MITSUBISHI

Mitsubishi Programmable Controller

Transition from MELSEC-A/QnA (Large Type), AnS/QnAS (Small Type) Series to Q Series Handbook

(Network Modules)



2012 Edition

SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this handbook and the relevant manuals introduced in this handbook carefully and pay full attention to safety to handle the product correctly.

In this handbook, the safety precautions are classified into two levels: " / WARNING" and " CAUTION".



Under some circumstances, failure to observe the precautions given under "ACAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this handbook and then keep the handbook in a safe place for future reference.

[Design Precautions]

• For the operating status of each station after a communication failure in the data link or the network, refer to the following manuals.

Failure to do so may result in an accident due to an incorrect output or malfunction.

- Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)
- Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/O network)
- MELSECNET, MELSECNET/B Local Station Data Link Module User's Manual
- CC-Link System Master/Local Module User's Manual
- If a coaxial cable is disconnected, the network may be unstable, resulting in a communication failure of multiple stations. Configure an interlock circuit in the program to ensure that the entire system will always operate safely even if communications fail. Failure to do so may result in an accident due to an incorrect output or malfunction.
- When connecting a peripheral with the CPU module or connecting a personal computer with an intelligent function module to modify data of a running programmable controller, configure an interlock circuit in the program to ensure that the entire system will always operate safely.
 For other forms of control (such as program modification or operating status change) of a running programmable controller, read the relevant manuals carefully and ensure that the operation is safe before proceeding. Especially, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure. To prevent this, configure an interlock circuit in the program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.
- Do not write any data to the "system area" of the buffer memory in each intelligent function module.
 Do not write any data to the "system area" of the buffer memory in the intelligent function module.
 Also, do not use any "use prohibited" signals as an output signal from the CPU module to the intelligent function module. Doing so may cause malfunction of the programmable controller system.
- To set the auto refresh parameter, select the device Y for the remote output (RY) refresh device.
 If a device other than Y is selected, the CPU module holds the device status even after its status is changed to STOP. For how to stop data link, refer to the following manual.
 - CC-Link System Master/Local Module User's Manual
- If a CC-Link dedicated cable is disconnected, the network may be unstable, resulting in a communication failure of multiple stations. Configure an interlock circuit in the program to ensure that the entire system will always operate safely even if communications fail.
 Failure to do so may result in an accident due to an incorrect output or malfunction.

- After changing the parameter of the CPU module or the remote I/O module, reset the CPU module.
 Failure to do so may cause malfunction, since the previous parameter setting remains in the module.
- Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100mm or more between them. Failure to do so may result in malfunction due to noise.

[Installation Precautions]

 Shut off the external power supply (all phases) used in the system before mounting or removing a module.

Failure to do so may result in electric shock or cause the module to fail or malfunction.

 Use the programmable controller in an environment that meets the general specifications in the user's manual for the CPU module used.

Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.

• To mount a Q series module, while pressing the module mounting lever located in the lower part of the module, fully insert the module fixing projection(s) into the hole(s) in the base unit and press the module until it snaps into place.

Incorrect mounting may cause malfunction, failure or drop of the module.

When using the programmable controller in an environment of frequent vibrations, fix the module with a screw.

Tighten the screw within the specified torque range.

Undertightening can cause drop of the screw, short circuit or malfunction.

Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.

• To mount an A/AnS/QnA/QnAS module, fully insert the module fixing projection(s) located in the lower part of the module into the hole(s) in the base unit and press the module until it snaps into place (To fix an AnS series module to the base unit, tighten the screws within the specified torque range).

Incorrect mounting may cause malfunction, failure or drop of the module.

- Shut off the external power supply (all phases) used in the system before mounting or removing the module. Failure to do so may result in damage to the product.
- A MELSECNET/H module with function version D or later can be replaced online (while power is on) on any remote I/O station. Note that there are restrictions on the modules that can be replaced online, and each module has its predetermined replacement procedure. For details, refer to the relevant section in the following.

• Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/O network)

• Do not directly touch any conductive parts and electronic components of the module.

Doing so can cause malfunction or failure of the module.

[Wiring Precautions]

- Shut off the external power supply (all phases) used in the system before wiring.
 Failure to do so may result in electric shock or cause the module to fail or malfunction.
- After installation and wiring, attach the included terminal cover to the module before turning it on for operation.

Failure to do so may result in electric shock.

- Ground the FG terminal to the protective ground conductor dedicated to the programmable controller. Failure to do so may result in malfunction.
- Check the rated voltage and terminal layout before wiring the external power supply terminal block, and connect the cables correctly.
 Connecting a power supply with a different voltage rating or incorrect wiring may cause a fire or

failure.

- Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Correctly solder coaxial cable connectors. Incomplete soldering may result in malfunction.
- Do not install the control lines or communication cables together with the main circuit lines or power cables.

Failure to do so may result in malfunction due to noise.

- Place the cables in a duct or clamp them.
 If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact.
- Tighten the terminal screw within the specified torque range. Undertightening can cause short circuit or malfunction.
 Overtightening can damage the screw and/or module, resulting in drop, short circuit, fire, or malfunction.
- When disconnecting the cable from the module, do not pull the cable by the cable part.
 For the cable with connector, hold the connector part of the cable.
 For the cable connected to the terminal block, loosen the terminal block screws.
 Pulling the cable connected to the module may result in malfunction and damage to the module or cable.

[Wiring Precautions]

•	Mitsubishi programmable controllers must be installed in control panels. Connect the main power supply to the power supply module in the control panel through a relay terminal block.
	Wiring and replacement of a power supply module must be performed by qualified maintenance personnel with knowledge of protection against electric shock. For wiring methods, refer to the QCPU User's Manual (Hardware Design, Maintenance and Inspection).
•	Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction
•	A protective film is attached to the top of the module to prevent foreign matter, such as wire chips, from entering the module during wiring.
	Do not remove the film during wiring. Remove it for heat dissipation before system operation.
•	Use CC-Link dedicated cables for the CC-Link system. If not, the performance of the CC-Link system is not guaranteed.
	For the maximum station-to-station distance and the overall cable distance, follow the specifications in the following.
	If not, normal data transmission will not be guaranteed.
	 CC-Link System Master/Local Module User's Manual

[Startup and Maintenance Precautions]

WARNING

Do not touch any terminal while power is on.
 Doing so will cause electric shock or malfunction.

• Shut off the external power supply (all phases) used in the system before cleaning the module or retightening the terminal screws or module fixing screws. Failure to do so may result in electric shock.

[Startup and Maintenance Precautions]

 Before performing online operations (especially, program modification, forced output, and operating status change) for the running CPU module on another station from GX Developer over the MELSECNET/H network, read relevant manuals carefully and ensure the safety. Improper operation may damage machines or cause accidents. Do not disassemble or modify the modules.
 Do not disassemble of modify the modules. Doing so may cause failure, malfunction, injury, or a fire.
 Use any radio communication device such as a cellular phone or PHS (Personal Handy-phone System) more than 25cm away in all directions from the programmable controller. Failure to do so may cause malfunction.
 Shut off the external power supply (all phases) used in the system before mounting or removing a module. Failure to do so may cause the module to fail or malfunction.
A MELSECNET/H module with function version D or later can be replaced online (while power is on) on any remote I/O station.
Note that there are restrictions on the modules that can be replaced online, and each module has its predetermined replacement procedure. For details, refer to the relevant section in the following manual.
 Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/O network) Do not touch any terminal while power is on.
 Tighten the module fixing screw and the terminal screw within the specified torque range. Undertightening can cause drop of the component or wire, short circuit, or malfunction.
 Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction. After the first use of the product, do not mount/remove the module to/from the base unit, and the terminal block to/from the module more than 50 times (IEC 61131-2 compliant) respectively. Exceeding the limit of 50 times may cause malfunction.
 Before handling the module, touch a grounded metal object to discharge the static electricity from the human body.
Failure to do so may cause the module to fail or malfunction.
Disposal Precautions]

• When disposing of this product, treat it as industrial waste.

CONDITIONS OF USE FOR THE PRODUCT

(1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;

i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and

ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.

MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT. ("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

REVISIONS

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

Print Date	* Handbook Number	Revision
Apr., 2005	L(NA)-08048ENG-A	First edition
Oct., 2005	L(NA)-08048ENG-B	Addition
		Section 1.1.3, Section 2.5.3, Section 2.5.4, Appendix 1
		Partial correction
		Contents, Section 2.5.2, Section 2.7, Section 3.5.2, Appendix $1 \rightarrow$ Appendix 2
Oct., 2006	L(NA)-08048ENG-C	
		Addition
		Partial correction
		Section 1.3, Chapter 6 \rightarrow Chapter 7, Chapter 7 \rightarrow Chapter 8
Jul., 2007	L(NA)-08048ENG-D	Addition
		Section 1.1.4, Chapter 7
		Partial correction
		Section 1.1.3, Chapter 7 \rightarrow Chapter 8, Chapter 8 \rightarrow Chapter 9
Nov., 2012	L(NA)-08048ENG-E	Revision on the new functions of the Universal model QCPU with a serial number
		(first five digits) is "13102" or later
		Model Addition
		QJ71NT11B, MELSEC-AnS/QnAS series, QA1S51B, 5C-FB
		Partial correction
		SAFETY PRECAUTIONS, Chapter 1 to 9, Appendix

Japanese Handbook Version L-08047-K

This handbook confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this handbook.

© 2005 MITSUBISHI ELECTRIC CORPORATION

CONTENTS

SAFETY PRECAUTIONS	A - 1
CONDITIONS OF USE FOR THE PRODUCT	A - 7
REVISIONS	A - 8
CONTENTS	A - 9
GENERIC TERMS AND ABBREVIATIONS	A - 14

CHAPTER 1 INTRODUCTION

1 - 1 to 1 - 29

1.1 Tr	ansition from MELSECNET(II), MELSECNET/B to MELSECNET/H 1 - 1
1.1.1	Transition to the Q series
1.1.2	Transition procedure to a Q series MELSECNET/H system 1 - 13
1.1.3	Transition to and addition of QCPU by utilizing existing network MELSECNET (II) 1 - 16
1.1.4	Replacement selection points1 - 19
1.2 Re	eplacement of the MELSECNET/10 for A/AnS/QnA/QnAS Series with the MELSECNET/H for
Q	Series
1.3 Re	eplacing the CC-Link for A/AnS/QnA/QnAS Series with the CC-Link for Q Series

CHAPTER 2 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (PLC TO PLC NETWORK)

2 - 1 to 2 - 75

2.1	Lis	t of MELSECNET (II), MELSECNET/B Alternative Models	2 - 1
2.2	Pe	rformance Specifications Comparisons	2 - 3
2.2	2.1	Module performance comparisons	
2.2	2.2	Cable performance comparisons	2 - 7
2.3	Fu	nctional Comparisons	2 - 10
2.4	Sw	vitch Settings Comparisons	2 - 11
2.5	Ра	rameter Comparisons	2 - 12
2.5	5.1	Parameter comparisons	
2.5	5.2	Example of changing parameters on 2-tier system	2 - 13
2.5	5.3	Example of changing parameters on 3-tier system	
		(When only the first half of link parameter is set)	2 - 27
2.5	5.4	Example of changing parameters on 3-tier system	
		(When the first half/second half of link parameter is set)	2 - 43
2.6	Pro	ogram Comparisons	2 - 63
2.6	6.1	Comparison of special relays M (SB) and special registers D (SW)	
2.6	6.2	Transient instructions	2 - 70
2.7	Re	placement Precautions	2 - 72

CHAPTER 3 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (REMOTE I/O NETWORK) 3 - 1 to 3 - 29 3.1 List of MELSECNET (II), MELSECNET/B Alternative Models 3.2 Performance Specifications Comparisons 3 - 3

3.2	.1	Module performance Compatibility comparisons	
3.2	.2	Cable performance comparisons	
3.3	Fur	nctional Comparisons	3 - 10
3.4	Swi	itch Settings Comparisons	
3.5	Par	ameter Comparisons	
3.5	.1	Parameter comparisons	
3.5	.2	Parameter change example	
3.6	Pro	gram Comparisons	
3.6	.1	Comparison of special relays M (SB) and special registers D (SW)	
3.6	.2	Transient instructions	
3.7	Rep	placement Precautions	

CHAPTER 4 REPLACEMENT OF THE MELSECNET/10 (PLC TO PLC NETWORK)

4 - 1 to 4 - 31

4.1	List of MELSECNET/10 Alternative Models	4 - 1
4.2	Performance Specifications Comparisons	4 - 2
4.2	Module performance comparisons incompatible	
4.2	.2 Cable performance comparisons	
4.3	Functional Comparisons	4 - 15
4.4	Switch Settings Comparisons	4 - 18
4.5	Parameter Comparisons	4 - 20
4.6	Program Comparisons	4 - 24
4.6	Comparison of link special relay (SB)/link special register (SW)	4 - 24
4.6	Comparison of dedicated instructions	4 - 27
4.7	Other Precautions	4 - 31

CHAPTER 5 REPLACEMENT OF THE MELSECNET/10 (REMOTE I/O NETWORK) 5 - 1 to 5 - 53

5.1	List of MELSECNET/10 Alternative Models	5 - 1
5.2	Performance Specifications Comparisons	5 - 3
5.2	2.1 Module performance comparisons	5 - 3
5.2	2.2 Cable performance comparisons	5 - 29
5.3	Functional Comparisons	5 - 31
5.4	Switch Settings Comparisons	5 - 35
5.5	Parameter Comparisons	5 - 39
5.6	Program Comparisons	5 - 46
5.6	6.1 Comparison of link special relay (SB)/link special register (SW)	5 - 46
5.6	6.2 Comparison of dedicated instruction	5 - 48
5.7	Other Precautions	5 - 53

8 - 1 to 8 - 27

CHAPTER 6 CONNECTING MELSECNET/10 TO EXISTING MELSECNET(II), /B WITH A 6 - 1 to 6 - 15 **GATEWAY STATION**

6.1	Applicaton of Gateway Station Using Gateway Set 6 - 1
6.2	List of Gateway Set Models
6.3	Precautions for Use of Gateway Set
6.4	Communication Between Existing ACPU in MELSECNET(II) and Added QCPU (Data Transmission/ Reception by Inter-link Data Transfer)
6.5	Communication Between Existing ACPU in MELSECNET(II) and Added QCPU Using Gateway Set (Data Transmission/Reception by Sequence Program)

CHAPTER 7 CONNECTING THE QCPU TO THE MELSECNET(II), /B AS THE LOCAL STATION 7 - 1 to 7 - 11

7.1	Application that Connects the QCPU as the Local Station7 - 1
7.2	List of Local Station Data Link Module
7.3	Precautions for Using Local Station Data Link Module7 - 3
7.4	Network Parameter

CHAPTER 8 REPLACEMENT OF CC-LINK

8.1	Lis	t of CC-Link Alternative Models
8.2	Pe	rformance Specifications Comparisons
8.2	2.1	Module performance comparisons
8.2	2.2	Cable performance comparisons
8.3	Fu	nctional Comparisons
8.4	Sw	ritch Settings Comparisons
8.5	Pa	rameter Comparisons
8.6	Pro	ogram Comparisons
8.6	6.1	Comparison of I/O signals
8.6	6.2	Buffer memory comparisons
8.6	6.3	Comparison of link special relay (SB)/link special register (SW)
8.7	Ot	ner Precautions
8.8	Pa	rameter Setting Example
8.8	3.1	Parameter setting example on the A/AnS series
8.8	3.2	Parameter setting example on the Q series

СНАРТ	ER 9 EXTERNAL DIMENSIONS	9 - 1 to 9 - 1
9.1	External Dimensions	

APPENDICES App - 1 to App - 4 Appendix 1 Spare parts storage App - 1 Appendix 2 Related Manuals App - 2 Appendix 2.1 Replacement handbooks App - 2 Appendix 2.2 A/AnS series App - 3 Appendix 2.3 QnA/QnAS series App - 3 Appendix 2.4 Q series App - 3

• For the products shown in handbooks for transition, catalogues, and transition examples, refer to the manuals for the relevant products and check the detailed specifications, precautions for use, and restrictions before replacement.

For the products manufactured by Mitsubishi Electric Engineering Co., Ltd., Mitsubishi Electric System & Service Co., Ltd., and other companies, refer to the catalogue for each product and check the detailed specifications, precautions for use, and restrictions before use.

The manuals and catalogues for our products, products manufactured by Mitsubishi Electric Engineering Co., Ltd., and Mitsubishi Electric System & Service Co., Ltd. are shown in Appendix of each handbook for transition.

• Products shown in this handbook are subject to change without notice.

GENERIC TERMS AND ABBREVIATIONS

Unless otherwise specified, this handbook uses the following generic terms and abbreviations.

Generic term/abbreviation	Description
■Series	
A series	Abbreviation for large types of Mitsubishi MELSEC-A series programmable controllers
AnS series	Abbreviation for compact types of Mitsubishi MELSEC-A series programmable controllers
A/AnS series	Generic term for A series and AnS series
QnA series	Abbreviation for large types of Mitsubishi MELSEC-QnA series programmable controllers
QnAS series	Abbreviation for compact types of Mitsubishi MELSEC-QnA series programmable controllers
QnA/QnAS series	Generic term for QnA series and QnAS series
A/AnS/QnA/QnAS series	Generic term for A series, AnS series, QnA series, and QnAS series
Q series	Abbreviation for Mitsubishi MELSEC-Q series programmable controllers
■CPU module type	
CPU module	Generic term for A series, AnS series, QnA series, QnAS series, and Q series CPU modules
Basic model QCPU	Generic term for the Q00JCPU, Q00CPU, and Q01CPU
High Performance model	Generic term for the Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, and Q25HCPU
QCPU	* This handbook mainly explains about the Q02CPU, Q02HCPU, Q06HCPU, and Q12HCPU.
Process CPU	Generic term for the Q02PHCPU, Q06PHCPU, Q12PHCPU, and Q25PHCPU
Redundant CPU	Generic term for the Q12PRHCPU and Q25PRHCPU
	Generic term for the Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU,
	Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU,
	Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU,
	Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, and Q100UDEHCPU
Universal model QCPU	* This handbook mainly explains about the Q00U.ICPU_Q00UCPU_Q01UCPU_Q02UCPU
	Q03UDCPU, Q04UDHCPU, and Q06UDHCPU, which can replace the AnS/QnAS series.
	The specifications and functions of the Q10UDEHCPU to Q100UDEHCPU are the same as those of
	the modules described above, although the program and memory capacities increase.
■CPU module model	
ACPU	Generic term for MELSEC-A series programmable controller CPUs
AnSCPU	Generic term for MELSEC-AnS series programmable controller CPUs
A/AnSCPU	Generic term for MELSEC-A series and MELSEC-AnS series programmable controller CPUs
	Generic term for the A1NCPU, A1NCPUP21/R21, A1NCPUP21-S3, A2NCPU, A2NCPU-S1,
AnNCPU	A2NCPUP21/R21, A2NCPUP21/R21-S1, A2NCPUP21-S3(S4), A3NCPU, A3NCPUP21/R21,
	and A3NCPUP21-S3
	Generic term for the A2ACPU, A2ACPU-S1, A3ACPU, A2ACPUP21/R21, A2ACPUP21/R21-
ANACPU	S1, and A3ACPUP21/R21
	Generic term for the A2UCPU, A2UCPU-S1, A3UCPU, A4UCPU, A2USCPU, A2USCPU-S1,
Anucpu	and A2USHCPU-S1
AnN/AnACPU	Generic term for the AnNCPU and AnACPU
AnN/AnA/AnSCPU	Generic term for the AnNCPU, AnACPU, and AnSCPU
QnACPU	Generic term for MELSEC-QnA series programmable controller CPUs
QnASCPU	Generic term for MELSEC-QnAS series programmable controller CPUs
	Generic term for MELSEC-QnA series and MELSEC-QnAS series programmable controller
QNA/QNASCPU	CPUs
	Generic term for A series, AnS series, QnA series, and QnAS series programmable controller
A/AnS/QnA/QnASCPU	CPUs
QCPU	Generic term for MELSEC-Q series programmable controller CPUs

[About symbols used in figures]

MELSECNET(II)	MELSECNET/H
M m Master station L L Local station	Control station MR Remote master station Remote I/O station
□ stands for the station No.	stands for the network No., and
	□ stands for the station No.

INTRODUCTION

1.1 Transition from MELSECNET(II), MELSECNET/B to MELSECNET/H

1.1.1 Transition to the Q series

To replace the MELSECNET(II) and the MELSECNET/B system with the Q series, the following methods can be used:

- Replace with the MELSECNET/H system
- Keep the existing MELSECNET(II) network and replace some of the systems with the QCPU. Or add the QCPU.

For replacement with the MELSECNET/10(H), refer to Section 1.1.2. For replacement with the Q series or add the Q series with the existing MELSECNET(II), refer to Section 1.1.3.

The following shows the configuration of the Q series MELSECNET/H system after the transition and the system configuration precautions at transition for each of the MELSECNET(II), MELSECNET/B system configurations.

For details, refer to CHAPTER 2 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (PLC TO PLC NETWORK) and CHAPTER 3 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (REMOTE I/O NETWORK).

Network type	2-tier/3-tier	Component stations	Refer to
		Local station only	Section 1.1.1 (1) (a)
	2-tier system	Remote I/O station only	Section 1.1.1 (1) (b)
Ontical loop		Mixture of local station and remote I/O station	Section 1.1.1 (1) (c)
Optical loop		Local station only	Section 1.1.1 (1) (d)
	3-tier system	2-tier local station, 3-tier remote I/O station	Section 1.1.1 (1) (e)
		Mixture of local station and remote I/O station	Section 1.1.1 (1) (f)
		Local station only	Section 1.1.1 (2) (a)
	2-tier system	Remote I/O station only	Section 1.1.1 (2) (b)
Coavial loop		Mixture of local station and remote I/O station	Section 1.1.1 (2) (c)
Coaxial loop	3-tier system	Local station only	Section 1.1.1 (2) (d)
		2-tier local station, 3-tier remote I/O station	Section 1.1.1 (2) (e)
		Mixture of local station and remote I/O station	Section 1.1.1 (2) (f)
		Local station only	Section 1.1.1 (3) (a)
	2-tier system	Remote I/O station only	Section 1.1.1 (3) (b)
Twistod pair		Mixture of local station and remote I/O station	Section 1.1.1 (3) (c)
i wisteu pail		Local station only	Section 1.1.1 (3) (d)
	3-tier system	2-tier local station, 3-tier remote I/O station	Section 1.1.1 (3) (e)
		Mixture of local station and remote I/O station	Section 1.1.1 (3) (f)

(1) Optical cable system

(a) 2-tier system 1: System configuration example using local stations only

MELSECNET(II)	MELSECNET/H		System configuration precautions
		1)	Distance between stations: If this value
			exceed the Q series specification values
Optional lange			when re-using the MELSECNET(II)
			system cables, optical cables, etc. has to
M	(1MP4)		be changed. ^{*1}
		2)	CPU: When replacing from an integrated
	(1No1) Network 1 (1No3)		type CPU, one new slot (32 points) is
			required.
		3)	Number of stations: When 65 modules
L2	1Ns2		are connected, measures (e.g. dividing
			into two networks of 64 modules or less
			having a different network No.) are
			required.

*1 As the transmission speed of MELSECNET/H is faster than that of MELSECNET(II), the distance between stations may become shorter.

(b) 2-tier system 2: System configuration example using remote I/O stations only



*1 As the transmission speed of MELSECNET/H is faster than that of MELSECNET(II), the distance between stations may become shorter.

(c) 2-tier system 3: System configuration example using local stations/remote I/O stations

MELSECNET(II)	MELSECNET/H		System configuration precautions
Optical loop	Optical loop	1) 2) 3)	System configuration precautions Distance between stations: If this value exceed the Q series specification values when re-using the MELSECNET(II) system cables, optical cables, etc. has to be changed. ^{*1} CPU: When replacing from an integrated type CPU, one new slot (32 points) is required. Composite system: As a mixture of a PLC to PLC network and a remote I/O network is not allowed on the Q series, the network has to be divided into two networks having different network Nos. For this reason, a separate network
			networks having different network Nos.
			module for the remote master station is
			required.
		4)	New installation: A separate optical cable
			is required for the remote I/O stations.

*1 As the transmission speed of MELSECNET/H is faster than that of MELSECNET(II), the distance between stations may become shorter.

(d) 3-tier system 1: System configuration example using local stations only

MELSECNET(II)	MELSECNET/H		System configuration precautions
Optical loop	Optical loop	1)	Distance between stations: If this value
			exceed the Q series specification values
(M)	(1MP4)		when re-using the MELSECNET(II)
			system cables, optical cables, etc. has to
$\begin{pmatrix} L1 \end{pmatrix}$ $\begin{pmatrix} L3 \end{pmatrix}$	(1Ns1)Network 1 (1Ns3)		be changed. ^{*1}
$\langle \rangle$	$\langle \rangle$	2)	CPU: When replacing from an integrated
1.2/m	1Ns2/2Mp4		type CPU, one new slot (32 points) is
			required.
		3)	Number of stations: When 65 modules
	(2Ns1) Network 2 (2Ns3)		are connected, measures (e.g. dividing
			into two networks of 64 modules or less
(12)	(2Ns2)		having a different network No.) are
\bigcirc)		required.

*1 As the transmission speed of MELSECNET/H is faster than that of MELSECNET(II), the distance between stations may become shorter.

(e) 3-tier system 2: System configuration example using 2-tier local stations and 3-tier remote I/O stations

MELSECNET(II)	MELSECNET/H		System configuration precautions
Optical loop	Optical loop	1)	Distance between stations: If this value
			exceed the Q series specification values
(M)	(1MP4)		when re-using the MELSECNET(II)
			system cables, optical cables, etc. has to
$\begin{pmatrix} L1 \end{pmatrix}$ $\begin{pmatrix} L3 \end{pmatrix}$	(1Ns1)Network 1 (1Ns3)		be changed. ^{*1}
$\langle \rangle$		2)	CPU: When replacing from an integrated
1.2/m	1Ns2/2MR		type CPU, one new slot (32 points) is
			required.
		3)	Number of stations: When 65 modules
r1 r3	2R1 Network 2 2R3		are connected, measures (e.g. dividing
			into two networks of 64 modules or less
(r2)	(2R2)		having a different network No.) are
\smile			required.

*1 As the transmission speed of MELSECNET/H is faster than that of MELSECNET(II), the distance between stations may become shorter.

(f) 3-tier system 3: System configuration example using local stations/remote I/O stations

MELSECNET(II)	MELSECNET/H		System configuration precautions
Optical loop	Optical loop 1MP4 1Ns1 Network 1 (1Ns3) 1Ns2/2MP4/3MR Network 2 Network 3 2Ns1 2Ns2 3R3	 1) 2) 3) 4) 	Distance between stations: If this value exceed the Q series specification values when re-using the MELSECNET(II) system cables, optical cables, etc. has to be changed. ^{*1} CPU: When replacing from an integrated type CPU, one new slot (32 points) is required. Composite system: As a mixture of a PLC to PLC network and a remote I/O network is not allowed on the Q series, the network has to be divided into two networks having different network Nos. For this reason, a separate network module for the remote master station is required. New installation: A separate optical cable is required for the remote I/O stations.

*1 As the transmission speed of MELSECNET/H is faster than that of MELSECNET(II), the distance between stations may become shorter.

(2) Coaxial cable system

(a) 2-tier system 1: System configuration example using local stations only

MELSECNET(II)	MELSECNET/H		System configuration precautions
Coaxial loop	Coaxial bus	 1) 2) 3) 4) 5) 	Distance between stations: If this value exceed the Q series specification values when re-using the MELSECNET(II) system cables, 3C-2V has to be changed to 5C-2V. ^{*1} Overall distance: If this value exceeds the Q series specification value when MELSECNET(II) system cables are re- used, measures (e.g. adding a repeater unit) are required. ^{*1} CPU: When replacing an integrated type CPU, one new slot (32 points) is required. Number of stations: When 65 modules are connected, measures (e.g. dividing into two or three networks of 32 modules or less having a different network No.) are required. Duplex loop: When the transmission path has to be duplexed, changes to an optical loop system, etc. are required.

*1 As the transmission speed of MELSECNET/H is faster than MELSECNET(II), and as the transmission method is different, the distance between stations and overall distance become shorter.

(b) 2-tier system 2: System configuration example using local stations only

, , ,			-
MELSECNET(II)	MELSECNET/H		System configuration precautions
Coaxial loop	Coaxial bus Network 1	 1) 2) 3) 4) 5) 	Distance between stations: If this value exceed the Q series specification values when re-using the MELSECNET(II) system cables, 3C-2V has to be changed to 5C-2V.*1 Overall distance: If this value exceeds the Q series specification value when MELSECNET(II) system cables are re- used, measures (e.g. adding a repeater unit) are required.*1 CPU: When replacing an integrated type CPU, one new slot (32 points) is required. Number of stations: When 65 modules are connected, measures (e.g. dividing into two or three networks of 32 modules or less having a different network No.) are required. Duplex loop: When the transmission path has to be duplexed, changes to an optical loop system, etc. are required.

MELSECNET(II)	MELSECNET/H		System configuration precautions
		1)	Distance between stations: If this value
			exceed the Q series specification values
			when re-using the MELSECNET(II)
			system cables, 3C-2V has to be changed
			to 5C-2V. ^{*1}
		2)	Overall distance: If this value exceeds the
			Q series specification value when
			MELSECNET(II) system cables are re-
Coavial loop			used, measures (e.g. adding a repeater
	Coaxial bus		unit) are required. ^{*1}
(M)		3)	CPU: When replacing an integrated type
	1Mp4/2MR		CPU, one new slot (32 points) is required.
(L1) $(R3)$	Network 1 Network 2	4)	Duplex loop: When the transmission path
$\langle \rangle$			has to be duplexed, changes to an optical
			loop system, etc. are required.
		5)	Composite system: As a mixture of a PLC
			to PLC network and a remote I/O network
			is not allowed on the Q series, the
			network has to be divided into two
			networks having different network Nos.
			For this reason, a separate network
			module for the remote master station is
			required.
		6)	New installation: A separate coaxial cable
			is required for the remote I/O stations.

(c) 2-tier system 3: System configuration example using local stations/remote I/O stations

(d) 3-tier system 1: System configuration example using local stations only

MELSECNET(II)	MELSECNET/H		System configuration precautions
Coaxial loop		1)	Distance between stations: If this value exceed the Q series specification values when re-using the MELSECNET(II) system cables, 3C-2V has to be changed to 5C-2V. ^{*1}
M L1 L2/m I1 I2	Coaxial bus	2) 3) 4) 5)	Overall distance: If this value exceeds the Q series specification value when MELSECNET(II) system cables are re- used, measures (e.g. adding a repeater unit) are required. ^{*1} CPU: When replacing an integrated type CPU, one new slot (32 points) is required. Number of stations: When 65 modules are connected, measures (e.g. dividing into two or three networks of 32 modules or less having a different network No.) are required. Duplex loop: When the transmission path has to be duplexed, changes to an optical loop system, etc. are required.

