MELSEC-L Digital-Analog Converter Module Sample Ladder Reference Manual

Applicable modules: L60DA4

<Contents>

Re	efer	rer	nce Manual Revision History	2
1.		0	verview	3
2.		W	/hen Using the Module in Standard System Configuration (When Using Intelligent Function Module	
		Ρ	arameters)	5
	2.	1	D/A conversion value output	5
3.		W	/hen Using the Module in Standard System Configuration (When Not Using Intelligent Function Module	
		Ρ	arameters)	13
	3.	1	D/A conversion value output	13
4.		W	/hen Connecting the Module to the Head Module	21
	4.	1	D/A conversion value output	21

Reference Manual Revision History

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1. Overview

Overview of the Sample Ladder Program

The sample ladder programs support a system that uses the MELSEC-L digital-analog converter module (L60DA4).

Sample Ladder Program Functions

The programs have the following functions.

(1) When Using the Module in Standard System Configuration (When Using Intelligent Function Module Parameters)

No.	Project name	Program	Item	Description	Version
		name			
1	LD-L60DA4_PRM	01OutDA	D/A conversion	Outputs an analog value that was	1.00A
	_V100A_E		value output	D/A converted by the digital-analog	
				converter module using the	
				configuration function.	

(2) When Using the Module in Standard System Configuration (When Not Using Intelligent Function Module Parameters)

No.	Project name	Program	Item	Description	Version
		name			
1	LD-L60DA4_NPM_	01OutDA	D/A conversion	Outputs an analog value that was	1.00A
	V100A_E		value output	D/A converted by the digital-analog	
				converter module without using the	
				configuration function.	

(3) When Connecting the Module to the Head Module

No.	Project name	Program	Item	Description	Version
		name			
1	LD-L60DA4_IEF_V	01OutDA	D/A conversion	Outputs an analog value that was	1.00A
	100A_E		value output	D/A converted by the digital-analog	
				converter module on the intelligent	
				device station using CC-Link IE	
				Field Network.	

Relevant Manuals

MELSEC-L Digital-Analog Converter Module User's Manual MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual MELSEC-L CC-Link IE Field Network Master/Local Module User's Manual MELSEC-L CC-Link IE Field Network Head Module User's Manual QCPU User's Manual(Hardware Design, Maintenance and Inspection) MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection) GX Works2 Version 1 Operating Manual (Common) GX Developer Version 8 Operating Manual

Note

This manual describes the functions of the sample ladder programs. It does not include information on restrictions of use such as combination with modules or programmable controller CPUs. Before using any Mitsubishi products, please read all the relevant manuals.

For information on the detailed specifications and operation timings of the sample ladder programs, refer to the MELSEC-L Digital-Analog Converter Module User's Manual. The descriptions of the sample ladder programs in this manual may be different from the ones found in the MELSEC-L Digital-Analog Converter Module User's Manual depending on the date created.

2. When Using the Module in Standard System Configuration (When Using Intelligent Function Module Parameters)

2.1 D/A conversion value output

Function Overview

This program outputs an analog value that was D/A converted by the digital-analog converter module in a standard system configuration using the intelligent module parameters.

Program

This function uses the project (program name).

•LD-L60DA4_PRM_V100A_E(01OutDA)

Applicable Hardware and Software

The following are the hardware and software applicable to the sample ladder programs.

Model	Description			
Digital-analog converter module	L60DA4			
CPU module				
	Series	Model		
	MELSEC-L series	LCPU		
Input Module	MELSEC-L series input module			
Output Module	MELSEC-L series output module			
Compatible software	GX Works2, GX Developer *1 *2			
	*1 For software versions applicable to the module used, refer to "Relevant manuals".			
	*2 When using GX Developer, use GX Configurator-DA to set the intelligent			
	function module para	meters.		

System Configuration

The following system configuration is used for the sample ladder programs.

