MITSUBISHI ELECTRIC

Mitsubishi Programmable Controller

MELSEC iQ-R series

MELSEC iQ-R Ethernet/CC-Link IE Function Block Reference

CONTENTS

CHAPTER 1 MODULE FUNCTION BLOCK (FB) LIST 2

CHAPTER 2 NETWORK COMMON MODULE FB 4

2.1 M+model_DeviceRead 4
2.2 M+model_DeviceWrite 9
2.3 M+model_Send 14
2.4 M+model_Recv 19
2.5 M+model_RemoteStopRun 23
2.6 M+model_ReadTime 28
2.7 M+model_WriteTime 32

CHAPTER 3 ETHERNET-EQUIPPED MODULE FB 36

3.1 M+model_ConnectionOpen 36
3.2 M+model_ConnectionClose 40
3.3 M+model_Recv_Socket 43
3.4 M+model_Send_Socket 46
3.5 M+model_Refresh_Data 49

CHAPTER 4 CC-LINK IE CONTROLLER NETWORK MODULE FB 50

4.1 M+model_StationNoSet 50

CHAPTER 5 CC-LINK IE FIELD NETWORK MODULE FB 53

5.1 M+model_SetParameter 53
5.2 M+model_StationNoSet 59

REVISIONS 60

1 MODULE FUNCTION BLOCK (FB) LIST

This chapter lists the module FBs that can be used in the MELSEC iQ-R series network modules and Ethernet function of the CPU module.

Network common module FB

Name	Description
M+model_DeviceRead	Reads data by specifying a device in the programmable controller of another station.
M+model_DeviceWrite	Writes data by specifying a device in the programmable controller of another station.
M+model_Send	Sends data to the programmable controller of another station.
M+model_Recv	Reads the data received from the programmable controller of another station.
M+model_RemoteStopRun	Sends a remote STOP/RUN request to the programmable controller of another station.
M+model_ReadTime	Reads clock data from the programmable controller of another station to adjust the time of the programmable controller CPU of own station.
M+model_WriteTime	Writes the clock data of the programmable controller of own station to another station to adjust the time of the programmable controller CPU of another station.

Ethernet-equipped module FB

Name	Description
M+model_ConnectionOpen	Opens (establishes) a connection.
M+model_ConnectionClose	Closes (disconnects) the connection.
M+model_Recv_Socket	Reads the data received from the external device through socket communication or fixed buffer communication.
M+model_Send_Socket	Sends data to the external device through socket communication or fixed buffer communication.
M+model_Refresh_Data	Transfers module label data.

CC-Link IE Controller Network module FB

Name	Description
M+model_StationNoSet	Sets the station number of the own station.

CC-Link IE Field Network module FB

Name	Description
M+model_SetParameter	Sets the parameters in the master, submaster, and local stations.
M+model_StationNoSet	Sets the station number for the own (local) station.

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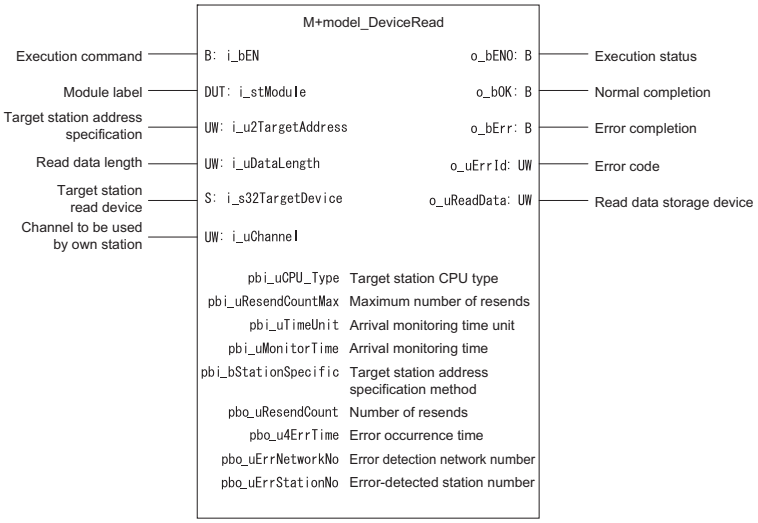
2 NETWORK COMMON MODULE FB

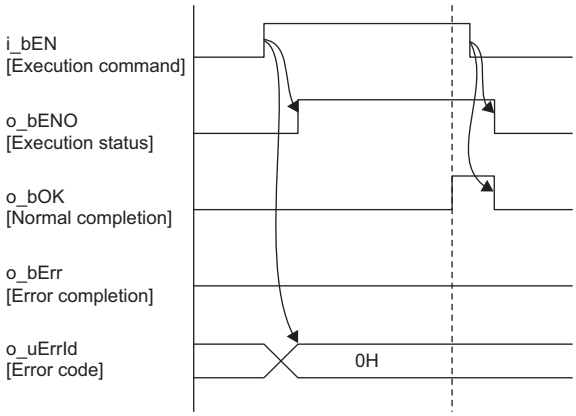
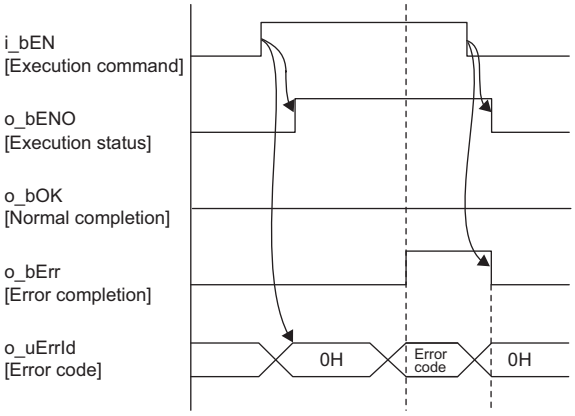
2.1 M+model_DeviceRead

Name

M+model_DeviceRead

FB details

Item	Description	
Overview	Reads data by specifying a device in the programmable controller of another station.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	85 steps	
Processing	When i_bEN (execution command) is turned on, this function reads device data from another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the G(P).READ instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
4000H to 4FFFH	MELSEC iQ-R CPU Module User's Manual (Application)
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Target station address	i_u2TargetAddress	Word [Unsigned] /Bit String [16-bit] (0..1)	—	Specify the network number and station number of the target station when "target station address specification method" is 0. When specifying the numbers using a label, use an array as the data type. b15 b0 1st word: Network number: 1 to 239 2nd word: Station number Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 126: Master operating station • 1 to 120: Local station, remote device station, intelligent device station, submaster station
				Specify the IP address of the target station when "target station address specification method" is 1 (Ethernet only). When specifying the address using a label, use an array as the data type. • 00000001H to FFFFFFFEH Note that the fourth octet cannot be set to 0 or 255 (FFH). b15 b8 b7 b0 1st word: 3rd octet | 4th octet 2nd word: 1st octet | 2nd octet When specifying the address using a label, use an array as the data type.
Read data length	i_uDataLength	Word [Unsigned] /Bit String [16-bit]	—	Specify the number of words to be read. • When reading data from RCPU, QCPU, or LCPU: 1 to 8192 words • When reading data from QnACPU: 1 to 480 words When specifying 961 words or more, specify 9 or 10 in "own station channel".
Target station read device	i_s32TargetDevice	Character string (32)	—	Specify the start address of the target station from which data is to be read.
Own station channel	i_uChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel to be used by own station. MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0
Read data storage device	o_ReadData	Word [Unsigned] /Bit String [16-bit]	Specify the start number of the device for storing the read data	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Target station CPU type	pbi_uCPU_Type	Word [Unsigned] /Bit String [16-bit]	0000H, 030DH to 03D3H, 03E0H to 03E3H, 03FFH	Specify the CPU type of the target station. • 0000H: To CPU of target station (control CPU) • 03D0H: To control system CPU • 03D1H: To standby CPU • 03D2H: To system A CPU • 03D3H: To system B CPU • 03E0H: To multiple CPU No. 1 • 03E1H: To multiple CPU No. 2 • 03E2H: To multiple CPU No. 3 • 03E3H: To multiple CPU No. 4 • 03FFH: To CPU of target station (control CPU)	0
Maximum number of resends	pbi_uResendCountMax	Word [Unsigned] /Bit String [16-bit]	0 to 15	Specify the number of resends to be performed if the data transfer is not completed within the monitoring time specified by "arrival monitoring time". • 0 to 15	5
Arrival monitoring time unit	pbi_uTimeUnit	Word [Unsigned] /Bit String [16-bit]	0, 1	Specify the unit of the "arrival monitoring time". • 0: 1s • 1: 100ms	0
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	—	Specify the monitoring time until completion of processing. If "arrival monitoring time unit" is set to 1s, specify the TCP resend timer value or a greater value for the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • Effective range (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s When "arrival monitoring time unit" is set to 100ms • Effective range 1 to 65535: 1 to 65535 × 100ms	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			—	Specify the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. When "arrival monitoring time unit" is set to 1ms • Effective range 1 to 32767: 1s to 32767s When "arrival monitoring time unit" is set to 100ms • Effective range 1 to 65535: 1 to 65535 × 100ms	0: 10s
Target station address specification method	pbi_bStationSpecific	Bit	On or off	Specify the specification method of a target station. • Off: Use the network number and station number. • On: Use the IP address (IPv4). (Ethernet only).	Off

■Public variables

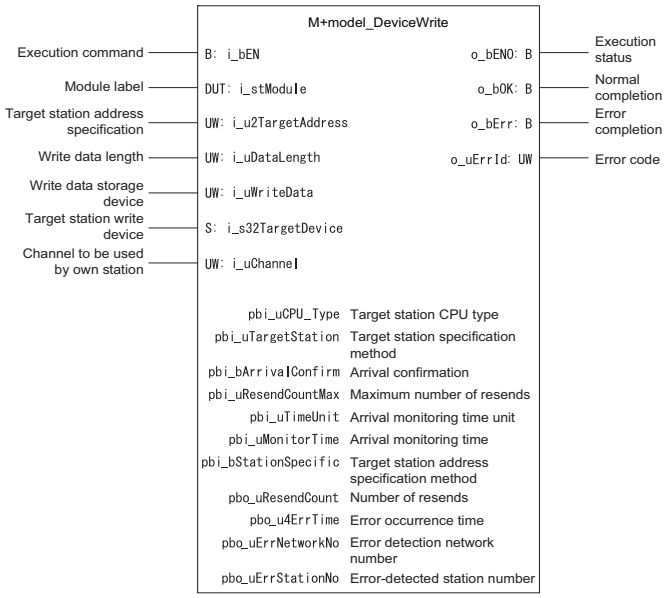
Name	Variable name	Data type	Description	Default value
Number of resends	pbo_uResendCount	Word [Unsigned] /Bit String [16-bit]	The number of resends performed (result) is stored.	0
Error occurrence time	pbo_u4ErrTime	Word [Unsigned] (0..3)	Clock data at the time of error occurrence is stored. 1st word • Upper 8 bits: Month (01H to 12H) • Lower 8 bits: Lower 2 digits of year (00H to 99H) 2nd word • Upper 8 bits: Hour (00H to 23H) • Lower 8 bits: Day (01H to 31H) 3rd word • Upper 8 bits: Second (00H to 59H) • Lower 8 bits: Minute (00H to 59H) 4th word • Upper 8 bits: Upper 2 digits of year (00H to 99H) • Lower 8 bits: Day of week (00H (Sunday) to 06H (Saturday))	0
Error detection network number	pbo_uErrNetworkNo	Word [Unsigned] /Bit String [16-bit]	The network number of the station in which an error was detected is stored.	0
Error-detected station number	pbo_uErrStationNo	Word [Unsigned] /Bit String [16-bit]	The station number of the station in which an error was detected is stored. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 1 to 120: Local station, remote device station, intelligent device station, submaster station	0