*1 As the transmission speed of MELSECNET/H is faster than MELSECNET(II), and as the transmission method is different, the distance between stations and overall distance become shorter.

(e) 3-tier system 2: System configuration example using 2-tier local stations and 3-tier remote I/O stations

MELSECNET(II)	MELSECNET/H		System configuration precautions
MELSECNET(II) Coaxial loop	MELSECNET/H Coaxial bus 1MP4 Network 1 1Ns1 1Ns2/2MR (1Ns3) Network 2 2R1 2R2 2R3	1) 2) 3) 4)	System configuration precautions Distance between stations: If this value exceed the Q series specification values when re-using the MELSECNET(II) system cables, 3C-2V has to be changed to 5C-2V. ^{*1} Overall distance: If this value exceeds the Q series specification value when MELSECNET(II) system cables are re- used, measures (e.g. adding a repeater unit) are required. ^{*1} CPU: When replacing an integrated type CPU, one new slot (32 points) is required. Number of stations: When 65 modules are connected, measures (e.g. dividing into two or three networks of 32 modules or less having a different network No.) are required.
		5)	required. Duplex loop: When the transmission path has to be duplexed, changes to an optical loop system, etc. are required.

MELSECNET(II)	MELSECNET/H		System configuration precautions
		1)	Distance between stations: If this value
			exceed the Q series specification values
			when re-using the MELSECNET(II)
			system cables, 3C-2V has to be changed
			to 5C-2V. ^{*1}
		2)	Overall distance: If this value exceeds the
Coaxial loop			Q series specification value when
			MELSECNET(II) system cables are re-
(M)			used, measures (e.g. adding a repeater
	(1Mp4)		unit) are required.*1
(L1) (L3)	Network 1	3)	CPU: When replacing an integrated type
$\langle \rangle$			CPU, one new slot (32 points) is required.
L2/m	(1Ns1)1Ns2/2Mp4/3Mr(1Ns3)	4)	Duplex loop: When the transmission path
			has to be duplexed, changes to an optical
(1) (r_3)	Network 2 Network 3		loop system, etc. are required.
		5)	Composite system: As a mixture of a PLC
			to PLC network and a remote I/O network
			is not allowed on the Q series, the
			network has to be divided into two
			networks having different network Nos.
			For this reason, a separate network
			module for the remote master station is
			required.
		6)	New installation: A separate coaxial cable
		1	is required for the remote I/O stations.

(f) 3-tier system 3: System configuration example using local stations/remote I/O stations

(3) Twisted cable system

(a) 2-tier system 1: System configuration example using local stations only

MELSECNET/B	MELSECNET/H	System configuration precautions
Twisted M t t t t t t t t t t t t t	Optical loop 1MP4 1Ns1 Network 1 1Ns3 1Ns2 Coaxial bus 1MP4 Network 1 1Ns1 1Ns2 1Ns3	New installation: The installation has to be changed for an optical loop system or a coaxial bus system.
	Twisted cables (using existing cables)	Existing cables: Process the terminals for MELSECNET/H connection.
	Twisted cables (using CC-Link dedicated cables) M L1 L2 L3	New installation: Change the cables to CC- Link dedicated cables.

(b) 2-tier system 2: System configuration example using remote I/O stations only



(c) 2-tier system 3: System configuration example using local stations/remote I/O stations



MELSECNET/B	MELSECNET/H	System configuration precautions
	Optical loop	
	1Mp4 1Ns1 1Ns2/2Mp4 2Ns1 Network 2 2Ns2 Coaxial bus 1Mp4 Network 1 1Ns1 1Ns2/2Mp4 1Ns1 1Ns2/2Mp4 1Ns1 1Ns2/2Mp4 1Ns1 1Ns2/2Mp4 1Ns1 1Ns2/2Mp4 1Ns1 1Ns2/2Mp4 1Ns3 Network 2 2Ns1 2Ns2 2Ns3	New installation: The installation has to be changed for an optical loop system or a coaxial bus system.
	Network 1 Network 2 (2Ns1) (2Ns2) (2Ns3)	Existing cables: Process the terminals for MELSECNET/H connection.
	Twisted (using CC-Link dedicated cables) (1MP4) Network 1 (1Ns1) 1Ns2/2MP4 (1Ns3) Network 2 (2Ns1) (2Ns2) (2Ns3)	New installation: Change the cables to CC- Link dedicated cables.



(e) 3-tier system 2: System configuration example using 2-tier local stations and 3-tier remote I/O stations

(f) 3-tier system 3: System configuration example using local stations/remote I/O stations



1.1.2 Transition procedure to a Q series MELSECNET/H system

The following shows transition procedure 1 and transition procedure 2 as the transition procedure to a Q series system.

(1) Transition procedure 1 (Simultaneous replacement with MELSECNET/10)

The entire MELSECNET(II) system is replaced with a MELSECNET/10 system with the wiring left as it is, and then the A/AnS/QnA/QnAS series system is replaced with the Q series system in stages. Note, however, that the gradual transition cannot be made in a network where both of the A/AnS/QnA/QnAS series system exist. This is because the MELSECNET/H twisted bus system supports only the Q series system.



(2) Transition procedure 2 (addition of gateway station)

MELSECNET(II), MELSECNET/B and MELSECNET/10 gateway stations are added on to shift the system to a MELSECNET/10 system in stages.

(a) Example of replacing some A series programmable controllers in an existing system with Q series programmable controllers



(b) Example of replacing with the Q series programmable controllers in stages to shift to a Q series system



1.1.3 Transition to and addition of QCPU by utilizing existing network MELSECNET (II)

This section describes the method to replace some programmable controller CPUs in an existing MELSECNET (II) network to QCPU or add QCPUs without changing whole MELSECNET (II) network.

Outline: Mount a local station data link module to the QA1S6 \square B extension base unit for Q series (Q mode) or the QA6 \square B (A-A1S module conversion adapter (requires the A1ADP-SP)), and then connect it to the MELSECNET(II)^{*1}.



Notes

- 1) The module can only be used with any of the following High Performance model QCPU.
 - Q02(H)CPU
 - Q06HCPU
 - Q12HCPU
 - Q25HCPU
- 2) The module is dedicated to local stations.
- 3) A base unit that can be mounted to the module is the QA1S6□B or QA6□B (A-A1S module conversion adapter (requires the A1ADP-XY)).
- *1 The existing Universal model QCPUs do not support a local station data link module (Soon will be supported). To use the supporting Universal model QCPU, the QA(1S) extension base unit is required. (The existing Universal model QCPUs do not also support the QA(1S) extension base unit.)







(2) Example of adding Q series programmable controllers to an existing system

1.1.4 Replacement selection points

The following is the main three methods to replace any one stations in the existing MELSECNET(II) with the QCPU or to add the QCPU in the system.

- Simultaneous replacement to the MELSECNET/10
- Relay using gateway set
- Local station data link

This section describes check points for selection.

Definition of symbols (\bigcirc , \bigcirc , \triangle) in the Advantage field shown on the pages starting from the following page is as follows.

- ©: Requires no system change, has no restrictions on replacement or has great advantage since system change is minor, even if required.
- O: Has some advantages although some restrictions on replacement exists and system change is required.
- △: System change is required depending on restrictions on replacement and items must be reviewed are many.

Selection points

- (1) Consider the following points and select replacement regarding replacement to/ addition of the QCPU
 - (a) Whether the network cable can be utilized and laying change: Cost phase Consider from the views whether the existing cable can be utilized without change, partial change is sufficient or new laying is required.
 - (b) Necessity of a new module: Cost phase Consider from the views from the number of the modules and the type of the module have to be prepared.
 - (c) Affection to the program by changing network parameters: Man-hour taken for design, maintenance

Consider from the views whether the existing network parameter setting can be utilized without change and how much network parameter change affects to the sequence program.

- (d) Ease of phased replacement: Extensibility
 When replacing the network having multiple stations in stages, consider from the views from ease of replacement/addition including the points from (a) to (c) above.
- (2) Selection differs depending on system configuration, network parameter setting, and module replacement method other than network.
 Select a method suitable for the actual system with reference to the contents starting from the following page.
(1) Replacing the existing A/AnS/QnA/QnASCPU with the QCPU

This section describes the methods for replacing the A/AnS/QnA/QnASCPU in the existing MELSECNET(II) with the QCPU.

(a) Replacing the network to the MELSECNET/10 simultaneously

This method replaces arbitrary stations of the existing MELSECNET(II) with the QCPU and replaces the network to the MELSECNET/10 simultaneously.



Item		Advantage	Outline	Reference	
		Optical cable	Ø	 Laying change is not required since the existing network cable can be used without change. Due to restrictions on station-to-station distance in some cable types, check the cable type if the distance is long. 	Section 2.2.1 (1)
	Cable	Coaxial loop	0	 Change from coaxial loop to coaxial bus is required. One side of the existing coaxial cable can be utilized. Due to restrictions on overall cable distance, if the distance is long, repeater module is required. 	Section 2.2.1 (2)
Cost		Twisted pair	Δ	 Since the twisted pair cables can be used for the MELSECNET/H only, all stations must be replaced with QCPU. When replacing the stations with QCPU step-by-step or replacing with the remote I/O network, change the twisted pair cables to coaxial bus cables. (The twisted pair cables cannot be used for the remote I/O network.)^{*1} 	Section 2.2.1 (3)
	Network	module	Δ	 All the existing stations are required to be replaced with the MELSECNET/10 modules. 	-
	Only first in second system	t half set d tier	Ø	 Setting made to the existing network parameter can be utilized without change. 	Section 2.5.1 (1)
Modification on software	Latter half set in second tier system		0	 Station-specific parameter setting is required. If the AnN, AnA, or AnSCPU (excluding AnUS(H)CPU) exists, newly set network parameters and modify the program. 	Section 2.5.1 (1)
	Three-tier system		Δ	• Since the second tier and the third tier is separate network, reviewing the network parameter and program is required	Section 2.5.3, Section 2.5.4
Extensibility		Ø	 By simultaneous replacement to the MELSECNET/10, replacing arbitrary station with the QCPU is possible. If modification on software is required, modifying it at replacement of the first module allows omitting modification to the second module or later. 	-	

*1 Twisted pair cables can be used by replacing the remote I/O station with a normal station and configuring a PLC to PLC network.

(b) Relaying using gateway set

This method installs a relay station using gateway set between the replaced QCPU and the existing MELSECNET(II) for sharing link data.



Item		Advantage	Outline	Reference	
		1st	Ø	 Installing a relay station (gateway set) at the position where the replaced QCPU is mounted allows 	
	Cable	stage		relay station and the replaced QCPU station.	Section 6.1
Cost	aying	2nd stage	Δ	 Since the station number of the existing MELSECNET(II) and that of the MELSECNET/10 after replacement changes, cable laying change is required. 	
	Network	1st ork stage		Add gateway set as the relay station.	Section 6.1,
module 2nd stage		0	 Change the replaced station's module to QCPU- compatible module in each replacement. 	Section 6.2	
Modification on software		Δ	 All data relay is disabled due to restrictions on the number of send data per station. Therefore, reduce relay data. Program change according to the relay data is also required. Since the station number of the existing MELSECNET(II) and that of the MELSECNET/10 after replacement change in each replacement, modifying network parameter, data interlink transmission parameter, and program in each case is required. 	Section 6.4	
Extensibility			0	 Since a module changes to the QCPU in each replacement, even in the last stage, changing a module again is unnecessarily. 	-

(c) Replacing a station using the MELSECNET local station data link module

This method replaces arbitrary station with the QCPU in the existing MELSECNET(II).



Item		Advantage	Outline	Reference	
	Cablo		 Replacement without changing the existing network is 		
		Ø	possible. Laying change of optical loop, coaxial loop, and	Section 7.1 (1)	
	laying		twisted pair cable are unnecessary.		
			 Connect the extension base unit (QA1S6□B) to the 		
Cost			replacement station and mount local station data link		
	Network	0	module on it.	Section 7.2	
	module	0	• In the last stage, where all stations become the QCPUs,	Section 7.2	
			removing the local station data link modules and		
			replacing the MELSECNET/H modules are required.		
			Since the existing network is held, a link without		
			parameter and program modification is possible.		
	Two-tier system	Ø	 As link refresh is performed with the FROM/TO 	Section 7.4	
			instructions, program addition is required.		
			(Utilizing a comp sample program allows eliminating		
			program creation.)		
			 If the corresponding station before replacement is the 		
Modification			master station for the third tier, since the replaced module		
on software			cannot be the MELSECNET(II) master station, changing		
			the third tier to the MELSECNET/H (10) is required.		
	Three-tier		Modifying the network parameter and program for the	Section 7.2	
	system	Δ	third tier is required.	Section 7.5	
			 As link refresh is performed with the FROM/TO 		
			instructions, program addition is required.		
			(Utilizing a comp sample program allows eliminating		
			program creation.)		
Extensibility	•		Replacing arbitrary station by the QCPU with the existing	_	
		U	network parameter held is possible.	-	

(2) Adding the QCPU to the existing network system

This section describes the methods for adding the QCPU in the existing network system.

(a) Replacing the network to the MELSECNET/10 simultaneously

This method simultaneously replaces the existing network with the MELSECNET/10 and adds the QCPU.



Item		Advantage	Outline	Reference	
	Optical cable		0	 The existing cable can be utilized, however; since one station has been added, laying change of before and after the added station is required. Due to restrictions on station-to-station distance in some cable types, check the cable type if the distance is long. 	Section 2.2.1 (1)
Cost	Cable laying	Coaxial loop	0	 Change from coaxial loop to coaxial bus is required. One side of the existing coaxial cable can be utilized. Due to restrictions on overall cable distance, if the distance is long, repeater module is required. 	Section 2.2.1 (2)
		Twisted pair	Δ	 Since the twisted pair cables can be used for the MELSECNET/H only, all stations must be replaced with QCPU. When replacing the stations with QCPU step-by-step or replacing with the remote I/O network, change the twisted pair cables to coaxial bus cables. (The twisted pair cables cannot be used for the remote I/O network.)^{*1} 	Section 2.2.1 (3)
Network module		module	Δ	 All the existing stations are required to be replaced with the MELSECNET/10 modules. 	-
Only first half set in second tier system		Ø	 Data link is possible by only changing the existing network parameter according to the added station(s). 	Section 2.5.1 (1)	
Modification on software	Latter half set in second tier system		0	 Station-specific parameter setting is required. If the AnN, AnA, or AnSCPU (excluding AnUS(H)CPU) exists, newly set network parameters and modify the program. 	Section 2.5.1 (1)
	Three-tier system		Δ	• Since the second tier and the third tier is separate network, reviewing the network parameter and program is required.	Section 2.5.3, Section 2.5.4
Extensibility		Ø	 By simultaneous replacement to the MELSECNET/10, an arbitrary station can be replaced with the QCPU. If modification on software is required, modifying parameters and a program at addition of the first module allows data link. At addition of the second module or later, data link is possible by only changing the existing network parameter according to the added station. 	-	

*1 Twisted pair cables can be used by replacing the remote I/O station with a normal station and configuring a PLC to PLC network.

(b) Adding the QCPU using gateway set

This method relays using gateway set when the QCPU is added and shares link data.



Item			Advantage	Outline	Reference
				 Since a relay station is added, cable laying change is 	
		1st		required.	
		stage	Δ	Newly laying between the relay station and the added	
	Cable			QCPU is required.	Section 6.1
	laying			Change to the existing MELSECNET(II) side is	Section 6.1
Cost		2nd	0	unnecessarily.	
COSI		stage	0	Data link is possible by only changing laying due to	
				station added to the MELSECNET/10.	
		1st	0	Adding gatoway act as the relay station is required	
	Network	stage	0	• Adding galeway set as the relay station is required.	Section 6.1,
module 2nd stage		2nd		• Data link is possible by only adding the OCPU	Section 6.2
		0	· Data link is possible by only adding the QCPO.		
			All data relay is disabled due to restrictions on the		
Modification on software			0	number of send data per station. Therefore, reduce	Section 6.4
			0	relay data. Program change according to the relay	Section 0.4
			data is also required.		
			Only the QCPU is added to the MELSECNET/10		
Extensibility				side. The addition does not affect the system	
			0	configuration of the existing MELSECNET(II).	
			0	 As necessary, replacing each station in the 	-
				MELSECNET(II) with the QCPU and changing the	
				system to the MELSECNET/10 is possible.	

(c) Adding the QCPU using the MELSECNET local station data link module

This method adds the QCPU without changing the existing MELSECNET(II) using local station data link module.



Item		Advantage	Outline	Reference	
	Cable Two-tier laying system t		Ø	 Data link is possible by only changing the laying of optical loop, coaxial loop, and twisted pair cable according to the added station, without changing the existing network. 	Section 7.1 (1)
Cost			0	 Connect the extension base unit (QA1S6□B) to the addition station and mount local station data link module on it. In the last stage, where all stations become the QCPUs, removing the local station data link modules and replacing the MELSECNET/H modules are required. 	Section 7.2
Modification on software			Ø	 Data link is possible by only changing the parameter according to the added station. 	Section 7.4
Extensibility			Ø	 Only the addition of a network and program modification are sufficient for adding a station. Station addition is easy. Data link is possible by only changing the laying of optical loop, coaxial loop, and twisted pair cable according to the added station, without changing the existing network. 	-

1.2 Replacement of the MELSECNET/10 for A/AnS/QnA/QnAS Series with the MELSECNET/H for Q Series

The following shows the configuration of a MELSECNET/H network system for Q after transition and the system configuration precautions for transition for each of the system configurations for MELSECNET/ 10 network systems for A/AnS/QnA/QnAS series.

For details, refer to CHAPTER 4 REPLACEMENT OF THE MELSECNET/10 (PLC TO PLC NETWORK) and CHAPTER 5 REPLACEMENT OF THE MELSECNET/10(REMOTE I/O NETWORK).

(1) PLC to PLC network

Pay attention to the following common precautions when replacing PLC to PLC networks.

Common precautions

 Network parameters must be set for MELSECNET/H module of normal stations. When replacing MELSECNET/10 module mounted on the CPU module of the AnN/AnA/AnSCPU (excluding AnUS(H)CPU), newly set network parameters.

(a) Optical loop system



(b) Coaxial bus system



(c) Coaxial loop system

MELSECNET/10	MELSECNET/H	System configuration precautions
Coaxial loop	Coaxial bus	 The following item is provided in addition to common precautions (1) described on the previous page. Overall distance: If this value exceeds the Q series specification value when the MELSECNET/10 system cables are re-used, measures (e.g. adding a repeater unit) are required. Number of stations: When 64 modules are connected, measures (e.g. dividing into two or three networks of 32 modules or less having a different network No.) are required. Duplex loop: When the transmission path has to be duplexed, changes to an optical loop system, etc. are required.

(2) Remote I/O network

Pay attention to the following common precautions when replacing remote I/O networks.

Common precautions

1) Replace all master stations and remote I/O stations with MELSECNET/H modules for the Q series.

In a remote I/O network, MELSECNET/H modules for Q series and MELSECNET/10 modules for A/AnS/QnA/QnAS series cannot be configured together.

	O : Connection allowed,	× : Connection not	allowed
--	-------------------------	--------------------	---------

		Remote I	O station
		MELSECNET/10 modules for A,	MELSECNET/H modulos for O
		QnA	
Remote	MELSECNET/10 modules for A,		~
master	QnA	0	^
station	MELSECNET/H modules for Q	×	0

2) When replacing a multiplex master system, select Q12PHCPU, Q25PHCPU, Q12PRHCPU, or Q25PRHCPU as the CPU module.

3) When replacing a parallel master system, build a separate network having a different network No.

(a) Optical loop system



(b) Coaxial bus system

MELSECNET/10	MELSECNET/H	System configuration precautions
Coaxial bus	Coaxial bus	
1MR Network 1 1R1 1R2 1R3	1MR Network 1 1R1 1R2 1R3	There are no extra items in addition to the common precautions on the previous page.

(c) Coaxial loop system

MELSECNET/10	MELSECNET/H	System configuration precautions
Coaxial loop	Coaxial bus	 The following item is provided in addition to common precautions (1) on the previous page. Overall distance: If this value exceeds the Q series specification value when the MELSECNET/10 system cables are re-used, measures (e.g. adding a repeater unit) are required. Number of stations: When 64 modules are connected, measures (e.g. dividing into two or three networks of 32 modules or less having a different network No.) are required. Duplex loop: When the transmission path has to be duplexed, changes to an optical loop system, etc. are required.

1.3 Replacing the CC-Link for A/AnS/QnA/QnAS Series with the CC-Link for Q Series

When using the A/AnS/QnA/QnAS series CC-Link system master/local module, replace it with the QJ61BT11N CC-Link system master/local module.

Currently used CC-Link dedicated cables, remote I/O stations, remote device stations, and intelligent device stations can be used excluding some models.

MELSEC

For details on models that cannot be used, check Section 8.7 Other Precautions.

2 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (PLC TO PLC NETWORK)

2.1 List of MELSECNET (II), MELSECNET/B Alternative Models

(1) Replacement of MELSECNET (II) modules with MELSECNET/H modules

Network type	A/AnS/A0J2(H) series	Alternative models for Q series		
	A1NCPUP21			
	A2NCPUP21			
	A2NCPUP21-S1			
Ontical loop	A3NCPUP21	CPU module + 0 1711 P21-25 (Ontical Joon: SI cable		
	A2ACPUP21	eupported)		
(CPO integrated type)	A2ACPUP21-S1	- supported)		
	A3ACPUP21			
	A2CCPUP21			
	A0J2HCPUP21			
	A1NCPUP21-S3			
	A2NCPUP21-S3			
Ontical loop	A2NCPUP21-S4	CPU module + 0 1711 P21C (Ontical Joan: CL cable		
(CDLL integrated type)	A3NCPUP21-S3			
(CFO integrated type)	A2ACPUP21-S3	supported)		
	A2ACPUP21-S4			
	A3ACPUP21-S3			
	A1NCPUR21			
	A2NCPUR21			
	A2NCPUR21-S1			
Coavial loop	A3NCPUR21	CPU module + QJ71BR11 (Coaxial bus)		
(CPLL integrated type)	A2ACPUR21			
(CFO integrated type)	A2ACPUR21-S1			
	A3ACPUR21			
	A2CCPUR21			
	A0J2HCPUR21			
Optical loop	AJ71AP21	O 1711 P21 25 (Ontical loop: SI cable supported)		
(Standalone)	A1SJ71AP21	(Optical loop. Si cable supported)		
	AJ71AP21-S3			
Optical loop	AJ71P22-S3	O IZ11 P21C (Ontical loop: CL cable supported)		
(Standalone)	AJ71AP22-S3	Government (Optical loop. Greable supported)		
	A1SJ71AP21-S3]		
Coaxial loop	AJ71AR21			
(Standalone)	A1SJ71AR21			

(2) Replacement of MELSECNET/B modules with MELSECNET/H modules

Network type	A/AnS series	Alternative models for Q series
	AJ71AT21B	QJ71NT11B (Twisted bus) ^{*1}
Twisted pair	A1S 171 AT21B	QJ71LP21-25 (Optical loop: SI cable supported)
		QJ71BR11 (Coaxial bus)

*1 Supported by the QCPU only. A system including an A/AnS/QnA/QnAS series module cannot be configured. The twisted bus system can be employed for a PLC to PLC network, but not for a remote I/O network.

2.2 Performance Specifications Comparisons

2.2.1 Module performance comparisons

(1) Comparison between MELSECNET (II) module (optical loop) and MELSECNET/H module (optical loop)

(a) SI optical fiber cable, H-PCF optical fiber cable

O: Compatible, \triangle : Partial change required, × : Incompatible

		Specifications			
ltem		MELSECNET (II) module	MELSECNET/H module	ibility	Precautions for replacement
		Optical loop	Optical loop (QJ71LP21-25)	ionity	
	х/ү	Max. 2048 points and max. number of I/ O points of CPU module on master station	(MELSECNET/10 mode), (MELSECNET/H mode), (MELSECNET/H extended mode) 8192 points	0	
Maximum number of link points per network	в	(MELSECNET mode) 1024 points (MELSECNET II mode), (MELSECNET II composite mode) 4096 points	(MELSECNET/10 mode) 8192 points (MELSECNET/H mode), (MELSECNET/H extended mode) 16384 points	0	
	w	(MELSECNET mode) 1024 points (MELSECNET II mode), (MELSECNET II composite mode) 4096 points	(MELSECNET/10 mode) 8192 points (MELSECNET/H mode), (MELSECNET/H extended mode) 16384 points	0	
Maximum number of link points per station		(MELSECNET mode) 1024 bytes (MELSECNET II mode), (MELSECNET II composite mode) First half: 1024 bytes Second half: 1024 bytes	(MELSECNET/10 mode), (MELSECNET/H mode) {(LY+LB) ÷ 8+(2 × LW)} ≦ 2000 bytes (MELSECNET/H extended mode) {(LY + LB) ÷ 8 + (2 × LW)} ≦ 35840 bytes	Δ	When the number of bytes exceeds 2000, mount two modules having the same network No., or set all modules on the network in the MELSECNET/H extended mode.
Communication speed		1.25Mbps	25Mbps/10Mbps	0	
Number of sta connected in network	ations one	65 stations (master station: 1, local station + remote I/O station: 64)	64 stations (control station: 1 normal station: 63)	Δ	 Set the remote I/O network to a separate network. For the 65th station, configure a separate network.
Applicable cable		SI optical cable H-PCF optical cable	SI optical cable H-PCF optical cable Broad-band H-PCF optical cable QSI optical cable	Δ	When using existing SI cables, the distance between stations may be shortened. (Refer to Section 2.2.2.)
Overall distance		10km	30km	0	
Distance between stations		Refer to Section 2.2.2.	Refer to Section 2.2.2.	Δ	To ensure the same distance as before replacement, either change the optical cable, or install a gateway station midway along existing cables.
Maximum number of networks		-	239	Δ	New MELSECNET/H parameter (mandatory)
Communication method	on	Half duplex bit serial method	Token ring method	Δ	Nothing to be noted though the communication method differs.
Transmission method		Duple	x loop	0	
Modulation m (Encoding me	ethod ethod)	(Modulation method) CMI method	(Encoding method) NRZI coding	Δ	Nothing to be noted though the modulation method differs.
Transmission format		HDLC standard	s (frame format)	0	
Error control system		CRC(X ¹⁶ +X ¹² +X ⁵ +1) a	and retry by a time over	0	
RAS function		 Loop-back function due to error detecti Diagnostic function for checking local li 	on or broken cable ink lines	0	
Number of occupied I/O	points	CPU integrated type: 0 point, standalone:32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	Δ	When replacing from a CPU integrated type, an additional slot (32 points) is required.

(b) Modules for GI optical cable

		Specifications			Pressutions for
ltem		MELSECNET (II) module	MELSECNET/H module	ibility	Precautions for
		Optical loop	Optical loop (QJ71LP21-25)	ionity	Teplacement
	X/Y	Max. 2048 points and max. number of I/O points of CPU module on master station	(MELSECNET/10 mode), (MELSECNET/H mode), (MELSECNET/H extended mode) 8192 points	0	
Maximum number of link points per network	В	(MELSECNET mode) 1024 points (MELSECNET II mode), (MELSECNET II composite mode) 4096 points	(MELSECNET/10 mode) 8192 points (MELSECNET/H mode), (MELSECNET/H extended mode) 16384 points	0	
١	w	(MELSECNET mode) 1024 points (MELSECNET II mode), (MELSECNET II composite mode) 4096 points	(MELSECNET/10 mode) 8192 points (MELSECNET/H mode), (MELSECNET/H extended mode) 16384 points	0	
Maximum number of link points per station		(MELSECNET mode) 1024 bytes (MELSECNET II mode), (MELSECNET II composite mode) First half: 1024 bytes Second half: 1024 bytes	 (MELSECNET/10 mode), (MELSECNET/H mode) {(LY + LB) ÷ 8 + (2 × LW)} ≤ 2000 bytes (MELSECNET/H extended mode) {(LY + LB) ÷ 8 + (2 × LW)} ≤ 35840 bytes 	Δ	When the number of bytes exceeds 2000, mount two modules having the same network No., or set all modules on the network in the MELSECNET/H extended mode.
Communication speed		1.25Mbps	10Mbps	0	
Number of stations connected in one network		65 stations (master station: 1, local station + remote I/O station: 64)	(master station: 1, emote I/O station: 64)64 stations (control station: 1 normal station: 63)		 Set the remote I/O network to a separate network. For the 65th station, configure a separate network.
Applicable cable		GI optical cable			
Overall distance		10km	30km	0	
Distance between stations		GI optical	GI optical cable: 2km		
Maximum number of networks		-	239	Δ	New MELSECNET/H parameter (mandatory)
Communication method		Half duplex bit serial method	Token ring method	Δ	Nothing to be noted though the communication method differs.
Transmission method		Duple	x loop	0	
Modulation method (Encoding method)		(Modulation method) CMI method	(Encoding method) NRZI coding	Δ	Nothing to be noted though the modulation method differs.
Transmission format	1	HDLC standard	s (frame format)	0	
Error control system		CRC(X ¹⁶ +X ¹² +X ⁵ +1) a	and retry by a time over	0	
RAS function		Loop-back function due to error detection Diagnostic function for checking local lin	on or broken cable nk lines	0	
Number of occupied I/O points		CPU integrated type: 0 point, Standalone:32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	Δ	When replacing from a CPU integrated type, an additional slot (32 points) is required.