Power supply module	CPU module L26CPU-BT	Digital- Analog Converter module L60DA4	Input module LX40C6	Output module LY42NT1P
		X/Y30	X/Y40	X/Y50
		~ X/Y3F	~ X/Y4F	~ X/Y8F
			2000 2 3 4 9 7 9 1 2 3 4 9 7 9 1 2 3 4 5 7 9 4 5 7 9 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 5 7 8 4 5 5 7 8 4 5 5 7 8 4 5 5 7 8 4 5 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4 5 7 8 4	

This program uses the following devices.

No.	Device	Data Type	Application	Remarks
1	X30	Bit	Module READY	-
2	X37	Bit	External power supply READY flag	-
3	X3E	Bit	Warning output signal	-
4	X3F	Bit	Error occurrence flag	-
5	X41	Bit	Batch output enable signal	-
6	X42	Bit	Digital value write command input	-
			signal	
7	X44	Bit	Warning output reset signal	-
8	X45	Bit	Error reset signal	-
9	Y31	Bit	CH1 Output enable/disable flag	-
10	Y32	Bit	CH2 Output enable/disable flag	-
11	Y3E	Bit	Warning output clear request	Turns OFF→ON to reset the warning
				output.
12	Y3F	Bit	Error clear request	Turns OFF \rightarrow ON to reset the error.
13	Y50 to Y5F	Bit	Error code display (BCD 4 digits)	-

Conditions for Using Sample Ladder Programs

Parameter Settings for the Digital-Analog Converter Module

The following explains the settings for the L60DA4 digital-analog converter module that the programs use.

- (1) Switch Setting
 - a) Open the switch setting screen and configure the setting as follows.

Project window→[Intelligent Function Module]→Module name→[Switch Setting]

	Switc	n Setting	0000:L60DA4		×		
Output Range Setting							
	CH Output range HOLD/CLEAR function						
	CH1 4 to 20mA ▼ CLEAR						
		CH2	4 to 20mA	CLEAR			
		CH3	4 to 20mA	CLEAR			
	CH4 4 to 20mA CLEAR						
	Drive I	Mode Settin	g				
		Normal Mo	de	•			
	* If an out-of-range value is contained in the switch setting of the PLC parameter,it will be treated as default setting.						
				OK Cancel			

Table 2-1 Switch setting

		-
	Setting value	(HOLD/CLEAR function)
CH1	4to20mA	(CLEAR)
CH2	4to20mA	(CLEAR)
CH3	4to20mA	(CLEAR)
CH4	4to20mA	(CLEAR)
Drive Mode Setting	Normal Mode	

(2) Parameter Setting

a) Open the parameter setting screen and configure the setting as follows.

Project window→[Intelligent Function Module]→Module name→[Parameter]

➢ 0030:L60DA4[]-Parameter							
Display Filter Display All							
Item	CH1	CH2	СНЗ	CH4			
😑 Basic setting	Sets method of D/A conv	ersion control.					
D/A conversion enable/disable setting	0:Enable	0:Enable	1:Disable	1:Disable			
Warning output function	Sets for warnings on D/A	conversion.					
Warning output setting	1:Disable	0:Enable	1:Disable	1:Disable			
Warning output upper limit value	0	10000	0	0			
Warning output lower limit value	0	3000	0	0			
Scaling function	Sets for scaling on D/A co	onversion.					
Scaling enable/disable setting	0:Enable	1:Disable	1:Disable	1:Disable			
Scaling upper limit value	32000	0	0	0			
Scaling lower limit value	0	0	0	0			
Sets method of D/A conversion control.							

Table 2-2 Parameter setting

		CH1	CH2	CH3	CH4
Basic setting	D/A conversion enable/disable setting	0: Enable	0: Enable	1:Disable	1:Disable
Warning	Warning output setting	1:Disable	0: Enable	1:Disable	1:Disable
output function	Warning output upper limit value		10000		
	Warning output lower limit value		3000		
Scaling	Scaling enable/disable setting	0: Enable	1: Disable	1:Disable	1:Disable
function	Scaling upper limit value	32000			
	Scaling lower limit value	0			

(3) Auto Refresh Setting

a) Open the auto refresh setting screen and configure the setting as follows.

