MELSEC-L Positioning Module FB Library (CC-Link IE Field compatible) Reference Manual

Applicable module:

LD75P1, LD75P2, LD75P4, LD75D1, LD75D2, LD75D4

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Reference Manual Revision History

Reference Manual Number	Date	Description		
FBM-M055-A	2011/06/30	First edition		
FBM-M055-B	2013/01/25	Applicable module is added to CONTENTS.		
		2) The following modules are added to Applicable module.		
		• LD75P1		
		• LD75P2		
		• LD75D1		
		• LD75D2		
		3) The module diagram of System Configuration is changed.		
		4) The description style of Applicable hardware and software is		
		changed.		
		5) FB Version Upgrade History for the following FBs is added.		
		M+LD75-IEF_CPUReady (PLC ready signal ON)		
		M+LD75-IEF_StartPosi (Positioning start)		
		M+LD75-IEF_JOG (JOG/inching operation)		
		M+LD75-IEF_MPG (Manual pulse generator operation)		
		M+LD75-IEF_ChgSpeed (Speed change)		
		M+LD75-IEF_ChgAccDecTime		
		(Acceleration/deceleration time setting value change)		
		M+LD75-IEF_ChgPosi (Target position change)		
		M+LD75-IEF_Restart (Restart)		
		M+LD75-IEF_ErrorOperation (Error operation)		
		M+LD75-IEF_InitParam (Parameter initialization)		
		M+LD75-IEF_WriteFlash (Flash ROM writing)		
		6) List of devices of FB Library Application Examples is changed.		
		7) The figure in FB Library Application Examples for the following FB		
		is changed.		
		M+LD75-IEF_CPUReady (PLC ready signal ON)		
		8) Each processing timing is modified in "Timing chart".		
FBM-M055-C	2015/11/20	Added applicable GX Works2 Version.		
		This FB is able to install on GX Works2 of all language versions.		



1. Overview

1.1. Overview of the FB Library

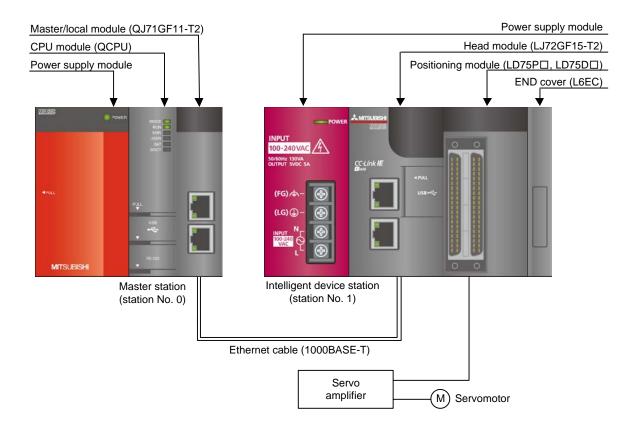
This FB library is for using the MELSEC-L LD75P/LD75D positioning module through the MELSEC CC-Link IE field.

1.2. Function of the FB Library

Item	Description
M+LD75-IEF_SetBPARAM1	Sets basic parameters 1 (Pr.1 to Pr.7).
M+LD75-IEF_SetBPARAM2	Sets basic parameters 2 (Pr.8 to Pr.10).
M+LD75-IEF_SetDPARAM1	Sets detailed parameters 1 (Pr.11 to Pr.24, and Pr.150).
M+LD75-IEF_SetDPARAM2	Sets detailed parameters 2 (Pr.25 to Pr.42).
M+LD75-IEF_SetZBPARAM	Sets OPR basic parameters (Pr.43 to Pr.48).
M+LD75-IEF_SetZDPARAM	Sets OPR detailed parameters (Pr.49 to Pr.57).
M+LD75-IEF_PosiDataSet	Sets positioning data (Da.1 to Da.10).
M+LD75-IEF_CPUReady	Outputs the PLC ready signal.
M+LD75-IEF_StartPosi	Starts positioning.
M+LD75-IEF_JOG	Carries out JOG and inching operation.
M+LD75-IEF_MPG	Carries out manual pulse generator operation.
M+LD75-IEF_ChgSpeed	Performs speed change.
M+LD75-IEF_ChgOverride	Performs override.
M+LD75-IEF_ChgAccDecTime	Changes the setting value of the acceleration/deceleration time.
M+LD75-IEF_ChgPosi	Changes the target position.
M+LD75-IEF_Restart	Performs restart.
M+LD75-IEF_ErrorOperation	Monitors errors and warnings, and performs error reset.
M+LD75-IEF_InitParam	Initializes parameters.
M+LD75-IEF_WriteFlash	Writes the setting data to the flash ROM.



1.3. System Configuration Example

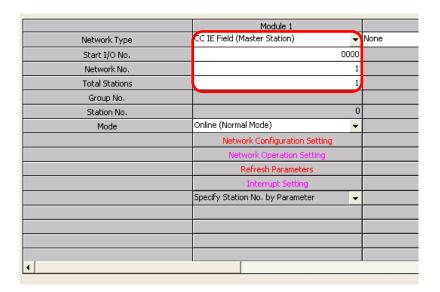


1.4. Setting the CC-Link IE Field Network Master/Local Module

This section explains the settings of CC-Link IE field network master/local module based on Section 1.3 "System Configuration Example". Set the following items using GX Works2.

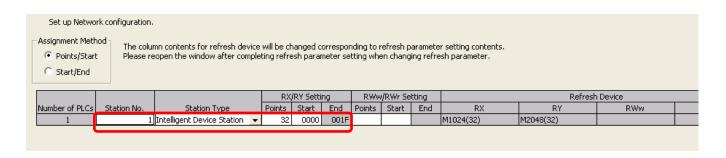
(1) Network parameters

Item	Description			
Network Type	Select the CC IE Field (Master Station).			
Start I/O No.	Set the start I/O number of the master/local module in increments of 16 points.			
	Set "0000".			
Network No.	Set the network number of the master/local module.			
	Set "1".			
Total Stations	Set the number of slave stations connected to the master station. Include the number of			
	reserved slave stations.			
	Set "1".			



(2) Network configuration setting

Item	Description			
Station No.	Set the station number of the slave connected to the master station.			
	Set "1".			
Station Type	Set the station type of the slave connected to the master station.			
	Set "Intelligent Device Station".			
RX/RY setting	Set assignment for RX/RY for the slave station connected to the master station.			
	(a) Points Set "32".			
	(b) Start Set "0000".			





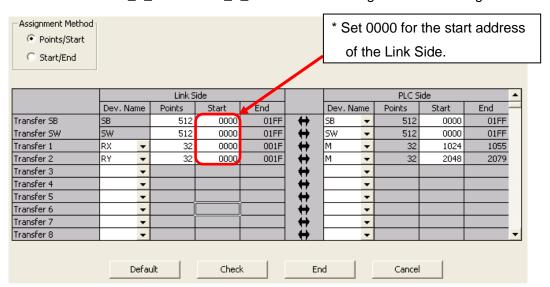
(3) Refresh Parameters

Item	Description	Setting value		е
Transfer SB	Select the link refresh range of SB device.	• "Link Side	Points"	: 512
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	": SB
		• "PLC Side	Start"	: 0000
Transfer SW	Select the link refresh range of SW device.	• "Link Side	Points"	: 512
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	": SW
		• "PLC Side	Start"	: 0000
Transfer 1	Select the link refresh range of RX device.	• "Link Side	Dev. Name	': RX
		• "Link Side	Points"	: 32
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	": M
		• "PLC Side	Start"	: 1024
Transfer 2	Select the link refresh range of RY device.	• "Link Side	Dev. Name	': RY
		• "Link Side	Points"	: 32
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	": M
		• "PLC Side	Start"	: 2048

^{*} Make sure to set "0000" for the Start of the Link side.

^{*} Change the Points of the Link Side and Dev. Name and Start of the PLC Side according to the system.

They must be the same as for "M_F_RX" and "M_F_RY" devices of the global label setting.





1.5. Setting Global Labels

Global labels must be set before using this FB. This section explains global label settings.

(1) M_F_RX Set remote input (RX).

Item	Description
Class	Select "VAR_GLOBAL".
Label Name	Enter "M_F_RX".
Data Type	Select "Bit".
Device	Enter the refresh device set for the refresh parameter with a "Z9" prefix.

(2) M_F_RY Set remote output (RY).

Item	Description
Class	Select "VAR_GLOBAL".
Label Name	Enter "M_F_RY".
Data Type	Select "Bit".
Device	Enter the refresh device set for the refresh parameter with a "Z8" prefix.

	Class	Label Name	Data Tune	Constant	Device	Comment
1	VAR_GLOBAL ▼	M_F_RX	Bit		M1024Z9	RX refresh device
2	VAR_GLOBAL ▼	M_F_RY	Bit		M2048Z8	RY refresh device
3	~					
4	-					
5	-					



1.6. Creating Interlock Programs

Interlock programs must be created for the FBs. The following are examples of interlock programs.

Set one interlock program to each cyclic transmission and transient transmission.

(Set a corresponding FB between MC and MCR instructions.)

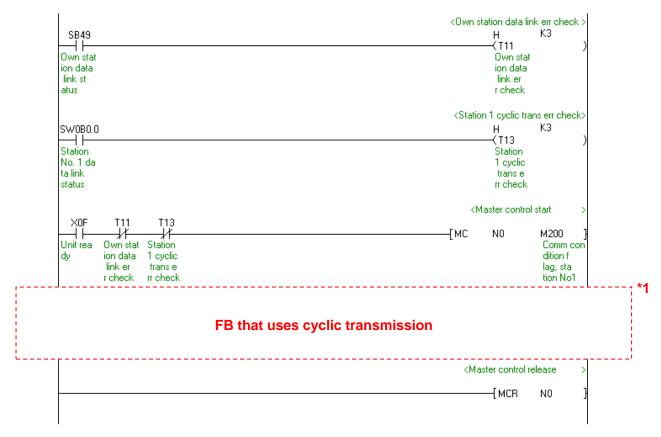
(For FBs that use both cyclic and transient transmission, refer to the application example.)

1.6.1. Cyclic Transmission Program

Use link special relay (SB) and link special register (SW) to create an interlock for cyclic transmission program.

- •Own station data link status (SB0049)
- •Each station data link status (SW00B0 to SW00B7)

Example: Interlock (station No.1)



^{*1} For FB library that uses cyclic transmission, refer to 1.6.3 FB Transmission List.

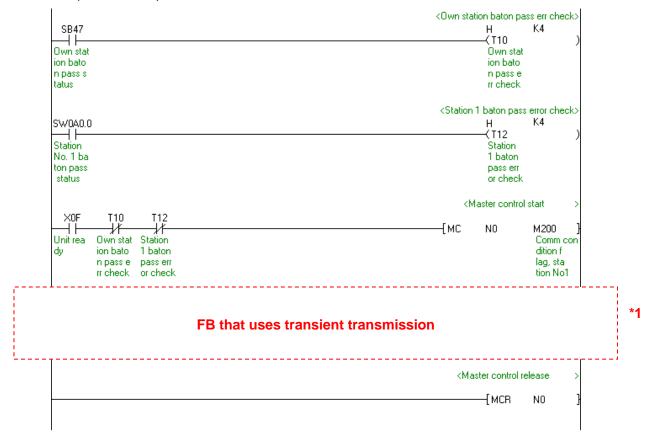


1.6.2. Transient Transmission Program

Use link special relay (SB) and link special register (SW) to create an interlock for transient transmission program.

- •Own station baton pass status (SB0047)
- •Each station baton pass status (SW00A0 to SW00A7)

Example: Interlock (Station No.1)



^{*1} For FB library that uses transient transmission, refer to 1.6.3 FB Transmission List.



1.6.3. FB Transmission List

This table lists transmission types used for FBs.

FB name	Cyclic transmission	Transient transmission
M+LD75-IEF_SetBPARAM1	-	0
M+LD75-IEF_SetBPARAM2	-	О
M+LD75-IEF_SetDPARAM1	-	0
M+LD75-IEF_SetDPARAM2	-	0
M+LD75-IEF_SetZBPARAM	-	0
M+LD75-IEF_SetZDPARAM	-	0
M+LD75-IEF_PosiDataSet	-	0
M+LD75-IEF_CPUReady	0	-
M+LD75-IEF_StartPosi	0	0
M+LD75-IEF_JOG	0	0
M+LD75-IEF_MPG	0	0
M+LD75-IEF_ChgSpeed	0	0
M+LD75-IEF_ChgOverride	-	0
M+LD75-IEF_ChgAccDecTime	-	0
M+LD75-IEF_ChgPosi	0	0
M+LD75-IEF_Restart	0	О
M+LD75-IEF_ErrorOperation	0	0
M+LD75-IEF_InitParam	0	0
M+LD75-IEF_WriteFlash	0	0

-: Not used

o: Used



1.7. Relevant manuals

MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

1.8. Note

Please make sure to read user's manuals for the corresponding products before using the products.



- 2. Details of the FB Library
- 2.1. M+LD75-IEF_SetBPARAM1 (Basic parameters 1 setting)

FB Name

M+LD75-IEF_SetBPARAM1

Function Overview

Item	Description					
Function overview	Sets basic parameters 1 (Pr.1 to Pr.7).					
Symbol	M+LD75-IEF_SetBPARAM1					
	Execution command-	_	ENO: B—Execution status			
	Module start XY address-	W: i_Start_IO_No FB	_OK: B —Basic parameters 1 setting complete			
	Station No	W: i_Station_No FB_ERF	ROR:B—Error flag			
	Slave module start XY address-	W: i_SlvStart_IO_No ERROF	R_ID:W—Error code			
	Own station channel-	W: i_CH_No				
	Target axis-	W: i_Axis				
	Pr.1: Unit setting-	W: i_UnitSetting				
	Pr.2: No. of pulses per rotation-					
	Pr.3: Movement amount per rotation-	-W: i_Al				
	Pr.4: Unit magnification—W:i_Am					
	Pr.5: Pulse output mode—W: i_PlsOutputMode					
	Pr.6: Rotation direction setting—W: i_Rotation					
	Pr.7: Bias speed at start-	art—D: i_BiasSpeed				
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD	75D1, LD75D2, LD75D4			
and software	CC-Link IE module	CC-Link IE field network maste	r/local module			
		CC-Link IE field network head	module			
	CPU module					
		Series	Model			
		MELSEC-Q Series *1	Universal model QCPU *2			
	MELSEC-L Series LCPU *3					
	*1 Not applicable to QCPU (A mode)					
		*2 The first five digits of the serial number are "12012" or later				
		*3 The first five digits of the serial number are "13012" or later.				



Item	Description		
	Engineering software	ring software GX Works2 *1	
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applica	ble to the modules used, refer to
		"Relevant manuals".	
Programming	Ladder		
language			
Number of steps	For universal model CPU: 341 steps (for MELSEC-Q series universal model CPU)		
	* The number of steps of the FB in a program depends on the CPU model that is used and		
	input and output definition.		
Function description	1) By turning ON FB_EN (Execution command), the set basic parameters 1 is written to the		
	buffer memory.		
	· ·	not only, triggered by the FB_EN	
	'	•	B is completed in multiple scans.
	'	ted when the PLC ready signal (•
		etting value is out of range, the F	•
		ed, and the error code 10 (Decim	al) is stored in ERROR_ID (Error
	code).	a evaluation agation for details	
	Refer to the error code explanation section for details. 6) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON, processing is interrupted, and the error code is stored in ERROR_ID (Error code). Refer to the error code explanation section for details.		
Compiling method	Macro type		
2 3 mpiling motifod			



Item	Description		
Restrictions and	The FB does not include error recovery processing. Program the error recovery		
precautions	processing separately in accordance with the required system operation.		
	2) The FB cannot be used in an interrupt program.		
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do		
	not use this FB in programs that are only executed once such as a subroutine,		
	FOR-NEXT loop, etc. because it is impossible to turn OFF.		
	4) When this FB and other FB are used at the same time, precaution must be taken to avoid		
	repetition of the own station's channel		
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition of		
	the target axis.		
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an		
	interrupt program.		
	7) Every input must be provided with a value for proper FB operation.		
	8) If the parameters are set using GX Configurator-QP or the configuration function of GX		
	Works 2, using this FB is unnecessary.		
	9) Parameters such as the pulse output mode and external I/O signal logic must be properly		
	configured to match devices and systems connected to the LD75.		
	10) This FB uses transient transmission. Therefore, an interlock program for transient		
	transmission is required.		
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4		
	Setting the CC-Link IE Field Network Master/Local Module".		
	12) Set the global label setting according to Section "1.5 Setting Global Labels".		
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To		
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the		
CD energtion type	FB for 2 or More Master/Local Modules".		
FB operation type	Pulsed execution (multiple scan execution type) Pefer to "Appendix 2 FR Library Application Examples"		
Application example	Refer to "Appendix 2 FB Library Application Examples".		
Timing chart	[When operation completes without error] [When an error occurs]		
	FB_EN(Execution command) FB_EN(Execution command)		
	FB_ENO(Execution status) FB_ENO(Execution status)		
	Parameters write processing No processing Write Processing Parameters write processing No processing		
	FB_OK(Basic parameter 1 setting complete) FB_OK(Basic parameter 1 setting complete)		
	FB_ERROR(Error flag) FB_ERROR(Error flag)		
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code 0		



Item	Description
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

Error Codes

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		VVOIG		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		VVOIG		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Pr.1: Unit setting	i_UnitSetting		0: mm	Set the unit used for
		Word	1: inch	defining positioning
		VVOIG	2: degree	operations in Pr.1: unit
			3: pulse	setting.
Pr.2: No. of pulses	i_Ap	Word	1~65,535 (pulse) *1	Define the amount of
per rotation		VVOIG		movement achieved by
Pr.3: Movement	i_Al	Word	1~65,535 *1	each single pulse within a
amount per rotation		vvoid		pulse train output.
Pr.4: Unit	i_Am		1: 1-fold	*1: Setting method
magnification			10: 10-fold	•1~32,767: Set in decimal.
		Word	100: 100-fold	•32,768~65,535: Set after
			1000: 1000-fold	converted into
				hexadecimal.



Name(Comment)	Label name	Data type	Setting range	Description
Pr.5: Pulse output mode	i_PlsOutputMode	Word	0: PULSE/SIGN mode 1: CW/CCW mode 2: A phase/B phase (multiple of 4) 3: A phase/B phase (multiple of 1)	Set the pulse output mode to match the servo amplifier being used. The only valid data of this parameter is the data at the moment when the PLC ready signal (Y signal) turns from OFF to ON for the first time after the power is switched ON or the CPU is reset.
Pr.6: Rotation direction setting	i_Rotation	Word	O: Current value increment with forward run pulse output 1: Current value increment with reverse run pulse output	Set the relation of the motor rotation direction and current value address increment/decrement.
Pr.7: Bias speed at start	i_BiasSpeed	Double Word	1) Pr.1: Unit setting = 0~2: 0~2,000,000,000 2) Pr.1: Unit setting = 3: 0~4,000,000	Set the minimum speed upon starting.



Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Bit	OFF	ON: Execution command is ON.
		DIL	OFF	OFF: Execution command is OFF.
Basic parameters 1	FB_OK	Bit	OFF	When ON, it indicates that the parameter
setting complete		DIL	OFF	setting is completed.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.

FB Version Upgrade History

Version	Date	Description	
1.00A	2011/06/30	First edition	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.

Before using any Mitsubishi products, please read all the relevant manuals.



2.2. M+LD75-IEF_SetBPARAM2 (Basic parameters 2 setting)

FB Name

M+LD75-IEF_SetBPARAM2

Function Overview

Item	Description		
Function overview	Sets basic parameters 2 (Pr.8 to Pr.10).		
Symbol			
	Execution commar	M+LD75-IEF_SetBPARAM2 nd → B : FB EN FB	ENO : B — Execution status
			B_OK: B — Basic parameters 2 setting complete
			ROR: B—Error flag
	Slave module start XY addres	ss—W:i_SlvStart_IO_No ERRO	R_ID: W—Error code
	Own station chann	el—W:i_CH_No	
	Target ax	is—W: i_Axis	
	Pr.8: Speed limit valu	ue D: i_SpeedLimit	
	Pr.9: Acceleration time	0—D: i_AccTime0	
	Pr.10: Deceleration time	0—D: i_DecTime0	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD	75D1, LD75D2, LD75D4
and software	CC-Link IE module		r/local module
		CC-Link IE field network head r	nodule
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A m	node)
		*2 The first five digits of the serie	al number are "12012" or later
		*3 The first five digits of the serie	al number are "13012" or later.



Item	Description		
	Engineering software GX Works2 *1		
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applical	ble to the modules used, refer to
		"Relevant manuals".	
Programming	Ladder		
language			
Number of steps	For universal model CPU: 332 steps (for MELSEC-Q series universal model CPU)		
	* The number of steps of the FB in a program depends on the CPU model that is used and		
	input and output definition.		
Function description	1) By turning ON FB_EN (Execution command), the set basic parameters 2 is written to		
	the buffer memory.		
	2) FB operation is one-shot only, triggered by the FB_EN signal.		
		,	FB is completed in multiple scans.
	4) When the target axis setting value is out of range, the FB_ERROR output turns ON,		
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error		
	code).		
		de explanation section for details.	
	,	field network error occurs, the FB	
		pted, and the error code is stored	
Compiling		de explanation section for details.	
Compiling method	Macro type		



Item	Description		
Restrictions and	1) The FB does not include error recovery processing. Program the error recovery		
precautions	processing separately in accordance with the required system operation.		
	2) The FB cannot be used in an interrupt program.		
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.		
	Do not use this FB in programs that are only executed once such as a subroutine,		
	FOR-NEXT loop, etc. because it is impossible to turn OFF.		
	4) When this FB and other FB are used at the same time, precaution must be taken to		
	avoid repetition of the own station's channel		
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition		
	of the target axis.		
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an		
	interrupt program.		
	7) Every input must be provided with a value for proper FB operation.		
	8) If the parameters are set using GX Configurator-QP or the configuration function of GX		
	Works 2, using this FB is unnecessary.		
	9) Parameters such as the pulse output mode and external I/O signal logic must be		
	properly configured to match devices and systems connected to the LD75.		
	10) This FB uses transient transmission. Therefore, an interlock program for transient		
	transmission is required.		
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4		
	Setting the CC-Link IE Field Network Master/Local Module".		
	12) Set the global label setting according to Section "1.5 Setting Global Labels".		
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To		
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the		
	FB for 2 or More Master/Local Modules".		
FB operation type	Pulsed execution (multiple scan execution type)		
Application example	Refer to "Appendix 2 FB Library Application Examples".		
Timing chart	[When operation completes without error] [When an error occurs]		
	FB_EN(Execution command) FB_EN(Execution command)		
	FB_ENO(Execution status)		
	Parameters write processing No No Processing No Parameters write processing No Parameters write processing No Parameters write processing		
	FB_OK(Basic parameter 2 setting complete) FB_OK(Basic parameter 2 setting complete)		
	setting complete) FB_ERROR(Error flag) FB_ERROR(Error flag)		
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code		



Item	Description
Relevant manuals	•MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

Error codes

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)



Name(Comment)	Label name	Data	Setting range	Description
		type		
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Pr.8: Speed limit	i_SpeedLimit		1) Pr.1: Unit setting = 0~2:	Set the maximum speed
value		Double	1~2,000,000,000	during positioning and
		Word	2) Pr.1: Unit setting = 3:	OPR operations.
			1~4,000,000	
Pr.9: Acceleration	i_AccTime0		1~8,388,608 (ms)	Specify the time for the
time 0		Double		speed to increase from
		Word		zero to the Pr.8: speed limit
				value.
Pr.10: Deceleration	i_DecTime0		1~8,388,608 (ms)	Specify the time for the
time 0		Double		speed to decrease from the
		Word		Pr.8: speed limit value to
				zero.

Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	D:+	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
Basic parameters 2	FB_OK	Bit	OFF	When ON, it indicates that the parameter
setting complete		DIL	OFF	setting is completed.
Error flag	FB_ERROR	D:4	OFF	When ON, it indicates that an error has
		Bit	OFF	occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version Date		Description	
1.00A	2011/06/30	First edition	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.

Before using any Mitsubishi products, please read all the relevant manuals.



