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Supplement to the application example • 04/2015

# Guideline to Connecting Multiple SITOP UPS1600 to a Controller

SITOP UPS1600 multi-instance in the TIA Portal

<https://support.industry.siemens.com/cs/ww/en/78817848>

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# 1 Task

## 1.1 Overview

### Introduction

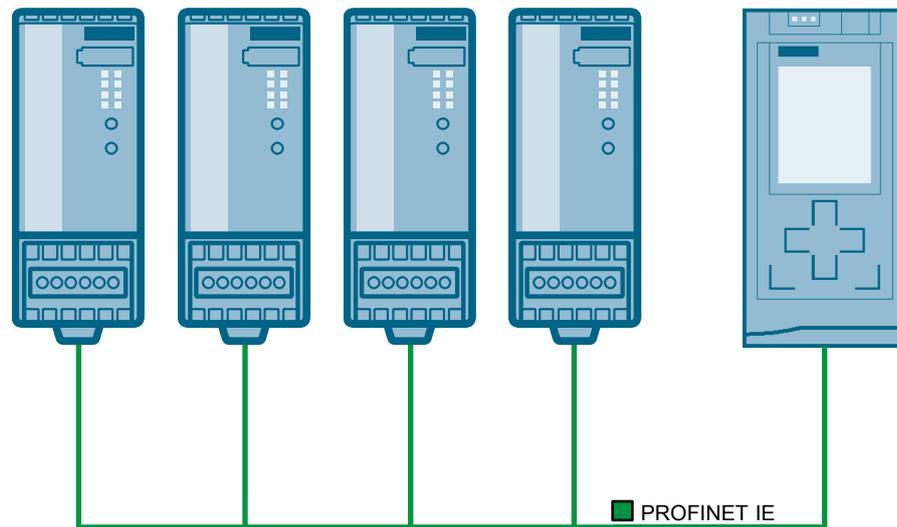
You want to connect more than one SITOP UPS1600 at a time to the controller in the TIA Portal and display the values on an operator panel.

This document is an addition to the main documentation for the application example “78817848\_Faceplates\_SITOP\_DC\_USV\_de”,  
Entry ID: [78817848](#).

It shows advanced settings to be made when connecting more than one UPS1600 to a controller.

### Overview of the automation task

Figure 1-1 Four UPS1600 to one SIMATIC S7-1500 controller



[Figure 1-1](#) shows an example of connecting four UPS1600 to one SIMATIC S7-1500 controller.

Table 1-1

Device	Used in documentation	Alternative devices <sup>1</sup>
Controller	SIMATIC S7-1500	SIMATIC S7-300/400/1200
Operator panel	TP1200 Comfort	See main documentation, chapter 8.1 “Prerequisites”.

<sup>1</sup> In these cases, use the specified alternative library elements.

## 1.2 Prerequisite

- STEP 7 (TIA Portal) V12 and higher<sup>2</sup>
- WinCC (TIA Portal) Comfort/Advanced V12 and higher<sup>2</sup>
- You have configured a controller and a UPS1600 (including the associated battery module UPS1100) as specified in the main documentation.
- You have opened the library provided in the associated application example (Entry ID: [78817848](#)) according to your TIA Portal version.
- You have installed the latest Hardware Support Package (HSP) file. For more information on the required version and manual installation of the HSP, see chapter [2.1.2](#).  
Depending on the version of the TIA Portal, the required version has already been installed automatically. Manual installation is necessary at least until TIA Portal V13 SP1 Update1.
- Your UPS1600 devices require firmware version 2.0.1 or higher. For information on how to update the firmware, see chapter [2.1.1](#).
- This document is an addition to the documentation “78817848\_Faceplates\_SITOP\_DC\_USV\_de” (Entry ID: [78817848](#)) and refers to the basics described there where appropriate. Keep the documentation ready to hand.

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<sup>2</sup> The library for V12 can be upgraded automatically for use with V13 (without SP1).

## 2 Solution

The solution comprises three parts:

- Adjusting the hardware configuration
- Adjusting the STEP 7 program
- Adjusting the HMI program

### 2.1 Hardware configuration

The firmware and software versions of the devices configured in the TIA Portal and the physical hardware must be consistent and be at least version 2.0.

#### 2.1.1 Firmware version

Connecting multiple UPS1600 units to one controller requires the firmware version on each UPS1600 to be 2.0.1 or higher.

##### Determining the firmware version

For information on how to determine your SITOP firmware version, see Entry ID: [79207181](#).

##### Changing the firmware version

Download the firmware file corresponding to your UPS1600 version under the Entry ID: [79207181](#).

Follow the instructions in the chapter “Firmware update with STEP 7 in the TIA Portal” in the “ReadMe.pdf” file included in the ZIP file.

#### 2.1.2 Hardware Support Package (HSP)

##### Determining the HSP version

Click “Tools > Support Packages”. Browse the “Name” column for “HSP0063 SITOP UPS1600 Devices, UPS1100 Modules”.

If the “Version” column contains the entry “V2.0”, the HPS is up to date. If “V1.0” is entered, you need to manually install the latest HSP.

##### Manual HSP installation

The entry “How to update the hardware catalog in STEP 7 (TIA Portal)” (Entry ID: [54163658](#)) describes how to install the HSP manually.

You will find the latest HSP file under the Entry ID: [75854606](#).

Depending on the TIA Portal version, you need at least the file

- “HSP\_V13\_0063\_001\_Other\_SITOP\_DC\_UPS\_2.0.ips12” (for TIA Portal V12) or
- “HSP\_V13\_0063\_001\_Other\_SITOP\_DC\_UPS\_2.0.ips13” (for TIA Portal from V13 SP1).

### 2.1.3 Software version

Drag the additional UPS1600 devices from the hardware catalog located at “Power Supplies > SITOP UPS > UPS1600” into your project.

Check the version of each UPS1600 device.

The UPS1600 devices must be set to the same version (2.0 or higher) in the hardware configuration.

#### Determining the software version

Right-click on one UPS1600 and click “Change device...” in the context menu.

Click “Change device...”. If the version is not set to 2.0 (or higher), click on the item number of your UPS1600 in the product tree on the right and then click “OK”. The name of the device associated with the item number is displayed below the graphic at “New device”.

If you cannot find the item number of your UPS1600, you have not yet installed the latest HSP (see chapter [2.1.2](#)).

#### Note

If the option “Change device...” is grayed out, the devices were configured using a GSD file.

You will find the available GSD files under the Entry ID: [75854605](#).

If configuration was made using a GSD file of version 2.0 (\*\_v20.zip) or higher, you do not need to install the current HSP.

The hardware catalog paths at “Devices and network” are different for UPS1600 devices installed via a GSD file and devices installed via an HSP.

- GSD path: “Other field devices PROFINET IO > I/O > Siemens AG > UPS1600”
- HSP path: “Power Supplies > SITOP UPS > UPS1600”

You should preferably configure your devices using the HSP files. Otherwise, the version of the devices cannot be updated using the “Change devices...” option and you have to delete the connected device first and subsequently integrate the device with the current version from the hardware catalog into the project.

