faceplate control of PX Developer monitor tool on InTouch WindowMaker.	Reference
• Install ActiveX control.	Section 3.3 • PX Developer Operating Manual (Monitor Tool)
• Paste/set a faceplate control.	



Operating procedure 3: Set to display alarm/event information of the PX Developer monitor tool on the Alarm Viewer control of InTouch WindowMaker.	Reference
• Paste/set Alarm Viewer control.	Section 3.4.1



Operating procedure 4: Execute InTouch WindowViewer.
--

*For operating procedures and setting items, refer to the manual of InTouch.

GENERIC TERMS, ABBREVIATIONS, AND TERMS

The following table shows the generic terms, abbreviations, and terms in this manual.

Generic term/abbreviation	Description
PX Developer	Generic term for PX Developer Version 1 (SW1D5C-FBDQ-E) and PX Developer Monitor Tool (SW1DNC-FBDQMON-E) For PX Developer, Programming Tool and Monitor Tool are installed. For PX Developer Monitor Tool, only Monitor Tool is installed.
Programming tool	Abbreviation for PX Developer programming tool
Monitor tool	Abbreviation for PX Developer monitor tool
OPS	Abbreviation for Operator Station
Server	Abbreviation for a monitor tool which starts up as Server in the server/client monitoring system interacting with multiple OPSs
Client	Abbreviation for a monitor tool which starts up as Client in the server/client monitoring system interacting with multiple OPSs
InTouch	Abbreviation for Wonderware® InTouch® Version 10.0
Windows Vista®	Generic term for Microsoft® Windows Vista® Home Basic Operating System, Microsoft® Windows Vista® Home Premium Operating System, Microsoft® Windows Vista® Business Operating System, Microsoft® Windows Vista® Ultimate Operating System, and Microsoft® Windows Vista® Enterprise Operating System
Personal computer	Generic term for IBM-PC/AT-compatible personal computer

Term	Description
WindowMaker	Development environment of InTouch
WindowViewer	Execution environment of InTouch
I/O server	Communication driver for Wonderware®
DDE	Abbreviation for Dynamic Data Exchange Windows® standard communication protocol between applications
DDC	Abbreviation for Direct Digital Control A control of controller functions with a digital device.
FB	Abbreviation for Function Block A block with a specific function used in a program.
Tag	Tags for identification attached to process control equipment. They are JIS-defined identification symbols attached to DDC processings.
Tag data	Organized data (process condition data, process status data) attached to DDC processing which is indicated by tag. Accessing this tag data allows monitoring and condition setting of a corresponding DDC processing.
Tag data item	Each data item that makes up tag data
Tag FB	A function block works as a controller or an indicator containing tag data
Faceplate	Gauge window on which an indicator such as a controller is displayed in image format Values assigned to tag data are manipulated.
SV	Setting value
PV	Process variable
MV	Manipulated variable
Assignment information database	"*.mdb" file which is created when compilation is executed in the programming tool This file stores assignment information of variables for storing data such as tag data, global variable and device information of the CPU module.

1 OVERVIEW

1.1 Overview

In addition to the basic monitoring function of the monitor tool, outstanding and easy-to-use InTouch development/monitoring environment can also be available by using the interaction function of the PX Developer monitor tool and InTouch (SCADA software manufactured by Invensys Systems, Inc.).

This function supports the following four interaction functions.

- (1) Incorporating faceplate control
- (2) Communication function using process control tag names
- (3) Reference function for PX Developer tag names
- (4) Alarm integration function

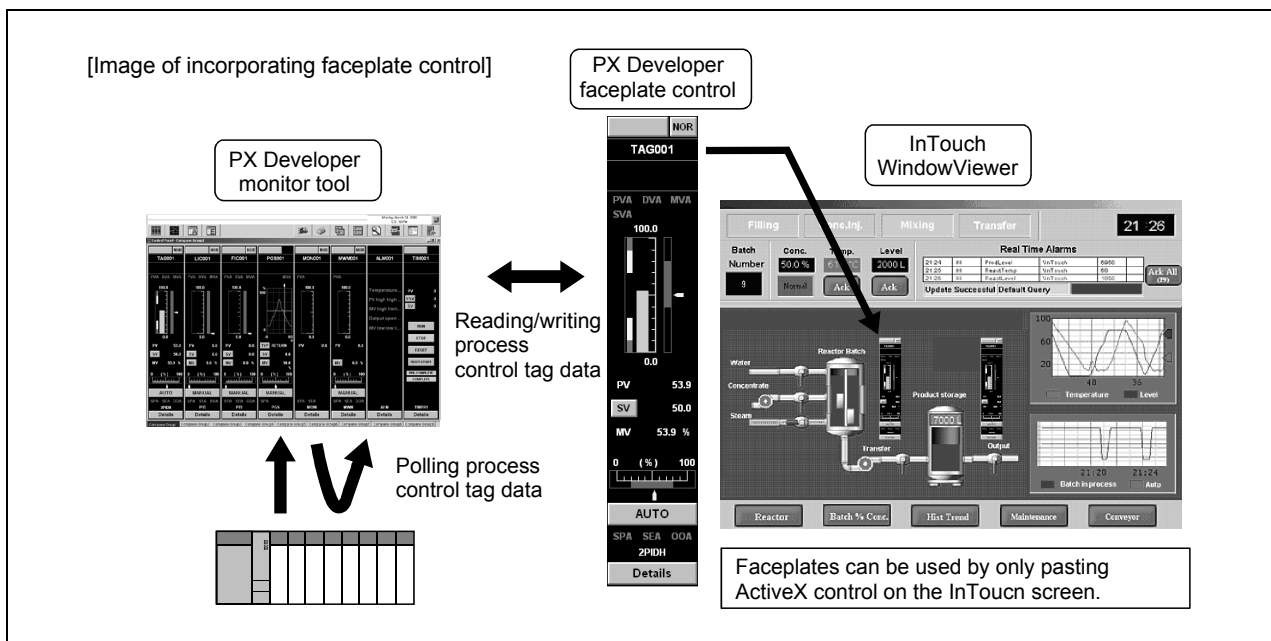
1.2 Features

This section explains the main features of the four interaction functions.

(1) Faceplate control reduces development time of monitor screens

By simply pasting the faceplate control of PX Developer (ActiveX control) on the monitor screen of InTouch, faceplates can be easily used on InTouch.

This function reduces development time of monitor screens and tuning screens for process control tag data on InTouch.

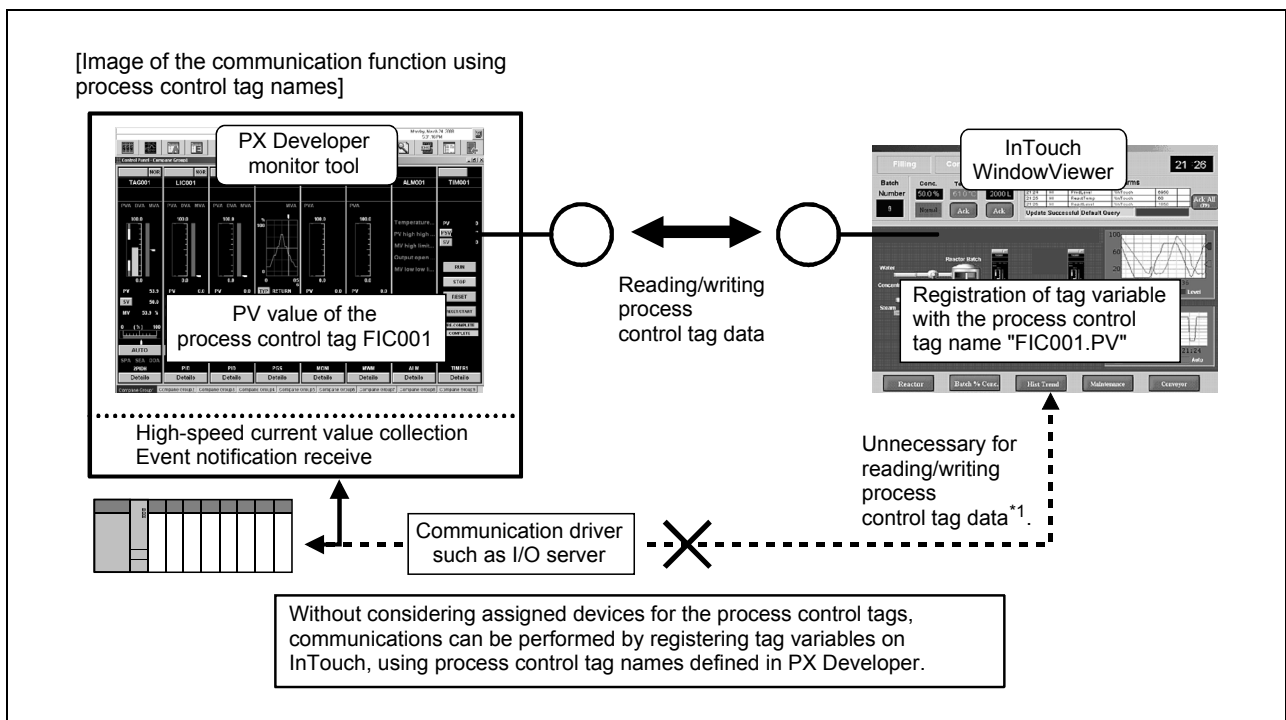


(2) Without considering assigned devices, communications can be performed using process control tag names in InTouch

When registering tag variables in InTouch, PX Developer process control tag names can be used as item names, and process control tag data in the monitor tool can be read from/written to InTouch.

This eliminates the need for managing assigned devices and communicating through a communication driver such as an I/O server to read/write process control tag data.

Furthermore, high-speed response by the event notification receive function and the high-speed current value collection function of the monitor tool can be utilized on InTouch.

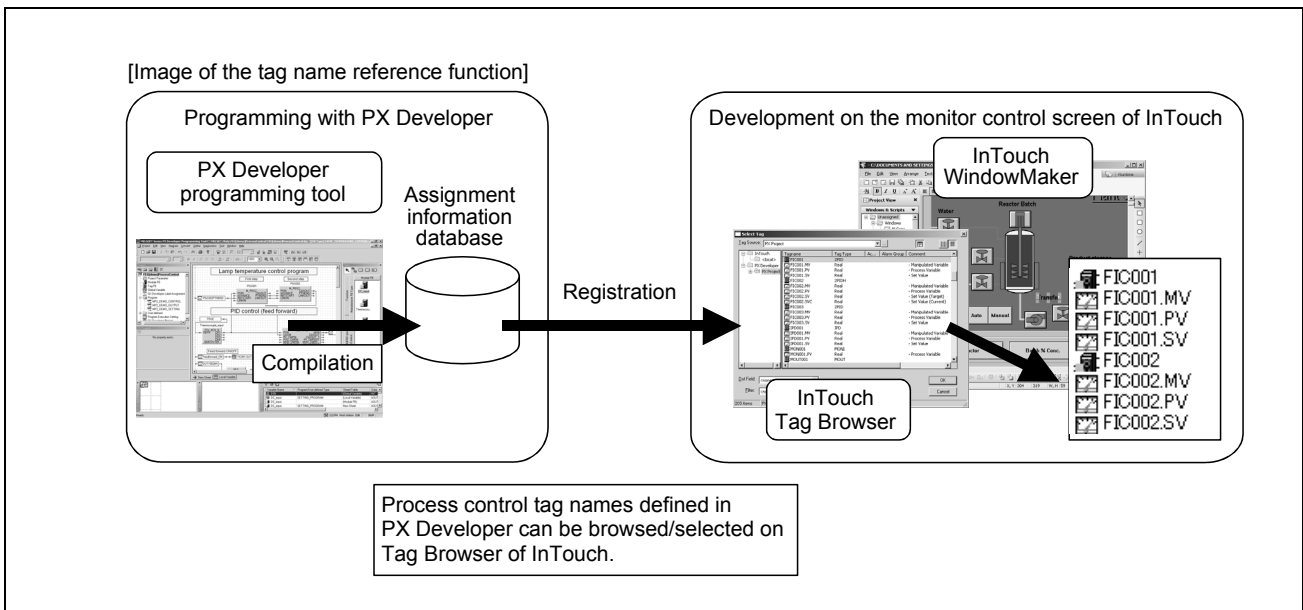


*1: When reading/writing device data except the process control tag with InTouch, a communication driver such as I/O server is required.

