

Precautions when Using Macro Type Function Blocks in GX Works3

■Date of Issue

June 2021

■Relevant Models

GX Works3

Thank you for your continued support of MELSOFT series.

This technical bulletin shows the precautions according to the changes in the specifications of macro type function block in GX Works3.

1 OVERVIEW OF CHANGES IN THE SPECIFICATIONS

The problem that caused the value to be incorrectly transferred in GX Works3 Version 1.070Y (released in October 2020) when specifying a device for an array type output argument of the macro type function block has been corrected.

Range affected

Due to the above correction, the conversion result of programs using function blocks that satisfy conditions is changed.

Descriptions

Assignment of local labels used in the VAR_OUTPUT class is changed according to the change of conversion specifications.

Status	Version	Conversion result of programs
Before change	Version 1.066U or earlier	A device specified for an output argument was also being used in a function block; therefore, the value (of the specified device for the output argument) could be referred to.
After change	Version 1.070Y or later	An operation result of a function block is now copied to an output argument.

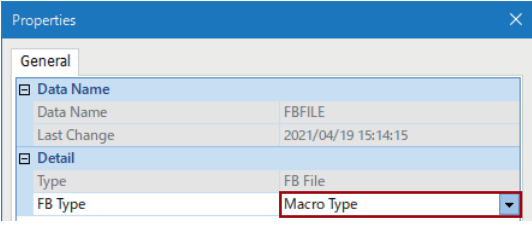
To acquire the conversion result equivalent to the one before change, refer to the following:

☞ Page 2 METHOD TO ACQUIRE EQUIVALENT CONVERSION RESULT

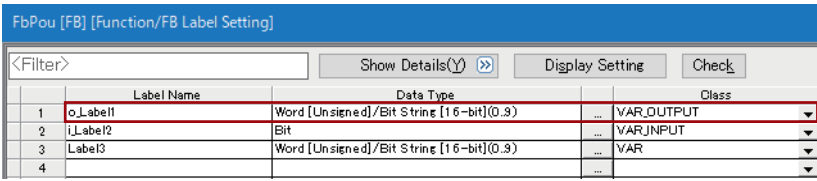
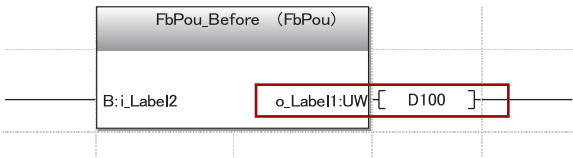
Conditions

A conversion result of programs is changed when satisfying all the following conditions.

No.	Condition	Checking method
1	"Macro Type" is specified for "FB Type."	<ol style="list-style-type: none"> Select "FB/FUN" ⇒ "(FB file name)" in the navigation window, then right-click it and select [Properties] from the shortcut menu. Check if "Macro Type" is specified for "FB Type" in the "Properties" screen.



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No.	Condition	Checking method
2	An array type label is specified for the FB definition output ("VAR_OUTPUT" class).	<ol style="list-style-type: none"> 1. Select "FB/FUN" ⇒ "(FB file name)" ⇒ "(Function)" ⇒ "Local Label" in the navigation window. 2. Check if there is any VAR_OUTPUT class label the data type of which is specified to an array. 
3	A device is specified for an output argument of function block in Ladder Diagram language.	<p>Check if there is any ladder program in which a device is specified for an output argument of function block satisfying conditions above.</p> 

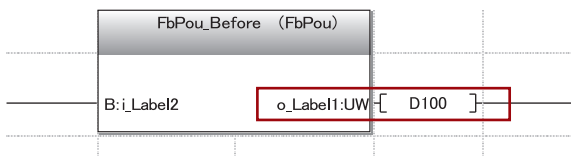
2 METHOD TO ACQUIRE EQUIVALENT CONVERSION RESULT

The conversion result equivalent to the one before change is acquired by changing programs as shown in the example below.

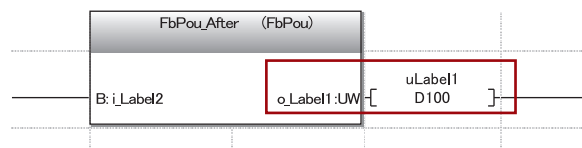
Ex.

Change the transfer destination of output argument data of a function block from a device to a global label to which the device is assigned.

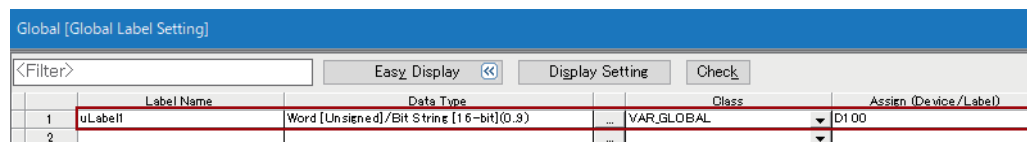
- Program before change



- Program after change



- Global label setting after change

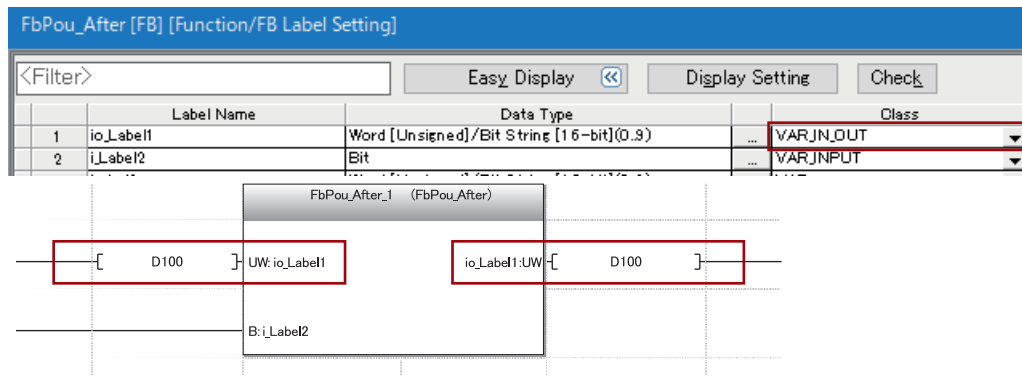


Label Name	Data Type	Class	Assign (Device/Label)
uLabel1	Word [Unsigned]/Bit String [16-bit](0.9)	VAR_GLOBAL	D100

Point 

When referring to values in a function block, use input variables (VAR_INPUT) or I/O variables (VAR_IN_OUT).

The following shows the program example when VAR_IN_OUT is specified for the class in the label setting of function block.



REVISIONS

Version	Date of Issue	Description
A	June 2021	First edition

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