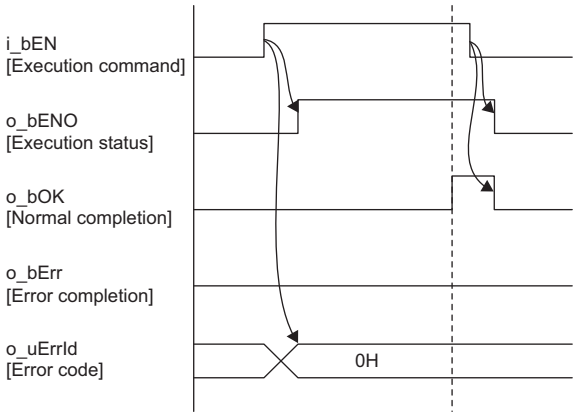
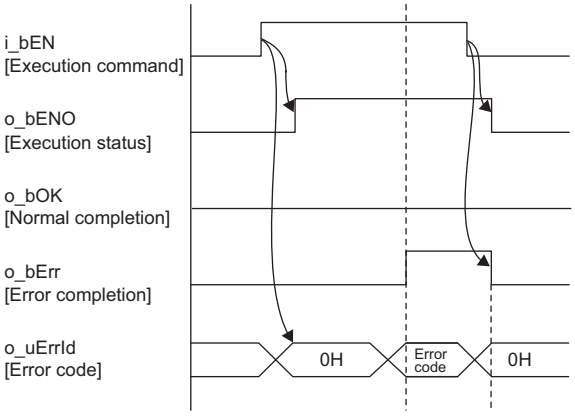
2.2 M+model_DeviceWrite

Name

M+model_DeviceWrite

FB details

Item	Description	
Overview	Writes data by specifying a device in the programmable controller of another station.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	90 steps	
Processing	When i_bEN (execution instruction) is turned on, this function writes device data to another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the G(P).WRITE instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
4000H to 4FFFH	📖 MELSEC iQ-R CPU Module User's Manual (Application)
C000H to CFFFH	📖 MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	📖 MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	📖 MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

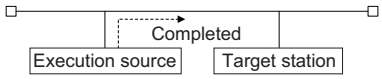
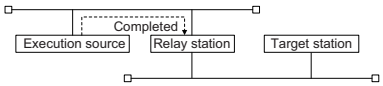
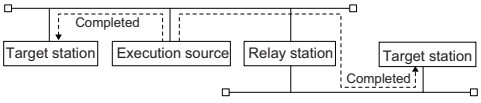
■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Target station address	i_u2TargetAddress	Word [Unsigned] /Bit String [16-bit] (0..1)	—	Specify the network number and station number of the target station when "target station address specification method" is 0. When specifying the numbers using a label, use an array as the data type. ■When "target station specification method" is set to 0 to specify a station number b15 b0 1st word: Network number: 1 to 239 2nd word: Station number Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 126: Master operating station • 1 to 120: Local station, remote device station, intelligent device station, submaster station ■When "target station specification method" is set to 1 to specify a group b15 b0 1st word: Network number: 1 to 239 2nd word: Transient transmission group number: 1 to 32 ■When "target station specification method" is set to 2 to specify all stations b15 b0 1st word: Network number: 1 to 239 2nd word: 0 (The set value is ignored.)
				Specify the IP address of the target station when "target station address specification method" is 1 (Ethernet only). When specifying the address using a label, use an array as the data type. • 00000001H to FFFFFFFEH Note that the fourth octet cannot be set to 0 or 255 (FFH). b15 b8 b7 b0 1st word: 3rd octet / 4th octet 2nd word: 1st octet / 2nd octet When specifying the address using a label, use an array as the data type.
Write data length	i_uDataLength	Word [Unsigned] /Bit String [16-bit]	—	Specify the number of words to be written. • When writing to RCPU, QCPU, or LCPU: 1 to 8192 words • When writing to QnACPU: 1 to 480 words When specifying 961 words or more, specify 9 or 10 in "own station channel".
Write data storage device	i_uWriteData	Word [Unsigned] /Bit String [16-bit]	—	Specify the start device of own station containing the write data.
Target station write device	i_s32TargetDevice	Character string (32)	—	Specify the start device of the target station to which data is to be written.
Own station channel	i_uChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel to be used by own station. MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Target station CPU type	pbi_uCPU_Type	Word [Unsigned] /Bit String [16-bit]	0000H, 030DH to 03D3H, 03E0H to 03E3H, 03FFH	Specify the CPU type of the target station. • 0000H: To CPU of target station (control CPU) • 03D0H: To control system CPU • 03D1H: To standby CPU • 03D2H: To system A CPU • 03D3H: To system B CPU • 03E0H: To multiple CPU No. 1 • 03E1H: To multiple CPU No. 2 • 03E2H: To multiple CPU No. 3 • 03E3H: To multiple CPU No. 4 • 03FFH: To CPU of target station (control CPU)	0
Target station specification method	pbi_uTargetStation	Word [Unsigned] /Bit String [16-bit]	0 to 2	Specify the specification method of a target station. • 0: Station number specification → Station with the station number specified in "target station address" • 1: Group specification (only when "OFF (No)" is specified in "arrival acknowledgment") → All stations of the transient transmission group number specified in "arrival station address" (For the CC-Link IE Field Network, the value 1 cannot be specified.) • 2: All stations (only when "OFF (No)" is specified in "arrival acknowledgment") → All stations of the network number specified in "arrival station address" (broadcast excluding own station)	0
Arrival acknowledgment	pbi_bArrivalConfirm	Bit	On or off	Specify whether to use arrival acknowledgment. ■Off: No check • When the target station is within the own network, sending data from the own station completes the sending.  • When the target station is within another network, data arrival to the relay station within the own network completes the sending.  ■On: Check Sending data is completed when the data is written to the target station.  	Off
Maximum number of resends	pbi_uResendCountMax	Word [Unsigned] /Bit String [16-bit]	0 to 15	Specify the number of resends to be performed if the data transfer is not completed within the monitoring time specified by "arrival monitoring time". • 0 to 15	5

Name	Variable name	Data type	Range	Description	Default value
Arrival monitoring time unit	pbi_uTimeUnit	Word [Unsigned] /Bit String [16-bit]	1, 0	Specify the unit of the "arrival monitoring time". • 0: 1s • 1: 100ms	0
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	—	Specify the monitoring time until completion of processing. If "arrival monitoring time unit" is set to 1s, specify the TCP resend timer value or a greater value for the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • Effective range (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s When "arrival monitoring time unit" is set to 100ms • Effective range 1 to 65535: 1 to 65535 × 100ms	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			—	Specify the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. When "arrival monitoring time unit" is set to 1ms • Effective range 1 to 32767: 1s to 32767s When "arrival monitoring time unit" is set to 100ms • Effective range 1 to 65535: 1 to 65535 × 100ms	0: 10s
Target station address specification method	pbi_bStationSpecific	Bit	On or off	Specify the specification method of a target station. • Off: Use the network number and station number. • On: Use the IP address (IPv4). (Ethernet only).	Off

■Public variables

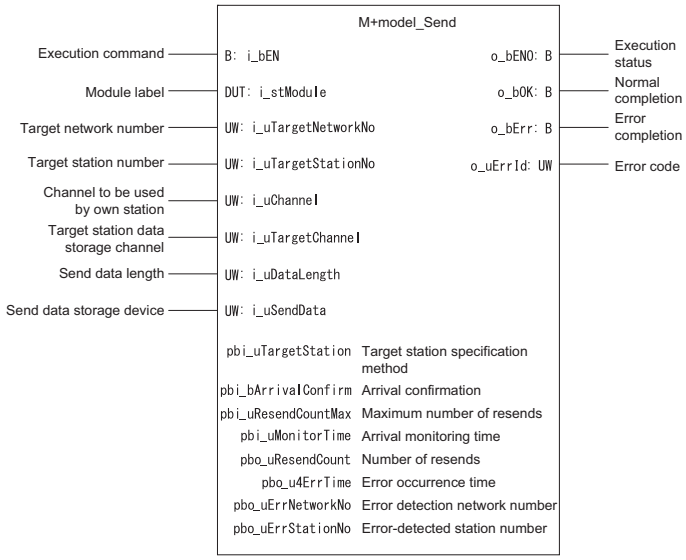
Name	Variable name	Data type	Description	Default value
Number of resends	pbo_uResendCount	Word [Unsigned] /Bit String [16-bit]	The number of resends performed (result) is stored.	0
Error occurrence time	pbo_u4ErrTime	Word [Unsigned] /Bit String [16-bit] (0..3)	Clock data at the time of error occurrence is stored. 1st word • Upper 8 bits: Month (01H to 12H) • Lower 8 bits: Lower 2 digits of year (00H to 99H) 2nd word • Upper 8 bits: Hour (00H to 23H) • Lower 8 bits: Day (01H to 31H) 3rd word • Upper 8 bits: Second (00H to 59H) • Lower 8 bits: Minute (00H to 59H) 4th word • Upper 8 bits: Upper 2 digits of year (00H to 99H) • Lower 8 bits: Day of week (00H (Sunday) to 06H (Saturday))	0
Error detection network number	pbo_uErrNetworkNo	Word [Unsigned] /Bit String [16-bit]	The network number of the station in which an error was detected is stored.	0
Error-detected station number	pbo_uErrStationNo	Word [Unsigned] /Bit String [16-bit]	The station number of the station in which an error was detected is stored. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 1 to 120: Local station, remote device station, intelligent device station, submaster station	0

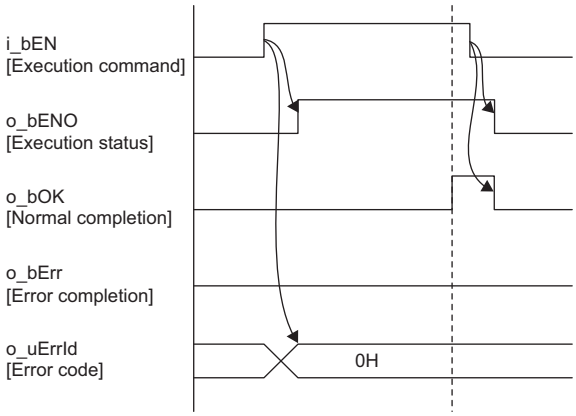
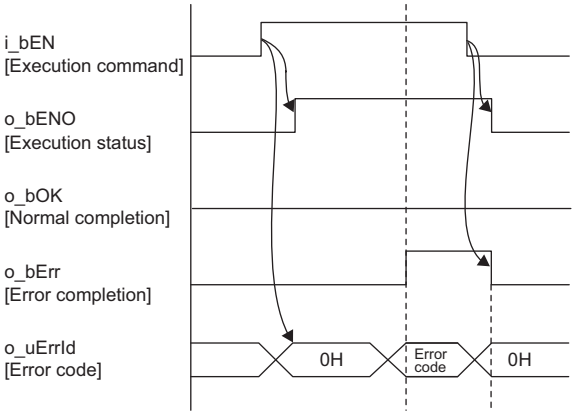
2.3 M+model_Send