2.3. M+LD75-IEF_SetDPARAM1 (Detailed parameters 1 setting)

FB Name

M+LD75-IEF_SetDPARAM1

Function Overview

Item		Descriptio	on			
Function overview	Sets detailed parameters 1 (Pr.11 to Pr.24, and Pr.150).					
Symbol						
		M+LD75-IEF_Se	tDPARAM1			
	Execution c	command—B: FB_EN	FB_ENO : B	Execution status		
	Module start XY	′ address—W:i_Start_IO_No	FB_OK : B	—Detailed parameters 1 setting complete		
	St	ation No.—W: i_Station_No	FB_ERROR : B	—Error flag		
	Slave module start XY	′ address—W:i_SlvStart_IO_No	ERROR_ID : W	—Error code		
	Own station	n channel—W: i_CH_No				
	Та	arget axis—W: i_Axis				
	Pr.11: Backlash compensation	n amount—W: i_Backlash				
	Pr.12: Software stroke limit upper li	mit value D: i_SSLimitUpper				
	Pr.13: Software stroke limit lower li	mit value D: i_SSLimitLower				
	Pr.14: Software stroke limit	Pr.14: Software stroke limit selection—W: i_SSLimitSelect				
	Pr.15: Software stroke limit valid/inval	Pr.15: Software stroke limit valid/invalid setting— W: i_SSLimitSetting				
	Pr.16: Command in-position width— D: i_InPosition					
	Pr.17: Torque limit sett	ing value—W:i_TorqueLimit				
	Pr.18: M code ON signal outp	Pr.18: M code ON signal output timing—W: i_MCodeTiming				
	Pr.19: Speed switching mode—W: i_SpeedSwMode					
	Pr.20: Interpolation speed designation method—W: i_InterpolaSpeed					
	Pr.21: Current feed value during spee	ed control—W: i_SpeedCntValue				
	Pr.22: Input signal logic	selection—W: i_InputSigLogic				
	Pr.23: Output signal logic	selection—W: i_OutputSigLogic				
	Pr.24: Manual pulse generator input	selection—W: i_MPGInputSelect				
	Pr.150: Speed-position function	selection—W: i_SPFuncSelect				
		T				
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75	P4, LD75D1, L	D75D2, LD75D4		
and software	CC-Link IE module	CC-Link IE field network	master/local m	nodule		
		CC-Link IE field network	head module			



Item	Description					
	CPU module					
		Series	Model			
		MELSEC-Q Series *1	Universal model QCPU *2			
		MELSEC-L Series	LCPU *3			
		*1 Not applicable to QCPU (A mo	ode)			
		*2 The first five digits of the seria	al number are "12012" or later			
		*3 The first five digits of the serial number are "13012" or later.				
	Engineering software	GX Works2 *1				
		Language	Software version			
		Japanese version	Version1.86Q or later			
		English version	Version1.24A or later			
		Chinese (Simplified) version	Version1.49B or later			
		Chinese (Traditional) version	Version1.49B or later			
		Korean version	Version1.49B or later			
		*1 For software versions applicable to the modules used, refer to				
		"Relevant manuals".				
Programming	Ladder					
language						
Number of steps		U: 464 steps (for MELSEC-Q serie	,			
	* The number of steps of the FB in a program depends on the CPU model that is used and					
	input and output defin					
Function description	1) By turning ON FB_EN (Execution command), the set detailed parameters 1 are written					
	to the buffer memor	•				
		shot only, triggered by the FB_EN				
	_ `	,	FB is completed in multiple scans.			
	,	dated when the PLC ready signal	, ,			
	,	s setting value is out of range, the	•			
	code).	pted, and the error code 10 (Decir	mal) is stored in ERROR_ID (Error			
	Refer to the error co	de explanation section for details.				
	6) When a CC-Link IE	field network error occurs, the FB	_ERROR output turns ON,			
	processing is interru	pted, and the error code is stored	in ERROR_ID (Error code).			
	Refer to the error co	de explanation section for details.				
Compiling method	Macro type					



Item	Description					
Restrictions and	The FB does not include error recovery processing. Program the error recovery					
precautions	processing separately in accordance with the required system operation.					
	2) The FB cannot be used in an interrupt program.					
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.					
	Do not use this FB in programs that are only executed once such as a subroutine,					
	FOR-NEXT loop, etc. because it is impossible to turn OFF.					
	4) When this FB and other FB are used at the same time, precaution must be taken to					
	avoid repetition of the own station's channel					
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition					
	of the target axis.					
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an					
	interrupt program.					
	7) Every input must be provided with a value for proper FB operation.					
	8) If the parameters are set using GX Configurator-QP or the configuration function of GX					
	Works 2, using this FB is unnecessary.					
	9) Parameters such as the pulse output mode and external I/O signal logic must be					
	properly configured to match devices and systems connected to the LD75.					
	10) This FB uses transient transmission. Therefore, an interlock program for transient					
	transmission is required.					
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4					
	Setting the CC-Link IE Field Network Master/Local Module".					
	12) Set the global label setting according to Section "1.5 Setting Global Labels".					
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To					
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the					
	FB for 2 or More Master/Local Modules".					
FB operation type	Pulsed execution (multiple scan execution type)					
Application example	Refer to "Appendix 2 FB Library Application Examples".					
Timing chart	[When operation completes without error] [When an error occurs]					
	FB_EN(Execution command) FB_EN(Execution command)					
	FB_ENO(Execution status)					
	Parameters write processing No processing Write Processing No processing					
	FB_OK(Detailed parameter 1 setting complete) FB_OK(Detailed parameter 1 setting complete)					
	FB_ERROR(Error flag) FB_ERROR(Error flag)					
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code					



Item	Description
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

Error codes

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)



Name(Comment)	Label name	Data type	Setting range	Description
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Pr.11: Backlash	i_Backlash		0~65,535 *1	Set the compensation
compensation				amount of the error that
amount				occurs due to backlash
				when moving the machine
		Word		via gears.
		vvoid		*1: Setting method
				●0~32,767: Set in decimal.
				•32,768~65,535: Set after
				converted into
				hexadecimal.
Pr.12: Software	i_SSLimitUpper		1) Pr.1: Unit setting =	Set the upper limit for the
stroke limit upper		Double	0,1,3:	machine's movement
limit value		Word	-2,147,483,648~	range during positioning
			2,147,483,647	control.
Pr.13: Software	i_SSLimitLower		2) Pr.1: Unit setting = 2:	Set the lower limit for the
stroke limit lower		Double	0~35,999,999	machine's movement
limit value		Word		range during positioning
				control.
Pr.14: Software	i_SSLimitSelect		0: Apply software stroke	Set whether to apply the
stroke limit selection			limit on current feed	software stroke limit on the
		Word	value.	"current feed value" or the
		VVOIG	1: Apply software stroke	"machine feed value".
			limit on machine feed	
			value.	



Name(Comment)	Label name	Data	Setting range	Description
		type		
Pr.15: Software	i_SSLimitSetting		0: Software stroke limit	Set whether to validate the
stroke limit			valid during JOG	software stroke limit during
valid/invalid setting			operation, inching	JOG/Inching operation and
			operation, and manual	manual pulse generator
			pulse generator	operation.
		Word	operation	
		vvora	1: Software stroke limit	
			invalid during JOG	
			operation, inching	
			operation, and manual	
			pulse generator	
			operation	
Pr.16: Command	i_InPosition	Double	1~2,147,483,647	Set the remaining distance
in-position width		Word		that turns the command
		vvoid		in-position ON.
Pr.17: Torque limit	i_TorqueLimit		1~500 (%)	Set the limit value of the
setting value		Word		torque generated by the
				servomotor.
Pr.18: M code ON	i_MCodeTiming	Word	0: WITH mode	Set the M code ON signal
signal output timing		VVOIG	1: AFTER mode	output timing.
Pr.19: Speed	i_SpeedSwMode		0: Standard speed	Set whether to switch the
switching mode			switching mode	Pr.19: speed switching
		Word	1: Front-loading speed	mode with the standard
			switching mode	switching or front-loading
				switching mode.
Pr.20: Interpolation	i_InterpolaSpeed		0: Composite speed	When carrying out
speed designation		Word	1: Reference axis speed	interpolation, set whether
method		Word		to designate the composite
				or reference axis speed.
Pr.21: Current feed	i_SpeedCntValue		0: Do not update current	Specify whether to enable
value during speed			feed value	or disable the update of the
control		Word	1: Update current feed	current feed value while
			value	operations are performed
			2: Clear current feed value	under the speed control.
			to zero	



Name(Comment)	Label name	Data	Setting range	Description
		type		
Pr.22: Input signal	i_InputSigLogic		b0: Lower limit	Set the input signal logic
logic selection			b1: Upper limit	that matches the signaling
			b2: Drive unit READY	specification of the
			b3: Stop signal	connected external device.
			b4: External command	*1: Set "0".
			b5: Zero signal	
		Word	b6: Near-point signal	
			b7: Not used*1	
			b8: Manual pulse	
			generator input	
			b9~b15: Not used*1	
			0: Negative logic	
			1: Positive logic	
Pr.23: Output signal	i_OutputSigLogic		b0: Command pulse signal	Set the output signal logic
logic selection			b1: Not used*1	that matches the signaling
			b2: Not used*1	specification of the
		Word	b3: Not used*1	connected external device.
		vvoid	b4: Deviation counter clear	*1: Set "0".
			b5~b15: Not used*1	
			0: Negative logic	
			1: Positive logic	
Pr.24: Manual pulse	i_MPGInputSelect		0: A-phase/B-phase;	Set the manual pulse
generator input			multiplied by 4	generator input pulse
selection			1: A-phase/B-phase;	mode.
			multiplied by 2	* The setting is valid only
		Word	2: A-phase/B-phase;	when i_Axis (Target axis)
			multiplied by 1	is set to "1".
			3: PULSE/SIGN	When i_Axis (Target
				axis) is set to other than
				1, set "0".
Pr.150:	i_SPFuncSelect		0: Speed-positioning	Select the mode of
Speed-position			switching control (INC	speed-positioning
function selection		Word	mode)	switching control.
		1.0.0	2: Speed-positioning	
			switching control (ABS	
			mode)	



Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	D:+	OFF	ON: Execution command is ON.
		Bit OFF		OFF: Execution command is OFF.
Detailed parameters	FB_OK	D:+	OFF	When ON, it indicates that the parameter
1 setting complete		Bit OFF		setting is completed.
Error flag	FB_ERROR	Bit	OFF	When ON, it indicates that an error has
		DIL	OFF	occurred.
Error code	ERROR_ID	Word	0	FB error code output.

FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.

Before using any Mitsubishi products, please read all the relevant manuals.



2.4. M+LD75-IEF_SetDPARAM2 (Detailed parameters 2 setting)

FB Name

M+LD75-IEF_SetDPARAM2

Function Overview

Item	Description
Function overview	Sets detailed parameters 2 (Pr.25 to Pr.42).
Symbol	Sets detailed parameters 2 (Pr.25 to Pr.42). M+LD75-IEF_SetDPARAM2
	Target axis—W: i_Axis Pr.25: Acceleration time 1—D: i_AccTime1 Pr.26: Acceleration time 2—D: i_AccTime2 Pr.27: Acceleration time 3—D: i_DecTime3 Pr.28: Deceleration time 2—D: i_DecTime1 Pr.29: Deceleration time 2—D: i_DecTime2 Pr.30: Deceleration time 3—D: i_DecTime2 Pr.31: JOG speed limit value—Pr.32: JOG operation acceleration time selection Pr.33: JOG operation deceleration—time selection Pr.34: Acceleration/deceleration—process selection Pr.35: S-curve ratio—V: i_AccTime2 D: i_DecTime3 D: i_DecTime3 W: i_JogSpeedLimit W: i_JogDecTimeSel W: i_JogDecTimeSel W: i_AccDecProcess W: i_AccDecProcess V: i_AccTime2 D: i_AccTime2 D: i_DecTime3 D: i_DecTime3 D: i_JogSpeedLimit V: i_JogDecTimeSel V: i_JogDecTimeSel V: i_JogDecTimeSel V: i_AccDecProcess
	Pr.37: Stop group 1 sudden stop selection Pr.38: Stop group 2 sudden stop selection Pr.39: Stop group 3 sudden stop selection Pr.40: Positioning complete signal output time Pr.41: Allowable circular interpolation error width Pr.42: External command function selection Pr.42: External command function selection



Item	Description			
Applicable hardware	Positioning module LD75P1, LD75P2, LD75P4, LD75D1, LD75D2, LD75D4			
and software	CC-Link IE module	CC-Link IE field network master/local module		
		CC-Link IE field network head module		
	CPU module			
		Series	Model	
		MELSEC-Q Series *1	Universal model QCPU *2	
		MELSEC-L Series	LCPU *3	
		*1 Not applicable to QCPU (A mo	ode)	
		*2 The first five digits of the seria	al number are "12012" or later	
		*3 The first five digits of the seria	al number are "13012" or later.	
	Engineering software	GX Works2 *1		
		Language	Software version	
		Japanese version	Version1.86Q or later	
		English version	Version1.24A or later	
		Chinese (Simplified) version	Version1.49B or later	
		Chinese (Traditional) version	Version1.49B or later	
		Korean version	Version1.49B or later	
		*1 For software versions applical	ble to the modules used, refer to	
		"Relevant manuals".		
Programming	Ladder			
language				
Number of steps	For universal model CP	U: 390 steps (for MELSEC-Q serie	es universal model CPU)	
	* The number of steps of	of the FB in a program depends or	n the CPU model that is used and	
	input and output defir	nition.		
Function description	1) By turning on FB_EN (Execution command), the set detailed parameters 2 are written to			
	the buffer memory.			
	2) FB operation is one-shot only, triggered by the FB_EN signal.			
	3) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.			
	4) When the target axis setting value is out of range, the FB_ERROR output turns ON,			
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error code). Refer to the error code explanation section for details.			
	5) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,			
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).			
	Refer to the error code explanation section for details.			
	1.0101 10 1110 01101 00	200 September 300tion for details.	•	



Item	Description		
Compiling method	Macro type		
Restrictions and	1) The FB does not include error recovery processing. Program the error recovery		
precautions	processing separately in accordance with the required system operation.		
	2) The FB cannot be used in an interrupt program.		
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do		
	not use this FB in programs that are only executed once such as a subroutine,		
	FOR-NEXT loop, etc. because it is impossible to turn OFF.		
	4) When this FB and other FB are used at the same time, precaution must be taken to		
	avoid repetition of the own station's channel.		
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition of		
	the target axis.		
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an		
	interrupt program.		
	7) Every input must be provided with a value for proper FB operation.		
	8) If the parameters are set using GX Configurator-QP or the configuration function of GX		
	Works 2, using this FB is unnecessary.		
	9) Parameters such as the pulse output mode and external I/O signal logic must be		
	properly configured to match devices and systems connected to the LD75.		
	10) This FB uses transient transmission. Therefore, an interlock program for transient		
	transmission is required.		
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4"		
	Setting the CC-Link IE Field Network Master/Local Module".		
	12) Set the global label setting according to Section "1.5 Setting Global Labels".		
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To		
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the		
	FB for 2 or More Master/Local Modules".		
FB operation type	Pulsed execution (multiple scan execution type)		
Application example	Refer to "Appendix 2 FB Library Application Examples".		
Timing chart	[When operation completes without error] [When an error occurs]		
	FB_EN(Execution command) FB_EN(Execution command)		
	FB_ENO(Execution status)		
	Parameters write processing No processing No processing No processing No processing Parameters write processing No processing No processing No processing No processing		
	FB_OK(Detailed parameter 2		
	setting complete) FB_ERROR(Error flag) FB_OR(Detailed parameter 2 setting complete)		
	ERROR_ID(Error code) 0 FB_ERROR(Error flag)		
	ERROR_ID(Error code) 0 Error code 0		



Item	Description	
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)	

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



Labels

Name(Comment)	Label name	Data type	Setting range	Description
Execution command	FB_EN	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
Module start XY address	i_Start_IO_No	Word	Depends on the I/O point range of the CPU. For details, refer to the CPU user's manual.	Specify the starting XY address (in hexadecimal) where the LD75 module is mounted. (For example, enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station number.
Slave module start XY address	i_SlvStart_IO_No	Word	Depends on the I/O point range of the head module. For details, refer to the head module user's manual.	Specify the starting XY address (in hexadecimal) where the LD75 module is mounted. (For example, enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Pr.25: Acceleration time	i_AccTime1	Double Word	1~8,388,608 (ms)	Set the time for the speed to increase from zero to
Pr.26: Acceleration time 2	i_AccTime2	Double Word		the Pr.8: speed limit value.
Pr.27: Acceleration time 3	i_AccTime3	Double Word		
Pr.28: Deceleration time	i_DecTime1	Double Word		Set the time for the speed to decrease from the Pr.8:
Pr.29: Deceleration time 2	i_DecTime2	Double Word		speed limit value to zero.
Pr.30: Deceleration time 3	i_DecTime3	Double Word		



Name(Comment)	Label name	Data type	Setting range	Description
Pr.31: JOG speed limit value	i_JogSpeedLimit	Double Word	1) Pr.1: JOG speed limit value = 0~2: 1~2,000,000,000 2) Pr.1: JOG speed limit value = 3:	Set the maximum speed for JOG operation.
			1~4,000,000	
Pr.32: JOG operation acceleration time selection	i_JogAccTimeSel	Word	0: Acceleration time 0 1: Acceleration time 1 2: Acceleration time 2 3: Acceleration time 3	Set which of the acceleration time 0 to 3 to use for the acceleration time during JOG operation.
Pr.33: JOG operation deceleration time selection	i_JogDecTimeSel	Word	0: Deceleration time 0 1: Deceleration time 1 2: Deceleration time 2 3: Deceleration time 3	Set which of the deceleration time 0 to 3 to use for the deceleration time during JOG operation.
Pr.34: Acceleration/deceleration process selection	i_AccDecProcess	Word	0: Trapezoid acceleration/deceleration process 1: S-curve acceleration/deceleration process	Set whether to use trapezoid acceleration/deceleration or S-curve acceleration/deceleration for the acceleration/deceleration process.
Pr.35: S-curve ratio	i_S_curveRatio	Word	1~100 (%)	Set the S-curve ratio for carrying out the S-curve acceleration/deceleration process.
Pr.36: Sudden stop deceleration time	i_SuddenStopTime	Double Word	1~8,388,608 (ms)	Set the time to reach speed 0 from the Pr.8: speed limit value during the sudden stop.
Pr.37: Stop group 1 sudden stop selection	i_StopGroup3	Word	0: Normal deceleration stop	Set the method to stop when the stop causes in
Pr.38: Stop group 2 sudden stop selection	i_StopGroup2	Word	1: Sudden stop	the stop groups occur.



Name(Comment)	Label name	Data	Setting range	Description
		type		
Pr.39: Stop group 3	i_StopGroup3	Word		
sudden stop selection		vvoid		
Pr.40: Positioning	i_PosiCmpSignal		0~65,535 (ms) *1	Set the output time of the
complete signal output				positioning complete
time				signal.
				*1: Setting method
		Word		●0~32,767: Set in
				decimal.
				•32,768~65,535: Set after
				converted into
				hexadecimal.
Pr.41: Allowable circular	i_ArcErrPermit		0~100,000	Set the allowable error
interpolation error width		Double		range of the calculated
		Word		arc path and end point
				address.
Pr.42: External command	i_ExtComFuncSel		0: External positioning	Select a command with
function selection			start	which the external
			1: External speed	command signal should
		Word	change request	be associated.
		vvoid	2: Speed-position,	
			position-speed	
			switching request	
			3: Skip request	

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
Detailed parameters	FB_OK	Bit	OFF	When ON, it indicates that the parameter
2 setting complete				setting is completed.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.5. M+LD75-IEF_SetZBPARAM (OPR basic parameters setting)

FB Name

M+LD75-IEF_SetZBPARAM

Item	Description			
Function overview	Sets OPR basic parameters (Pr.43 to Pr.48).			
Symbol				
	Execution command-	M+LD75-IEF_SetZBPARA	FB_ENO : B—Execution status	
	Module start XY address		FB_OK : B OPR basic parameters setting complete	
	Station No.	W: i_Station_No FB_	ERROR: B — Error flag	
	Slave module start XY address-	W: i_SlvStart_IO_No ER	ROR_ID: W—Error code	
	Own station channel-	W:i_CH_No		
	Target axis-	W: i_Axis		
	Pr.43: OPR method-	W: i_OPRMethod		
	Pr.44: OPR direction-	W: i_OPRDirection		
	Pr.45: OP address	D: i_OPAddress		
	Pr.46: OPR speed	Pr.46: OPR speed D: i_OPRSpeed		
	Pr.47: Creep speed— D: i_CreepSpeed			
	Pr.48: OPR retry—W: i_OPRRetry			
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD	D75D1, LD75D2, LD75D4	
and software	CC-Link IE module	CC-Link IE field network maste	er/local module	
		CC-Link IE field network head	module	
	CPU module			
		Series	Model	
		MELSEC-Q Series *1	Universal model QCPU *2	
		MELSEC-L Series	LCPU *3	
		*1 Not applicable to QCPU (Ar	mode)	
		*2 The first five digits of the ser	rial number are "12012" or later	
		*3 The first five digits of the ser	rial number are "13012" or later.	



Item	Description		
	Engineering software	GX Works2 *1	
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applica	ble to the modules used, refer to
		"Relevant manuals".	
Programming	Ladder		
language			
Number of steps	For universal model CPU: 344 steps (for MELSEC-Q series universal model CPU)		
	* The number of steps of the FB in a program depends on the CPU model that is used and		
	input and output definition.		
Function description	1) By turning ON FB_EN (Execution command), the set OPR basic parameters are written		
	to the buffer memory.		
	, .	shot only, triggered by the FB_EN	
	,	,	FB is completed in multiple scans.
	,	dated when the PLC ready signal	`
	'	s setting value is out of range, the	•
	processing is interru code).	pted, and the error code 10 (Deci	mal) is stored in ERROR_ID (Error
	Refer to the error co	de explanation section for details	
	6) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,		
	processing is interru	pted, and the error code is stored	in ERROR_ID (Error code).
	Refer to the error co	de explanation section for details.	
Compiling method	Macro type		



Item	Description			
Restrictions and	The FB does not include error recovery processing. Program the error recovery			
precautions	processing separately in accordance with the required system operation.			
	2) The FB cannot be used in an interrupt program.			
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.			
	Do not use this FB in programs that are only executed once such as a subroutine,			
	FOR-NEXT loop, etc. because it is impossible to turn OFF.			
	4) When this FB and other FB are used at the same time, precaution must be taken to			
	avoid repetition of the own station's channel			
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition			
	of the target axis.			
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an			
	interrupt program.			
	7) Every input must be provided with a value for proper FB operation.			
	8) If the parameters are set using GX Configurator-QP or the configuration function of GX			
	Works 2, using this FB is unnecessary.			
	9) Parameters such as the pulse output mode and external I/O signal logic must be			
	properly configured to match devices and systems connected to the LD75.			
	10) This FB uses transient transmission. Therefore, an interlock program for transient			
	transmission is required.			
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4			
	Setting the CC-Link IE Field Network Master/Local Module". 12) Set the global label setting according to Section "1.5 Setting Global Labels"			
	12) Set the global label setting according to Section "1.5 Setting Global Labels". 13) Only one master/local module can be controlled by the CC Link IE Field system EP. To			
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To			
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the FB for 2 or More Master/Local Modules".			
FB operation type	Pulsed execution (multiple scan execution type)			
Application example	Refer to "Appendix 2 FB Library Application Examples".			
Timing chart	[When operation completes without error] [When an error occurs]			
Timing origin	[When operation completes without one)			
	FB_EN(Execution command) FB_EN(Execution command)			
	FB_ENO(Execution status)			
	Parameters write processing No processing Parameters write processing No processing No processing FB_OK			
	FB_OK (OPR basic parameters setting complete) (OPR basic parameters setting complete)			
	FB_ERROR(Error flag) FB_ERROR(Error flag)			
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code 0			



Item	Description	
Relevant manuals	•MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)	

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)



Name(Comment)	Label name	Data type	Setting range	Description
Own station channel	i_CH_No	Word	1~32	Specify the channel for own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Pr.43: OPR method	i_OPRMethod		0: Near-point dog method	Set the OPR method for
			1: Stopper method 1)	carrying out machine OPR.
		Word	2: Stopper method 2)	
		VVOIG	3: Stopper method 3)	
			4: Count method 1)	
			5: Count method 2)	
Pr.44: OPR direction	i_OPRDirection		0: Positive direction	Set the direction to start
			(address increment	movement when starting
		Word	direction)	machine OPR.
		vvoid	1: Negative direction	
			(address decrement	
			direction)	
Pr.45: OP address	i_OPAddress		1) Pr.1: Unit setting =	Set the address used as
			0,1,3:	the reference point for
		Double	-2,147,483,648~	positioning control (ABS
		Word	2,147,483,647	system).
			2) Pr.1: Unit setting = 2:	
			0~35,999,999	
Pr.46: OPR speed	i_OPRSpeed		1) Pr.1:Unit setting = 0~2:	Set the speed for OPR.
		Double	1~2,000,000,000	
		Word	2) Pr.1: Unit setting = 3:	
			1~4,000,000	
Pr.47: Creep speed	i_CreepSpeed		1) Pr.1: Unit setting = 0~2:	Set the creep speed after
		Double	1~2,000,000,000	near-point dog ON.
		Word	2) Pr.1: Unit setting = 3:	
			1~4,000,000	
Pr.48: OPR retry	i_OPRRetry		0: Do not retry OPR with	Set whether to carry out
		14/	limit switch	OPR retry.
		Word	1: Retry OPR with limit	
			switch	



Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit.	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
OPR basic	FB_OK			When ON, it indicates that the parameter
parameters setting		Bit	OFF	setting is completed.
complete				
Error flag	FB_ERROR	Dit	OFF	When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.

FB Version Upgrade History

Version Date		Description	
1.00A	2011/06/30	First edition	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.6. M+LD75-IEF_SetZDPARAM (OPR detailed parameters setting)

FB Name

M+LD75-IEF_SetZDPARAM

Item	Description			
Function overview	Sets OPR detailed parameters (Pr.49 to Pr.57).			
Symbol	Execution con Module start XY a Stati Slave module start XY a Own station of Targ Pr.49: OPR dwd Pr.50: Setting for the movement a after near-point of Pr.51: OPR acceleration time see Pr.52: OPR deceleration time see Pr.53: OP shift a Pr.54: OPR torque limi Pr.55: Deviation counter clear outp Pr.56: Speed designation during C	M+LD75-IEF_SetZDPAR/ nmand—B: FB_EN ddress—W: i_Start_IO_No on No.—W: i_Station_No FE ddress—W: i_Station_No E hannel—W: i_CH_No let axis—W: i_Axis ell time—W: i_OPRDwellTime amount log ON D: i_DogOnLength election—W: i_OPRAccTimeSel election—W: i_OPRDecTimeSel amount—D: i_OPShift t value—W: i_OPRTorqueLim signal ut time—W: i_DevCntClr	FB_ENO: B — Execution status OPR detailed parameters setting complete B_ERROR: B — Error flag RROR_ID: W — Error code	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD7	75D1, LD75D2, LD75D4	
and software	CC-Link IE module	CC-Link IE field network master CC-Link IE field network head m		
	CPU module			
		Series	Model	
		MELSEC-Q Series *1	Universal model QCPU *2	
		MELSEC-L Series	LCPU *3	
		*1 Not applicable to QCPU (A m	,	
		*2 The first five digits of the seria		
		*3 The first five digits of the seria	al number are "13012" or later.	