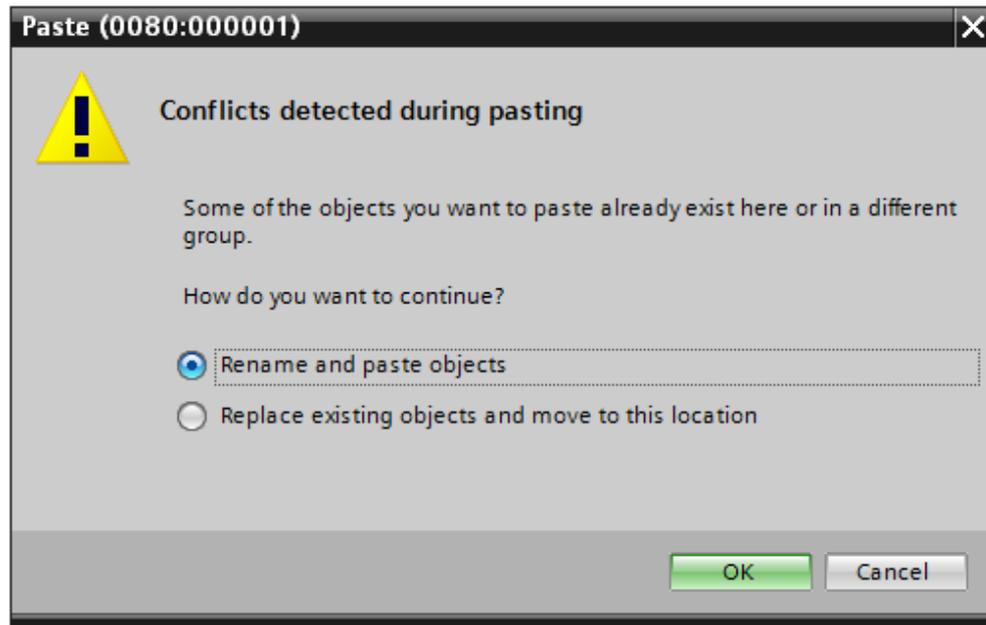
## 2.2 STEP 7 program

Draw one “STEP 7 Tag table” library element per UPS1600 into the project which you want to connect in addition to the UPS1600 already configured.

Look up the main documentation if you need help integrating the library elements into the project.

The following message appears when dragging identical library elements multiple times:

Figure 2-1



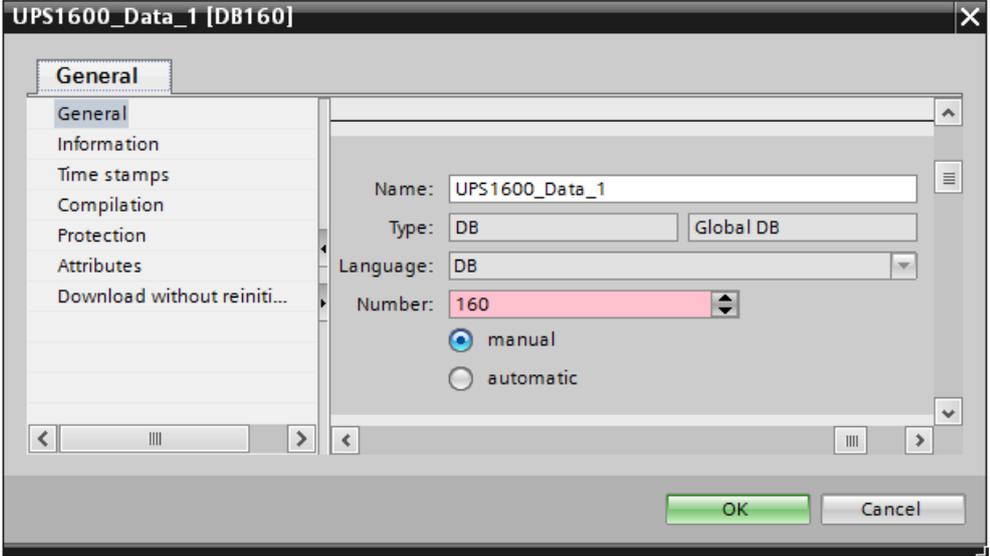
Select “Rename and paste objects” and click “OK”.

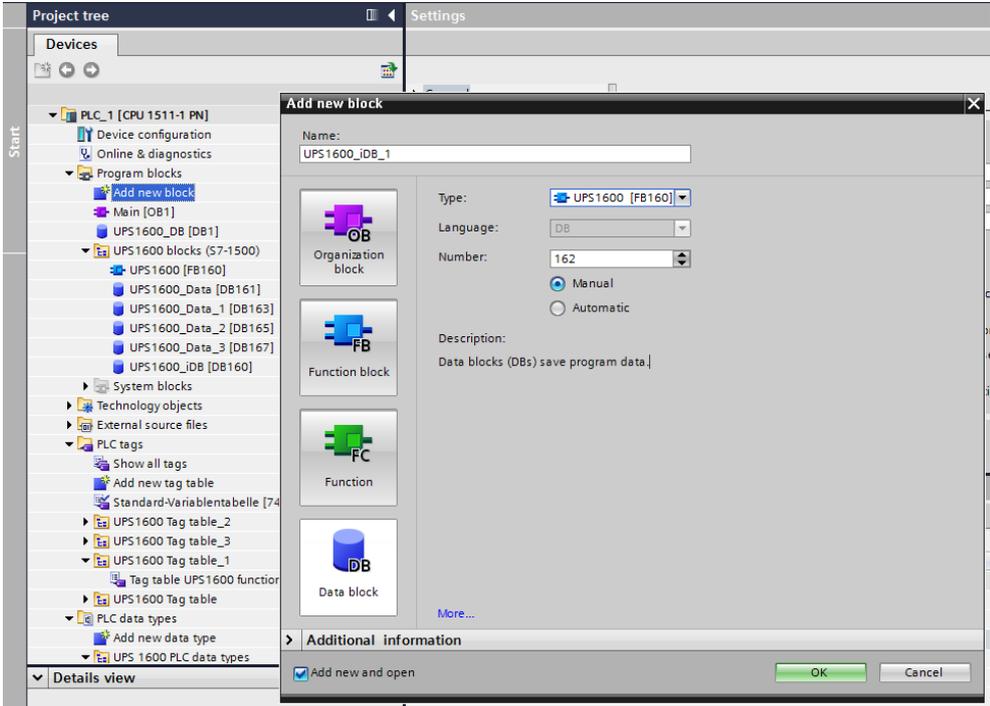
The placeholder “x” in the subsequent document denotes the range from “1” to the “Number of additionally pasted UPS1600 devices”.