Name

M+model_Send

FB details

Item	Description	
Overview	Sends data to the programmable controller of another station.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	75 steps	
Processing	When i_bEN (execution instruction) is turned on, this function sends a message to another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the G(P).SEND instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
4000H to 4FFFH	MELSEC iQ-R CPU Module User's Manual (Application)
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

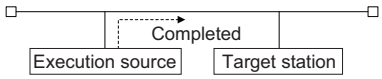
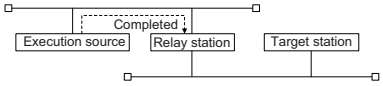
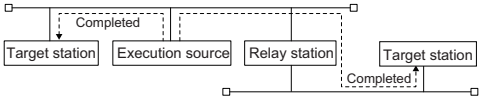
■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Target network number	i_uTargetNetworkNo	Word [Unsigned] /Bit String [16-bit]	1 to 239	Specify the network number of the target station.
Target station number	i_uTargetStationNo	Word [Unsigned] /Bit String [16-bit]	—	Specify the station number of the target station or the transient transmission group number. ■When "target station specification method" is set to 0 to specify a station number Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 126: Master operating station • 1 to 120: Local station, remote device station, intelligent device station, submaster station ■When "target station specification method" is set to 1 to specify a group Specify the transient transmission group number. • 1 to 32 ■When "target station specification method" is set to 2 to specify all stations The setting is ignored.
Own station channel	i_uChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel to be used by own station. 📖 MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)
Target station data storage channel	i_uTargetChannel	Word [Unsigned] /Bit String [16-bit]	1 to 8	Specify the channel of the target station for storing data. When the target station is a CC-Link IE Field Network master/local module, specify 1 or 2.
Send data length	i_uDataLength	Word [Unsigned] /Bit String [16-bit]	—	Specify the number of words to be sent. • When the target station is RCPU, QCPU, or LCPU: 1 to 960 words • When the target station is QnACPU: 1 to 480 words
Send data storage device	i_uSendData	Word [Unsigned] /Bit String [16-bit]	—	Specify the start device of own station containing the send data.

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Target station specification method	pbi_uTargetStation	Word [Unsigned] /Bit String [16-bit]	0 to 2	Specify the specification method of a target station. • 0: Station number specification → Station with the station number specified in "Target station number" • 1: Group specification (only when "OFF (No)" is specified in "Arrival acknowledgment") → All stations of the transient transmission group number specified in "Target station number" (For the CC-Link IE Field Network, the value 1 cannot be specified.) • 2: All stations (only when "OFF (No)" is specified in "Arrival acknowledgment") → All stations of the network number specified in "Target network number" (broadcast excluding own station)	0
Arrival acknowledgment	pbi_bArrivalConfirm	Bit	On or off	Specify whether to use arrival acknowledgment. ■Off: No check • When the target station is within the own network, sending data from the own station completes the sending.  • When the target station is within another network, data arrival to the relay station within the own network completes the sending.  ■On: Check Sending data is completed when the data is written to the target station. 	Off
Maximum number of resends	pbi_uResendCountMax	Word [Unsigned] /Bit String [16-bit]	0 to 15	Specify the number of resends to be performed if the data transfer is not completed within the monitoring time specified by "arrival monitoring time". • 0 to 15	5
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	0 to 16383	Specify the TCP resend timer value or a greater value for the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			0, 1 to 32767	Specify the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0: 10s • 1 to 32767: 1 to 32767s	0

■Public variables

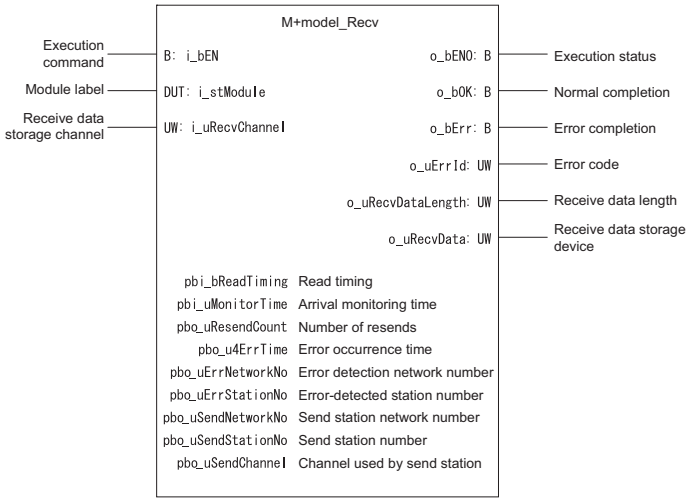
Name	Variable name	Data type	Description	Default value
Number of resends	pbo_uResendCount	Word [Unsigned] /Bit String [16-bit]	The number of resends performed (result) is stored.	0
Error occurrence time	pbo_u4ErrTime	Word [Unsigned] /Bit String [16-bit] (0..3)	Clock data at the time of error occurrence is stored. 1st word • Upper 8 bits: Month (01H to 12H) • Lower 8 bits: Lower 2 digits of year (00H to 99H) 2nd word • Upper 8 bits: Hour (00H to 23H) • Lower 8 bits: Day (01H to 31H) 3rd word • Upper 8 bits: Second (00H to 59H) • Lower 8 bits: Minute (00H to 59H) 4th word • Upper 8 bits: Upper 2 digits of year (00H to 99H) • Lower 8 bits: Day of week (00H (Sunday) to 06H (Saturday))	0
Error detection network number	pbo_uErrNetworkNo	Word [Unsigned] /Bit String [16-bit]	The network number of the station in which an error was detected is stored.	0
Error-detected station number	pbo_uErrStationNo	Word [Unsigned] /Bit String [16-bit]	The station number of the station in which an error was detected is stored. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 1 to 120: Local station, remote device station, intelligent device station, submaster station	0

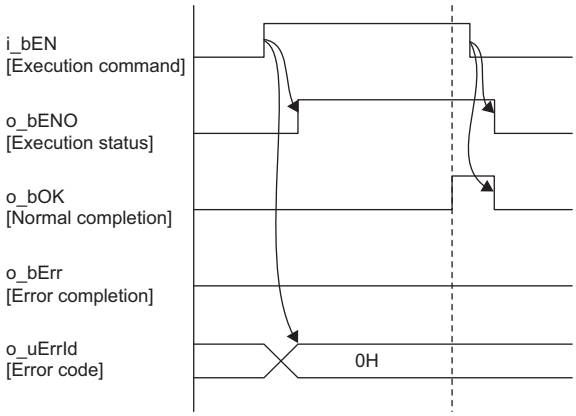
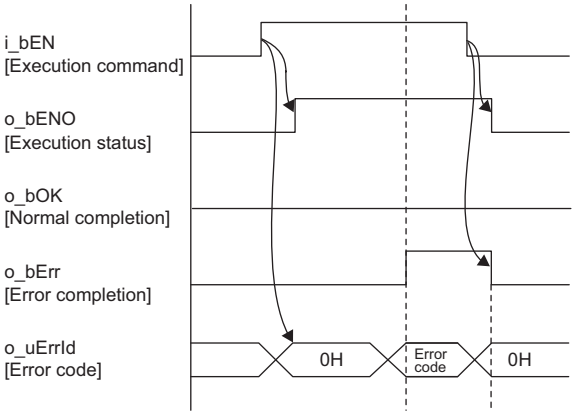
2.4 M+model_Recv

Name

M+model_Recv

FB details

Item	Description	
Overview	Reads the data received from the programmable controller of another station.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	94 steps	
Processing	When i_bEN (execution instruction) is turned on, this function receives a message from another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.RECV instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
C000H to CFFFH	📖 MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	📖 MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	📖 MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Receive data storage channel	i_uRecvChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel containing the data to be read. MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0
Receive data length	o_uRecvDataLength	Word [Unsigned] /Bit String [16-bit]	The number of received data is stored. • 1 to 1920 words	0
Receive data storage device	o_uRecvData	Word [Unsigned] /Bit String [16-bit]	Specify the start number of the device for storing received data.	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Read timing	pbi_bReadTiming	Bit	On	Specify the timing of executing data read processing. • On: Start reading in the first END processing after the module FB starts.	On
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	0 to 16383	Specify the TCP resend timer value or a greater value for the monitoring time until completion of processing (the setting is valid only when "read timing" is on). When the processing is not completed normally within the monitoring time, the processing is completed with an error. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			0, 1 to 32767	Specify the monitoring time until completion of processing (the setting is valid only when "read timing" is on). When the processing is not completed normally within the monitoring time, the processing is completed with an error. • 0: 10s • 1 to 32767: 1 to 32767s	0

■Public variables

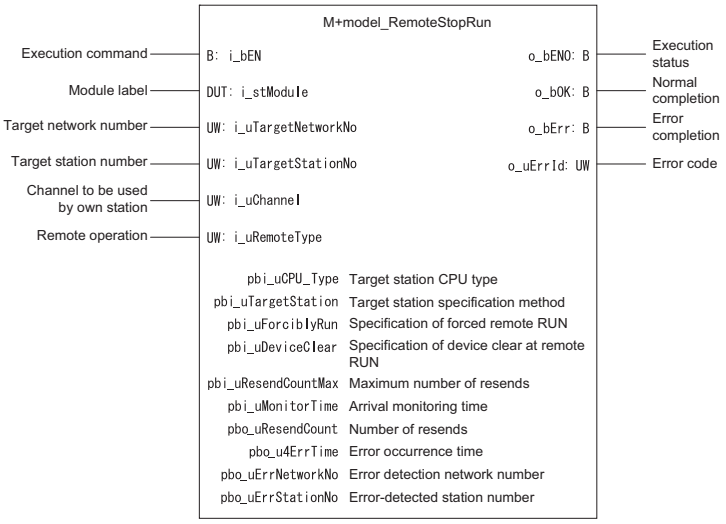
Name	Variable name	Data type	Description	Default value
Number of resends	pbo_uResendCount	Word [Unsigned] /Bit String [16-bit]	The number of resends performed (result) is stored.	0
Error occurrence time	pbo_u4ErrTime	Word [Unsigned] /Bit String [16-bit] (0..3)	Clock data at the time of error occurrence is stored. 1st word • Upper 8 bits: Month (01H to 12H) • Lower 8 bits: Lower 2 digits of year (00H to 99H) 2nd word • Upper 8 bits: Hour (00H to 23H) • Lower 8 bits: Day (01H to 31H) 3rd word • Upper 8 bits: Second (00H to 59H) • Lower 8 bits: Minute (00H to 59H) 4th word • Upper 8 bits: Upper 2 digits of year (00H to 99H) • Lower 8 bits: Day of week (00H (Sunday) to 06H (Saturday))	0
Error detection network number	pbo_uErrNetworkNo	Word [Unsigned] /Bit String [16-bit]	The network number of the station in which an error was detected is stored.	0
Error-detected station number	pbo_uErrStationNo	Word [Unsigned] /Bit String [16-bit]	The station number of the station in which an error was detected is stored. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 1 to 120: Local station, remote device station, intelligent device station, submaster station	0
Send station network number	pbo_uSendNetworkNo	Word [Unsigned] /Bit String [16-bit]	The network number of the send station is stored.	0
Send station number	pbo_uSendStationNo	Word [Unsigned] /Bit String [16-bit]	The station number of the send station is stored. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 1 to 120: Local station, remote device station, intelligent device station, submaster station	0
Channel used by send station	pbo_uSendChannel	Word [Unsigned] /Bit String [16-bit]	The channel number used by the send station is stored. 1 to 8	0