(3) Process control tag names can be selected easily from InTouch

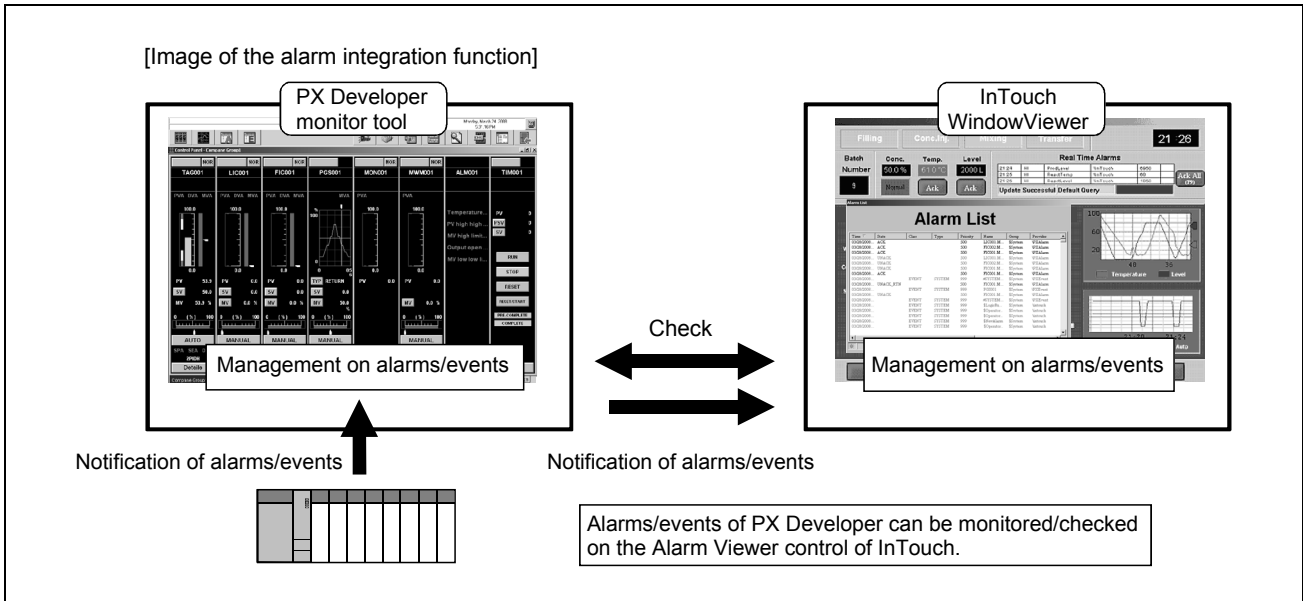
When using the communication function with the aforementioned process control tag name, PX Developer process control tag names can be easily browsed/selected*1 using the tag name reference function.

This function reduces key inputs and typing errors, and improves work efficiency.



(4) Alarms/events of the PX Developer monitor tool can be monitored/checked on InTouch

By using the alarm integration function, alarm/event information of the monitor tool can be displayed on the Alarm Viewer control of InTouch. They can be monitored and checked in the same list with the alarm/event information of InTouch.



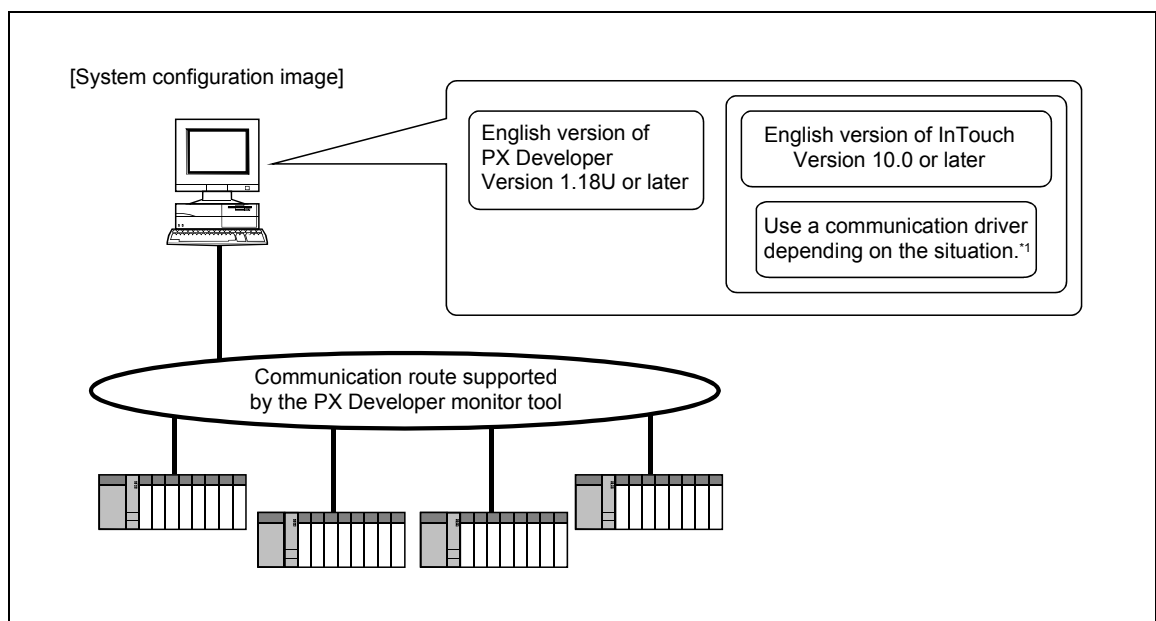
2 SYSTEM CONFIGURATION

2.1 System Configuration

This section explains system configuration when using the interaction function of PX Developer and InTouch.

For communication routes supported by PX Developer, refer to "SYSTEM CONFIGURATION" in "PX Developer Operating Manual (Monitor Tool)".

To use the interaction function, install PX Developer and InTouch to the same personal computer. If they are installed to different personal computers, the interaction function cannot be used.



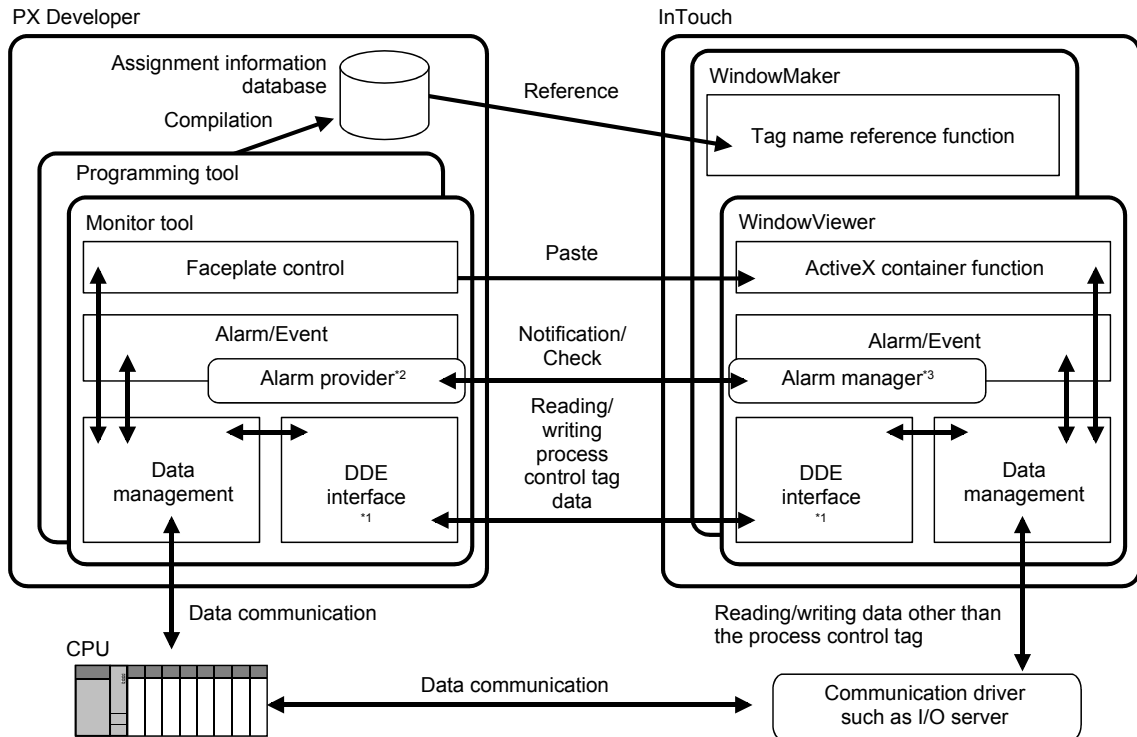
*1: For reading/writing device data other than process control tags in InTouch, a communication driver such as an I/O server is required.

POINT

In the server/client monitoring system configuration, the alarm integration function is not available.

2.2 Software Configuration

This section explains software configuration when using the interaction function of PX Developer and InTouch.



*1: InTouch reads/writes process control tag data in the monitor tool through DDE interface.

*2: The alarm provider is an alarm function supplied by Invensys Systems, Inc.

This function enables the monitor tool to notify/check alarms and events to the alarm manager of InTouch, and to receive a confirmation request for corresponding alarm from the Alarm Viewer control of InTouch.

*3: The alarm manager is an application that manages information on alarms and events to the alarm system of InTouch.

2.3 Operating Environment

PX Developer Version 1.18U or later and InTouch Version 10.0 or later are required for interacting themselves.

For the operating environment of PX Developer, refer to "Operating Environment" in "PX Developer Operating Manual (Monitor Tool)".

For the operating environment of InTouch, refer to "ReadMe" in InTouch installer.

The following are the applicable system software (operating system) to operate this interaction function.

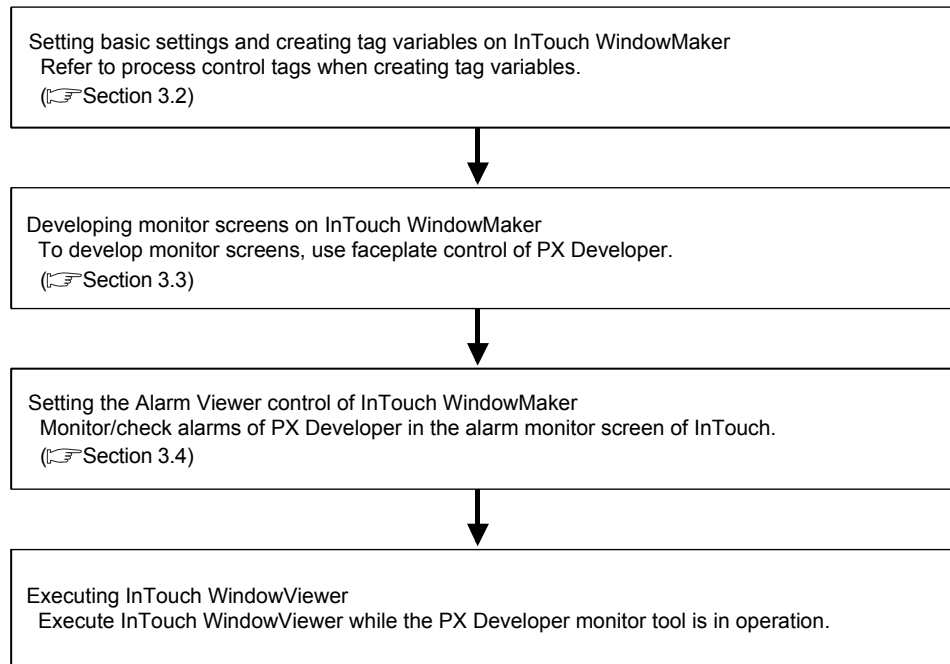
- Microsoft® Windows XP® Professional Operating System
- Microsoft® Windows Vista® Business Operating System
- Microsoft® Windows Vista® Ultimate Operating System
- Microsoft® Windows Vista® Enterprise Operating System
- Microsoft® Windows® 7 Professional Operating System

POINT
 To execute InTouch in Windows Vista®, disable the user account control (UAC) in Windows Vista®.

3 BASIC OPERATION

3.1 Operating Procedures for Monitoring on InTouch

This section explains procedures for monitoring on InTouch.



POINT

- To monitor on InTouch WindowViewer using the faceplate control, communications using process control tag names, or alarm integration function, execute InTouch WindowViewer after starting the monitor tool.
- For basic operations of InTouch, refer to the manual of InTouch.

3.2 Operation to Communicate using PX Developer Process Control Tag Names in InTouch



PURPOSE

Register tag variables using process control tag names defined in PX Developer and read/write the process control tag data of the monitor tool in InTouch.