Item	Description				
	Engineering software	e GX Works2 *1			
		Language	Software version		
		Japanese version	Version1.86Q or later		
		English version	Version1.24A or later		
		Chinese (Simplified) version	Version1.49B or later		
		Chinese (Traditional) version	Version1.49B or later		
		Korean version	Version1.49B or later		
		*1 For software versions applica	ble to the modules used, refer to		
		"Relevant manuals".			
Programming	Ladder				
language					
Number of steps	For universal model CP	U: 357 steps (for MELSEC-Q seri	es universal model CPU)		
	* The number of steps of the FB in a program depends on the CPU model that is used and				
	input and output definition.				
Function description	1) By turning ON FB_EN (Execution command), the set OPR detailed parameters are				
	written to the buffer memory.				
	2) FB operation is one-shot only, triggered by the FB_EN signal.				
	3) After FB_EN (Execution command) is turned ON, the FB is completed in multiple				
	scans.				
	4) Parameters are valid	dated when the PLC ready signal	(Y signal) turns from OFF to ON.		
	5) When the target axis	s setting value is out of range, the	FB_ERROR output turns ON,		
	processing is interru	pted, and the error code 10 (Deci	imal) is stored in ERROR_ID		
	(Error code). Refer to the error code explanation section for details.				
	6) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,				
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).				
	Refer to the error co	de explanation section for details			
Compiling method	Macro type				



## Parameters are set using GX Configurator-QP or the configuration function of GX Works 2, using this FB is unnecessary. Parameters are set using this FB is unnecessary.	Item	Description					
2) The FB cannot be used in an interrupt program. 3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do not use this FB in programs that are only executed once such as a subroutine, FOR-NEXT loop, etc. because it is impossible to turn OFF. 4) When this FB and other FB are used at the same time, precaution must be taken to avoid repetition of the early axis. 5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis. 6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an interrupt program. 7) Every input must be provided with a value for proper FB operation. 8) If the parameters are set using GX Configurator-QP or the configuration function of GX Works 2, using this FB is unnecessary. 9) Parameters such as the pulse output mode and external I/O signal logic must be properly configured to match devices and systems connected to the LD75. 10) This FB uses transient transmission. Therefore, an interlock program for transient transmission is required. 11) Set the refresh device of the network parameter setting according to 3) in Section *1.4 Setting the CC-Link IE Field Network Master/Local Module*. 12) Set the global label setting according to Section *1.5 Setting Global Labels*. 13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To control 2 or more master/local modules by the FB, refer to *Appendix 1 When Using the FB for 2 or More Master/Local Modules*. FB operation type Pulsed execution (multiple scan execution type) Refer to *Appendix 2 FB Library Application Examples*. 179. ENCEmention commands and processing transmission commands are processing to the processing and processing the processing and processing the processing and processing a	Restrictions and	The FB does not include error recovery processing. Program the error recovery					
3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do not use this FB in programs that are only executed once such as a subroutine, FOR-NEXT loop, etc. because it is impossible to turn OFF. 4) When this FB and other FB are used at the same time, precaution must be taken to avoid repetition of the own station's channel 5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis. 6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an interrupt program. 7) Every input must be provided with a value for proper FB operation. 8) If the parameters are set using GX Configurator-QP or the configuration function of GX Works 2, using this FB is unnecessary. 9) Parameters such as the pulse output mode and external I/O signal logic must be properly configured to match devices and systems connected to the LD75. 10) This FB uses transient transmission. Therefore, an interlock program for transient transmission is required. 11) Set the refresh device of the network parameter setting according to 3) in Section "1.4 Setting the CC-Link IE Field Network Master/Local Module". 12) Set the global label setting according to Section "1.5 Setting Global Labels". 13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the FB for 2 or More Master/Local Modules". FB operation type Pulsed execution (multiple scan execution type) Refer to "Appendix 2 FB Library Application Examples". 1When operation completes without error! [When an error occurs] FB_ENClescolor setuals [FB_ENClescolor setuals	precautions	processing separately in accordance with the required system operation.					
Do not use this FB in programs that are only executed once such as a subroutine, FOR-NEXT loop, etc. because it is impossible to turn OFF. 4) When this FB and other FB are used at the same time, precaution must be taken to avoid repetition of the own station's channel 5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis. 6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an interrupt program. 7) Every input must be provided with a value for proper FB operation. 8) If the parameters are set using GX Configurator-QP or the configuration function of GX Works 2, using this FB is unnecessary. 9) Parameters such as the pulse output mode and external I/O signal logic must be properly configured to match devices and systems connected to the LD75. 10) This FB uses transient transmission. Therefore, an interlock program for transient transmission is required. 11) Set the refresh device of the network parameter setting according to 3) in Section "1.4 Setting the CC-Link IE Field Network Master/Local Module". 12) Set the global label setting according to Section "1.5 Setting Global Labels". 13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the FB for 2 or More Master/Local Modules". FB operation type Pulsed execution (multiple scan execution type) Application example Refer to "Appendix 2 FB Library Application Examples". [When an error occurs] FB_ENExecution command FB_ENExecution		2) The FB cannot be used in an interrupt program.					
FOR-NEXT loop, etc. because it is impossible to turn OFF. 4) When this FB and other FB are used at the same time, precaution must be taken to avoid repetition of the own station's channel 5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis. 6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an interrupt program. 7) Every input must be provided with a value for proper FB operation. 8) If the parameters are set using GX Configurator-QP or the configuration function of GX Works 2, using this FB is unnecessary. 9) Parameters such as the pulse output mode and external I/O signal logic must be properly configured to match devices and systems connected to the LD75. 10) This FB uses transient transmission. Therefore, an interlock program for transient transmission is required. 11) Set the refresh device of the network parameter setting according to 3) in Section "1.4 Setting the CC-Link IE Field Network Master/Local Module". 12) Set the global label setting according to Section "1.5 Setting Global Labels". 13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the FB for 2 or More Master/Local Modules". FB operation type Application example FB erection (multiple scan execution type) Refer to "Appendix 2 FB Library Application Examples". FB. ENCEnacion command Parameters with processing Loop completes without error] [When an error occurs] FB. ENCEnacion command Parameters were processing long completes and control c		3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.					
4) When this FB and other FB are used at the same time, precaution must be taken to avoid repetition of the own station's channel 5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis. 6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an interrupt program. 7) Every input must be provided with a value for proper FB operation. 8) If the parameters are set using GX Configurator-QP or the configuration function of GX Works 2, using this FB is unnecessary. 9) Parameters such as the pulse output mode and external I/O signal logic must be properly configured to match devices and systems connected to the LD75. 10) This FB uses transient transmission. Therefore, an interlock program for transient transmission is required. 11) Set the refresh device of the network parameter setting according to 3) in Section "1.4 Setting the CC-Link IE Field Network Master/Local Module". 12) Set the global label setting according to Section "1.5 Setting Global Labels". 13) Only one master/local modules and be controlled by the CC-Link IE Field system FB. To control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the FB for 2 or More Master/Local Modules". FB operation type Pulsed execution (multiple scan execution type) Refer to "Appendix 2 FB Library Application Examples". [When an error occurs] FB_ENCExecution station FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUTION FB_ENCEXECUT		Do not use this FB in programs that are only executed once such as a subroutine,					
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Item	Description			
Relevant manuals	•MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)			

●Error code list

Error code	de Description Action	
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution	FB_EN	Bit	ON, OFF	ON: The FB is activated.
command		ы		OFF: The FB is not activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example, enter
				H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head	address (in hexadecimal)
		Word	module.	where the LD75 module is
			For details, refer to the	mounted. (For example, enter
			head module user's	H10 for X10.)
			manual.	



Name(Comment)	Label name	Data type	Setting range	Description
Own station channel	i_CH_No	Word	1~32	Specify the channel for own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Pr.49: OPR dwell time	i_OPRDwellTime	Word	0~65,535 (ms)*1	When stopper method 1) is set for Pr.43: OPR method, set the time for the machine OPR to complete after the near-point dog signal turns ON. *1: Setting method •0~32,767: Set in decimal.
				•32,768~65,535: Set after converted into hexadecimal.
Pr.50: Setting for the movement amount after near-point dog ON	i_DogOnLength	Double Word	0~2,147,483,647	When the count method 1) or 2) is set in Pr.43: OPR method, set the movement amount to the OP after the near-point dog ON.
Pr.51: OPR acceleration time selection	i_OPRAccTimeSel	Word	0: Acceleration time 0 1: Acceleration time 1 2: Acceleration time 2 3: Acceleration time 3	Set which of the acceleration time 0 to 3 to use for the acceleration time during OPR.
Pr.52: OPR deceleration time selection	i_OPRDecTimeSel	Word	0: Deceleration time 0 1: Deceleration time 1 2: Deceleration time 2 3: Deceleration time 3	Set which of the deceleration time 0 to 3 to use for the deceleration time during OPR.
Pr.53: OP shift amount	i_OPShift	Double Word	-2,147,483,648~ 2,147,483,647	Set the shift amount from the position stopped at with machine OPR.
Pr.54: OPR torque limit value	i_OPRTorqueLim	Word	1~300 (%)	Set the value to limit the servomotor torque after reaching the creep speed during machine OPR.



Name(Comment)	Label name	Data	Setting range	Description
		type		
Pr.55: Deviation	i_DevCntClr		1~65,535 (ms) *1	Set the duration of the
counter clear signal				deviation counter clear signal
output time				output during a machine OPR
				operation using any of the
				following methods: the
		Word		near-point dog method,
		vvora		stopper methods 1) to 3), and
				count method 1).
				*1: Setting method
				•1~32,767: Set in decimal.
				•32,768~65,535: Set after
				converted into hexadecimal.
Pr.56: Speed	i_ShiftSpeed		0: OPR speed	Set the operation speed for
designation during		Word	1: Creep speed	when a value other than 0 is
OP shift				set for Pr.53: OP shift amount.
Pr.57: Dwell time	i_OPRRetryDwell		0~65,535 (ms) *1	When setting Pr.48: OPR retry,
during OPR retry				set the stop time during the
				retry.
		Word		*1: Setting method
				●0~32,767: Set in decimal.
				•32,768~65,535: Set after
				converted into hexadecimal.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO			ON: Execution command is ON.
		Bit	0	OFF: Execution command is OFF.
OPR detailed	FB_OK			When ON, it indicates that the parameter
parameters setting		Bit	OFF	setting is completed.
complete				
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version Date		Description	
1.00A	2011/06/30	First edition	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.7. M+LD75-IEF_PosiDataSet (Positioning data setting)

FB Name

M+LD75-IEF_PosiDataSet

Item		Descri	iption		
Function overview	Sets positioning data (Da.1 to Da.10).				
Symbol					
		M+LD75-IEF_F			
	Execution command—			—Execution status	
	Module start XY address-	W: i_Start_IO_No	FB_OK : B	Positioning data setting complete	
	Station No	W:i_Station_No	FB_ERROR : B	—Error flag	
	Slave module start XY address-	W:i_SlvStart_IO_No	ERROR_ID: W	—Error code	
	Own station channel—	W: i_CH_No			
	Target axis-	W: i_Axis			
	Data No	W: i_DataNo			
	Da.1: Operation pattern-	W: i_OperatePattern			
	Da.2: Control system-	W: i_ControlSystem			
	Da.3: Acceleration time No	W: i_AccTimeNo			
	Da.4: Deceleration time No	W: i_DecTimeNo			
	Da.5: Axis to be interpolated—	W: i_InterpolatedAx			
	Da.10: M code-	W: i_Mcode			
	Da.9: Dwell time-	W: i_DwellTime			
	Da.8: Command speed-	D: i_CommandSpeed			
	Da.6: Positioning address-	D: i_PosiAddr			
	Da.7: Arc address-	D: i_ArcAddr			
Applicable hardware	Positioning module	LD75P1, LD75P2, LI	D75P4, LD75D1, L	D75D2, LD75D4	
and software	CC-Link IE module	CC-Link IE field netw	ork master/local m	nodule	
		CC-Link IE field network head module			



Item	Description						
	CPU module						
		Series	Model				
		MELSEC-Q Series *1	Universal model QCPU *2				
		MELSEC-L Series	LCPU *3				
		*1 Not applicable to QCPU (A mode) *2 The first five digits of the serial number are "12012" or later *3 The first five digits of the serial number are "13012" or later.					
	Engineering software	GX Works2 *1					
		Language	Software version				
		Japanese version	Version1.86Q or later				
		English version	Version1.24A or later				
		Chinese (Simplified) version	Version1.49B or later				
		Chinese (Traditional) version	Version1.49B or later				
		Korean version	Version1.49B or later				
		*1 For software versions applicable to the modules used, refer to					
		"Relevant manuals".					
Programming	Ladder						
language							
Number of steps	For universal model CP	U: 464 steps (for MELSEC-Q seri	es universal model CPU)				
	* The number of steps of the FB in a program depends on the CPU model that is used and						
	input and output definition.						
Function description		EN (Execution command), the set	positioning data is written to the				
	buffer memory.						
		-shot only, triggered by the FB_EN					
	, ,	ution command) is turned ON, the	·				
	,	s setting value is out of range, the	•				
		ıpted, and the error code 10 (Deci	mal) is stored in ERROR_ID (Erro				
	code).						
		ode explanation section for details					
		field network error occurs, the FB	•				
		upted, and the error code is stored	,				
Compiling as the	Refer to the error code explanation section for details.						
Compiling method	Macro type						



Item	Description						
Restrictions and	The FB does not include error recovery processing. Program the error recovery						
precautions	processing separately in accordance with the required system operation.						
	2) The FB cannot be used in an interrupt program.						
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.						
	Do not use this FB in programs that are only executed once such as a subroutine,						
	FOR-NEXT loop, etc. because it is impossible to turn OFF.						
	4) When this FB and other FB are used at the same time, precaution must be taken to						
	avoid repetition of the own station's channel						
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition						
	of the target axis.						
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an						
	interrupt program.						
	7) Every input must be provided with a value for proper FB operation.						
	8) Parameters such as the pulse output mode and external I/O signal logic must be						
	properly configured to match devices and systems connected to the LD75.						
	9) This FB uses transient transmission. Therefore, an interlock program for transient						
	transmission is required.						
	10) Set the refresh device of the network parameter setting according to 3) in Section "1.4						
	Setting the CC-Link IE Field Network Master/Local Module".						
	11) Set the global label setting according to Section "1.5 Setting Global Labels".						
	12) Only one master/local module can be controlled by the CC-Link IE Field system FB. To						
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the						
	FB for 2 or More Master/Local Modules".						
FB operation type	Pulsed execution (multiple scan execution type)						
Application example	Refer to "Appendix 2 FB Library Application Examples".						
Timing chart	[When operation completes without error] [When an error occurs]						
	FB_EN(Execution command) FB_EN(Execution command)						
	FB_ENO(Execution status)						
	Parameters write processing No processing Write Processing No processing						
	FB_OK(Positioning data setting complete) FB_OK(Positioning data setting complete)						
	FB_ERROR(Error flag) FB_ERROR(Error flag)						
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code						



Item	Description
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)



Name(Comment)	Label name	Data	Setting range	Description
		type		
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Data No.	i_DataNo	Word	1~600	Designate the positioning
		vvoid		data No.
Da.1: Operation	i_OperatePattern		0: Positioning complete	Designate whether
pattern			1: Continuous positioning	positioning is to be ended
			control	with just that data, or
			3:Continuous path control	whether the positioning for
				the next data No. is to be
		Word		carried out in succession.
		vvoid		* If the invalid range of 4 or
				higher is set, bit 0 and 1
				will be used. (For
				instance, when 4 is set,
				the operation will be
				performed under 0.)
Da.2: Control	i_ControlSystem		01h: ABS1 1-axis linear	Set the "control system"
system			control (ABS)	for carrying out positioning
			02h: INC1 1-axis linear	control.
			control (INC)	
			03h: FEED1 1-axis	
			fixed-feed control	
			04h: VF1 1-axis speed	
			control (forward run)	
			05h: VR1 1-axis speed	
		Word	control (reverse run)	
			06h: VPF speed-position	
			switching control	
			(forward run)	
			07h: VPR speed-position	
			switching control	
			(reverse run)	
			08h: PVF position-speed	
			switching control	
			(forward run)	



Name(Comment)	Label name	Data type	Setting range	Description
			09h: PVR position-speed	
			switching control	
			(reverse run)	
			0Ah: ABS2 2-axis linear	
			interpolation control	
			(ABS)	
			0Bh: INC2 2-axis linear	
			interpolation control	
			(INC)	
			0Ch: FEED2 fixed-feed	
			control by 2-axis	
			linear interpolation	
			0Dh: ABS circular	
			interpolation control	
			with sub point	
			specified (ABS)	
			0Eh: INC circular	
			interpolation control	
			with sub point	
			specified (INC)	
			0Fh: ABS. circular	
			interpolation control	
			with center point	
			specified (ABS, CW)	
			10h: ABS. circular	
			interpolation control	
			with center point	
			specified (ABS,	
			CCW)	
			11h: INC. circular	
			interpolation control	
			with center point	
			specified (INC, CW)	
			12h: INC. circular	
			interpolation control	
			with center point	



Name(Comment)	Label name	Data type	Setting range	Description
			specified (INC, CCW)	
			13h: VF2 2-axis speed	
			control (forward run)	
			14h: VR2 2-axis speed	
			control (reverse run)	
			15h: ABS3 3-axis linear	
			interpolation control	
			(ABS)	
			16h: INC3 3-axis linear	
			interpolation control	
			(INC)	
			17h: FEED3 fixed-feed	
			control by 3-axis	
			linear interpolation	
			control	
			18h: VF3 3-axis speed	
			control (forward run)	
			19h: VR3 3-axis speed	
			control (reverse run)	
			1Ah: ABS4 4-axis linear	
			interpolation control	
			(ABS)	
			1Bh: INC4 4-axis linear	
			interpolation control	
			(INC)	
			1Ch: FEED4 fixed-feed	
			control by 4-axis	
			linear interpolation	
			control	
			1Dh: VF4 4-axis speed	
			control (forward run)	
			1Eh: VR4 4-axis speed	
			control (reverse run)	
			80h: NOP NOP instruction	
			81h: POS current value	
			changing	



Name(Comment)	Label name	Data	Setting range	Description
		type		
			82h: JUMP JUMP	
			instruction	
			83h: LOOP declares the	
			beginning of LOOP	
			to LEND section	
			84h: LEND declares the	
			end of LOOP to	
			LEND section	
Da.3: Acceleration	i_AccTimeNo		0: Acceleration time 0	Set which of "acceleration
time No.			1: Acceleration time 1	time 0 to 3" to use for the
			2: Acceleration time 2	acceleration time during
			3: Acceleration time 3	positioning.
		Word		* If the invalid range of 4 or
		vvoid		higher is set, bit 0 and 1
				will be used. (For
				instance, when 4 is set,
				the operation will be
				performed under 0.)
Da.4: Deceleration	i_DecTimeNo		0: Deceleration time 0	Set which of "deceleration
time No.			1: Deceleration time 1	time 0 to 3" to use for the
			2: Deceleration time 2	deceleration time during
			3: Deceleration time 3	positioning.
		Word		* If the invalid range of 4 or
		vvoid		higher is set, bit 0 and 1
				will be used. (For
				instance, when 4 is set,
				the operation will be
				performed under 0.)



Name(Comment)	Label name	Data	Setting range	Description
		type		
Da.5: Axis to be	i_InterpolatedAx		0: Axis 1	Set the target axis for
interpolated			1: Axis 2	operations under the
			2: Axis 3	2-axis interpolation
			3: Axis 4	control.
				Do not specify the own
		\		axis number or any
		Word		number except the
				numbers in the setting
				range.
				Set "0" for operations
				under no interpolation, or
				3 or 4-axis interpolation.
Da.10: M code	i_Mcode		Da.2: Control system =	Set the "condition data
			82h: JUMP	No.", "number of
			instruction	repetitions", or "M code"
			0~10	depending on how the
			Da.2: Control system =	"control system" is set.
			83h: LOOP	*1: Setting method
			1~65,535*1	•1~32,767: Set in decimal.
		Word	Da.2: Control system =	•32,768~65,535: Set after
			other than above	converted into
			0~65,535*2	hexadecimal.
				*2: Setting method
				●0~32,767: Set in decimal.
				•32,768~65,535: Set after
				converted into
				hexadecimal.
Da.9: Dwell time	i_DwellTime		Da.2: Control system =	Set the "positioning data
			82h: JUMP	No." or "dwell time"
			instruction	corresponding to the
			1~600	"control system".
		Word	Da.2: Control system =	*1: Setting method
			82h: other than	●0~32,767: Set in decimal.
			JUMP instruction	•32,768~65,535: Set after
			0~65,535*1	converted into
				hexadecimal.



Name(Comment)	Label name	Data type	Setting range	Description
Da.8: Command	i_CommandSpeed		1) Pr.1: Unit setting = 0~2:	Set the command speed
speed			1~2,000,000,000	for positioning.
		Double	2) Pr.1: Unit setting = 3:	*1: The speed set for
		Word	1~4,000,000	previous positioning
		vvoid	-1: Current speed*1	data No. will be used for
			(Speed set for previous	positioning control.
			positioning data No.)	
Da.6: Positioning	i_PosiAddr		1) Pr.1: Unit setting = 0,1,3	Designate the target
address			Da.2: Control system =	position/movement
			06h~09h	amount for positioning
			0~2,147,483,647	control.
			Da.2: Control system other	The setting value range
			than above	differs according to the
			-2,147,483,648~	"control system".
			2,147,483,647	
			2) Pr.1: Unit setting = 2	
			Da.2: Control system =	
			01h,0Ah,	
			15h,1Ah,81h	
			0~35,999,999	
		Double	Da.2: Control system =	
		Word	02h,08h,	
			16h,1Bh,03h,	
			0Ch,17h,1Ch	
			-2,147,483,648~	
			2,147,483,647	
			Da.2: Control system =	
			06h,07h	
			INC mode	
			0~2,147,483,647	
			ABS mode	
			0~35,999,999	
			Da.2: Control system	
			= 08h,09h	
			0~2,147,483,647	



Name(Comment)	Label name	Data	Setting range	Description
		type		
Da.7: Arc address	i_ArcAddr		1) Pr.1: Unit setting = 0,1,3	Use only for carrying out
			-2,147,483,648~	circular interpolation
			2,147,483,647	control.
			2) Pr.1: Unit setting = 2	With sub point
		Double	Not used*1	designation, set the sub
		Word		point address.
				With center point
				designation, set the center
				point address of the arc.
				*1: Set "0".

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Di+	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
Positioning data	FB_OK	Bit	OFF	When ON, it indicates that the positioning
setting complete		DIL	OFF	data setting is completed.
Error flag	FB_ERROR	Dit OFF	When ON, it indicates that an error has	
		Bit OFF		occurred.
Error code	ERROR_ID	Word	0	FB error code output.

FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

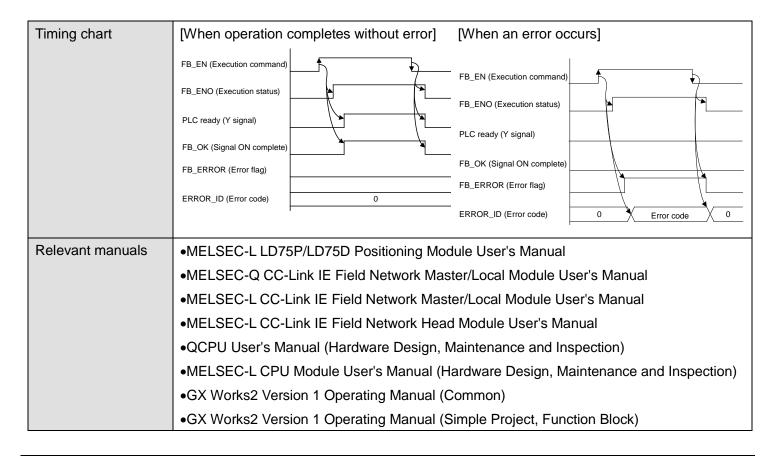
M+LD75-IEF_CPUReady

Item	Description					
Function overview	Outputs the PLC ready signal.					
Symbol		ess—W: i_Start_IO_No No.—W: i_Station_No	FB_ENO: B—Execution status FB_OK: B—Signal ON complete FB_ERROR: B—Error flag FROR_ID: W—Error code			
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD7	75D1, LD75D2, LD75D4			
and software	CC-Link IE module	CC-Link IE field network master	/local module			
		CC-Link IE field network head m	nodule			
	CPU module					
		Series	Model			
		MELSEC-Q Series *1	Universal model QCPU *2			
		MELSEC-L Series	LCPU *3			
		*1 Not applicable to QCPU (A m	ode)			
		*2 The first five digits of the seria	al number are "12012" or later			
		*3 The first five digits of the seria	al number are "13012" or later.			
	Engineering software	GX Works2 *1				
		Language	Software version			
		Japanese version	Version1.86Q or later			
		English version	Version1.24A or later			
		Chinese (Simplified) version	Version1.49B or later			
		Chinese (Traditional) version	Version1.49B or later			
		Korean version	Version1.49B or later			
		, ,	ble to the modules used, refer to			
_		"Relevant manuals".				
Programming .	Ladder					
language						



Item	Description
Number of steps	For universal model CPU: 310 steps (for MELSEC-Q series universal model CPU)
	* The number of steps of the FB in a program depends on the CPU model that is used and
	input and output definition.
Function description	By turning ON FB_EN (Execution command), the PLC ready signal (Y signal) is turned ON.
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.
	3) When the network configuration setting of the station number specified by i_Station_No
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error
	code 40 (decimal) is stored in ERROR_ID.
	Refer to the error code explanation section for details.
Compiling method	Macro type
Restrictions and	1) The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.
	Do not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) This FB uses index registers Z7 to Z9. Please do not use these index registers in an interrupt program.
	5) When this FB is used, a duplicated coil warning may occur during compile operation due
	to the Y signal being operated by index modification. However this is not a problem and
	the FB will operate without error.
	6) Every input must be provided with a value for proper FB operation.
	7) When FB_EN (Execution command) is turned ON from OFF, the OFF time should be set to 100 ms or longer.
	8) Parameters such as the pulse output mode and external I/O signal logic must be
	properly configured to match devices and systems connected to the LD75.
	9) This FB uses cyclic transmission. Therefore, an interlock program for cyclic
	transmission is required.
	10) Set the refresh device of the network parameter setting according to 3) in Section "1.4
	Setting the CC-Link IE Field Network Master/Local Module".
	11) Set the global label setting according to Section "1.5 Setting Global Labels".
	12) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Real-time execution
Application example	Refer to "Appendix 2 FB Library Application Examples".