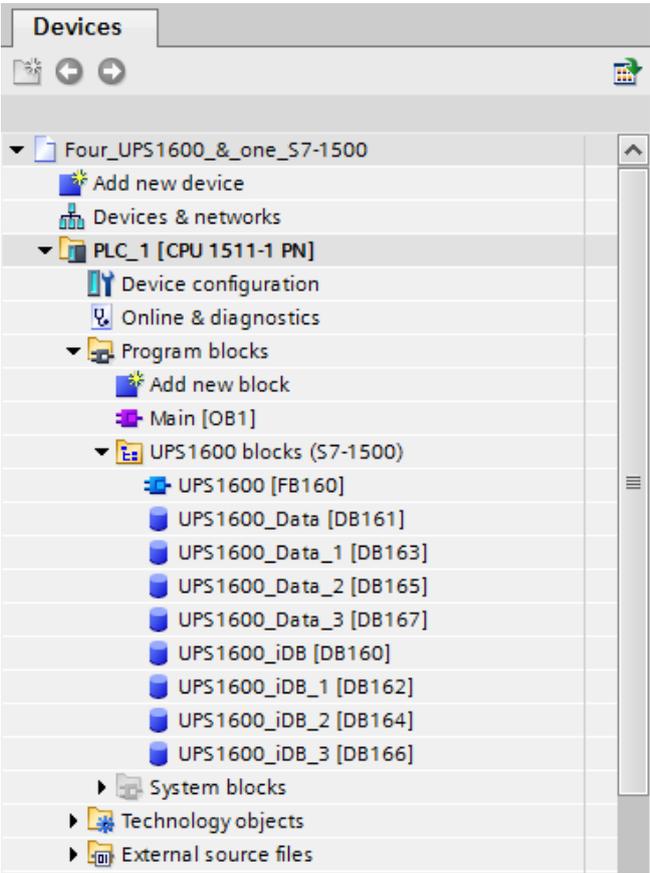
### 2.2.1 Adjusting the data and function blocks

Function block “UPS1600 [FB160]” in the folder “Program blocks > UPS1600 blocks (S7-1500)” is capable of multi-instances. You need this function block only once.

Table 2-1

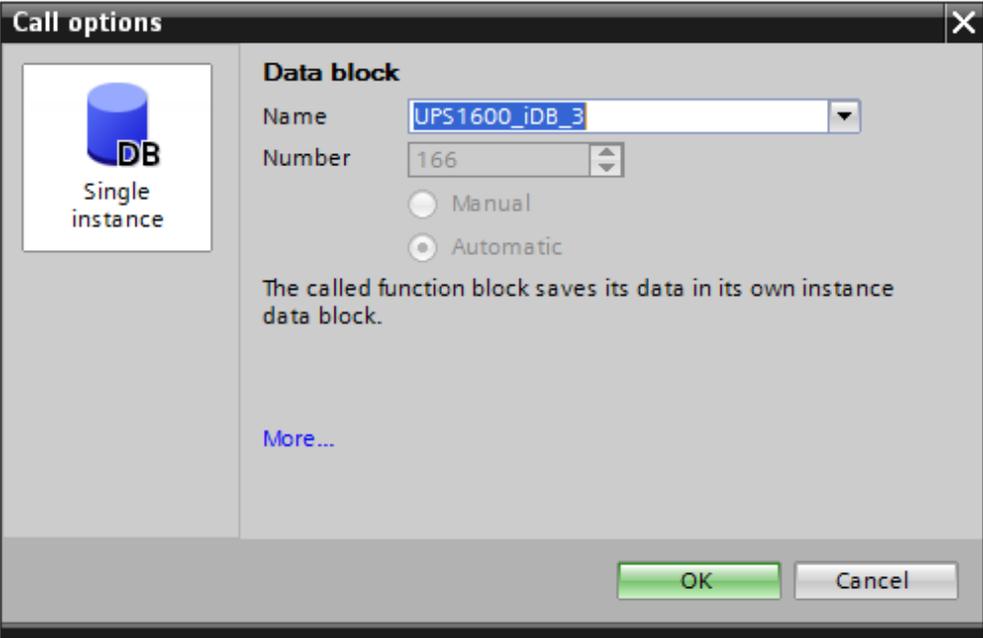
Step	Description
1.	You need one copy each of both data blocks for each additional UPS1600. First copy the data block “UPS1600_Data”. The name changes automatically by suffixing “_x” to the name, with “x” incrementing with each copy.
2.	 <p>1. Assign a new DB number to the copied data block “UPS1600_Data_x”.</p> <p>2. To do so, right-click the data block and click “Properties” in the new window. The number has a red background color, because another data block with the same number already exists.</p> <p>3. Select “manual” and assign an unused number to the data block. Click “OK”.</p>
4.	Repeat step 1 and 2 for each additional UPS1600 you want to connect.
5.	Subsequently click “Add new block” in the project tree.

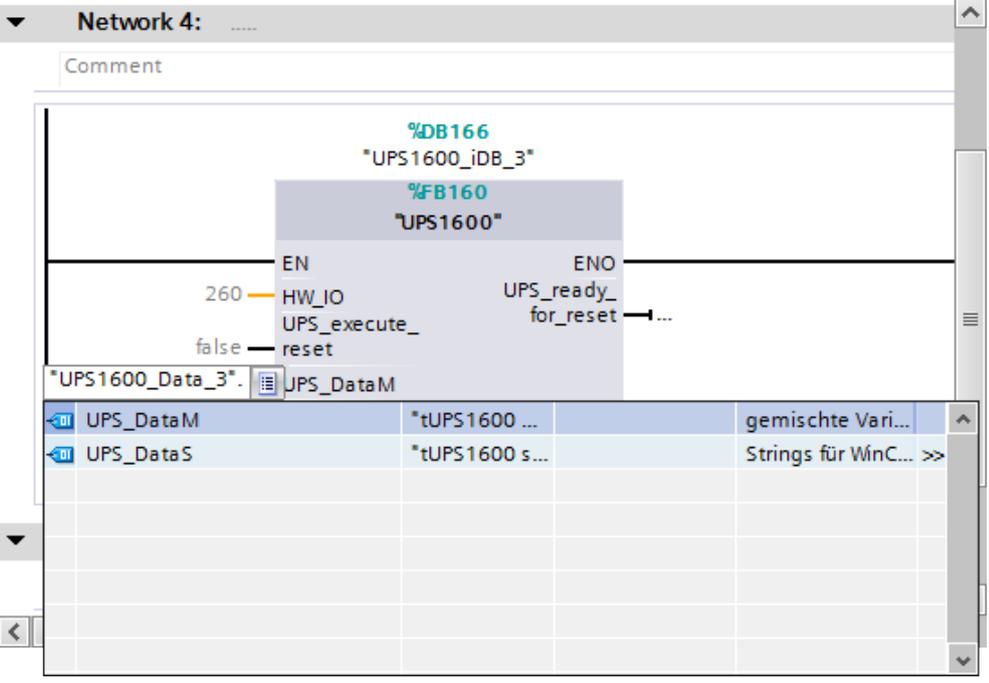
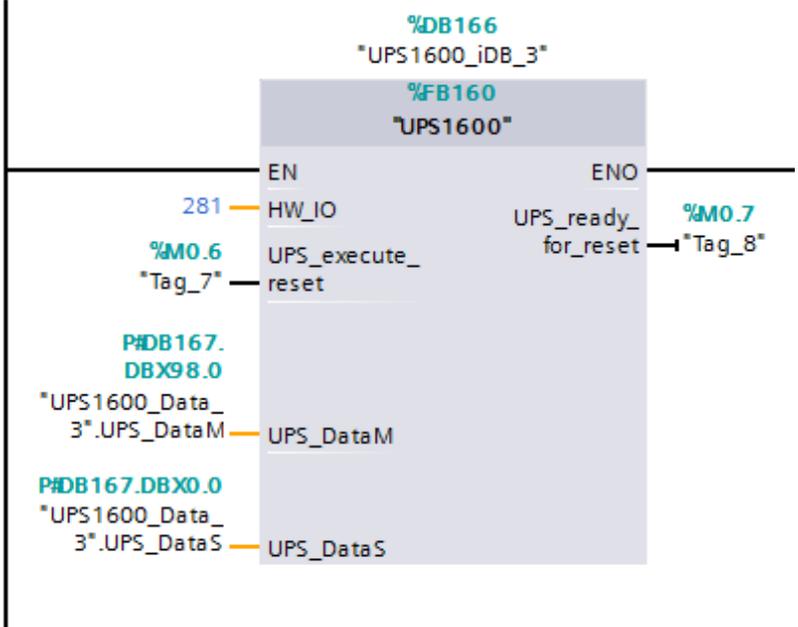
Step	Description
6.	<p data-bbox="360 309 1136 338">Instance data block creation at the example of UPS1600_iDB_1 [DB162]</p>  <ol data-bbox="360 1104 1326 1254" style="list-style-type: none"> <li>1. Assign the name “UPS1600_iDB_x”.</li> <li>2. Under “Type” select the option “UPS1600 [FB160]” from the drop-down list.</li> <li>3. Set the number assignment to “manual” and assign a number not yet used by another data block.</li> <li>4. Click “OK”.</li> </ol>