Setting on InTouch WindowMaker

Procedure 1) Register an access name for communicating with the PX Developer monitor tool. (☞ Section 3.2.1)*1



Procedure 2) Create tag variables. (☞ Section 3.2.2)



Procedure 3) Define a tag source in the Tag Browser. (☞ Section 3.2.2)*1



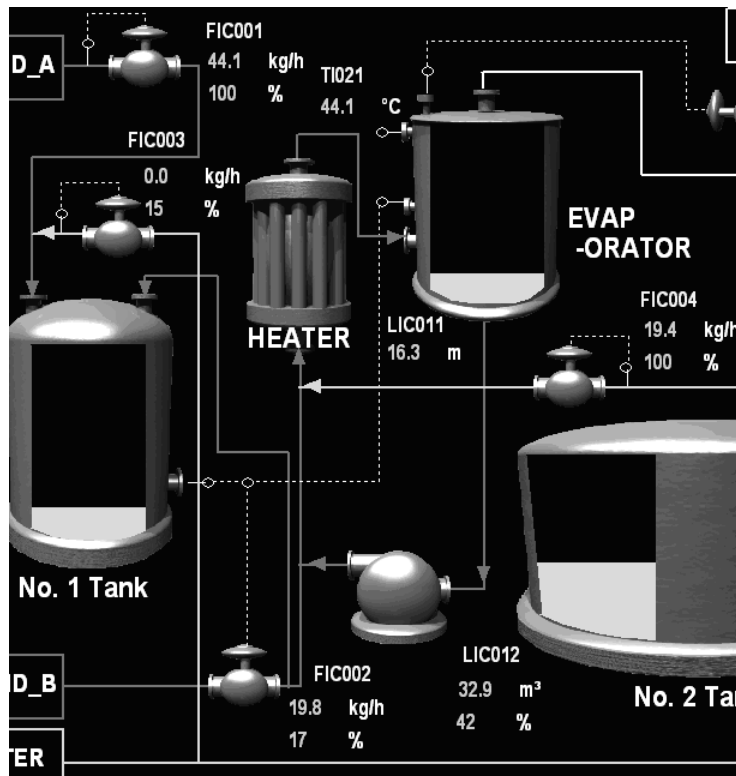
Procedure 4) Refer/select tag names on the Tag Browser. (☞ Section 3.2.3)

*1: Required only when using InTouch application for the first time.



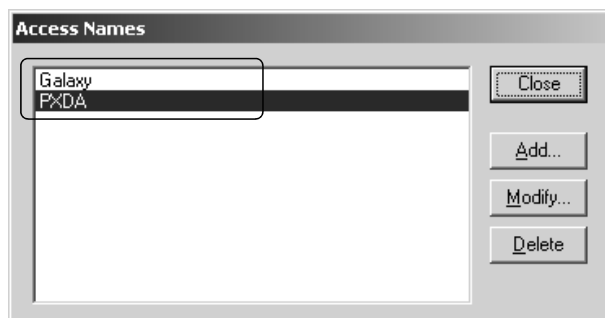
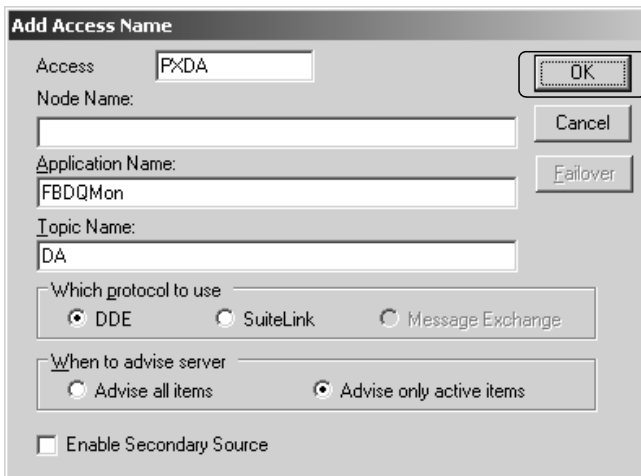
Execution on InTouch WindowViewer

The process control tag data can be read/written by executing WindowViewer after starting the monitor tool.



<Example of InTouch WindowViewer monitor screen>

3.2.1 Registering access names



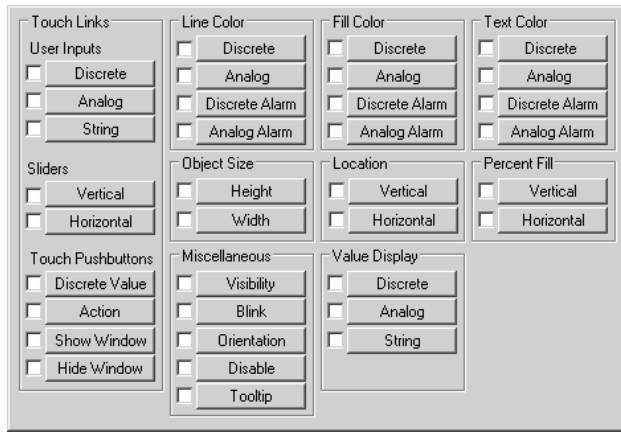
1. Click [Special] → [Access Names...] from the menu of WindowMaker.
2. The Access Names dialog box is displayed. Click the "Add..." button.

3. The Add Access Name dialog box is displayed. Set the following items and click the "OK" button.
 - Access : Any specific name
 - Node Name : Blank
 - Application Name : FBDQMon
 - Topic Name : DA
 - Which protocol to use : DDE
 - When to advise server : Advise only active items
 - Enable Secondary Source : Without a check (Check this item when using the backup server.)

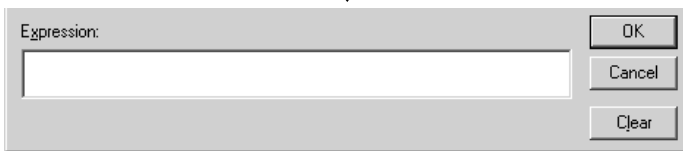
4. Check if the set access name has been added to the Access Names dialog box.

3.2.2 Defining tag source

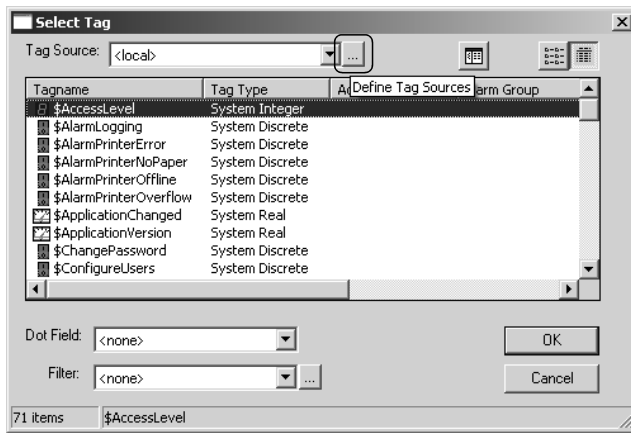
(1) Creating tag variables and setting tag sources



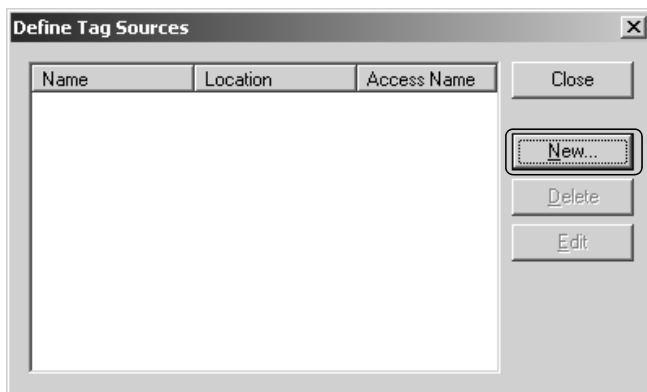
1. Create an object on Window Maker.
The Animation Links dialog box is displayed as shown on the left by double-clicking the object or selecting [Animation Links] from the menu displayed by right-clicking the object. Click a tag variable type to be assigned for the object.



2. The tag variable setting screen is displayed. Double-click the input field of [Expression].



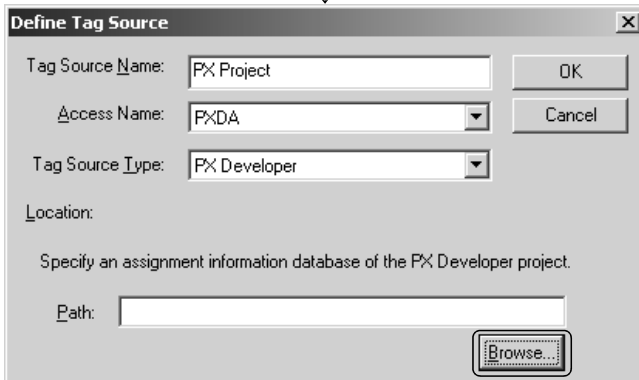
3. The Tag Browser is displayed. Click the "Define Tag Sources" button (...).



4. The Define Tag Sources dialog box is displayed. Click the "New..." button.

(To the next page)

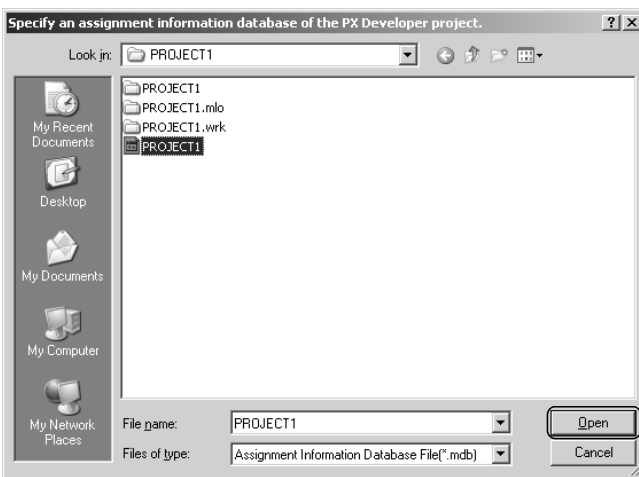
(From the previous page)



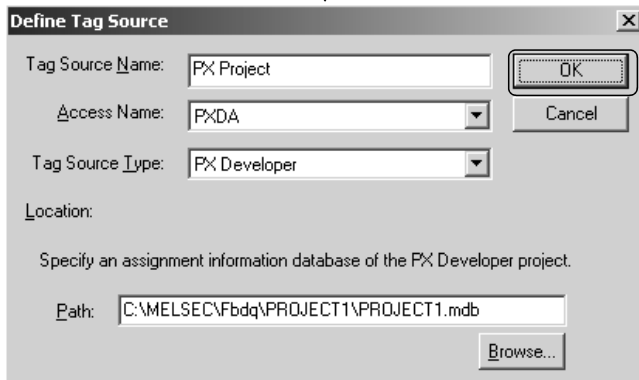
5. The Define Tag Source dialog box is displayed. Set the following items and click the "Browse..." button.

- Tag Source Name : Any specific name
- Access Name : Set access name (Section 3.2.1)
- Tag Source Type : PX Developer

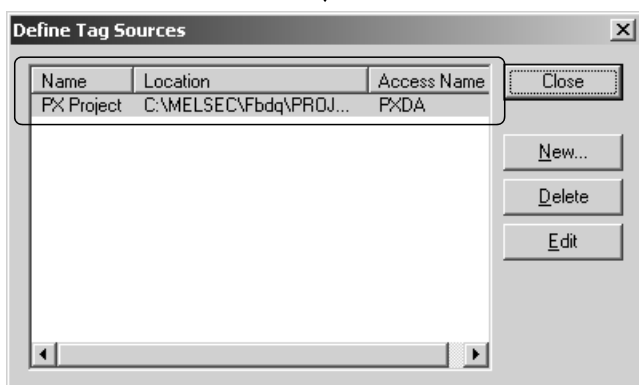
* For details of the setting screen, refer to (2) in this section.



6. Select assignment information database of PX Developer project to be referred (project name with .mdb extension), and click the "Open" button.



7. After completing the settings, the path for the selected project is stored to the Path field. Click the "OK" button to close the Define Tag Source dialog box.