Error code list

Error code	Description	Action
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No



Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)

Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit	OFF	ON: Execution command is ON.
		Bit OFF (OFF: Execution command is OFF.
Signal ON complete	FB_OK	D:+	OFF	When ON, it indicates that the PLC ready
				signal ON is completed.
Error flag	FB_ERROR	Dit	OFF	When ON, it indicates that an error has
		Bit OFF		occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version	Date	Description	
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.9. M+LD75-IEF_StartPosi (Positioning start)

FB Name

M+LD75-IEF_StartPosi

Item	Description		
Function overview	Starts positioning.		
Symbol	M+LD75-IEF_StartPosi		
	Execution comman	nd—B:FB_EN	FB_ENO : B — Execution status
	Module start XY addre	ss—W:i_Start_IO_No	FB_OK: B — Execution complete
	Station N	lo.—W: i_Station_No F	FB_ERROR: B — Error flag
	Slave module start XY addre	ss—W:i_SlvStart_IO_No	ERROR_ID: W—Error code
	Own station channel—W:i_CH_No		
	Target axis—W: i_Axis		
	Cd.3: Positioning start No.—W:i_StartNo		
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD75D1, LD75D2, LD75D4	
and software	CC-Link IE module	CC-Link IE field network master/local module	
		CC-Link IE field network head module	
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A mode)	
		*2 The first five digits of the serial number are "12012" or later	
		*3 The first five digits of the serial number are "13012" or later.	



Item	Description			
	Engineering software	tware GX Works2 *1		
		Language	Software version	
		Japanese version	Version1.86Q or later	
		English version	Version1.24A or later	
		Chinese (Simplified) version	Version1.49B or later	
		Chinese (Traditional) version	Version1.49B or later	
		Korean version	Version1.49B or later	
		*1 For software versions applica	ble to the modules used, refer to	
		"Relevant manuals".		
Programming	Ladder			
language				
Number of steps	For universal model CP	U: 557 steps (for MELSEC-Q serie	es universal model CPU)	
	* The number of steps of the FB in a program depends on the CPU model that is used and			
	input and output defin	ition.		



Item	Description
Function description	1) By turning ON FB_EN (Execution command), the control required for i_StartNo (Cd.3:
	Positioning start No.) is started.
	2) The FB is started when the positioning start signal (Y signal) is turned ON.
	3) When FB_EN (Execution command) is turned ON, the following conditions must be
	satisfied to turn ON the positioning start signal (Y signal).
	When the following conditions are not satisfied, the positioning start signal (Y signal) is
	not turned ON, but FB_OK (Execution complete) is turned ON. (In this case, warnings at
	start will not occur.)
	[Conditions]
	PLC ready signal (X signal): ON, Positioning start signal (Y signal): OFF, Start complete
	signal (X signal): OFF, BUSY signal (X signal): OFF
	4) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.
	5) When the start complete signal (X signal) is ON or FB_EN (Execution command) is
	OFF, the positioning start signal (Y signal) is turned OFF.
	6) When the target axis setting value is out of range, the FB_ERROR output turns ON,
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error
	code).
	Refer to the error code explanation section for details.
	7) When the network configuration setting of the station number specified by i_Station_No
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error
	code 40 (decimal) is stored in ERROR_ID.
	Refer to the error code explanation section for details.
	8) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).
	Refer to the error code explanation section for details.
Compiling method	Macro type



Item	Description
Restrictions and	The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.
	Do not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) When this FB and other FB are used at the same time, precaution must be taken to avoid repetition of the own station's channel
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis.
	6) This FB uses index registers Z5 to Z9. Please do not use these index registers in an interrupt program.
	7) When this FB is used in two or more places, a duplicated coil warning may occur during
	compile operation due to the Y signal being operated by index modification. However
	this is not a problem and the FB will operate without error.
	8) The data is not set at start in the FB. Data necessary for each control of start No. must
	be set in the parameters and buffer memory beforehand.
	9) Every input must be provided with a value for proper FB operation.
	10) Parameters such as the pulse output mode and external I/O signal logic must be properly configured to match devices and systems connected to the LD75.
	11) This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.
	12) Set the refresh device of the network parameter setting according to 3) in Section "1.4 Setting the CC-Link IE Field Network Master/Local Module".
	13) Set the global label setting according to Section "1.5 Setting Global Labels".
	14) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Pulsed execution (multiple scan execution type)
Application example	Refer to "Appendix 2 FB Library Application Examples".



Item	Description		
Timing chart	[When operation completes without error [When an error occurs (axis 1)] FB_EN(Execution command) FB_ENO(Execution status) Cd.3: Positioning start No. [When an error occurs (axis 1)] FB_EN(Execution command) FB_EN(Execution command) FB_ENO(Execution status) Cd.3: Positioning start No. 0		
	Positioning start signal (Y signal) Start completion signal (X signal) FB_OK(Execution complete) FB_ERROR(Error flag) ERROR_ID(Error code) Positioning start signal (Y signal) Start completion signal (X signal) FB_OK(Execution complete) FB_ERROR(Error flag) ERROR_ID(Error code) 0 Error code 0		
Relevant manuals	 MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block) 		

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



●Input labels

Name(Comment)	Label name	Data type	Setting range	Description
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
Mandada ataut VV	: Otant IO Na		Danagada ay tha 1/0 maint	activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address		\\\	range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
				number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		Word		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Cd.3: Positioning	i_StartNo		1~600: Positioning data	Set the "Positioning start
start No.			No.	No." required for the start
			7000~7004:	control in Cd.3:
			Block start	Positioning start No.
			designation	
		\\\	9001: Machine OPR	
		Word	9002: Fast OPR	
			9003: Current value	
			changing	
			9004: Simultaneous	
			starting of multiple	
			axes	



Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Rit	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
Execution complete	FB_OK			When ON, it indicates that the execution is
		Bit	OFF	completed. However, the FB is not turned
				ON if a module error has occurred at start.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.

FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition
1.01B	2013/01/25	When the network configuration setting of specified
		station No. is incorrect, Error flag (Error code: 40) is
		turned ON.

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.10. M+LD75-IEF_JOG (JOG/inching operation)

FB Name

M+LD75-IEF_JOG

Item	Description		
Function overview	Carries out JOG and inching operation.		
Symbol			
	For each in a common	M+LD75-IEF_JO	
		nd—B: FB_EN	FB_ENO: B — Execution status
		ess—W:i_Start_IO_No	FB_OK: B — Operation start complete
	Station N	No.—W: i_Station_No	FB_ERROR: B—Error flag
	Slave module start XY addre	ess—W:i_SlvStart_IO_No	ERROR_ID : W—Error code
	Own station chan	nel—W:i_CH_No	
	Target a.	xis—W: i_Axis	
	Forward run JOG comma	nd—B: i_FowardJOG	
	Reverse run JOG comma	nd—B: i_ReverseJOG	
	Cd.17: JOG spe	ed—D:i_JOGSpeed	
	Cd.16: Inching movement amou	unt—W:i_Inching	
	5		
Applicable hardware	Positioning module LD75P1, LD75P2, LD75P4, LD75D1, LD75D2, LD75D4		
and software	CC-Link IE module	CC-Link IE field network mast	
		CC-Link IE field network head	module
	0011		
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A	mode)
		*2 The first five digits of the se	rial number are "12012" or later
		*3 The first five digits of the se	rial number are "13012" or later.



Item	Description			
	Engineering software	ware GX Works2 *1		
		Language	Software version	
		Japanese version	Version1.86Q or later	
		English version	Version1.24A or later	
		Chinese (Simplified) version	Version1.49B or later	
		Chinese (Traditional) version	Version1.49B or later	
		Korean version	Version1.49B or later	
		*1 For software versions applica	ble to the modules used, refer to	
		"Relevant manuals".		
Programming	Ladder			
language				
Number of steps	For universal model CPU: 567 steps (for MELSEC-Q series universal model CPU)			
	* The number of steps of the FB in a program depends on the CPU model that is used and			
	input and output defin	ition.		

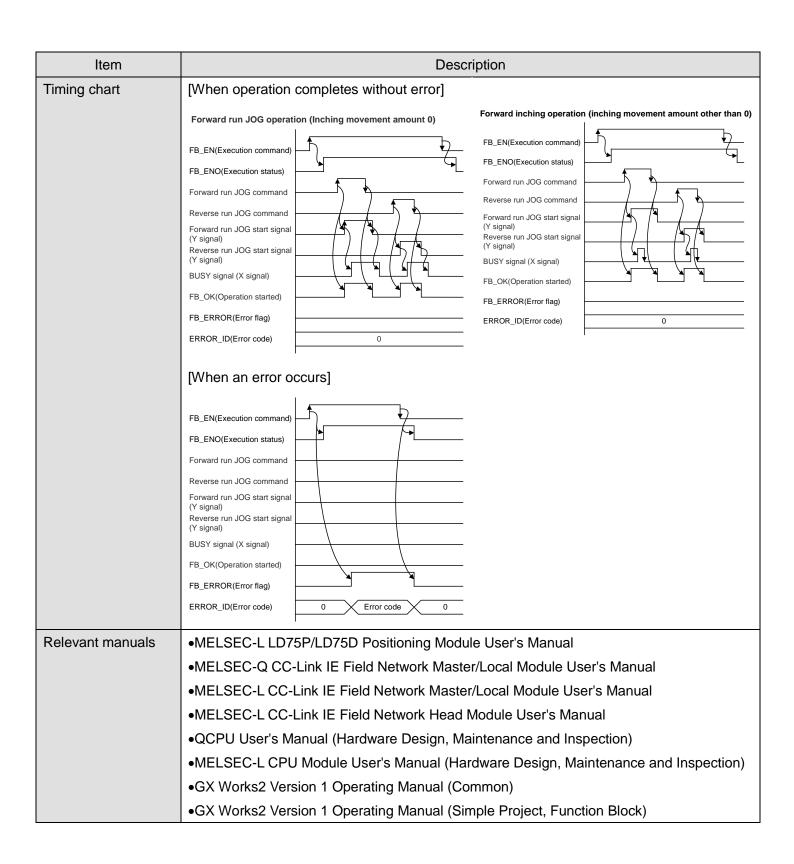


Item	Description
Function description	1) After FB_EN (Execution command) is turned ON, JOG or inching operation is carried
	out by turning ON i_FowardJOG (Forward run JOG command) or i_ReverseJOG
	(Reverse run JOG command).
	2) After FB_EN (Execution command) is turned ON, the FB is always executed.
	3) When i_FowardJOG (Forward run JOG command) and i_ReverseJOG (Reverse run
	JOG command) are simultaneously turned ON, the operation stops.
	4) After FB_EN (Execution command) is turned ON, the operation will stop if FB_EN
	(Execution command) is turned OFF during i_FowardJOG (Forward run JOG
	command) or i_ReverseJOG (Reverse run JOG command) operation.
	5) The operation will stop if i_ReverseJOG (Reverse run JOG command) is turned ON
	during the forward run JOG operation. When i_ReverseJOG (Reverse run JOG
	command) is turned OFF from ON, the forward run JOG operation will start again.
	(Work in the same way for the opposite operation.)
	6) When the target axis setting value is out of range, the FB_ERROR output turns ON,
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error
	code).
	Refer to the error code explanation section for details.
	7) When the network configuration setting of the station number specified by i_Station_No
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error
	code 40 (decimal) is stored in ERROR_ID.
	Refer to the error code explanation section for details.
	8) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).
	Refer to the error code explanation section for details.
Compiling method	Macro type



Item	Description
Restrictions and	The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.
	Do not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) When this FB and other FB are used at the same time, precaution must be taken to
	avoid repetition of the own station's channel
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition
	of the target axis.
	6) This FB uses index registers Z5 to Z9. Please do not use these index registers in an
	interrupt program.
	7) It is dangerous to set the JOG speed to a large value from the beginning. For safety, first
	set to a smaller value and check the movement. Then, gradually increase the value to
	an optimum speed for control.
	8) If a value other than "0" is set in Cd.16: Inching movement amount and Cd.17: JOG
	speed, the operation will become an inching operation.
	9) When this FB is used in two or more places, a duplicated coil warning may occur during
	compile operation due to the Y signal being operated by index modification. However
	this is not a problem and the FB will operate without error.
	10) Every input must be provided with a value for proper FB operation.
	11) Parameters such as the pulse output mode and external I/O signal logic must be
	properly configured to match devices and systems connected to the LD75.
	12) This FB uses cyclic and transient transmission. Therefore, an interlock program for
	cyclic and transient transmission is required.
	13) Set the refresh device of the network parameter setting according to 3) in Section "1.4
	Setting the CC-Link IE Field Network Master/Local Module".
	14) Set the global label setting according to Section "1.5 Setting Global Labels".
	15) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Real-time execution
Application example	Refer to "Appendix 2 FB Library Application Examples".







●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting. (After the forward run JOG
		command/reverse run JOG command is
		turned OFF and FB_EN is turned ON from
		OFF, turn ON the forward run JOG
		command/reverse run JOG command
		again.)
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Forward run JOG	i_FowardJOG		ON, OFF	Turn ON for forward run
command		Bit		JOG or forward run
				inching operation
Reverse run JOG	i_ReverseJOG		ON, OFF	Turn ON for reverse run
command		Bit		JOG or reverse run
				inching operation.
Cd.17: JOG speed	i_JOGSpeed		1) Pr.1: Unit setting = 0~2:	Set the JOG speed.
		Double	0~2,000,000,000	Set "0" for inching
		Word	2) Pr.1: Unit setting = 3:	operation.
			0~4,000,000	



Name(Comment)	Label name	Data	Setting range	Description
		type		
Cd.16: Inching	i_Inching		0~65,535 *1	Set inching movement
movement amount			0: JOG operation	amount. Set "0" for JOG
				operation.
		Word		*1: Setting method
		vvoid		●0~32,767: Set in decimal.
				•32,768~65,535: Set after
				converted into
				hexadecimal.

Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
Operation start	FB_OK	Bit	OFF	ON: JOG command is ON.
complete		DIL	OFF	OFF: JOG command is OFF.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition
1.01B	2013/01/25	When the network configuration setting of specified
		station No. is incorrect, Error flag (Error code: 40) is
		turned ON.

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.11. M+LD75-IEF_MPG (Manual pulse generator operation)

FB Name

M+LD75-IEF_MPG

Item		Description			
Function overview	Carries out manual pulse generator operation.				
Symbol	M+LD75-IEF_MPG				
	Execution comm	nand—B:FB_EN	FB_ENO : B	Execution status	
	Module start XY add	lress—W: i_Start_IO_No	FB_OK : B	Manual pulse generator enable complete	
	Station	No.—W:i_Station_No	FB_ERROR : B	Error flag	
	Slave module start XY add	lress—W: i_SlvStart_IO_No	ERROR_ID: W	Error code	
	Own station cha	nnel—W:i_CH_No			
	Target	axis—W: i_Axis			
		Cd.20: Manual pulse generator 1 D : i_MPGInputMag			
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD	D75D1, LD75D	02, LD75D4	
and software	CC-Link IE module	CC-Link IE field network maste	er/local module	Э	
		CC-Link IE field network head	module		
	CPU module				
		Series		Model	
		MELSEC-Q Series *1 Universal model QCPU *2			
	MELSEC-L Series LCPU *3				
		*1 Not applicable to QCPU (A mode)			
		*2 The first five digits of the serial number are "12012" or later			
		*3 The first five digits of the ser	rial number are	e "13012" or later.	



Item		Description		
	Engineering software	GX Works2 *1		
		Language	Software version	
		Japanese version	Version1.86Q or later	
		English version	Version1.24A or later	
		Chinese (Simplified) version	Version1.49B or later	
		Chinese (Traditional) version	Version1.49B or later	
		Korean version	Version1.49B or later	
		*1 For software versions applical	ble to the modules used, refer to	
		"Relevant manuals".		
Programming	Ladder			
language				
Number of steps	For universal model CPI	J: 471 steps (for MELSEC-Q serie	es universal model CPU)	
	* The number of steps of	f the FB in a program depends or	the CPU model that is used and	
	input and output definition.			
Function description	1) The manual pulse generator operation is enabled or disabled by turning ON/OFF FB_EN			
	(Execution command).			
	2) After FB_EN (Execution command) is turned ON, the FB is always executed.			
	3) While FB_OK (Manual pulse generator enable complete) is turned ON, the workpiece is			
	moved corresponding to the No. of pulses input from the manual pulse generator.			
		s setting value is out of range, the	-	
		pted, and the error code 10 (Deci	mal) is stored in ERROR_ID (Error	
	code).	de esculerentiare escation for detaile		
		de explanation section for details.		
	,		number specified by i_Station_No	
		ROR is turned ON and the proces stored in ERROR_ID.	sing is interrupted, and the error	
	, , ,	de explanation section for details.		
		field network error occurs, the FB		
	,			
	processing is interrupted, and the error code is stored in ERROR_ID (Error code). Refer to the error code explanation section for details.			
Compiling method	Macro type	and the production of the control of		
23				



Item	Description				
Restrictions and	The FB does not include error recovery processing. Program the error recovery				
precautions	processing separately in accordance with the required system operation.				
	2) The FB cannot be used in an interrupt program.				
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do				
	not use this FB in programs that are only executed once such as a subroutine,				
	FOR-NEXT loop, etc. because it is impossible to turn OFF.				
	4) Do not change i_Axis (Target axis) while FB_EN (Execution command) is turned ON.				
	5) When this FB and other FB are used at the same time, precaution must be taken to				
	avoid repetition of the own station's channel				
	6) When two or more of these FBs are used, precaution must be taken to avoid repetition of				
	the target axis.				
	7) This FB uses index registers Z5 to Z9. Please do not use these index registers in an				
	interrupt program.				
	8) Every input must be provided with a value for proper FB operation.				
	9) Parameters such as the pulse output mode and external I/O signal logic must be				
	properly configured to match devices and systems connected to the LD75.				
	10) This FB uses cyclic and transient transmission. Therefore, an interlock program for				
	cyclic and transient transmission is required.				
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4				
	Setting the CC-Link IE Field Network Master/Local Module".				
	12) Set the global label setting according to Section "1.5 Setting Global Labels".				
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To				
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the				
	FB for 2 or More Master/Local Modules".				
FB operation type	Real-time execution				
Application example	Refer to "Appendix 2 FB Library Application Examples".				
Timing chart	[When operation completes without error [When an error occurs (axis 1)]				
	(axis 1)]				
	FB_EN(Execution command) FB_EN(Execution command)				
	FB_ENO(Execution status)				
	Cd.21: Manual pulse generator 0 1 Cd.21: Manual pulse generator enable flag 0 Cd.21: Manual pulse generator enable flag				
	BUSY signal (X signal) BUSY signal (X signal)				
	FB_OK(Manual pulse generator enable complete) FB_OK(Manual pulse generator enable complete)				
	FB_ERROR(Error flag) ERROR ID(Error code) FB_ERROR(Error flag) ERROR_ID(Error code) O Error code O Error code				
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 V Error code 0				



Item	Description
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	\\/ a = d	1~32	Specify the channel for
		Word		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Cd.20: Manual pulse	i_MPGInputMag		1~1000	Set the manual pulse
generator 1 pulse				generator 1 pulse input
input magnification		Double		magnification.
		Word		Value 0: Read as "1".
				Value 1001 or higher:
				Read as "1000".



Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit.	OFF	ON: Execution command is ON.
				OFF: Execution command is OFF.
Manual pulse	FB_OK			When ON, it indicates that the manual pulse
generator enable		Bit	OFF	generator enable setting is completed.
complete				
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.

FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition
1.01B	2013/01/25	When the network configuration setting of specified
		station No. is incorrect, Error flag (Error code: 40) is
		turned ON.

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

M+LD75-IEF_ChgSpeed

Item	Description		
Function overview	Performs speed change.		
Symbol	M+LD75-IEF_ChgSpeed		
	Execution command-		FB_ENO: B—Execution status
	Module start XY address	W: i_Start_IO_No	FB_OK: B—Speed change request complete
	Station No.	W: i_Station_No FB_	ERROR: B—Error flag
	Slave module start XY address	W: i_SlvStart_IO_No ER	ROR_ID : W—Error code
	Own station channel	W:i_CH_No	
	Target axis-	W:i_Axis	
	Cd.14: New speed value	D: i_SpeedChgValue	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, L	D75D1, LD75D2, LD75D4
and software	CC-Link IE module	CC-Link IE field network mas	ter/local module
		CC-Link IE field network head	d module
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A	mode)
		*2 The first five digits of the se	erial number are "12012" or later
		*3 The first five digits of the se	erial number are "13012" or later.
	Engineering software	GX Works2 *1	
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions appli	cable to the modules used, refer to
		"Relevant manuals".	

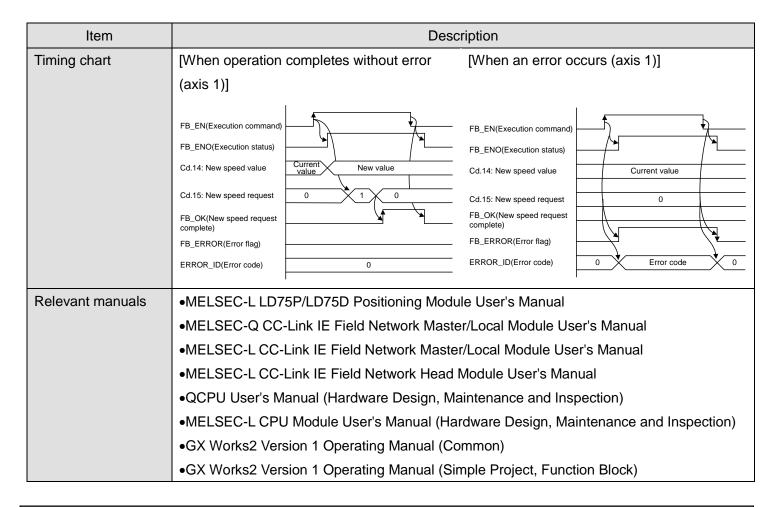


Item	Description
Programming	Ladder
language	
Number of steps	For universal model CPU: 471 steps (for MELSEC-Q series universal model CPU)
	* The number of steps of the FB in a program depends on the CPU model that is used and
	input and output definition.
Function description	1) The speed during control is changed to a newly designated speed by turning ON FB_EN
	(Execution command).
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.
	3) When the target axis setting value is out of range, the FB_ERROR output turns ON,
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error
	code).
	Refer to the error code explanation section for details.
	4) When the network configuration setting of the station number specified by i_Station_No
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error
	code 40 (decimal) is stored in ERROR_ID.
	Refer to the error code explanation section for details.
	5) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).
	Refer to the error code explanation section for details.
Compiling method	Macro type



Item	Description
Restrictions and	The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do
	not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) When this FB and other FB are used at the same time, precaution must be taken to
	avoid repetition of the own station's channel
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition of
	the target axis.
	6) This FB uses index registers Z5, Z6, Z7 and Z9. Please do not use these index registers
	in an interrupt program.
	7) Every input must be provided with a value for proper FB operation.
	8) If FB_EN (Execution command) is turned ON while the BUSY signal (X signal) is OFF,
	the request will be ignored. In this case, FB_OK (Speed change request complete) is not
	turned ON.
	9) Parameters such as the pulse output mode and external I/O signal logic must be
	properly configured to match devices and systems connected to the LD75.
	10) This FB uses cyclic and transient transmission. Therefore, an interlock program for
	cyclic and transient transmission is required.
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4
	Setting the CC-Link IE Field Network Master/Local Module".
	12) Set the global label setting according to Section "1.5 Setting Global Labels".
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Pulsed execution (multiple scan execution type)
Application example	Refer to "Appendix 2 FB Library Application Examples".





Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvora		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Cd.14: New speed	i_SpeedChgValue		1) Pr.1: Unit setting = 0~2:	Set the new speed.
value		Double	0~2,000,000,000	
		Word	2) Pr.1: Unit setting = 3:	
			0~4,000,000	

Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Bit	OFF	ON: Execution command is ON.
		DIL	OFF	OFF: Execution command is OFF.
Speed change	FB_OK	Bit	OFF	When ON, it indicates that the speed
request complete		DIL	OFF	change request is completed.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version	Date Description		
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

M+LD75-IEF_ChgOverride

Item	Description		
Function overview	Performs override.		
Symbol	M+LD75-IEF_ChgOverride		
	Execution command-	_	ENO : B — Execution status
	Module start XY address-		B_OK: B —Override value setting complete
	Station No	W: i_Station_No FB_ER	ROR : B—Error flag
	Slave module start XY address-	- W : i_SlvStart_IO_No ERRO	R_ID: W—Error code
	Own station channel-	-W: i_CH_No	
		-W: i_Axis	
	Cd.13: Positioning operation speed override	-W: i_Override	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD	75D1, LD75D2, LD75D4
and software	CC-Link IE module	CC-Link IE field network master	r/local module
		CC-Link IE field network head r	nodule
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A m	node)
		*2 The first five digits of the seri	al number are "12012" or later
		*3 The first five digits of the serie	al number are "13012" or later.
	Engineering software	GX Works2 *1	
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applica "Relevant manuals".	able to the modules used, refer to



Item	Description
Programming	Ladder
language	
Number of steps	For universal model CPU: 320 steps (for MELSEC-Q series universal model CPU)
	* The number of steps of the FB in a program depends on the CPU model that is used and
	input and output definition.
Function description	1) By turning ON FB_EN (Execution command), the speed is changed for all controls to be
	executed at the percentage specified with i_Override (Cd.13: Positioning operation
	speed override).
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.
	3) When the target axis setting value is out of range, the FB_ERROR output turns ON,
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID
	(Error code).
	Refer to the error code explanation section for details.
	4) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).
	Refer to the error code explanation section for details.
Compiling method	Macro type



Item	Description		
Restrictions and	The FB does not include error recovery processing. Program the error recovery		
precautions	processing separately in accordance with the required system operation.		
	2) The FB cannot be used in an interrupt program.		
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.		
	Do not use this FB in programs that are only executed once such as a subroutine,		
	FOR-NEXT loop, etc. because it is impossible to turn OFF.		
	4) When this FB and other FB are used at the same time, precaution must be taken to		
	avoid repetition of the own station's channel		
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition		
	of the target axis.		
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an		
	interrupt program.		
	7) Every input must be provided with a value for proper FB operation.		
	8) Parameters such as the pulse output mode and external I/O signal logic must be		
	properly configured to match devices and systems connected to the LD75.		
	9) This FB uses transient transmission. Therefore, an interlock program for transient		
	transmission is required.		
	10) Set the refresh device of the network parameter setting according to 3) in Section "1.4		
	Setting the CC-Link IE Field Network Master/Local Module".		
	11) Set the global label setting according to Section "1.5 Setting Global Labels".		
	12) Only one master/local module can be controlled by the CC-Link IE Field system FB. To		
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the		
	FB for 2 or More Master/Local Modules".		
FB operation type	Pulsed execution (multiple scan execution type)		
Application example	Refer to "Appendix 2 FB Library Application Examples".		
Timing chart	[When operation completes without error [When an error occurs (axis 1)]		
	(axis 1)]		
	FB_EN(Execution command) FB_EN(Execution command)		
	FB_ENO(Execution status)		
	Cd.13: Positioning operation speed override Cd.13: Positioning operation speed override Cd.13: Positioning operation speed override		
	FB_OK(Override value setting complete) FB_OK(Override value setting complete)		
	FB_ERROR(Error flag) FB_ERROR(Error flag)		
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code 0		



Item	Description
Relevant manuals	•MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



●Input labels

Name(Comment)	Label name	Data	Setting range	Description
Execution command	FB EN	type	ON, OFF	ON: The FB is activated.
	_	Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	n station channel i_CH_No Word	Mord	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Cd.13: Positioning	i_Override			Set the new speed as a
operation speed		Word	1~300 (%)	percentage.
override				

Output labels

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit	OFF	ON: Execution command is ON.
		Bit OFF		OFF: Execution command is OFF.
Override value	FB_OK	Dit	OFF	When ON, it indicates that the setting of
setting complete				override value is completed.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



FB Version Upgrade History

Version	Date	Description
1.00A	2011/06/30	First edition

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.14. M+LD75-IEF_ChgAccDecTime (Acceleration/deceleration time setting value change)

FB Name

M+LD75-IEF_ChgAccDecTime

Item	Description		
Function overview	Changes the setting value of the acceleration/deceleration time.		
Symbol		M 1 D 75 155 OL A D T	
	Execution comma	M+LD75-IEF_ChgAccDecTim und—B:FB_EN FI	e B_ENO : B — Execution status
	Module start XY addre	ess—W:i_Start_IO_No	FB_OK : B Acceleration/deceleration time change complete
	Station N	No.—W: i_Station_No FB_E	ERROR : B — Error flag
	Slave module start XY addre	ess—W:i_SlvStart_IO_No ERR	ROR_ID: W—Error code
	Own station chan	nel—W:i_CH_No	
	Target a	xis—W:i_Axis	
	Acceleration/deceleration tir change enable fl	me_B : i_Enable	
	Cd.10: New acceleration time val		
	Cd.11: New deceleration time val	lue—D: i_NewDecTime	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD7	75D1, LD75D2, LD75D4
and software	CC-Link IE module CC-Link IE field network master/local module		/local module
		CC-Link IE field network head n	nodule
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A m	ode)
		*2 The first five digits of the serial number are "12012" or later	
		*3 The first five digits of the seria	al number are "13012" or later.

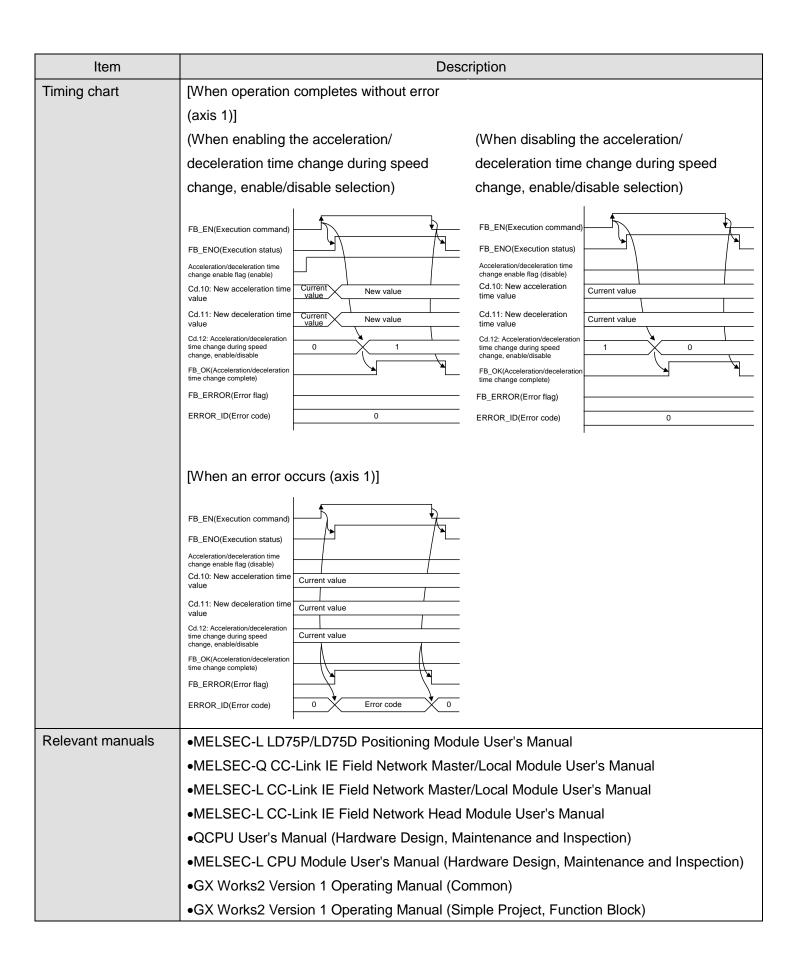


Item	Description		
	Engineering software GX Works2 *1		
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applica	ble to the modules used, refer to
		"Relevant manuals".	
Programming	Ladder		
language			
Number of steps	For universal model CF	PU: 395 steps (for MELSEC-Q serie	es universal model CPU)
	* The number of steps of	of the FB in a program depends or	the CPU model that is used and
	input and output definition.		
Function description	' '	EN (Execution command), the acc	
		ing to the i_Enable (Acceleration/d	eceleration time change enable
	flag).		
	,	cceleration/deceleration time chan	J.
	i_NewAccTime (Cd.10: New acceleration time value) and i_NewDecTime (Cd.11: New		
	deceleration time value) are set, and Cd.12: Acceleration/deceleration time change		
	during speed change, enable/disable selection is changed to 1: Acceleration/deceleration time change enable.		
		eration time change enable. cceleration/deceleration time chan	go onable flag) is OEE both
	,	d.10: New acceleration time value)	.
	_ `	value) are not changed, and Cd.12	_ ,
		ed change, enable/disable selection	
		eration time change disable.	in is shariged to si
		is setting value is out of range, the	FB ERROR output turns ON.
	'		mal) is stored in ERROR_ID (Error
	code).		,
	Refer to the error co	ode explanation section for details.	
	3) When a CC-Link IE	field network error occurs, the FB	_ERROR output turns ON,
	processing is interru	upted, and the error code is stored	in ERROR_ID (Error code).
	Refer to the error co	ode explanation section for details	
Compiling method	Macro type	•	



Item	Description
Restrictions and	The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program. Do
	not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) When this FB and other FB are used at the same time, precaution must be taken to
	avoid repetition of the own station's channel
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition of
	the target axis.
	6) This FB uses index registers Z5 to Z7. Please do not use these index registers in an
	interrupt program.
	7) A duplicated coil warning may occur with this FB during compile operation. However this
	is not a problem and the FB will operate without error.
	8) Every input must be provided with a value for proper FB operation.
	9) Parameters such as the pulse output mode and external I/O signal logic must be
	properly configured to match devices and systems connected to the LD75.
	10) This FB uses transient transmission. Therefore, an interlock program for transient
	transmission is required.
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4
	Setting the CC-Link IE Field Network Master/Local Module".
	12) Set the global label setting according to Section "1.5 Setting Global Labels".
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Pulsed execution (multiple scan execution type)
Application example	Refer to "Appendix 2 FB Library Application Examples".







●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Acceleration/	i_Enable		ON: Enabled	Enable or disable
deceleration time		Bit	OFF: Disabled	acceleration/deceleration
change enable flag				time change.



Name(Comment)	Label name	Data	Setting range	Description
		type		
Cd.10: New	i_NewAccTime		0~8,388,608 (ms)	Set the new acceleration
acceleration time				time.
value				When 0 is set, the
		Double		acceleration time is not
		Word		changed even if the speed
		vvoid		is changed. In this case,
				the control is performed
				with the preset
				acceleration time.
Cd.11: New	i_NewDecTime		0~8,388,608 (ms)	Set the new deceleration
deceleration time				time.
value				When 0 is set, the
		Double		deceleration time is not
		Word		changed even if the speed
		vvoid		is changed. In this case,
				the control is performed
				with the preset
				deceleration time.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Di+	OFF	ON: Execution command is ON.
		Bit OFF C		OFF: Execution command is OFF.
Acceleration/deceleration	FB_OK			When ON, it indicates that the setting of
time change complete		Bit	OFF	acceleration/deceleration time change is
				completed.
Error flag	FB_ERROR	Bit	OFF	When ON, it indicates that an error has
		DIL	OFF	occurred.
Error code	ERROR_ID	Word	0	FB error code output.



Version	Date	Description
1.00A	2011/06/30	First edition
1.01B	2013/01/25	The timing for turning ON FB_OK of when the
		acceleration/deceleration time change is disabled is
		modified.

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

M+LD75-IEF_ChgPosi

Item	Description				
Function overview	Changes the target position.				
Symbol	Execution comma	M+LD75-IEF_ChgPosi nd— B : FB_EN FB	B_ENO : B—Execution status		
	Module start XY addre	ss—W:i_Start_IO_No F	B_OK: B —Target position change complete		
	Station N	lo.—W: i_Station_No FB_E	RROR:B—Error flag		
	Slave module start XY addre	ss—W: i_SlvStart_IO_No ERR	OR_ID: W—Error code		
	Own station chann	nel—W:i_CH_No			
	_	wis—W: i_Axis			
	Cd.27: Target position change val (new addres	ss) D: I_PosiCngAddr			
	Cd.28: Target position change val (new spee	— D · L PosiChospeed			
		L			
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD7	75D1, LD75D2, LD75D4		
and software	CC-Link IE module	CC-Link IE field network master	local module		
		CC-Link IE field network head m	nodule		
	CPU module				
		Series	Model		
		MELSEC-Q Series *1	Universal model QCPU *2		
		MELSEC-L Series	LCPU *3		
		*1 Not applicable to QCPU (A me	ode)		
		*2 The first five digits of the seria	al number are "12012" or later		
		*3 The first five digits of the seria	al number are "13012" or later.		
	Engineering software	GX Works2 *1			
		Language	Software version		
		Japanese version	Version1.86Q or later		
		English version	Version1.24A or later		
		Chinese (Simplified) version	Version1.49B or later		
		Chinese (Traditional) version	Version1.49B or later		
		Korean version	Version1.49B or later		
	*1 For software versions applicable to the modules used, refer to				
		"Relevant manuals".			

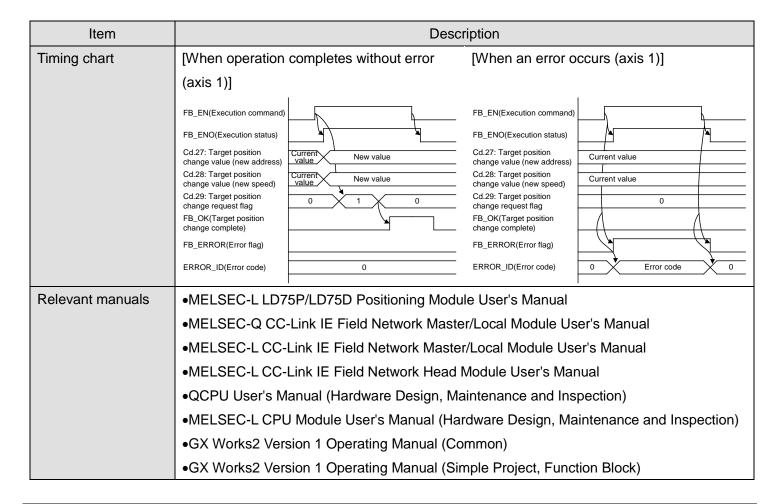


Item	Description			
Programming	Ladder			
language				
Number of steps	For universal model CPU: 504 steps (for MELSEC-Q series universal model CPU)			
	* The number of steps of the FB in a program depends on the CPU model that is used and			
	input and output definition.			
Function description	1) By turning ON FB_EN (Execution command), the target position under position control			
	is changed to the value set for i_PosiChgAddr (Cd.27: Target position change value			
	(new address)). The command speed is also changed to the value set for			
	i_PosiChgSpeed (Cd.28: Target position change value (new speed)) simultaneously.			
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.			
	3) When the target axis setting value is out of range, the FB_ERROR output turns ON,			
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error code).			
	Refer to the error code explanation section for details.			
	4) When the network configuration setting of the station number specified by i_Station_No			
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error			
	code 40 (decimal) is stored in ERROR_ID.			
	Refer to the error code explanation section for details.			
	5) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,			
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).			
	Refer to the error code explanation section for details.			
Compiling method	Macro type			



Item	Description
Restrictions and	1) The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.
	Do not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) When this FB and other FB are used at the same time, precaution must be taken to
	avoid repetition of the own station's channel
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition of the target axis.
	6) This FB uses index registers Z5, Z6, Z7, and Z9. Please do not use these index
	registers in an interrupt program.
	7) Every input must be provided with a value for proper FB operation.
	8) If FB_EN (Execution command) is turned ON while the BUSY signal (X signal) is OFF,
	the request will be ignored. In this case, FB_OK (Target position change complete) is not turned ON.
	9) Parameters such as the pulse output mode and external I/O signal logic must be
	properly configured to match devices and systems connected to the LD75.
	10) This FB uses cyclic and transient transmission. Therefore, an interlock program for
	cyclic and transient transmission is required.
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4
	Setting the CC-Link IE Field Network Master/Local Module".
	12) Set the global label setting according to Section "1.5 Setting Global Labels".
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Pulsed execution (multiple scan execution type)
Application example	Refer to "Appendix 2 FB Library Application Examples".





Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		VVOIG		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoid		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.
Cd.27: Target	i_PosiChgAddr		1) Pr.1: Unit setting = 2	When changing the target
position change			ABS mode	position during a
value (new address)			0~35,999,999	positioning operation,
			INC mode	specify a new positioning
		Double	-2,147,483,648~	address.
		Word	2,147,483,647	
			2) Pr.1: Unit setting =	
			Other than 2	
			-2,147,483,648~	
			2,147,483,647	



Name(Comment)	Label name	Data	Setting range	Description
		type		
Cd.28: Target	i_PosiChgSpeed		1) Pr.1: Unit setting = 0~2:	When changing the target
position change			0~2,000,000,000	position during a
value (new speed)		Double	2) Pr.1: Unit setting = 3:	positioning operation,
		Word	0~4,000,000	specify a new speed.
				When 0 is set, the speed is
				not changed.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Bit OFF		ON: Execution command is ON.
				OFF: Execution command is OFF.
Target position	FB_OK			When ON, it indicates that a request of target
change complete		Bit	OFF	position change request flag has been
				accepted by the module.
Error flag	FB_ERROR	Bit OFF	When ON, it indicates that an error has	
			OFF	occurred.
Error code	ERROR_ID	Word	0	FB error code output.



Version	Date	Description	
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

M+LD75-IEF_Restart

Item	Description		
Function overview	Performs restart.		
Symbol	M+LD75-IEF_Restart		
	Execution command		_ENO : B —Execution status
	Module start XY address	s─W: i_Start_IO_No F	B_OK: B—Restart acceptance complete
	Station No	.—W: i_Station_No FB_EI	RROR:B—Error flag
	Slave module start XY address	S─W: i_SlvStart_IO_No ERRO	DR_ID: W—Error code
	Own station channe	I—W: i_CH_No	
	Target axis	S─W: i_Axis	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD7	75D1, LD75D2, LD75D4
and software	CC-Link IE module	CC-Link IE field network master	local module
		CC-Link IE field network head m	nodule
	CPU module		
		Series	Model
		MELSEC-Q Series *1	Universal model QCPU *2
		MELSEC-L Series	LCPU *3
		*1 Not applicable to QCPU (A me	ode)
		*2 The first five digits of the seria	al number are "12012" or later
		*3 The first five digits of the seria	al number are "13012" or later.
	Engineering software	GX Works2 *1	
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applica	ble to the modules used, refer to
		"Relevant manuals".	
Programming	Ladder		
language			



Item	Description
Number of steps	For universal model CPU: 554 steps (for MELSEC-Q series universal model CPU)
	* The number of steps of the FB in a program depends on the CPU model that is used and
	input and output definition.
Function description	1) By turning ON FB_EN (Execution command), positioning operation that stopped when a
	stop cause has occurred restarts.
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.
	3) When the target axis setting value is out of range, the FB_ERROR output turns ON,
	processing is interrupted, and the error code 10 (Decimal) is stored in ERROR_ID (Error
	code).
	Refer to the error code explanation section for details.
	4) When the network configuration setting of the station number specified by i_Station_No
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error
	code 40 (decimal) is stored in ERROR_ID.
	Refer to the error code explanation section for details.
	5) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).
	Refer to the error code explanation section for details.
Compiling method	Macro type



Item	Description		
Restrictions and	The FB does not include error recovery processing. Program the error recovery		
precautions	processing separately in accordance with the required system operation.		
	2) The FB cannot be used in an interrupt program.		
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.		
	Do not use this FB in programs that are only executed once such as a subroutine,		
	FOR-NEXT loop, etc. because it is impossible to turn OFF.		
	4) When this FB and other FB are used at the same time, precaution must be taken to		
	avoid repetition of the own station's channel		
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition		
	of the target axis.		
	6) This FB uses index registers Z5, Z6, Z7 and Z9. Please do not use these index registers		
	in an interrupt program.		
	7) Every input must be provided with a value for proper FB operation.		
	8) If FB_EN (Execution command) is turned ON while Axis operation status is not Stopped,		
	the request will be ignored. In this case, FB_OK (Restart acceptance complete) is not		
	turned ON.		
	9) Parameters such as the pulse output mode and external I/O signal logic must be		
	properly configured to match devices and systems connected to the LD75.		
	10) This FB uses cyclic and transient transmission. Therefore, an interlock program for		
	cyclic and transient transmission is required.		
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4		
	Setting the CC-Link IE Field Network Master/Local Module".		
	12) Set the global label setting according to Section "1.5 Setting Global Labels".		
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To		
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the		
	FB for 2 or More Master/Local Modules".		
FB operation type	Pulsed execution (multiple scan execution type)		
Application example	Refer to "Appendix 2 FB Library Application Examples".		
Timing chart	[When operation completes without error [When an error occurs (axis 1)]		
	(axis 1)]		
	FB_EN(Execution command) FB_EN(Execution command)		
	FB_ENO(Execution status)		
	Cd.6: Restart command 0 1 0 Cd.6: Restart command 0		
	FB_OK(Restart acceptance command) FB_OK(Restart acceptance command)		
	FB_ERROR(Error flag) FB_ERROR(Error flag)		
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code		



Item	Description
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)

●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvolu		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Mord	1~32	Specify the channel for
		Word		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Dit OFF		ON: Execution command is ON.
		Bit OFF	OFF: Execution command is OFF.	
Restart acceptance	FB_OK			When ON, it is indicates that the restart
complete		Bit	OFF	command has been accepted by the
				module.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



Version	Date	Description	
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



2.17. M+LD75-IEF_ErrorOperation (Error operation)

FB Name

M+LD75-IEF_ErrorOperation

Item	Description			
Function overview	Monitors errors and warnings, and performs error reset.			
Symbol		M+LD75-IEF_	ErrorOperation	
	Execution comman		FB_ENO : B —Execution status	
	Module start XY addres	s—W:i_Start_IO_No	FB_OK: B—Error reset complete	
	Station No	o.—W:i_Station_No	o_UNIT_ERROR: B—Axis error detection	
	Slave module start XY addres	s — W:i_SlvStart_IO_No	o_UNIT_ERR_CODE: W—Axis error code	
	Own station channel	el—W:i_CH_No	o_UNIT_WARNING : B —Axis warning detection	1
	Target ax	is—W:i_Axis	o_UNIT_WAR_CODE: W—Axis warning code	
	Error reset comman	d B: i_ErrorReset	FB_ERROR: B—Error flag	
			ERROR_ID: W—Error code	
		<u> </u>		
Applicable hardware	Positioning module	LD75P1, LD75P2, LD7	75P4, LD75D1, LD75D2, LD75D4	
and software	CC-Link IE module			
		CC-Link IE field netwo	rk head module	
	CPU module			_
		Series	Model	
		MELSEC-Q Series *1	Universal model QCPU *2	
		MELSEC-L Series	LCPU *3	
		*1 Not applicable to QCPU (A mode)		
		*2 The first five digits of the serial number are "12012" or later		
		*3 The first five digits o	of the serial number are "13012" or later.	

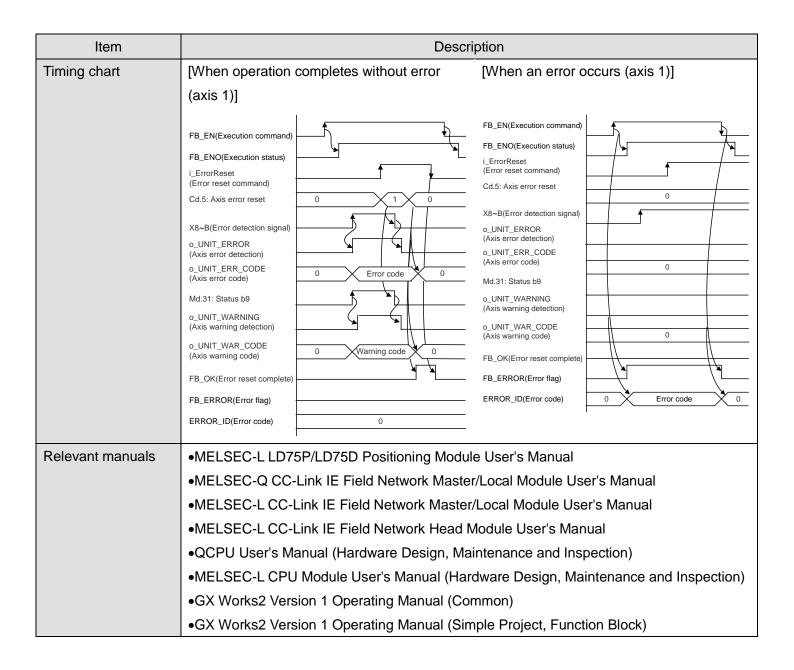


Item	Description		
	Engineering software	GX Works2 *1	
		Language	Software version
		Japanese version	Version1.86Q or later
		English version	Version1.24A or later
		Chinese (Simplified) version	Version1.49B or later
		Chinese (Traditional) version	Version1.49B or later
		Korean version	Version1.49B or later
		*1 For software versions applica	ble to the modules used, refer to
		"Relevant manuals".	
Programming	Ladder		
language			
Number of steps	For universal model CP	U: 635 steps (for MELSEC-Q seri	es universal model CPU)
	* The number of steps of	of the FB in a program depends or	n the CPU model that is used and
	input and output defin	ition.	
Function description	1) When FB_EN (Exec	cution command) is turned ON, ar	n error in the target axis is
	monitored.		
	2) An error code is stor	red in o_UNIT_ERR_CODE (Axis	error code) when a module error
	occurs.		
	3) After FB_EN (Execution command) is turned ON, an error is reset when i_ErrorReset		
	(Error reset command) is turned ON during error occurrence.		
	4) A warning can be reset by turning ON i_ErrorReset (Error reset command) even when a module warning is occurring.		
		s setting value is out of range, the	FB_ERROR output turns ON,
		ipted, and the error code 10 (Dec	·
	(Error code).		
	Refer to the error co	de explanation section for details	
	6) When the network c	onfiguration setting of the station	number specified by i_Station_No
	is incorrect, FB_ERI	ROR is turned ON and the proces	ssing is interrupted, and the error
	code 40 (decimal) is	stored in ERROR_ID.	
	Refer to the error co	de explanation section for details	
	7) When a CC-Link IE	field network error occurs, the FB	S_ERROR output turns ON,
	processing is interru	pted, and the error code is stored	d in ERROR_ID (Error code).
	Refer to the error co	de explanation section for details	
Compiling method	Macro type		



Item	Description
Restrictions and	The FB does not include error recovery processing. Program the error recovery
precautions	processing separately in accordance with the required system operation.
	2) The FB cannot be used in an interrupt program.
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.
	Do not use this FB in programs that are only executed once such as a subroutine,
	FOR-NEXT loop, etc. because it is impossible to turn OFF.
	4) When this FB and other FB are used at the same time, precaution must be taken to
	avoid repetition of the own station's channel
	5) When two or more of these FBs are used, precaution must be taken to avoid repetition
	of the target axis.
	6) This FB uses index registers Z7 to Z9. Please do not use these index registers in an
	interrupt program.
	7) Do not change i_Axis (Target axis) while FB_EN (Execution command) is turned ON.
	8) Every input must be provided with a value for proper FB operation.
	9) Parameters such as the pulse output mode and external I/O signal logic must be
	properly configured to match devices and systems connected to the LD75.
	10) This FB uses cyclic and transient transmission. Therefore, an interlock program for
	cyclic and transient transmission is required.
	11) Set the refresh device of the network parameter setting according to 3) in Section "1.4
	Setting the CC-Link IE Field Network Master/Local Module".
	12) Set the global label setting according to Section "1.5 Setting Global Labels".
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the
	FB for 2 or More Master/Local Modules".
FB operation type	Real-time execution
Application example	Refer to "Appendix 2 FB Library Application Examples".