O: Compatible, $\bigtriangleup:$ Partial change required, ${\sf \times}:$ Incompatible

(2) Comparison between MELSECNET (II) module (coaxial loop) and MELSECNET/H module (coaxial bus)

\bigcirc : Compatible, \triangle : Partial change required, × : Incom	npatible
---	----------

		Specifi	Compat	Dressutions for	
Item		MELSECNET (II) module	MELSECNET/H module	Compat-	Precautions for
		Coaxial loop	Coaxial bus (QJ71BR11)	ibility	replacement
	X/Y	Max. 2048 points and max. number of I/O points of CPU module on master station	(MELSECNET/10 mode), (MELSECNET/H mode), (MELSECNET/H extended mode) 8192 points	0	
Maximum number of link points per network	в	(MELSECNET mode) 1024 points (MELSECNET II mode), (MELSECNET II composite mode) 4096 points	(MELSECNET/10 mode) 8192 points (MELSECNET/H mode), (MELSECNET/H extended mode) 16384 points	0	
	w	(MELSECNET mode) 1024 points (MELSECNET II mode), (MELSECNET II composite mode) 4096 points	(MELSECNET/10 mode) 8192 points (MELSECNET/H mode), (MELSECNET/H extended mode) 16384 points	0	
Maximum number of link points per station		(MELSECNET mode) 1024 bytes (MELSECNET II mode), (MELSECNET II composite mode) First half: 1024 bytes Second half: 1024 bytes	 (MELSECNET/10 mode), (MELSECNET/H mode) {(LY + LB) ÷ 8 + (2 × LW)} ≤ 2000 bytes (MELSECNET/H extended mode) {(LY + LB) ÷ 8 + (2 × LW)} ≤ 35840 bytes 	Δ	When the number of bytes exceeds 2000, mount two modules having the same network No., or set all modules on the network in the MELSECNET/H extended mode.
Communicat speed	ion	1.25Mbps	10Mbps	0	
Number of stations connected in one network		65 stations (master station: 1, local station + remote I/O station: 64)	32 stations (control station: 1, normal station: 31)	Δ	 Set the remote I/O network to a separate network. For the 33th station, configure a separate network.
Applicable cable		3C-2V 5C-2V		Δ	When using existing cables, the overall distance and distance between stations becomes shorter.
Overall distance		3C-2V: 10km 5C-2V: 10km	3C-2V: 300m 5C-2V: 500m	Δ	Either use an A6BR10/ A6BR10-DC type repeater unit, or configure a separate network.
Distance between stations		3C-2V: 500m 5C-2V: 500m	3C-2V: 300m 5C-2V: 500m	Δ	When using the 3C-2V, use the A6BR10/A6BR10-DC type repeater unit.
Maximum number of networks		-	239	Δ	New MELSECNET/H parameter (mandatory)
Communication method		Half duplex bit serial method	Token ring method	Δ	Nothing to be noted though the communication method differs.
Transmission method		Duplex loop	Single bus	Δ	Nothing to be noted though the transmission method differs.
Modulation method (Encoding method)		(Modulation method) CMI method	(Encoding method) Manchester code	Δ	Nothing to be noted though the modulation method differs.
Transmissior format	Ansmission HDLC standards (frame format)		s (frame format)	0	
Error control CRC(X ¹⁶ +X ¹² +X ⁵ +1) and retry by a time over		and retry by a time over	0		
system		 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines 	Diagnostic function for checking local link lines	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Number of occupied I/O points		CPU integrated type: 0 point, Standalone:32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	Δ	When replacing from a CPU integrated type, an additional slot (32 points) is required.

(3) Comparison between MELSECNET/B module (twisted pair) and MELSECNET/H module (optical loop/coaxial bus)

O: Compatible. A: Partial change required. X : Incompatible	O: Compatible.	∆: Partial	change required.	× :	Incompatibl
---	----------------	------------	------------------	-----	-------------

		Specifi				
Itom		MELSECNET/B module	MELSECNE	T/H module	Compat-	Precautions for
Item		Twisted pair	Optical loop	Coaxial bus	ibility	replacement
			(QJ71LP21-25)	(QJ71BR11)		
			(MELSECNET/10 mc	ode),		
	X/Y	Max. 2048 points and max. number of I/O	(MELSECNET/H mod	de),	0	
		points of CPO module on master station		ended mode) 8 192		
Maximum		(MELSECNET mode) 1024 points	(MELSECNET/10 r	mode) 8192 points		
number of	_	(MELSECNET II mode).	(MELSECNET/H m	node).		
link points	В	(MELSECNET II composite mode) 4096	(MELSECNET/H e	xtended mode)	0	
per network		points	16384 points	,		
		(MELSECNET mode) 1024 points	• (MELSECNET/10 r	mode) 8192 points		
	w	(MELSECNET II mode),	(MELSECNET/H m	node),	0	
		(MELSECNET II composite mode) 4096	(MELSECNET/H e	xtended mode)	Ŭ	
		points	16384 points			
		• (MELSECNET mode) 1024 hytes	(MELSECNET/10 r	mode),		When the number of bytes
Maximum nu	mher	• (MELSECNET Hode)	(MELSECNET/H m	node)		modules having the same
of link points	per	(MELSECNET II composite mode)	{(LY + LB) ÷ 8 + (2	× LW)} \leq 2000 bytes	~	network No., or set all
station	r -	Link parameter first half: 1024 bytes	(MELSECNET/H e	xtended mode)	-	modules on the network in
		Link parameter second half: 1024 bytes	{(LY + LB) ÷ 8 + (2	× LW)} ≦ 35840		the MELSECNET/H
			bytes			extended mode.
Communicat	ion	125kbps/250kbps/500kbps/1Mbps	25Mbps/10Mbps	-	0	
speed			-	10Mbps	0	
			64 stations (control			Set the remote I/O network
Number of stations			station: 1	-	\triangle	to a separate network.
connected in	one	32 stations (master station: 1,	normal station: 63)	00.1.1.1		
network		local station + remote I/O station: 31)		32 stations (control		Set the remote I/O network
			-	normal station: 31)		to a separate network.
			SI optical cable	normal otationi o ry		
			H-PCF optical cable			A new entirel achie has to
			Broad-band H-PCF	-	Δ	A new optical cable has to
Applicable ca	able	Shielded twisted pair cable	optical cable			be installed.
			QSI optical cable			
			-	3C-2V	Δ	A new coaxial cable has to
			001.0	50-20		de installed.
		125kbps: 1200m	30km	-	0	
Overall dista	nce	250kbps: 600m		3C 21/- 300m		Lither use an A6BR10/
	100	500kbps: 400m	-	5C-2V: 500m		unit or configure a
		1Mbps: 200m		00 21.000		separate network.
						When 1200 m is required,
			Pofor to Soction			use GI optical cables for all
		125kbps: 1200m	222	-	\triangle	optical cables, and use
Distance bet	ween	250kbps: 600m				QJ71LP21G as the
stations		500kbps: 400m				module.
		1Mbps: 200m		2C 2V/: 200m		Either use an A6BR10/
			-	5C-2V: 500m	\triangle	unit or configure a
				00 21.000		separate network.
Maximum number						New MELSECNET/H
of networks		-	23	39	Δ	parameter (mandatory)
Communicat	ion					Nothing to be noted though
method	01	Half duplex bit serial method	Token bu	is method	Δ	the communication method
				Γ		differs.
			Due la l			Nothing to be noted though
Transmission	1	Single bus		-	Δ	the transmission method
method				Single hue		uiiicis.
		1	-	Single bus	0	

	Specifications				
ltem	MELSECNET/B module MELSECNET/H module 0			Compat-	Precautions for
nem	Twisted pair	Optical loop (QJ71LP21-25)	Coaxial bus (QJ71BR11)	ibility	replacement
Modulation		(Encoding method) NRZI coding	-	0	
method (Encoding method)	(Modulation method) NRZI method	-	(Encoding method) Manchester code	Δ	Nothing to be noted though the modulation method differs.
Transmission format	HDLC standards (frame format)				
Error control system	CRC(X ¹⁶ +X ¹² +X ⁵ +1) and retry by a time over			0	
RAS function	Diagnostic function for checking local link lines			0	
Occupied I/O points	Standalone:32 points per slot (I/O assignment: special 32 points)	32 points per slot (1/0 32 po	O assignment: intelli. pints)	0	

2.2.2 Cable performance comparisons

(1) Optical fiber cable

(a) Overall distance

The overall distance (30km) does not differ according to the optical fiber cable.

(b) Distance between stations

1) SI optical fiber cable

O: Compatible, \triangle : Partial change required, × : Incompatible

Туре		MELSECNET (II) MELSECNET/I module (optical I		T/H module al loop)	Compat-	Precautions for
		(optical loop)	10Mbps	25Mbps	ionity	replacement
SI optical fiber cable	L type	1km	500m	200m	Δ	
(Type: A-2P-□)	H type	500m	300m	100m	Δ	Refer to ^{*1} below
SI optical fiber cable (Type: AN-2P-□)		1km	500m	200m	Δ	
H-PCF optical fiber cable		1km	1km	400m	Δ	Refer to ^{*2} below.
Broad-band H-PCF optical fiber cable		-	1km	1km	0	
QSI optical fiber cable		-	1km	1km	0	

*1 When the distance between stations does not satisfy the MELSECNET/H specifications, either change the type of optical fiber cable, or install a gateway station midway along existing cables.

*2 When the distance between stations does not satisfy the MELSECNET/H specifications, use at a communication speed of 10 Mbps, change the type of optical fiber cable, or install a gateway station midway along existing cables.

2) GI optical fiber cable

O: Compatible, \triangle : Partial change required, × : Incompatible

Туре	MELSECNET (II) module (optical loop)	MELSECNET/H module (optical loop)	Compat- ibility	Precautions for replacement
GI optical fiber cable	2km	2km	0	

(2) Coaxial cable

(a) Overall distance

Туре	MELSECNET (II) module (coaxial loop)	MELSECNET/H module (coaxial bus)	Compat- ibility	Precautions for replacement
3C-2V	10km	300m	Δ	D () (*3) ()
5C-2V	10km	500m	Δ	Refer to ° below.

*3 When the overall distance does not satisfy the MELSECNET/H specifications, either use an A6BR10/A6BR10-DC type repeater unit in the network, or configure a separate network.

(b) Distance between stations

O: Compatible, $\bigtriangleup:$ Partial change required, $\times:$ Incompatible

O: Compatible, A: Partial change required, × : Incompatible

Туре	MELSECNET(II)module (coaxial loop)	MELSECNET/H module (coaxial bus)	Compat- ibility	Precautions for replacement	
3C-2V	500m	300m	Δ		
5C-2V	500m	500m	0	Refer to ⁴ below.	

*4 When the distance between stations does not satisfy the MELSECNET/H specifications, either use an A6BR10/A6BR10-DC type repeater unit in the network.

```
Remarks
```

The following shows the extension method when a repeater unit for the A6BR10/A6BR10-DC type MELSECNET/10 coaxial bus system is used.

For details, refer to the Repeater Unit for the MELSECNET/10 Coaxial Bus System type A6BR10/ A6BR10-DC User's Manual (IB-66499).

(1) The distance between stations of 500m (5C-2V) and 300m (3C-2V) can be extended.



(2) Up to four repeater units can be used in a single network.^{*5}





(3) Twisted pair cable

(a) Overall distance, Distance between stations

O: Compatible, $\bigtriangleup:$ Partial change required, $\times:$ Incompatible

	Specifi	ications						
Communication	MELSECNET/B module	MELSECNE (QJ711	T/H module NT11B)	Compat-	Precautions for replacement			
Speeu	Twisted pair cable	Twisted pair cable	CC-Link dedicated cable	ibility				
125kbps	1200m	1200m	1200m	0				
250kbps	600m	-	-	0	Change the communication speed from 250Kbps to			
312kbps	-	600m 900m 312Kbps.		312Kbps.				
500kbps	400m	-	-	0	Change the communication speed from 500Kbps to			
625kbps	-	400m	600m	0	625Kbps.			
1Mbps	200m	-	-	0	Change the communication speed from 1Mbps to			
1.25Mbps	-	200m	400m	0	1.25Mbps.			
2.5Mbps	-		200m	-				
5Mbps	-	(Not available)	150m	-	New function of MELSECNET/H			
10Mbps	-	1	100m	-	1			

(b) Cable performance

1) Twisted pair cable

Item	Specifications (KNPEV-SB 0.5SQ × 1P*1)
Cable type	Shielded twisted pair cable
Number of cores	2
Conductive resistance (20°C)	39.4 Ω/km or lower
Insulation resistance (20°C)	10 MΩ/km or higher
Dielectric withstand voltage (V-min)	1000 V AC for one minute
Electrostatic capacity (1kHz)	70 nF/km or less (on average)
Characteristic impedance (100kHz)	110 ± 10Ω
	Biue

Cross section



*1 The same specifications as the MELSECNET/B twisted pair cable.

To use the existing MELSECNET/B twisted pair cables, process the terminals.

For details, refer to the Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network) (SH-080049).

2) CC-Link dedicated cable

Product name	Mdele name	Remark
Ver 1 10 compatible CC Link dedicated cable	FANC-110SBH	
	FA-CBL200PSBH	

	Descr	ription	Compat	Precautions for	
Item	MELSECNET (II) module MELSECNET/B module	MELSECNET/H module	ibility	replacement	
Cyclic transmission	 X/Y are used to perform 1:1 communications between the master station and local stations, and the master station and remote I/O stations. B/W are used to perform communications between the master station and all local stations. 	 LX/LY are used to perform 1:1 communications between the control station and normal stations. LB/LW are used to perform communications between the control station and all normal stations. 	0		
Transient transmission	 The LRDP/LWTP instructions issued from the master station are used to read/write devices on the programmable controller CPU of local stations. Other stations are accessed from GX Developer connected to the master station. The master station is accessed from GX Developer connected to local stations. 	 The READ/WRITE/ZNRD/ ZNWR instructions issued from the control station are used to read/write devices on the programmable controller CPU of normal stations. Other stations are accessed from GX Developer connected to the control station. The control station and other normal stations are accessed from GX Developer connected to a normal station. 	Δ	Correct the LRDP/LWTP instructions for reading/ writing devices on the programmable controller CPU of other stations to the READ/WRITE or ZNRD/ ZNWR instructions. (Refer to Section 2.6.2.)	
Automatic return function	When a disconnected local station returns to normal status, it is automatically restored and the data link is resumed.	When a disconnected normal station returns to normal status, it is automatically restored and the data link is resumed.	0		
Loopback function	In the case of an optical loop system and coaxial loop system, faulty parts are disconnected when a fault (e.g. cable disconnection) occurs, and normal operation is continued on operable stations as a result of the loopback.	In the case of an optical loop system, faulty parts are disconnected when a fault (e.g. cable disconnection) occurs, and normal operation is continued on operable stations as a result of the loopback.	0		
Error detection	Faulty parts are detected by the data of special relays (M9200 to 9255) and special registers (D9200 to 9255).	Faulty parts are detected by the data of link special relays (SB0 to 1FF) and link special registers (SW0 to 1FF).	Δ	Change the devices in the sequence program. (Refer to Section 2.6.2.)	
Self-diagnosis test function	Set the following test items by the mode setting switch: • Self-loopback test • Station-to-station test • Forward loop/reverse loop test	Set the following test items by the mode setting switch: • Self-loopback test • Internal self-loopback test • Hardware test Set the following test items in the network parameters: • Station-to-station test • Forward loop/reverse loop test	Δ	Set the station-to-station test and forward loop/ reverse loop test in the network parameter settings.	

O: Compatible, $\bigtriangleup:$ Partial change required, $\times:$ Incompatible

2.4 Switch Settings Comparisons

(1) Comparison between MELSECNET (II) modules and MELSECNET/H (optical loop and coaxial bus) modules

		O: Compatible	$, \Delta$. Partial 0	change required, * . Incompatible	
Switch nome	Desci	ription	Compat-	Precautions for	
Switch hame	MELSECNET (II) module	ibility	replacement		
Station number setting switch	Sets the station number.	Sets the station number.	0		
Mode select switch	Sets the mode for operation or self-diagnostics test.	Sets the mode for operation or self-diagnostics test.	Δ	Set the station-to-station test and forward loop/ reverse loop test in the GX Developer network parameters.	

(2) Comparison between MELSECNET/B modules and MELSECNET/H (optical loop and coaxial bus) modules

 \bigcirc Compatible, \triangle : Partial change required, × : Incompatible

Or Operate the Art Destint share as a surfaced on a large starting

Switch nome	Desci	ription	Compat-	Precautions for
Switch hame	MELSECNET/B module	MELSECNET/H module	ibility	replacement
Station number setting switch	Sets the station number.	Sets the station number.	0	
Mode select switch	Sets the mode for operation or self-diagnostics test.	Sets the mode for operation or self-diagnostics test.	Δ	Set the station-to-station test and forward loop/ reverse loop test in the GX Developer network parameters.
Communication speed setting switch	Sets the communication speed.	-	Δ	The setting is not required.

(3) Comparison between MELSECNET/B modules and MELSECNET/H (twisted bus) modules

O: Compatible, \triangle : Partial change required, × : Incompatible

Switch name	Desci	ription	Compat-	Precautions for
Switch hame	MELSECNET/B module	MELSECNET/H module	ibility	replacement
Station number setting switch	Sets the station number.	A station number is set using the station number/mode setting switch.	0	
Mode select switch	Sets the mode for operation or self-diagnostics test.	A self-diagnostic test is set using the station number/mode setting switch.	0	
Communication speed setting switch	Sets the communication speed.	Sets the communication speed.	Δ	Set a communication speed in the network parameter dialog box of GX Developer.

2.5 Parameter Comparisons

2.5.1 Parameter comparisons

The network parameters of MELSECNET (II) are deleted when the programmable controller type is changed with the GX Developer. After changing the programmable controller type, set the MELSECNET/H network parameters again.

(1) Replacing MELSECNET (II) with MELSECNET/H

The following shows a comparison between MELSECNET (II) network parameter settings and MELSECNET/H network parameter settings.

The MELSECNET (II) master station settings are compared with the MELSECNET/H control station settings, and the MELSECNET (II) local station setting are compared with the MELSECNET/H normal station settings.



O: Compatible, \triangle : Partial change required, × : Incompatible

		MELSECNET (II)			MELSECNET/H	Compat- ibility	Precautions for replacement
	Net	work type		Ne	twork type	0	
	Sta	rting I/O No. ^{*1}		Sta	arting I/O No.	0	
	- (N	lo setting)		Ne	twork No.	\triangle	Mandatory for the MELSECNET/H.
	Tota	al number of (slave) stations		Tot	al number of (slave) stations	Δ	The total number of stations is 64 at maximum.
	- (N	lo setting)		Group No.		\triangle	Mandatory for the MELSECNET/H.
station	nts		station	nts	LX/LY assignments on the control station and normal stations	0	
ters	LB/LW assignments (first half,		trol	Jme	Station inherent parameter	Δ	*2
Mas	k range assig	second half) on the master station and local stations	Con	k range assig	Supplemental settings-Secured data send Supplemental settings-Secured data receive	Δ	*3
	Vetwor	LX/LY assignments on the master		Vetwor	LX/LY assignments on the control station and normal stations	0	
	-	station and local stations		-	I/O master station specification	\triangle	Mandatory on communications of LX/LY
	Ref	resh parameters ^{*1}		Re	fresh parameters	0	
	Net	work type ^{*1}		Ne	twork type	0	
E	Sta	rting I/O No. ^{*1}	uo	Sta	arting I/O No.	0	
static			stati	Ne	twork No.	Δ	Mandatory for the MELSECNET/H.
cal	- (N	lo setting)	mal	Gro	oup No.	Δ	Mandatory for the MELSECNET/H.
Ľ			Noi	Sta	tion inherent parameter	Δ	*2
	Ref	resh parameters ^{*1}		Re	fresh parameters	0	

*1 This is set when the AnU/AnUS(H)/QnA/QnASCPU is mounted.

*2 Applied when LB/LW are set for both the first half/second half on MELSECNET (II). (For details, refer to Section 2.5.2 Example of changing parameters on 2-tier system.)

*3 This is the data separation prevention function for reading/writing cyclic data of two words or more in a single operation. (For details, refer to Section 2.7 Replacement Precautions.)

2.5.2 Example of changing parameters on 2-tier system

The following shows examples of how to change the LB/LW network parameters when replacing the MELSECNET (II) with MELSECNET/H.

As MELSECNET (II) has three operation modes, the examples are shown for each operation mode.

- MELSECNET mode
- MELSECNET II mode
- MELSECNET II composite mode

(1) MELSECNET mode

The following shows the procedure for changing the parameters in the case of a MELSECNET mode 2tier system configuration.

The MELSECNET master station is replaced with the MELSECNET/H control station, and MELSECNET local stations are replaced with MELSECNET/H normal stations.



A MELSECNET/H module set as normal station requires network parameter setting. For replacement of MELSECNET (II) module mounted on the CPU module of the AnN/AnA/AnSCPU (excluding AnUS(H)CPU), newly set network parameters.

	Common parameter (Network range assignment)	Refresh parameter
1Mp1	0	Δ
ninpr	(Refer to example in (c) 2))	(Refer to example in (c) 3))
1Nc2		Δ
11132		(Refer to example in (d) 2))
1Nc3		Δ
11155		(Refer to example in (d) 2))
1Nc4		Δ
11134		(Refer to example in (d) 2))

The following shows parameters required on each station of MELSECNET/H.

 $O: Setting \ required \ (Default \ setting \ is \ also \ acceptable)$

(a) MELSECNET master station

The following shows the network parameter settings of the MELSECNET master station (A3ACPU).

	_ Module No.1	Module No.2	Module No.3	Module No.4
Network type	MNET(Master station)	None 🚽	None	 None
Start I/O No.				
Network No.				
Total stations	3			
Group No.				
Station No.				
	Network range assignment			
Necessarv setting(No setting / Already set 1 Set if it is ne	eded(Nosetting / Alreadyset)		
	Start I/O No.:	Valid module during other sta	tion access	

Setup comm	ion paramete	ers											
Assignment m	ethod tart	Mor	nitoring time	200	×10ms								
Start/En/	ł	Tota stati	al slave ions	3		Swito	h screens	LB/LW	/ settings	-	•		
	Send ra	nge for ea	ach station	Send ra	ange for ea	ach station	M stati	on -> R sta	ation	M stati	on <- Rista	ation	
													_
L/R		LB			LW			LW			LW		
L/R station No.	Points	LB Start	End	Points	LW Start	End	Points	LW Start	End	Points	LW Start	End	
L/R station No. M 0	Points 256	LB Start 0000	End 00FF	Points 256	LW Start 0000	End 00FF	Points	LW Start	End	Points	LW Start	End	
L/R station No. M 0 L 1	Points 256 256	LB Start 0000 0100	End 00FF 01FF	Points 256 256	LW Start 0000 0100	End 00FF 01FF	Points	LW Start	End	Points	LW Start	End	
L/R station No. M 0 L 1 L 2	Points 256 256 256	LB Start 00000 0100 0200	End 00FF 01FF 02FF	Points 256 256 256	LW Start 0000 0100 0200	End 00FF 01FF 02FF	Points	LW Start	End	Points	LW Start	End	

(b) MELSECNET local station

As all stations perform cyclic communication according to the network range assignments of the master station (A3ACPU), there are no parameter settings for network range assignment on local stations.

(c) MELSECNET/H control station

The following shows the network parameter settings after replacing with the MELSECNET/H control station (Q06HCPU).

	Module 1		Module 2		Module 3		Module 4
Network type	MNET/H mode (Control station)	-	None	-	None	-	None
Starting I/O No.		0000					
Network No.		1					
Total stations		4					
Group No.		0					
Station No.							
Mode	On line	-		•		-	
	Network range assignment						
	Refresh parameters						
	Interrupt settings						
	Return as control station	-					
	Optical/coaxial	•					

2) Network ran	ge ass	ignmen	nt (Q06	HCPU:	MELS	ECNET	T/H cor	ntrol sta	ation)						
Setup common a	nd Station	inherent p	arameters.												
Assignment method-					_	Daramator									
O Points/Start		Monitorin	ng time	200 X 1	Oms	Falalleter	name								
Start/End		Total sla stations	ve [4		Switch scr	eens L	.B/LW set	tings	•					
	Send r	ange for ea	ach station	Sendra	ange for e	ach station	Sendir	ange for e	ach station	Send r	ange for ea	ach station	n		
Station No.		LB			LW			Low spee	ed LB		Low spee	dLW	Pairing	j	
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End			
1	256	0000	OOFF	256	0000	OOFF							Disable	-	
2	256	0100	01FF	256	0100	01FF							Disable	-	
3	256	0200	02FF	256	0200	02FF							Disable	-	
4	128	0300	037F	128	0300	037F							Disable	-	-
•														Þ	

Refresh para	meters	; (Q0	6HCPU: M	ELSECNE	T/H contro	l stati	on)					
Assignment me C Points/Sta Start/End	ethod — art				Trans (ient tr ∙ Ov	ansmiss erwrite	ion e	rror history s O Hold	tatus —		
				Link side						PLC side		•
	Dev. n	name	Points	Start	End		Dev. n	ame	Points	Start	End	
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF	
Transfer SW	S₩		512	0000	01FF	+	SW		512	0000	01FF	
Random cyclic	LB					+		-				
Random cyclic	LW							-				
Transfer1	LB	•	896	0000	037F	+	В	-	896	0000	037F	
Transfer2	LW	-	896	0000	037F	+	W	-	896	0000	037F	
Transfer3		٠				+		-				
Transfer4		٠				+		-				
Transfer5		-				+		-				
Transfer6		•				+		-				•

(d) MELSECNET/H normal station

The following shows the network parameter settings after replacing with a MELSECNET/H normal station (Q02HCPU).

The same parameter settings are required on all normal stations.

1) Network parameter setting (Q02HCPU: MELSECNET/H normal station)

	Module 1	Module 2	Module 3	Module 4
Network type	MNET/H mode (Normal station)	None	None 👻	None
Starting I/O No.	0000			
Network No.				
Total stations				
Group No.	(
Station No.				
Mode	On line 🗸	-	-	
	Station inherent parameters			
	Refresh parameters			
	Interrupt settings	1		

 Refresh paran Assignment me Points/Sta Start/End 	meters thod rt	s (Q0)2HCPU: M	ELSECNE	T/H norma	ient tr Ov	ion) ansmis: erwrite	sion ei (ror history s ÕHold	tatus —	
				Link side						PLC side	-
	Dev. r	name	Points	Start	End		Dev. r	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	S₩		512	0000	01FF		S₩		512	0000	01FF
Random cyclic	LB							-			
Random cyclic	LW					+		-			
Transfer1	LB	-	896	0000	037F	+	В	-	896	0000	037F
Transfer2	LW	-	896	0000	037F	+	W	-	896	0000	037F
Transfer3		-				+		-			
Transfer4		-				+		-			
Transfer5		-				+		-			
Transfer6		-				+		-			

The following shows the procedure for changing the parameters in the case of a MELSECNET II mode 2-tier system configuration.



Each of the MELSECNET II first and second half settings correspond to [Setting1] and [Setting2] set to all stations according to the "Station inherent parameters" on MELSECNET/H. (Example) Station inherent parameters of a normal station (1Ns2)

CPU MELSECNET/H (normal station: 1Ns2) Common parameters (LB/LW) Station inherent parameters (LB/LW) 0 000 0 1M_P1 to FF --1Mp1---100 1Ns2 to 1FF 1FF 200 1Ns3 to 200 Refresh 2FF 300 - 1Ns2 ---1Ns4 to Send/receive 3FF data 3FF Each station 3FF 800 800 400 1M⊵1 to 8FF --1Ns3---900 1Ns2 to 9FF 5FF A00 1Ns3 to 600 8FF AFF 1Ns4 6FF

MELSEC

A MELSECNET/H module set as normal station requires network parameter setting. For replacement of MELSECNET (II) module mounted on the CPU module of the AnN/AnA/AnSCPU (excluding AnUS(H)CPU), newly set network parameters.

The following shows	s parameters	required	on each	station	of MELS	ECNET/H.
---------------------	--------------	----------	---------	---------	---------	----------

	Common parameter (Network range assignment)	Station inherent parameter	Refresh parameter
1Mp1	0	0	Δ
nup i	(Refer to example in (b) 2))	(Refer to example in (b) 3))	(Refer to example in (b) 4))
1Nc2		0	Δ
11152		(Refer to example in (c) 2))	(Refer to example in (c) 3))
1Ne3		0	Δ
11155		(Refer to example in (c) 2))	(Refer to example in (c) 3))
1Ne/		0	Δ
11134		(Refer to example in (c) 2))	(Refer to example in (c) 3))

O: Setting required/ △: Setting required (Default setting is also acceptable)

(a) MELSECNET II master station

The following shows the network parameter settings of the MELSECNET II master station (A3ACPU).

	Module No.1	Module No.2	Module No.3	Module No.4
Network type	MNET II (Master station)	None	 None 	✓ None
Start I/O No.				
Network No.				
Total stations	3	1		
Group No.				
Station No.				
	Network range assignment			
			-	
Necessary setting	(Nosetting / Alreadyset) Set if it is ne	eded(Nosetting / Alreadyset)		
P.1.4	Start I/O No.:	Valid module during other st	ation access	
	neters inportation of the moduled in a	io modulo in ro point ant.		

2) Network ra	nge assi	gnment	(A3ACI	PU: ME	SECN	ET II ma	ster sta	tion)				
Setup commo	in paramete	ers										
Assignment met O Points/Sta	thod art	Mor	nitoring time	200	X 10ms							
Start/End		stat	ai siave ions	3		Swito	h screens	LB/LW	/ settings		•	
	Send range for each station Send range for each station Send range for each station								Send r	ange for ea	ach station 🔺	
L/R		First half L	.В	First half LW			Second half LB			Second half LW		
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End
MO	256	0000	OOFF	256	0000	00FF	256	0800	08FF	256	0800	08FF
IIL 1	256	0100	01FF	256	0100	01FF	256	0900	09FF	256	0900	09FF
IIL 2	256	0200	02FF	256	0200	02FF	256	0A00	0AFF	256	0A00	OAFF
IIL 3	256	0300	03FF	256	0300	03FF						-
•												•

(b) MELSECNET/H control station

Each of the MELSECNET II first and second half settings correspond to [Setting1] and [Setting2] set according to the "Station inherent parameters" on MELSECNET/H.

Points when replacing the first and second half of MELSECNET II

MELSECNET sequence programs can be re-used more efficiently by using the station inherent parameters of MELSECNET/H. The followings describe the points when setting station inherent parameters.

• Set station inherent parameters to all stations.

• As the "station inherent parameter" setting functions cannot be used on basic models (Q00JCPU, Q00CPU, Q01CPU), use the [Device block replacement] function to change the devices in the first and second half settings to continuous numbers.

1) Network parameter

The network parameter settings of the MELSECNET/H control station (Q06HCPU) are the same as the parameters when replaced with the MELSECNET mode.

Network parameter setting (Q06HCPU: MELSECNET/H control station)

	Module 1	Module 2	Module 3	Module 4
Network type	MNET/H mode (Control station) 🛛 🗸	None 👻	None 👻	None 👻
Starting I/O No.	0000			
Network No.	1			
Total stations	4			
Group No.	0			
Station No.				
Mode	On line 🗸 🗸		•	•
	Network range assignment			
	Refresh parameters			
	Interrupt settings			
	Return as control station 🗸 🗸			
∢				•

2) Network range assignment parameter

Set the total number of points in the first half and second half for the common parameters.

Setup common a	nd Station	inherent p	arameters.												
Assignment method		Monitorin	ıg time 🗍	200 × 1	Oms	Parameter	name								
Start/End		Total sla stations	ve	4		Switch scr	eens 🛛	.B/LW sett	ings	•					
	Sendira	ange for ea	ach station	Send ra	ange for e	ach station	Sendir	ange for ea	ch station	Sendir	ange for ea	ach station	1		
Station No.		LB			LW			Low spee	dLB		Low spee	d LW	Pairing		
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	Ţ		Γ
1	512	0000	01FF	512	0000	01FF							Disable	-	İ
2	512	0200	03FF	512	0200	03FF							Disable	-	İ
3	512	0400	05FF	512	0400	05FF							Disable	-	İ
4	256	0600	06FF	256	0600	06FF							Disable	-	
4														Þ	ſ

3) Station inherent parameter

Set the first half in [Setting1] and the second half in [Setting2] as the inherent parameters.