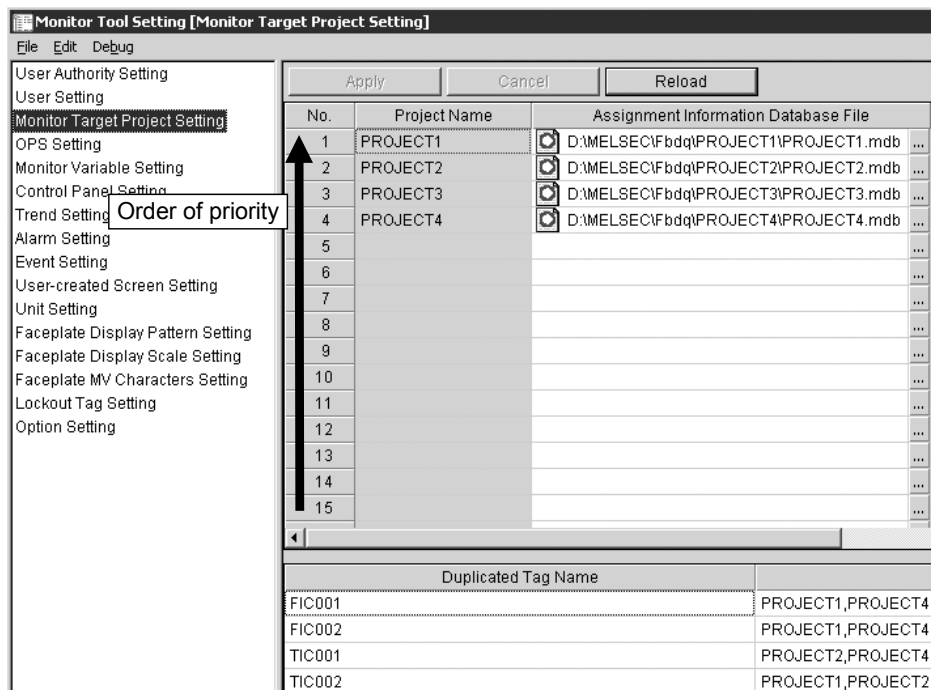


8. Close the screen after checking that the set tag source is displayed on the Define Tag Sources dialog box.

POINT

- When registering a tag variable using the process control tag declared with the same process control tag name with multiple projects with InTouch, the process control tag data of the highest priority *1 project are read/written. Whether the same process control tag name has been declared or not can be checked on the Monitor Target Project Setting screen of the monitor tool.

*1: The more the number at [No.] field on the Monitor Target Project Setting screen is small, the more the priority of its project becomes high.



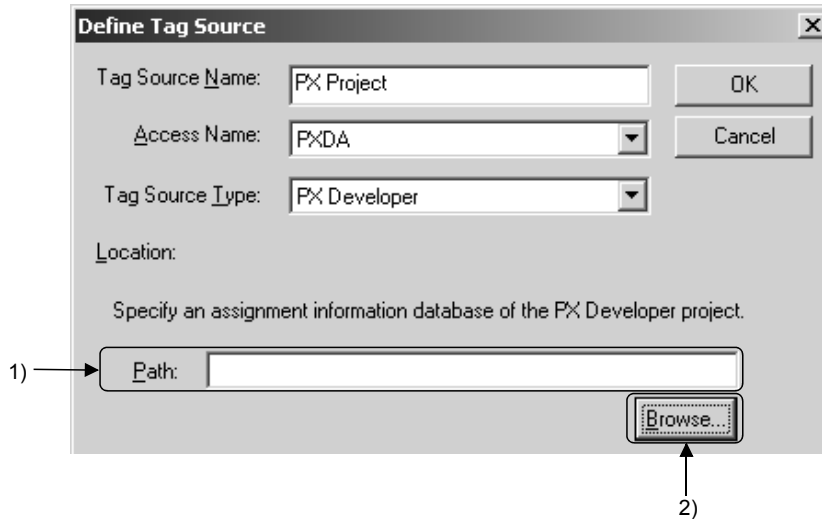
<Example of Monitor Target Project Setting screen of PX Developer monitor tool>

- The assignment information database created with PX Developer Version 1.02C or later can be used for the tag name reference function. If the database is created Version 1.01B or earlier, convert it with the programming tool Version 1.02C or later. For details of the conversion, refer to "Precautions for the assignment information database" in "PX Developer Operating Manual (Programming Tool)"
- To uninstall PX Developer, delete tag sources for the PX Developer project reference beforehand.

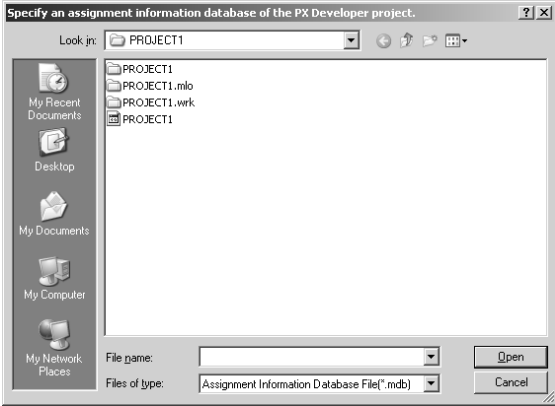
(2) Specifications of the Define Tag Source screen

The following shows display items and setting items when "PX Developer" is selected for [Tag Source Type] on the Define Tag Source dialog box of InTouch.

 **DISPLAY/SETTING SCREEN**

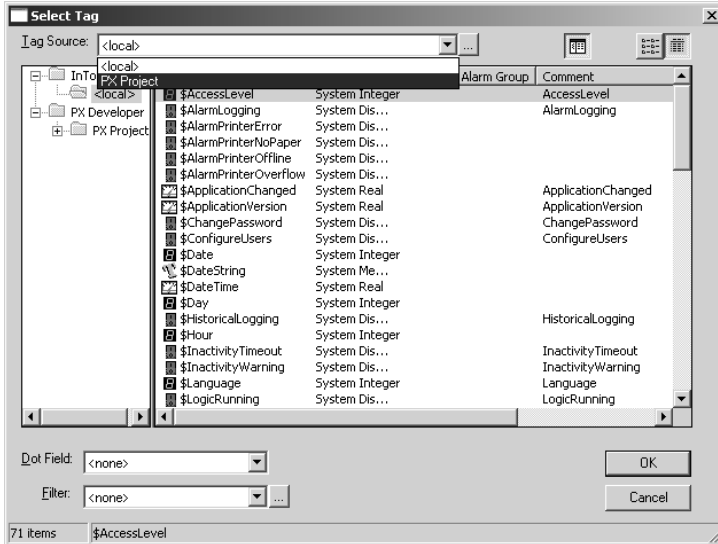


 **DISPLAY/SETTING DATA**

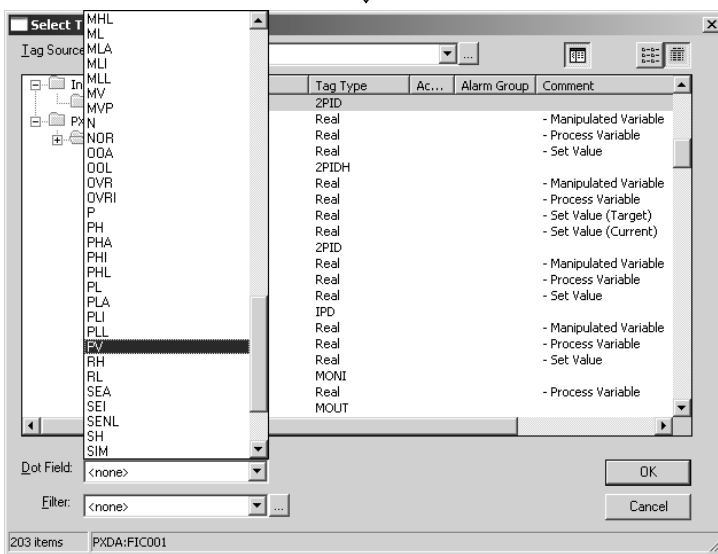
No.	Item	Description	Input restriction
1)	Path edit box	Input an absolute path to the assignment information database of a PX Developer project to be referred (path to the target mdb file of the project).The specified assignment information database is stored as a tag source.	Maximum 260 characters can be input.
2)	"Browse..." button	Displays a dialog box for selecting a file.  The specified path in the dialog box is displayed at 1).	—

3.2.3 Referring to and selecting tag names

 OPERATION



1. Select a set tag source from a list in [Tag Source] of the Tag Browser.



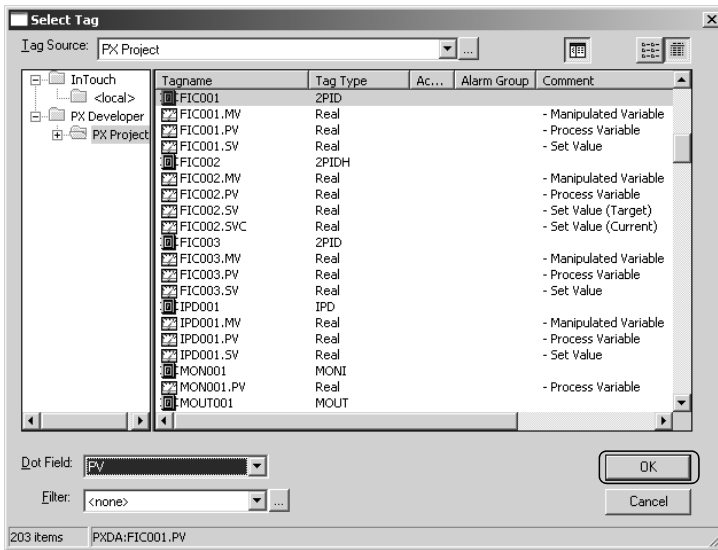
2. The process control tags and their main tag items (Appendix 2) are displayed in the list.^{*1}

To access a tag item except for the main tag items, select a process control tag name, and then select a tag item corresponding to the process control tag type from [Dot Field]. (Appendix 1)

↓
(To the next page)

*1: For a comment of main tag item, explanation on the tag item is displayed after "- " (a hyphen and a space).

(From the previous page)



3. Select a tag item to be registered and click the "OK" button.



4. A tag name is automatically created at [Expression] of the tag variable setting screen. A format of the created tag name is "Access name:Process control tag name.Tag item".*1

*1: The reference method is referred to as remote reference. For details, refer to the manual of InTouch.

POINT

- If changing the tag FB information of PX Developer project and recompile it after selecting a tag source and opening the list on the Tag Browser of InTouch WindowMaker, the information is not reflected on the screen. To refer to the latest tag FB, select a tag source again.
- If the tag FB variable name has been set other than alphanumeric characters or underscore (_), InTouch cannot recognize the name. (The corresponding tag is not displayed in the tag list of the Tag Browser.)

3.3 Operation to Use Faceplates of PX Developer in InTouch



PURPOSE

Use the faceplate control of PX Developer for developing process control monitor screens on InTouch to reduce development time.



Setting on InTouch WindowMaker

Procedure 1) Install ActiveX control. (☞ Section 3.3.1) *1



Procedure 2) Check that the installation is successful on the wizard menu. (☞ Section 3.3.2)



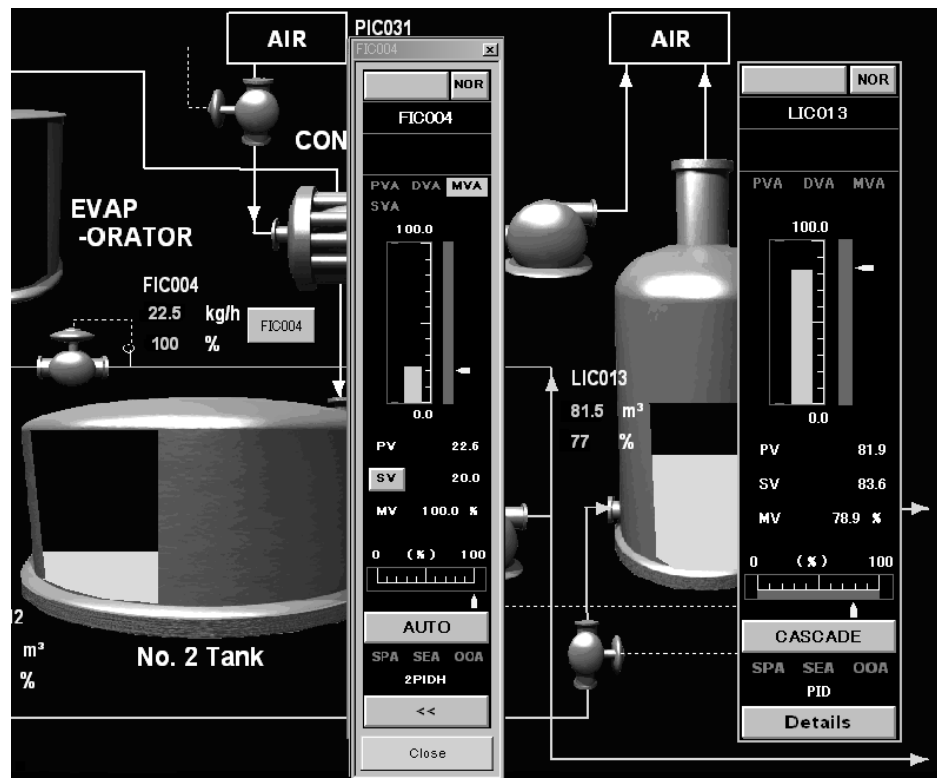
Procedure 3) Paste a faceplate control and configure its setting. (☞ Section 3.3.3)

*1: Required only when using InTouch application for the first time.