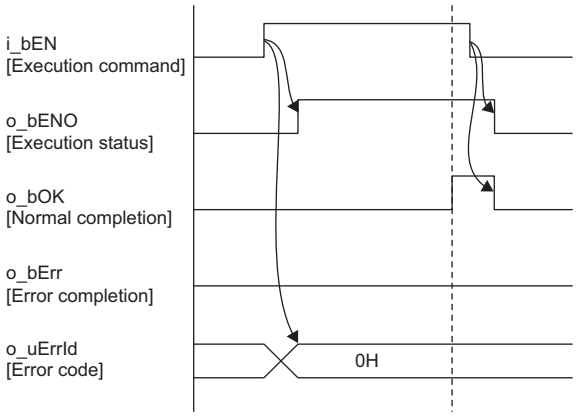
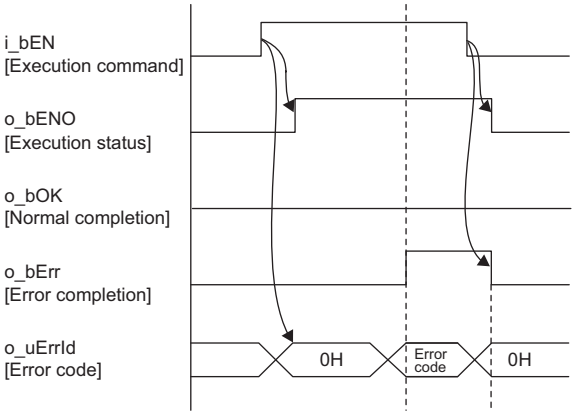
2.5 M+model_RemoteStopRun

Name

M+model_RemoteStopRun

FB details

Item	Description	
Overview	Performs remote STOP/RUN for other stations.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	122 steps	
Processing	When i_bEN (execution instruction) is turned on, this function receives a message from another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.REQ instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
4000H to 4FFFH	📖 MELSEC iQ-R CPU Module User's Manual (Application)
C000H to CFFFH	📖 MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	📖 MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	📖 MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Target network number	i_uTargetNetworkNo	Word [Unsigned] /Bit String [16-bit]	1 to 239	Specify the network number of the target station.
Target station number	i_uTargetStationNo	Word [Unsigned] /Bit String [16-bit]	—	Specify the station number of the target station or the transient transmission group number. ■When "target station specification method" is set to 0 to specify a station number Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 126: Master operating station • 1 to 120: Local station, remote device station, intelligent device station, submaster station ■When "target station specification method" is set to 1 to specify a group Specify the transient transmission group number. • 1 to 32 ■When "target station specification method" is set to 2 to specify all stations The setting is ignored.
Own station channel	i_uChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel to be used by own station. MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)
Remote operation	i_uRemoteType	Word [Unsigned] /Bit String [16-bit]	1, 2	Specify remote RUN or STOP. • 1: Remote RUN • 2: Remote STOP

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Target station CPU type	pbi_uCPU_Type	Word [Unsigned] /Bit String [16-bit]	0000H, 030DH to 03D3H, 03E0H to 03E3H, 03FFH	Specify the CPU type of the target station. • 0000H: To CPU of target station (control CPU) • 03D0H: To control system CPU • 03D1H: To standby CPU • 03D2H: To system A CPU • 03D3H: To system B CPU • 03E0H: To multiple CPU No. 1 • 03E1H: To multiple CPU No. 2 • 03E2H: To multiple CPU No. 3 • 03E3H: To multiple CPU No. 4 • 03FFH: To CPU of target station (control CPU)	0
Target station specification method	pbi_uTargetStation	Word [Unsigned] /Bit String [16-bit]	0 to 2	Specify the specification method of a target station. • 0: Station number specification → Station with the station number specified in "Target station number" • 1: Group specification → All stations of the transient transmission group number specified in "Target station number" (For the CC-Link IE Field Network, the value 1 cannot be specified.) • 2: All stations → All stations of the network number specified in "Target network number" (simultaneous broadcast except own station)	0
Specification of forced remote RUN	pbi_uForciblyRun	Word [Unsigned] /Bit String [16-bit]	1, 2	■"Remote operation": 1 (remote RUN) Specify whether to forcibly execute remote RUN. The forcible execution function enables forcible execution of remote RUN from another station when a station which executed remote STOP can no longer execute remote RUN. • 1: Not forcibly executed • 2: Forcibly executed ■"Remote operation": 2 (remote STOP) Any setting here is ignored and the following setting is always used. • 2: Forcibly executed	1
Specification of device clear at remote RUN	pbi_uDeviceClear	Word [Unsigned] /Bit String [16-bit]	0 to 2	■"Remote operation": 1 (remote RUN) Specify how to handle the CPU module device memory after remote RUN is executed. • 0: Do not clear. • 1: Clear (except the latch range). • 2: Clear (including the latch range). ■"Remote operation": 2 (remote STOP) Any setting here is ignored.	0
Maximum number of resends	pbi_uResendCountMax	Word [Unsigned] /Bit String [16-bit]	0 to 15	Specify the number of resends to be performed if the data transfer is not completed within the monitoring time specified by "arrival monitoring time".	5
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	0 to 16383	Specify the TCP resend timer value or a greater value for the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			0, 1 to 32767	Specify the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0: 10s • 1 to 32767: 1 to 32767s	0

■Public variables

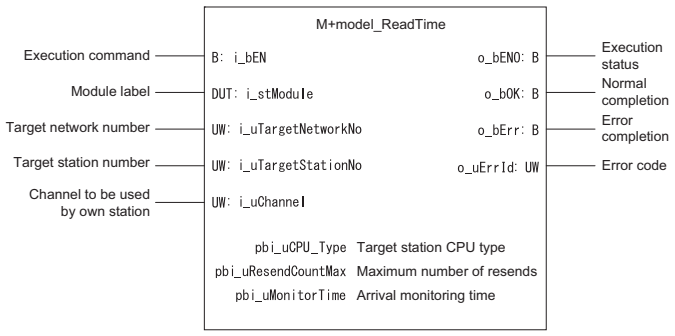
Name	Variable name	Data type	Description	Default value
Number of resends	pbo_uResendCount	Word [Unsigned] /Bit String [16-bit]	The number of resends performed (result) is stored.	0
Error occurrence time	pbo_u4ErrTime	Word [Unsigned] /Bit String [16-bit] (0..3)	Clock data at the time of error occurrence is stored. 1st word • Upper 8 bits: Month (01H to 12H) • Lower 8 bits: Lower 2 digits of year (00H to 99H) 2nd word • Upper 8 bits: Hour (00H to 23H) • Lower 8 bits: Day (01H to 31H) 3rd word • Upper 8 bits: Second (00H to 59H) • Lower 8 bits: Minute (00H to 59H) 4th word • Upper 8 bits: Upper 2 digits of year (00H to 99H) • Lower 8 bits: Day of week (00H (Sunday) to 06H (Saturday))	0
Error detection network number	pbo_uErrNetworkNo	Word [Unsigned] /Bit String [16-bit]	The network number of the station in which an error was detected is stored.	0
Error-detected station number	pbo_uErrStationNo	Word [Unsigned] /Bit String [16-bit]	The station number of the station in which an error was detected is stored. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 1 to 120: Local station, remote device station, intelligent device station, submaster station	0

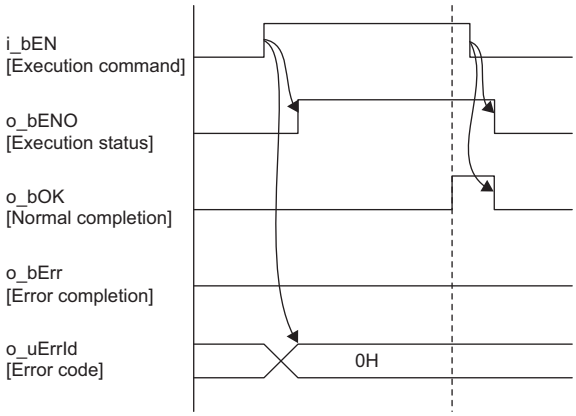
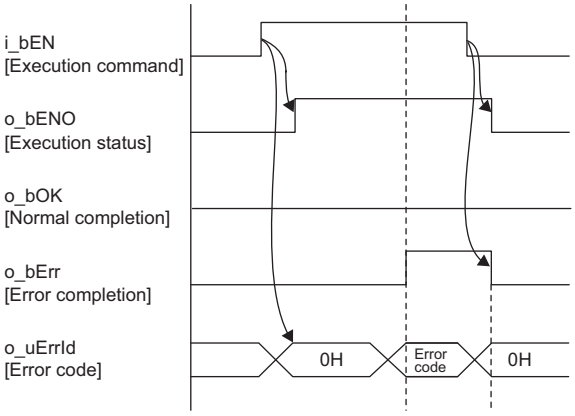
2.6 M+model_ReadTime

Name

M+model_ReadTime

FB details

Item	Description	
Overview	Reads clock data from the programmable controller of another station to adjust the time of the programmable controller CPU of own station.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	133 steps	
Processing	When i_bEN (execution instruction) is turned on, this function reads clock data from another station to adjust the time of the programmable controller CPU of own station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.REQ instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
4000H to 4FFFH	MELSEC iQ-R CPU Module User's Manual (Application)
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Target network number	i_uTargetNetworkNo	Word [Unsigned] /Bit String [16-bit]	1 to 239	Specify the network number of the target station.
Target station number	i_uTargetStationNo	Word [Unsigned] /Bit String [16-bit]	—	Specifies the station number of the target station. Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 126: Master operating station • 1 to 120: Local station, remote device station, intelligent device station, submaster station
Own station channel	i_uChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel to be used by own station. 📖 MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Operation parameters