Setup common and Station inherent parameters. Assignment method Opints/Start Monitoring time 200 × 10ms Parameter name © Points/Start Monitoring time 200 × 10ms Parameter name Image: Start Parameter name © Start/End Total slave stations 4 Switch screens LB/LW settings Image: Start Parameter name Station No. Send range for each station Station No. LB LW Low speed LB Low speed LW Pairin 1 512 0000 01FF Image: Start End Points Start End 1 512 0000 01FF Image: Start End Disable			
Assignment method Monitoring time 200 X 10ms Parameter name • Points/Start • Start/End • Total slave stations • Switch screens • LB/LW settings • Switch screens • LB/LW settings • Station No. • Send range for each station • Station No. • LB • LW • Low speed LB • Low speed LW • Points • Start • Doints • Start • End • 1 • 512 • 0000 • 01FF • 1 • Disable			
Station No. Send range for each station Station No. LB LW Low speed LB Low speed LW Points Start End Points Start End 1 512 0000 01FF 512 0000 01FF			
Station No. Send range for each station Pairin Points Start End Start End Points Start End			
Station No. LB LW Low speed LB Low speed LW Pairin Points Start End Points End Points End Points End Points End End <td></td> <td></td> <td>*</td>			*
Points Start End Start End Points Start End Start			
1 512 0000 01FF 512 0000 01FF Disable			
	-	·	
2 512 0200 03FF 512 0200 03FF Disable	-	·	
3 512 0400 05FF 512 0400 05FF Disable	-	·	
4 256 0600 06FF 256 0600 06FF Disable	-	·	-
		·	

4) Refresh parameters

Refresh parameters (Q06HCPU: MELSECNET/H control station)

Assignment me Points/Sta Start/End	ethod — art				Trans (sient tr ● Ov	ansmission e erwrite	error history s O Hold	or history status Hold				
				Link side					PLC side				
	Dev. n	ame	Points	Start	End		Dev. name	Points	Start	End			
Transfer SB	SB		512	0000	01FF	ŧ	SB	512	0000	01FF			
Transfer SW	SW		512	0000	01FF	+	SW	512	0000	01FF			
Random cyclic	LB					+	•						
Random cyclic	LW					+	•						
Transfer1	LB	•	1024	0000	03FF	+	B 💌	1024	0000	03FF			
Transfer2	LB	•	768	0800	0AFF	+	B 💌	768	0800	0AFF			
Transfer3	LW	•	1024	0000	03FF	+	W 💌	1024	0000	03FF			
Transfer4	LW	-	768	0800	0AFF	+	W 💌	768	0800	0AFF			
Transfer5		•				+	-						
Transfer6		•				+	-			•			

(c) MELSECNET/H normal station

1) Network parameter setting

The network parameter settings of MELSECNET/H normal stations (Q02HCPU) are the same as those of MELSECNET/H normal stations when replaced with the MELSECNET mode. (Refer to the Section 2.5.2 (1) MELSECNET mode.)

2) Station inherent parameter

For the station inherent parameter settings, settings of the same content as that for the control stations has to be set to all normal stations.

Station inh	erent pa	aramete	r (Q02l	HCPU:	MELSE	ECNET/	/H norm	nal static	on)					
Reference Drive/P Project I Refe	ce netwo ath C Name C erence	rk range a 2:VA to Q 206HCPU	assignme J_a 1 Read	ent I	Board Cance	al	Assig O Pi O Si	inment me oints/Starl tart/End	ethod —	Parame name Switch screen	eter I	LB sett	ings	•
Ch-1	tion No.		Setting 1			Setting 2		Network	range as:	signment	D-ii	ina		
Stat	JUNINU.	Points	Start	End	Points	Start	End	Points	Start	End	ган	ing		
	1	256	0000	00FF	256	0800	08FF	512	0000	01FF	Disable	-		
	2	256	0100	01FF	256	0900	09FF	512	0200	03FF	Disable	-		
	3	256	0200	02FF	256	0A00	0AFF	512	0400	05FF	Disable	-	·	
	4	256	0300	03FF				256	0600	06FF	Disable	-	-	

3) Refresh parameters

The same parameter settings are required on all normal stations.

Refresh parameters (Q02HCPU: MELSECNET/H normal station) Assignment method Transient transmission error history status O Points/Start Overwrite C Hold Start/End PLC side Link side ٠ Start Dev. name Dev. name Points End Points End Start Transfer SB H SB 512 0000 01FF SB 512 0000 01FF Transfer SW S₩ 512 0000 01FF SW 512 0000 01FF Ħ Random cyclic LB H Ŧ LW Random cyclic Ŧ Transfer1 LB 1024 0000 03FF **+**++ 1024 0000 03FF В Ŧ Ŧ Transfer2 LB 768 0800 **OAFF** В 768 0800 **OAFF** Ŧ Ŧ 03FF Transfer3 LW 1024 0000 03FF W 1024 0000 Ŧ H • Transfer4 LW 768 0800 **QAFF** W 768 0800 **0AFF** Ŧ ÷ Ŧ Transfer5 Ŧ Ŧ Ŧ Transfer6 • -

(3) MELSECNET II composite mode

The following shows the procedures for changing the parameters in the case of a MELSECNET II composite mode 2-tier system configuration on an A3ACPU.

MELSECNET (II)	MELSECNET/H
Optical loop	Optical loop
A3ACPU M A3ACPU L1 L2 A2ACPU MELSECNET II mode compatible link modules are used for the M and L2 stations, and a MELSECNET mode compatible link module is used for the L1 station.	Network 1 Q06HCPU Network 1 1Ns2 Q02HCPU
B/W 0 100 200 300 400 500 FFF	
M L1 L2 M L2	
Setting range of Setting range of second half of parameters ink parameters	

A MELSECNET/H module set as normal station requires network parameter setting. For replacement of MELSECNET (II) module mounted on the CPU module of the AnN/AnA/AnSCPU (excluding AnUS(H)CPU), newly set network parameters.

The following shows parameters required on each station of MELSECNET/H.

	Common parameter (Network range assignment)	Station inherent parameter	Refresh parameter
1Mp1	0	0	Δ
TWPT	(Refer to example in (b) 2))	(Refer to example in (b) 3))	(Refer to example in (b) 4))
1Nc2		0	Δ
11152		(Refer to example in (c) 2))	(Refer to example in (c) 3))
1No2		0	Δ
11155		(Refer to example in (c) 2))	(Refer to example in (c) 3))

O: Setting required/ \triangle : Setting required (Default setting is also acceptable)

(a) MELSECNET II composite mode master station

The following shows the network parameter settings of the MELSECNET II composite mode master station (A3ACPU).

1)	Network parameter settir	a	(A3ACPU: MELSECNET II composite mode mas	ster station)
	network parameter bettin	· M 1		stor otation	1

	Module No.1	Module No.2	Modu	ile No.3 Module	e No.4
Network type	INET II comp. (Master station)	✓ None	 None 	✓ None	
Start I/O No.					
Network No.					
Total stations		2			
Group No.					
Station No.					
	Network range assignment				
Necessary setting(N	osetting / Alreadyset) Set if it is Start I/0 No.: Input the start I/0 No. installed in	needed(Nosetting / Alreadyse Validin during the module in 16-point unit.	et) nodule other station access 1	-	

) Network rai	nge assi	ignment	(A3ACF	PU: MEI	SECNE	ET II con	nposite i	mode m	aster sta	ation) : F	first half		
Setup commo	n paramete	ers											
Assignment met	hod — —	Mor	nitoring time	200	×10ms								
Start/End	Points/Start Start/End Start/End					Swite	h screens:	First ha	alf LB/LW	setting	•		
	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station	M stati	on -> Rista	ation	M stati	on <-R st	ation	
L/R		First half L	B		First half L	W	LW				LW		
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO	256	0000	00FF	256	0000	00FF							
L 1	256	0100	01FF	256	0100	01FF							
IIL 2	256	0200	02FF	256	0200	02FF							-
•												•	

Network ra	inge assi	ignment	(A3ACI	PU: ME	LSECNE	ET II cor	nposite	mode m	aster s	tation) : :	Second	half
Setup comm	on paramet	ers										
Assignment method Monitor Points/Start Start/End Stations				200	× 10ms	Swite	ch screens	Secon	d half LB/	LW settin	•	
	Sendra	ange for ea	ach station	Send r	ange for ea	ach station						4
L/R		Second h	ialf LB		Second h	ialf LW						
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End
MO	256	0300	03FF	256	0300	03FF						
L 1												
IIL 2	256	0400	04FF	256	0400	04FF						•
•												

(b) Q06HCPU (control station)

Each of the MELSECNET II first and second half settings correspond to [Setting1] and [Setting2] set according to the "Station inherent parameters" on MELSECNET/H.

Points when replacing the first and second half of MELSECNET II

MELSECNET sequence programs can be re-used more efficiently by using the station inherent parameters of MELSECNET/H. The followings describe the points when setting station inherent parameters.

• Set station inherent parameters to all stations.

• As the "station inherent parameter" setting functions cannot be used on basic models (Q00JCPU, Q00CPU, Q01CPU), use the [Device block replacement] function to change the devices in the first and second half settings to continuous numbers.

1) Network parameter

The network parameter settings of the MELSECNET/H control station (Q06HCPU) are the same as the parameters when replaced with the MELSECNET mode.

network parameter setting (Q06HCPU: MELSECNET/H control station)

	kalandu da 1	M-44-0	Marketa D	Markula A
Network type	Module 1 MNET/H mode (Control station)	None -	None -	None -
Charting L/O Mo	0000	•	•	
Statung 170 No.	1			
Network No.	1			
Total stations	3			
Group No.	0			
Station No.				
Mode	On line 👻	-	•	~
	Network range assignment			
	Refresh parameters			
	Interrupt settings			
	Return as control station 🖉 👻			
•				

2) Network range assignment parameter

Set the total number of points in the first half and second half for the common parameters.

occup common a	nd Station	inherent pa	arameters.											
Assignment method Points/Start		Monitorin	ıg time 🛛	200 × 1	Oms	Parameter	name							
Start/End		Total slav stations	ve [3		Switch sci	reens L	B/LW sett	ings	•				
	Send ra	ange for ea	ach station	Send ra	ange for ea	ach station	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station	1	
					TW.			Low spee	dLB		Low spee	ed LW	T Pairing	
Station No.		LB			L **									
Station No.	Points	LB Start	End	Points	Start	End	Points	Start	End	Points	Start	End	1	
Station No.	Points 512	LB Start 0000	End 01FF	Points 512	Start 0000	End 01FF	Points	Start	End	Points	Start	End	Disable	-
Station No.	Points 512 256	LB Start 0000 0200	End 01FF 02FF	Points 512 256	Start 0000 0200	End 01FF 02FF	Points	Start	End	Points	Start	End	Disable Disable	•

3) Station inherent parameter

Set the first half in [Setting1] and the second half in [Setting2] as the inherent parameters.

Station inherent parameter (Q06HCPU: MELSECNET/H control station)

ference netwo ive/Path	rk range (assignme	ent			- Assig	gnment me oints/Start	ethod	Parame name	eter		
oject Name				Board		⊙ s	tart/End Switc scree				3 setting	IS .
Reference		Read		Cance	el 🛛							
		2 - 11 ¹ 4			 C = #in = 0		b 1_b		·			
Station No.		Getting 1 LB			Setting 2		Network	range as: LB	signment	Pairing	-	
Station No.	Points	Setting 1 LB Start	End	Points	Setting 2 LB Start	End	Network Points	range as: LB Start	signment End	Pairing	-	
Station No.	Points 256	Setting 1 LB Start 0000	End	Points 256	Setting 2 LB Start 0300	End	Network Points 512	range as: LB Start 0000	signment End 01FF	Pairing Disable		
Station No.	Points 256 256	Setting 1 LB Start 0000 0100	End 00FF 01FF	Points 256	Setting 2 LB Start 0300	End 03FF	Network Points 512 256	range ass LB Start 0000 0200	signment End 01FF 02FF	Pairing Disable Disable		

4) Refresh parameters

Refresh parameters (Q06HCPU: MELSECNET/H control station)

 Assignment method
O Points/Start

Transient transmission error history status

Start/End

Overwrite
 Overwrite
 Overwrite

				Link side						PLC side		
	Dev. na	ame	Points	Start	End		Dev. n	ame	Points	Start	End	
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF	Γ
Transfer SW	SW		512	0000	01FF	+	SW		512	0000	01FF	ŧ.
Random cyclic	LB					₩.		-				[
Random cyclic	LW					₩.		-				[
Transfer1	LB	-	1280	0000	04FF	₩.	В	-	1280	0000	04FF	1
Transfer2	LW	-	1280	0000	04FF	₩.	W	-	1280	0000	04FF	1
Transfer3		-				₩.		-				[
Transfer4		-				₩.		-				[
Transfer5		-				₩.		-				
Transfer6		-				₩.		-				•

(c) MELSECNET/H normal station

1) network parameter setting

The network parameter settings of MELSECNET/H normal stations (Q02HCPU) are the same as those of MELSECNET/H normal stations when replaced with the MELSECNET mode. (Refer to the MELSECNET mode.)

2) Station inherent parameter

For the station inherent parameter settings, settings of the same content as that for the control stations has to be set to all normal stations. (Refer to the station inherent parameters of the MELSECNET/H control station.)

Station inherent parameter (Q02HCPU: MELSECNET/H normal station)

eference netwo rive/Path	ence network range assignment e/Path C:\A to Q					Assi <u>o</u> O Po	Assignment method			eter			
roject Name 🛛	306HCPU	_a 1	▼ E	3oard		● SI	tart/End		Switch screen	s	.B settir	ngs	•
Reference		Read		Cance	el 📗								
	 	etting 1		(Setting 2		Network	range as:	ignment		_	•	
Station No.	9	∂etting 1 LB		(Setting 2 LB		Network	range as: LB	ignment	Pairin		•	
Station No.	Points	Setting 1 LB Start	End	Points	Setting 2 LB Start	End	Network Points	range ass LB Start	ignment End	Pairin	g	•	
Station No.	Points 256	Setting 1 LB Start 0000	End	Points 256	Setting 2 LB Start 0300	End	Network Points 512	range as: LB Start 0000	ignment End 01FF	Pairin Disable	g •	•	
Station No.	Points 256 256	Setting 1 LB Start 0000 0100	End 00FF 01FF	Points 256	Setting 2 LB Start 0300	End 03FF	Network Points 512 256	range ass LB Start 0000 0200	ignment End 01FF 02FF	Pairin Disable Disable	g •	•	

3) Refresh parameters

The same parameter settings are required on all normal stations.

Refresh parameters (Q02HCPU: MELSECNET/H normal station)

Points/Sta Start/End	art		 Transient transmission error history status Overwrite Hold 								
			Link side				PLC side 🔺				
	Dev. r	name	Points	Start	End		Dev. n	ame	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	+	SW		512	0000	01FF
Random cyclic	LB					+		-			
Random cyclic	LW					+		-			
Transfer1	LB	4	1280	0000	04FF	+	В	-	1280	0000	04FF
Transfer2	LW	-	1280	0000	04FF	+	W	-	1280	0000	04FF
Transfer3		4				+		-			
Transfer4		-				+		-			
Transfer5		-				+		-			
Transfer6		•				+		-			-
2.5.3 Example of changing parameters on 3-tier system (When only the first half of link parameter is set)

The following shows how to change a system on which first half of LB/LW link parameters is set, when replacing the MELSECNET (II) 3-tier system with MELSECNET/H. Network range assignment of the present MELSECNET (II) 3-tier system can be used in replacement with MELSECNET/H. The MELSECNET (II) 2-tier is replaced with the network 1 of MELSECNET/H, and 3-tier is replaced with the network 2. The MELSECNET (II) master station is replaced with the MELSECNET/H control station, and MELSECNET local stations are replaced with MELSECNET/H normal stations.



Concept of MELSECNET (II) 3-tier system replacement

Step 1: Control station (1Mp3) setting

Replace the link parameter setting of MELSECNET (II) 2-tier master station directly with "Network range assignment (Common parameters)" of MELSECNET/H network 1 control station 1Mp3.

Step 2: Gateway station (1Ns1/2Mp3) setting

Data transfer between 2 and 3-tier, performed automatically on MELSECNET (II), should be set with parameter setting on MELSECNET/H. Perform the following settings.

• Replace the link parameter setting of MELSECNET (II) 3-tier master station directly with "Network range assignment (Common parameters)" of MELSECNET/H network 2 control station 2Mp3.

The range assignment should be performed including the same LB/LW size as that of 1Mp3 to relay the network 1 control station 1Mp3.

• Set "Refresh parameters" not to duplicate B/W of networks 1 and 2 on the CPU.

• Set data transfer between 2 and 3-tier of MELSECNET (II) in "Interlink transmission parameters" between gateway stations 1Ns1 and 2Mp3.

Step 3: Normal station (1Ns2, 2Ns1, 2Ns2) setting

Set "Refresh parameters" of each normal station (1Ns2, 2Ns1, 2Ns2) on MELSECNET/H networks 1 and 2.

The following shows the flow of MELSECNET/H link data after being replaced from MELSECNET (II).



Network parameter setting is required for control and normal stations on MELSECNET/H.

	Common parameter (Network range assignment)	Station inherent parameter	Refresh parameter	Inter-link data transfer
1Mp3	O (Refer to example in (e) 2))	-	\triangle (Refer to example in (e) 3))	
1Ns2		-	\triangle (Refer to example in (f) 2))	
1Ns1		-	O (Refer to example in (g) 2))	O (Refer to example in (h) 1))
2Mp3	O (Refer to example in (g) 3))	-	O (Refer to example in (g) 4))	
2Ns1		-	\triangle (Refer to example in (i) 2))	
2Ns2		-	\triangle (Refer to example in (i) 2))	

The following shows parameters required on each station of MELSECNET/H.

 $O: Setting \ required \ (Default \ setting \ is \ also \ acceptable)/ \ -: \ Setting \ not \ required$

(a) MELSECNET (II) 2-tier master station M

The following describes the network parameter setting of MELSECNET (II) 2-tier master station M (A3UCPU).

	Module No.1	Module No.2	Module No.3	Module No.4
Network type	MNET II (Master station) 🗸	None 💌	None 🗸	None
Start I/O No.	0000			
Network No.				
Total stations	2			
Group No.				
Station No.				
	Network range assignment			
	Refresh parameters			
Necessary setting(rflink transmission param cknowledge XY assignm	No setting / Already set) Set if it is ne Start I/D No.: Input the start I/D No. installed in th ent Routing parameters Chr	eded(Nosetting / Alreadyset) Valid module during other stat emodule in 16-point unit.	ion access 1	

Network range assignment (A3UCPU: MELSECNET (II) 2-tier master station M) 2) Setup common parameters Assignment method Monitoring time 200 ×10ms O Points/Start Total slave 2 Switch screens LB/LW settings Start/End • stations Send range for each station Send range for each station Send range for each station Send range for each station 🔺 L/R First half LB First half LW Second half LB Second half LW Points Start End Points Start End Points Start End Points Start End station No. 00FF Μ0 256 0000 00FF 256 0000 IL 1 384 0100 027F 384 0100 027F IL 2 256 0280 037F 0280 037F 256 • Þ

Assignment method Points/Start Start/End			C	nsient tra Overwrit	nsmission error ie 💿 Hole	history status —		
		Link side				PLC side	e	
	Points	Link side Start	End		BlockNo.	PLC sid Points	e Start	End
LB<->B transmission(1)	Points 896	Link side Start 0000	End 037F	+	BlockNo.	PLC sid Points 896	e Start 0000	End 037F
LB<->B transmission(1) LW<->W transmission(1)	Points 896	Link side Start 0000 0000	End 037F 037F	tt	BlockNo.	PLC sid Points 896 896	e Start 0000 0000	End 037F 037F

(b) MELSECNET (II) 2-tier local station L2

As the cyclic communication is performed according to the network range assignments of the 2-tier master station (A3UCPU), there is no parameter setting for network range assignment on 2-tier local stations.

(c) MELSECNET (II) 2-tier local station L1/3-tier master station m

The following describes the network parameter setting of MELSECNET (II) 2-tier local station L1/3-tier master station m (A3UCPU).

	Module No.1		Module No.2	Module No.3	Module No.4	
Network type	MNET II (Local station)	-	MNET II (Master station)	None	▼ None	•
Start I/O No.		0000	0020)		
Network No.						
Total stations			2	2		
Group No.						
Station No.						
			Network range assignment			
			Refresh parameters			
						P
Necessary setting(Nosetting / Alreadyset) S Start I/O No.: tere Input the start I/O No. in	iet if it is ne istalled in th	eded(Nosetting / Alreadyset) Valid module during other stal e module in 16-point unit.	ion access		

Setup comm	ion paramet	ers										
-Assignment m C Points/S	ethod tart	Mor	nitoring time	e 200	×10ms							
Start/End	d	T ot stat	al slave ions	2		Swito	h screens	LB/LV	/ settings]	•	
	Sendira	ange for ea	ach station	Send ra	ange for ea	ach station	Send ra	ange for ea	ach station	Send ra	ange for ea	ich station
L/R		First half L	.B		First half L	W		Second h	ialf LB		Second h	alf LW
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End
MO	128	0100	017F	128	0100	017F						
IIL 1	128	0180	01FF	128	0180	01FF						
	128	0200	027E	128	0200	027E						

Assignment method Points/Start Start/End			C (sient tra Dverwrit	nsmission error l te © Hold	history status —		
		Link side				PLC side	!	
	Points	Start	End		BlockNo.	Points	Start	End
LB<->B transmission(1)	Points 640	Start 0000	End 027F	+	BlockNo.	Points 640	Start 0000	End 027F
LB<->B transmission(1) LW<->W transmission(1)	Points 640 640	Start 0000 0000	End 027F 027F	# #	BlockNo.	Points 640 640	Start 0000 0000	End 027F 027F

(d) MELSECNET (II) 3-tier local station I1, I2

As the cyclic communication is performed according to the network range assignments of the 3-tier master station (A3UCPU), there is no parameter setting for network range assignment on 3-tier local stations.

(e) MELSECNET/H network 1 control station 1Mp3

For MELSECNET/H network 1 control station 1Mp3, change the settings of MELSECNET (II) 2-tier master station by:

- Assigning LB/LW to each station by the setting of "Network range assignment (Common parameters)"
- Performing B/W refreshment by the setting of "Refresh parameters"



The following describes the network parameter setting of MELSECNET/H network 1 control station 1Mp3 (Q06HCPU).

)	Network parameter setting	(Q06HCPU: MELSECNET/H network 1 control station 1)	Ap3)
/			

1)	Network parameter	setting (Q06HCPU:	Μ	ELSECNET/H networ	rł	x 1 control station 1M	o3)	
		Module 1		Module 2	Ι	Module 3	Module 4	
	Network type	MNET/H mode (Control station)	٠	None 🗸	·	None 🗸 🗸	None 🗸	
	Starting I/O No.	0	000		Τ			
	Network No.		1		Τ			
	Total stations		3		Ι			
	Group No.		0		T			
	Station No.				Т			
	Mode	On line	•	•	·	•	-	
		Network range assignment						
		Refresh parameters						
		Interrupt settings						
		Return as control station	•					
		Optical/coaxial	4					
								1
					T			-
•							•	

Network rang	ge assię	gnment	t (Q06H	ICPU:	MELSI	ECNET	/H netv	vork 1	control	station	1Mp3)			
Setup common a	nd Station	inherent pa	arameters.												
Assignment method		Monitorin	ıg time 🛛	200 × 1	Oms	Parameter	name 🗌								
Start/End		Total slav stations	ve [3		Switch scr	eens L	B/LW sett	ings	•					
	Send ra	ange for ea	ach station	Send ra	ange for e	ach station	Send ra	ange for ea	ach station	Sendra	ange for ea	ach statior			
Station No.		LB			LW			Low spee	dLB		Low spee	ed LW] Pairing		
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End			
1	384	0100	027F	384	0100	027F							Disable	-	
2	256	0280	037F	256	0280	037F							Disable	•]
3	256	0000	OOFF	256	0000	00FF							Disable	-	
•														Þ	Г

Assignment me O Points/Sta O Start/End	ethod —— art				Trans (sient ti ● Ov	ansmis erwrite	sion e	error history s O Hold	tatus —	
				Link side						PLC side	4
	Dev. na	me	Points	Start	End		Dev. r	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	ŧ	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	÷.	SW		512	0000	01FF
Random cyclic	LB					÷.		-			
Random cyclic	LW					÷.		-			
Transfer1	LB	-	896	0000	037F	÷.	В	-	896	0000	037F
Transfer2	LW	-	896	0000	037F	÷.	W	-	896	0000	037F
Transfer3		-				÷.		-			
Transfer4		-				÷.		-			
Transfer5		-				÷.		-			
Transfer6		-				4		-			

(f) MELSECNET/H network 1 normal station 1Ns2

For MELSECNET/H network 1 normal station 1Ns2 that is not gateway station, change the settings by:

• Performing B/W refreshment by the setting of "Refresh parameters"



The following describes the network parameter setting of MELSECNET/H network 1 normal station 1Ns2 (Q02HCPU).

	Module 1	Modu	le 2	Module 3		Module 4
Network type	MNET/H mode (Normal station)	 None 	•	None	👻 N	one
Starting I/O No.	000	0				
Network No.		1				
Total stations						
Group No.		0				
Station No.						
Mode	On line •	•	-		•	
	Station inherent parameters					
	Refresh parameters					
	Interrupt settings					
Necessary setting(No	setting / Alreadyset) Set if it is nee	ded(No setting / /	Already set)			
	Start I/O No		Valid module	1	-	
(order the rect		during other s	station access		

Assignment me O Points/Sta O Start/End	neter (ethod— art	Q02	HCPU: ME	LSECNET	Transient transmission error history status Overwrite Hold						
				Link side						PLC side	
	Dev. r	name	Points	Start	End		Dev. r	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	÷.	SW		512	0000	01FF
Random cyclic	LB					H		•			
Random cyclic	LW					+		-			
Transfer1	LB	-	896	0000	037F	+	В	-	896	0000	037F
Transfer2	LW	-	896	0000	037F	+	W	-	896	0000	037F
Transfer3		-				+		-			
Transfer4		-				+		-			
Transfer5		-				+		-			
Transfer6		-				+		-			

(g) MELSECNET/H network 1 normal station 1Ns1/Network 2 control station 2Mp3 (Network range assignment of gateway stations, refresh parameters)

For MELSECNET/H network 1 normal station 1Ns1 that is gateway station, change the settings by: • Performing B/W refreshment by the setting of "Refresh parameters"^{*1}

For MELSECNET/H network 2 control station 2Mp3 that is gateway station, change the settings of MELSECNET (II) 3-tier master station by:

- Assigning LB/LW to each station by the setting of "Network range assignment (Common parameters)"^{*2}
- Assigning B/W refreshment by the setting of "Refresh parameters"^{*1}



*1 Set not to duplicate B/W on the CPU.

*2 Perform the LB/LW assignment for network 2 control station 2Mp3 including the same LB/LW area as that of 1Mp3 to relay network 1 control station 1Mp3.

The following describes the network parameter setting of MELSECNET/H network 1 normal station 1Ns1/network 2 control station 2Mp3 (Q06HCPU).

1)	Network parameter	setting (Q06HCPU	: N	IELSECNET/H net	NOI	rk 1 normal station 1N	s1/network 2 control
	station 2Mp3)						
		Module 1		Module 2		Module 3	Module 4
	Network type	MNET/H mode (Normal station)	•	MNET/H mode (Control station)	•	None	None 🗾
	Starting I/O No.	C	0000		0020		
	Network No.		1		2		
	Total stations				3		
	Group No.		0		0		
	Station No.						
	Mode	On line	-	On line	-	-	-
				Network range assignment			
		Station inherent parameters					
		Refresh parameters		Refresh parameters			
		Interrupt settings		Interrupt settings			
				Return as control station	•		
				Optical/coaxial	•		
•							•

Assignment me O Points/Sta O Start/End	neter ((ethod— art	Q06H	1CPU: MEI	LSECNET	H network	1 no ient tr	rmal s ansmis erwrite	sion e	n 1Ns1) rror history s O Hold	tatus —	
				Link side						PLC side	
	Dev. r	name	Points	Start	End		Dev. r	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	÷	SW		512	0000	01FF
Random cyclic	LB					÷		-			
Random cyclic	LW					÷		-			
Transfer1	LB	-	256	0000	00FF	+	В	-	256	0000	00FF
Transfer2	LB	-	256	0280	037F	+	В	-	256	0280	037F
Transfer3	LW	-	256	0000	00FF	+	W	-	256	0000	00FF
Transfer4	LW	-	256	0280	037F	+	W	-	256	0280	037F
Transfer5		-				+		-			
Transfer6		-				+		-			•

) Network rang	ge assi	gnmen	t (Q06I	HCPU:	MELS	ECNET	7H netv	work 2	control	station	2Mp3)			
Setup common and Station inherent parameters.															
Assignment method Points/Start Start/End		Monitorin Total sla stations	ng time 🗍 ve	200 × 1 3	Oms	Parameter Switch sci	name reens L	B/LW sett	tings	•					
	Sendira	ange for ea	ach station	Sendra	ange for e	ach station	Sendira	ange for ea	ach station	Sendira	ange for ea	ach station			
Station No.		LB			LW			Low spee	ed LB		Low spee	d LW] Pairing	j .	
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End]		
1	128	0180	01FF	128	0180	01FF							Disable	•	j
2	128	0200	027F	128	0200	027F							Disable	•	j i
3	384	0000	017F	384	0000	017F							Disable	•	-

Assignment me O Points/Sta O Start/End	ethod — irt				Trans (ient ti ● Ov	ansmission erwrite	error history s O Hold	tatus	
				Link side					PLC side	
	Dev. r	name	Points	Start	End		Dev. name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB	512	0200	03FF
Transfer SW	SW		512	0000	01FF	+	SW	512	0200	03FF
Random cyclic	LB						-			
Random cyclic	LW					÷.	-			
Transfer1	LB	•	384	0100	027F	+	В 🔻	384	0100	027F
Transfer2	LW	•	384	0100	027F	+	W 💌	384	0100	027F
Transfer3		•				₩.	•			
Transfer4		•				+	-			
Transfer5		•				+	-			
Transfer6		•				+	•			
		[Default		heck		End		Cancel	

(h) MELSECNET/H network 1 normal station 1Ns1/network 2 control station 2Mp3 (Inter-link data transfer of gateway station)

For data transfer between MELSECNET/H networks 1 and 2, cange the setting of MELSECNET (II) 2 and 3-tier by:

• Transferring the data between networks 1 and 2 by the setting of "Interlink transmission parameters" between gateway stations 1Ns1 and 2Mp3



The following describes the inter-link data transfer setting of MELSECNET/H network 1 normal station 1Ns1/network 2 control station 2Mp3 (Q06HCPU).