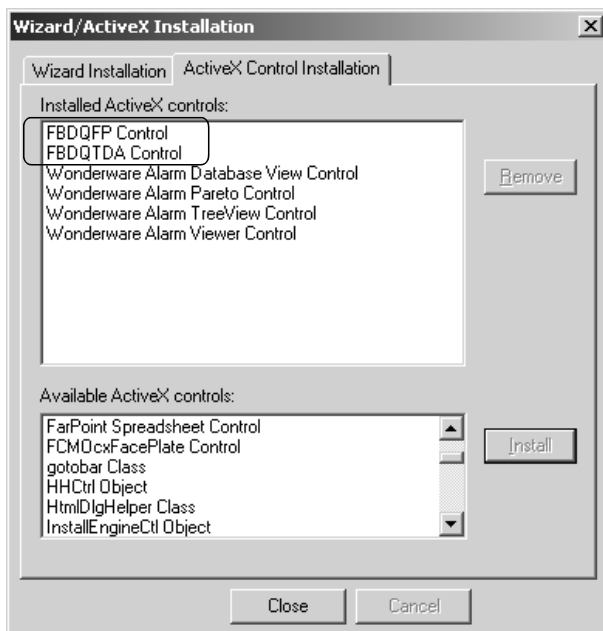
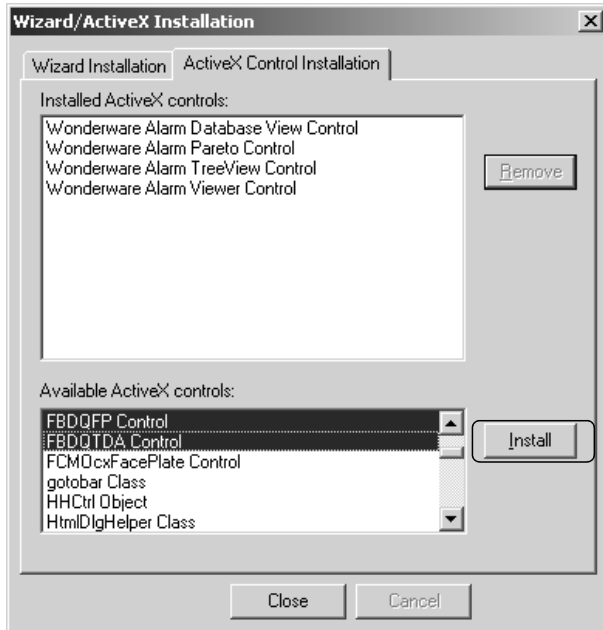
Execution on InTouch WindowViewer

By executing WindowViewer after starting the monitor tool, faceplates can be used, the process control data can be monitored, and the process control parameter can be tuned.



<Example of faceplate control screen of InTouch WindowViewer>

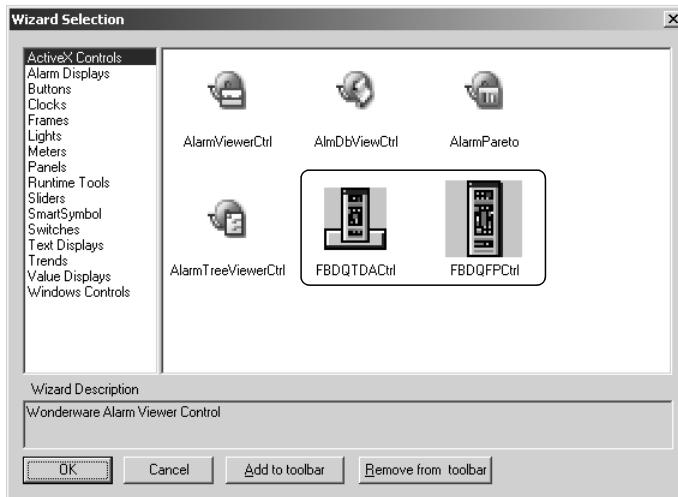
3.3.1 Installing ActiveX control




1. Select [Special] → [Configure] → [Wizard/ActiveX Installation...] from the WindowMaker menu.
2. The Wizard/ActiveX Installation dialog box is displayed. Click the <<ActiveX Control Installation>> tab.
3. Select "FBDQFP Control" and "FBDQTDA Control" from the list in [Available ActiveX controls] and click the "Install" button.

4. After the installation, "FBDQFP Control" and "FBDQTDA Control" are added to the list in [Installed ActiveX controls].

3.3.2 Checking installation



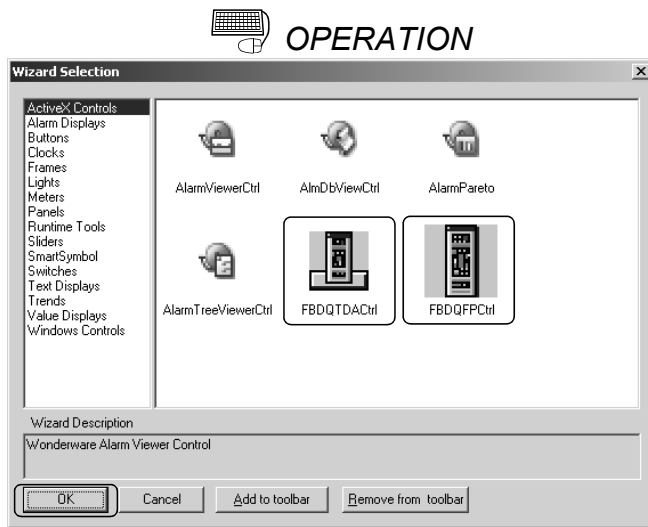
1. Click the "Wizard" button () of WindowMaker.
2. The Wizard Selection dialog box is displayed. Check that "FBDQTDACtrl" and "FBDQFFCtrl" icons are added to the list in [ActiveX Controls].

POINT

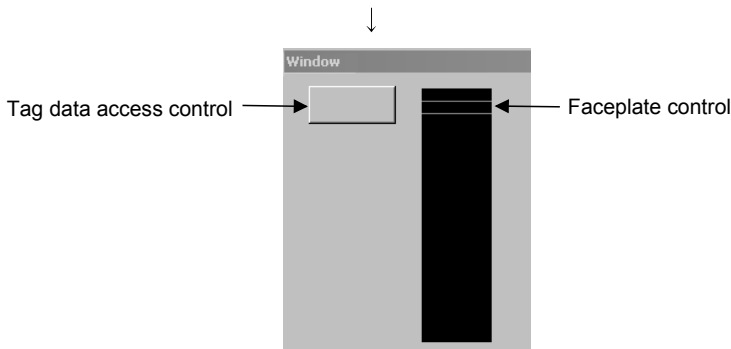
- "FBDQFFCtrl" can be pasted on the InTouch screen directly using the faceplate control.
- "FBDQTDACtrl" can read/write the process control tag data set to the tag data access control. Clicking the button can also display the pop-up faceplate screen.


For details of each control, refer to "ActiveX control" of "PX Developer Operating Manual (Monitor Tool)".

3.3.3 Setting/pasting faceplate control

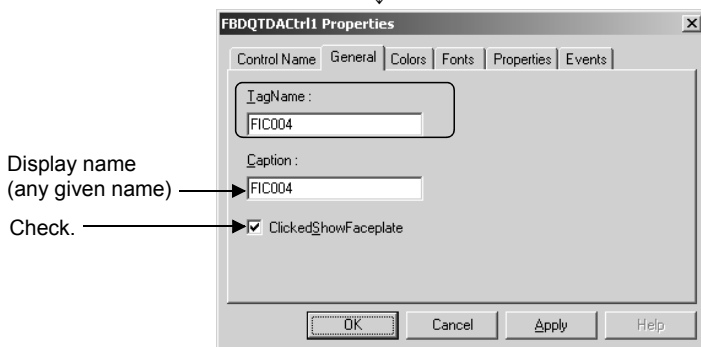


1. Select "FBDQTDACtrl" or "FBDQFFCtrl" from the list in [ActiveX Controls] of the Wizard Selection dialog box and click the "OK" button.



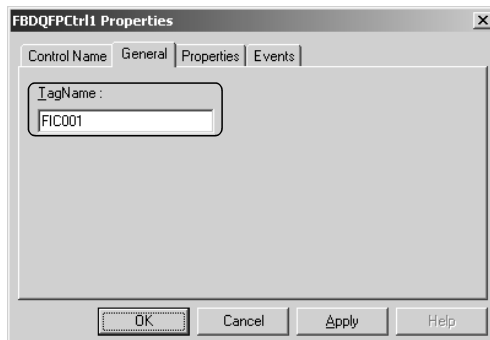
2. The cursor changes to  on InTouch. Click a position where the faceplate control is to be pasted and adjust the control size by dragging the icon.
3. Double-click the control to display the property screen.

<Example of InTouch WindowMaker screen>



4. Click the <<General>> tab and set the process control tag name of PX Developer for [TagName].

<Example of property screen of the tag data access control>



<Example of the property screen of the faceplate control>

POINT

If InTouch application is edited, overwritten, and saved after PX Developer is uninstalled, contents of the faceplate control and tag data access control originally set (such as tag names) are deleted when PX Developer is reinstalled.

3.4 Operation to Display PX Developer Alarm Information on InTouch Alarm Viewer control



PURPOSE

Display alarm/event information of the monitor tool on the InTouch Alarm Viewer control and to monitor/check them in the same list with alarm/event information of InTouch.



OVERVIEW OF ALARM

[Summary alarm and historical alarm of InTouch]

<Summary alarm>

Summary alarm is an alarm list on which records of current alarms and unchecked alarms are displayed. On the summary alarm, alarms can be checked by appending comments.

<Historical alarm>

Historical alarm is an alarm list on which records of occurred/recovered/checked alarms and occurred events are displayed. On the historical alarm, the alarm check operation is unavailable.



Setting on InTouch WindowMaker

Procedure 1) Paste the Alarm Viewer control. (☞ Section 3.4.1)



Procedure 2) Set the Alarm Query of the Alarm Viewer control. (☞ Section 3.4.2)



Execution on InTouch WindowViewer

Alarms of PX Developer can be monitored/checked on the InTouch Alarm Viewer control by executing InTouch WindowViewer after starting the monitor tool.

When the Alarm Viewer control type is summary alarm, only the alarm information can be monitored. When the Alarm Viewer control type is historical alarm, alarm information and event information can be monitored.

POINT
<ul style="list-style-type: none"> Alarms and events can be stored to the historical alarm buffer of InTouch, secured for PX Developer, up to 6,000 and 2,000, respectively. When capacity of the historical alarm buffer is full, stored alarm/event information is deleted from the oldest to store the latest information. Alarm Viewer control of InTouch displays only alarm/event information of PX Developer occurred while the monitor tool is in operation. Therefore, histories of alarms/events occurred before starting the monitor tool is not reflected to alarms on InTouch. After exiting the monitor tool, the alarm/event information on PX Developer displayed on the Alarm Viewer control of InTouch are all deleted from the summary alarm and historical alarm. To display the alarm information on InTouch even after exiting the monitor tool, logging alarms with AlarmPrinter^{*1} or accumulating the database with Alarm DB Logger Manager^{*1} beforehand is necessary. In the server/client monitoring system configuration, the alarm integration function is not available. <p>^{*1}: For details, refer to the manual of InTouch.</p>

The following shows interlock operation of alarms and events.
 For operation methods of InTouch, refer to the manual of InTouch.

(1) Operating alarm monitor screen

The following are an Alarm List screen of the monitor tool and a summary alarm screen of InTouch.

No.	Confirm	Tag	Alarm Contents	Occurrence Date	Recovered Date
1	<input checked="" type="checkbox"/>	LIC001	PHA	3/28/2008 1:49:36 PM	
2	<input type="checkbox"/>	LIC002	PHA	3/28/2008 1:49:01 PM	3/28/2008 1:49:07 PM
3	<input type="checkbox"/>	LIC002	MHA	3/28/2008 1:48:47 PM	3/28/2008 1:48:52 PM
4	<input type="checkbox"/>	LIC001	MHA	3/28/2008 12:59:25 PM	3/28/2008 1:28:07 PM
5	<input type="checkbox"/>	#SYSTEM	Communication Open Error : PROJECT1 Specified connection ta	3/28/2008 12:58:24 PM	3/28/2008 12:58:31 PM
6	<input type="checkbox"/>	#SYSTEM	Communication Reading Error : PROJECT1 Specified connector	3/28/2008 12:58:22 PM	3/28/2008 12:58:31 PM
7	<input type="checkbox"/>	#SYSTEM	Project ID Code Inconsistency : PROJECT1	3/28/2008 12:58:10 PM	3/28/2008 12:58:31 PM

<Example of Alarm List screen of PX Developer monitor tool>

State	Name	Time	Priority	Value
UNACK	LIC002.PHA Tank 2 water level	03/28/2008 01:49:36 PM	500	81.5
UNACK_RTN	LIC002.PHA Tank 2 water level	03/28/2008 01:49:07 PM	500	91.0
UNACK_RTN	LIC002.MHA Tank 2 water level	03/28/2008 01:48:52 PM	500	100.0%
UNACK_RTN	LIC001.MHA Tank 1 water level	03/28/2008 01:28:07 PM	500	100.0%
UNACK_RTN	#SYSTEM Communication Open Error : PROJECT1 Specified connection target	03/28/2008 12:58:31 PM	100	
UNACK_RTN	#SYSTEM Communication Reading Error : PROJECT1 Specified connection target	03/28/2008 12:58:31 PM	100	
UNACK_RTN	#SYSTEM Project ID Code Inconsistency : PROJECT1	03/28/2008 12:58:31 PM	100	

<Example of summary alarm screen of InTouch WindowViewer>

InTouch receives alarm notification/alarm check notification from the monitor tool and displays them.