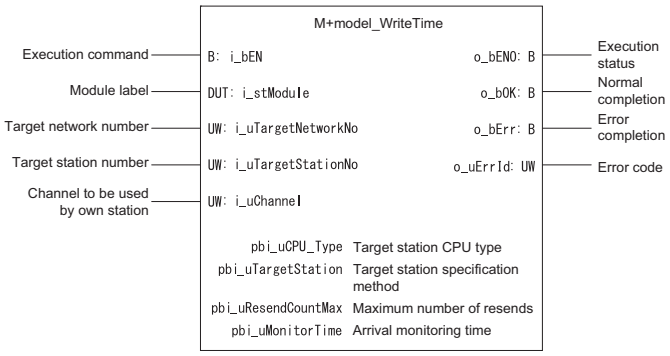
Name	Variable name	Data type	Range	Description	Default value
Target station CPU type	pbi_uCPU_Type	Word [Unsigned] /Bit String [16-bit]	0000H, 030DH to 03D3H, 03E0H to 03E3H, 03FFH	Specify the CPU type of the target station. • 0000H: To CPU of target station (control CPU) • 03D0H: To control system CPU • 03D1H: To standby CPU • 03D2H: To system A CPU • 03D3H: To system B CPU • 03E0H: To multiple CPU No. 1 • 03E1H: To multiple CPU No. 2 • 03E2H: To multiple CPU No. 3 • 03E3H: To multiple CPU No. 4 • 03FFH: To CPU of target station (control CPU)	0
Maximum number of resends	pbi_uResendCountMax	Word [Unsigned] /Bit String [16-bit]	0 to 15	Specify the number of resends to be performed if the data transfer is not completed within the monitoring time specified by "arrival monitoring time".	5
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	0 to 16383	Specify the TCP resend timer value or a greater value for the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			0, 1 to 32767	Specify the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0: 10s • 1 to 32767: 1 to 32767s	0

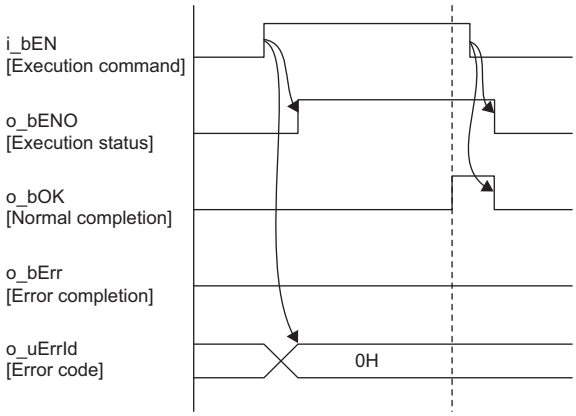
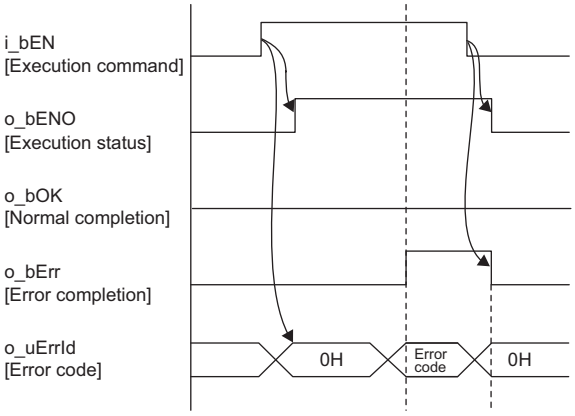
2.7 M+model_WriteTime

Name

M+model_WriteTime

FB details

Item	Description	
Overview	Writes the clock data of the programmable controller of own station to another station to adjust the time of the programmable controller CPU of another station.	
Symbol		
Available device	Target module	• RJ71GF11-T2 • RJ71GP21-SX • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	133 steps	
Processing	When i_bEN (execution instruction) is turned on, this function writes clock data to another station to adjust the time of the programmable controller CPU of the station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.REQ instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
4000H to 4FFFH	MELSEC iQ-R CPU Module User's Manual (Application)
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)
D000H to DFFFH	MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Target network number	i_uTargetNetworkNo	Word [Unsigned] /Bit String [16-bit]	1 to 239	Specify the network number of the target station.
Target station number	i_uTargetStationNo	Word [Unsigned] /Bit String [16-bit]	—	Specify the station number of the target station or the transient transmission group number. ■When "target station specification method" is set to 0 to specify a station number Station number of Ethernet or CC-Link IE Controller Network • 1 to 120 Station number of CC-Link IE Field Network • 125: Master station • 126: Master operating station • 1 to 120: Local station, remote device station, intelligent device station, submaster station ■When "target station specification method" is set to 1 to specify a group Specify the transient transmission group number. • 1 to 32 ■When "target station specification method" is set to 2 to specify all stations The setting is ignored.
Own station channel	i_uChannel	Word [Unsigned] /Bit String [16-bit]	—	Specify the channel to be used by own station. 📖 MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Target station CPU type	pbi_uCPU_Type	Word [Unsigned] /Bit String [16-bit]	0000H, 030DH to 03D3H, 03E0H to 03E3H, 03FFH	Specify the CPU type of the target station. • 0000H: To CPU of target station (control CPU) • 03D0H: To control system CPU • 03D1H: To standby CPU • 03D2H: To system A CPU • 03D3H: To system B CPU • 03E0H: To multiple CPU No. 1 • 03E1H: To multiple CPU No. 2 • 03E2H: To multiple CPU No. 3 • 03E3H: To multiple CPU No. 4 • 03FFH: To CPU of target station (control CPU)	0
Target station specification method	pbi_uTargetStation	Word [Unsigned] /Bit String [16-bit]	0 to 2	Specify the specification method of a target station. • 0: Station number specification → Station with the station number specified in "Target station number" • 1: Group specification → All stations of the transient transmission group number specified in "Target station number" (For the CC-Link IE Field Network, the value 1 cannot be specified.) • 2: All stations → All stations of the network number specified in "Target network number" (simultaneous broadcast except own station)	0
Maximum number of resends	pbi_uResendCountMax	Word [Unsigned] /Bit String [16-bit]	0 to 15	Specify the number of resends to be performed if the data transfer is not completed within the monitoring time specified by "arrival monitoring time".	5
Arrival monitoring time (Ethernet)	pbi_uMonitorTime	Word [Unsigned] /Bit String [16-bit]	0 to 16383	Specify the TCP resend timer value or a greater value for the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0 to TCP resend timer value: Time represented by "TCP resend timer value" • (TCP resend timer value + 1) to 16383: ("TCP resend timer value" + 1) seconds to 16383s	0
Arrival monitoring time (CC-Link IE Controller Network, CC-Link IE Field Network)			0, 1 to 32767	Specify the monitoring time until completion of processing. If the processing is not completed within the monitoring time, data is resent until the value specified in "maximum number of resends" is reached. • 0: 10s • 1 to 32767: 1 to 32767s	0

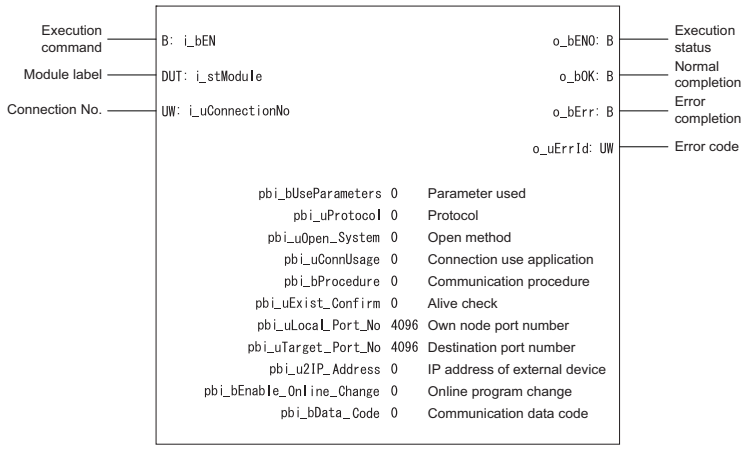
3 ETHERNET-EQUIPPED MODULE FB

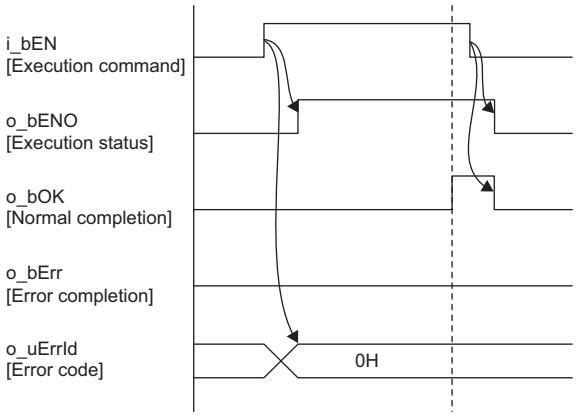
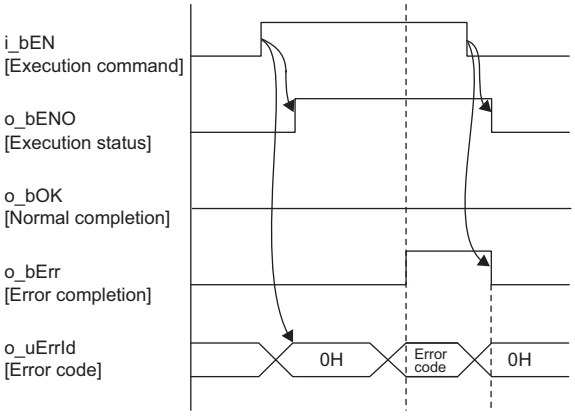
3.1 M+model_ConnectionOpen

Name

M+model_ConnectionOpen

FB details

Item	Description	
Overview	Opens (establishes) a connection for data communication with an external device.	
Symbol		
Available device	Target module	• RCPU (CPU part for the RnENCPU) • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	171 steps	
Processing	When i_bEN (start condition) is turned on, this function opens (establishes) a connection for data communication with an external device.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This module FB cannot be executed for the connection that is being used by another module FB or dedicated instruction. An error occurs if this module FB is executed for the connection in use. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0. • If this FB is executed for the connection for which parameters are already set by "External Device Connection Configuration Setting", make settings so that the parameters specified by this FB are overwritten. • When open processing is performed according to the content of the operation parameter with pbi_bUseParameters set to ON, the available communication means are the fixed-buffer communications and socket communications only.

Error code

Error code	Reference
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, RCPU)
Connection No.	i_uConnectionNo	Word [Unsigned] /Bit String [16-bit]	• RCPU (CPU part for the RnENCPU): 1 to 16 • RJ71EN71: 1 to 128 • RnENCPU (network part): 1 to 64	Specify the number of the connection to be opened.

