TECHNICAL BULLETIN

**[Issue No.]** FA-A-0099   **[Page]** 1/3

[Title] Enhanced compilation check function for structured ladder program in GX Works2 version 1.40S or later

[Date of Issue] October 2010

[Relevant Models] Mitsubishi Integrated FA software MELSOFT series
GX Works2

Thank you for your continued support of Mitsubishi integrated FA software MELSOFT series.

This bulletin outlines the enhanced compilation check function for structured ladder program in GX Works2 version 1.40S or later.

1. **Notes on the enhanced compilation check function**

   The compilation check function for structured ladder program is enhanced in GX Works2 version 1.40S. For this reason, a compilation error (error code: C2025 error) may occur when a structured project with a structured ladder program created in an earlier version of GX Works2 is compiled in GX Works2 version 1.40S or later.

   To correct the compilation error, change the program according to the method described in "3. Error correction".

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2. Details on enhanced compilation check function

The compilation check function is enhanced to produce a compilation error when application functions with different data types are combined. A compilation error occurs when compiling a program in which all conditions from 1 to 3 as shown in the figure below are satisfied.
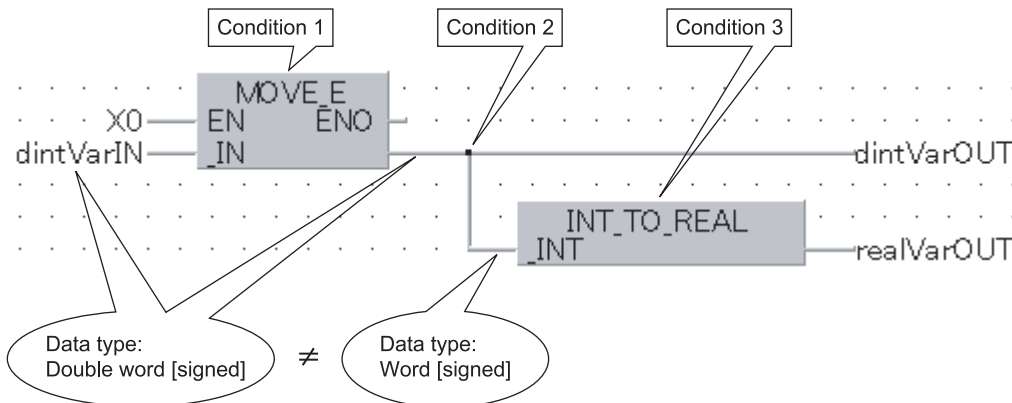
Example of program that causes a compilation error

Condition 1: An application function with ANY type output, which contains argument EN/ENO, is used.
(The relevant functions are listed in the following table.)

No.	Function name	No.	Function name	No.	Function name	No.	Function name	No.	Function name
1	ABS_E	6	COS_E	11	LIMITATION_E	16	MUL_E	21	SUB_E
2	ACOS_E	7	DINT_TO_BCD_E	12	MAXIMUM_E	17	NOT_E	22	TAN_E
3	ADD_E	8	DIV_E	13	MINIMUM_E	18	OR_E	23	XOR_E
4	ASIN_E	9	EXP_E	14	MOD_E	19	SIN_E		
5	ATAN_E	10	EXPT_E	15	MOVE_E	20	STR_TO_BCD_E		

Condition 2: The output of the function in Condition 1 is branched.

Condition 3: The output data type of the function in Condition 1 is different from the input data type of the function in Condition 3 connected at the branched destination.

In the above program example, the output data of the "MOVE_E" function in Condition 1 is "double word [signed]" type because the input data type of the function in Condition 1 is "double word [signed]" type. The input data type of the "INT_TO_REAL" function in Condition 3 is "word [signed]" type, which is different from the output data type of the "MOVE_E" function in Condition 1.

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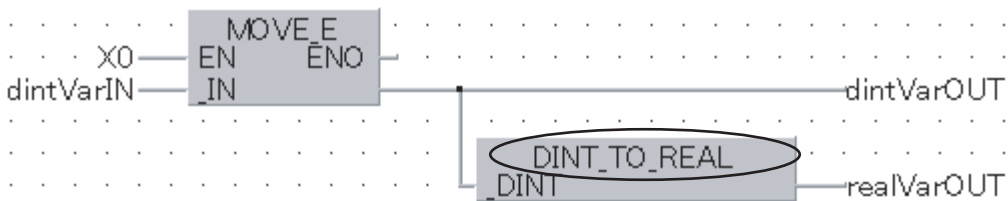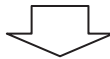GX Works2

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3. Error correction

Change the program to match the output data type of the function in Condition 1 with the input data type of the function in Condition 3.

Correction example: Change the "INT_TO_REAL" function in Condition 3 to the "DINT_TO_REAL" function whose data type is "double word [signed]" type.
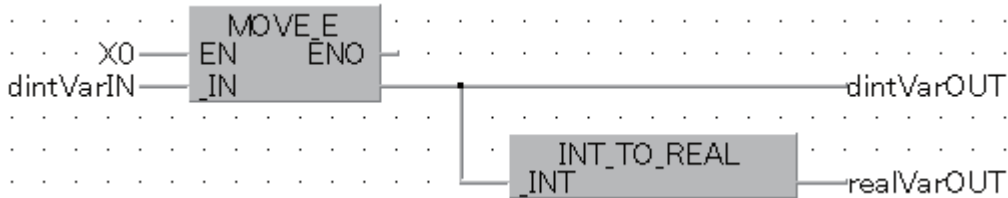
Example of program that causes a compilation error

Example of corrected program