However, system alarms of InTouch itself (SCADA interaction function error) are not notified to InTouch.

[Operation from the monitor tool that interlocks with the alarms of InTouch]

- Executing "Delete Recovered Alarms" deletes the corresponding alarms of InTouch.
- Executing "Confirm All" checks all corresponding alarms of InTouch.
- Checking "Confirm" check box checks corresponding alarm of InTouch.
- Clearing "Confirm" check box of ongoing alarm regenerates corresponding alarm of InTouch.
- When alarms exceed 2,000 on the Alarm List screen of the monitor tool, old alarms are deleted. If corresponding alarm of InTouch exists in the summary alarm, the alarm is also deleted.

[Operation from InTouch that interlocks with the monitor tool]

- Checking alarms on InTouch checks "Confirm" check box for corresponding alarm on the Alarm List screen of the monitor tool.

POINT

- For correspondence table for alarm items notified by the monitor tool to InTouch, refer to Appendix 3.1.
- When checking the alarm in the monitor tool with InTouch, the user who operates the monitor tool is required with the authority of operation for checking the alarm/event.

(2) Operating event monitor screen

The following are an Event List screen of the monitor tool and a historical alarm screen of InTouch.

On InTouch, alarms and events are displayed on the historical alarm screen.

No.	Confirm	Tag	Tag Comment	Event Message	Occurrence Date	Status	Set Value	User
1		LIC002	Tank 2 water level	SV	3/28/2008 3:15:38 PM		81.8	admin
2		LIC002	Tank 2 water level	SV	3/28/2008 3:15:35 PM		81.9	admin
3		TIC002	Heat pump 2 temperature		3/28/2008 3:14:22 PM	SIM		
4		TIC002	Heat pump 2 temperature		3/28/2008 3:14:19 PM		SIM	admin
5		TIC001	Heat pump 1 temperature		3/28/2008 3:14:16 PM	AUT		
6		TIC001	Heat pump 1 temperature		3/28/2008 3:14:13 PM		AUT	admin
7		TIC001	Heat pump 1 temperature		3/28/2008 3:14:10 PM	SIM		
8		TIC001	Heat pump 1 temperature	SV	3/28/2008 3:14:04 PM		50.0	admin
9		TIC001	Heat pump 1 temperature		3/28/2008 3:14:01 PM	SIM		admin
10		LIC003	Tank 3 water level	SV	3/28/2008 3:13:58 PM		80.1	admin
11		LIC003	Tank 3 water level	SV	3/28/2008 3:13:55 PM		80.0	admin

<Example of Event List screen of PX Developer monitor tool>

State	Name	Time	Priority	Operator
	LIC002.SV Tank 2 water level	03/28/2008 03:15:38 PM	81.8	admin
	LIC002.SV Tank 2 water level	03/28/2008 03:15:35 PM	81.9	admin
	TIC002 Heat pump 2 temperature	03/28/2008 03:14:22 PM	SIM	
	TIC002 Heat pump 2 temperature	03/28/2008 03:14:19 PM	SIM	admin
	TIC001 Heat pump 1 temperature	03/28/2008 03:14:16 PM	AUT	
	TIC001 Heat pump 1 temperature	03/28/2008 03:14:13 PM	AUT	admin
	TIC001 Heat pump 1 temperature	03/28/2008 03:14:10 PM	SIM	
	TIC001.SV Heat pump 1 temperature	03/28/2008 03:14:04 PM	50.0	admin
	TIC001 Heat pump 1 temperature	03/28/2008 03:14:01 PM	SIM	admin
	LIC003.SV Tank 3 water level	03/28/2008 03:13:58 PM	80.1	admin
	LIC003.SV Tank 3 water level	03/28/2008 03:13:55 PM	80.0	admin
	LIC003 Tank 3 water level	03/28/2008 03:13:52 PM	SIM	admin

<Example of historical alarm screen of InTouch WindowViewer>

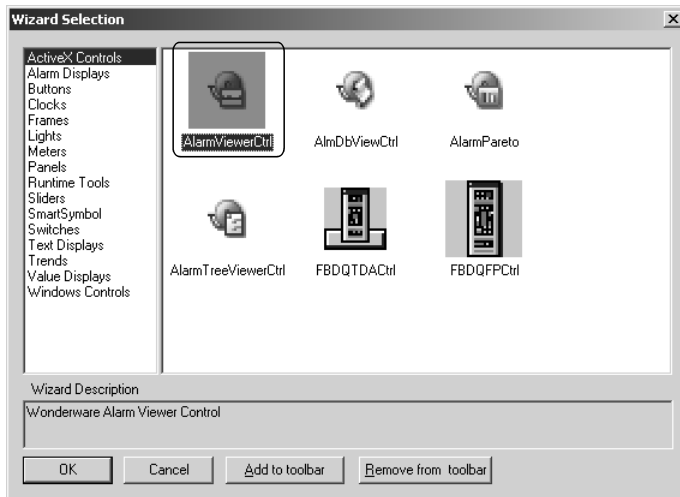
InTouch receives event notifications from the monitor tool and displays them.

POINT

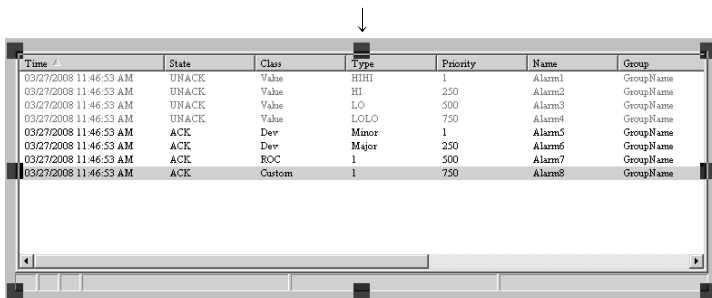
- For correspondence table for event items notified by the monitor tool to InTouch, refer to Appendix 3.2.
- A check operation can be performed on events of the message tag from the Event List screen of the monitor tool. However, events of the message tag are not displayed on the historical alarm of InTouch for a check operation.

3.4.1 Pasting Alarm Viewer control


 OPERATION



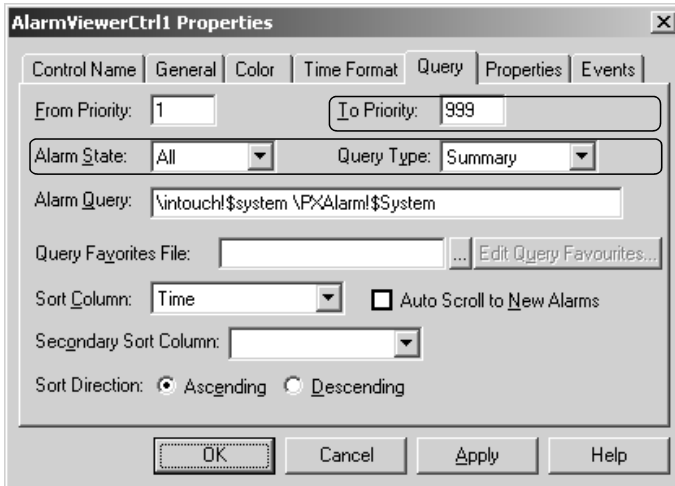
1. Click the "Wizard" button () of WindowMaker.
2. The Wizard Selection dialog box is displayed. Select "AlarmViewerCtrl" from the list in [ActiveX Controls] and click the "OK" button.



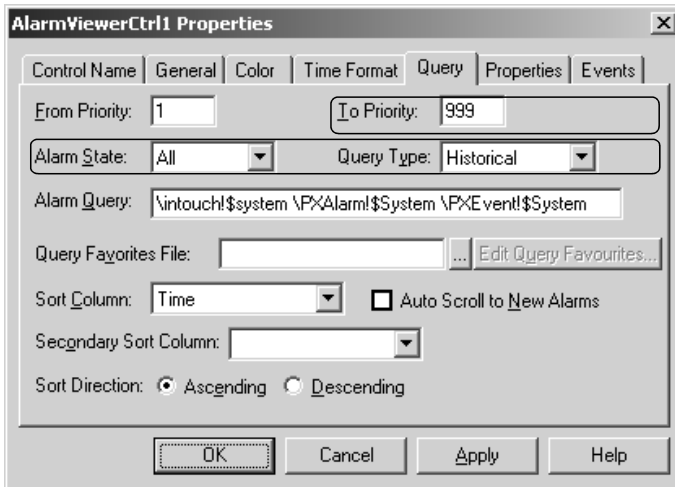
<Example of InTouch WindowMaker screen>

3. The cursor changes to  on InTouch. Click a position where the faceplate control is to be pasted and adjust the control size by dragging the icon.

3.4.2 Setting Alarm Query



<Setting example of summary alarm>



<Setting example of historical alarm>

1. Double-click the Alarm Viewer control to display the property screen.
2. Click the <<Query>> tab, input a space after "\intouch!\$system", and input "\PXAlarm!\$System" to interact the alarm information or "\PXEvent!\$System" to interact the event information in the [Alarm Query] field. Inputting both of them allows alarm/event information to be integrated. However, the event information is stored only to the historical alarm.

Integrated contents	Added alarm query	Valid query type
Alarm	\PXAlarm!\$System	Both summary and history
Event	\PXEvent!\$System	History only

POINT

- To register multiple alarm query items, separate each item with a space.
- The alarm query is not case-sensitive.
- By setting alarm query in the same way for "Distributed Alarm", included in WindowMaker wizard, the alarm integration function can be used. For details, refer to the manual of InTouch.

4 TROUBLESHOOTING

(1) Troubleshooting related to the communication function regarding process control tag names

This section explains troubleshooting for failures possibly occur in relation to the communication function regarding process control tag names.

Trouble	Cause/corrective action	Reference
<p>While WindowViewer is in operation, the monitor data remains 0.</p> <hr/> <p>Although the process control tag data in PX Developer are changed while WindowViewer is in operation, the monitor data do not change.</p>	<p>The following are the possible factors.</p> <ul style="list-style-type: none"> • "Expression" may not be set correctly in InTouch. • The monitor tool may not be started. • The user who is operating the monitor tool does not have the authority of operation for changing the tag data items. <p>Check the following and make correct setting.</p> <ul style="list-style-type: none"> • Check if a format of "Expression" is "Access name:Process control tag name.Tag item". • Check if the access name is set correctly. • Check if the process control tag name exists in the target project of the monitor tool. • Check if the monitor tool is in operation. • If the tag variable is changed in WindowMaker while WindowViewer is in operation, restart WindowViewer. • Change to a user who has the authority of operation for changing the process control tag data items in the monitor tool. <p>For cases other than above, refer to "Error list" in "ActiveX control", "Setting Tagname property", and "Calling or Setting Tagname property" of "PX Developer Operating Manual (Monitor Tool)".</p>	<p>Section 3.2</p>

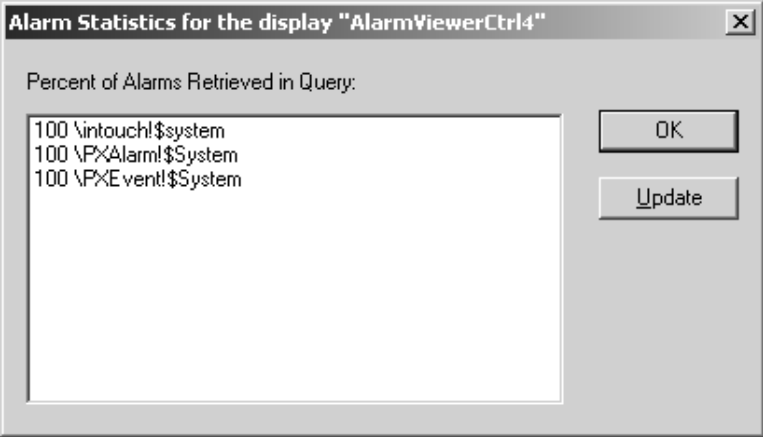


(2) Troubleshooting related to the incorporation function of faceplate control

For troubleshooting for failures possibly occur in relation to the incorporation function of faceplate control, refer to "Error list" in "ActiveX control" section of "PX Developer Operating Manual (Monitor Tool)".

