MITSUBISHI ELECTRIC

TECHNICAL BULLETIN

[Issue No.] HIME-T-P-0171A

[Title] Precautions for connecting MELSEC iQ-F Series FX5U CPU module and FX3U-4AD/FX3U-4DA

[Date of Issue] August 2016

[Relevant Models] FX5U/FX5UC, FX5-CNV-BUS, and FX5-CNV-BUSC

Thank you for your support of the Mitsubishi programmable controllers MELSEC iQ-F Series and MELSEC-F Series.
Precautions for connecting the bus conversion module (FX5-CNV-BUS or FX5-CNV-BUSC) to the iQ-F Series, and using FX3U-4AD/FX3U-4DA are given below.

Please refer to this document and the related manuals when using this product. The latest manual is downloadable from our website.

Note

When FX3U-4AD/FX3U-4DA is connected to FX5U/FX5UC, some functions of FX3U-4AD/FX3U-4DA are not supported. Details of the functions that are not supported are as follows.

1. FX3U-4AD type analog input block

■ Convenient function setting (BFM#22)

- Do not use the peak value automatic transfer function (BMF#22 b4) and status automatic transfer function (BFM#22 b5 to b8) which are included in the convenient function.
  Each status data should be read by the sequence program.
  →Refer to the “FX3S/FX3G/FX3GC/FX3U/FX3UC Series User’s Manual - Analog Control Edition” for the convenient functions.

2. FX3U-4DA type analog output block

■ Data table transfer command (BFM#99)

- Do not use the data table transfer command.
  The data table should be set by the sequence program.
  →Refer to the “FX3S/FX3G/FX3GC/FX3U/FX3UC Series User’s Manual - Analog Control Edition” for the data table transfer command.

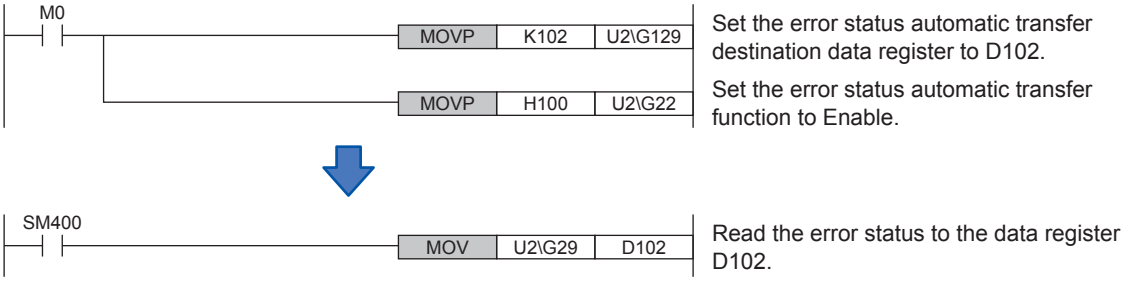
■ Status automatic transfer function (BFM#60)

- Do not use the status automatic transfer function.
  Each status data should be read by the sequence program.
  →Refer to the “FX3S/FX3G/FX3GC/FX3U/FX3UC Series User’s Manual - Analog Control Edition” for the status automatic transfer function.

3. Program example

Refer to the following program example, and create the appropriate program.

- When replacing the error status automatic transfer function with ladder program in FX3U-4AD
  [Example: To transfer the error status to D102]



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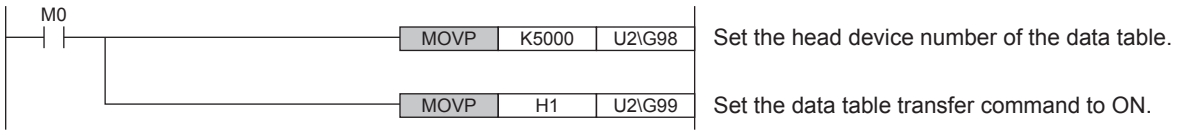
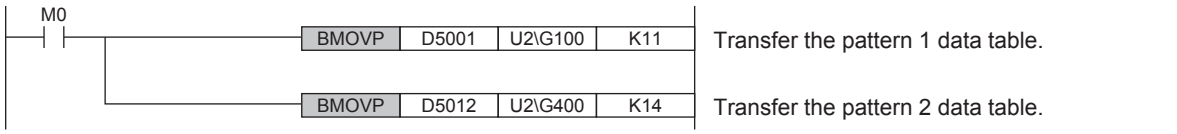
- When replacing the data table transfer with ladder program in FX3U-4DA
  [Example: To transfer two patterns of data table from D5000]