●Error code list

Error code	Description	Action
10 (Decimal)	The specified target axis is not valid. The	Please try again after confirming the
	target axis is not within the range of 1 to 4.	setting.
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.

Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoiu		own station.
Target axis	i_Axis	Word	1~4	Specify the axis number.



Name(Comment)	Label name	Data	Setting range	Description
		type		
Error reset	i_ErrorReset	Bit	ON, OFF	ON: An error is reset.
command		DIL		OFF: An error is not reset.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	D:t 055		ON: Execution command is ON.
		Bit	OFF	OFF: Execution command is OFF.
Error reset complete	FB_OK	Bit	OFF	When ON, it indicates that an error reset is
		DIL	OFF	completed.
Axis error detection	o_UNIT_ERROR	Dit	OEE	When ON, it indicates that an axis error has
		Bit OFF o		occurred.
Axis error code	o_UNIT_ERR_CODE	Word 0		Return an error code for a target axis error
				occurred in the module.
Axis warning	o_UNIT_WARNING	Bit	OEE	When ON, it indicates that an axis warning
detection				has occurred.
Axis warning code	o_UNIT_WAR_CODE	Word	0	Return a warning code for a target axis
		vvoid	U	warning occurred in the module.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



Version	Date	Description	
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

M+LD75-IEF_InitParam

Item	Description				
Function overview	Initializes parameters.				
Symbol	M+LD75-IEF_InitParam				
	Execution comma	nd—B:FB_EN	FB_ENO : B — Execution status		
	Module start XY addre	ess—W:i_Start_IO_No	FB_OK: B—Initialization complete		
	Station N	No.—W:i_Station_No F	B_ERROR: B—Error flag		
	Slave module start XY addre	ess—W:i_SlvStart_IO_No	ERROR_ID: W—Error code		
	Own station chan	nel—W:i_CH_No			
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD7	75D1, LD75D2, LD75D4		
and software	CC-Link IE module	CC-Link IE field network master	/local module		
		CC-Link IE field network head n	nodule		
	CPU module	CPU module			
		Series	Model		
		MELSEC-Q Series *1	Universal model QCPU *2		
	MELSEC-L Series LCPU *3		LCPU *3		
	*1 Not applicable to QCPU (A mode)		ode)		
		*2 The first five digits of the seria			
		*3 The first five digits of the seria	al number are "13012" or later.		
	Engineering software	GX Works2 *1			
		Language	Software version		
		Japanese version	Version1.86Q or later		
		English version	Version1.24A or later		
		Chinese (Simplified) version	Version1.49B or later		
			Version1.49B or later		
	Korean version Version1.49B or				
	*1 For software versions applicable to the modules used, refer to				
Drogramming	Loddor	"Relevant manuals".			
Programming	Ladder				
language					



Item	Description			
Number of steps	For universal model CPU: 510 steps (for MELSEC-Q series universal model CPU)			
	* The number of steps of the FB in a program depends on the CPU model that is used and			
	input and output definition.			
Function description	1) By turning ON FB_EN (Execution command), the setting data stored in the buffer			
	memory and in flash ROM of LD75 are returned to the factory-set initial value.			
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.			
	3) When the network configuration setting of the station number specified by i_Station_No			
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error			
	code 40 (decimal) is stored in ERROR_ID.			
	Refer to the error code explanation section for details.			
	4) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,			
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).			
	Refer to the error code explanation section for details.			
Compiling method	Macro type			



Item	Description			
Restrictions and	The FB does not include error recovery processing. Program the error recovery			
precautions	processing separately in accordance with the required system operation.			
	2) The FB cannot be used in an interrupt program.			
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.			
	Do not use this FB in programs that are only executed once such as a subroutine,			
	FOR-NEXT loop, etc. because it is impossible to turn OFF.			
	4) When this FB and other FB are used at the same time, precaution must be taken to			
	avoid repetition of the own station's channel			
	5) This FB uses index registers Z5 to Z9. Please do not use these index registers in an			
	interrupt program.			
	6) Every input must be provided with a value for proper FB operation.			
	7) PLC ready signal (Y signal) must be tuned OFF to use this FB. FB_EN (Execution			
	command) must also be turned OFF if PLC ready signal (Y signal) is turned ON with			
	M+LD75-IEF_CPUReady (PLC ready signal ON).			
	8) After completing the initialization of setting data, reset the CPU module or reboot the			
	PLC power.			
	9) Parameters such as the pulse output mode and external I/O signal logic must be			
	properly configured to match devices and systems connected to the LD75.			
	10) This FB uses cyclic and transient transmission. Therefore, an interlock program for			
	cyclic and transient transmission is required. 11) Set the refresh device of the network parameter setting according to 3) in Section "1.4"			
	,			
	Setting the CC-Link IE Field Network Master/Local Module". 12) Set the global label setting according to Section "1.5 Setting Global Labels"			
	12) Set the global label setting according to Section "1.5 Setting Global Labels".			
	13) Only one master/local module can be controlled by the CC-Link IE Field system FB. To			
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the			
CD apparation type	FB for 2 or More Master/Local Modules".			
FB operation type Application example	Pulsed execution (multiple scan execution type) Refer to "Appendix 2 FB Library Application Examples".			
Timing chart	[When operation completes without error] [When an error occurs]			
	FB_EN(Execution command) FB_EN(Execution command)			
	FB_ENO(Execution status) Cd.2: Parameter initialization Cd.2: Parameter initialization			
	request request request			
	FB_OK(Initialization complete) FB_OK(Initialization complete)			
	FB_ERROR(Error flag) ERROR_ID(Error code) 0			
	ERROR_ID(Error code) 0 Error code 0			



Item	Description			
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)			

●Error code list

Error code	Description	Action
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



Labels

●Input labels

Name(Comment)	Label name	Data	Setting range	Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoiu		own station.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Di+	OFF	ON: Execution command is ON.
		Bit OFF O		OFF: Execution command is OFF.
Initialization	FB_OK	Dit	OFF	When ON, the initialization of parameters is
complete		Bit OFF		completed.
Error flag	FB_ERROR	Bit OFF		When ON, it indicates that an error has
				occurred.
Error code	ERROR_ID	Word	0	FB error code output.



Version	Date	Description	
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



FB Name

M+LD75-IEF_WriteFlash

Item	Description			
Function overview	Writes the setting data to the flash ROM.			
Symbol	M+LD75-IEF_WriteFlash			
	Execution comma		FB_ENO : B — Execution status	
	Module start XY addre	ss—W:i_Start_IO_No	FB_OK: B — Write complete	
			B_ERROR: B—Error flag	
			ERROR_ID: W—Error code	
		nel—W:i_CH_No		
A	D		75D4 D75D0 D75D4	
Applicable hardware	Positioning module	LD75P1, LD75P2, LD75P4, LD		
and software	CC-Link IE module	CC-Link IE field network maste		
	ODIT ded-	CC-Link IE field network head r	nodule	
	CPU module	0.00	Model	
		Series	Model	
		MELSEC-Q Series *1	Universal model QCPU *2	
		MELSEC-L Series	LCPU *3	
	*1 Not applicable to QCPU (An		al number are "12012" or later	
		*3 The first five digits of the seri		
	Engineering software	GX Works2 *1	arnamber are 15012 of later.	
	Engineering conward	Language	Software version	
		Japanese version	Version1.86Q or later	
		English version	Version1.24A or later	
		Chinese (Simplified) version	Version1.49B or later	
		Chinese (Traditional) version	Version1.49B or later	
		Korean version	Version1.49B or later	
		*1 For software versions applicable to the modules used		
		"Relevant manuals".		
Programming	Ladder	1		
language				



Item	Description		
Number of steps	For universal model CPU: 503 steps (for MELSEC-Q series universal model CPU)		
	* The number of steps of the FB in a program depends on the CPU model that is used and		
	input and output definition.		
Function description	1) By turning ON FB_EN (Execution command), the data set in the buffer memory is		
	written to the flash ROM.		
	2) After FB_EN (Execution command) is turned ON, the FB is completed in multiple scans.		
	3) When the network configuration setting of the station number specified by i_Station_No		
	is incorrect, FB_ERROR is turned ON and the processing is interrupted, and the error		
	code 40 (decimal) is stored in ERROR_ID.		
	Refer to the error code explanation section for details.		
	4) When a CC-Link IE field network error occurs, the FB_ERROR output turns ON,		
	processing is interrupted, and the error code is stored in ERROR_ID (Error code).		
	Refer to the error code explanation section for details.		
Compiling method	Macro type		



Item	Description			
Restrictions and	The FB does not include error recovery processing. Program the error recovery			
precautions	processing separately in accordance with the required system operation.			
	2) The FB cannot be used in an interrupt program.			
	3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.			
	Do not use this FB in programs that are only executed once such as a subroutine,			
	FOR-NEXT loop, etc. because it is impossible to turn OFF.			
	4) When this FB and other FB are used at the same time, precaution must be taken to			
	avoid repetition of the own station's channel			
	5) Every input must be provided with a value for proper FB operation.			
	6) PLC ready signal (Y signal) must be tuned OFF to use this FB. FB_EN (Execution			
	command) must also be turned OFF if PLC ready signal (Y signal) is turned ON with			
	M+LD75-IEF_CPUReady (PLC ready signal ON).			
	7) This FB uses index registers Z5 to Z9. Please do not use these index registers in an			
	interrupt program.			
	8) Parameters such as the pulse output mode and external I/O signal logic must be			
	properly configured to match devices and systems connected to the LD75.			
	9) This FB uses cyclic and transient transmission. Therefore, an interlock program for			
	cyclic and transient transmission is required.			
	10) Set the refresh device of the network parameter setting according to 3) in Section "1.4			
	Setting the CC-Link IE Field Network Master/Local Module".			
	11) Set the global label setting according to Section "1.5 Setting Global Labels".			
	12) Only one master/local module can be controlled by the CC-Link IE Field system FB. To			
	control 2 or more master/local modules by the FB, refer to "Appendix 1 When Using the			
	FB for 2 or More Master/Local Modules".			
FB operation type	Pulsed execution (multiple scan execution type)			
Application example	Refer to "Appendix 2 FB Library Application Examples".			
Timing chart	[When operation completes without error] [When an error occurs]			
	FB_EN(Execution command)			
	FB_EN(Execution command) FB_ENO(Execution status) FB_ENO(Execution status)			
	Cd.1: Flash ROM write request No processing			
	FB_OK(Write complete) FB_OK(Write complete)			
	FB_ERROR(Error flag) FB_ERROR(Error flag)			
	ERROR_ID(Error code) 0 ERROR_ID(Error code) 0 Error code 0			



Item	Description	
Relevant manuals	MELSEC-L LD75P/LD75D Positioning 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 Works2 Version 1 Operating Manual (Simple Project, Function Block)	

●Error code list

Error code	Description	Action
40 (Decimal)	The network configuration setting of the	Review the following setting.
	station number specified by i_Station_No is	Network configuration setting
	incorrect.	Refer to (2) in Section 1.4 Setting the
		CC-Link IE Field Network Master/Local
		Module.
		•The value entered in i_Station_No
D000~DAF9	A CC-Link IE field network error occurs.	For details, refer to Error Code List in
(Hexadecimal)		MELSEC-Q/L CC-Link IE Field Network
		Master/Local Module User's Manual.



Labels

●Input labels

Name(Comment)	Label name	Data Setting range		Description
		type		
Execution command	FB_EN		ON, OFF	ON: The FB is activated.
		Bit		OFF: The FB is not
				activated.
Module start XY	i_Start_IO_No		Depends on the I/O point	Specify the starting XY
address			range of the CPU. For	address (in hexadecimal)
		Word	details, refer to the CPU	where the LD75 module is
			user's manual.	mounted. (For example,
				enter H10 for X10.)
Station No.	i_Station_No	Word	1~120	Specify the target station
		vvoid		number.
Slave module start	i_SlvStart_IO_No		Depends on the I/O point	Specify the starting XY
XY address			range of the head module.	address (in hexadecimal)
		Word	For details, refer to the	where the LD75 module is
			head module user's	mounted. (For example,
			manual.	enter H10 for X10.)
Own station channel	i_CH_No	Word	1~32	Specify the channel for
		vvoiu		own station.

Name(Comment)	Label name	Data	Initial	Description
		type	value	
Execution status	FB_ENO	Bit OFF		ON: Execution command is ON.
				OFF: Execution command is OFF.
Write complete	FB_OK	Bit OFF		When ON, it indicates that writing to flash
				ROM is completed.
Frankler FR FRANK		When ON, it indicates that an error has		
Error flag F	FB_ERROR	Bit	OFF	occurred.
Error code	ERROR_ID	Word	0	FB error code output.



Version	Date	Description	
1.00A	2011/06/30	First edition	
1.01B	2013/01/25	When the network configuration setting of specified	
		station No. is incorrect, Error flag (Error code: 40) is	
		turned ON.	

Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with positioning modules or programmable controller CPUs.



Appendix 1. When Using the FB for 2 or More Master/Local Modules

To use 2 or more CC-Link IE field master/local modules and to use an FB for the second and subsequent CC-Link IE field master/local modules, it is necessary to create an FB for the second and subsequent modules from the MELSOFT Library CC-Link IE field master/local module FB using the following procedure.

Four steps are required to create the FB for the second and subsequent modules, and the brief description is given as follows.

- 1) Enter network parameters
- 2) Set global labels
- 3) Copy MELSOFT Library to create the FB for the second module
- 4) Replace devices to create the FB for the second module



Appendix 1.1. Entering network parameters

1) Enter the network parameters for the second module.

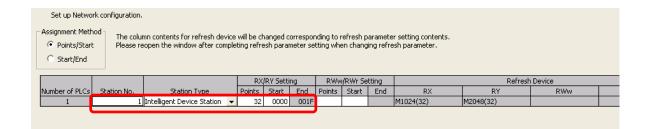
Item	Description		
Network Type	Select CC IE Field (Master Station).		
Start I/O No.	Set the start I/O number of the master/local module in increments of 16 points.		
	Set "0020".		
Network No.	Set the network number of the master/local module.		
	Set "2".		
Total Stations	Set the number of slave stations connected to the master station. Include the number of		
	reserved slave stations.		
	Set "1".		

	Module 1	Module 2	Module 3
Network Type	CC IE Control(Control Station)	CC IE Control(Control Station)	None 🔻
Start I/O No.	0000	0020	
Network No.	1	2	
Total Stations	1	1	
Group No.	0	Ó	
Station No.	0	0	
Mode	Online	Online 🔻	-
	Network Range Assignment	Network Range Assignment	
	Network Operation Setting	Network Operation Setting	
	Refresh Parameters	Refresh Parameters	
	Interrupt Setting	Interrupt Setting	
	Specify Station No. by Parameter 🔻	Specify Station No. by Parameter 🔻	



2) Set the network configuration setting for the second module.

Item	Description			
Station No.	Set the station number of the slave connected to the master station.			
	Set "1".			
Station Type	Set the station type of the slave connected to the master station.			
	Set "Intelligent Device Station".			
RX/RY Setting	Set assignment for RX/RY for the slave station connected to the master station.			
	(a) Points Set "32".			
	(b) Start Set "0000".			

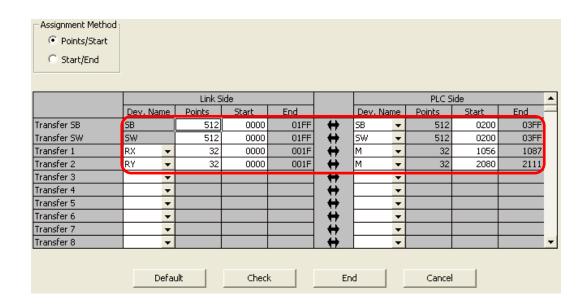




3) Enter the refresh parameters for the second module.

Item	Description	Setting value		
Transfer SB	Set the link refresh range of SB device.	• "Link Side	Points"	: 512
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	e": SB
		• "PLC Side	Start"	: 0200
Transfer SW	Set the link refresh range of SW device.	• "Link Side	Points"	: 512
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	e": SW
		• "PLC Side	Start"	: 0200
Transfer 1	Set the link refresh range of RX device.	• "Link Side	Dev. Name	": RX
		• "Link Side	Points"	: 32
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	e": M
		• "PLC Side	Start"	: 1056
Transfer 2	Set the link refresh range of RY device.	• "Link Side	Dev. Name	": RY
		• "Link Side	Points"	: 32
		• "Link Side	Start"	: 0000
		• "PLC Side	Dev. Name	e": M
		• "PLC Side	Start"	: 2080

^{*} Change the Points of the Link Side and Dev. Name and Start of the PLC Side according to your system.





Appendix 1.2. Entering global labels

Enter the global labels for the second module.

Specify label names for the second module. The names must be different from the label names for the first module. The following explains how to set the global label for the second module.

1) M_F_RX2 Set for remote input (RX).

Item	Description
Class	Select "VAR_GLOBAL".
Label Name	Enter "M_F_RX2".
Data type	Select "Bit".
Device	Enter the refresh device set for the refresh parameter with a prefix "Z9".

2) M_F_RY2 Set for remote output (RY).

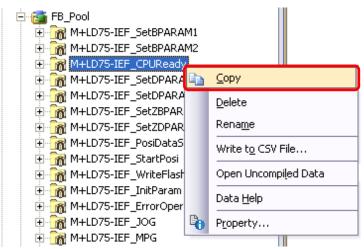
Item	Description
Class	Select "VAR_GLOBAL".
Label Name	Enter "M_F_RY2".
Data type	Select "Bit".
Device	Enter the refresh device set for the refresh parameter with a prefix "Z8".

		Class	Label Name	Data Type	Constant	Device	Comment
1		VAR_GLOBAL ▼	M_F_RX	Bit		M1024Z9	RX refresh device
- 2	2	VAR GL∩RAL ▼	M F BY	Rit		M204878	BY refresh device
3	3	VAR_GLOBAL ▼	M_F_RX2	Bit		M1056Z9	RX refresh device
4	1	VAR_GLOBAL ▼	M_F_RY2	Bit		M2080Z8	RY refresh device

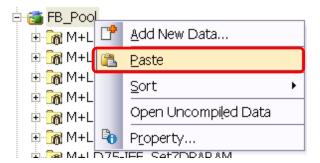


Appendix 1.3. Copying MELSOFT Library to create an FB for the second module

1) Select an FB necessary for the second module from the Project tab of the Navigation window. Execute the Copy command.



2) Paste the copied FB to "FB_Pool" on the Project tab of the Navigation window.





3) After selecting the paste command, a window appears to enter an FB name. Enter an FB name after paste.

(Example: LD75-IEF_CPUReady_02)

[Note] The character string "+" of M+... cannot be entered.



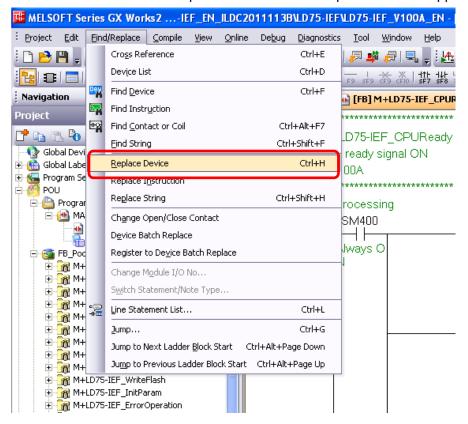




Appendix 1.4. Replacing Devices to Create the FB for the Second Module 1) Open "Program" of the added FB.

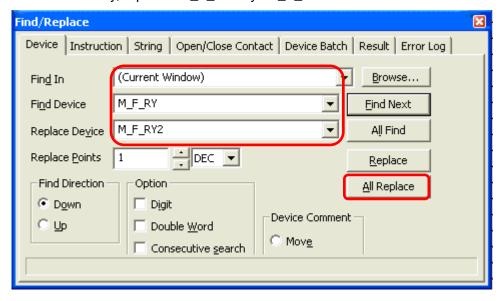


2) Select "Find/Replace" menu and then select "Replace Device". "Find/Replace" window appears.





3) Select "Current Window" from Find In, "M_F_RY" from Find Device, and "M_F_RY2" from Replace Device. Then replace all devices. In the same way, replace "M_F_RX" by "M_F_RX2" all at once.



By performing the steps above, the CC-Link IE field master/local FB can be used for the second module.

[Point]

- 1) To use multiple FBs for the second CC-Link IE field master/local module, repeat the step (4).
- 2) To use an FB for third or subsequent CC-Link IE field master/local modules, make sure that the preset "Global label name", "Data Name After Paste" that was set when pasting FB data and "Replace Device" that was set when replacing devices are not duplicated for the first and second modules.

[Note]

If MELSOFT Library is upgraded, MELSOFT Library FBs can be upgraded by importing them again. However, the FBs that were created by following these procedures for the second and subsequent modules are not upgraded even if the FBs are imported again.

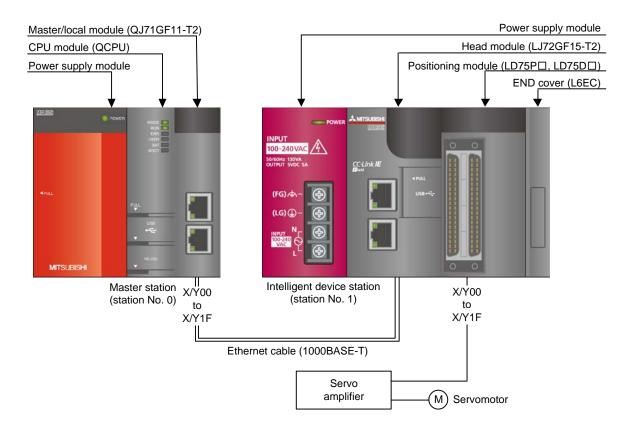
Therefore, to upgrade FBs that were created by following these procedures, after upgrading MELSOFT Library, follow these procedures again.



Appendix 2. FB Library Application Examples

LD75-IEF FB application examples are as follows.

1) System configuration



Reminder

- •Every input must be provided with a value for proper FB operation. If not set, the values will be unspecified.
- •Abbreviations may be used in the label comments due to the limitation on the number of the characters to display in GX Works2.