(3) Troubleshooting related to alarm integration function

This section explains troubleshooting for failures possibly occur in relation to the alarm integration function.





Trouble	Cause/corrective action	Reference
<p>4</p> <p>While WindowViewer is in operation, alarms of the monitor tool are not displayed on the Alarm Viewer control of InTouch.</p>	<p>The monitor tool may not be executed or the Alarm Query may not be set correctly.</p> <p>Check the following.</p> <p>Right-click on the Alarm Viewer control of WindowViewer and check if the Alarm Query is set as shown below in the [Stats] menu.</p> <p>When the setting is correct and the execution rate of the Alarm Query (the number is displayed at the area displayed as 100 on the screen below) is 0, check if the monitor tool is being activated.</p>  <p><Alarm Statistics screen of InTouch WindowViewer></p>	<p>Section 3.4</p>
<p>While WindowViewer is in operation, executing alarm check of the monitor tool with InTouch does not reflect.</p>	<p>The user who is operating the monitor tool may not have the authority of operation for checking the alarm/event. Execute the following setting.</p> <p>Change to a user who has the authority of operation for checking the alarm/event in the monitor tool.</p>	<p>Section 3.4</p>

APPENDIX

Appendix 1 Details of Dot Field Name in the Tag Name Reference Function

For lists of the tag items of process control tag that can be specified on the Tag Browser (tag item that can be specified on the Dot Field when the process control tag is selected), refer to "List of Various Tag Type/Tag Data" in "PX Developer Programming Manual".

The following table shows the data types and icons in InTouch corresponding to the data types of each tag item in PX Developer.

Data type in PX Developer	Data type in InTouch	Icon
BOOL	Discrete	
INT, DINT, WORD, DWORD	Integer	
REAL	Real	
Tag FB	—	

Appendix 2 Main Tag Items

Main tag items of process control tag displayed on the Tag Browser is the tag items which perform the current value collection and event notification.

The following table shows the tag items which perform current value collection.

Tag FB name	Current value collection tag		Tag FB name	Current value collection tag	
PID, 2PID, PIDP, SPI, IPD, BPI, R, ONF2, ONF3	PV	Process variable	MWM	PV	Process variable
	MV	Manipulated variable		MV	Manipulated variable
	SV	Setting value		PV	Process variable
2PIDH, SWM, PFC_SF, PFC_SS, PFC_INT	PV	Process variable	SEL	MV	Manipulated variable
	MV	Manipulated variable		SLNO	Selection No.
	SVC	Setting value (current)		PV	Process variable
	SV	Setting value (target)	BC	SV1	Setting value 1
PGS	MV	Manipulated variable		SV2	Setting value 2
	SV	Setting value		SV	Setting value
	TYP	Operation type	PSUM	PV	Process variable
PGS2	SV	Setting value	NREV, REV, MVAL1, MVAL2, PB	DIM	Monitor input buffer
	STC	Executing step No.		PV	Process variable
	T	Time in the step	TIMER1, TIMER2, COUNT1, COUNT2	PSV	Setting value
	PV	Process variable		SV	Setting value
	TYP	Operation type		DIM	Monitor input buffer
	SV0C	Start point (current)			
MOUT	MV	Manipulated variable	ALM, MSG	No corresponding current value correction tags.	
MONI	PV	Process variable			
PVAL	PV	Motor valve opening	HTCL	MV_HT	Heating manipulated variable
	SVC	Setting value of valve opening (current)		MV_CL	Cooling manipulated variable
	SV	Setting value of valve opening (target)		SV	Setting value
	VOUT	Command signal output status			
	DIM	Monitor input buffer			



The following table shows the tag items which perform event notification.

Tag FB name	Event notification tag		Tag FB name	Event notification tag	
PID, 2PID, NREV, REV, MVAL1, MVAL2, PGS2, HTCL	MODE ^{*1}	Mode	MONI	ALM ^{*1}	Alarm
	ALM ^{*1}	Alarm		CTNO	Lookout tag No.
	CTNO	Lookout tag No.	BC, PSUM, TIMER1, TIMER2, COUNT1, COUNT2	ALM ^{*1}	Alarm
	DIM ^{*1}	Monitor input buffer		CTNO	Lookout tag No.
2PIDH, SWM, PFC_SF, PFC_SS, PFC_INT, PVAL	MODE ^{*1}	Mode	PB	DIM ^{*1}	Monitor input buffer
	ALM ^{*1}	Alarm		MODE ^{*1}	Mode
	ALM2 ^{*1}	Alarm 2		CTNO	Lookout tag No.
	CTNO	Lookout tag No.		DIM ^{*1}	Monitor input buffer
PIDP, SPI, IPD, BPI, R, ONF2, ONF3, MWM, SEL, MOUT, PGS	DIM ^{*1}	Monitor input buffer	ALM	ALM ^{*1}	Alarm
	MODE ^{*1}	Mode	MSG	MSG ^{*1}	Message
	ALM ^{*1}	Alarm			
	CTNO	Lookout tag No.			

*1: This tag item consists of multiple BOOL type variables; however, it is displayed as a BOOL type variable on the Tag Browser.

Appendix 3 Correspondence Table for Items of Monitor Tool and InTouch

Appendix 3.1 Correspondence table for alarm items

The following is a correspondence table for alarm items notified to InTouch by the monitor tool.

In the InTouch alarm screen, a display name, item, and display format can be selected in the Properties of the Alarm Viewer control.

For details, refer to the manual of InTouch.

PX Developer monitor tool		InTouch	
Alarm item	Expression	Alarm item	Expression
Confirm check	ON/OFF	State	ACK/UNACK
Tag	FIC001	Name *2	Format: "Tag.Alarm contents Tag comment"*3 Example) FIC001.MHA Tank 1 water level
Tag Comment	Tank 1 water level		
Alarm Contents *1	MHA		
Occurrence Date	The format depends on the setting of OS.	Time *4	Depends on setting of time format in the Alarm Viewer control.
Recovered Date			
Level	Minor/Major	Priority *5	Minor: 500, major: 100
Measured Value	100%	Value	100%
No correspondence		Provider	\PXAlarm
		Group	\$System
		Limit	Blank
		Class	Blank
		Type	Blank
		Tag Comment	Blank
		Operator	Blank
		Operator Domain	Blank
		Operator Node	Blank
		Operator Full Name	Blank
		Alarm Comment	At alarm check: Check comment
		User1, 2	0
		User3	PX Developer project name

*1: The description corresponds to "Tag Data Item Display of Alarm" on the option setting of the monitor tool is displayed.

*2: "Item Name" is displayed all the time.

*3: If there is no tag comment, the format will be "Tag.Alarm contents".

*4: For summary alarm, occurrence date is displayed during an alarm occurrence and recovered date is displayed after an alarm is recovered. For historical alarm, occurrence and recovery are displayed on another record.

*5: The alarm level of InTouch is expressed by priority from 1 to 999. The more the number is close to 1, the more priority becomes high.

Appendix 3.2 Correspondence table for event items

The following is a correspondence table for event items notified to InTouch by the monitor tool.

In the InTouch alarm screen, a display name, item, and display format can be selected in the Properties of the Alarm Viewer control.

For details, refer to the manual of InTouch.

PX Developer monitor tool		InTouch	
Event item	Expression	Event item	Expression
Confirm check	ON/OFF	No correspondence (State is left blank.)	
Tag	FIC001	Name ^{*2}	Format: "Tag.Event message Tag comment" ^{*3} Example) FIC001.SV Valve flow
Tag Comment	Valve flow		
Event Message ^{*1}	SV		
Occurrence Date	The format depends on the setting of OS.	Time	Depends on setting of time format in the Alarm Viewer control.
Status ^{*1}	CAS	Value ^{*2}	CAS
Set Value ^{*1}	90.0		90.0
User	admin	Operator	admin
No correspondence		Provider	\PXEvent
		Group	\$System
		Limit	Blank
		Class	EVENT
		Type	"OPR/SYS" ^{*4}
		Priority	999
		Tag Comment	Blank
		Operator Domain	Blank
		Operator Node	Blank
		Operator Full Name	Blank
		Alarm Comment	Blank
		User1,2	0
User3	PX Developer project name		

*1: The description corresponds to "Tag Data Item Display of Event" on the option setting of the monitor tool is displayed.

*2: "Item Name" is displayed all the time.

*3: If there is no event message, the format will be "Tag Tag comment".

*4: "OPR" is displayed when the setting is changed by user, and "SYS" is displayed when the status is changed.

Appendix 4 Security of Monitor Tool and InTouch

The mixture of the user authority function of the monitor tool and the security function of InTouch enables to set the restrictions for operation of process control tag on the graphic screen of InTouch.

The access level of user who is logging on is stored on \$AccessLevel system tag. Using \$AccessLevel system tag in conditional statement of [Disable] and [Visibility] of object enables to set the operation restrictions.

For details of the security function of InTouch, refer to the manual of InTouch.

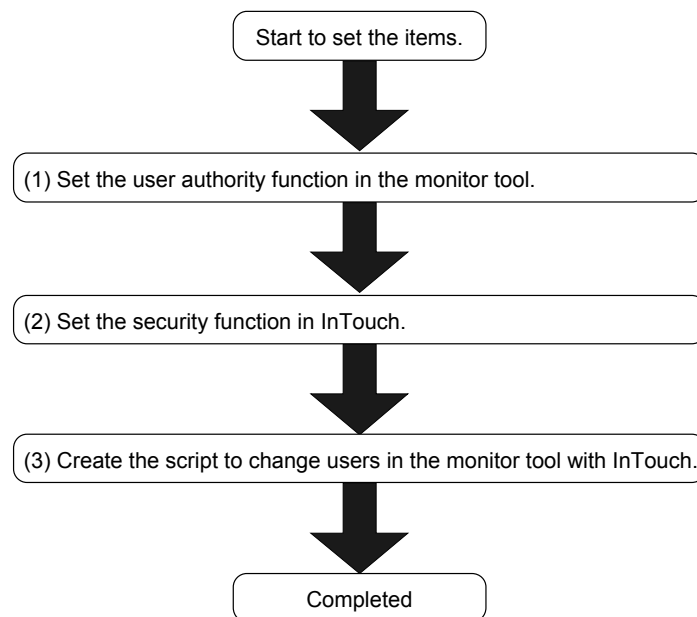
Appendix 4.1 Operating environment for using security of monitor tool and InTouch

The following describes the operating environment for using security of the monitor tool and InTouch.

Application	Version
PX Developer	Version 1.31H or later

Appendix 4.2 Setting procedure for using security of monitor tool and InTouch

The following diagram describes the setting procedure for using the user authority function in the monitor tool and the security function in InTouch.



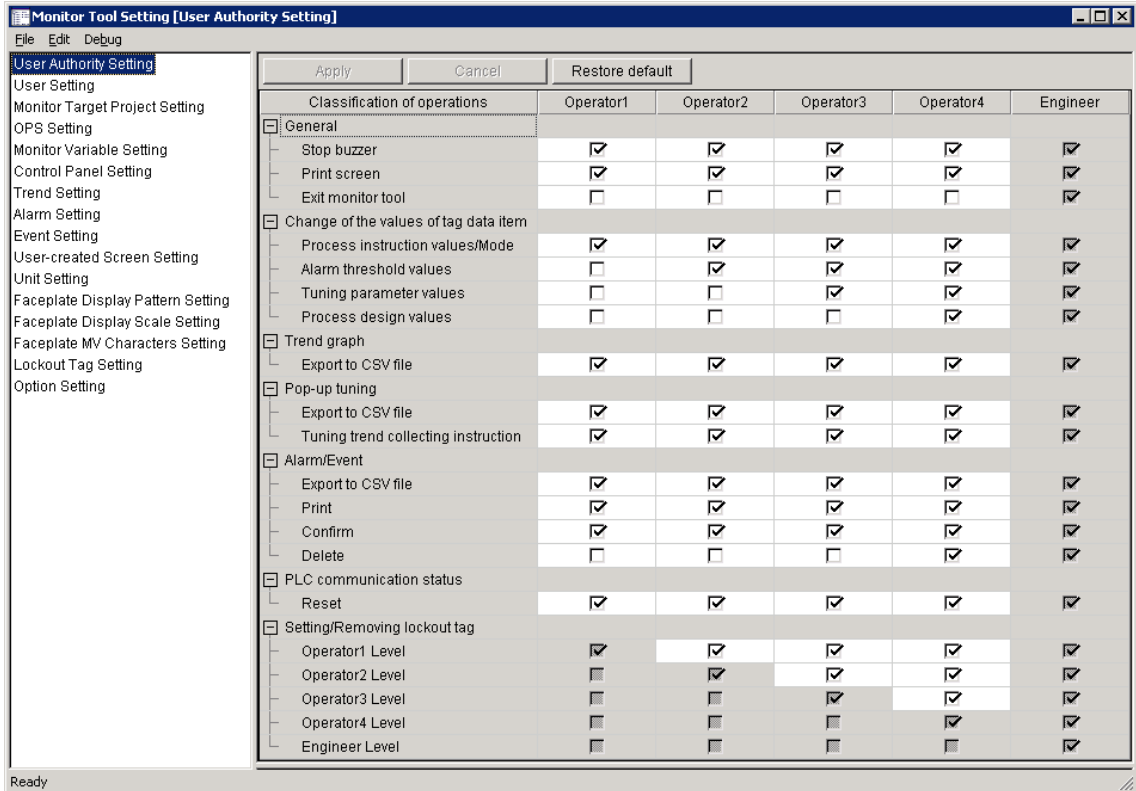
(1) Setting user authority function in monitor tool

Set the following items in the monitor tool.