) Int co	er-link da ntrol statio	ta transfo on 2Mp3	er param	ieter (Q0	6HCPU:	MELSE	CNET/H	network	1 norma	al station	1Ns1/ne	twork 2
As	signment me	ethod		Tran	Isfer from	Module1:N	INET/H m	iode (Norm	al station)			
) Points/St	art 💽 Si	tart/End	Tran	isfer to	Module2:M	1NET/H m	iode (Contr	rol station)			
			LB						LW			
No	Tr	<u>ansfer fro</u>	<u>)m</u>	Т	ransfer to	0	Tra	<u>ansfer fro</u>	<u>)m</u>	Т	ransfer to)
	Points	Start	End	Points	Start	End	Points	Start	End	Points	<u>Start</u>	End
1	256	0000	OOFF	256	0000	OOFF	256	0000	OOFF	256	<u> 0000 </u>	
2												
3												
4												
6												
7												
8												
9					ļ							
10												
111					i			i	·			•
Ase	signment me	thod		Tran	isfer from	Module2:M	INET/H m	ode (Contr	rol station)			
	Points/St	art 💌 Si	tart/End	Tran	sfer to 🗍	Module1:M	INET/H m	ode (Norm	al station)			
			LB						LW			
No	Tr	ansfer fro)m	Т	ransfer to	D	Tr	ansfer fro	Im	Т	ransfer to	
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End
1	384	0100	027F	384	0100	027F	384	0100	027F	384	<u> </u>	
2												
3												
4												
6												
7												
8												
9												
10												
the second second second second second second second second second second second second second second second se			, ,									T

(i) MELSECNET/H network 2 normal station 2Ns1, 2Ns2

For MELSECNET/H network 2 normal stations 2Ns1 and 2Ns2, change the settings by: • Performing B/W refreshment by the setting of "Refresh parameters"



The following describes the network parameter setting of MELSECNET/H network 2 normal stations 2Ns1, 2Ns2 (Q02HCPU).

	Module 1		Module 2		Module 3		Module 4	
Network type	MNET/H mode (Normal station)	•	None	•	None	•	None	-
Starting I/O No.		0000						
Network No.		2						
Total stations								
Group No.		0						
Station No.								
Mode	On line	-		•		•		-
	Station inherent paramete	rs						
	Refresh parameters							
	Interrupt settings							
	I		l		l		l	
Necessary setting No	setting / Alreadyset) Set if it	is need	ed [Nosetting / Alreadyset]					
	Start I/O No -		Valid mo	dule	•			
	Diana in the static UD No. (1)		during of	ther	station access			
starlink transmission parameters	 Please input the starting I/U No. of th 	ie modu	le in HEXLIE biti form					

Refresh parar	neter (Q02	HCPU: ME	LSECNET	/H network	2 no	rmal st	atior	ns 2Ns1, 2I	Ns2)	
Assignment me O Points/Sta O Start/End	ethod — irt				Trans (ient ti • Ov	ansmiss rerwrite	ion e	rror history s O Hold	tatus —	
				Link side							
	Dev. n	iame	Points	Start	End		Dev. n	ame	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	+	SW		512	0000	01FF
Random cyclic	LB					+		•			
Random cyclic	LW					+		•			
Transfer1	LB	•	640	0000	027F	+	В	•	640	0000	027F
Transfer2	LW	•	640	0000	027F	+	W	•	640	0000	027F
Transfer3		•				+		•			
Transfer4		•				+		•			
Transfer5		•				+		•			
Transfer6		•				+		-			•

The following shows how to change network parameter on LB/LW, when replacing the MELSECNET II 3-tier system with MELSECNET/H. Network range assignment of the present MELSECNET II 3-tier system is used as it is for replacement with MELSECNET/H.

MELSECNET II 2-tier is replaced with the network 1 of MELSECNET/H, and 3-tier is replaced with the network 2. The MELSECNET II master station is replaced with the MELSECNET/H control station, and MELSECNET II local stations are replaced with MELSECNET/H normal stations.



Concept of MELSECNET II 3-tier system replacement
ep 1: Control station (1Mp3) setting
et the link parameter setting on MELSECNET II 2-tier master station as MELSECNET/H network 1 control station 1Mp3.
In "Network range assignment (Common parameters)" of control station 1Mp3, set the LB/LW (first half size + second half siz as a contiguous area on each station.
It is divided into the first half LB/LW and the second half LB/LW, and transferred depending on the settings 1 and 2 of "Static inherent parameter".
ep 2: Common parameter and refresh parameter settings of gateway station (1Ns1/2Mp3)
common parameter" setting and "Refresh parameter setting" of the MELSECNET II 3-tier master station are set as
ELSECNET/H network 2 control station 2Mp3 and network 1 normal station 1Ns1.
In "Network range assignment (Common parameters)" of control station 2Mp3, set the LB/LW (first half size + second half siz as a contiguous area on each station.
The range assignment should be performed including the same LB/LW size as that of 1Mp3 to relay 1Mp3.
Set "Refresh parameter" to transfer B/W by dividing it into the first half B/W and the second half B/W on each station of netwo 2 control station 2Mp3 and network 1 normal station 1Ns1.
Make sure that B/W of networks 1 and 2 will not duplicate on the CPU.
As "Interlink transmission parameters" parameter the gateway station 1Ns1/2Mp3 is set for, do not set a station inherent parameter.
ep 3: Inter-link data transfer setting of gateway station (1Ns1/2Mp3)
ata transfer between 2 and 3-tier, which is performed automatically on MELSECNET II, is performed by Inter-link data transf gateway station 1Ns1/2Mp3.
LB/LW area shared by networks 1 and 2 is set by "Interlink transmission parameters" parameter of gateway station betweer 1Ns1 and 2Mp3.
ep 4: Station setting other than gateway stations (1Ns2, 2Ns1, 2Ns2)
tation inherent parameter" and "Refresh parameters" of stations excluding gateway stations (1Ns2, 2Ns1, 2Ns2) are set.
Set "Station inherent parameter" of network 1 normal station 1Ns2 as the same setting as that of network 1 control station 1Mp3.
Set "Station inherent parameter" of network 2 normal station 2Ns2 as the same setting as that of network 2 normal station 2Ns1.
Cat IID afready non-material to referable III area of a summary non-material and an academic static

• Set "Refresh parameter" to refresh all area of common parameters assigned on control stations.



Data flow between each station of MELSECNET/H is shown at next page.

Network parameter setting is required for control and normal stations on MELSECNET/H.

	Common parameter (Network range assignment)	Station inherent parameter	Refresh parameter	Inter-link data transfer
1Mn3	0	0	Δ	
тиро	(Refer to example in (e) 2))	(Refer to example in (e) 3))	(Refer to example in (e) 4))	
1Ne2		0	Δ	
11132		(Refer to example in (f) 2))	(Refer to example in (f) 3))	
1Nc1			0	
11151		-	(Refer to example in (g) 3))	0
21/102	0		0	(Refer to example in (g) 5))
210103	(Refer to example in (g) 2))	-	(Refer to example in (g) 4))	
2Ne1		0	Δ	
21151		(Refer to example in (h) 2))	(Refer to example in (h) 3))	
20102		0	Δ	
ZINSZ		(Refer to example in (h) 2))	(Refer to example in (h) 3))	

The following shows parameters required on each station of MELSECNET/H.

 $O: Setting \ required \ (Default \ setting \ is \ also \ acceptable)/ \ - \ Setting \ not \ required$

(a) MELSECNET II 2-tier master station M

The following describes the network parameter setting of MELSECNET II 2-tier master station M (A3UCPU).

	1	1)	Network parameter setting	(A3UCPU: MELSECNET II 2-tier master station I	M)
--	---	----	---------------------------	---	----

	Module No.1	Module No.2	Module No.3	Module No.4							
Network type	MNET II (Master station) 🗸	None 🗸	None 👻	None							
Start I/O No.	0000										
Network No.											
Total stations	2										
Group No.											
Station No.											
	Network range assignment										
	Refresh parameters										
Necessary setting(Nosetting / Alreadyset) Set if it is ne Start I/O No.: ters Input the start I/O No. installed in th	eded(Nosetting / Alreadyset) Valid module during other stat e module in 16-point unit.	ion access								
nowledge XX assignme	ent Bouting parameters Chr	ack End	Cancel								

) Network ra	nge assi	ignment	(A3UCI	PU: MEI	LSECNE	ET II 2-ti	er maste	er statio	n M)				
Setup commo	in paramete	ers											
Assignment method Points/Start Start/End Start/End				200	× 10ms	Swite	h screens	LB/LV	/ settings		•		
	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station	Sendira	ange for ea	ach station	Sendira	ange for ea	ich statio	n 🔺
L/R		First half L	B	First half LW			Second half LB			Second half LW			
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO	256	0000	00FF	256	0000	00FF	256	0400	04FF	256	0400	04FF	
IIL 1	384	0100	027F	384	0100	027F	384	0500	067F	384	0500	067F	
∥L 2	256	0280	037F	256	0280	037F	256	0680	077F	256	0680	077F	-
•					-								

Assignment method Points/Start Start/End	Transient transmission error history status									
		Link side				PLC side	9	4		
					Dissibility	Delete	Chevel	End		
	Points	Start	End		ј вюскімо. ј	Points	otati j	Eriu		
LB<->B transmission(1)	Points 1920	Start 0000	End 077F	+	BIOCKINO.	Points 1920	0000	077F		
LB<->B transmission(1) LW<->W transmission(1)	Points 1920 1920	Start 0000 0000	End 077F 077F	‡	BIOCKINO.	1920 1920	0000	077F		

(b) MELSECNET II 2-tier local station L2

As the cyclic communication is performed according to the network range assignments of the 2-tier master station (A3UCPU), there is no parameter setting for network range assignment on 2-tier local stations.

(c) MELSECNET II 2-tier local station L1/3-tier master station m (gateway station)

The following describes the network parameter settings of MELSECNET II 2-tier local station L1/3-tier master station m (A3UCPU).

	Module No.1	Module No.2	Module No.3	Module No.4	
Network type	MNET II (Local station) 🗸 🗸	MNET II (Master station) 🛛 🗸 🗸	None 🗸	None	-
Start I/O No.	0000	0020			
Network No.					
Total stations		2			
Group No.					
Station No.					
		Network range assignment			
I		Refresh parameters			•
Necessary setting(nterlink transmission parame Acknowledge XY assignme	No setting / Already set) Set if it is ne Start I/O No.: ters Input the start I/O No. installed in th nt Routing parameters Che	eded(Nosetting / Alreadyset) Valid module e module in 16-point unit. sckEnd	on access 1 💌		

2) Network range assignment (A3UCPU: MELSECNET II 3-tier master station m)

Assignment m O Points/S	ethod	Mor	nitoring time	200	×10ms							
 Start/En 	d	T ot stat	al slave ions	2		Swite	h screens	LB/LW	/ settings	j	•	
	Send ra	ange for ea	ach station	Send ra	ange for ea	ach station	Send ra	ange for ea	ach station	Send ra	ange for ea	ach station
L/R		First half L	B		First half L	.W		Second h	alf LB		Second h	alf LW
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End
MO	128	0100	017F	128	0100	017F	128	0500	057F	128	0500	057F
IL 1	128	0180	01FF	128	0180	01FF	128	0580	05FF	128	0580	05FF
			0075	400	0000	0075	4.00	0000	0075	100	0000	0075

-Assignment method © Points/Start © Start/End	Assignment method © Points/Start © Start/End Transient transmission error history status © Overwrite © Hold										
		Link side				PLC side					
	Points	Link side Start	End		BlockNo.	PLC side Points	e Start	End			
LB<->B transmission(1)	Points 1920	Link side Start 0000	End 077F	+	BlockNo.	PLC side Points 1920	e Start 0000	End 077F			
LB<->B transmission(1) LW<->W transmission(1)	Points 1920 1920	Link side Start 0000 0000	End 077F 077F	‡ ‡	BlockNo.	PLC side Points 1920 1920	e Start 0000 0000	End 077F 077F			

(d) MELSECNET II 3-tier local station I1, I2

As the cyclic communication is performed according to the network range assignments of the 3-tier master station (A3UCPU), there is no parameter setting for network range assignment on 3-tier local stations.

(e) MELSECNET/H network 1 control station 1Mp3

For MELSECNET/H network 1 control station 1Mp3, change the settings of MELSECNET II 2-tier first half/second half setting by:

- Assigning LB/LW (first half + second half size) to each station by the setting of "Network range assignment (Common parameters)"
- Dividing the data into the first half LB/LW and second half LB/LW and transferring them by the setting of "Setting1" and "Setting2" of "Station inherent parameter"



The following describes the network parameter setting of MELSECNET/H network 1 control station 1Mp3 (Q06HCPU).

	Module 1		Module 2		Module 3	Module	4
Network type	MNET/H mode (Control station)	 Nor 	one 👻	No	lone 👻	None	•
Starting I/O No.	000)0					
Network No.		1					
Total stations		3					
Group No.		0					
Station No.							
Mode	On line 🔹	-	•		-		-
	Network range assignment						
	Refresh parameters						
	Interrupt settings						
	Return as control station	-					
	Optical/coaxial	-					

Network range	e assigi	nment	(Q06H	CPU: N	MELSE	CNEL	/H netv	vork 1	control	station	n 1Mp3	3)			
Setup common and	d Station in	herent para	ameters.												
Assignment method — C Points/Start I Start/End		Monitoring Total slave stations	time 20	0 × 10	ms F	⁹ arameter n Switch scree	ame ame B	/LW settin	igs	-					
Charling Ma	Send ra	ange for ea	ach station	Send ra	ange for e	ach station	Send ra	ange for ea	ach station	Send ra	ange for ea	ach statior	Deirine		
Station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End			-
1	768	0200	04FF	768	0200	04FF			10				Disable	-	1
2	512	0500	06FF	512	0500	06FF							Disable	-]
3	512	0000	01FF	512	0000	01FF							Disable	-	ŀ

2 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (PLC TO PLC

00FF

04FF

Reference netwo	ork range -	assignme	nt				gnment me oints/Star	ethod	Param	eter			
Project Name				Board		⊙ s	tart/End		Switch screer	1	LB se	ttings	•
Reference		Read		Cance	1								
		Setting 1			Setting 2		Network	range ass	signment				
Station No.	Deinte	LB	End	Deinte	LB Short	Find	Deinte	LB Shout	End	Pa	iring		
1	294	0100	027E	284	0500	0675	769	0200		Disabla		-	
2	256	0100	027F	256	0000	077E	512	0200	04FF	Disable		÷	
	200	0200	0011	200	00000	0111	012	00001	0011	Disable.		·	
3	256	0000	00FF	256	0400	04FF	512	0000	01FF	Disable		• •	
3 Reference netwo	256	0000	00FF	256	0400	O4FF	512 Inment me Dints/Starl	0000 ethod	01FF Parame	Disable eter	·	• •	
Reference netwo Drive/Path	rk range -	0000	00FF	256 Board	0400	O4FF Assig O Po O SI	512 gnment me pints/Starl tart/End	0000 ethod —	01FF Parama name Switch screen	Disable eter	LW se	• •	:
Reference netwo Drive/Path	256 rk range -	0000	nt E	256 Board Cance	0400	Assig O Po O SI	512 gnment me pints/Starl tart/End	0000 ethod t	01FF Parame name Switch screen	Disable eter	LW se	• •	;
Reference netwo Drive/Path	256 rk range -	0000	nt E	256 Board Cance	0400	O4FF	gnment me pints/Starl tart/End	0000	01FF Parame name Switch screen	Disable eter	LW se	• •	:
Reference netwo	256 rk range	0000	nt E	256 Board Cance	0400	O4FF	gnment me pints/Stark tart/End Network	0000	01FF Parame name Switch screen	Disable eter is	LW se	ettings	: :
Reference netwo Drive/Path Project Name Reference	rk range -	assignme Read		256 Board Cance	0400		gnment me pints/Starl tart/End	ethod t	01FF Parame Switch screen	Disable eter Is Pai	LW se	etting:	
Beference netwo Drive/Path Project Name Reference	rk range -	0000 assignme Read	nt	256 Board Cance Points	0400 Setting 2 LW Start	O4FF	90000000000000000000000000000000000000	thod t t t t t t t t t t t t t t t t t t t	01FF Parame Name Switch screen	Disable eter s Pai	LW se	ettings	

Assignment me O Points/Sta	eter (C ethod — art	206H	ICPU: MEL	SECNET/ŀ	H network	ient ti	ntrol statio ransmission rerwrite	n 1Mp3) error history s O Hold	tatus —		
				Link side					PLC side		
	Dev. n	iame	Points	Start	End		Dev. nam	e Points	Start	End	
Transfer SB	SB		512	0000	01FF	+	SB	512	0000	01FF	
Transfer SW	SW		512	0000	01FF	+	SW	512	0000	01FF	
Random cyclic	LB					H		·			
Random cyclic	LW					₩.		•			
Transfer1	LB	•	1920	0000	077F	+	В	1920	0000	077F	
Transfer2	LW	•	1920	0000	077F	+	W 🔹	1920	0000	077F	
Transfer3		•				+	•	•			
Transfer4		•				+	•	•			
Transfer5		•				+	•	•			
Transfer6		-				+		•			

01FF Disable

• • •

MELSEC

(f) MELSECNET/H network 1 normal station 1Ns2

For MELSECNET/H network 1 normal station 1Ns2 that is not gateway station, change the settings of MELSECNET II 2-tier first half/second half setting by:

• Dividing the data into the first half LB/LW and second half LB/LW and transferring them by setting of "Setting1" and "Setting2" of "Station inherent parameter"



The following describes the network parameter setting of MELSECNET/H network 1 normal station 1Ns2 (Q02HCPU).

	Module 1		Module 2		Module 3		Module 4	
Network type	MNET/H mode (Normal station)	•	None	 None 	•	None		
Starting I/O No.		0000						
Network No.		1						
Total stations								
Group No.		0						
Station No.								
Mode	On line	•		•		•		
	Station inherent parameter	s						
	Refresh parameters							
	Interrupt settings							
Necessary setting(No	setting / Alreadyset) Set if it i	s need	ed[Nosetting / Alreadyset)				
	Start I/O No. :		Valid durin	module other station	access 1 💌			
nk transmission parameters	Please input the starting I/O No. of th	e modu	e in HEX(16 bit) form					

Reference network range assignment Assignment method Drive/Path C:¥MELSEC¥Gppw Project Name Q02H_MNETH 1 Board Assignment method Parameter name Use Start/End Switch Screens LB settings	-
Drive/Path C:¥MELSEC¥Gppw C Points/Start Parameter name Project Name Q02H_MNETF 1 Board Start/End Switch screens LB settings Start/End Start/End Start/End Switch screens LB settings Start/End /ul>	
Project Name Q02H_MNETF 1 Board Switch screens	_
screens	1
Defenses I Devel I Conset	
Station No. LB LB LB LB Pairing	
Points Start End Points Start End Points Start End	
1 384 0100 027F 384 0500 067F 768 0200 04FF Disable 💌	
2 256 0280 037F 256 0680 077F 512 0500 06FF Disable 💌	
3 256 0000 00FF 256 0400 04FF 512 0000 01FF Disable 💌 💌	
Reference network range assignment	_
Drive/Path C:¥MELSEC¥Gppw O Points/Start name	
Project Name Q02H_MNETH 1 Board Start/End Switch LW settings	-
Reference Read Cancel	
Setting 1 Setting 2 Network range assignment	
Station No. LW LW LW Pairing	
Points Start End Points Start End Points Start End	
1 384 0100 027F 384 0500 067F 768 0200 04FF Disable	
2 256 0280 037F 256 0680 077F 512 0500 06FF Disable ▼	
3 256 0000 00FF 256 0400 04FF 512 0000 01FF Disable 💌 💌	

Assignment me O Points/Sta O Start/End	ethod— art				Trans (ient tr ● Ov	ransmission error history status verwrite O Hold				
				Link side						PLC side	
	Dev. r	name	Points	Start	End		Dev. r	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	÷÷	SW		512	0000	01FF
Random cyclic	LB					÷.		-			
Random cyclic	LW					÷.		-			
Transfer1	LB	-	1920	0000	077F	÷	В	-	1920	0000	077F
Transfer2	LW	-	1920	0000	077F	+	W	-	1920	0000	077F
Transfer3		-				+		-			
Transfer4		-				+		-			
Fransfer5		-				+		-			
Transfer6		-				+		-			

(g) MELSECNET/H network 1 normal station 1Ns1/network 2 control station 2Mp3 (gateway station)

For data transfer between MELSECNET/H networks 1 and 2, change the setting of MELSECNET II 2 and 3-tier by:

- Assigning LB/LW of network 2 control station 2Mp3 including LB/LW size of network 1 control station 1Mp3 by the setting of "Network range assignment (Common parameters)" on network 2 control station 2Mp3
- Transferring the data between networks 1 and 2 by the setting of "Interlink transmission parameters" between gateway stations 1Ns1 and 2Mp3



For MELSECNET/H normal station 1Ns1 that is gateway station, change the settings of MELSECNET II 2-tier first half/second half settings by:

• Dividing the data into the first half and second half and refreshing them by the setting of "Refresh parameters"^{*1}

Also, for MELSECNET/H control station 2Mp3 of gateway station, change the settings of MELSECNET II 3-tier first half/second half settings by:

- Assigning LB/LW (first + last size) to each station by the setting of "Network range assignment (Common parameters)"^{*2}
- Dividing the data into the first half and second half and refreshing them by the setting of "Refresh parameters"^{*1}



^{*1} Set not to duplicate B/W on the CPU.

*2 Perform the LB/LW assignment for network 2 control station 2Mp3 including the same LB/LW area as that of 1Mp3 to relay network 1 control station 1Mp3.

The following describes the network parameter setting of MELSECNET/H network 1 normal station 1Ns1/network 2 control station 2Mp3 (Q06HCPU).

1) Network parameter	r setting (Q06HCPU: N	/IELSECNET/H netw	voi	rk 1 normal station 1N	s1/network 2 control
station 2Mp3)					
	Module 1	Module 2		Module 3	Module 4 🔺
Network type	MNET/H mode (Normal station)	MNET/H mode (Control station)	•	None 🗸	None 🗾
Starting I/O No.	0000) (0020		
Network No.	1	1	2		
Total stations			3		
Group No.	(0		
Station No.		<u> </u>			
Mode	On line 🗸 🗸	On line	•	•	•
		Network range assignment			
	Station inherent parameters				
	Refresh parameters	Refresh parameters			
	Interrupt settings	Interrupt settings			
		Return as control station	•		
		Optical/coaxial	•		
					<u></u>
•					•

Network range	e assigi	nment	(Q06H	CPU: N	MELSE	ECNET	/H netv	vork 2	control	statior	n 2Mp3	3)			
Setup common and	l Station inl	herent par	ameters.												
Assignment method C Points/Start C Start/End	-	Monitoring Fotal slave stations	time 20	0 × 10	ms F	Parameter n iwitch scree	ame ns LB.	/LW settin	gs	•					
	Send ra	ange for ea	ach station	Send ra	ange for e	ach station	Send ra	ange for ea	ach station	Send r	ange for e	ach statior	า		-
Station No.		LB			LW			Low spee	:d LB		Low spee	ed LW] Pairin	g	
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End			
1	256	0300	03FF	256	0300	03FF							Disable	-	
2	256	0400	04FF	256	0400	04FF							Disable	-	
3	768	0000	02FF	768	0000	02FF							Disable	-	-
•															

Assignment me O Points/Sta O Start/End	ethod— irt				Trans (sient ti ● Ov	ransmis rerwrite	sion e (rror history sl O Hold	tatus —	
				Link side						PLC side	
	Dev. r	name	Points	Start	End		Dev. r	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	S₩		512	0000	01FF	+	S₩		512	0000	01FF
Random cyclic	LB					+		•			
Random cyclic	LW					+		•			
Transfer1	LB	-	256	0000	00FF	+	В	-	256	0000	00FF
Transfer2	LB	-	256	0100	01FF	₩.	В	-	256	0400	04FF
Transfer3	LB	-	256	0500	05FF	÷.	В	-	256	0280	037F
Transfer4	LB	-	256	0600	06FF	÷.	В	-	256	0680	077F
Transfer5	LW	-	256	0000	OOFF	÷.	W	-	256	0000	OOFF
Transfer6	LW	-	256	0100	01FF	÷	W	-	256	0400	04FF 1
Transfer7	LW	-	256	0500	05FF	÷	W	-	256	0280	037F
Transfer8	LW	-	256	0600	06FF	÷	W	-	256	0680	077F
Transfer9		-				÷.		-			•
		[Default	[C	heck		E	ind		Cancel	

Refresh paran	neter (ethod—	Q06H	ICPU: MEI	LSECNET/	H network	2 co	ntrol stati	ion	2Mp3)			
C Points/Sta	art				- I rans	ient ti	ansmissior	n er	ror history s	tatus		
C Start/End					,	• ••	erwrite		Hold			
				Link side					PLC side			
	Dev. r	name	Points	Start	End		Dev. nam	ne	Points	Start	End	
Transfer SB	SB		512	0000	01FF	+	SB		512	0200	03FF	
Transfer SW	SW		512	0000	01FF	+	SW		512	0200	03FF	
Random cyclic	LB					+		-				
Random cyclic	LW					+		-				
Transfer1	LB	-	128	0100	017F	÷	В	-	128	0100	017F	
Transfer2	LB	-	128	0280	02FF	+	В	-	128	0500	057F	
Transfer3	LB	-	128	0300	037F	+	В	-	128	0180	01FF	
Transfer4	LB	-	128	0380	03FF	+	В	-	128	0580	05FF	
Transfer5	LB	-	128	0400	047F	+	В	-	128	0200	027F	
Transfer6	LB	-	128	0480	04FF	÷	В	-	128	0600	067F	
Transfer7	LW	-	128	0100	017F	÷	W •	-	128	0100	017F	
Transfer8	LW	-	128	0280	02FF	+	W •	-	128	0500	057F	
Transfer9	LW	-	128	0300	037F	+	W •	-	128	0180	01FF	
Transfer10	LW	-	128	0380	03FF	+	W •	-	128	0580	05FF	
Transfer11	LW	-	128	0400	047F	+	W I	-	128	0200	027F	
Transfer12	LW	-	128	0480	04FF	+	W •	-	128	0600	067F	
Transfer13		-				÷	•	-			-	

2 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (PLC TO PLC

ŝ	ignment metho	bdbd											
-	Points/Start												
•	Start/End												
dı	ile 1 -> 2 Moi	dule 2 -> 1											
	1												
				2								•	
	1	Transfer from	n		Transfer to			Transfer from Transfer to					
ło	MNET/H mo	de (Normal	station)	MNET/H mode (Control station)			MNET/H mo	ode (Normal	station)	MNET/H mo	ode (Control	station)	
1	Points 256	Start	End 00FF	Points 256	Start 0000	End OOFF	Points 256	Start 0000	End OOFE	Points 256	Start 0000	End OOFE	
2	256	0100	01FF	256	0180	027F	256	0100	01FF	256	0180	027F	
3													
4 5													
6													
7													
8													
0												-	
												►	
si!	gnment method Points/Start												
Assi O odul	gn ment methoo Points/Start Start/End e 1 -> 2 Mod	d Iule 2 → 1											
issii O idul	gnment methoo Points/Start Start/End e 1 -> 2 Mod	tule 2 -> 1	B		[tansfer to			Tansfer from	V	/	- Insfer to	A	
	gnment method Points/Start Start/End e 1 -> 2 Mod	tule 2 -> 1	B	MNET/H mo	Fransfer to de (Normal s	tation)	T MNET/H mor	ransfer from	V tation)	/ / 1 1	Transfer to de (Normal s	tation)	
	gnment method Points/Start Start/End e 1 -> 2 Mod mod T MNET/H mod Points	tule 2 -> 1 ransfer from fe [Control s Start	B tation) End	MNET/H mo Points	Transfer to de (Normal s Start	tation) End	T MNET/H mor Points	Transfer from de (Control s Start	tation) End	/ T MNET/H mo Points	Transfer to de (Normal s Start	tation)	
	gnment method Points/Start Start/End e 1 -> 2 Mod motion Points 128	tule 2 -> 1 ransfer from fe (Control s Start 0100	B tation) End 017F	MNET/H mo Points 128	Fransfer to de (Normal s Start 0200	tation) End 027F	T MNET/H mor Points 128	ransfer from de (Control s Start 0100	tation) End 017F	/ T MNET/H mo Points 128	ransfer to de (Normal s Start 0200	tation) End 027F	
	gnment method Points/Start Start/End e 1 -> 2 Mod e 1 -> 2 Mod T MNET/H mod Points 128 128 128	tule 2 -> 1 ransfer from de (Control s Start 0100 0280	End 017F 02FF	MNET/H mo Points 128 128 129	Fransfer to de (Normal s Start 0200 0380	tation) End 027F 03FF	T MNET/H mor Points 128 128 129	ransfer from de (Control s Start 0100 0280	tation) End 017F 02FF	/ T MNET/H mo Points 128 128 128	ransfer to de (Normal s Start 0200 0380	tation) End 027F 03FF	
	gnment method Points/Start Start/End e 1 -> 2 Mod e 1 -> 2 Mod Mod Points 128 128 128 128 128	tule 2 -> 1 tule 2 -> 1 de (Control s Start 0100 0280 0300	Bitation) End 017F 02FF 037F	MNET/H mo Points 128 128 128 129	Transfer to de (Normal s Start 0200 0380 0280	tation) End 02FF 02FF 0.7FF	T MNET/H mor Points 128 128 128 129	Transfer from de (Control s Start 0100 0280 0300	V tation) End 017F 02FF 037F 037F	/ T MNET/H mo Points 128 128 128 128	ransfer to de (Normal s Start 0200 0380 0280	▲ tation) End 02FF 03FF 02FF 0475	
	gnment method Points/Start Start/End e 1 -> 2 Mod e 1 -> 2 Mod model model Points 128 128 128 128 128 128	tule 2 -> 1 tule 2 -> 1 de (Control s Start 0100 0280 0300 0380 0400	B tation) End 017F 02FF 037F 037F 037F	MNET/H mo Points 128 128 128 128 128 128	Transfer to de (Normal s Start 0200 0380 0280 0400 0300	tation) End 027F 03FF 02FF 047F 037F	T MNET/H mo- Points 128 128 128 128 128 128	Transfer from de (Control s Start 0100 0280 0380 0400	V tation) End 017F 02FF 037F 037F 047F	/ MNET/H moo Points 128 128 128 128 128 128 128	Transfer to de (Normal s Start 0200 0380 0280 0400 0300	tation) End 027F 03FF 02FF 047F 037F	
	gnment method Points/Start Start/End e 1 -> 2 Mod e 1 -> 2 Mod MNET/H mod Points Points 128 128 128 128 128 128	tule 2 -> 1 tule 2 -> 1 te (Control s Start 0100 0280 0380 0380 0400 0480	B tation) End 017F 02FF 037F 037F 047F 047F	MNET/H mo Points 128 128 128 128 128 128 128 128	Transfer to de (Normal s Start 0380 0280 0400 0300 0400	tation) End 027F 03FF 02FF 047F 037F 037F	MNET/H mor Points 128 128 128 128 128 128 128 128	ransfer from de (Control s Start 0100 0280 0380 0400 0480	V tation) End 017F 037F 037F 047F 047F	/ MNET/H mo Points 128 128 128 128 128 128 128 128 128	ransfer to de (Normal s Start 0200 0380 0280 0400 0300 0480	tation) End 027F 03FF 02FF 047F 037F 047F	
	gnment method Points/Start Start/End e 1 -> 2 Mod model MNET/H mod Points Points 128 128 128 128 128 128	tule 2 -> 1 tule 2 -> 1 de (Control s Start 0100 0280 0380 0400 0480 0-	B tation) End 07FF 03FF 03FF 047F 047F 04FF	MNET/H mo Points 128 128 128 128 128 128 128 128	Transfer to de (Normal s Start 0200 0380 0280 0400 0300 0480	tation) End 027F 03FF 02FF 047F 037F 037F	T MNET/H mor Points 128 128 128 128 128 128 128 128 128	ransfer from de [Control s Start 0100 0280 0380 0380 0400 0480	V tation) End 017F 02FF 037F 037F 047F 047F	/ T MNET/H mo Points 128 128 128 128 128 128 128 128	ransfer to de (Normal s Start 0200 0380 0280 0400 0300 0300 0480	▲ tation) End 02FF 03FF 02FF 047F 037F 037F 04FF	
	gnment method Points/Start Start/End e 1 -> 2 Mod e 1 -> 2 Mod MNET/H mod Points 128 128 128 128 128 128	tule 2 -> 1 tule 2 -> 1 te (Control s Start 0100 0280 0380 0400 0480	B tation) End 017F 02FF 037F 037F 047F 04FF	MNET/H mo Points 128 128 128 128 128 128 128	Fransfer to de (Normal s Start 0200 0380 0280 0400 0300 0480	tation) End 027F 02FF 02FF 037F 037F 04FF	T MNET/H mor Points 128 128 128 128 128 128 128 128 128	ransfer from de [Control s Start 0100 0280 0380 0380 0400 0480	V tation) End 017F 02FF 037F 03FF 047F 04FF	/ MNET/H mo Points 128 128 128 128 128 128 128 128	ransfer to de (Normal s Start 0380 0380 0280 0400 0300 0480	▲ tation) End 02FF 03FF 02FF 047F 037F 047F 047F	
	gnment method Points/Start Start/End e 1 -> 2 Mod e 1 -> 2 Mod MNET/H mod Points 128 128 128 128 128 128 128	tule 2 -> 1 tule 2 -> 1 te (Control s Start 0100 0280 0300 0380 0400 0480	B tation) End 017F 02FF 037F 037F 037F 047F 047F	MNET/H mo Points 128 128 128 128 128 128 128	Fransfer to de (Normal s Start 0200 0380 0280 0400 0300 0480	tation) End 027F 02FF 02FF 047F 037F 04FF	T MNET/H mor Points 128 128 128 128 128 128 128 128 128 128	ransfer from de (Control s Start 01280 0380 0400 0480	V tation) End 017F 02FF 037F 03FF 047F 04FF	/ MNET/H mo Points 128 128 128 128 128 128 128 128	ransfer to de (Normal s Start 0380 0380 0280 0400 0300 0480	tation) End 027F 037F 02FF 047F 037F 047F	

(h) MELSECNET/H network 2 normal station 2Ns1, 2Ns2

For MELSECNET/H network 2 normal station 2Ns1, 2Ns2 that is not gateway station, change the settings of MELSECNET II 2-tier first half/second half setting by:

• Dividing the data into the first half LB/LW and second half LB/LW and transferring them by the setting of "Setting1" and "Setting2" of "Station inherent parameter"



The following describes the network parameter setting of MELSECNET/H network 1 normal stations 2Ns1, 2Ns2 (Q02HCPU).