Project window→[Intelligent Function Module]→Module name→[Auto Refresh]

💋 0030:L60DA4[]-Auto_Refresh					
Display Filter Display All	•				-
Item	CH1	CH2	CH3	CH4	
🖃 Transfer to PLC	Transfers buffer mem	ory data to the specified	l device.		
Set value check code					
Warning output flag	D8				
Latest error code	D10				
Latest address of error history					
Transfer to intelligent function module	Transfers the data of	specified device to the b	uffer memory.		
Digital value	D1	D2			-

Table 2-3 Auto refresh setting

		CH1	CH2	CH3	CH4	
Transfer to PLC	Set value check code	-	-	-	-	
	Warning output flag	D8				
Latest error code		D10				
	Latest address of error history	-				
Transfer to intelligent function module	Digital value	D1	D2	-	-	

Devices

This program uses the following devices.

No.	Device	Data Type	Application	Remarks
1	SM400	Bit	Warning output flag read	Always ON
2	X30	Bit	Module READY	-
3	X37	Bit	External power supply READY flag	-
4	X3E	Bit	Warning output signal	-
5	X3F	Bit	Error occurrence flag	-
6	X41	Bit	Batch output enable signal	-
7	X42	Bit	Digital value write command input	-
			signal	
8	X44	Bit	Warning output reset signal	-
9	X45	Bit	Error reset signal	-
10	Y31	Bit	CH1 Output enable/disable flag	-
11	Y32	Bit	CH2 Output enable/disable flag	-
12	Y3E	Bit	Warning output clear request	Turns OFF \rightarrow ON to reset the warning
				output.
13	Y3F	Bit	Error clear request	Turns OFF \rightarrow ON to reset the error.
14	Y50 to Y5F	Bit	Error code display (BCD 4 digits)	-
15	M20 to M27	Bit	Warning output flag	-
16	D1	Word	CH1 Digital value	Stores the CH1 digital output value.
17	D2	Word	CH2 Digital value	Stores the CH1 digital output value.
18	D8	Word	Warning output flag	-
19	D10	Word	Error code	Stores the error code.

Version Upgrade History

Version	Date	Description
1.00A	2011/09/26	First edition





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3. When Using the Module in Standard System Configuration (When Not Using Intelligent Function Module Parameters)

3.1 D/A conversion value output

Function Overview

This program outputs an analog value that was D/A converted by the digital-analog converter module in a standard system configuration without using the intelligent module parameters.

Program

This function uses the project (program name).

•LD-L60DA4_NPM_V100A_E(01OutDA)

Applicable Hardware and Software

The following are the hardware and software applicable to the sample ladder programs.

Model	Description		
Digital-analog converter module	L60DA4		
CPU module			
	Series	Model	
	MELSEC-L series	LCPU	
Input Module	MELSEC-L series input module		
Output Module	MELSEC-L series output module		
Compatible software	GX Works2, GX Developer *1		
	*1 For software versions applicable to the module used, refer to "Relevant		
	manuals".		

System Configuration

The following system configuration is used for the sample ladder programs.



This program uses the following devices.

No.	Device	Data Type	Application	Remarks
1	X30	Bit	Module READY	-
2	X37	Bit	External power supply READY flag	-
3	X39	Bit	Operating condition setting	-
			completed flag	
4	X3E	Bit	Warning output signal	-
5	X3F	Bit	Error occurrence flag	-
6	X41	Bit	Batch output enable signal	-
7	X42	Bit	Digital value write command input	-
			signal	
8	X44	Bit	Warning output reset signal	-
9	X45	Bit	Error reset signal	-
10	Y31	Bit	CH1 Output enable/disable flag	-
11	Y32	Bit	CH2 Output enable/disable flag	-
12	Y39	Bit	Operation condition setting request	-
13	Y3E	Bit	Warning output clear request	Turns OFF→ON to reset the warning
				output.
14	Y3F	Bit	Error clear request	Turns OFF→ON to reset the error.
15	Y50 to Y5F	Bit	Error code display (BCD 4 digits)	-

Conditions for Using Sample Ladder Programs

Parameter Settings for the Digital-Analog Converter Module

The following explains the settings for the L60DA4 digital-analog converter module that the programs use.

- (1) Switch Setting
 - a) Open the switch setting screen and configure the setting as follows.