For details, refer to "PX Developer Operating Manual (Monitor Tool)".

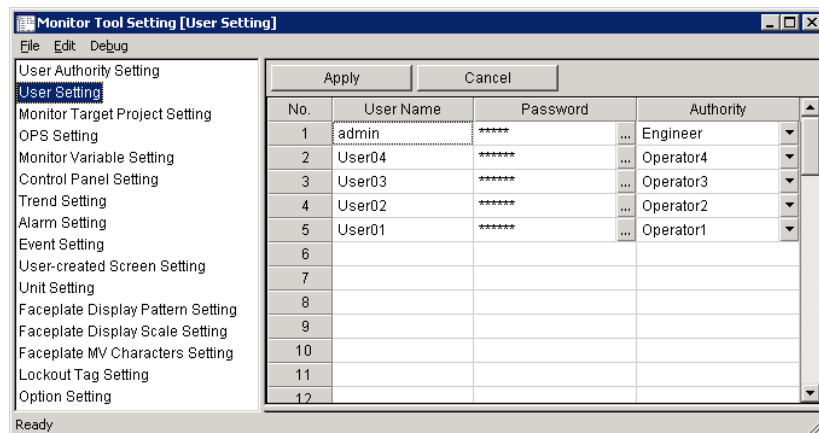
1) User Authority Setting

Set the operation restrictions for each user authority.



2) User Setting

Set a user name, a password, and the authority of users who operate the monitor tool.



(2) Setting security function in InTouch

Set the following items in InTouch.



For details, refer to the manual of InTouch.

1) User setting

Select [Special] → [Security] → [Configure Users] on the WindowMaker menu, and set a user name, a password, and the access level of users who log on to InTouch.

<User setting example of the monitor tool and InTouch>

The user authority (initial setting) of the monitor tool and the user access level of InTouch have the operation authority of high and low as shown below.

User setting of the monitor tool (initial setting)	User access level of InTouch	Operation authority
Engineer	9999	High
Operator 4		
Operator 3		
Operator 2		
Operator 1		
Lock		

Therefore, match between user authority of the monitor tool and the user access level of InTouch is required.

The following table is a setting example.

User setting of the monitor tool		User setting of InTouch	
User name	User authority	User name	Access level
admin	Engineer	admin	9999
User04	Operator 4	User04	8000
User03	Operator 3	User03	6000
User02	Operator 2	User02	4000
User01	Operator 1	User01	2000
—	Lock	None	0

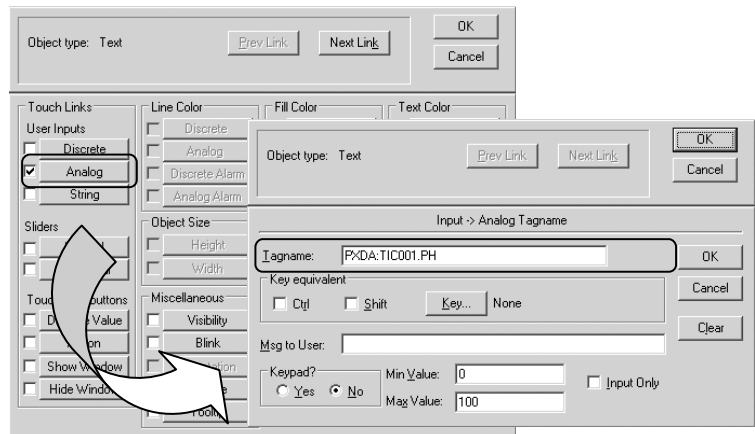
2) Security setting for process control tag

As a security when inputting the data or displaying the values for process control tag, set with the mixture of Animation Links of [Disable] or [Visibility]. In this case, using \$AccessLevel system tag in the conditional statement controls valid/invalid and display/hide of the touch function of object in accordance with user who is logging on.

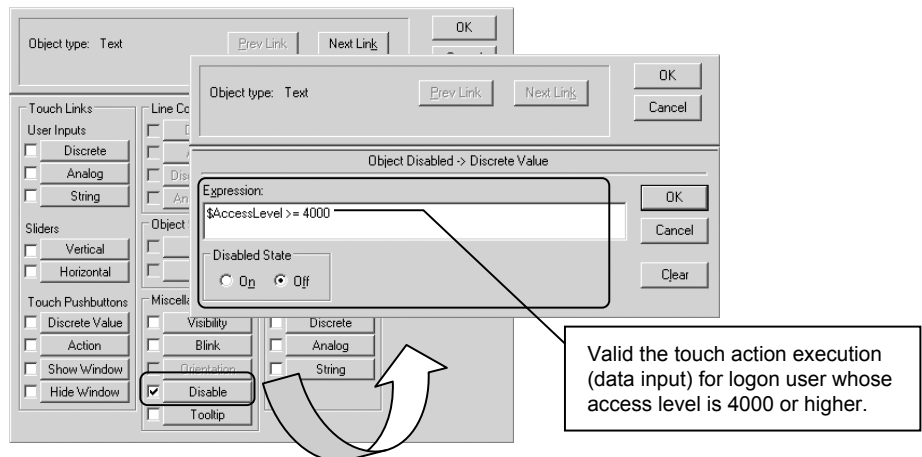
Example) Security setting when executing touch action (data input) for "PXDA:TIC001.PH" which is PV high limit alarm value of process control tag TIC001.

For data input of process control tag "PXDA:TIC001.PH", the operation authority higher than Operator2 in the monitor tool is required. The following indicate the setting procedure to execute the touch action (data input) by logon user whose access level is 4000 or higher with InTouch.

1. Double-click the text object for displaying numerical value, or right-click the context menu, and select [Animation Links].
2. Select [Touch Links] → [User Inputs] → [Analog], and set Tagname "PXDA:TIC001.PH".



- 3) Select [Miscellaneous] – [Disable], and set to valid the touch action execution for logon user whose access level is 4000 or higher.



(3) Creating script to change users of monitor tool with InTouch

Create the script as shown below to change users of the monitor tool automatically when changing logon user of InTouch. (For mode change of the monitor tool, execute the MonCtrl command. The file path of installation target folder of PX Developer is "C:\MELSEC" as an example.)

- 1) QuickFunction script
- Function : PXChangeMode
- Script :

```
{When a user is "User01"}
IF $Operator == "User01" THEN
    StartApp "C:\MELSEC\Fbdq\MonCtrl.exe /changemode /u User01 /p User01";
ELSE
{When a user is "User02"}
IF $Operator == "User02" THEN
    StartApp "C:\MELSEC\Fbdq\MonCtrl.exe /changemode /u User02 /p User02";
ELSE
{When a user is "User03"}
IF $Operator == "User03" THEN
    StartApp "C:\MELSEC\Fbdq\MonCtrl.exe /changemode /u User03 /p User03";
ELSE
{When a user is "User04"}
IF $Operator == "User04" THEN
    StartApp "C:\MELSEC\Fbdq\MonCtrl.exe /changemode /u User04 /p User04";
ELSE
{When a user is "admin"}
IF $Operator == "admin" THEN
    StartApp "C:\MELSEC\Fbdq\MonCtrl.exe /changemode /u admin /p admin";
ELSE
    StartApp "C:\MELSEC\Fbdq\MonCtrl.exe /changemode /Lock";
ENDIF;ENDIF;ENDIF;ENDIF;ENDIF;

CurrentUser = $Operator;
```

Description of functions and variables:

StartApp	Start Windows Application
\$Operator	System tag Data type : String Description : Store the logon name of user who is logging on.
CurrentUser	Local tag Data type : Memory message Description : Store the current user.

2) Application script

Condition Type : On Startup

Script :

CALL PXChangeMode();

3) Condition script

Condition : CurrentUser <> \$Operator

Condition Type : On True

Script :

CALL PXChangeMode();

POINT

Modify a user name and a password specified for argument of MonCtrl command to correspond with the user setting of the monitor tool.

Appendix 4.3 Procedure for monitoring operation with security interaction between monitor tool and InTouch

When monitoring with security interaction between the monitor tool and InTouch, monitor by following the procedure described below.

- 1) Start the monitor tool.
- 2) Start InTouch WindowViewer.
- 3) Change the logon users with InTouch.
(The users in the monitor tool are changed by condition script described in Appendix 4.2 (3) 3.)

POINT

When an error message is displayed with the monitor tool by changing logon users with InTouch, log on with a user who does not have the authority ("None") with InTouch once, and log on with the operation user again after the problem is solved.

Appendix 5 Functions Added to and Changed from Old Version

The following table indicates the functions added and changed with this upgrade.

Compatible version* ¹	Added/changed function	Description	Reference
Version 1.31H	Supported OS	Windows [®] 7 is supported.	Section 2.3

*1 The compatible version can be confirmed in Product Information. For details, refer to the "PX Developer Operating Manual (Programming Tool or Monitor Tool)".

INDEX

- [A]
 Alarm integration function..... 1-1, 4
 Assignment information databaseA-10
- [C]
 Checking installation..... 3-12
 Communication function using process control tag names 1-1, 2
 Correspondence table for alarm itemsB-3
 Correspondence table for event itemsB-4
 Correspondence Table for Items of Monitor Tool and InTouch.....B-3
 Creating tag variable/setting variables and setting tag sources 3-4
- [D]
 DDC.....A-10
 DDE.....A-10
 Defining tag source..... 3-4
 Details of Dot Field Name in the Tag Name Reference FunctionB-1
- [F]
 Faceplate.....A-10
 FB.....A-10
 FBD.....A-10
- [I]
 Incorporating faceplate control 1-1
 Installing ActiveX control 3-11
 InTouch.....A-10
 I/O server.....A-10
- [M]
 Main Tag Items.....B-1
 Monitor tool.....A-10
 MV.....A-10
- [O]
 Operating Environment 2-2
 Operating Procedures for Monitoring on InTouch 3-1
 Operating alarm monitor screen..... 3-16
 Operating event monitor screen..... 3-17
 Operation from InTouch that interlocks with the monitor tool..... 3-17
 Operation from the monitor tool that interlocks with the alarms of InTouch 3-17
 Operation to Communicate using PX Developer Process Control Tag Names in InTouch 3-2
 Operation to Display PX Developer Alarm Information on InTouch Alarm Viewer control 3-15
 Operation to Use Faceplates of PX Developer in InTouch 3-10
- [P]
 Pasting Alarm Viewer control 3-19
 Personal computerA-10
 Programming tool.....A-10
 PV.....A-10
 PX DeveloperA-10
- [R]
 Reference function for PX Developer tag names. 1-1, 3
 Referring to and selecting tag names 3-8
 Registering access names 3-3
- [S]
 Security of Monitor Tool and InTouch B-5
 Setting Alarm Query 3-20
 Setting/pasting faceplate control 3-13
 Software Configuration..... 2-2
 Specifications of the Define Tag Source screen 3-7
 SV.....A-10
 SYSTEM CONFIGURATION..... 2-1

[T]

Tag	A-10
Tag data	A-10
Tag data item.....	A-10
Tag FB.....	A-10
TROUBLESHOOTING	4-1
Troubleshooting related to alarm integration function	4-2
Troubleshooting related to the communication function regarding process control tag names	4-1
Troubleshooting related to the incorporation function of faceplate control.....	4-1

[W]

WindowMaker.....	A-10
WindowViewer.....	A-10

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PX Developer Version 1

Operating Manual (InTouch Interaction)

MODEL	SW1D5C-FBDQ-O-SCDA-E
MODEL CODE	13JU62
SH(NA)-080773ENG-F(1110)KWIX	



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