Step	Description
5.	 <p>After they have been created, the new instance data blocks are located in the “Program blocks” folder.</p> <ul style="list-style-type: none"> <li>• For a better overview, drag and drop them to the other UPS1600 function blocks in the folder “UPS1600 blocks (S71500)”.</li> </ul>
6.	<p>Compile the blocks completely.</p> <ul style="list-style-type: none"> <li>• For this purpose, right-click the folder “Program blocks” and select “Compile &gt; Software (rebuild all blocks)”.</li> </ul>

### 2.2.2 Adjustments in the operation block

Table 2-2

Step	Description
1.	Open OB1 or the operation block from which you want to call the function block “UPS1600 [FB160]” of the UPS1600.
2.	Drag the function block into a network.
3.	 <p>A window opens prompting you to specify which data block to connect. FB160 is already connected to data block “UPS1600iDB”.</p> <ol style="list-style-type: none"> <li>To call the function block, select one of the data blocks “UPS1600_iDB_x”.</li> <li>Then click “OK”.</li> </ol>
3.	Repeat step 2 and 3 for each additional UPS1600 device you want to connect.
4.	For the input “WH_IO” you need the corresponding hardware address of the associated UPS1600. Chapter <a href="#">2.2.4</a> “Determining the hardware address” specifies how to find out the hardware address.

Step	Description
5.	 <p>Connect the inputs “UPS_DataM” and “UPS_DataS” accordingly with the tags</p> <ul style="list-style-type: none"> <li>• “UPS1600_Data[...]”.UPS_DataM and</li> <li>• “UPS1600_Data[...]”.UPS_DataS</li> </ul> <p>of the adjusted data blocks “UPS1600_Data[...]”.</p>
6.	 <p>Parameterize the remaining input and output.</p>

### 2.2.3 Adjusting the PLC tag tables

Having dragged the library element “STEP 7 Tag table” (see chapter [2.2](#)) several times, there are multiple folders in the project tree that each contain a tag table named “table UPS1600 function block\_x”.

You need the first input address of the UPS1600 associated respectively. Chapter [2.2.5](#) “Determining the input addresses” specifies how to determine the input addresses.

Adjust the addresses here according to the following pattern:

Table 2-3

Tag names	Adjusted address of the respective UPS1600	Example of new address 1st Input address = 266
UPS_Buffer_mode(x)	1 <sup>st</sup> Input address + 1	%IB267
UPS_Ready_for_buffering(x)	1 <sup>st</sup> Input address + 2	%IB268
UPS_New_alarms_pending(x)	1 <sup>st</sup> Input address + 5	%IB271
UPS_Battery_charge_level(x)	1 <sup>st</sup> Input address + 6	%IB272

Figure 2-2 Adjusting the input addresses at the example of a fourth UPS1600

	Name	Data type	Address	Retain
1	UPS_Buffer_mode(3)	Byte	%IB274	<input type="checkbox"/>
2	UPS_Ready_for_buffering(3)	Byte	%IB275	<input type="checkbox"/>
3	UPS_New_alarms_pending(3)	Byte	%IB278	<input type="checkbox"/>
4	UPS_Battery_charge_level(3)	Byte	%IB279	<input type="checkbox"/>
5	<Add new>			<input type="checkbox"/>

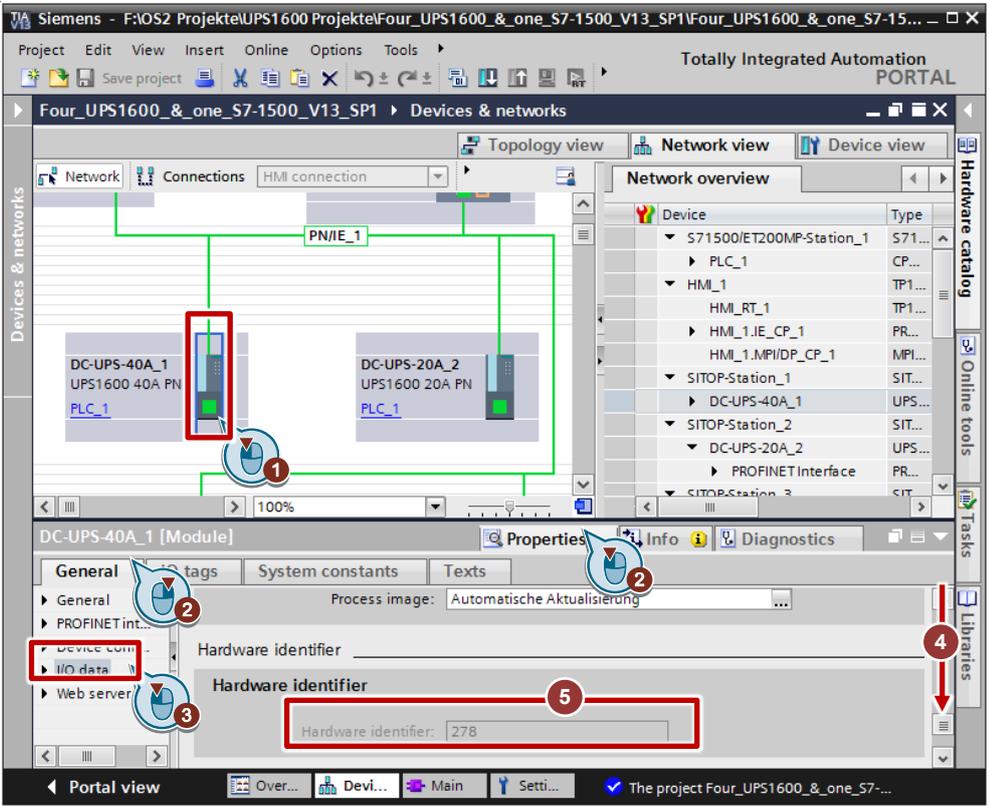
## 2.2.4 Determining the hardware address

You need the hardware address for step 5 in chapter [2.2.2](#).