Project window→[Intelligent Function Module]→Module name→[Switch Setting]

	Switc	n Setting	0000:L60DA4		×		
1	Outpu	t Range Sel	tting				
		СН	Output range	HOLD/CLEAR function			
		CH1	4 to 20mA 📃 💌	CLEAR			
		CH2	4 to 20mA	CLEAR			
		CH3	4 to 20mA	CLEAR			
		CH4	4 to 20mA	CLEAR			
	Drive I	Mode Settin	g				
		Normal Mo	de	•			
					_		
* If an out-of-range value is contained in the switch setting of the PLC parameter,it will be treated as default setting.							
				OK Cancel			

Table 3-1 Switch setting

		-
	Setting value	(HOLD/CLEAR function)
CH1	4to20mA	(CLEAR)
CH2	4to20mA	(CLEAR)
CH3	4to20mA	(CLEAR)
CH4	4to20mA	(CLEAR)
Drive Mode Setting	Normal Mode	

Devices

This program uses the following devices.

No.	Device	Data Type	Application	Remarks
1	SM400	Bit	Warning output flag read	Always ON
2	X30	Bit	Module READY	-
3	X37	Bit	External power supply READY flag	-
4	X39	Bit	Operating condition setting	-
			completed flag	
5	X3E	Bit	Warning output signal	-
6	X3F	Bit	Error occurrence flag	-
7	X41	Bit	Batch output enable signal	-
8	X42	Bit	Digital value write command input	-
			signal	
9	X44	Bit	Warning output reset signal	-
10	X45	Bit	Error reset signal	-
11	Y31	Bit	CH1 Output enable/disable flag	-
12	Y32	Bit	CH2 Output enable/disable flag	-
13	Y39	Bit	Operation condition setting request	-
14	Y3E	Bit	Warning output clear request	Turns OFF→ON to reset the warning
				output.
15	Y3F	Bit	Error clear request	Turns OFF \rightarrow ON to reset the error.
16	Y50 to Y5F	Bit	Error code display (BCD 4 digits)	-
17	M20 to M27	Bit	Warning output flag	-
18	M100	Bit	Module READY checking flag	-

Version Upgrade History

Version	Date	Description
1.00A	2011/09/26	First edition

Program

l setting		
) X30 1	SET M1 Mi Eł ck ag	100 lodul ADY king g
	<d a="" conversion="" enable<="" th=""><th></th></d>	
Module R Operatio OP condi EADY che n condit tion set cking fl ion sett complet ag ing req ed flg	U3: [MOV H0C G0 D, er le. le. le	⊧¥ 0 rter ⊧/dis e set
	<scaling setting<="" td=""><td></td></scaling>	
	U3 MOV H0E G5 Sci en is: et	¦¥ 53 icali nabl sable ttine
	<warning output="" setting<="" td=""><td>z</td></warning>	z
	U3 MOV HOD G4 W ou et	:¥ /arn utpu ttine
	<ch1 limit<="" lower="" scaling="" td=""><td>val</td></ch1>	val
	U33 ———————————————————————————————————	:¥ 54 :H1 ng lo limi alue
	<ch1 limit<="" scaling="" td="" upper=""><td>val</td></ch1>	val
		i¥ 55 H1 Ig u Iim alue
	CH2 warning output upper Lips	r In
	[MOV K10000 G3 CI O سبب سبب mi	B8 H2 ppe nit v
	<ch2 lower<="" output="" td="" warning=""><td>r Im</td></ch2>	r Im
	U3: ————————————————————[MOV K3000 G8 OI o lov mi	:¥ 89 :H2 outp ower ower
	<turns cond="" on="" operation="" s<="" td=""><td>set</td></turns>	set
	SET Y3 Or n ior internation	}9 iper cor n s ng re
	Грст М1	100

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4. When Connecting the Module to the Head Module

4.1 D/A conversion value output

Function Overview

This program outputs an analog value that was D/A converted by the digital-analog converter module on the intelligent device station in a system configuration where a head module is connected.

Program

This function uses the project (program name).