1) Network parameter settir	g (Q02HCPU: MELSECNET/H network 2 normal stations 2Ns1, 2Ns	s2)
۰.) Hollion parameter ootan		-,

	N-11-1	N-11-2	N-11-2	No. L. L. L. L. L. L. L. L. L. L. L. L. L.
Network turns	MNET/H mode (Normal station)	Module 2	Module 3	None Module 4
Network type	MINE 17H IIIOde (Noimai station)	INONE V	None •	
Starting I/U No.	0000			
Network No.	2			
Total stations				
Group No.	0			
Station No.				
Mode	On line 👻	•	· ·	▼
	Station inherent parameters			
	Refresh parameters			
	Interrupt settings			
Necessary setting(No setting	/ Alreadyset) Set if it is neede	ed(Nosetting / Alreadyset) Valid modul		
Sta Interlink transmission parameters Ple	rt I/O No. : ase input the starting I/O No. of the modu	during other during other le in HEX(16 bit) form	station access	
Acknowledge XY assignment Rou	uting parameters Assignment image	Group Settings Check	End Cancel	

'	ation innerer	nt param	neter (C	02HCF	PU: MEI	SECN	ET/H n	etwork 2	2 normal	station	s 2Ns1	, 2Ns2)	
□ Re D	eference netwo rive/Path	rk range C¥MELSE	assignme EC¥Gppv	ent ——— W		_	Assi O P	gnment m oints/Star	ethod	Param name	eter		
P	roject Name 🛛	QO2H_MN	IETH 2	•	Board		ΘS	tart/End		Switch screer	า าร	LB settings	•
	Reference		Read		Cance	el 🔤							
			P - 11/2 - 1			C - Min - O		N = 1 = - 1 -		·			
	Station No.		LB		:	<u>Setting 2</u> LB		Network	range as: LB	agnment] Pa	iring	
		Points	Start	End	Points	Start	End	Points	Start	End	1		
	1	128	0180	01FF	128	0580	05FF	256	0300	03FF	Disable	•	
	3	384	0200	027F 017F	384	0600	067F	206 768	0400	04FF 02FF	Disable	<u> </u>	
-Be													
Pr	rive/Path C oject Name C Reference	rk range a :¥MELSE 102H_MN	assignme C¥Gppv IETF 2 Read	nt	3oard Cance		Assig O Pi O Si	nment me pints/Starl tart/End	ethod — t	Parame name Switch screen	eter 1 15	LW settings	V
Dr Pr	Iference networ ive/Path C oject Name C Reference	rk range a :¥MELSE 102H_MN	assignme C¥Gppv IETF 2 Read Setting 1 LW	nt	Board Cance	6etting 2	Assig O P O S	gnment me pints/Starf tart/End <u>Network</u>	t t range ass	Parame name Switch screen	eter Is Pai	LW settings	T
Dr Pr	Iference network ive/Path C oject Name C Reference Station No.	k range a WMELSE 02H_MN	EC¥Gppv EC¥Gppv ETF 2 Read Setting 1 LW Start 1	nt	Board Cance	6 6etting 2 LW Start	Assig O P O S S	gnment me oints/Stark tart/End Network	range ass LW Start	Parami name Switch screen ignment End	eter 1 1s Pai	LW settings	¥
Pr	iference networ ive/Path C oject Name C Reference Station No.	ik range a WHELSE 02H_MN	ETF 2 Read Cetting 1 LW Start 0180	nt v End 01FF	Board Cance S Points 128	Setting 2 LW Start 0580	Assig P S S End 05FF	gnment me oints/Starl tart/End <u>Network</u> Points 256	range ass LW Start 0300	Param name Switch screen ignment End 03FF	eter 15 Pai	LW settings	T
Pr	Iference network ive/Path C oject Name C Reference Station No. 1 2	k range a WHELSE 02H_MN Points 128 128	ETF 2 Read Setting 1 LW Start 0180 0200	nt E	Board Cance Points 128 128	Setting 2 LW Start 0580 0600	Assig P S S End 05FF 067F	gnment me oints/Starl tart/End Network Points 256 256	range ass LW Start 0300 0400	Param name Switch screen ignment End 03FF 04FF	eter Is Disable Disable	LW settings	V
Pr	Iference network ive/Path C oject Name C Reference Station No. 1 2 3	k range a WHELSE 102H_MN 02H_M	EC¥Gppv IETF 2 Read Setting 1 LW Start 0180 0200 0000	nt E	Cance Cance Points 128 128 384	5etting 2 LW Start 0580 0600 0400	Assig P S S S S S S S S S S F S S F S S S S S	nment me oints/Start tart/End Network Points 256 256 768	range ass LW Start 0300 0400	Param name Switch screen ignment End 03FF 02FF	eter Is Disable Disable	LW settings	T

 Points/Sta Start/End 	art				- Trans (sient ti Ο ν	ansmis erwrite	sion e	rror history s O Hold	tatus —	
				Link side						PLC side	
	Dev. n	iame	Points	Start	End		Dev.	name	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	+	SW		512	0000	01FF
Random cyclic	LB					+		•			
Random cyclic	LW					+		-			
Transfer1	LB	•	1664	0000	067F	+	В	-	1664	0000	067F
Transfer2	LW	•	1664	0000	067F	÷.	W	-	1664	0000	067F
Transfer3		•				÷.		-			
Transfer4		•				÷.		-			
Transfer5		-				÷		-			
Transfer6		-				÷		-			•
		(Default		heck			End		Cancel	
2.6 Program Comparisons

2.6.1 Comparison of special relays M (SB) and special registers D (SW)

(1) Master station special relays

Special relays enabled when host station is the master station.

				0	: Compatible, \triangle : Part	ial change	required, × : Incompatible
Spec	ial relay in the case master sta	of MELSECNET (II) tion		Correspon	ding MELSECNET/H	special re	lay
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement
M9200	LRDP instruction received	OFF : Not accepted ON : Accepted	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
M9201	LRDP instruction complete	OFF : Not completed ON : Completed	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
M9202	LWTP instruction received	OFF : Not accepted ON : Accepted	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
M9203	LWTP instruction complete	OFF : Not completed ON : Completed	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
M9206	Link parameter error in the host	OFF : Normal ON : Abnormal	SB0055	Receive parameter error	OFF : Parameter normal ON : Parameter abnormal	0	
M9207	Link parameter check results	OFF : Match ON : Mismatch	None	-	-	Δ	Delete when used in a sequence program as a 3-tier system cannot be configured.
M9208	Master station B,W transmission range setting (only master station of lower link)	OFF : Transmits to tier2 and tier3 ON : Transmits to tier2 only	None	-	-	Δ	Delete when used in a sequence program as a 3-tier system cannot be configured.
M9209	Check instructions of link parameters (only master station of lower link)	OFF : Executing the check function ON : Check non- execution	None	-	-	Δ	Delete when used in a sequence program as a 3-tier system cannot be configured.
M9210	Link card error (for master station)	OFF : Normal ON : Abnormal	SB0020	Module status	OFF : Normal ON : Abnormal	0	
M9224	Link status	OFF : Online ON : Offline, station- to-station test, or self-loopback test	SB0043	Online switch	OFF : Online ON : Other than online	0	
M0005	F	OFF : Normal	SB0090	Host loop status	OFF : Normal ON : Abnormal	0	When ON, confirm the loop status by SW0090. The loop status can also be judged by the host station bits of SW0091 to SW0094.
W9225	Forward loop error	ON : Abnormal	SB0092 (when host station is remote master station)	Forward loop status of the remote master station	OFF : Normal ON : Abnormal	0	

(to next page)

Speci	al relay in the case master <u>sta</u>	of MELSECNET (II) ation		Correspo	nding MELSECNET/H	/H special relay			
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement		
M9226	Reverse loop error	OFF : Normal	SB0090	Host loop status	OFF : Normal ON : Abnormal	0	When ON, confirm the loop status by SW0090. The loop status can also be judged by the host station bits of SW0095 to SW0098.		
1113220		ON : Abnormal	SB0096 (when host station is remote master station)	Reverse loop status of the remote master station	OFF : Normal ON : Abnormal	0			
M9227	Loop test status	OFF : Not being executed ON : Forward loop test/reverse loop test execution underway	SB00AC	Offline test instruction status	OFF : Not instructed ON : Instructed	0			
M9232	Local station operation status	OFF : RUN or STEP RUN status ON : STOP or PAUSE status	SB0084	Each station CPU RUN status	OFF : All stations RUN or STEP RUN status ON : Stations in the STOP or PAUSE status exist	0			
M9233	Local station error detection status	OFF : No error ON : Error detection	None	-	-	Δ	Can be substituted by SB0074.		
M9235	Local station, remote I/O station parameter error detection status	OFF : No error ON : Error detection	SB007C	Parameter status of each station	OFF : No station detected parameter errors ON : A station detected parameter errors	0			
M9236	Local station, remote I/O station initial communications status	OFF : No communication ON : Communication in progress	SB0078	Parameter status of each station	OFF : Parameter communication not in progress ON : Parameter communication in progress	0			
M9237	Local station, remote I/O station error	OFF : Normal ON : Abnormal	SB0074	Cyclic transmission status of each station	OFF : All stations normal ON : Station where cyclic transmission is not executing exist	0			
M9238	Local station, remote I/O station	OFF : Normal	SB0091	Forward loop status	OFF : All stations normal ON : Faulty station present	0			
	torward/reverse loop error	UN : Abnormal	SB0095	Reverse loop status	OFF : All stations normal ON : Faulty station present	0			

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

(2) Local station special relay

Special relays enabled when host station is the local station.

				0	: Compatible, \triangle : Part	ial change	required, × : Incompatible
Special	relay in the case of statior	MELSECNET (II) local		МІ	ELSECNET/H special	relay	
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement
M9204	LRDP instruction complete	OFF : Not completed ON : Completed	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
M9205	LWTP instruction complete	OFF : Not completed ON : Completed	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
M9211	Link card error (for local station)	OFF : Normal ON : Abnormal	SB0020	Module status	OFF : Normal ON : Abnormal	0	
M9240	Link status	OFF : Online ON : Offline, station- to-station test, or self-loopback test	SB0043	Online switch	OFF : Online ON : Other than online	0	
M9241	Forward loop error	OFF : Normal ON : Abnormal	SB0090	Host loop status	OFF : Normal ON : Abnormal	0	When ON, confirm the loop status by SW0090. The loop status can also be judged by the host station bits of SW0091 to SW0094.
M9242	Reverse loop error	OFF : Normal ON : Abnormal	SB0090	Host loop status	OFF : Normal ON : Abnormal	0	When ON, confirm the loop status by SW0090. The loop status can also be judged by the host station bits of SW0095 to SW0098.
M9243	Loopback execution	OFF : Loopback not executed ON : Loopback execution	SB0090	Host loop status	OFF : Normal ON : Abnormal	0	When ON, confirm the loop status by SW0090. The loop status can also be judged by whether SW0099 and SW009A are the host station No.
M9246	Data not received from master station	OFF : Received ON : Not received	None	-	-	Δ	Delete when used in a sequence program as a 3-tier system cannot be configured.
M9247	Data not received from the upper loop in 3-tier system	OFF : Received ON : Not received	None	-	-	Δ	Delete when used in a sequence program as a 3-tier system cannot be configured.
M9250	Parameter unreceived	OFF : Received ON : Not received	SB0054	Parameter receive status	OFF : Receive completed ON : Not received	0	
M9251	Link break	OFF : Normal ON : Cancel	SB0049	Host station data link status	OFF : Normal ON : Abnormal	0	
M9252	Loop test status	OFF : Not being executed ON : Forward loop test/reverse loop test execution underway	SB00AE	Offline testing response designation	OFF : No response ON : Response	0	

(to next page)

Special	relay in the case of station	MELSECNET (II) local		ME	IELSECNET/H special relay			
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement	
M9253	Master station operation status	OFF : RUN or STEP RUN status ON : STOP or PAUSE status	SW0084 to SW0087	Each station CPU RUN status	Stores the CPU RUN status of each station.	0	When the MELSECNET II master station is the MELSECNET/H specified control station, the operation status is distinguished by the corresponding bit of the control station specified on SW0084 to SW0087.	
M9254	Operating status of other local stations	OFF : RUN or STEP RUN status ON : STOP or PAUSE status	SB0084	Each station CPU RUN status	OFF : All stations RUN or STEP RUN status ON : Stations in the STOP or PAUSE status exist	0		
M9255	Local station error on stations other than host station	OFF : Normal ON : Abnormal	SB0074	Cyclic transmission status of each station	OFF : All stations normal ON : Station where cyclic transmission is not executing exist	0		

 ${\sf O}:{\sf Compatible},\ {\vartriangle}:{\sf Partial}\ {\sf change}\ {\sf required},\ {\sf x}:{\sf Incompatible}$

(3) Master station special register

Special register enabled when host station is the master station.

Specia	l register in the cas master sta	e of MELSECNET (II) ation		MEL	_SECNET/H special re	egister				
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement			
D9200	LRDP processing results	 Normal completion LRDP instruction setting fault Error at relevant station Relevant station LRDP execution disabled 	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)			
D9201	LWTP processing results	 Normal completion LWTP instruction setting fault Error at relevant station Relevant station LRDP execution disabled 	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)			
D9202 D9203 D9241 D9242	Local station link type	Stores whether or not the slave station is a MELSECNET compatible station or a MELSECNET II compatible station.	None	-	-	Δ	Delete when used in a sequence program due to MELSECNET/H system.			
D9204	Link status	 Forward loop, during data link Reverse loop, during data link Loopback implemented in forward/reverse directions Loopback implemented in only forward direction Loopback implemented only in reverse direction Data link disabled 	SW0049 (SW0090 to SW009A)	Cause of data link transmission stop	 Normal Stop instruction issued No common parameters Common parameter error Host station CPU error Communication canceled 	Δ	Check whether or not the data link is normally SW0049. (Loop status is judged comprehensively by SW0090 to SW009A.)			
D9205	Station implementing loopback	Station that implemented forward loopback	SW0099	Loopback station (forward loop side)	Stores the number of stations executing the loopback on the forward loop side.	0				
D9206	Station implementing loopback	Station that implemented reverse loopback	SW009A	Loopback station (reverse loop side)	Stores the number of stations executing the loopback on the reverse loop side.	0				
D9207		Max. value	SW006B		Max. value	0				
D9208	Link scan time	Min. value	SW006C	Link scan time	Min. value	0				
D9209		Current value	SW006D		Current value	0				
D9210	Retry	Stored as cumulative	SW00C8	Number of retries on the forward loop side	Accumulates and stores the number of retries on the forward loop side.	Δ	The retries on the forward loop side are stored as a cumulative value.			
D9210 Retry		value	SW00C9	Number of retries on the reverse loop side	stores the number of retries on the reverse loop side.	Δ	reverse loop side are stored as a cumulative value.			

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

(to next page)

Specia	l register in the cas master sta	e of MELSECNET (II) ition		MEL	SECNET/H special re	l special register			
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement		
D9211	Loop switching count	Stored as cumulative value	SW00CE	Loop switching count	Accumulates and stores the number of loop checks conducted.	0			
D9212			SW0084						
D9213	Local station	Stores local stations in	SW0085	Each station CPU	Stores the CPU	0			
D9214	14 operation status	status	SW0086	RUN status	station	0			
D9215		olaldo.	SW0087						
D9216 D9217 D9218 D9219	Local station error detection status	Stores whether each local station has detected any error in other station.	None	-	-	Δ	Can be substituted by SW0074 to SW0077.		
D9220	Local station	Turns ON when a local	SW007C						
D9221	parameter	station or a remote I/O	SW007D	Parameter error	Stores the				
D9222	mismatch	station has detected	SW007E	status of each	parameter status of	0			
D9223	Remote I/O station 9223 I/O assignment error	an error on the link parameters from the master station.	SW007F	station	each station.)			
D9224	Local station,	Stores stations that are	SW0078	Parameter	Stores the				
D9225	remote I/O station	performing	SW0079	communication	communication status of each station parameters.	0			
D9226	initial	communication of link	SW007A	status of each					
D9227	communication underway	parameters.	SW007B	station					
D9228	Local station		SW0074	Cyclic transmission	Stores the cyclic				
D9229	remote I/O station	Stores data link error	SW0075	status of each	transmission status	0			
D9230	error	stations.	SW0076	station	of each station.	U			
D9231			SW0077						
D9232			SW0091		Stores the forward		The error on the loop		
D9233			SW0092	Forward loop status	loop status of each	\wedge	line of the forward loop		
D9234	Local station and	Stores the station that	SW0093	of each station	station.	_	is stored.		
D9235	remote I/O station	detected the error on	SW0094						
D9236	loop error	the forward loop line	SW0095	Reverse loop	Stores the reverse		The error on the loop		
D9237		and reverse loop line.	SW0096	status of each	loop status of each	Δ	line of the reverse loop		
D9238			500097	station	station.		is stored.		
D9239	Number of reactive		200098				The error count for		
D9240	error detection times	Stores cumulative total of receive errors	SW00B8 to SW00C7	Various error counters	Various error counters	Δ	each error cause is stored.		

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

(4) Local station special register

Special registers enabled when host station is a local station

Specia	Special register in the case of MELSECNET (II) master station			MEL	SECNET/H special re	egister	ister			
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement			
D9243	Station number information for host station	Stores the station number. (0 to 64)	SW0042	Station No.	Stores the station number of the host.	0				
D9244	Number of link device stations	Stores number of slave stations.	SW0056	Total number of link stations	Stores the total number of link stations that is set with the parameters.	0				
D9245	Number of receive error detection times	Stores cumulative total of receive errors.	SW00B8 to SW00C7	Various error counters	Various error counters	Δ	The error count for each error cause is stored.			
D9248			SW0084							
D9249	Local station	Stores local stations in	SW0085	Each station CPU	Stores the CPU	0				
D9250	operation status	status.	SW0086	RUN status	station.	0				
D9251			SW0087							
D9252			SW0074							
D9253	Local station error	Stores the local station	SW0075	Cyclic transmission	Stores the cyclic					
D9254	status	host, which is in error.	SW0076	status of each	of each station.	0				
D9255			SW0077							

(1) MELSECNET II dedicated instruction

Dedicated instructions that were used on MELSECNET II need to be replaced with the following dedicated instructions on MELSECNET/H.

The table below shows a comparison between dedicated instructions on MELSECNET II and dedicated instructions on MELSECNET/H. The table also shows reference items in the Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC Network). Check these reference items before changing the sequence program.

	MELSECNET II			MELSECNET/H			
Instruction	Category	Description	Instruction	Category	Description	item in the	
name			name		e e e e e e e e e e e e e e e e e e e	manual	
		The master station reads the word devices (T, C, D, W) on local stations.	READ	Other station	Reads device data on other	Section	
LRDP	Reading from local station		SREAD	word device read	stations of target network No.	7.4.5	
				Other station	Reads device data on other	Section	
			ZNRD	word dovico road	stations of target network No.	7.4.5	
				word device read	by A-compatible instructions.		
			WDITE	Other station	Writes data to devices on	Soction	
		The meeter station		word device	other stations of target		
	Writing to local	writes to the word	SWRITE	write	network No.	7.4.5	
LWTP	station	dovicos (T.C.D.W)		Other station	Writes data to devices on		
	Station				other stations of target	Section	
		un iucai sidliuns.		word device	network No. by A-compatible	7.4.5	
				write	instructions.		

The following describes operation by the instructions.

			-		,	
		Execution station			Targe statio	n n
Instruction	Name	QCPU	Description	QCPU	QnA/ QnAS CPU	AnU/ AnUS(H) CPU
READ SREAD	Other station word device read	0	Reads CPU device data on target stations of target network No. (in 16-bit units) CPU Network module CPU HH-[READ] Channel 1 Word device Channel 2 Channel 3 2594 Word device Channel 5 2594 Channel 7 Channel 8 2594	0	0	×
WRITE SWRITE	Other station word device write	0	Writes data to CPU device on target station of target network No. (in 16-bit units) (Devices on the target station can be turned ON by SWRITE.) CPU Network module CPU Channel 1 Channel 2 Channel 4 Channel 5 Channel 6 Channel 7 Channel 8	0	0	×

○ : Can be used, ×: Cannot be used

(to next page)

				0000	,	
		Execution			Targe	et
		station			statio	n
Instruction	Name		Description		QnA/	AnU/
		QCPU		QCPU	QnAS	AnUS(H)
ZNRD	Other station word device read	0	[A-compatible instruction] Reads CPU device data on target stations of target network No. CPU Network module Network module CPU (Channel 1 Word device 2594 2594 2594	0	0	0
ZNWR	Other station word device write	0	[A-compatible instruction] Writes data to CPU device on target station of target network No. CPU Network module CPU Channel 2 * Fixed 361	0	0	0

O : Can be used, × : Cannot be used

2.7 Replacement Precautions

The following shows the replacement precautions when replacing MELSECNET (II) with MELSECNET/ H.

(1) Cables

For details on precautions for optical cables and coaxial cables, refer to Section 2.2.2 Cable performance comparisons.

(2) System configuration

(a) System configuration using local stations and remote I/O stations in MELSECNET mode and MELSECNET II mode

MELSECNET/H system, which is a composite system comprising local stations and remote stations, provides high-performance functions by making a separation between local stations and remote stations. It therefore cannot be configured by a mixture of local stations and remote stations. For this reason, in a MELSECNET (II) system, when replacing a system, which comprises a mixture of local stations and remote I/O stations connected to a single master station, with a MELSEC/H system, the following system configuration is necessary. Normal stations are connected to a single control station, and remote I/O stations are controlled by an additional remote master station (the control station in a remote I/O system is defined as the "remote master station"). The following shows a system configuration example.

For a parameter change example, refer to Section 3.5.2.

System configuration using local and remote stations (optical)

MELSECNET (II) (optical)	MELSECNET/H (optical)	Remarks (proposed measure)
Optical loop M L1 R3 L2	Optical loop	 The control station of network No.1 configures a PLC to PLC network that controls normal station 1 and normal station 2. The other network module becomes the remote master station, and the remote I/O network system of No.2 is configured.

(b) MELSECNET (II) system comprising 65 connected modules

The maximum number of stations on the MELSECNET/H system is 64 (one control station, 63 normal stations).

The maximum number of stations on the MELSECNET (II) system is 65 (one master station, 64 local stations + remote I/O stations). For this reason, when the maximum number of 65 MELSECNET/H modules are connected, measures (e.g. division into two networks of 64 modules or less having a different network No.) are required.

(3) Sequence program

(a) Data separation prevention

When two words (32 bits) or more of cyclic data are handled, the old data sometimes is mixed with the new data. To read/write cyclic data of two words or more in a single operation, set data separation prevention by the following method.

1) Interlock program using BW

Data separation can be prevented by performing handshaking using BW between the cyclic data sending station and cyclic data receiving station.

The following shows an example of an interlock program for handshaking.



2) Per-station block guarantee function

When the "interlock program using BW" in 1) cannot be made, use the per-station block guarantee function for MELSECNET/H cyclic data. By enabling the per-station block guarantee function, handshaking is performed between CPU modules and network modules to refresh the network, and enables data separation prevention of cyclic data per station. The per-station block guarantee function is enabled when "Secured data send" and "Secured data receive" in the following parameters are set.

MELSECNET/10H supplementary settings	MELSECNET/10H supplementary settings						
Constant scanmsMaximum No.of returns to system stations in 1 scan.2Station	Specification of low speed cyclic transmission Transmit data of one station in 1 scan Fixed interval cycle setting Second						
With multiplex transmission	C System times						
 There is a data link through the sub-controlling station when the controlling station is down. ✓ Secured data send ✓ Secured data receive 	Year Month Day Hour Min. Sec. 1						
Transient setting	5						
Maximum No.of transients in 1 2 Times scan.	6						
Maximum No.of transients in 2 Times one station	8						
End	Cancel						

(b) BW first half/second half assignments in the MELSECNET II mode and composite mode

Set the station inherent parameters of the MELSECNET/H to all stations to re-use MELSECNET II sequence programs more efficiently. Note, however, that as the "station inherent parameter" setting functions cannot be used on basic models (Q00JCPU, Q00CPU, Q01CPU), use the [Device block replacement] function to change the devices in the first and second half settings to continuous numbers.

(c) Processing time

The link scan time and link refresh time differ between the A/AnS/QnA/QnAS series and the Q series. For details on processing times, refer to the manual for the respective module.

(4) Precautions for system where AnN/AnS/AnACPU are mixed.

Pay attention to the following when replacing the MELSECNET II system where AnN/AnA/AnSCPU (excluding AnUS(H)CPU) are mixed, with the MELSECNET/10 system. Refer to "Chapter 11 COMPOSITE SYSTEMS" in "Type MELSECNET/10 Network system (PLC to PLC network) Reference Manual", for details.

(a) Control station of the MELSECNET/10 system

MELSECNET/10 system after transition requires one AnU/AnUS(H)/QnA/QnAS/QCPU as a control station.

In addition, because AnN/AnA/AnSCPU (excluding AnUS(H)CPU) cannot be a sub-control station in the transition to MELSECNET/10, the MELSECNET/10 system after transition requires two or more AnU/AnUS(H)/QnA/QnAS/QCPU to use the control station shift function of MELSECNET/10.

(b) Device range where data link can be executed on the MELSECNET/10 system

Device range where data link can be executed on the MELSECNET/10 system is the device range of AnN/AnS/AnACPU to be connected.

	X/Y	B/Y		
AnN/AnSCPU (excluding		0000 to 03EE		
AnUS(H)CPU)	Maximum 0000 to 07FF			
AnACPU	Maximum 0000 to 07FF ^{*2}	0000 to 0FFF		

*1 For A3NCPU. Depends on the number of I/O points that can be controlled by AnN/AnSCPU (excluding AnUS(H)CPU).

*2 For A3ACPU. Depends on the number of I/O points that can be controlled by AnACPU.

(c) When AnN/AnA/AnSCPU (excluding AnUS(H)CPU) are mixed in transition from MELSECNET II composite mode to MELSECNET/10

Communicable B/W range is 0 to 3FF when AnN/AnSCPU (excluding AnUS(H)CPU) are mixed on MELSECNET/10.

When the second half is set on the MELSECNET II composite mode, it is necessary to divide with station inherent parameter for transferring data, but the station inherent parameter cannot be set on AnN/AnSCPU (excluding AnUS(H)CPU).

AnACPU can communicate at the range of B/W0 to FFF, but station inherent parameter cannot be set.

From here onwards, it may cause a communication error of the area divided by station inherent parameter at the other station where transmission of B/W 400 or later cannot be made.