### Note

Hardware addresses and input addresses can change when you exchange devices.  
For more information on exchanging devices, determining and changing the device firmware version and changing the device software version in the hardware configuration, see chapter [2.1](#) "Hardware configuration".

Table 2-4

Step	Description
7.	To determine the hardware address, open "Devices & networks".
8.	 <ol style="list-style-type: none"> <li>1. Click "Network" and click the icon of the UPS1600 whose hardware address you want to determine (1).</li> <li>2. Click "General" and "Properties" (2).</li> <li>3. Click "I/O data" (3).</li> <li>4. Scroll down to the field "Hardware identifier" (4).</li> <li>5. Read the hardware address (5) and enter it at the input of the associated network in the operation block (see step 5 in chapter <a href="#">2.2.2</a>).</li> </ol>

### 2.2.5 Determining the input addresses

You need the first input address in chapter [2.2.3](#) “Adjusting the PLC tag tables”.

Table 2-5

Step	Description
1.	Follow the steps in chapter <a href="#">2.2.4</a> “Determining the hardware address” until point 3 of step 2.
2.	Scroll down to the field “I/O addresses” (4).
3.	Here you can read the input address range and adjust it if necessary. Read the start address. Enter the input addresses resulting from this as per chapter <a href="#">2.2.3</a> into the associated PLC tag table in the “Address” column.

## 2.3 HMI project tree section

Draw one “STEP 7 Tag table” library element per UPS1600 into the project which you want to connect in addition to the UPS1600 already configured.

Look up the main documentation if you need help integrating the library elements into the project.

Drag the following library elements as often into the table as you want to connect additional UPS1600 devices:

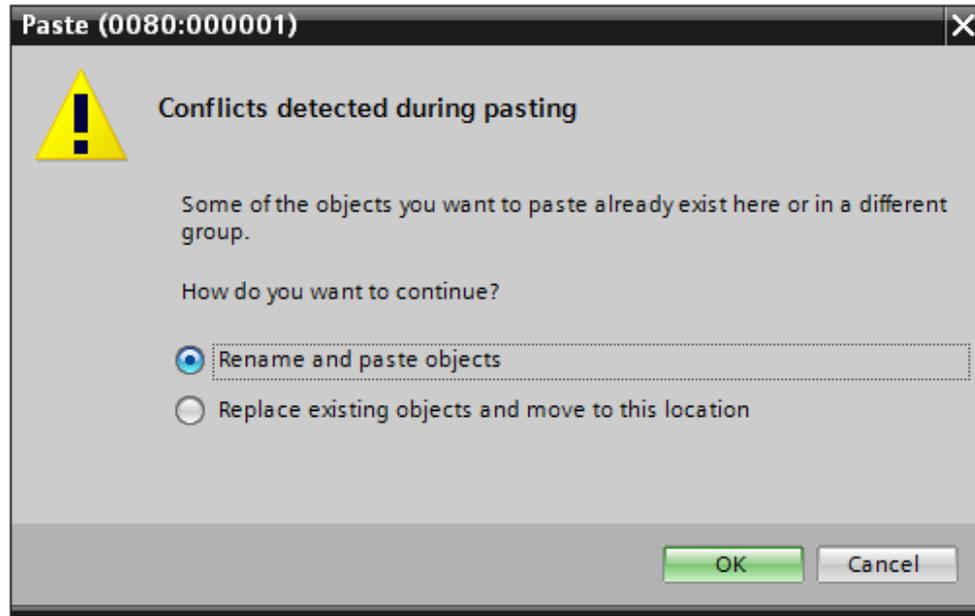
- “HMI Tag table”
- “HMI VB-Script”
- For V12/13 only:
  - “HMI Faceplates (WinCC Comfort/Advanced V12)”
  - “HMI Alarm views”  
(optional, you can also display the messages of all UPS1600 devices collectively.)
- For V13 SP1 only:
  - “HMI Faceplate\_UPS1600” and “HMI Faceplate\_UPS1600\_State” in the folder “HMI Faceplates (WinCC Comfort/ Advanced V13 SP1)”
  - “Alarmview\_UPS\_1 Pending alarms” and  
“Alarmview\_UPS\_2 Alarm history” in the “HMI Alarm views” folder  
(optional, you can also display the messages of all UPS1600 devices collectively.)

This is necessary in order to display the values of all configured UPS1600 devices at the operator panel.

The placeholder “x” in the subsequent document denotes the range from “1” to the “Number of additionally pasted UPS1600 devices”.

The following message appears when dragging identical library elements multiple times:

Figure 2-3

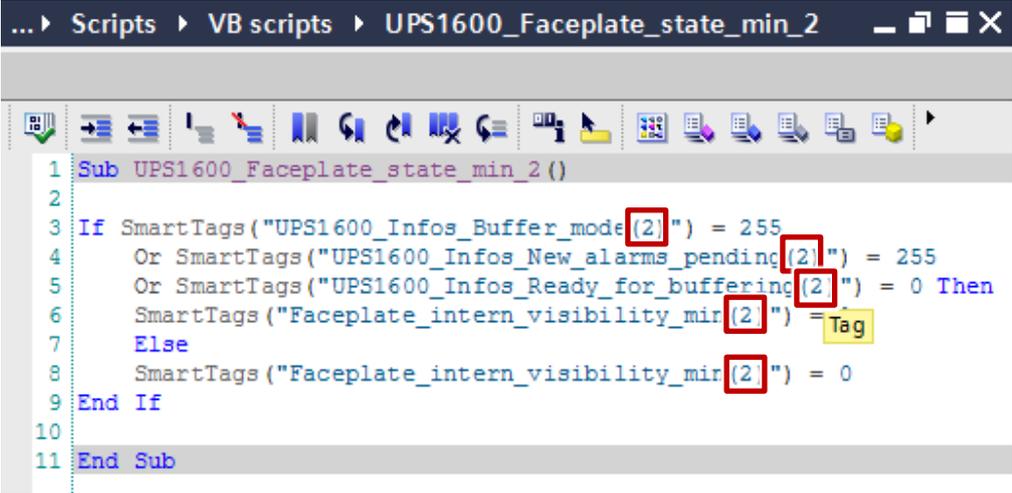


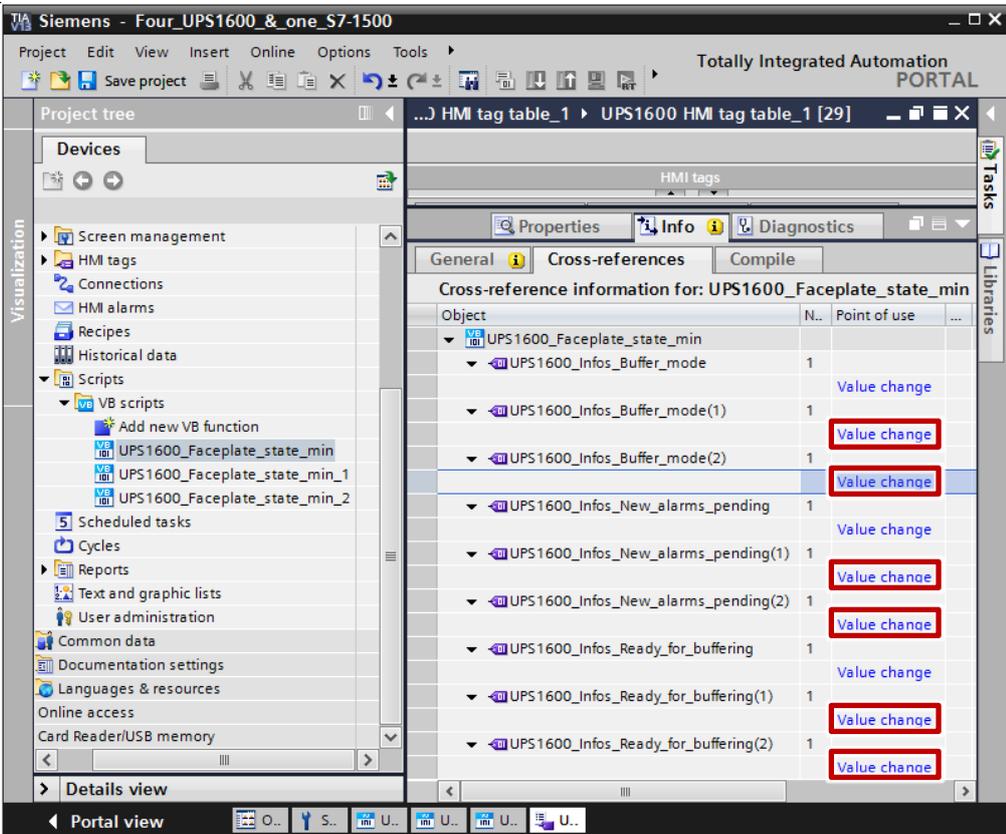
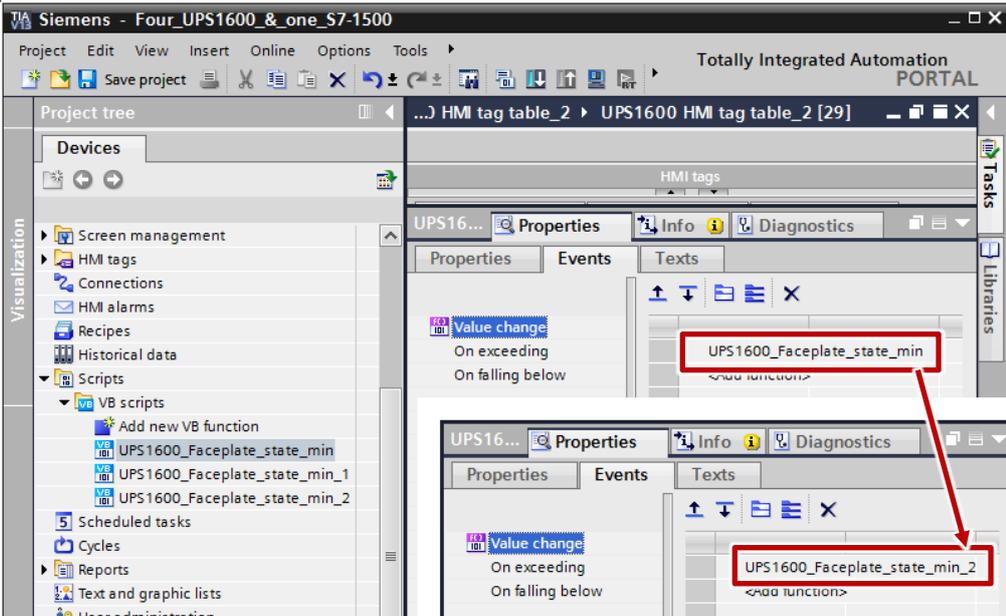
Select "Rename and paste objects" and click "OK". The effects are examined more closely in the corresponding chapters.

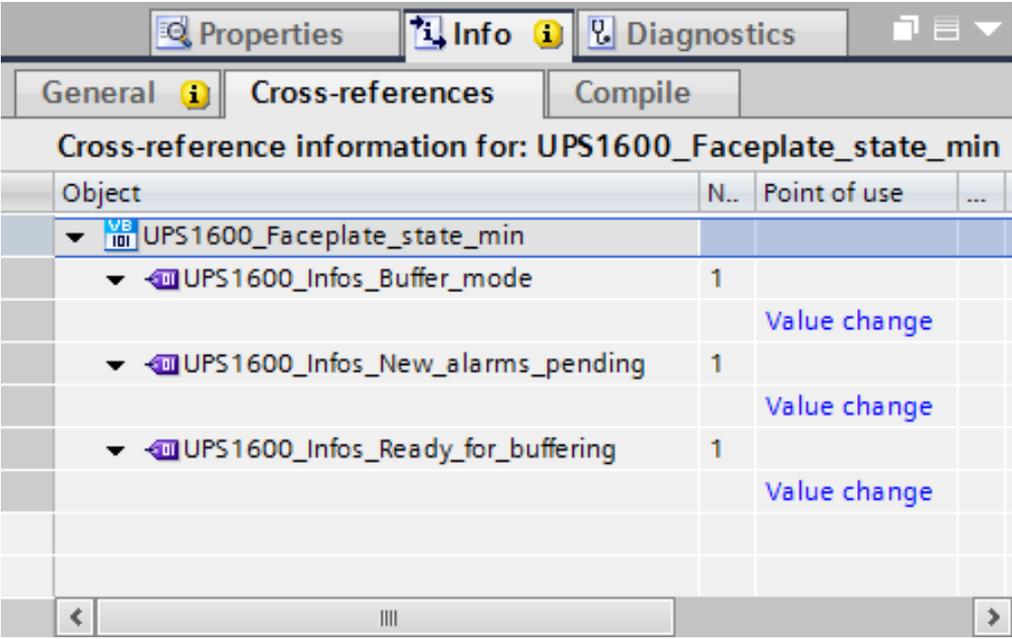
Subsequently, you will learn how you have to modify the library elements dragged into the project multiple times.