•LD-L60DA4_IEF_V100A_E(01OutDA)

Applicable Hardware and Software

The following are the hardware and software applicable to the sample ladder programs.

Model	Description			
Digital-analog converter module	L60DA4			
CC-Link IE Field Network module	CC-Link IE Field Network n	naster/local module		
	CC-Link IE Field Network h	ead module		
CPU module				
	Series	Model		
	MELSEC-Q series	Universal model QCPU *1		
	MELSEC-L series	LCPU *2		
	*1 The first five digits of the serial number are "12012" or later.			
	*2 The first five digits of the serial number are "13012" or later.			
Input Module	MELSEC-Q/L series input r	nodule		
Output Module	MELSEC-Q/L series output module			
Compatible software	GX Works2 *1			
	*1 For software versions applicable to the module used, refer to			
	"Relevant manuals".			

System Configuration

The following system configuration is used for the sample ladder programs.



No. Application Remarks Device Data Type 1 X21 Batch output enable signal Bit _ 2 X22 Bit Digital value write command input _ signal X24 Bit 3 Warning output reset signal _ 4 X25 Bit Error reset signal _ 5 X1000 _ Bit Module READY 6 X1007 Bit External power supply READY flag _ 7 X100E Bit Warning output signal -X100F 8 Bit Error occurrence flag _ 9 Y30 to Y3F Error code display (BCD 4 digits) Bit _ 10 Y1001 Bit _ CH1 Output enable/disable flag 11 Y1002 Bit CH2 Output enable/disable flag _ Y100E Warning output clear request Turns OFF→ON→OFF to reset the 12 Bit warning output. 13 Y100F Bit Error clear request Turns OFF→ON→OFF to reset the error.

This program uses the following devices.

Conditions for Using Sample Ladder Programs

Use GX Works2 when connecting to the head module.

Parameter Settings for the Digital-Analog Converter Module

The following explains the settings for the L60DA4 digital-analog converter module that the programs use.

- (1) Settings for the Master Station
 - a) Configure settings for the master station.

Project window→[Parameter] → [Network Parameter] →[Ethernet/CC IE/MELSECNET]

A Network Parameter Setting	the Number of MELSECNET/CC IE	/Eth	ernet Cards			×
						-
	Module 1	Т	Module 2	Module 3	Module 4	:
Network Type	CC IE Field (Master Station)	No	e 🗸	None 🗸	None 🗸	
Start I/O No.	000	D				
Network No.		1				
Total Stations		1				
Group No.						
Station No.		D				
Mode	Online (Normal Mode)	·	-	-	•	
	Network Configuration Setting					
	Network Operation Setting					
	Refresh Parameters					
	Interrupt Setting					
	Specify Station No. by Parameter					

Table 4-1 Network parameter setting

Module 1
CC IE Field (Master Station)
0000
1
1

b) Open the network configuration setting screen and configure the setting as follows.

Project window→[Parameter]→[Network Parameter]→[Ethernet/CC IE/MELSECNET]→Network Configuration Setting

🔒 Network Param	eter CC IE	Field Network Configu	ura	tion Se	tting N	lodule	No:1					
Set up Network Assignment Methoo C Points/Start C Start/End	configuration. - The colur Please re	nn contents for refresh dev open the window after com	rice : iplet	will be ch ing refre	anged c sh parar	orrespor neter se	nding to r tting whe	efresh p n chang	arameter ing refres	setting contents, h parameter.		<u>•</u>
				RX,	/RY Setti	ng	RWw	/RWr Se	tting			Refresh D 🔺
Number of PLCs	Station No.	Station Type		Points	Start	End	Points	Start	End	RX	RY	
1	1	Intelligent Device Station	-	256	0000	00FF	256	0000	00FF)	1000(256)	Y1000(256)	₩ 🕶

	Table 4	4-2	Network	config	uration	setting
--	---------	-----	---------	--------	---------	---------

						-	
ſ	/	Station		RX/RY Sett	ting	RWw/RWr	Setting
	\sim	No.	Station Type	Start	End	Start	End
ſ	1	1	Intelligent Device Station	0000	00FF	0000	00FF

c) Open the refresh parameter setting screen and configure the setting as follows.