2) List of devices

a) External input (commands)

Device	FB name	Application (ON details)	
MO	M+LD75-IEF_SetBPARAM1	Basic param 1 setting request	
M10	M+LD75-IEF_SetBPARAM2	Basic param 2 setting request	
M20	M+LD75-IEF_SetDPARAM1	Detailed param 1 setting request	
M30	M+LD75-IEF_SetDPARAM2	Detailed param 2 setting request	
M40	M+LD75-IEF_SetZBPARAM	OPR basic param setting request	
M50	M+LD75-IEF_SetZDPARAM	OPR detailed param setting req	
M60	M+LD75-IEF_PosiDataSet	Positioning data setting request	
M70	M+LD75-IEF_CPUReady	PLC ready signal ON cond judge	
M71		PLC ready signal ON request	
M80	M+LD75-IEF_StartPosi	Positioning start request	
M90	M+LD75-IEF_JOG	JOG operation start request	
M91		Forward run JOG start	
M92		Reverse run JOG start	
M100	M+LD75-IEF_MPG	Manual pulse gen start request	
M110	M+LD75-IEF_ChgSpeed	Speed change request	
M120	M+LD75-IEF_ChgOverride	Override command	
M130	M+LD75-IEF_ChgAccDecTime	Acc/dec time change command	
M131		Acc/dec time change enable flag	
M140	M+LD75-IEF_ChgPosi	Target position change command	
M150	M+LD75-IEF_Restart	Restart command	
M160	M+LD75-IEF_ErrorOperation	Error operation FB start	
M161		Error reset request	
M170	M+LD75-IEF_InitParam	Parameter initialization command	
M180	M+LD75-IEF_WriteFlash	Flash ROM write request	



b) External output (checks)

Device	FB name	Application (ON details)
M1	M+LD75-IEF_SetBPARAM1	Basic parameters 1 setting ready
M2		Basic param 1 setting complete
F0		Basic param 1 setting FB error
D0		Basic param 1 set FB error code
M11	M+LD75-IEF_SetBPARAM2	Basic parameters 2 setting ready
M12		Basic param 2 setting complete
F10	M+LD75-IEF_SetBPARAM2	Basic param 2 setting FB error
D10		Basic param 2 set FB error code
M21	M+LD75-IEF_SetDPARAM1	Detailed param 1 setting ready
M22		Detailed param 1 setting comp
F20		Detailed param 1 setting FB err
D20		Detailed param 1 set FB err code
M31	M+LD75-IEF_SetDPARAM2	Detailed param 2 setting ready
M32		Detailed param 2 setting comp
F30		Detailed param 2 setting FB err
D30		Detailed param 2 set FB err code
M41	M+LD75-IEF_SetZBPARAM	OPR basic param setting ready
M42		OPR basic param setting complete
F40		OPR basic param setting FB error
D40		OPR basic param FB error code
M51	M+LD75-IEF_SetZDPARAM	OPR detailed param setting ready
M52		OPR detailed param setting comp
F50		OPR detailed param set FB err
D50		OPR detailed param FB error code
M61	M+LD75-IEF_PosiDataSet	Positioning data setting ready
M62		Positioning data setting comp
F60		Positioning data setting FB err
D60		Pos data setting FB error code
M72	M+LD75-IEF_CPUReady	PLC ready signal ON ready
M73		PLC ready signal ON complete
F70		PLC ready signal ON FB error
D70		PLC ready signal ON FB err code



Device	FB name	Application (ON details)
M81	M+LD75-IEF_StartPosi	Positioning start ready
M82		Execution complete
F80		Positioning start FB error
D80		Positioning start FB error code
M93	M+LD75-IEF_JOG	JOG operation ready
M94		Operation start complete
F90		JOG operation FB error
D90		JOG operation FB error code
M101	M+LD75-IEF_MPG	Manual pulse gen OP ready
M102		Manual pulse gen enable complete
F100		Manual pulse gen OP FB error
D100	M+LD75-IEF_MPG	Manual pulse gen OP FB err code
M111	M+LD75-IEF_ChgSpeed	Speed change ready
M112		Speed change request complete
F110		Speed change FB error
D110		Speed change FB error code
M121	M+LD75-IEF_ChgOverride	Override ready
M122		Override value setting complete
F120		Override FB error
D120		Override FB error code
M132	M+LD75-IEF_ChgAccDecTime	Acc/dec time change ready
M133		Acc/dec time change request cmd
F130		Acc/dec time change FB error
D130		Acc/dec time change FB err code
M141	M+LD75-IEF_ChgPosi	Target position change ready
M142		Target position chg accept comp
F140		Target position change FB error
D140		Target position change err code
M151	M+LD75-IEF_Restart	Restart ready
M152		Restart acceptance complete
F150		Restart FB error
D150		Restart FB error code



Device	FB name	Application (ON details)
M162	M+LD75-IEF_ErrorOperation	Error reset ready
M163		Error reset complete
M164		Axis error detection
D160		Designated axis error code
M165		Axis warning detection
D161		Designated axis warning code
F160		Error operation FB error
D162		Error operation FB error code
M171	M+LD75-IEF_InitParam	Parameter initialization ready
M172		Parameter initialization comp
F170		Parameter initialization FB err
D170		Param initialization FB err code
M181	M+LD75-IEF_WriteFlash	Flash ROM write ready
M182		Flash ROM write complete
F180		Flash ROM writing FB error
D180		Flash ROM writing FB error code
T10	Interlock check	Own station baton pass err check
T11		Own station data link err check
T12		Station 1 baton pass error check
T13		Station 1 cyclic trans err check
M200		Comm condition flag, station No1

3) Global label settings

a) Common settings

Class	Label name	Data type	Device
VAR_GLOBAL	M_F_RX	Bit	M1024Z9
VAR_GLOBAL	M_F_RY	Bit	M2048Z8



4) Application example settings

a) Common settings

Item	Value	Description	
Module start XY address	0	Specify the starting XY address where the CC-Link IE field system	
		master/local module is mounted.	

b) Network parameters

Item	Setting value	
Network Type	CC IE Field (Master Station)	
Start I/O No.	0000	
Network No.	1	
Total Stations	1	
Mode	Online (Normal Mode)	

c) Network configuration setting

Item		Setting value
Station No.		1
Station Type		Intelligent Device Station
RX/RY setting	Points	32
Start		0000



d) Refresh Parameters

Item	Link Side			PLC Side	
	Dev. Name	Points	Start	Dev. Name	Start
Transfer SB	SB	512	0000	SB	0000
Transfer SW	SW	512	0000	SW	0000
Transfer 1	RX	32	0000	M	1024
Transfer 2	RY	32	0000	M	2048

e) Slave Station Information

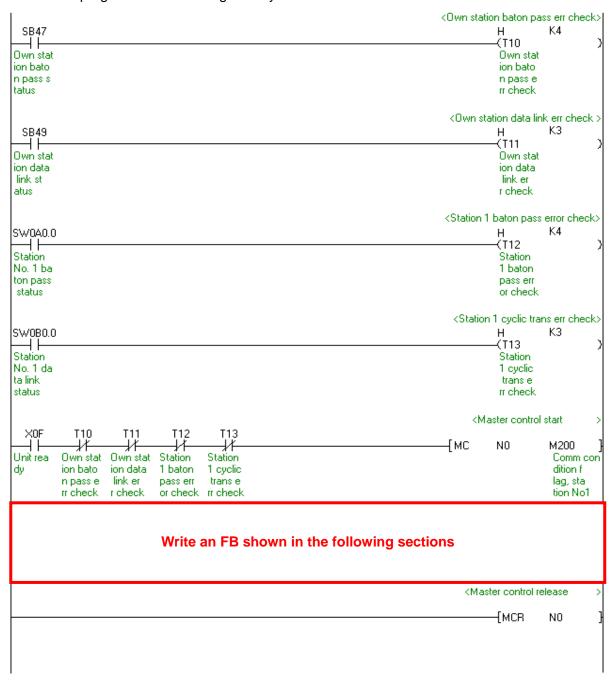
Item	Setting value
Mode	Online
Network No.	1
Station No.	1



5) Programs

Interlock program

* This is the interlock program for when using both cyclic and transient transmission.





M+LD75-IEF_SetBPARAM1 (Basic parameters 1 setting)

- * It is recommended to use GX Configurator-QP or the configuration function of GX Works 2 to perform module initialization such as parameter setting. In this case, using this FB is unnecessary.
- * The parameter setting complete (M2) contact is used for PLC ready signal ON FB (M+LD75-IEF_CPUReady).
- * This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

The example below shows a program with the following conditions.

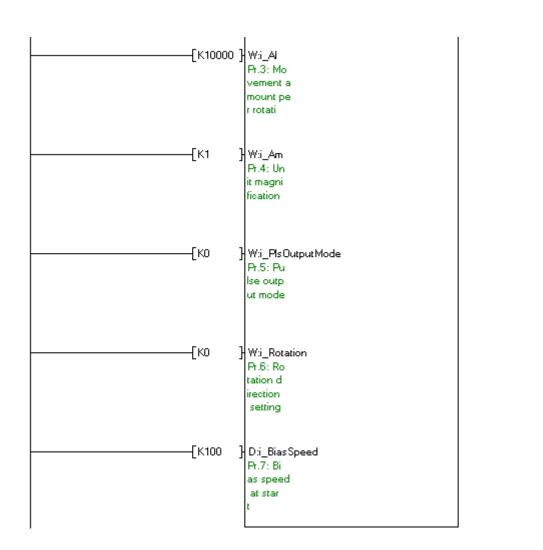
Label name	Setting	Description	
	value		
i_Start_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.	
i_Station_No	K1	Set the target station number to 1.	
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.	
i_CH_No	K1	Set the own station channel to 1.	
i_Axis	K1	Set axis 1.	
i_UnitSetting	K3	Set the unit used for defining positioning operations to "pulse".	
i_Ap	K10000	Set the number of pulses within a pulse train output to 10,000.	
i_Al	K10000	Set the amount of movement required for a rotation within a pulse train output	
		to 10,000.	
i_Am	K1	Set the unit magnification to 1-fold.	
i_PlsOutputMode	K0	Set the pulse output mode to "PULSE/SIGN mode".	
i_Rotation	K0	Set the relation of the motor rotation direction and current value address	
		increment/decrement to "Current value increment with forward run pulse	
		output".	
i_BiasSpeed	K100	Set the minimum speed upon starting to 100.	

By turning ON M0, the basic parameters 1 setting is written to the buffer memory.



м0		SetBPAF	KAM1 I		
		— B:FB_EN	FB_ENO:B		———(M1
Basic pa		Executio	Executio		Basic pa
am 1 se		n comman	n status		rameters
ting re		d			1 setti
quest					ng ready
1					
	——[H0	} W:i_Start_I0_No	FB_OK:B		———(M2
	_	Module s	Basic pa		Basic pa
		tart XY	rameters		ram 1 se
		address	1 setti		tting co
			ng compl		mplete
			ng compi		mpiece
	——[К1	} W:i_Station_No	FB_ERROR:B		———(F0
	-	Station	Error fl		Basic pa
		No.	ag		ram 1 se
			-3		tting FB
					error
	——[но	} W:i_SlvStart_I0_No	ERROR_ID:W	{DO }───	
	L	Slave mo	Error co	Basic pa	
		dule sta	de	ram 1 se	
		rt XY ad		t FB err	
		dress		or code	
		13.000		5. 5545	
	——[K1	} w:i_ch_n₀			
	Liki	Own stat			
		ion chan			
		nel			
		l lei			
	——[K1	∦W:i_Axis			
	L	Target a			
		xis			
		niv			
	_				
	——[K3	} W:i_UnitSetting			
		Pr.1: Un			
		it setti			
		ng			
	Europe	. 1			
	——[K1000	D } W:i_Ap			
		Pr.2: No			
		. of pul			
		1			
		ses per rotation	l		





M+LD75-IEF_SetBPARAM2 (Basic parameters 2 setting)

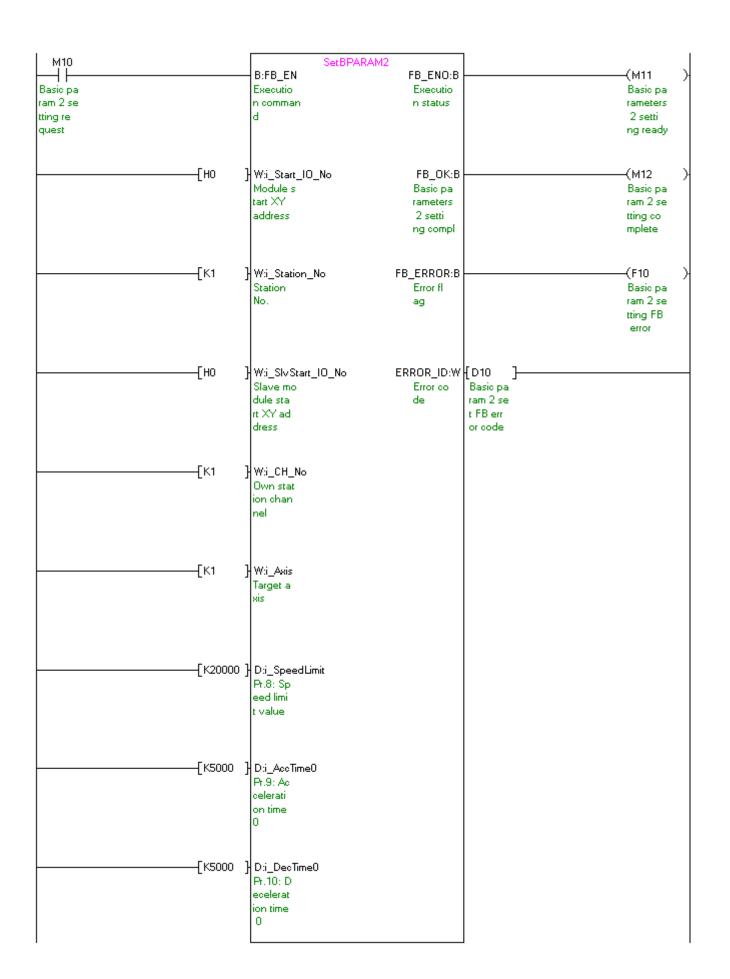
- * It is recommended to use GX Configurator-QP or the configuration function of GX Works 2 to perform module initialization such as parameter setting. In this case, using this FB is unnecessary.
- * This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_SpeedLimit	K20000	Set the maximum speed during positioning and OPR operations to 20,000.
i_AccTime0	K5000	Set the time for the speed to increase from zero to the Pr.8: speed limit value
		to 5,000 ms
i_DecTime0	K5000	Set the time for the speed to decrease from the Pr.8: speed limit value to zero
		to 5000 ms.

By turning ON M10, the basic parameters 2 setting is written to the buffer memory.







M+LD75-IEF_SetDPARAM1 (Detailed parameters 1 setting)

- * It is recommended to use GX Configurator-QP or the configuration function of GX Works 2 to perform module initialization such as parameter setting. In this case, using this FB is unnecessary.
- * The parameter setting complete (M22) contact is used for PLC ready signal ON FB (M+LD75-IEF_CPUReady).
- * This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting value	Description		
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.		
i_Station_No	K1	Set the target station number to 1.		
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.		
i_CH_No	K1	Set the own station channel to 1.		
i_Axis	K1	Set axis 1.		
i_Backlash	K0	Set the compensation amount of the error that occurs due to backlash		
		when moving the machine via gears to 0.		
i_SSLimitUpper	K2147483647	Set the upper limit for the machine's movement range during positioning		
		control to 2,147,483,647.		
i_SSLimitLower	K-2147483648	Set the lower limit for the machine's movement range during positioning		
		control to -2,147,483,648.		
i_SSLimitSelect	K0	Set "Apply software stroke limit on current feed value".		
i_SSLimitSetting	K0	Set "Software stroke limit valid during JOG operation, inching operation,		
		and manual pulse generator operation".		
i_InPosition	K100	Set the remaining distance that turns the command in-position ON to		
		100.		
i_TorqueLimit	K100	Set the limit value of the torque generated by the servomotor to 100.		
i_MCodeTiming	K0	Set the M code ON signal output timing to "WITH mode".		
i_SpeedSwMode	K0	Set the speed switching mode to "Standard speed switching mode".		
i_InterpolaSpeed	K0	Set the interpolation speed designation method to "Composite speed".		
i_SpeedCntValue	K1	Set the current feed value during speed control to "Update current feed		
		value".		
i_InputSigLogic	H0	Set all input signal logics to "Negative logic".		
i_OutputSigLogic	H0	Set all output signal logics to "Negative logic".		
i_MPGInputSelect	K0	Set the manual pulse generator input pulse mode to "A-phase/B-phase;		
		multiplied by 4".		
i_SPFuncSelect	K0	Set "Speed-positioning switching control (INC mode)".		

By turning ON M20, the detailed parameters 1 setting is written to the buffer memory.



М20		SetDPAF	2ΔΜ1	ı
H 1		B:FB_EN	FB_ENO:B	(M21)
Detailed		Executio	Executio	Detailed
param 1		n comman	n status	param 1
			n status	
setting		d		setting
request				ready
	——[но	} W:i_Start_IO_No	FB_OK:B	————(M22)
	-	Module s	Detailed	Detailed
		tart XY	paramet	param 1
		address	ers 1 se	setting
		1000.000	tting co	comp
			9 00	Somp
	Fiza.	1	ED EDDOD D	(500
	——[К1	} W:i_Station_No	FB_ERROR:B	(F20)
		Station	Error fl	Detailed
		No.	ag	param 1
				setting
				FB err
	——[но	} W:i_Sl∨Start_IO_No	ERROR_ID:W { D20]———
	_	Slave mo	Error co Detailed	-
		dule sta	de param 1	
		rt XY ad	set FB	
		dress	err code	
	Ev.	1 w: cu n-		
	——[К1	} W:i_CH_No		
		Own stat		
		ion chan		
		nel		
	——[К1	} Wi_Asis		
	-	Target a		
		xis		
	—[ко	} W:i_Backlash		
		Pr.11: B		
		acklash		
		compensa		
		tion amo		
_		_]		
K21	47483647] D:i_SSLimitUpper		
Ī		Pr.12: S		
		oftware		
		stroke l		
		imit upp		
l			1	



K-2147483648	Pr.13: S oftware stroke I imit low
(KO	W:i_SSLimit Select Pr.14: S oftware stroke I imit sel
	W:i_SSLimit Setting Pr.15: S oftware stroke I imit val
[K100	Pr.16: C ommand i n-positi on width
	W:i_TorqueLimit Pr.17: T orque li mit sett ing valu
[K0	W:i_MCodeTiming Pr.18: M code ON signal output t
[K0	W:i_SpeedSwMode Pr.19: S peed swi tohing m ode
	Wii_InterpolaSpeed Pr.20: I nterpola tion spe ed desig
	Wi_SpeedCntValue Pr.21: C urrent f eed valu e during



[но	W:i_InputSigLogic Pr.22: I nput sig nal logi c select	
	W:i_OutputSigLogic Pr.23: O utput si gnal log ic selec	
[ко	W:i_MPGInputSelect Pr.24: M anual pu Ise gene rator in	
[ко	Wii_SPFundSelect Pr.150: Speed-po sition f unction	

M+LD75-IEF_SetDPARAM2 (Detailed parameters 2 setting)

- * It is recommended to use GX Configurator-QP or the configuration function of GX Works 2 to perform module initialization such as parameter setting. In this case, using this FB is unnecessary.
- * This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
: Ctart IO Na	value	Cot the starting VV address where the LD75 module is mounted to 0.1.
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_AccTime1	K10000	Set the acceleration time 1 to 10,000 as the time for the speed to increase
		from zero to the Pr.8: speed limit value.
i_AccTime2	K20000	Set the acceleration time 2 to 10,000 as the time for the speed to increase
		from zero to the Pr.8: speed limit value.
i_AccTime3	K40000	Set the acceleration time 3 to 10,000 as the time for the speed to increase
		from zero to the Pr.8: speed limit value.
i_DecTime1	K10000	Set the deceleration time 1 to 10,000 as the time for the speed to decrease
		from zero to the Pr.8: speed limit value.
i_DecTime2	K20000	Set the deceleration time 2 to 10,000 as the time for the speed to decrease
		from zero to the Pr.8: speed limit value.
i_DecTime3	K40000	Set the deceleration time 3 to 10,000 as the time for the speed to decrease
		from zero to the Pr.8: speed limit value.
i_JogSpeedLimit	K10000	Set the maximum speed for JOG operation to 10,000.
i_JogAccTimeSel	K0	Set the acceleration time during JOG operation to "Acceleration time 0".
i_JogDecTimeSel	K0	Set the deceleration time during JOG operation to "Deceleration time 0".
i_AccDecProcess	K0	Set the acceleration/deceleration process to "Trapezoid
		acceleration/deceleration process".
i_S_curveRatio	K50	Set the S-curve ratio for carrying out the S-curve acceleration/deceleration
		process to 50%.
i_SuddenStopTime	K1000	Set the time to reach speed 0 from the Pr.8: speed limit value during the
		sudden stop to 1,000 ms.
i_StopGroup1	K0	Set the method to stop when the stop causes in the stop group 1 occur to
		"Normal deceleration stop".
i_StopGroup2	K0	Set the method to stop when the stop causes in the stop group 2 occur to
		"Normal deceleration stop".



Label name	Setting	Description
	value	
i_StopGroup3	K0	Set the method to stop when the stop causes in the stop group 3 occur to
		"Normal deceleration stop".
i_PosiCmpSignal	K100	Set the output time of the positioning complete signal to 100 ms.
i_ArcErrPermit	K1000	Set the allowable error range of the calculated arc path and end point address
		to 1,000.
i_ExtComFuncSel	K0	Set the command with which the external command signal is associated to
		"External positioning start".

By turning ON M30, the detailed parameters 2 setting is written to the buffer memory.



м 30		SetDPAR.			, .
\dashv		- B:FB_EN	FB_ENO:B		———(M31)·
Detailed		Executio	Executio		Detailed
param 2		n comman	n status		param 2
setting		la			setting
request		ľ			ready
request					ready
	_	_			
	———[но	} W:i_Start_IO_No	FB_OK:B		———(M32)-
	_	Module s	Detailed		Detailed
		tart XY	paramet		param 2
		address	ers 2 se		setting
		333.333	tting co		comp
			tang oo		oomp
	_	_			, .
	———[K1	} W:i_Station_No	FB_ERROR:B		———(F30)·
		Station	Error fl		Detailed
		No.	ag		param 2
			_		setting
					FB err
					1001
	_			_	
	———[но	} W:i_SlvStart_IO_No	ERROR_ID:W		
	_	Slave mo	Error co	Detailed	
		dule sta	de	param 2	
		rt XY ad		set FB	
		dress		err code	
		3.233			
	_				
	———[K1	} W:i_CH_No			
	-	Own stat			
		ion chan			
		nel			
		i i e i			
	———[K1	} W:i_Asis			
	-	Target a			
		xis			
	K10000	∄D:i_AccTime1			
	-	Pr.25: A			
		ccelerat			
		ion time			
		1			
	————Г K20000] D:i_AccTime2			
	_,	Pr.26: A			
		ccelerat			
		4			
		게D:i AccTime3			
	[1445500	Pr 27: A			
		3			
	(K40000	ion time 2 D:i_AccTime3 Pr.27: A ccelerat ion time 3			



[K10000]	D:i_DecTime1 Pr.28: D ecelerat ion time 1
[K20000]	Di_DecTime2 Pr.29: D ecelerat ion time 2
[K40000]	D:i_DecTime3 Pr.30: D ecelerat ion time 3
[K10000]	D:i_JogSpeedLimit Pr.31: J OG speed limit v alue
[KO]	W:i_JogAccTimeSel Pr.32: J OG opera tion acc eleratio
[KO]	W:i_JogDecTimeSel Pr.33: J OG opera tion dec eleratio
[KO]	Wii_AccDecProcess Pr.34: A ccelerat ion/dece leration
[K50]	-Wii_S_curveRatio Pr.35: S -curve r atio



I	1
[K1000	D:i_SuddenStopTime Pr.36: S udden st op decel eration
[K0	W.i_StopGroup1 Pr.37: S top grou p 1 sudd en stop
[K0	} W:i_StopGroup2 Pr.38: S top grou p 2 sudd en stop
[K0	} W:i_StopGroup3 Pr.39: S top grou p 3 sudd en stop
[K100	W:i_PosiCmpSignal Pr.40: P ositioni ng compl ete sign
	D:i_ArcErrPermit Pr.41: A Ilowable circula r interp
[K0	W:i_ExtComFuncSel Pr.42: E xternal command function



M+LD75-IEF_SetZBPARAM (OPR basic parameters setting)

- * It is recommended to use GX Configurator-QP or the configuration function of GX Works 2 to perform module initialization such as parameter setting. In this case, using this FB is unnecessary.
- * The parameter setting complete (M42) contact is used for PLC ready signal ON FB (M+LD75-IEF_CPUReady).
- * This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

The example below shows a program with the following conditions.

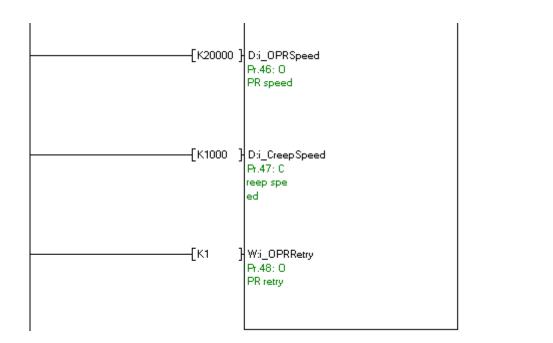
Label name	Setting	Description
	value	
i_Start_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_OPRMethod	K0	Set the OPR method for carrying out machine OPR to "Near-point dog
		method".
i_OPRDirection	K0	Set the direction to start movement when starting machine OPR to "Positive
		direction (address increment direction)".
i_OPAddress	K0	Set the address used as the reference point for positioning control (ABS
		system) to 0.
i_OPRSpeed	K20000	Set the speed for OPR to 20,000.
i_CreepSpeed	K1000	Set the creep speed after near-point dog ON to 1000.
i_OPRRetry	K1	Set the OPR retry to "Retry OPR with limit switch".

By turning ON M40, the OPR basic parameters setting is written to the buffer memory.



M40 —		SetZBP/ B:FB_EN	FB_ENO:B	(M41
II IPR basi		Executio	Executio	OPR basi
param		n comman	n status	c param
etting		d	11 513133	setting
equest		٦		ready
-quest				ready
	——[но	1 W: 6 10 N-	ED OK D	(M42
] W:i_Start_IO_No	FB_OK:B	
		Module s	OPR basi	OPR basi
		tart XY address	c parame	c param
		address	ters set	setting
			ting com	complete
	Fire	1		(=10
	——[K1] W:i_Station_No	FB_ERROR:B	(F40
		Station	Error fl	OPR basi
		No.	ag	c param
				setting
				FB error
	_	_	<u> </u>	
	——[но	} W:i_SlvStart_IO_No	ERROR_ID:W { D40 }	
		Slave mo	Error co OPR basi	
		dule sta	de c param	
		rt XY ad	FB error	
		dress	code	
	——[K1	}w:i_cH_No		
	L	Own stat		
		ion chan		
		nel		
	——[K1	} W:i_Axis		
	LIVI			
		Target a		
		NIS		
	F	1		
	——[ко	} W:i_OPRMethod		
		Pr.43: 0		
		PR metho		
		d		
		_[
	——[ко	} W:i_OPRDirection		
		Pr.44: 0		
		PR direc		
		tion		
		-1		
	<u> —</u> Гко	∦D:i_OPAddress	l	
	——[ко	} D:i_OPAddress Pr.45: O		
	——[ко	Pr.45: 0		
	——[ко			







M+LD75-IEF_SetZDPARAM (OPR detailed parameters setting)

- * It is recommended to use GX Configurator-QP or the configuration function of GX Works 2 to perform module initialization such as parameter setting. In this case, using this FB is unnecessary.
- * The parameter setting complete (M52) contact is used for PLC ready signal ON FB (M+LD75-IEF_CPUReady).
- * This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_OPRDwellTime	K1000	When stopper method 1) is set in Pr.43: OPR method, set the time for the
		machine OPR to complete after the near-point dog signal turns ON to 1,000
		ms.
i_DogOnLength	K20000	When the count method 1) or 2) is set in Pr.43: OPR method, set the
		movement amount to the OP after the near-point dog ON to 20,000.
i_OPRAccTimeSel	K0	Set the acceleration time during OPR to "Acceleration time 0".
i_OPRDecTimeSel	K1	Set the deceleration time during OPR to "Deceleration time 1".
i_OPShift	K0	Set the shift amount from the position stopped at with machine OPR to 0.
i_OPRTorqueLim	K100	Set the value to limit the servomotor torque after reaching the creep speed
		during machine OPR to 100%.
i_DevCntClr	K11	Set the duration of the deviation counter clear signal output during a machine
		OPR operation using any of the near-point dog method, stopper methods 1) to
		3), or count method 1) to 11 ms.
i_ShiftSpeed	K0	Set the operation speed for when a value other than 0 is set in Pr.53: OP shift
		amount to "OPR speed".
i_OPRRetryDwell	K100	When setting Pr.48: OPR retry, set the stop time during the retry to 100 ms.