### 2.3.1 Adjusting the VB scripts

Table 2-6

Step	Description															
1.	Make sure that you have already dragged the “HMI Tag table” into the project corresponding to the number of your additional UPS devices (see chapter 2.3).															
2.	Open the folder “Scripts > VB scripts”.															
3.	<p>Complement all 5 tags in each of the VB scripts copied into the project “UPS1600_Faceplate_state_min_x” by “(x)” according to the pattern “tag name(x)”. “x” corresponds to the automatic extension of the tag names in the tag table “UPS1600 HMI tag table_x” which was suffixed automatically when the additional tag tables were dragged over.</p> <p>Example: Adjusting the tag names</p> <table border="1"> <thead> <tr> <th>UPS1600</th> <th>Script name</th> <th>Tag name</th> </tr> </thead> <tbody> <tr> <td>First UPS1600 (unchanged)</td> <td>UPS1600_Faceplate_state_min</td> <td>Faceplate_intern_visibility_min</td> </tr> <tr> <td>First additional UPS1600</td> <td>UPS1600_Faceplate_state_min_1</td> <td>Faceplate_intern_visibility_min(1)</td> </tr> <tr> <td>Second additional UPS1600</td> <td>UPS1600_Faceplate_state_min_2</td> <td>Faceplate_intern_visibility_min(2)</td> </tr> <tr> <td>xth additional UPS1600</td> <td>UPS1600_Faceplate_state_min_x</td> <td>Faceplate_intern_visibility_min(x)</td> </tr> </tbody> </table> <p>Example: Modifications in the VB script for a <b>second additional</b> UPS</p>  <pre> 1 Sub UPS1600_Faceplate_state_min_2 () 2 3 If SmartTags("UPS1600_Infos_Buffer_mode(2)") = 255 4   Or SmartTags("UPS1600_Infos_New_alarms_pending(2)") = 255 5   Or SmartTags("UPS1600_Infos_Ready_for_buffering(2)") = 0 Then 6   SmartTags("Faceplate_intern_visibility_min(2)") = Tag 7   Else 8   SmartTags("Faceplate_intern_visibility_min(2)") = 0 9 End If 10 11 End Sub </pre>	UPS1600	Script name	Tag name	First UPS1600 (unchanged)	UPS1600_Faceplate_state_min	Faceplate_intern_visibility_min	First additional UPS1600	UPS1600_Faceplate_state_min_1	Faceplate_intern_visibility_min(1)	Second additional UPS1600	UPS1600_Faceplate_state_min_2	Faceplate_intern_visibility_min(2)	xth additional UPS1600	UPS1600_Faceplate_state_min_x	Faceplate_intern_visibility_min(x)
UPS1600	Script name	Tag name														
First UPS1600 (unchanged)	UPS1600_Faceplate_state_min	Faceplate_intern_visibility_min														
First additional UPS1600	UPS1600_Faceplate_state_min_1	Faceplate_intern_visibility_min(1)														
Second additional UPS1600	UPS1600_Faceplate_state_min_2	Faceplate_intern_visibility_min(2)														
xth additional UPS1600	UPS1600_Faceplate_state_min_x	Faceplate_intern_visibility_min(x)														
4.	Right-click the VB script “UPS1600_Faceplate_state_min”.															
5.	Click “Cross-references” in the context menu.															
6.	Increase the width of the “Object” column until you can read the full tag names.															

Step	Description																																	
7.	<p>For all tags that have the extension “(x)” suffixed to their name, click on “Value change” in the row below the tag in the “Point of use” column.</p>  <table border="1" data-bbox="774 683 1356 1187"> <caption>Cross-reference information for: UPS1600_Faceplate_state_min</caption> <thead> <tr> <th>Object</th> <th>N.</th> <th>Point of use</th> </tr> </thead> <tbody> <tr> <td>UPS1600_Faceplate_state_min</td> <td>1</td> <td></td> </tr> <tr> <td>UPS1600_Infos_Buffer_mode</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_Buffer_mode(1)</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_Buffer_mode(2)</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_New_alarms_pending</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_New_alarms_pending(1)</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_New_alarms_pending(2)</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_Ready_for_buffering</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_Ready_for_buffering(1)</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_Ready_for_buffering(2)</td> <td>1</td> <td>Value change</td> </tr> </tbody> </table>	Object	N.	Point of use	UPS1600_Faceplate_state_min	1		UPS1600_Infos_Buffer_mode	1	Value change	UPS1600_Infos_Buffer_mode(1)	1	Value change	UPS1600_Infos_Buffer_mode(2)	1	Value change	UPS1600_Infos_New_alarms_pending	1	Value change	UPS1600_Infos_New_alarms_pending(1)	1	Value change	UPS1600_Infos_New_alarms_pending(2)	1	Value change	UPS1600_Infos_Ready_for_buffering	1	Value change	UPS1600_Infos_Ready_for_buffering(1)	1	Value change	UPS1600_Infos_Ready_for_buffering(2)	1	Value change
Object	N.	Point of use																																
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UPS1600_Infos_New_alarms_pending	1	Value change																																
UPS1600_Infos_New_alarms_pending(1)	1	Value change																																
UPS1600_Infos_New_alarms_pending(2)	1	Value change																																
UPS1600_Infos_Ready_for_buffering	1	Value change																																
UPS1600_Infos_Ready_for_buffering(1)	1	Value change																																
UPS1600_Infos_Ready_for_buffering(2)	1	Value change																																
8.	<p>Double-click the entry “UPS1600_Faceplate_state_min” and add “_x” according to the number of the suffix “(x)” of the tags.</p> 																																	

Step	Description												
9.	<p>Repeat steps 4 through 8 until only the three tags of the first UPS are displayed - without name suffixes.</p>  <table border="1" data-bbox="363 571 1375 1037"> <thead> <tr> <th>Object</th> <th>N..</th> <th>Point of use</th> </tr> </thead> <tbody> <tr> <td>UPS1600_Infos_Buffer_mode</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_New_alarms_pending</td> <td>1</td> <td>Value change</td> </tr> <tr> <td>UPS1600_Infos_Ready_for_buffering</td> <td>1</td> <td>Value change</td> </tr> </tbody> </table>	Object	N..	Point of use	UPS1600_Infos_Buffer_mode	1	Value change	UPS1600_Infos_New_alarms_pending	1	Value change	UPS1600_Infos_Ready_for_buffering	1	Value change
Object	N..	Point of use											
UPS1600_Infos_Buffer_mode	1	Value change											
UPS1600_Infos_New_alarms_pending	1	Value change											
UPS1600_Infos_Ready_for_buffering	1	Value change											
10.	<p>Optional: open the “Cross-references” for each script. Check whether three tags each are displayed and whether the script and tag names end in the same number.</p>												

### 2.3.2 Adjusting the HMI tag table

There are two ways to adjust the HMI tag table. They depend on the type of access.

Open the tag table “UPS1600\_HMI tag table\_x” located at “HMI tags > UPS1600 HMI tag table\_x”.

The access type is indicated in the seventh column of the HMI tag table.

[Figure 2-4](#) shows the two adjustment options at the example of the HMI tag table “UPS1600 HMI tag table\_2”. The adjusted HMI tags access the data block “UPS1600\_Data\_2 [DB165]” (1)(2).

The original access of the HMI tags to the data block “UPS1600\_Data [DB161]” is additionally visible (3).

Figure 2-4 Example of the HMI tag table “UPS1600 HMI tag table\_2” (→ x=2)