Project window→[Parameter]→[Network Parameter]→[Ethernet/CC IE/MELSECNET]→Refresh Parameters

Network Parame	eter CC I	IE Fi	eld Refre	sh Param	eter Modu	ule No:	1						L	
Assignment Method														
			Link Si	ide					PLC Si	ide				
	Dev. N	ame	Points	Start	End		Dev. N	ame	Points	Start	End			
Transfer SB	SB		512	0000	01FF	+	SB	-	512	0000	01FF			
Transfer SW	SW		512	0000	01FF	÷	SW	-	512	0000	01FF			
Transfer 1	RX	-	256	0000	00FF	÷	X	-	256	1000	10FF			
Transfer 2	RY	-	256	0000	00FF	- ₩	Y	-	256	1000	10FF			
Transfer 3	RWw	Ţ.	256	0000	00FF	÷÷	W	-	256	000000	0000FF			
Transfer 4	RWr	-	256	0000	00FF	÷÷-	W	-	256	001000	0010FF			
Transfer 5		-				÷÷-		-						
Transfer 6		-				÷		-						
		-				÷÷		-						
Transfer 7								_						

Table 4-3 Refresh parameter setting

Link Side				CPU Side	
Device	Start	End		Device	Start
Name				Name	
SB	0000	01FF	\leftrightarrow	SB	0000
SW	0000	01FF	\leftrightarrow	SW	0000
RX	0000	00FF	\leftrightarrow	Х	1000
RY	0000	00FF	\leftrightarrow	Y	1000
RWw	0000	00FF	\leftrightarrow	W	000000
RWr	0000	00FF	\leftrightarrow	W	001000

- (2) Settings for the intelligent device station.
 - a) Select "LCPU" in "PLC Series" and "LJ72GF15-T2" for "PLC Type" and create a project.

[Project]→[New Project]

New Project	X
Project Type: Simple Project	OK Cancel
PLC Series:	·
LJ72GF15-T2	- -

b) Open the PLC parameter setting screen and configure the setting as follows.

Project window→[Parameter]→[PLC Parameter]→[Communication Head Setting]

CC-Link IE Field Communication Head Parameter Setting	
Communication Head Setting PLC Name PLC System PLC RAS Operation Setti	ig [I/O Assignment]
CC-Link IE Field Network Setting	
Mode Online 💌	
Network No. 1 (1 to 239)	
Station No. 1 (1 to 120)	
* Operating with station No. setting of CC IE Field diagnostics in master station when petwork No. and station No. are	
blank in online setting.	
Hold (Store in flash ROM) PLC diagnostic error history and system error	
history by POWER-OFF/REDET.	

Table 4-4 Communication head setting

	Setting value
Mode	Online
Network No.	1
Station No.	1

c) Open the new module setting screen and configure the setting as follows. Project window→[Intelligent Function Module]→right-click→[New Module]

New Module	
Module Selection Module Type Module Name	Analog Module
Mount Position Base No.	Mounted Slot No. 0 Acknowledge I/O Assignment address 0000 (H) 1 Module Occupy [16 points]
Title Setting Title	OK Cancel

d) Open the switch setting screen and configure the setting as follows.
 Project window→[Intelligent Function Module]→Module name→[Switch Setting]

Output Rar	nge Setting	UDA4		×
	TH Outp	ut range	HOLD/CLEAR fun	iction
C	H1 4 to 2	20mA 🔹 🔻	CLEAR	
C	H2 4 to) 20mA	CLEAR	
C	H3 4 to	20mA	CLEAR	
C	H4 4 to) 20mA	CLEAR	
	of-range value is	contained in t	he switch setting of	f the PLC

Table 4-5 Switch setting

	Setting value	(HOLD/CLEAR function)
CH1	4to20mA	(CLEAR)
CH2	4to20mA	(CLEAR)
CH3	4to20mA	(CLEAR)
CH4	4to20mA	(CLEAR)
Drive Mode Setting	Normal Mode	

e) Open the parameter setting screen and configure the setting as follows.