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Operation parameters

Name	Variable name	Data type	Range	Description	Default value
Parameter used	pbi_bUseParameters	Bit	On or off	Specify whether to use the parameter values set by the engineering tool or the following operation parameter values when processing for opening a connection. • Off: Performs open processing according to the external device configuration setting made by the engineering tool. (The following operation parameters need not be set. Any settings are ignored if made.) • On: Performs open processing according to the following operation parameters.	Off
Protocol	pbi_uProtocol	Word [Unsigned] /Bit String [16-bit]	0, 1	Select the protocol to be used for the connection to be opened. • 0: TCP/IP • 1: UDP/IP	0
Open method	pbi_uOpen_System	Word [Unsigned] /Bit String [16-bit]	0 to 2	Select the connection open method. • 0: Active open or UDP/IP • 1: Unpassive open • 2: Fullpassive open	0
Connection use application	pbi_uConnUsage	Word [Unsigned] /Bit String [16-bit]	0 to 2	Specify the purpose of the connection: sending, receiving, or paring open with regard to the external device. • 0: Send • 1: Receive • 2: Pairing open (The value 2 can be set for the connection No. 1 to No. 7 and No. 9 to No. 15.) Valid only when connection No. 1 to 16 is used with the RJ71EN71 or the RnENCPU (network part). For the RCPU (CPU part for the RnENCPU), the setting is ignored because it does not support communications using a fixed buffer.	0

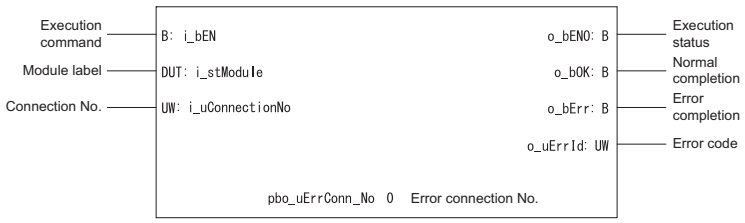
Name	Variable name	Data type	Range	Description	Default value
Communication procedure	pbi_bProcedure	Bit	On or off	Specify whether to use a communication procedure. • Off: Procedure not used • On: Procedure used Valid only when connection No. 1 to 16 is used with the RJ71EN71 or the RnENCPU (network part). For the RCPU (CPU part for the RnENCPU), the setting is ignored because it does not support communications using a fixed buffer.	Off
Alive check	pbi_uExist_Confirm	Word [Unsigned] /Bit String [16-bit]	0 to 2	Specify whether to enable the arrive check function (with the use mode). • 0: Disable the alive check. • 1: Enable KeepAlive (in TCP/IP mode only). • 2: Enable the alive check with UDP (in TCP/IP mode only) Valid only when connection No. 1 to 16 is used with the RJ71EN71 or the RnENCPU (network part). For the RCPU (CPU part for the RnENCPU), the setting is ignored because it does not support communications using a fixed buffer.	0
Own node port number	pbi_uLocal_Port_No	Word [Unsigned] /Bit String [16-bit]	1 to 4999, 5010 to 65534	Specify the port number of the own node. Port numbers 1 to 1023 are generally reserved port numbers (WELL KNOWN PORT NUMBERS), and therefore port numbers 1024 to 4999 and 5010 to 65534 should be used.	4096
Destination port number	pbi_uTarget_Port_No	Word [Unsigned] /Bit String [16-bit]	1 to 65534, 65535	Specify the destination port number. With the connection that is assigned port No. 65535, data is received through all port number. Data cannot be sent with the connection which is assigned port No. 65535 and therefore a port number from 1 to 65534 should be specified to send data.	4096
IP address of external device	pbi_u2IP_Address	Word [Unsigned] /Bit String [16-bit] (0..1)	0.0.0.1 to 255.255.255.255	Specify the IP address of an external device. Specify 255.255.255.255 when performing simultaneous broadcast. b15 b8 b7 b0 1st word: 3rd octet | 4th octet 2nd word: 1st octet | 2nd octet	192.168.1.1
Online program change	pbi_bEnable_Online_Change	Bit	On or off	Specify whether to enable of disable the online program change. • Off: Disable • On: Enable Valid only for the RJ71EN71 or the RnENCPU (network part). For the RCPU (CPU part for the RnENCPU), the setting is ignored. Set this item in the module parameters of the CPU module.	Off
Communication data code	pbi_bData_Code	Bit	On or off	Set the communication code used. • Off: Binary code • On: ASCII code Valid only for the RJ71EN71 or the RnENCPU (network part). For the RCPU (CPU part for the RnENCPU), the setting is ignored. Set this item in the module parameters of the CPU module.	Off

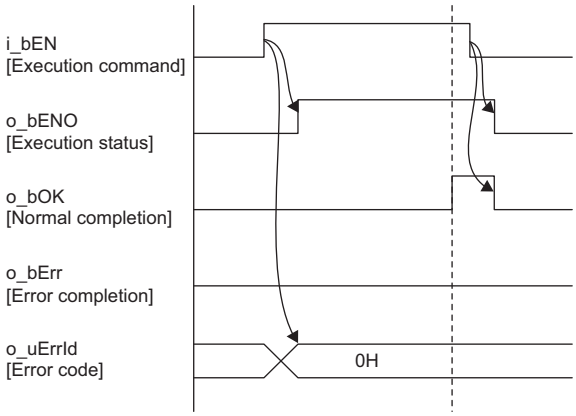
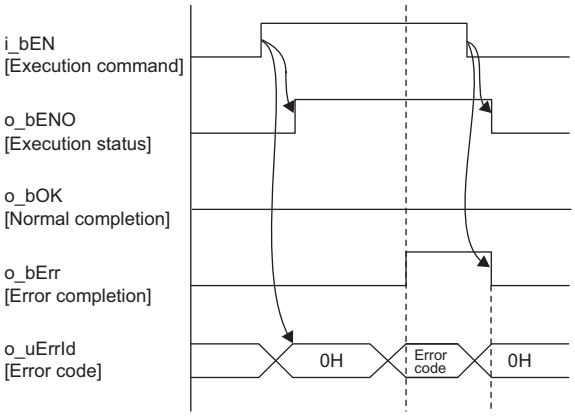
3.2 M+model_ConnectionClose

Name

M+model_ConnectionClose

FB details

Item	Description	
Overview	Closes (disconnects) a connection for data communication with an external device.	
Symbol		
Available device	Target module	• RCPU (CPU part for the RnENCPU) • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	86 steps	
Processing	• When i_bEN (execution command) is turned on, this function closes (disconnects) a connection for data communication with an external device. • The function closes all connections if FFFF is specified for the connection number in the input argument. • If the function fails to close even one connection among those specified to be closed, it is completed with an error.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This module FB cannot be executed for the connection that is being used by another module FB or dedicated instruction. An error occurs if this module FB is executed for the connection in use. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, RCPU)
Connection No.	i_uConnectionNo	Word [Unsigned] /Bit String [16-bit]	• RCPU (CPU part for the RnENCPU): 1 to 16 • RJ71EN71: 1 to 128 • RnENCPU (network part): 1 to 64	Specify the number of the connection to be opened. This function closes all connections if FFFF is specified.

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

■Public variables

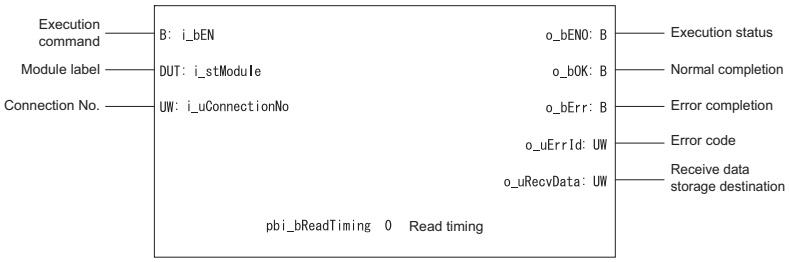
Name	Variable name	Data type	Description	Default value
Error connection No.	pbo_uErrConn_No	Word [Unsigned] /Bit String [16-bit]	The number of the connection for which close processing was completed with an error is stored. If FFFF is specified in "Connection No.", the number of the connection for which close processing was first completed with an error is stored.	0

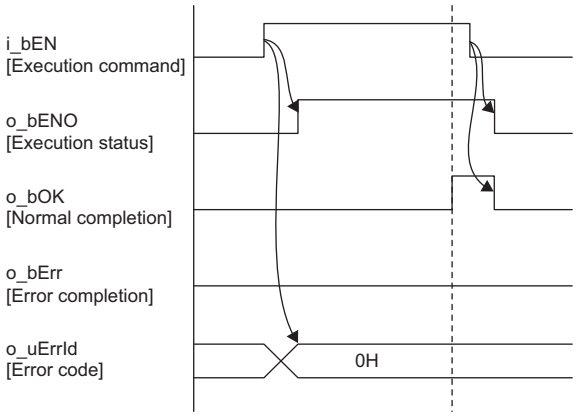
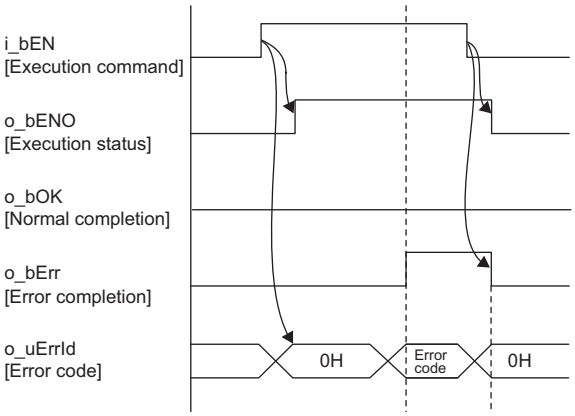
3.3 M+model_Recv_Socket

Name

M+model_Recv_Socket

FB details

Item	Description	
Overview	Reads the data received by connection communication.	
Symbol		
Available device	Target module	• RCPU (CPU part for the RnENCPU) • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	109 steps	
Processing	When i_bEN (execution instruction) is turned on, this function reads the data received to the connection specified by the input argument.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This module FB cannot be executed for the connection that is being used by another module FB or dedicated instruction. An error occurs if this module FB is executed for the connection in use. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0. ■For the RCPU (CPU part for the RnENCPU) • The execution command of this FB can be executed at any timing. However, when executing it after receiving data, SD1506 (Socket communications reception status signal) or corresponding module label must be added to conditions of the command. • When the module FB is executed by specifying ON (start reading in the first END processing after the FB starts) in operation parameter "read timing", the module FB extends the scan time to complete data read processing within one END processing. ■For the RJ71EN71 or the RnENCPU (network part) • The execution command of this FB can be executed at any timing. However, when executing it after receiving data, 'Socket/fixed buffer reception status signal' (Un\G1900016 to UnG1900023) must be added to conditions of the command. • When the module FB is executed by specifying OFF (Start reading soon after the module FB starts) in operation parameter "read timing", processing completes in a single scan.

Error code

Error code	Reference
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, RCPU)
Connection No.	i_uConnectionNo	Word [Unsigned] /Bit String [16-bit]	• RCPU (CPU part for the RnENCPU): 1 to 16 • RJ71EN71: 1 to 128 • RnENCPU (network part): 1 to 64	Specify the number of the connection to be opened. This function closes all connections if FFFF is specified.