Name	Data type	Conn...	PL...	PLC tag	Address	Access mode
Faceplate_intern_visibility_trends(2)	Int	<Inte...		<Undefined>		
UPS1600_Infos_Battery_charge_lev...	Byte	HMI...	PL...	<Undefined>	%DB165.DBB269	<absolute access>
UPS1600_Infos_Battery_voltage(2)	Int	HMI...	PL...	<Undefined>	%DB165.DBW260	<absolute access>
UPS1600_Infos_Battery_voltage_tre...	Int	HMI...	PL...	<Undefined>	%DB165.DBW260	<absolute access>
UPS1600_Infos_Buffer_mode(2)	Byte	HMI...	PL...	<Undefined>	%DB165.DBB266	<absolute access>
UPS1600_Infos_Device_name(2)	Arr...	HMI...	PL...	<Undefined>	%DB165.DBX170.0	<absolute access>
UPS1600_Infos_End_of_charge_vol...	Int	HMI...	PL...	<Undefined>	%DB165.DBW100	<absolute access>
UPS1600_Infos_HW_revision(2)	Int	HMI...	PL...	<Undefined>	%DB165.DBW104	<absolute access>
UPS1600_Infos_Input_voltage(2)	Int	HMI...	PL...	<Undefined>	%DB165.DBW250	<absolute access>
UPS1600_Infos_Input_voltage_tren...	Int	HMI...	PL...	<Undefined>	%DB165.DBW250	<absolute access>
UPS1600_Infos_Measured_charge...	Int	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Measured_cha...		<symbolic access>
UPS1600_Infos_Measured_charge...	Int	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Measured_cha...		<symbolic access>
UPS1600_Infos_New_alarms_pendi...	Byte	HMI...	PL...	UPS1600_Data_2.UPS_DataM.New_alarms_p...		<symbolic access>
UPS1600_Infos_Order_number(2)	Arr...	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Order_number		<symbolic access>
UPS1600_Infos_Output_current(2)	Int	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Output_current		<symbolic access>
UPS1600_Infos_Output_current_tre...	Int	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Output_current		<symbolic access>
UPS1600_Infos_Output_voltage(2)	Int	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Output_voltage		<symbolic access>
UPS1600_Infos_Output_voltage_tre...	Int	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Output_voltage		<symbolic access>
UPS1600_Infos_Ready_for_bufferin...	Byte	HMI...	PL...	UPS1600_Data_2.UPS_DataM.Ready_for buf...		<symbolic access>
UPS1600_Infos_Serial_number(2)	Arr...	HMI...	PL...	UPS1600_Data.UPS_DataM.Serial_number	%DB161.DBX140.0	<absolute access>
UPS1600_Infos_SW_revision(2)	Int	HMI...	PL...	UPS1600_Data.UPS_DataM.SW_revision	%DB161.DBW106	<absolute access>
UPS1600_Infos_Version_number(2)	Arr...	HMI...	PL...	UPS1600_Data.UPS_DataM.Version_number	%DB161.DBX200.0	<absolute access>
UPS1600_Infos_Battery_charge_lev...	Byte	HMI...	PL...	UPS1600_Data.UPS_DataM.Battery_charge_lev...	%DB161.DBB269	<absolute access>

### Absolute access (1)

If you set “<absolute access>”, the HMI tag will be connected to the data block via the address specified in the “Address” column.

Change the number of the data block at address “%DB161.DB\*\*\*\*” to the number of your data block “UPS1600\_Data\_x” that is associated with the tag table.

In the example shown in [Figure 2-4](#)

- “%DB161.DBB269” thus becomes
- “%DB165.DBB269”.

The name of the PLC tag is no longer displayed after the change.

### Symbolic access (2)

If you set “<symbolic access>”, the HMI tag will be connected to the data block via the PLC tag name specified in the “PLC tag” column.

The PLC tag name is composed of “data block name”. “tag structure levels”. “tag name”.

Add “\_x” to the part “data block name” to access the associated data block “UPS1600\_Data\_x”.

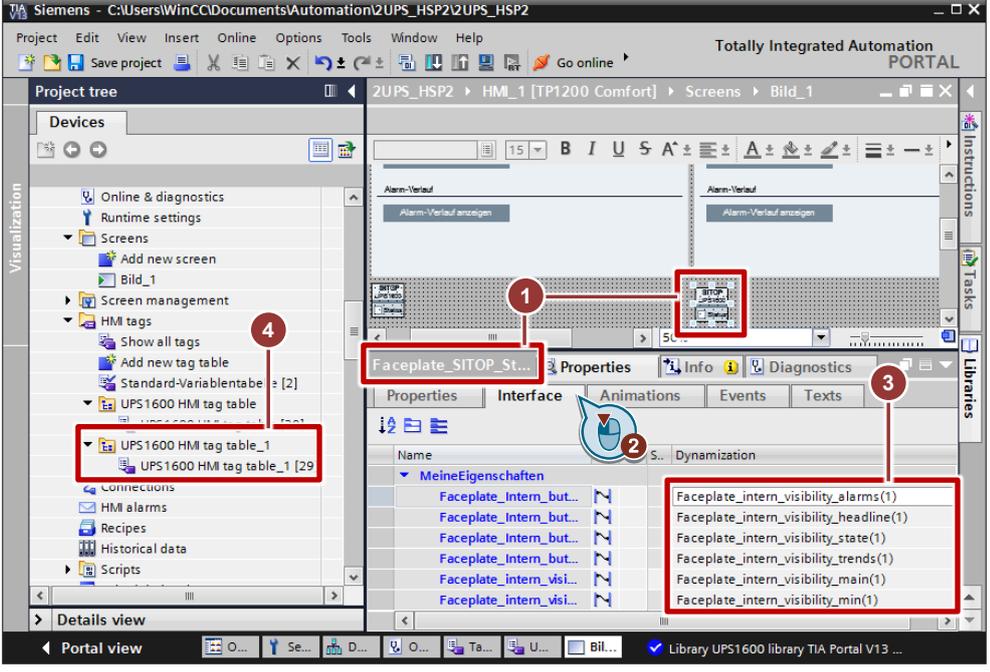
In the example shown in [Figure 2-4](#)

- “UPS1600\_Data.UPS\_DataM.Output\_current” thus becomes
- “UPS1600\_Data\_2.UPS\_DataM.Output\_current”

The address of the PLC tag is no longer displayed after the change.

### 2.3.3 Adjusting the faceplate interfaces

Table 2-7

Step	Description
1.	Open the screen or one of the screens to which you dragged the faceplates for displaying the values of a UPS1600.
2.	<p>1. Click on the (small) faceplate “Faceplate_SITOP_State_n” (1) and then on “Interface” (2) (with n depending on the number of faceplates on the screen).</p> <p>2. Double-click the connected tags and add the suffix “(x)” to them (3), with x being the number of the automatic extension at the associated tag table (4).</p> <p>Example for x=1</p> 
3.	Click on the (large) faceplate “Faceplate_SITOP_n” (1) and then on “Interface” (2)
4.	Double-click the connected tags and add the suffix “(x)” to them.
5.	Repeat steps 1 to 4 for all additional faceplate pairs. The faceplate pair belonging to the first tag table (without a suffix at the end of the name) does not have to be adjusted.

### 2.3.4 Adjusting the message windows

Should the message windows “Pending alarms” and “Message buffer” exist separately for each UPS1600, drag the corresponding library elements as often into the project as you want to connect UPS1600 devices.

The procedure is similar to that in chapter [2.3.1](#).

Table 2-8

Step	Description
1.	Right click a message window.
2.	Click “Cross-references” in the context menu.
3.	Increase the width of the “Object” column until you can read the full tag names.
4.	For all tags that have the extension “(1)” to “(x)” suffixed to their name, click on “Value change” in the row below the tag in the “Point of use” column.
5.	Click the marginal “...” button in the input box next to “Object name”.
6.	Select the message window to be triggered by a change of the corresponding tag.
7.	Repeat steps 1 to 6 until only one tag for each message window is displayed in the cross-reference.

### 3 Related Literature

Table 3-1

	Topic	Title
\1\	Siemens Industry Online Support	<a href="http://support.industry.siemens.com">http://support.industry.siemens.com</a>
\2\	Download page of the entry	<a href="https://support.industry.siemens.com/cs/ww/en/78817848">https://support.industry.siemens.com/cs/ww/en/78817848</a>
\3\		

### 4 History

Table 4-1

Version	Date	Modifications
V1.0	04/2015	First version