Data register	Set value	Description			
D5000	K2	Number of patterns			2 patterns
D5001	K3	Pattern 1	Number of points in pattern 1		3 points
D5002	K0	Pattern 1	Setting of condition after output at final point in pattern 1		Holding of value output at final point
D5003	K3000	Pattern 1	Point 1	Data to be output at point 1 in pattern 1	3 V
D5004	K18	Pattern 1	Point 1	Output update time at point 1 in pattern 1	1800 ms
D5005	H0021	Pattern 1	Point 1	Output update time unit at point 1 in pattern 1 Point-to-point interpolation method	100 ms S-shaped interpolation
D5006	K8000	Pattern 1	Point 2	Data to be output at point 2 in pattern 1	8 V
D5007	K26	Pattern 1	Point 2	Output update time at point 2 in pattern 1	2600 ms
D5008	H0011	Pattern 1	Point 2	Output update time unit at point 2 in pattern 1 Point-to-point interpolation method	100 ms Linear interpolation
D5009	K5000	Pattern 1	Point 3	Data to be output at point 3 in pattern 1	5 V
D5010	K5	Pattern 1	Point 3	Output update time at point 3 in pattern 1	500 ms
D5011	H0011	Pattern 1	Point 3	Output update time unit at point 3 in pattern 1 Point-to-point interpolation method	100 ms Linear interpolation
D5012	K4	Pattern 2	Number of points in pattern 2		4 points
D5013	K1	Pattern 2	Setting of condition after output at final point in pattern 2		Output of offset value
D5014	K2000	Pattern 2	Point 1	Data to be output at point 1 in pattern 2	2 V
D5015	K6	Pattern 2	Point 1	Output update time at point 1 in pattern 2	6 s
D5016	H0022	Pattern 2	Point 1	Output update time unit at point 1 in pattern 2 Point-to-point interpolation method	1 s S-shaped interpolation
D5017	K10000	Pattern 2	Point 2	Data to be output at point 2 in pattern 2	10 V
D5018	K15	Pattern 2	Point 2	Output update time at point 2 in pattern 2	15 s
D5019	H0002	Pattern 2	Point 2	Output update time unit at point 2 in pattern 2 Point-to-point interpolation method	1 s No interpolation
D5020	K500	Pattern 2	Point 3	Data to be output at point 3 in pattern 2	0.5 V
D5021	K45	Pattern 2	Point 3	Output update time at point 3 in pattern 2	4500 ms
D5022	H0021	Pattern 2	Point 3	Output update time unit at point 3 in pattern 2 Point-to-point interpolation method	100 ms S-shaped interpolation
D5023	K4000	Pattern 2	Point 4	Data to be output at point 4 in pattern 2	4 V
D5024	K9	Pattern 2	Point 4	Output update time at point 4 in pattern 2	9 s
D5025	H0012	Pattern 2	Point 4	Output update time unit at point 4 in pattern 2 Point-to-point interpolation method	1 s Linear interpolation



Set the head device number of the data table.

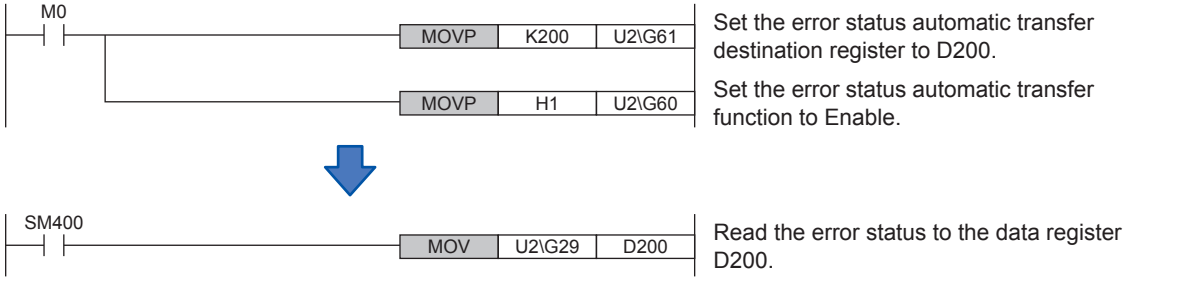
Set the data table transfer command to ON.



Transfer the pattern 1 data table.

Transfer the pattern 2 data table.

- When replacing the error status automatic transfer function with ladder program in FX3U-4DA
  [Example: To transfer the error status to D200]



Set the error status automatic transfer destination register to D200.

Set the error status automatic transfer function to Enable.

Read the error status to the data register D200.

Revised History

Revision	Date	Description
A	August 2016	First Edition