When replacing MELSECNET II composite mode with MELSECNET/10 where AnN/AnA/AnSCPU (excluding AnUS(H)CPU) are mixed, replace AnN/AnA/AnSCPU (excluding AnUS(H)CPU) with a CPU that is applicable to MELSECNET/10, such as QCPU.

3 REPLACEMENT OF MELSECNET (II) AND MELSECNET/B (REMOTE I/O NETWORK)

3.1 List of MELSECNET (II), MELSECNET/B Alternative Models

(1) Replacement of MELSECNET (II) modules with MELSECNET/H modules

Network type	A/AnS/A0J2(H) series	Alternative models for Q series			
	A1NCPUP21				
	A2NCPUP21				
	A2NCPUP21-S1				
Ontion	A3NCPUP21	CPU modulo + 0 1711 P21 25 (Ontion loon: SLepho			
(CPLL integrated type)	A2ACPUP21	CF0 Initialitie + Q37 IEF21-25 (Optical 100p. SI cable			
(CFO integrated type)	A2ACPUP21-S1	Supported)			
	A3ACPUP21				
	A2CCPUP21				
	A0J2HCPUP21				
	A1NCPUP21-S3				
	A2NCPUP21-S3				
Ontingligen	A2NCPUP21-S4	CPU modulo I 01711 P21C (Ontion loon) CLeable			
	A3NCPUP21-S3				
(CPO integrated type)	A2ACPUP21-S3	supported)			
	A2ACPUP21-S4				
	A3ACPUP21-S3				
	A1NCPUR21				
	A2NCPUR21				
	A2NCPUR21-S1				
Cooviel loop	A3NCPUR21				
	A2ACPUR21	CPU module + QJ71BR11 (Coaxial bus)			
(CFO integrated type)	A2ACPUR21-S1				
	A3ACPUR21				
	A2CCPUR21				
	A0J2HCPUR21				
Optical loop (Standalopa)	AJ71AP21	Q 1711 D21 25 (Optical loop: SI cable supported)			
Optical loop (Standalone)	A1SJ71AP21	GJ7 TLP21-25 (Optical loop. SI cable supported)			
	AJ71P21-S3				
	AJ71AP21-S3				
Optical loop (Standalone)	AJ71P22-S3	QJ71LP21G (Optical loop: GI cable supported)			
	AJ71AP22-S3				
	A1SJ71AP21-S3				
Coavial loop (Standalopa)	AJ71AR21				
Coaxial loop (Standalone)	A1SJ71AR21				
Optical loop (Standalone)	AJ72P25	Q 1721 D25 25 (Optical loop: SL cable supported)			
(Remote I/O station)	AJ72P25-S1	Q372LF25-25 (Optical loop. SI cable supported)			
Optical loop (Standalone)	AJ72P25-S3	0 1721 D2EC (Ontion loop: Clashla supported)			
(Remote I/O station)	A0J2P25				
Copying Joon (Standalana)	AJ72R25				
(Remote I/O station)	AJ72R25-S1	QJ72BR15 (Coaxial bus)			
	A0J2R25	<u> </u>			

(2) Replacement of MELSECNET/B modules with MELSECNET/H modules

Network type	A/AnS series	Alternative models for Q series
Twistod pair	AJ71AT21B	QJ71LP21-25 (Optical loop)
Twisted pair	A1SJ71AT21B	QJ71BR11 (Coaxial bus)
Twistod pair	AJ72T25B	QJ72LP25-25 (Optical loop)
	A1SJ72T25B	QJ72BR15 (Coaxial bus)

3.2 Performance Specifications Comparisons

3.2.1 Module performance Compatibility comparisons

- (1) Comparison between MELSECNET (II) module (optical loop) and MELSECNET/H module (optical loop)
 - (a) SI optical cable, H-PCF optical cable

 \bigcirc : Compatible, \bigtriangleup : Partial change required, ×: Incompatible

		Spec			
lte	m	MELSECNET (II) module	MELSECNET/H module	Compat-	Precautions for replacement
		Optical loop	Optical loop (QJ71LP21-25, QJ72LP25-25)	ibility	
		Max. 2048 points and max. number of			
	X/Y	I/O points of CPU module on master station	8192 points	0	
Maximum			16384 points		
numberof	в	_	(Remote master station \rightarrow remote I/O	0	
link points			station: 8192 points, remote I/O station \rightarrow	U	
per			remote master station: 8192 points)		
network		(MELSECNET mode) 1024 points	16384 points		
	W	(MELSECNET II composite mode)	station: 8192 points, remote I/O station \rightarrow	0	
		4096 points	remote master station: 8192 points)		
		(MELSECNET mode) 1024 bytes	Remote master station \rightarrow remote I/O		
Maximum	Master	• (MELSECNET II composite mode)	station		
number of	station	First half: 1024 bytes	$\{(LY + LB) \div 8 + (2 \times LW)\} \leq 1600 \text{ bytes}$	-	
ner	Remote		Remote I/O station \rightarrow remote master	0	
station	I/O	512 bytes	station		
	station		$\{(LX + LB) \div 8 + (2 \times LW)\} \le 1600 \text{ bytes}$		
Maximum I I/O points I	number of per station	512 points	4096 points	0	
Communic speed	cation	1.25 Mbps	25Mbps/10Mbps	0	
Number of stations		65 stations (Master station: 1 local	65 stations (Remote master station: 1		Set the PLC to PLC network to
connected in one		station + remote I/O station: 64)	remote I/O station: 64)	Δ	a separate network.
network			Clastical cable		When using evicting Clashlas
		SI ontical cable	H-PCE ontical cable		the distance between stations
Applicable	cable	H-PCF optical cable	Broad-band H-PCF optical cable	Δ	may be shortened.
			QSI optical cable		(Refer to Section 3.2.2.)
Overall dis	tance	10km	30km	0	
			Refer to Section 3.2.2.		To ensure the same distance
Distance b	etween				as before replacement, either
stations		Refer to Section 3.2.2.		Δ	change the optical cable, or
					install a gateway station
Maximum	number of				New MELSECNET/H
networks		-	239	\triangle	parameter (mandatory)
Communic	ation		Toles de la dest		Nothing to be noted though the
method		Hair duplex bit serial method	loken ring method	Δ	communication method differs.
Transmissi method	ion	Duplex loop		0	
Modulation method		(Modulation method) CMI method	(Encoding method) NRZI coding	^	Nothing to be noted though the
(Encoding method)		((modulation method differs.
Transmissi	ion format	HDLC standards (frame format)		0	
Error contr	ol system	CRC (X ¹⁶ +X ¹² +X ⁶ +1) and retry by a tim	ne over	0	
RAS functi	ion	Loop-back function due to error dete	ction or broken cable	0	
		Diagnostic function for checking loca	II IINK IINES		When the meeter station is
Number of	occupied	(Master Station)	(Master station)		replaced from a CPU
I/O points	occupied	Standalone:32 points per slot (I/O	32 points per slot (I/O assignment: intelli.	Δ	integrated type, one new slot
		assignment: special 32 points)	32 points)		(32 points) is required.

(b) Modules for GI optical cable

		Speci			
Item		MELSECNET (II) module MELSECNET/H module		Compat-	Precautions for replacement
		Optical loop Optical loop(QJ71LP21G, QJ72LP25G)		ionity	
	Х/Ү	Max. 2048 points and max. number of I/O points of CPU module on master station	8192 points	0	
Maximum number of link points per	в	-	16384 points (Remote master station \rightarrow remote I/O station: 8192 points, remote I/O station \rightarrow remote master station: 8192 points)	0	
network	w	(MELSECNET mode) 1024 points (MELSECNET II composite mode) 4096 points	16384 points (Remote master station \rightarrow remote I/O station: 8192 points, remote I/O station \rightarrow remote master station: 8192 points)	0	
Maximum number of link points	Master station	• (MELSECNET mode) 1024 bytes • (MELSECNET II composite mode) link parameter First half: 1024 bytes link parameter Second half: 1024 bytes		. 0	
per station	Remote I/O station	512 bytes	Remote I/O station \rightarrow remote master station {(LX + LB) \div 8 + (2 × LW)} \leq 1600 bytes		
Maximum number of I/O points per station		512 points	4096 points	0	
Communication speed		1.25 Mbps	10 Mbps	0	
Number of stations connected in one network		65 stations (Master station: 1, local station + remote I/O station: 64)	65 stations (Remote master station: 1, remote I/O station: 64)	Δ	Set the PLC to PLC network to a separate network.
Applicable	e cable	GI optical cable	GI optical cable	0	
Overall dis	stance	10 km	30 km	0	
Distance b stations	between	GI optical cable: 2km	GI optical cable: 2km	0	
Maximum networks	number of	-	239	Δ	New MELSECNET/H parameter (mandatory)
Communio method	cation	Half duplex bit serial method	Token ring method	Δ	Nothing to be noted though the communication method differs.
Transmiss method	ion	Duplex loop		0	
Modulation method (Encoding method)		(Modulation method) CMI method	(Encoding method) NRZI coding	Δ	Nothing to be noted though the modulation method differs.
Transmiss	ion format	HDLC standards (frame format)		0	
Error conti	rol system	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and retry by a tim	ne over	0	
RAS funct	ion	 Loop-back function due to error detect Diagnostic function for checking local 	ction or broken cable link lines	0	
Number of I/O points	foccupied	• Diagnostic function for checking local link lines (Master station) CPU integrated type: 0 point Standalone:32 points per slot (I/O Standalone:32 points		Δ	When the master station is replaced from a CPU integrated type, one new slot (32 points) is required.

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

(2) Comparison between MELSECNET (II) module (coaxial loop) and MELSECNET/H module (coaxial bus)

$\bigcirc:Compatible,$	\triangle : Partial	change required,	× : Incompatible
------------------------	-----------------------	------------------	------------------

		Specif	0		
Ite	m	MELSECNET (II) module	MELSECNET/H module	compat-	Precautions for replacement
		Coaxial loop	Coaxial bus (QJ71BR11, QJ72BR15)	ioiiity	
	X/Y	Max. 2048 points and max. number of I/O points of CPU module on master	8192 points	0	
Maximum number of link points	в	-	16384 points (Remote master station \rightarrow remote I/O station: 8192 points, remote I/O station \rightarrow remote master station: 8192 points)	0	
network	w	(MELSECNET mode) 1024 points (MELSECNET II composite mode) 4096 points	16384 points (Remote master station → remote I/O station: 8192 points, remote I/O station → remote master station: 8192 points)	0	
Maximum number of link points	Master station Remote	(MELSECNET mode) 1024 bytes (MELSECNET II composite mode) link parameter first half: 1024 bytes	Remote master station \rightarrow remote I/O station {(LY + LB) \div 8 + (2 × LW)} \leq 1600 bytes Remote I/O station \rightarrow remote master	0	
station	I/O station	512 bytes	station $\{(LX + LB) \div 8 + (2 \times LW)\} \leq 1600 \text{ bytes}$		
Maximum I I/O points I	number of per station	512 points	4096 points	0	
Communic speed	ation	1.25 Mbps	10 Mbps	0	
Number of stations connected network	in one	65 stations (Master station: 1, local station + remote I/O station: 64)	33 stations (Remote master station: 1, remote I/O station: 32)	Δ	 Set the PLC to PLC network to a separate network. For stations over 33, build a separate network.
Applicable	cable	3C-2V 5C-2V		Δ	When using existing cables, the overall distance and distance between stations becomes shorter.
Overall distance		3C-2V: 10km 5C-2V: 10km	3C-2V: 300m 5C-2V: 500m	Δ	Either use an A6BR10/ A6BR10-DC type repeater unit, or configure a separate network.
Distance between stations		3C-2V: 500m 5C-2V: 500m	3C-2V: 300m 5C-2V: 500m	Δ	When using the 3C-2V, use the A6BR10/A6BR10-DC type repeater unit.
Maximum I networks	number of	-	239	Δ	New MELSECNET/H parameter (mandatory)
Communic method	ation	Half duplex bit serial method	Token ring method	Δ	Nothing to be noted though the communication method differs.
Transmissi method	ion	Duplex loop	Single bus	Δ	Nothing to be noted though the transmission method differs.
Modulation (Encoding	n method method)	(Modulation method) CMI method	(Encoding method) Manchester code	Δ	Nothing to be noted though the modulation method differs.
Transmission format		HDLC standards (frame format)			
Error control system		CRC (X ¹⁶ +X ¹² +X ⁵ +1) and retry by a time	e over	0	
RAS function		 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines 	Diagnostic function for checking local link lines	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Number of occupied I/O points		(Master station) CPU integrated type: 0 point Standalone:32 points per slot (I/O assignment: special 32 points)	(Master station) 32 points per slot (I/O assignment: intelli. 32 points)	Δ	When the master station is replaced from a CPU integrated type, one new slot (32 points) is required.

(3) Comparison between MELSECNET/B module (twisted pair) and MELSECNET/H module (optical loop/coaxial bus)

\sim	· Compatible	<u>،</u> .	Dartial	change	roquirod	v .	Incompatible
\odot	. Compatible,	Λ .	Paruar	change	required,	×.	incompatible

Item		Speci					
		MELSECNET/B module	MELSECNE	T/H module	Compat-	Precautions for replacement	
1.6	5111	Twisted pair	Optical loop (QJ71LP21-25)	Coaxial bus (QJ71BR11)	ibility	Precautions for replacement	
		Max. 2048 points and max. number of					
	X/Y	I/O points of CPU module on master station	8192 points		0		
			16384 points				
Maximum			(Remote master stat	tion \rightarrow remote I/O	_		
link points	В	-	station: 8192 points,	romoto master	0		
nink points			station: 8192 points)				
network			16384 points	,			
		(MELSECNETmode) 1024 points	(Remote master star	tion \rightarrow remote I/O			
	W	(MELSECNET II composite mode)	station: 8192 points,		0		
		4096 points	remote I/O station -	remote master			
			station: 8192 points))			
Maximum	Master	(MELSECNETmode) 1024 bytes	Remote master stati	on \rightarrow remote I/O			
number of	station	(MELSECNET II composite mode)	station				
link points	Desiste	Link parameter first haif: 1024 bytes	{(LY + LB) ÷ 8 + (2 ×	$LVV) \ge 1600 \text{ bytes}$	0		
per	Remote	E12 butco	Remote I/O station -	→ remote master	_		
station	station	512 bytes	f(1 X + 1 B) + 8 + (2 X)	(1.00) < 1600 bytes			
Maximum	number of		((LX · LD) · 0 · (2 ·				
I/O points	per station	512 points	4096 points		0		
Communie	cation	125kbps/250kbps/500kbps/1Mbps	25Mbps/10Mbps	-	0		
speed			-	10Mbps	0		
			65 stations				
			(Remote master	_	~	Set the PLC to PLC network to	
Number o	f stations	20 stations (Master stations 4	station: 1, remote I/		_	a separate network.	
connected	l in one	local station + remote I/O station: 31)	O station. 64)	33 stations			
network				(Remote master	Δ	Set the PLC to PLC network to	
			-	station: 1, remote I/		a separate network.	
				O station: 32)			
			SI optical cable				
			H-PCF optical				
			cable			A new optical cable has to be	
Annlinghle		Objected to viete dia sin estate	Broad-band	-		installed.	
Applicable	e cable	Shielded twisted pair cable	cable				
			QSI optical cable				
				3C-2V		A new coaxial cable has to be	
			-	5C-2V	Δ	installed.	
		125kbps: 1200m	30km	-	0		
		250kbps: 600m				Either use an A6BR10/	
Overall dis	stance	500kbps: 400m	-	3C-2V: 300m	~	A6BR10-DC type repeater	
		1Mbps: 200m		5C-2V: 500m		unit, or configure a separate	
						network.	
			Refer to Section			GL optical cables for all optical	
		125kbps: 1200m	3.2.2.	-	0	cables, and use QJ71LP21G	
Distance ł	petween	250kbps: 600m				as the module.	
stations		500kbps: 400m				Either use an A6BR10/	
		1Mbps: 200m	_	3C-2V: 300m	_	A6BR10-DC type repeater	
				5C-2V: 500m		unit, or configure a separate	
						network.	
networks	number of	-	239		Δ	parameter (mandatorv)	

(to next page)

	Specif				
Itom	MELSECNET/B module	MELSECNE	T/H module	Compat-	Brocoutions for replacement
item	Twisted pair	Optical loop (QJ71LP21-25)	Coaxial bus (QJ71BR11)	ibility	Frecautions for replacement
Communication method	Half duplex bit serial method	Token ring method		Δ	Nothing to be noted though the communication method differs.
Transmission	Single hue	Duplex loop	-	0	
method		-	Single bus	0	
Modulation method	(Medulation method) NPZI method	(Encoding method) NRZI coding	-	0	
(Encoding method)		-	(Encoding method) Manchester code	Δ	Nothing to be noted though the modulation method differs.
Transmission format	HDLC standards (frame format)			0	
Error control system	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and retry by a time		0		
RAS function	Diagnostic function for checking local link lines				
Number of occupied I/O points	(Master station) Standalone: 32 points per slot (I/O assignment: special 32 points)	(Master station) s per slot (I/O 32 points per slot (I/O assignment: intelli. 32 points) 32 points)		0	

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

3.2.2 Cable performance comparisons

(1) Optical fiber cable

(a) Overall distance

The overall distance (30km) does not differ according to the optical fiber cable.

(b) Distance between stations

1) SI optical fiber cable

 \bigcirc : Compatible, $\ {\bigtriangleup}$: Partial change required, \times : Incompatible

Туре		MELSECNET (II) module	MELSECNET/H module (Optical loop) 10Mbps 25Mbps		Compat- ibility	Precautions for replacement
		(Optical loop)	TUMBPS	25Mbps		
SI optical fiber cable	L type	1km	500m	200m	\triangle	
(type: A-2P-□)	H type	500m	300m	100m	Δ	Refer to ^{*1} below.
SI optical fiber cable (typ	e: AN-2P-□)	1km	500m	200m	Δ	
H-PCFoptical fiber cable		1km	1km	400m	Δ	Refer to ^{*2} below.
Broad-band H-PCF optical fiber cable		-	1km	1km	0	
QSI optical fiber cable		-	1km	1km	0	

*1 When the distance between stations does not satisfy the MELSECNET/H specifications, either change the type of optical fiber cable, or install a gateway station midway along existing cables.

*2 When the distance between stations does not satisfy the MELSECNET/H specifications, use at a communication speed of 10 Mbps, change the type of optical fiber cable, or install a gateway station midway along existing cables.

2) GI optical fiber cable

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

Туре	MELSECNET (II) module (Optical loop)	MELSECNET/H module (Optical loop)	Compat- ibility	Precautions for replacement
GI optical fiber cable	2km	2km	0	

(2) Coaxial cable

(a) Overall distance

			O : Compa	atible, \triangle : Pa	artial change required, × : Incompatible
	Туре	MELSECNET (II) module (Coaxial loop)	MELSECNET/H module (Coaxial bus)	Compat- ibility	Precautions for replacement
3C-2V	,	10km	300m	Δ	Defende ^{*3} heleur
5C-2V	,	10km	500m	Δ	Refer to a below.

*3 When the overall distance does not satisfy the MELSECNET/H specifications, either use an A6BR10/A6BR10-DC type repeater unit in the network, or configure a separate network.

(b) Distance between stations

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

Туре	MELSECNET (II) module (Coaxial loop)	MELSECNET/H module (Coaxial bus)	Compat- ibility	Precautions for replacement
3C-2V	500m	300m	Δ	Defende*4 helen
5C-2V	500m	500m	0	Keler to below.

*4 When the distance between stations does not satisfy the MELSECNET/H specifications, either use an A6BR10/A6BR10-DC type repeater unit in the network.



The following shows the extension method when a repeater unit for the A6BR10/A6BR10-DC type MELSECNET/10 coaxial bus system is used. For details, refer to the Repeater Unit for the MELSECNET/10 Coaxial Bus System type A6BR10/A6BR10-DC User's Manual (IB-66499).

(1) The distance between stations of 500m (5C-2V) and 300m (3C-2V) can be extended.



(2) Up to four repeater units can be used in a single network.^{*5}



3.3 Functional Comparisons

	Descr	iption	Compat	Precautions for	
Item	MELSECNET (II) module MELSECNET/B module	MELSECNET/H module	ibility	replacement	
Cyclic transmission	X/Y are used to perform 1:1 communications between the master station and local stations, and the master station and remote I/O stations.	X/Y are used to perform 1:1 communications between the remote master station and remote I/O stations.	0		
Transient transmission	 The RFRP/RTOP instructions issued from the master station are used to read/write the buffer memory of special function modules at remote I/ O stations. Other stations are accessed from GX Developer connected to the master station. The master station is accessed from GX Developer connected to remote I/O stations. 	 The REMFR/REMTO instructions issued from the remote master station are used to read/write the buffer memory of intelligent function modules at remote I/O stations. Other stations are accessed from GX Developer connected to the remote master station. The remote master station is accessed from GX Developer connected to remote I/O stations. 	Δ	Correct the RFRP/RTOP instructions for reading/ writing buffer memory on intelligent function modules at remote I/O stations to the REMFR/REMTO instructions. (Refer to Section 3.6.2.)	
Automatic return	When a disconnected remote I/C	D station returns to normal	0		
Loopback function	In the case of an optical loop system and coaxial loop system, faulty parts are disconnected when a fault (e.g. cable disconnection) occurs, and normal operation is continued on operable stations as a result of the loopback.	In the case of an optical loop system, faulty parts are disconnected when a fault (e.g. cable disconnection) occurs, and normal operation is continued on operable stations as a result of the loopback.	0		
Error detection	Faulty parts are detected by the data of special relays (M9200 to 9255) and special registers (D9200 to 9255).	Faulty parts are detected by the data of link special relays (SB0 to 1FF) and link special registers (SW0 to 1FF).	Δ	Change the devices in the sequence program. (Refer to Section 3.6.1.)	
Self-diagnosis test function	Set the following test items by the mode setting switch: • Self-loopback test • Station-to-station test • Forward loop/reverse loop test	Set the following test items by the mode setting switch: • Self-loopback test • Internal self-loopback test • Hardware test Set the following test items in the network parameters: • Forward loop/reverse loop test	Δ	 Set the forward loop/ reverse loop test in the network parameter settings. Substitute the station-to- station test with the forward loop/reverse loop test. 	

3.4 Switch Settings Comparisons

(1) Comparison between MELSECNET (II) modules and MELSECNET/H modules

		⊖ : Compatible,	\triangle : Partial of	change required, × : Incompatible
0	Descr	ription	Compat-	Precautions for
Switch name	MELSECNET (II) module	ibility	replacement	
Station number setting switch	Sets the station number.	Sets the station number.	0	
Mode select switch	Sets the mode for operation self-diagnostics test.	Sets the mode for operation self-diagnostics test.	Δ	The forward loop/reverse loop test is set in GX Developer network parameter settings.

(2) Comparison between MELSECNET/B modules and MELSECNET/H modules

Ousitals	Descr	Description						
Switch name	MELSECNET (II) module	MELSECNET/H module	ibility	replacement				
Station number setting switch	Sets the station number.	Sets the station number.	0					
Mode select switch	Sets the mode for operation self-diagnostics test.	Sets the mode for operation self-diagnostics test.	Δ	The forward loop/reverse loop test is set in GX Developer network parameter settings.				
Communication speed setting switch	Sets the communication speed.	-	Δ	The setting is not required.				

3.5 Parameter Comparisons

3.5.1 Parameter comparisons

The network parameters of MELSECNET (II) are deleted when the programmable controller type is changed with the GX Developer. After changing the programmable controller type, set the MELSECNET/H network parameters again.

(1) MELSECNET (II) \rightarrow MELSECNET/H

The following shows a comparison between MELSECNET (II) network parameter settings and MELSECNET/H network parameter settings.

The MELSECNET (II) master station is compared with the MELSECNET/H master station.



	MELSECNET (II)		MELSECNET/H			Compat- ibility	Precautions for replacement
	Net	vork type		Net	work type	0	
	Star	ting I/O No. ^{*1}		Star	ting I/O No.	0	
	- (N	o setting)		Net	work No.	Δ	Mandatory for the MELSECNET/H.
	Tota	I number of (slave) stations		Tota	al number of (slave) stations	0	
Master	nents		Master	ents	LB, LW assignments on the master station and remote I/O stations	0	
station	ignr	master station and remote	station	gnm	Station inherent parameter	Δ	*2
	ork range ass	I/O stations		vork range assi	Supplemental settings- Secured data send Supplemental settings- Secured data receive	Δ	*3
	Netwo	LX/LY assignments on the master station and remote I/O stations		Netv	LX/LY assignments on the master station and remote I/O stations	0	
	Refr	esh parameters ^{*1}		Ref	resh parameters	0	
Remote I/O station	re I/O - (No setting) Remote I/O station - (No setting)		o setting)				

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

*1 This is set when the AnU/AnUS(H)/QnA/QnASCPU is mounted.

*2 Applied when LB/LW are set for both the first half/second half on MELSECNET (II). (For details, refer to Section 3.5.2 Parameter change example.)

*3 This is the data separation prevention function for reading/writing cyclic data of two words or more in a single operation. (For details, refer to Section 3.7 Replacement Precautions.)

3.5.2 Parameter change example

The following shows an example of how to change the LB/LW, LX/LY network parameters when replacing the MELSECNET remote system with MELSECNET/H.

The MELSECNET remote system can be used in the following operation modes.

- MELSECNET mode
- MELSECNET II composite mode

(1) MELSECNET mode

The following shows the procedure for changing the parameters in the case of a MELSECNET mode 2tier system configuration.

A MELSECNET composite system comprising local stations and remote I/O stations is divided into a PLC to PLC network and a remote I/O network in the MELSECNET/H.



(a) Setting ranges of MELSECNET link parameters



(b) Setting ranges of MELSECNET/H link parameters

1) Setting ranges of network 1 link parameters



2) Setting ranges of network 2 link parameters

The REMFR, REMTO instructions do not use B, W, and the setting of B, W is not required. Only X,Y are set.



A MELSECNET/H module set as normal station requires network parameter setting. For replacement of MELSECNET (II) module mounted on the CPU module of the AnN/AnA/AnSCPU (excluding AnUS(H)CPU), newly set network parameters.

	Common parameter (Network range assignment)	Refresh parameter		
1Mp1	0	0		
•	(Refer to example in (e) 2) and 3))	(Refer to example in (e) 4))		
2MR	0	0		
2001	(Refer to example in (f) 1) and 2))	(Refer to example in (f) 3))		
1Ne2		0		
11132		(Refer to example in (g) 2))		
1Ne3		0		
11135		(Refer to example in (g) 2))		
2R2				
2R3				

The following shows parameters required on each station of MELSECNET/H.

 \bigcirc : Setting required/ \bigtriangleup : Setting required (Default setting is also acceptable)

(c) MELSECNET master station

The following shows the network parameter settings of the MELSECNET master station (A3ACPU).

	Module No.1	Module No.2	Module No.3	Module No.4
Network type	MNET(Master station)	None	✓ None	✓ None
Start I/O No.				
Network No.				
Total stations	4			
Group No.				
Station No.				
	Network range assignment			
Necessary setting	(Nosetting / Alreadyset) Set if it is no Start I/ONo.: meters Input the start I/ONo.installed in th	eded(Nosetting / Alreadyset) Valid module during others	tation access	

Setup common parameters												
Assignment method Monitoring time 200 × 10ms												
Start/En	T ot stat	al slave ions	4		Swite	ch screens	LX/LY	settings		•		
		M station	-> L/R sta	tion				M station	<- L/R stal	tion		
L/R		LY		LX/LY			LX			LY/LX	<	
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End
М О												
R 1	224	0230	030F	224	0030	010F	144	0200	028F	144	0000	008F
L 2	128	0680	06FF	128	0200	027F	128	0600	067F	128	0280	02FF
	128	0700	077F	128	0200	027F	128	0700	077F	128	0200	027F
L 3						04.05	400	0.400	0405	400	0000	0005

) Network range assignment (A3ACPU: MELSECNE1 master station)													
Setup commo	on paramete	ers											
Assignment me	thod	Mor	nitoring time	e 200	×10ms								
 Start/End 		T ot stat	al slave ions	4		Swite	h screens	LB/LV	/ settings		•		
Send ra		ange for ea	ach station	Sendira	ange for ea	ach station	M stati	on -> R st	ation	M stati	on <- Rista	ation	
L/R		LB			LW			LW			LW		
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO	256	0000	00FF	256	0000	00FF							
R 1							17	0300	0310	16	0360	036F	
L 2	128	0100	017F	128	0100	017F							
L 3	128	0200	027F	192	0200	02BF							
R 4							34	0320	0341	32	0380	039F	•
•													·

(d) MELSECNET local station, remote I/O station

As all stations perform cyclic communication according to the network range assignments of the master station (A3ACPU), the network range assignment parameters of local stations and remote I/O stations need not be set.

(e) MELSECNET/H control station (network 1)

The following shows the network parameter settings for when a station is replaced with a MELSECNET/H control station (network 1).

1) Network parameter setting (Q06HCPU: MELSECNET/H control station, remote master station)

	Module 1	Module 2	Module 3	Module 4
Network type	MNET/H mode (Control station)	MNET/H(Remote master)	None 👻	None 👻
Starting I/O No.	0000	0020		
Network No.	1	2		
Total stations	3	2		
Group No.	0			
Station No.			[
Mode	On line 🗸	On line 👻	•	•
	Network range assignment	Network range assignment		
	Refresh parameters	Refresh parameters		
	Interrupt settings	Interrupt settings		
	Return as control station 🗸 🗸			
	Optical/coaxial 🗸 🗸			
				► I

) Network rang	e assig	nment	(Q06H	CPU: N	IELSE	CNET/	H conti	rol stati	ion)				
Setup common a	nd Station	inherent p	arameters.										
-Assignment method © Points/Start		Monitorin	ng time 🛛	200 × 1	Oms	Parameter	name						
Start/End		Total sla stations	ve	3		Switch sc	reens L	X/LY setti	ngs (1)	•			
			M statio	n -> L statio	on				M statio	n <- Listatio	on		▲
Station No.		LY			LX			LX			LY		
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
Master 1 1													
2	128	0680	06FF	128	0200	027F	128	0600	067F	128	0280	02FF	
3	128	0700	077F	128	0200	027F	128	0700	077F	128	0200	027F	▼ ►

Setup common	and Station	inherent p	arameters.											
Assignment method Points/Start Start/End		Monitorin Total sla stations	ng time 🖡	200 × 1	Oms	Parameter Switch scr	name reens L	.B/LW sett	ings	•				
	Sendira	ange for ea	ach station	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station	Sendra	ange for ea	ach station		_
Station No.		LB			LW			Low spee	dLB		Low spee	ed LW	Pairing	
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	I	
Master 1 1	256	0000	OOFF	256	0000	OOFF							Disable	-
2	256	0100	01FF	128	0100	017F							Disable	-
	128	0200	027E	192	0200	02BE							Disable	-
3	120	0200	020	105	0200							1	D IOGDIO	

 Refresh paran Assignment me 	neters ethod	(Q06	HCPU: ME	LSECNET/	H control s	statio	n)		List	L=1		
 ○ Points/Sta ③ Start/End 	ırt				(ient d	ansmissio erwrite	ne I	C Hold	latus		
				Link side						PLC side		
	Dev. r	name	Points	Start	End		Dev. nan	ne	Points	Start	End	
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF	
Transfer SW	SW		512	0000	01FF	+	SW		512	0000	01FF	
Random cyclic	LB					+		•				
Random cyclic	LW					+		•				
Transfer1	LB	-	768	0000	02FF	+	В	•	768	0000	02FF	
Transfer2	LW	-	768	0000	02FF	+	W I	•	768	0000	02FF	
Transfer3	LX	-	128	0600	067F	+	X	•	128	0600	067F	
Transfer4	LX	-	128	0700	077F	+	X	•	128	0700	077F	
Transfer5	LY	-	128	0680	06FF	+	Y	•	128	0680	06FF	
Transfer6	LY	-	128	0700	077F	↔	Y	-	128	0700	077F	-

(f) MELSECNET/H remote master station (network 2)

The following shows the network parameter settings for when a station is replaced with a MELSECNET/H remote master station (network 2).