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0
Receive data storage destination	o_uRecvData	Word [Unsigned] /Bit String [16-bit]	Specify the receive data length and the start number of the device for storing received data. The data that has been read is stored sequentially in ascending order of addresses as shown below. ▪ When the data unit is word 1st word: Receive data length (unit: word) 2nd word: Receive data 1 ⋮ nth word: Receive data m ▪ When the data unit is byte b15 to b18 / b7 to b0 1st word: Receive data length (unit: byte) 2nd word: Receive data 2 / Receive data 1 ⋮ nth word: Receive data m / Receive data m-1 • The data format, unit, and data length range of receive data vary depending on the module type and connection number. • Receive data is stored in the word area in order from the first half (b0 to b7) to the second half (b8 to b15).	0

■Operation parameters

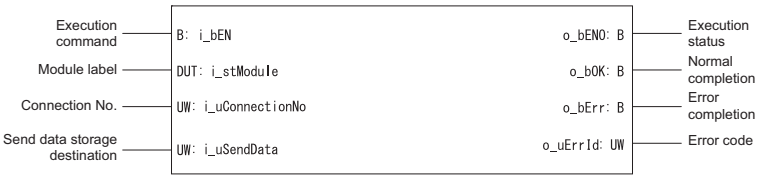
Name	Variable name	Data type	Range	Description	Default value
Read timing	pbi_bReadTiming	Bit	On or off	Specify the timing of executing data read processing. • Off: Start reading soon after the module FB starts. • On: Start reading in the first END processing after the module FB starts.	Off

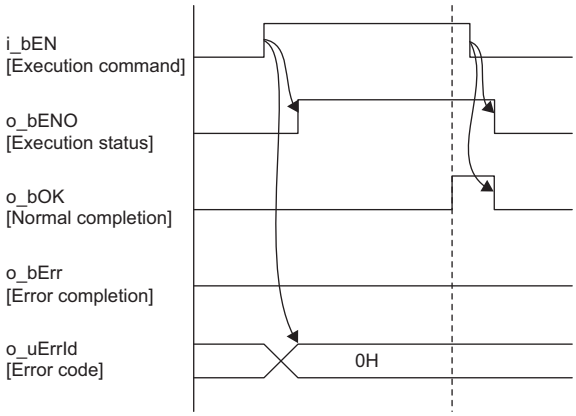
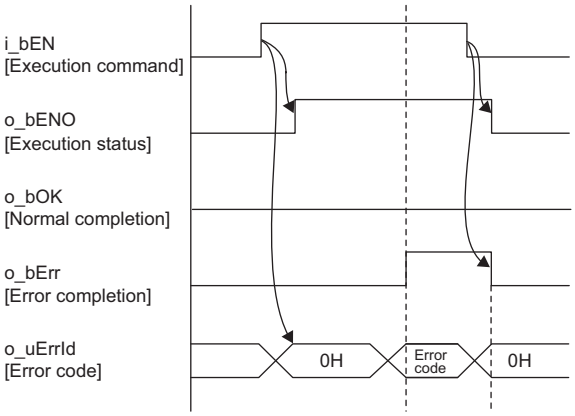
3.4 M+model_Send_Socket

Name

M+model_Send_Socket

FB details

Item	Description	
Overview	Sends the data to the external device of the specified connection.	
Symbol		
Available device	Target module	• RCPU (CPU part for the RnENCPU) • RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	60 steps	
Processing	When i_bEN (execution instruction) is turned on, this function sends the data to the external device of the connection specified by the input argument.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This module FB cannot be executed for the connection that is being used by another module FB or dedicated instruction. An error occurs if this module FB is executed for the connection in use. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
C000H to CFFFH	MELSEC iQ-R Ethernet User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, RCPU)
Connection No.	i_uConnectionNo	Word [Unsigned] /Bit String [16-bit]	• RCPU (CPU part for the RnENCPU): 1 to 16 • RJ71EN71: 1 to 128 • RnENCPU (network part): 1 to 64	Specify the number of the connection to be opened. This function closes all connections if FFFF is specified.
Send data storage destination	i_SendData	Word [Unsigned] /Bit String [16-bit]	—	Specify the send data length and the start number of the device containing the send data.*1 ▪ When the data unit is word 1st word: Send data length (unit: word) 2nd word: Send data 1 ⋮ nth word: Send data n ▪ When the data unit is byte b15 to b18 / b7 to b0 1st word: Send data length (unit: byte) 2nd word: Send data 2 / Send data 1 ⋮ nth word: Send data 2n / Send data 2n-1 • The data format and data length range of send data vary depending on the module type and the setting of the connection used. • Data is sent in the word area in order from the first half (b0 to b7) to the second half (b8 to b15).

*1 The data unit and the range of send data length differ depending on the communication method of parameters and communication data code setting as follows.

Parameter setting		Data unit	Send data length
Communication method	Communication data code		
Communications using a fixed buffer (procedure used)	Binary	Word	1 to 5113
	ASCII	Word	1 to 2556
Communications using a fixed buffer (procedure not used)	Binary/ASCII	Byte	1 to 10238
Socket communications	Binary/ASCII	Byte	1 to 10238

■Output arguments

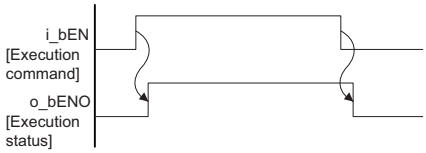
Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

3.5 M+model_Refresh_Data

Name

M+model_Refresh_Data

FB details

Item	Description	
Overview	Transfers data from the buffer memory in the Ethernet module to the module label.	
Symbol		
Available device	Target module	• RJ71EN71 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	33 steps	
Processing	When i_bEN (execution instruction) is turned on, this function transfers the following buffer memory data of the RJ71EN71 or the RnENCPU (network part) to the module label. • Open completion signal (addresses 1900000 to 1900007) • Open request signal (addresses 1900008 to 1900015) • Socket/fixed buffer reception status signal (addresses 1900016 to 1900023)	
FB compilation method	Macro type	
FB operation	ON-time execution type	
Timing chart of I/O signals		
Precautions	When another FB is used, write the program so that scan is executed every time at the beginning of the program.	

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, RCPU)

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off

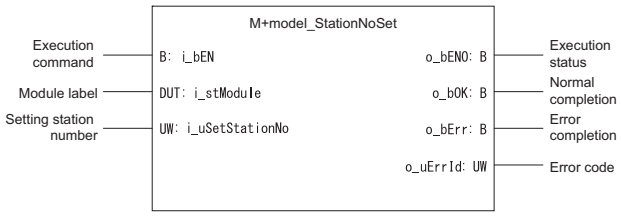
4 CC-LINK IE CONTROLLER NETWORK MODULE FB

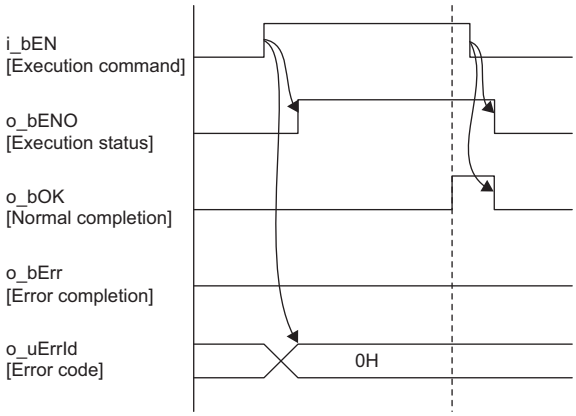
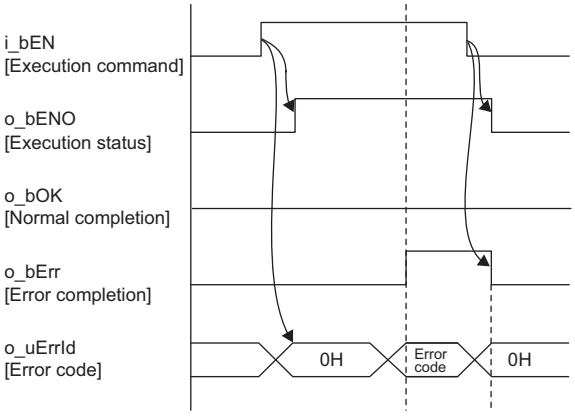
4.1 M+model_StationNoSet

Name

M+model_StationNoSet

FB details

Item	Description	
Overview	Sets the station number of the own station (normal station/local station).	
Symbol		
Available device	Target module	• RJ71EN71 • RJ71GP21-SX • RJ71GF11-T2 • RnENCPU (network part)
	CPU module	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	44 steps	
Processing	When i_bEN (execution instruction) is turned on, this function sets the station number of the own station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.UNI instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Reference
D000H to DFFFH	MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)
E000H to EFFFH	MELSEC iQ-R CC-Link IE Controller Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example: EN71_EE_1, EN71_EF_1, EN71_F_1, GF11_1, GP21_1)
Setting station number	i_uSetStationNo	Word [Unsigned] /Bit String [16-bit]	1 to 120	Specifies the station number to be set.

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [Unsigned] /Bit String [16-bit]	An error code is stored at error completion.	0

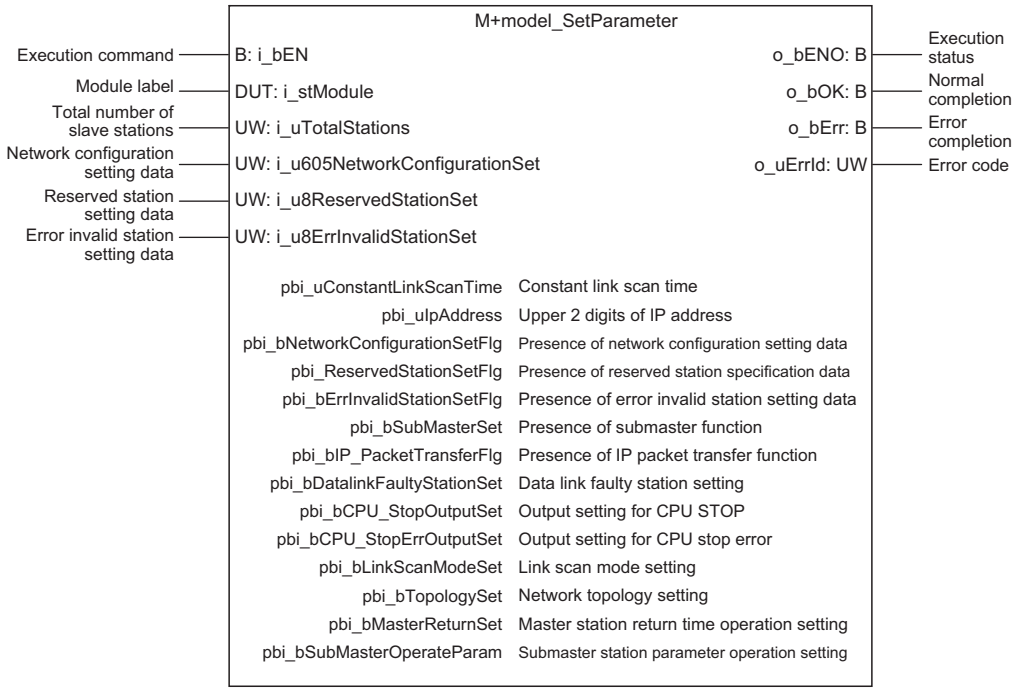
5 CC-LINK IE FIELD NETWORK MODULE FB

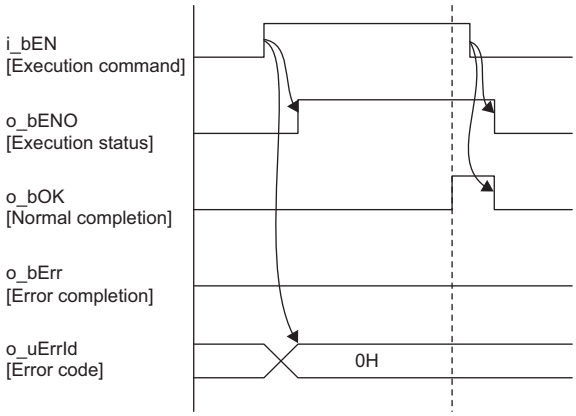
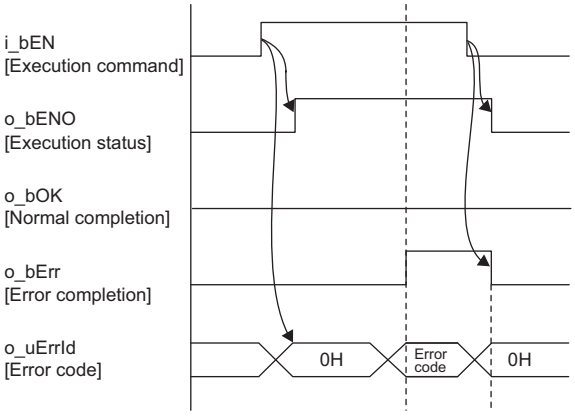
5.1 M+model_SetParameter