Project window→[Intelligent Function Module]→Module name→[Parameter]

play Filter Display All	•				
Item	CH1	CH2	СНЗ	CH4	
Basic setting	Sets method of D/	A conversion control.			
D/A conversion enable/disable	0:Enable	0:Enable	1:Disable	1:Disable	
Warning output function	Sets for warnings	on D/A conversion.			
Warning output setting	1:Disable	0:Enable	1:Disable	1:Disable	
Warning output upper limit value	0	10000	0	0	
Warning output lower limit value	0	3000	0	0	
Scaling function	Sets for scaling on D/A conversion.				
Scaling enable/disable setting Scaling upper limit value	0:Enable	1(Disable	1:Disable	1:Disable	
	32000	0	0	0	
Scaling lower limit value	0	0	0	0	
ets the lower limit value for scaling calc n error will occur unless upper limit > lo scaling is set to "disable", this setting i 2000 to 22000	ulation. wer limit. will be ignored.				

Table 4-6 Parameter setting

		CH1	CH2	CH3	CH4
Basic setting	D/A conversion enable/disable setting	0: Enable	0: Enable	1: Disable	1: Disable
Warning Output Function Warning output setting		1: Disable	0: Enable	1: Disable	1: Disable
Warning output upper limit value			10000		
	Warning output lower limit value		3000		
Scaling function	Scaling function	0: Enable	1: Disable	1: Disable	1: Disable
	Scaling upper limit value	32000			
	Scaling lower limit value	0			

f) Open the auto refresh setting screen and configure the setting as follows.

Project window→[Intelligent Function Module]→Module name→[Auto Refresh]

🕴 0000:L60DA4[]-Auto_Refresh				
Display Filter Display All	•			
Item Transfer to PLC Set value check code Uarning output flag Latest error code Latest address of error history Transfer to intelligent function module	CH1 Transfers buffer mem W1008 W1010 Transfers the data of	CH2 ory data to the specific specified device to the	CH3 ed device. buffer memory.	CH4
Digital value	W1	W2		
Transfer Direction [Intelligent Function Module -> PLC] Buffer Memory Address [19 (13h)], Transfer Word Counts[1] Stores the error codes detected in D/A conversion module.				

Table 4-7 Auto refresh setting

		CH1	CH2	CH3	CH4
Transfer to PLC	Set value check code	-	-	-	-
	Warning output flag	W1008			
	Latest error code	W1010			
	Latest address of error history	-			
Transfer to intelligent function module	Digital value	W1	W2	-	-

Devices

This program uses the following devices.

No.	Device	Data Type	Application	Remarks
1	SM400	Bit	Warning output flag read	Always ON
2	SB49	Bit	Data link status of the own station	-
3	SW0B0.0	Bit	Data link status of each station	-
			(station No.1)	
4	X21	Bit	Batch output enable signal	-
5	X22	Bit	Digital value write command input	-
			signal	
6	X24	Bit	Warning output reset signal	-
7	X25	Bit	Error reset signal	-
8	X1000	Bit	Module READY	-
9	X1007	Bit	External power supply READY flag	-
10	X100E	Bit	Warning output signal	-
11	X100F	Bit	Error occurrence flag	-
12	Y30 to Y3F	Bit	Error code display (BCD 4 digits)	-
13	Y1001	Bit	CH1 Output enable/disable flag	-
14	Y1002	Bit	CH2 Output enable/disable flag	-
15	Y100E	Bit	Warning output clear request	Turns OFF→ON→OFF to reset the
				warning output.
16	Y100F	Bit	Error clear request	Turns OFF→ON→OFF to reset the
				error.
17	MO	Bit	Communication condition	-
			satisfaction flag (station No.1)	
18	M20 to M27	Bit	Warning output flag	-
19	W1	Word	CH1 Digital value	Stores the CH1 digital conversion
				value.
20	W2	Word	CH2 Digital value	Stores the CH2 digital conversion
				value.
21	W1008	Word	Warning output flag	Stores the warning output flat.
22	W1010	Word	Latest error code	Stores the latest error code.

Version Upgrade History

Version	Date	Description
1.00A	2011/09/26	First edition

Program



Continues on next page.