By turning ON M50, the OPR detailed parameters setting is written to the buffer memory.



M50		SetZDPAR			(
1		B:FB_EN	FB_ENO:B		———(M51
PR deta		Executio	Executio		OPR deta
d par		n comman	n status		iled par
n setti		la			am setti
l ted		ľ			ng ready
ried					rig ready
	— [но]	W:i_Start_IO_No	FB_OK:B		———(M52
		Module s	OPR deta		OPR deta
		tart XY	iled par		iled par
		address	ameters		am setti
		addless			
			setting		ng comp
	—[K1]	W:i_Station_No	FB_ERROR:B		———(F50
	L	Station	Error fl		OPR deta
		No.	ag		iled par
		NO.	ay		
					am set F
					B err
	—[но]	W:i_SlvStart_IO_No	ERROR_ID:W	f D50 7	
	L	Slave mo	Error co	OPR deta	
		dule sta	de	iled par	
		rt XY ad		am FB er	
		dress		ror code	
	Eus :	w: eu n			
	—[к1]	W:i_CH_No			
		Own stat			
		ion chan			
		nel			
	F				
	—[К1]	W:i_Axis			
		Target a			
		xis			
	—[K1000]	W:i_OPRDwellTime			
	L.1.000	Pr.49: 0			
		PR dwell			
		time			
		1			
	Ekooooo '	D: D0 !			
	—[K20000]	D:i_DogOnLength			
	—[K20000]	Pr.50: S			
	—[K20000]	Dii_DogOnLength Pr.50: S etting f			
	—[K20000]	Pr.50: S			
	—[K20000]	Pr.50: S etting f or the m			
	—[K20000]	Pr.50: S etting f			
	—[K20000]	Pr.50: S etting f or the m			
		Pr.50: S etting f or the m ovement			
		Pr.50: S etting f or the m ovement			
		Pr.50: S etting f or the m ovement W:i_OPRAccTimeSel			
		Pr.50: S etting f or the m ovement W:i_OPRAccTimeSel Pr.51: 0			
		Pr.50: S etting f or the m ovement W:i_OPRAcoTimeSel Pr.51: O PR accel			
		Pr.50: S etting f or the m ovement W:i_OPRAccTimeSel Pr.51: 0			



[K1	} W:i_OPRDecTimeSel Pr.52: 0 PR decel eration time sel
[K0] D:i_OPShift Pr.53: O P shift amount
[K100	} W:i_OPRTorqueLim Pr.54: 0 PR torqu e limit value
	W:i_DevCntClr Pr.55: D eviation counter clear s
[KO] W:i_ShiftSpeed Pr.56: S peed des ignation during
[K100	W:i_OPRRetryDwell Pr.57: D well tim e during OPR ret

M+LD75-IEF_PosiDataSet (Positioning data setting)

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_DataNo	K1	Set the positioning data No. to 1.
i_OperatePattern	K0	Set the operation pattern whether positioning is to be ended with just that
		data, or whether the positioning for the next data No. is to be carried out in
		succession to "Positioning complete".
i_ControlSystem	H1	Set the control system for carrying out positioning control to "ABS1 1-axis
		linear control (ABS)".
i_AccTimeNo	K0	Set the acceleration time during positioning to "Acceleration time 0".
i_DecTimeNo	K0	Set the deceleration time during positioning to "Deceleration time 0.
i_InterpolatedAx	K0	Set the target axis for operations under the 2-axis interpolation control to "Axis
		1".
i_Mcode	K0	Set the "condition data No.", "number of repetitions", or "M code"
		corresponding to the "control system" to 0.
i_DwellTime	K0	Set the "positioning data No." or "dwell time" corresponding to the "control
		system" to 0.
i_CommandSpeed	K10000	Set the command speed for positioning to 10,000.
i_PosiAddr	K300000	Set the target position/movement amount for positioning control to 300,000.
i_ArcAddr	K0	Set the arc address to 0 when carrying out circular interpolation control.

By turning ON M60, the positioning data setting is written to the buffer memory.

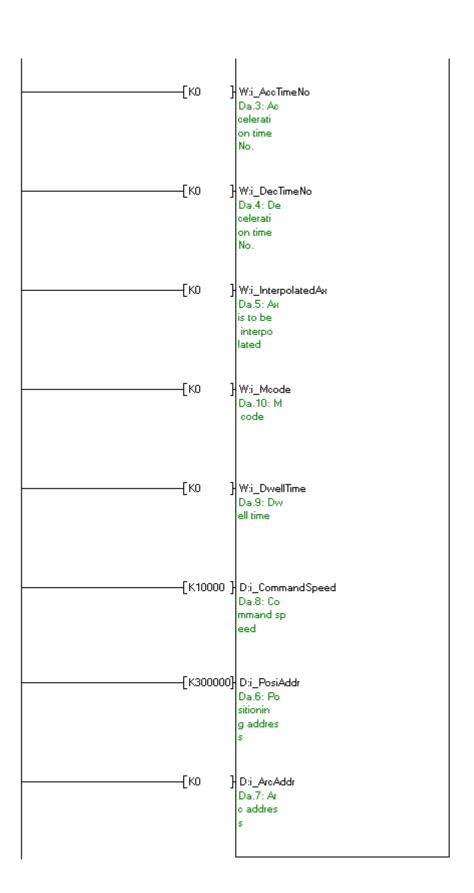


^{*} This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

м60		PosiData	a Set		
HH		B:FB_EN	FB_ENO:B		———(M61)
Position		Executio	Executio		Position
ing data		n comman	n status		ing data
setting		d			setting
request		ľ			ready
request					ready
	———[но] W:i_Start_IO_No	FB_OK:B		———(M62)
	_	Module s	Position		Position
		tart XY	ing data		ing data
		address	setting		setting
		addiess	complet		comp
			complet		comp
	_				
	———[K1	} W:i_Station_No	FB_ERROR:B		———(F60)
	-	Station	Error fl		Position
		No.	ag		ing data
			-9		setting
					FB err
					ro en
		_		_	
	———[но] W:i_SlvStart_IO_No	ERROR_ID:W	[D60]———	
	-	Slave mo	Error co	Pos data	
		dule sta	de	setting	
		rt XY ad		FB erro	
		dress		rcode	
		diess		i code	
	———[K1]∤W:i_CH_No			
	-	Own stat			
		ion chan			
		nel			
	———[K1	} W:i_Axis			
	L	Target a			
		xis			
		nis nis			
	———[K1	} W:i_DataNo			
	L	Data No.			
		Data No.			
	———[ко	} W:i_OperatePattern			
	Γιω	Da.1: Op			
		eration			
		pattern			
	——[Н1	} W:i_ControlSystem			
	Γ	Da.2: Co			
		ntrol sy			
		stem			
		I			

(Please refer to next page.)







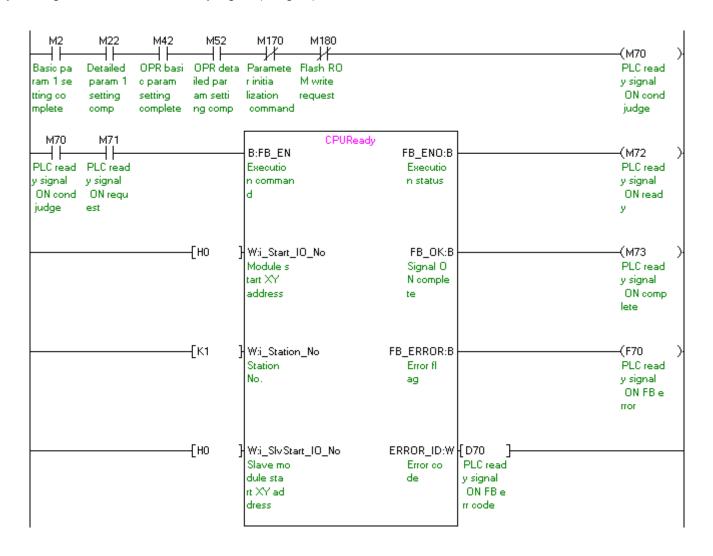
M+LD75-IEF_CPUReady (PLC ready signal ON)

- * Contacts of M2, M22, M42 and M52 are not required if initial parameters are set not with the parameter setting FB but with GX Configurator-QP or the configuration function of GX Works 2.
- * This FB uses cyclic transmission. Therefore, an interlock program for cyclic transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.

By turning ON M71, the PLC ready signal (Y signal) is turned ON.





M+LD75-IEF_StartPosi (Positioning start)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_StartNo	K1	Set Cd.3: Positioning start No. to "Positioning data No.1".

By turning ON M80, the positioning start number "Positioning data No.1" is started.



М80		StartPo			I
Position ing star t reques t		B:FB_EN Executio n comman d	FB_ENO:B - Executio n status		(M81)- Position ing star t ready
	(но	Wij_Start_IO_No Module s tart XY address	FB_OK:B - Executio n comple te		(M82)- Executio n comple te
	——[К1	} W:i_Station_No Station No.	FB_ERROR:B – Error fl ag		(F80)- Position ing star t FB err or
	——[но	Wij_SlvStart_IO_No Slave mo dule sta rt XY ad dress	de	D80]————————————————————————————————————	
	[K1	} W:i_CH_No Own stat ion chan nel			
	[K1	} W:i_Axis Target a xis			
	[K1	} W:i_StartNo Cd.3: Po sitionin g start No.			

M+LD75-IEF_JOG (JOG/inching operation)

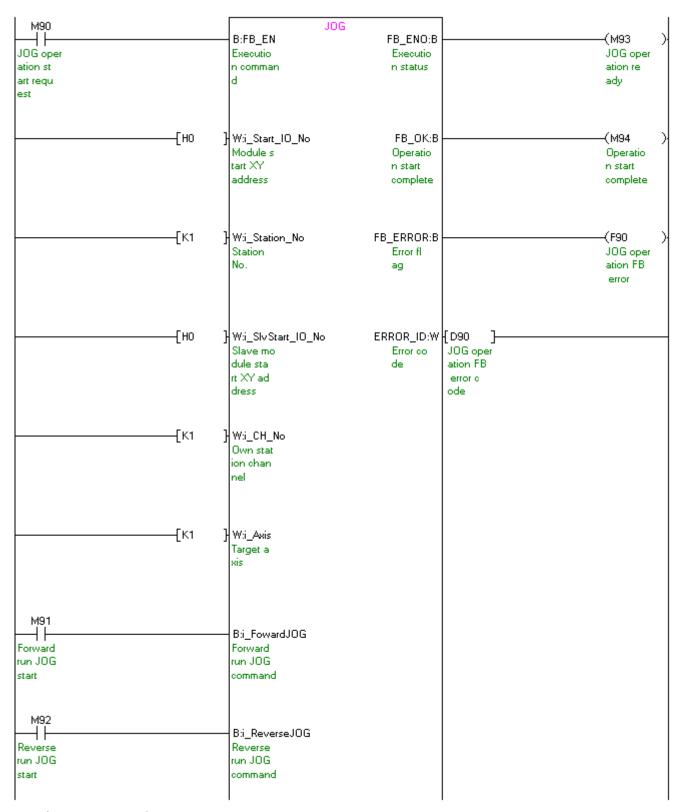
* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_JOGSpeed	K5000	Set the JOG speed to 5,000.
i_Inching	K0	Set the inching movement amount to 0. Set 0 for JOG operation.

By turning ON M90, and then by turning ON M91 (Forward run JOG command) or M 92 (Reverse run JOG command), JOG operation is performed.





(Please refer to next page.)







M+LD75-IEF_MPG (Manual pulse generator operation)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_MPGInputMag	K1	Set the manual pulse generator 1 pulse input magnification to 1

By turning ON/OFF M100, the manual pulse generator operation is enabled/disabled.



M100		MPG			
		B:FB_EN	FB_ENO:B		———(M101
Manual p		Executio	Executio		Manual p
ilse gen		n comman	n status		ulse gen
start r		d			0P read
equest					у
-quest					,
	—[но	} W:i_Start_IO_No	FB_OK:B		———(M102
	Liio	Module s	Manual p		Manual p
		tart XY	ulse gen		ulse gen
		address	erator e		enable
		address	nable co		complete
			nable co		complete
	—[K1	} W:i_Station_No	FB_ERROR:B		———(F100
	Lixi	Station_No	Error fl		Manual p
		No.			ulse gen
		No.	ag		
					OP FB e
					rror
	—[но	W:i_SlvStart_IO_No	ERROR_ID:W	[D100]	
	[Slave mo	Error co	Manual p	
		dule sta	de	ulse gen	
		rt XY ad	ue	OP FB e	
		dress		m code	
		aress		rr code	
	—[K1	} w:i_cH_N₀			
	Livi	Own stat			
		ion chan			
		nel			
		nei			
	—[K1	} Wi_Asis			
	L	Target a			
		xis			
	Fire	la cupor co			
	—[K1	D:i_MPGInputMag			
		Cd.20: M			
				l	
		anual pu			
		lse gene rator 1			



M+LD75-IEF_ChgSpeed (Speed change)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_SpeedChgValue	K20000	Set the new speed to 20,000.

By turning ON M110, the speed during control is changed to a newly designated speed.



M110		ChgSpee	d		
-		B:FB_EN	FB_ENO:B		———(M111)
Speed ch		Executio	Executio		Speed ch
ange req uest		n comman d	n status		ange rea dy
uesi					Gy.
	——[но	} W:i_Start_IO_No	FB_OK:B		(M112)
	Liio	Module s	Speed ch		Speedich
		tart XY	ange req		ange req
		address	uest com		uest com
			plete		plete
	——[K1	} W:i_Station_No	FB_ERROR:B		(F110)
	_	Station	Error fl		Speed ch
		No.	ag		ange FB
					error
	_			_	
	——[но	} W:i_SlvStart_IO_No	ERROR_ID:W		
		Slave mo dule sta	Error co de	Speed ch ange FB	
		rt XY ad	GE	error co	
		dress		de	
	——[K1	}w:j_cH_No			
	-	Own stat			
		ion chan			
		nel			
	——[К1	} Wi_Axis			
	Livi	Target a			
		xis			
	K20000	D:i_SpeedChgValue			
	L	Cd.14: N			
		ew speed			
		value			

M+LD75-IEF_ChgOverride (Override)

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_Override	K75	Set the new speed to 75%.

By turning ON M120, the speed is changed for all controls to be executed at the percentage designated with the positioning operation speed override.



^{*} This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

M120		ChgOver	ride		
		B:FB_EN	FB_ENO:B		———(M121
Override		Executio	Executio		Override
command		n comman	n status		ready
		d			
	Euo	11,000	55 04 5		(1,1400
	——[но	} W:i_Start_IO_No Module s	FB_OK:B		———(M122
		tart XY	Override value s		Override value s
		address	etting c		etting c
		address	omplete		omplete
			omplete		omprese.
	—[K1	} W:i_Station_No	FB_ERROR:B		———(F120
	F	Station	Error fl		Override
		No.	ag		FB erro
			_		r
	——[но	} W:i_SlvStart_IO_No	ERROR_ID:W	[D120]———	
		Slave mo	Error co	Override	
		dule sta	de	FB erro	
		rt XY ad		r code	
		dress			
	5	J			
	—[K1	} W:i_CH_No			
		Own stat			
		ion chan			
		nel			
	—[K1	} Wi_Axis			
		Target a			
		xis			
		12			
	——[K75	} W:i_Override			
	-	Cd.13: P			
		ositioni			
		ositioni ng opera tion spe			

M+LD75-IEF_ChgAccDecTime (Acceleration/deceleration time setting value change)

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_NewAccTime	K15000	Set the new acceleration time to 15,000 ms.
i_NewDecTime	K10000	Set the new deceleration time to 10,000 ms.

By turning ON M130, the acceleration/deceleration time setting is changed according to M131 (Acceleration/deceleration time change enable flag).



^{*} This FB uses transient transmission. Therefore, an interlock program for transient transmission is required.

M130		ChgAccDe	oTime			
⊣		B:FB_EN	FB_ENO:B		——(M132	
Acc/dec		Executio	Executio		Acc/dec	
ime cha		n comman	n status		time cha	
nge comm		a			nge read	
and					y	
					•	
	—[но]	W:i_Start_IO_No	FB_OK:B		——(М133	
	[Module s	Accelera		Acc/dec	
		tart XY	tion/dec		time cha	
		address				
		address	eleratio n time c		nge requ	
			n time c		est cmd	
	—[K1]	Waleston No	ED EDDOD.D		——(F130	
	[]	W:i_Station_No	FB_ERROR:B			
		Station	Error fl		Acc/dec	
		No.	ag		time cha	
					nge FB e	
					rror	
	—[но]	MAN Shase IO No	ERROR_ID:W	[D130]		
		W:i_SlvStart_IO_No				
		Slave mo	Error co	Acolded		
		dule sta	de	time cha		
		rt XY ad		nge FB e		
		dress		rr code		
	—[К1]	W:i_CH_No				
		Own stat				
		ion chan				
		nel				
	—[K1]	W:i_Axis				
		Target a				
		xis				
M131						
		B:i_Enable				
Acc/dec		Accelera				
time cha		tion/dec				
nge enab		eleratio				
e flag		n time c				
e nag		Trume o				
	Evaroon 1	D:i_NewAccTime				
	— - К 15HHH Т	- :				
	—[K15000]	ICH 10: N				
	—[KI5000]	Cd.10: N				
	—[K15000]	ew accel				
	—[K15000]	ew accel eration				
	— <u>[</u> K15000]	ew accel				
	—-[K15000]	ew accel eration				
		ew accel eration time val				
		ew accel eration time val D:i_NewDecTime				
		ew accel eration time val D:i_NewDecTime Cd.11: N				
		ew accel eration time val D:i_NewDecTime Cd.11: N ew decel				
		ew accel eration time val D:i_NewDecTime Cd.11: N				



M+LD75-IEF_ChgPosi (Target position change)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.
i_PosiChgAddr	K400000	When changing the target position during a positioning operation, set the new
		positioning address to 400,000.
i_PosiChgSpeed	K20000	When changing the target position during a positioning operation, set the new
		speed to 20,000.

By turning ON M140, the target position under position control is changed to the value set in the target position change value (new address) and the command speed is changed to the value set in the target position change value (new speed) at the same time.



M140		ChgPo	si		
┦├──		B:FB_EN	FB_ENO:B		———(M141
rget p		Executio	Executio		Target p
tion		n comman	n status		osition
ange c		d			change r
mand					eady
	_	_			
	——[но] W:i_Start_IO_No	FB_OK:B		———(M142
		Module s	Target p		Target p
		tart XY	osition		osition
		address	change c		chg acce
			omplete		pt comp
	——[К1] W:i_Station_No	FB_ERROR:B		———(F140
	Livi	Station	Error fl		Target p
		No.	ag		osition
		110.	ay		change F
					B error
					_ =
	_			_	
	——[но	} W:i_SlvStart_IO_No	ERROR_ID:W		
		Slave mo	Error co	Target p	
		dule sta	de	osition	
		rt XY ad		change e	
		dress		rr code	
	F	1			
	——[К1	}\w:i_CH_No			
		Own stat			
		ion chan			
		nel			
	——[К1	} W:i_Axis			
	L	Target a			
		xis			
	FK400000	D:i_PosiChgAddr			
		Cd.27: T			
		arget po sition c			
		hange va			
	——[K20000	} D:i_PosiChgSpeed			
	-	Cd.28: T			
		1		i	
		arget po		1	
		arget po sition c			

M+LD75-IEF_Restart (Restart)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.

By turning ON M150, the positioning operation that stopped when a stop cause has occurred restarts.



M150	Restart			
	B:FB_EN	FB_ENO:B -		———(M151)·
Restart	Executio	Executio		Restart
command	n comman	n status		ready
	d			
	} W:i_Start_IO_No	FB_OK:B —		(M152)
	Module s	Restart		Restart
	tart XY	acceptan		acceptan
	address	ce compl		ce compl
		ete		ete
	} W:i_Station_No	FB_ERROR:B		(F150)
_	Station	Error fl		Restart
	No.	ag		FB error
	} W:i_SlvStart_IO_No	ERROR_ID:W { C		
	Slave mo dule sta		estart B error	
	rt XY ad dress		ode:	
[K1	W:i_CH_No Own stat			
	ion chan nel			
_				
	} W:i_Axis Target a			
	жis			

M+LD75-IEF_ErrorOperation (Error operation)

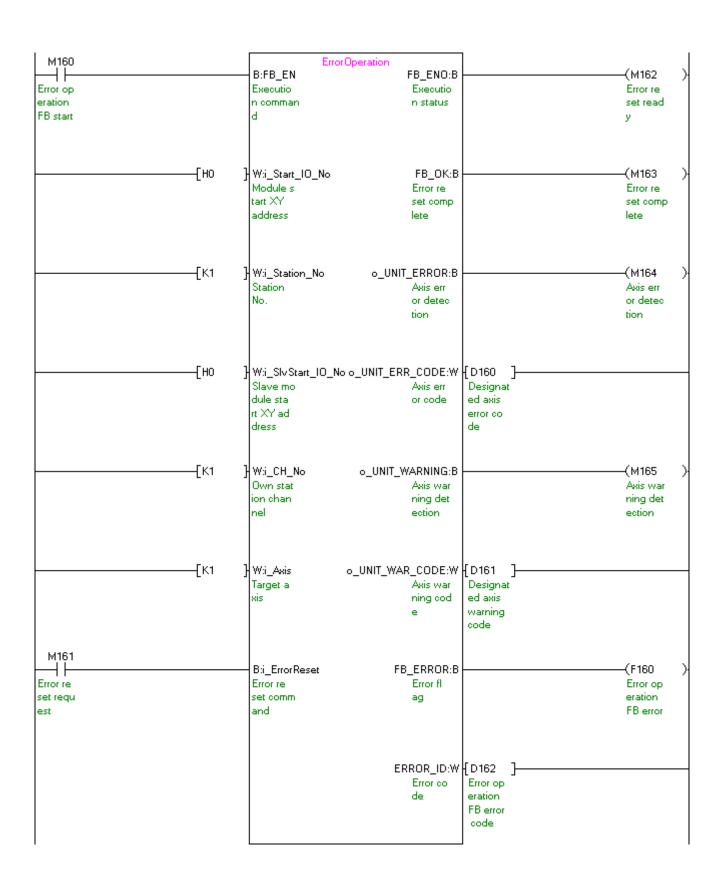
* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.
i_Axis	K1	Set axis 1.

After turning ON M160, by turning ON M161 (error reset command) during error occurrence, the warning and error for the target axis are reset.







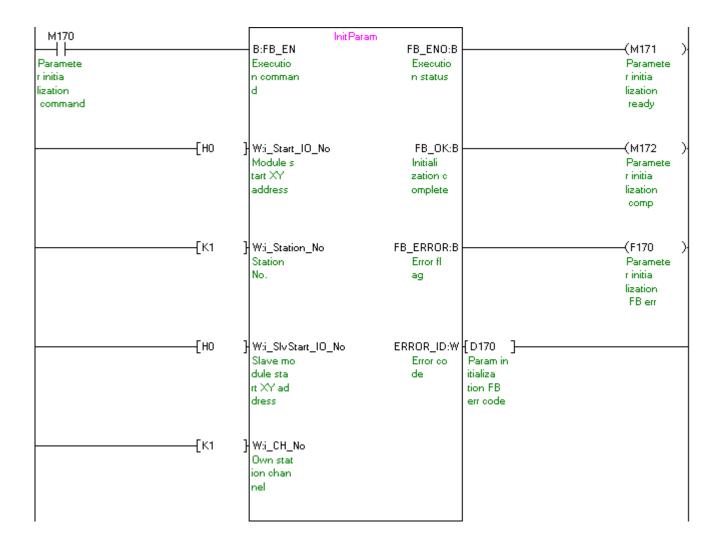
M+LD75-IEF_InitParam (Parameter initialization)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.

By turning ON M170, the setting data stored in the buffer memory and flash ROM are returned to the factory-set initial value.





M+LD75-IEF_WriteFlash (Flash ROM writing)

* This FB uses cyclic and transient transmission. Therefore, an interlock program for cyclic and transient transmission is required.

The example below shows a program with the following conditions.

Label name	Setting	Description
	value	
i_Start_IO_No	H0	Set the starting XY address where the LD75 module is mounted to 0H.
i_Station_No	K1	Set the target station number to 1.
i_SlvStart_IO_No	НО	Set the starting XY address where the LD75 module is mounted to 0H.
i_CH_No	K1	Set the own station channel to 1.

By turning ON M180, the setting data in the buffer memory is written to the flash ROM.