Name

M+model_SetParameter

FB details

Item	Description
Overview	Sets parameters for a module.
Symbol	
Available device	Target module: • RJ71EN71 • RJ71GF11-T2 • RnENCPU (network part)
	CPU module: RCPU
	Engineering tool: GX Works3
Language	Ladder diagram
Number of basic steps	79 steps
Processing	When i_bEN (execution command) is turned on, this function sets parameters for a module.
FB compilation method	Macro type
FB operation	Pulse type (multiple-scan execution type)
Input condition for FB_EN	None

Item	Description
Timing chart of I/O signals	• For normal completion  • For error completion (same as in the case of a module error) 
Precautions	• This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.CCPASET instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

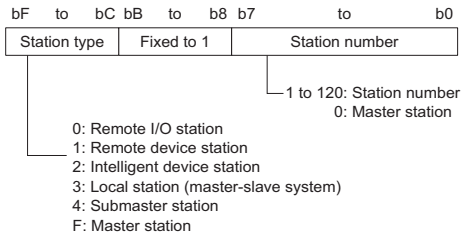
Error code	Reference
D000H to DFFFH	📖 MELSEC iQ-R CC-Link IE Field Network User's Manual (Application)

Labels

■Input arguments

Name	Variable name	Data type	Range	Description
Execution command	i_bEN	Bit	—	On: Start FB. Off: Do not start FB.
Module label	i_stModule	Structures	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules.
Total number of slave stations	i_uTotalStations	Word [Unsigned] /Bit String [16-bit]	1 to 120, 121	Specify the total number of the slave stations connected. • 1 to 120: Applicable when "Presence of submaster function" is OFF (disabled) • 1 to 121: Applicable when "Presence of submaster function" is ON (enabled)
Network configuration setting data	i_u605NetworkConfigurationSet	Word [Unsigned] /Bit String [16-bit] (0..604)	—	Specify the start address of the storage location of network configuration setting data. When specifying the address using a label, use an array as the data type. Set data for the number of stations specified in "Total number of slave stations". (☞ Page 56 Network configuration setting data)
Reserved station setting data	i_u8ReservedStationSet	Word [Unsigned] /Bit String [16-bit] (0..7)	—	Specify the start address of the storage location of the reserved-station setting data. When specifying the address using a label, use an array as the data type. Setting: Specify an error invalid station. (No default value) • 0: Not specified • 1: Specified bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 1st word: 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 2nd word: 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 3rd word: 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 4th word: 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 5th word: 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 6th word: 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 7th word: 112 111 110 109 108 107 106 105 104 103 102 101 100 99 98 97 8th word: Fixed to 0 120 119 118 117 116 115 114 113 Numbers 1 to 120 in the table indicate station numbers.
Error invalid station setting data	i_u8ErrInvalidStationSet	Word [Unsigned] /Bit String [16-bit] (0..7)	—	Specify the start address of the storage location of the error invalid station setting. When specifying the address using a label, use an array as the data type. Setting: Specify a reserved station. • 0: Not specified • 1: Specified If both an error invalid station and a reserved station are specified for the same station, the reserved station will take priority. bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 1st word: 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 2nd word: 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 3rd word: 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 4th word: 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 5th word: 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 6th word: 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 7th word: 112 111 110 109 108 107 106 105 104 103 102 101 100 99 98 97 8th word: Fixed to 0 120 119 118 117 116 115 114 113 Numbers 1 to 120 in the table indicate station numbers.

■Network configuration setting data

Element number	Item name		Range	Description
0	For 1st module	Slave station setting information	—	Specify the station type and number. 
1		RX/RY offset	0 to 16368	Specify the offset value from the head of RX/RY in increments of 16 points.
2		Number of RX/RY points	—	Specify the the number of RX/RY points in increments of 16 points. • Master station, local station: 0 to 2048 • Intelligent device station: 0 to 2048 • Remote I/O station: 0 to 64 • Remote device station: 0 to 128
3		RWr/RWw offset	0 to 8188	Specify the offset value from the head of RWr/RWw/LW in increments of 4 points.
4		Number of RWr/RWw points	—	Specify the the number of RWr/RWw points in increments of 16 points. • Master station, local station: 0 to 1024 • Intelligent device station: 0 to 1024 • Remote device station: 0 to 64
5 to 599	Setting for the 2nd to 120th module			
600	For 121st module	Slave station setting information	Same as for the 1st module	
601		RX/RY offset		
602		Number of RX/RY points		
603		RWr/RWw offset		
604		Number of RWr/RWw points		

If the specified total number of slave stations does not match the individual station setting data, the total number of individual stations specified in the total number of slave stations take precedence and any individual station information exceeding the total number of slave stations is ignored. Note that 1 is added to the total number of slave stations when the submaster function is "enabled".

Example) When the station information of ten stations is set even if the total number of slave stations is two.

→ The first and second information is enabled and parameters which are set the third to tenth station information are ignored.

■Output arguments

Name	Variable name	Data type	Description	Default value
Execution status	o_bENO	Bit	The execution status of the module FB is output. On: In execution Off: Not in execution	Off
Normal completion	o_bOK	Bit	The module FB has been processed normally when this argument is on.	Off
Error completion	o_bErr	Bit	The module FB has been processed abnormally when this argument is on.	Off
Error code	o_uErrId	Word [unsigned]	An error code is stored at error completion.	0

■Operation parameters

○: Can be set, ×: Cannot be set

Name	Variable name	Data type	Range	Description	Default value	Master station	Submaster station	Local station
Constant link scan time	pbi_uConstantLinkScanTime	Word [Unsigned]/ Bit String [16-bit]	0, 1 to 200	Specify the constant link scan time. • 0: Not set (default value) • 1 to 200: 1ms to 200ms	0	○	○*1	×
Upper 2 digits of IP address	pbi_uIpAddress	Word [Unsigned]/ Bit String [16-bit]	—	Set the IP address when the IP packet transfer function is used. Only the upper two digits (1st and 2nd octets) of a 4-digit IP address can be set. The 3rd and 4th digits are each determined automatically from the network number and station number (master station is 125).	0	○	○*1	×
Presence of network configuration setting data	pbi_bNetworkConfigurationSetFlg	Bit	Off, on	Specify whether to enable/disable the network configuration setting data. • Off: Disable • On: Enable	Off	○	○*1	×
Presence of reserved station specification data	pbi_bReservedStationSetFlg	Bit	Off, on	Specify whether to enable/disable the reserved station specification data. • Off: Disable • On: Enable	Off	○	○*1	×
Presence of error invalid station setting data	pbi_bErrInvalidStationSetFlg	Bit	Off, on	Specify whether to enable/disable the error invalid station setting data. • Off: Disable • On: Enable	Off	○	○*1	×
Presence of submaster function	pbi_bSubMasterSet	Bit	Off, on	Specify whether to use the submaster function • Off: Do not use. • On: Use.	Off	○	×	×
Presence of IP packet transfer function	pbi_bIP_PacketTransferFlg	Bit	Off, on	Specify whether to enable/disable the IP address. (Specify whether to enable/disable the IP packet transfer function.) • Off: Disable • On: Enable	Off	○	○*1	×
Data link faulty station setting	pbi_bDatalinkFaultyStationSet	Bit	Off, on	Specify whether to hold or clear the input data from a data link faulty station. • Off: Clear • On: Hold	Off	○	○	○
Output setting for CPU STOP	pbi_bCPU_StopOutputSet	Bit	Off, on	Specify whether to hold or clear the output data when the operating status of a CPU module is STOP. • Off: Hold • On: Clear	Off	○	○	○
Output setting for CPU stop error	pbi_bCPU_StopErrOutputSet	Bit	Off, on	Specify whether to hold or clear the output data when the a CPU module caused a stop error. • Off: Clear • On: Hold	Off	○	○	○
Link scan mode setting	pbi_bLinkScanModeSet	Bit	Off, on	Specify whether to perform a link scan and sequence scan synchronously or asynchronously. (Valid when "Constant link scan time" is 0 (no setting)) • Off: Asynchronous • On: Synchronous	Off	○	○	×
Network topology setting	pbi_bTopologySet	Bit	Off, on	Specify the network topology. • Off: Line topology, star topology, or coexistence of star and line topologies • On: Ring topology	Off	○	○*1	×
Master station return time operation setting	pbi_bMasterReturnSet	Bit	Off, on	Specify the operation mode applicable when the master station returns. • Off: Returns as the master operating station. • On: Returns as a submaster operating station.	Off	○	×	×

Name	Variable name	Data type	Range	Description	Default value	Master station	Submaster station	Local station
Submaster station parameter operation setting	pbi_bSubMaster OperateParam	Bit	Off, on	Specify which station parameters (master or own station) should be used for the submaster station to work. • Off: Operating with the parameters of the master station • On: Operating with the parameters of the own (submaster) station	Off	×	○	×

*1 Valid only when "Submaster station parameter operation setting" is ON (Operating with the parameters of the own (submaster) station)

5.2 M+model_StationNoSet

The contents are the same as M+model_StatoinNoSet in CC-Link IE Controller Network Module FBs. (☞ Page 50 M+model_StationNoSet)

REVISIONS

*The manual number is given on the bottom left of the back cover.

Revision date	*Manual number	Description
June 2014	BCN-P5999-0381-A	First edition
July 2014	BCN-P5999-0381-B	Partial correction
November 2014	BCN-P5999-0381-C	■Added function CC-Link IE Controller Network function of the RJ71EN71 ■Added or modified parts Section 2.1, 2.2, 3.3, 4.1, 5.1
July 2015	BCN-P5999-0381-D	■Added or modified parts Section 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.5, 4.1, 5.1

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