User's Manual

# Analog Output Module (F3DA04-6R/DCR)



Manual No. : IM 34M06H11-03E

Manual Title : Analog Output Module

Edition : 1st Edition

The above manual has the following a change:

In the text, replace F3DA04-6R with F3DA04-6R(including F3DA04-6R/DCR).

### ■ Page 2-1 Table 2.1 Model and Suffix Codes

The following table is added.

Model	Suffix Code	Style Code	Option Code	Description
F3DA04	-6R		/DCR	-10 to 10 V, 0 to 10 V, 0 to 5 V, 1 to 5 V, 4 to 20 mA, 0 to 20 mA and -20 to 20 mA; 4 outputs, 16-bit D/A conversion, 2 μs per channel

#### ■ Page 2-2 Table 2.3 Performance and Functional Specifications

The following table is added.

The specifications except default output signal range are the same as F3DA04-6R.

Item	Specifications*1						
item	F3DA04-6R/DCR						
Output signal range	Voltage output :	-10 to 10V 0 to 10V 0 to 5V 1 to 5V	(-11 to 11V) (-0.5 to 10.5V) (-0.25 to 5.25V) (0.1 to 5.25V)				
	Current output :	4 to 20mA 0 to 20mA -20 to 20mA	(1.25 to 21mA) (default) (-1 to 21mA) (-21 to 21mA)				

<sup>\*1:</sup> The module must be supplied with an external power supply. Unless otherwise indicated, all specifications assume that the external power supply is switched on



## ■ Page 2-3 Table 2.4 Output Conversion Characteristics for Various Output Types and Output Signal Ranges\*1

The following table is added.

F3DA04-6R/DCR is different from F3DA04-6R in default state.

Output	Output Si	gnal Range	Outpu	t Range	Demode
Туре	Analog Output Values	Digital Input Values	Analog Output Values	Digital Input Values	Remarks
Voltage output	-10 to 10V	-20000 to 20000	-11 to 11V	-22000 to 22000	Default state(F3DA04-6R, F3DA08-5R)
	0 to 10V	0 to 20000	-0.5 to 10.5V	-1000 to 21000	
	0 to 5V	0 to 10000	-0.25 to 5.25V	-500 to10500	
	1 to 5V	2000 to 10000	0.1 to 5.25V	200 to 10500	
Current output	4 to 20mA	2000 to 10000	1.25 to 21mA	625 to 10500	Default state(F3DA04-6R/DCR) Selectable for F3DA04-6R (including F3DA04-6R/DCR)
	0 to 20mA	0 to 10000	-1 to 21mA	-500 to 10500	Selectable for F3DA04-6R (including F3DA04-6R/DCR)
	-20 to 20mA	-10000 to 10000	-21 to 21mA	-10500 to 10500	Selectable for F3DA04-6R (including F3DA04-6R/DCR)

<sup>\*1:</sup> These are conversion characteristics with scaling disabled.

## ■ Page 6-9 Table 6.7 Output Signal Range and Default Values of Scale High and Low Limits

The following table is added.

F3DA04-6R/DCR is different from F3DA04-6R in default operation mode setting.

Output	Output Setting*1	Output Signal Range	Scale		Output Range		Domando
Type			High Limit	Low Limit	Analog Output Values	Digital Output Values	Remarks
	\$0	-10 to 10V	-20000	20000	-11 to 11V	-22000 to 22000	Default operation mode setting(F3DA04-6R, F3DA08-5R)
Voltage	\$8	0 to 10V	0	20000	-0.5 to 10.5V	-1000 to 21000	
output	\$4	0 to 5V	0	10000	-0.25 to 5.25V	-500 to 10500	
	\$C	1 to 5V	2000	10000	0.1 to 5.25V	200 to 10500	
Current output	\$E	4 to 20mA	2000	10000	1.25 to 21mA	625 to 10500	Default operation mode setting (F3DA04-6R/DCR) Selectable for F3DA04-6R (including F3DA04-6R/DCR)
	\$6	0 to 20mA	0	10000	-1 to 21mA	-500 to 10500	Selectable for F3DA04-6R (including F3DA04-6R/DCR)
	\$2	-20 to 20mA	-10000	10000	-21 to 21mA	-10500 to 10500	Selectable for F3DA04-6R (including F3DA04-6R/DCR)

<sup>\*1:</sup> Output setting corresponds to the first 4 bits of the Operation Mode Setting register.

<sup>\*2:</sup> These are default scale high and low limit values. The scaling range is configurable within -30000 to 30000.

- Page 5-4 Table 5.4 Mode Registers (part 1 of 2)
- Page 6-11 Table 6.8 Output Type and Range Setting Related Mode Registers
- Page Appx-5 Appendix Table 2 Mode Registers (part 1 of 2)

The following table is added.

F3DA04-6R/DCR is different from F3DA04-6R in default value.

Data Position Number					R/W
Sequence CPU	BASIC CPU	Name	Symbol	Description	*1
511	11	Operation mode setting 1	MD1	Specify the output type and output signal	R/W
512	12	Operation mode setting 2	MD2	range. *2	
513	13	Operation mode setting 3	MD3	Bits 15 to 12: output type and output signal	
514	14	Operation mode setting 4	MD4	range	
515	15	Operation mode setting 5	MD5	Bits 11 to 0: not used, must always be 0.	
516	16	Operation mode setting 6	MD6	[F3DA04-6R, F3DA08-5R] Default value: 0	
517	17	Operation mode setting 7	MD7	[F3DA04-6R/DCR] Default value: E	
518	18	Operation mode setting 8	MD8	For details, see Figure 6.8, "Operation Mode Setting."	

<sup>\*1: &</sup>quot;R/W" indicates a register for reading and writing. "R" indicates a read-only register. Any data written to a read-only register is ignored and has no effect on module operation.

<sup>\*2:</sup> Operating Mode Settings 1-8 are applied when the value of 1 is written to the Operation Mode Setup Flag. After the settings are applied, the Operation Mode Setup Flag reverts to 0 and Operation Modes 1 to 8 at data position numbers 211 to 218 are updated accordingly.