1) Network range	e assigni	ment (C	06HCP	U: MEL	SECNE	T/H rem	ote mas	ster stati	ion)				
Setup common para	ameters and	d I/O assig	inments.										
Assignment method	Мо	nitoring tim	e 200	×10ms	Parar	neter name	•						
Start/End	T ot stat	al slave ions	2		Swite	h screens	XY s	etting	•				
			M station	-> R statio	on				M station	<- R statio	n		
StationNo.		Y			Y			X			X	-	
StationNo.	Points	Y Start	End	Points	Y Start	End	Points	X Start	End	Points	× Start	End	
StationNo.	Points 224	Y Start 0230	End 030F	Points 224	Y Start 0030	End 010F	Points 144	× Start 0200	End 028F	Points 144	× Start 0000	End 008F	
StationNo.	Points 224 288	Y Start 0230 0480	End 030F 059F	Points 224 288	Y Start 0030 0080	End 010F 019F	Points 144 192	× Start 0200 0400	End 028F 04BF	Points 144 192	× Start 0000 0000	End 008F 00BF	•
StationNo.	Points 224 288	Y Start 0230 0480	End 030F 059F	Points 224 288	Y Start 0030 0080	End 010F 019F	Points 144 192	X Start 0200 0400	End 028F 04BF	Points 144 192	× Start 0000 0000	End 008F 00BF	•

2) Network range	e assign	ment (Q	06HCP	U: MEL	SECNE	T/H rem	iote mas	ster stat	ion)				
Setup common para	imeters and	d I/O assig	nments.										
Assignment method	Мо	nitoring tim	e 200	×10ms	Parar	neter name	•						
Start/End	T ot stal	al slave tions	2		Swito	h screens	BW	setting	•				
	M stati	on -> R sta	ition	M stati	ion <- Rista	ation	M stati	on -> R st	ation	M stati	on <- Rist	ation	•
StationNo.		В			В			W			W		
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
1													
2					l								_
•													

Assignment me O Points/Sta O Start/End	athod -			LISEONET		ient tr	ansmissi erwrite	on e	rror history s O Hold	tatus —		
				Link side						PLC side		*
	Dev. r	name	Points	Start	End		Dev. na	ame	Points	Start	End	
Transfer SB	SB		512	0000	01FF	+	SB		512	0200	03FF	
Transfer SW	SW		512	0000	01FF	+	SW		512	0200	03FF	
Random cyclic	LB					+		-				
Random cyclic	LW					+		-				
Transfer1	LX	-	144	0200	028F	+	Х	-	144	0200	028F	
Transfer2	LX	-	192	0400	04BF	+	Х	-	192	0400	04BF	
Transfer3	LY	-	224	0230	030F	+	Y	-	224	0230	030F	
Transfer4	LY	-	288	0480	059F	+	Y	-	288	0480	059F	
Transfer5		-				+		-				
Transfer6		-				4		-				-

An overall picture of CPU-side device assignments on the Q06HCPU to which the PLC to PLC network (control station) and remote I/O network (remote master station) is mounted can be checked at [Assignment image diagram] in the GX Developer network parameters. After setting the parameters, make sure that assignments are correctly set.



(g) MELSECNET/H normal station (network 1)

The following shows the network parameter settings for when a station is replaced with a MELSECNET/H control station (network 1).

The same parameter settings are required on all normal stations.

1) Network parameter setting (1 Ns 2: MELSECNET/H normal station)

		Module 2	Module 3	Module 4
Network type	MNET/H mode (Normal station)	None	None	None
Starting I/O No.	0000			
Network No.	1			
Total stations				
Group No.	0			
Station No.				
Mode	On line 👻	•	•	~
	Station inherent parameters			
	Refresh parameters			
	Interrupt settings			
		•		

Assignment me Points/Sta Start/End	neters (ethod art	(1 Ns	3 2: MELSE	CNET/H n	ormal statio	on) ient tr • Ov	ansmissi erwrite	ion e	error history s O Hold	tatus —	
				Link side						PLC side	-
	Dev. r	name	Points	Start	End		Dev. na	ame	Points	Start	End
Transfer SB	SB		512	0000	01FF	+	SB		512	0000	01FF
Transfer SW	SW		512	0000	01FF	+	SW		512	0000	01FF
Random cyclic	LB					+		-			
Random cyclic	LW					+		-			
Transfer1	LB	-	768	0000	02FF	+	В	•	768	0000	02FF
Transfer2	LW	-	768	0000	02FF	+	W	-	768	0000	02FF
Transfer3	LX	-	128	0200	027F	+	X	-	128	0200	027F
Transfer4	LY	-	128	0280	02FF	+	Y	-	128	0280	02FF
Transfer5		-				+		-			
Transfer6		-				+		-			-

3.6 Program Comparisons

3.6.1 Comparison of special relays M (SB) and special registers D (SW)

(1) Master station special relays

Special relays enabled when host station is the master station

O : Compatible, △ : Partial change required, × : Incompatible Special relay in the case of MELSECNET (II) Corresponding MELSECNET/H special relay master station Compat-Precautions for Number Name Description Number Name Description ibility replacement Delete when used in a LRDP instruction OFF : Not accepted sequence program. M9200 None Δ received ON : Accepted (Refer to Section 2.6.2 Transient instructions.) Delete when used in a LRDP instruction OFF : Not completed sequence program. M9201 None Δ complete ON : Completed (Refer to Section 2.6.2 Transient instructions.) Delete when used in a I WTP instruction OFF : Not accepted sequence program. M9202 None Δ (Refer to Section 2.6.2 received ON : Accepted Transient instructions.) Delete when used in a LWTP instruction OFF : Not completed sequence program. M9203 None Δ complete ON : Completed (Refer to Section 2.6.2 Transient instructions.) OFF: Parameter Link parameter OFF · Normal Receive parameter normal SB0055 M9206 0 error in the host ON : Abnormal ON: Parameter error abnormal Delete when used in a Link parameter OFF : Match sequence program as a M9207 None Δ check results ON : Mismatch 3-tier system cannot be configured. Master station B,W OFF : Transmits to Delete when used in a transmission range tier2 and tier3 sequence program as a M9208 None Δ setting (only master ON · Transmits to 3-tier system cannot be station of lower link) tier2 only configured. Check instructions OFF : Executing the Delete when used in a of link parameters check function sequence program as a M9209 None Δ (only master station ON : Check non-3-tier system cannot be of lower link) execution configured. Link card error (for OFF : Normal OFF : Normal M9210 SB0020 Module status Ο master station) ON : Abnormal ON : Abnormal OFF : Online OFF · Online ON : Offline, station-M9224 SB0043 Link status to-station test, Online switch ON : Other than 0 or self-loopback online test When ON, confirm the loop status by SW0090. OFF : Normal The loop status can SB0090 Host loop status 0 ON : Abnormal also be judged by the host station bits of SW0091 to SW0094. OFF : Normal M9225 Forward loop error ON : Abnormal SB0092 (when host Forward loop status station is OFF : Normal of the remote 0 remote ON : Abnormal master station master

station)

(to next page)
Special relay in the case of MELSECNET (II) master station			Corresponding MELSECNET/H special relay				
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement
M0226	Poverse loop error	OFF : Normal	SB0090	Host loop status	OFF : Normal ON : Abnormal	0	When ON, confirm the loop status by SW0090. The loop status can also be judged by the host station bits of SW0095 to SW0098.
M9220	Reverse loop error	ON : Abnormal	SB0096 (when host station is remote master station)	Reverse loop status of the remote master station	OFF : Normal ON : Abnormal	0	
M9227	Loop test status	OFF : Not being executed ON : Forward loop test/reverse loop test execution underway	SB00AC	Offline test instruction status	OFF : Not instructed ON : Instructed	0	
M9232	Local station operation status	OFF : RUN or STEP RUN status ON : STOP or PAUSE status	SB0084	Each station CPU RUN status	OFF : All stations RUN or STEP RUN status ON : Stations in the STOP or PAUSE status exist	0	
M9233	Local station error detection status	OFF : No error ON : Error detection	None	-	-	Δ	Can be substituted by SB0074.
M9235	Local station, remote I/O station parameter error detection status	OFF : No error ON : Error detection	SB007C	Parameter status of each station	OFF : No station detected parameter errors ON : A station detected parameter errors	0	
M9236	Local station, remote I/O station initial communications status	OFF : No communication ON : Communication in progress	SB0078	Parameter status of each station	OFF : Parameter communication not in progress ON : Parameter communication in progress	0	
M9237	Local station, remote I/O station error	OFF : Normal ON : Abnormal	SB0074	Cyclic transmission status of each station	OFF : All stations normal ON : Station where cyclic transmission is not executing exist	0	
M9238	Local station, remote I/O station	OFF : Normal	SB0091	Forward loop status	OFF : All stations normal ON : Faulty station present	0	
	torward/reverse loop error	ION : Abnormal	SB0095	Reverse loop status	OFF : All stations normal ON : Faulty station present	0	

(2) Master station special register

Special register enabled when host station is the master station

O · Compatible	Dertial abanga	required	. Incomposible
O. Compatible, 2	∆ . Fartiai change	required,	 Incompatible

Specia	I register in the cas	e of MELSECNET (II)	MELSECNET/H special register				
Number	Namo	Description	Number	Namo	Description	Compat-	Precautions for
Number	Name	Description	Number	Name	Description	ibility	replacement
D9200	LRDP processing results	 Normal completion LRDP instruction setting fault Error at relevant station Relevant station LRDP execution disabled 	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
D9201	LWTP processing results	 Normal completion LWTP instruction setting fault Error at relevant station Relevant station LRDP execution disabled 	None	-	-	Δ	Delete when used in a sequence program. (Refer to Section 2.6.2 Transient instructions.)
D9202 D9203 D9241 D9242	Local station link type	Stores whether or not the slave station is a MELSECNET compatible station or a MELSECNET II compatible station.	None	-	-	Δ	Delete when used in a sequence program due to MELSECNET/H system.
D9204	Link status	 Forward loop, during data link Reverse loop, during data link Reverse loop, during data link Loopback implemented in forward/reverse directions Loopback implemented in only forward direction Loopback implemented only in reverse direction Data link disabled 	SW0049 (SW0090 to SW009A)	Cause of data link transmission stop	 Normal Stop instruction issued No common parameters Common parameter error Host station CPU error Communication canceled 	Δ	Check whether or not the data link is normally SW0049. (Loop status is judged comprehensively by SW0090 to SW009A.)
D9205	Station implementing loopback	Station that implemented forward loopback	SW0099	Loopback station (forward loop side)	Stores the number of stations executing the loopback on the forward loop side.	0	
D9206	Station implementing loopback	Station that implemented reverse loopback	SW009A	Loopback station (reverse loop side)	Stores the number of stations executing the loopback on the reverse loop side.	0	
D9207		Max. value	SW006B		Max. value	0	
D9208	Link scan time	Min. value	SW006C	Link scan time	Min. value	0	
D9209		Current value	SW006D		Current value	0	
D9210	Retry	Stored as cumulative	SW00C8	Number of retries on the forward loop side	Accumulates and stores the number of retries on the forward loop side.	Δ	The retries on the forward loop side are stored as a cumulative value.
	Retry	value	SW00C9	Number of retries on the reverse loop side	Accumulates and stores the number of retries on the reverse loop side.	Δ	The retries on the reverse loop side are stored as a cumulative value.

(to next page)

Special register in the case of MELSECNET (II) master station			MELSECNET/H special register				
Number	Name	Description	Number	Name	Description	Compat- ibility	Precautions for replacement
D9211	Loop switching count	Stored as cumulative value	SW00CE	Loop switching count	Accumulates and stores the number of loop checks conducted.	0	
D9212			SW0084				
D9213	Local station	Stores local stations in	SW0085	Each station CPU	Stores the CPU	-	
D9214	operation status	a STOP OF PAUSE	SW0086	RUN status	station	0	
D9215		Status.	SW0087		Station.		
D9216 D9217 D9218 D9219	Local station error detection status	Stores whether each local station has detected any error in other station.	None	-	-	Δ	Can be substituted by SW0074 to SW0077.
D9220	Local station	Turns ON when a local	SW007C				
D9221	parameter	station or a remote I/O	SW007D	Parameter error status of each	Stores the	0	
D9222	mismatch	station has detected an error on the link parameters from the master station.	SW007E		parameter status of each station.		
D9223	Remote I/O station I/O assignment error		SW007F	station			
D9224	Local station,	Stores stations that are	SW0078	Parameter	Stores the	on h O neters.	
D9225	remote I/O station	performing	SW0079	communication	communication		
D9226	initial	communication of link	SW007A	status of each	status of each		
D9227	communication underway	parameters.	SW007B	station	station parameters.		
D9228	Local station		SW0074	Cyclic transmission	Stores the cyclic		
D9229	remote I/O station	Stores data link error	SW0075	status of each	transmission status	0	
D9230	error	stations.	SW0076	station	of each station.	0	
D9231			SW0077				
D9232			SW0091		Stores the forward		The error on the loop
D9233			SW0092	Forward loop status	loop status of each	~	line of the forward loop
D9234	Local station and	Stores the station that	SW0093	of each station	station.	_	is stored.
D9235	remote I/O station	detected the error on	SW0094				
D9236 D9237	loop error	and reverse loop line.	SW0095 SW0096	Reverse loop	Stores the reverse		The error on the loop
D9238			SW0097	station	station	Δ	ine of the reverse loop
D9239			SW0098				
D9240	Number of receive error detection times	Stores cumulative total of receive errors	SW00B8 to SW00C7	Various error counters	Various error counters	Δ	The error count for each error cause is stored.

3.6.2 Transient instructions

(1) MELSECNET dedicated instruction

Dedicated instructions that were used on MELSECNET must be replaced with the following dedicated instructions on MELSECNET/H.

The following table shows a comparison between dedicated instructions on MELSECNET and dedicated instructions on MELSECNET/H. The table also shows reference items in the Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/O Network). Check these reference items before changing the sequence program.

MELSECNET (II)				NET/H		
Instruction name	Category	Description	Instruction name	Category	Description of change	Reference item in the manual
RFRP	Reading data from remote I/O station	The master station reads the data of special modules mounted on remote I/O stations.	REMFR	Reading data from buffer memory on remote I/O station intelligent function modules	Reads data from buffer memory on a target remote I/O station intelligent function module.	Section 7.1.1
RTOP	Writing data to remote I/O station	The master station writes data to special modules mounted on remote I/O stations.	REMTO	Writing data to buffer memory on remote I/O station intelligent function modules	Writes data to buffer memory on a target remote I/O station intelligent function module.	Section 7.1.1

The following describes operation by the instructions.

O : Can be used, × : Cannot be used

		Execution		Target station
Instruction Name		station	Description	Remote I/O
		QCPU		module
REMFR	Reading from buffer memory on remote I/O station intelligent function module	0	Reads data from buffer memory on a target remote I/O station intelligent function module.	0
REMTO	Writing to buffer memory on remote I/O station intelligent function module	0	Writes data to buffer memory on a target remote I/O station intelligent function module.	0

3.7 Replacement Precautions

The following shows the replacement precautions when replacing MELSECNET (II) with MELSECNET/H.

(1) Cables

For details on precautions for optical cables and coaxial cables, refer to Section 2.2.2 Cable performance comparisons.

(2) System configuration

(a) System configuration using local stations and remote I/O stations in MELSECNET mode and MELSECNET II mode

MELSECNET/H system, which is a composite system comprising local stations and remote stations, provides high-performance functions by making a separation between local stations and remote stations. It therefore cannot be configured by a mixture of local stations and remote stations. For this reason, in a MELSECNET (II) system, when replacing a system, which comprises a mixture of local stations and remote I/O stations connected to a single master station, with a MELSEC/H system, the following system configuration is necessary. Normal stations are connected to a single control station, and remote I/O stations are controlled by an additional remote master station (the control station in a remote I/O system is defined as the "remote master station"). The following shows a system configuration example.

System configuration using local and remote	e stations (optical)
---	----------------------

MELSECNET (II) (optical)	MELSECNET/H (optical)	Remarks (proposed measure)
Optical loop M L1 R3 L2	Optical loop	 The control station of network No.1 configures a PLC to PLC network that controls normal station 1 and normal station 2. The other network module becomes the remote master station, and the remote I/O network system of No.2 is configured.

(3) Sequence program

(a) Data separation prevention

When two words (32 bits) or more of cyclic data (e.g. current value of the positioning module) are handled, the old data sometimes is mixed with the new data. To read/write cyclic data of two words or more in a single operation, set data separation prevention by the per-station block guarantee function.

By enabling the per-station block guarantee function, handshaking is performed between CPU modules and network modules to refresh the network and to enable data separation to be prevented in station units. The per-station block guarantee function is enabled when "Secured data send" and "Secured data receive" in the following parameters are set. Enabling the per-station block guarantee function is recommended.

MNET/10(H) common parameters supple 🔀					
Constant scan ms					
Maximum No.of returns to system 2 Station stations in 1 scan.					
🗔 With multiplex transmission					
There is a data link through the sub-controlling station when the controlling station is down.					
Secured data send					
Secured data receive					
Transient setting					
Maximum No.of transients in 1 scan. 2 Times					
Maximum No.of transients in one station. 2 Times					
Link start instruction Links automatically when the power is turned ON.					
Links automatically when the parallel master station's power is turned on.					
Links automatically when the parallel sub-master station's power is turned on.					
End Cancel					

(b) I/O assignments

The I/O assignment function is used to reserve and set module information to prevent I/O numbers from deviating even if a module is mounted later on in an empty slot, and to conserve the number of I/O points.

With MELSECNET/H, each of the I/O assignments are set on each remote I/O station. With MELSECNET (II), however, as the I/O assignments of all remote I/O stations were set on the master station CPU. Set the I/O assignments of each remote I/O station again at transition to MELSECNET/H.

Also, as the I/O assignment settings of PLC parameters are not cleared when the programmable controller type is changed (e.g. when A3ACPU is changed to Q06HCPU), manually clear the I/O assignment settings for the remote I/O stations.

(c) Processing time

The link scan time and link refresh time differ between the A/AnS/QnA/QnAS series and the Q series. For details on processing times, refer to the manual for the respective module.

REPLACEMENT OF THE MELSECNET/10 (PLC TO PLC NETWORK)

4.1 List of MELSECNET/10 Alternative Models

(1) Replacement of the A/AnS series

Network type	A/AnS series	Q series
	AJ71LP21	0 1711 021 25
Optical loop	A1SJ71LP21	QJ71LF21-25
	AJ71LP21G	QJ71LP21G
Capyial loop	AJ71LR21	
	A1SJ71LR21	0.1710011
Copying hun	AJ71BR11	QJ/IBRII
Cuaxiai Dus	A1SJ71BR11	

(2) Replacement of the QnA/QnAS series

Network type	QnA series	Q series	
	AJ71QLP21	0 1711 P21 25	
	A1SJ71QLP21	Q371EF21-23	
Optical loop	AJ71QLP21S	0 1711 0248 25	
	A1SJ71QLP21S	QJ/ 1LP213-25	
	AJ71QLP21G	QJ71LP21G	
Capyial loop	AJ71QLR21		
Coaxiai loop	A1SJ71QLR21		
Cooviel hue	AJ71QBR11		
	A1SJ71QBR11		

4.2 Performance Specifications Comparisons

4.2.1 Module performance comparisons incompatible

(1) A/AnS series

(a) Performance comparison of AJ71LP21/A1SJ71LP21 and QJ71LP21-25

 \bigcirc : Compatible, \triangle : Partial change required, ×: Incompatible Specifications Compat-**Precautions for** QJ71LP21-25 ltem AJ71LP21/A1SJ71LP21 ibility replacement (MELSECNET/10 mode) LX/LY 8192 points Maximum number 0 LB 8192 points of link points per 0 network LW 8192 points Ο Maximum number of link $\{(LY + LB) \div 8 + (2 \times LW)\} \leq 2000 \text{ bytes}$ Ο points per station 10Mbps Communication speed Ο Communication method Token ring method Ο Synchronous type Frame synchronization method 0 NRZI coding (Non Return to Zero Inverted) Encoding method Ο Transmission method Duplex loop 0 HDLC standards (frame format) Transmission format Ο Network No.240 to No.255 239 (Total number of PLC 255 (Total number of PLC cannot be set. Maximum number of networks to PLC networks and to PLC networks and \triangle Alternate them with unused remote I/O networks) remote I/O networks) network Nos. Maximum number of groups q Ο Number of stations connected 64 stations (Control station: 1, normal station: 63) 0 in one network SI optical cable H-PCF optical cable Applicable cable 0 Broad-band H-PCF optical cable QSI optical cable Overall distance 30km 0 SI optical cable: 500m H-PCF optical cable: 1km Distance between stations 0 Broad-band H-PCF optical cable: 1km QSI optical cable: 1km $CRC(X^{16} + X^{12} + X^5 + 1)$ and retry by a time over Error control system Ο · Loop-back function due to error detection or broken cable · Diagnostic function for checking local link lines · Prevention of system down by switching the control **RAS** function 0 station · Abnormal detection using link special relays and link special registers · Network monitoring and various diagnostic functions • N:N communication (e.g. • N:N communication (e.g. For comparison of dedicated monitor, program up/ monitor, program up/ Transient transmission link instruction, refer to Δ download) download) Section 4.6.2. · Dedicated link instruction · Dedicated link instruction 32 points per slot (I/O 32 points per slot (I/O Number of occupied I/O assignment: special 32 assignment: intelli. 32 Ο points points) points)

(b) Performance comparison of AJ71LP21G and QJ71LP21G

		Specifi	cations	Commet	Dressutions for
Item		AJ71LP21G	QJ71LP21G (MELSECNET/10 mode)	ibility	replacement
Maximumnumber	LX/LY	8192 points		0	
of link points per	LB	8192 points		0	
network	LW	8192 points		0	
Maximum number points per station	of link	$\{(LY + LB) \div 8 + (2 \times LW)\} \leq$	2000 bytes	0	
Communication sp	eed	10Mbps		0	
Communication me	ethod	Token ring method		0	
Synchronous type		Frame synchronization meth	od	0	
Encoding method		NRZI coding(Non Return to	Zero Inverted)	0	
Transmission meth	nod	Duplex loop		0	
Transmission form	at	HDLC standards (frame form	nat)	0	
Maximum number of networks		255 (Total number of PLC to PLC networks and remote I/O networks)	239 (Total number of PLC to PLC networks and remote I/O networks)	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
Maximum number of groups		9		0	
Number of stations connected in one network		64 stations (Control station: 1, normal station: 63)			
Applicable cable		GI optical cable			
Overall distance		30km			
Distance between	stations	GI optical cable: 2km			
Error control syste	m	$CRC(X^{16} + X^{12} + X^5 + 1)$ and retry by a time over			
RAS function		 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmission		 N:N communication (e.g. monitor, program up/ download) Dedicated link instruction 32 points per slot (I/O environment equated 20) 	 N:N communication (e.g. monitor, program up/ download) Dedicated link instruction 32 points per slot (I/O equipment in the line operation) 	Δ	For comparison of dedicated link instruction, refer to Section 4.6.2.
points		assignment: special 32	assignment: intelli. 32	0	

(c) Performance comparison of AJ71LR21/A1SJ71LR21 and QJ71BR11

Item		Specifications		Compat	Proceutiens for
		AJ71LR21/A1SJ71LR21	QJ71BR11 (MELSECNET/10 mode)	ibility	replacement
Maximumnumber	LX/LY	8192 points		0	
of link points per	LB	8192 points		0	
network	LW	8192 points		0	
Maximum number points per station	of link	$\{(LY + LB) \div 8 + (2 \times LW)\} \leq$	2000 bytes	0	
Communication sp	eed	10Mbps		0	
Communication me	ethod	Token ring method	Token bus method	Δ	Nothing to be noted though the communication method differs.
Synchronous type		Frame synchronization meth	nod	0	
Encoding method		Manchester code		0	
Transmission method		Duplex loop	Single bus	Δ	The coaxial bus system cannot use the loopback function and multiplex transmission function. Using the optical loop system is recommended for using the loopback function and multiplex transmission function.
Transmission form	at	HDLC standards (frame format)		0	
Maximum number of networks		255 (Total number of PLC to PLC networks and remote I/O networks)	239 (Total number of PLC to PLC networks and remote I/O networks)	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
Maximum number	of groups	9		0	
Number of stations connected in one network		64 stations (Control station: 1, normal station: 63)	32 stations (Control station: 1, normal station: 31)	Δ	Up to 31 stations are available as the normal station of coaxial bus system. Using the optical loop system is recommended for connecting 32 normal stations or more.
Applicable cable		3C-2V 5C-2V		0	
Overall distance		3C-2V: 19.2km 5C-2V: 30km	3C-2V: 300m 5C-2V: 500m	Δ	Using the optical loop system or A6BR10/A6BR10- DC repeater unit is recommended.
Distance between	stations	3C-2V: 300m 5C-2V: 500m		0	
Error control syste	m	CRC(X ¹⁶ + X ¹² + X ⁵ + 1) an	d retry by a time over	0	

4 REPLACEMENT OF THE MELSECNET/10 (PLC TO PLC NETWORK)

MELSEC

	Specifications		Compat	Procentions for
ltem	AJ71LR21/A1SJ71LR21	QJ71BR11 (MELSECNET/10 mode)	ibility	replacement
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	 Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Transient transmission	 N:N communication (e.g. monitor, program up/ download) Dedicated link instruction 	 N:N communication (e.g. monitor, program up/ download) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 4.6.2.
Number of occupied I/O points	32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	0	

(d) Performance comparison of AJ71BR11/A1SJ71BR11 and QJ71BR11

		Specifications		Commet	
Item		A.J71BR11/A1S.J71BR11	QJ71BR11	ibility	replacement
		AUTERTIATOUTERT	(MELSECNET/10 mode)	ionity	replacement
Maximum number	LX/LY	8192 points		0	
of link points per	LB	8192 points		0	
network	LW	8192 points		0	
Maximum number points per station	of link	$\{(LY + LB) \div 8 + (2 \times LW)\} \leq$	2000 bytes	0	
Communication sp	eed	10Mbps		0	
Communication me	ethod	Token bus method		0	
Synchronous type		Frame synchronization meth	nod	0	
Encoding method		Manchester code		0	
Transmission meth	nod	Single bus		0	
Transmission form	at	HDLC standards (frame forn	nat)	0	
Maximum number of networks		255 (Total number of PLC to PLC networks and remote I/O networks)	239 (Total number of PLC to PLC networks and remote I/O networks)	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
Maximum number of groups		9		0	
Number of stations connected in one network		32 stations (Control station: 1, normal station: 31)		0	
Applicable cable		3C-2V 5C-2V		0	
Overall distance		3C-2V: 300m 5C-2V: 500m		0	
Distance between stations		3C-2V: 300m 5C-2V: 500m		0	
Error control system		$CRC(X^{16} + X^{12} + X^5 + 1)$ and retry by a time over		0	
RAS function		 Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmis	sion	 N:N communication (e.g. monitor, program up/ download) Dedicated link instruction 32 points per slot (I/O 	 N:N communication (e.g. monitor, program up/ download) Dedicated link instruction 32 points per slot (I/O 	Δ	For comparison of dedicated link instruction, refer to Section 4.6.2.
Number of occupie points	ed I/O	assignment: special 32 points)	assignment: intelli. 32 points)	0	

(2) QnA/QnAS series

(a) Performance comparison of AJ71QLP21/A1SJ71QLP21 and QJ71LP21-25

	O : Compatible.	∧ : Partial change	required. ×	: Incompatible
--	-----------------	--------------------	-------------	----------------

		Specifications		Compat	Procentions for
Item		AJ71QLP21/	QJ71LP21-25	ibility	replacement
		A1SJ71QLP21	(MELSECNET/10 mode)		
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points		0	
network	W	8192 points		0	
Maximum number points per station	of link	$\{(Y + B) \div 8 + (2 \times W)\} \leq 20$	000 bytes	0	
Communication sp	eed	10Mbps		0	
Communication me	ethod	Token ring method		0	
Synchronous type		Frame synchronization met	hod	0	
Encoding method		NRZI coding (Non Return to	o Zero Inverted)	0	
Transmission meth	od	Duplex loop		0	
Transmission form	at	HDLC standards (frame for	mat)	0	
N	- 6	239 (Total number of PLC to	PLC networks and remote	-	
Maximum number	of networks	I/O networks)		0	
Maximum number	of groups	9		0	
Number of stations in one network	connected	64 stations (Control station: 1, normal station: 63)		0	
		SI optical cable H-PCF optical cable			
Appliachla achla					
Applicable cable		Broad-band H-PCF optical	cable	0	
		QSI optical cable			
Overall distance		30km		0	
		SI optical cable: 500m H-PCF optical cable: 1km Broad-band H-PCF optical cable: 1km		0	
Distance between	stations				
Error control system	m	$CRC(X^{10} + X^{12} + X^{5} + 1)$ and retry by a time over		0	
		Loop-back function due to	o error detection or broken		
		Cable	a alvian la sal link linas		
		 Diagnostic function for checking local link lines Prevention of system down by switching the control station 			
RAS function				0	
		Abnormal detection using	link special relays and link		
		special registers			
		Network monitoring and various diagnostic functions			
		N:N communication	N:N communication		
		(e.g. monitor, program	(e.g. monitor, program		For comparison of dedicated
Transient transmission		up/download)	up/download)	Δ	link instruction, refer to
		 Dedicated link 	 Dedicated link 		Section 4.6.2.
		instruction	instruction		
Number of occupie		32 points per slot (I/O	32 points per slot (I/O		
noints	.u 1/0	assignment: special 32	assignment: intelli. 32	0	
points		points)	points)		

(b) Performance comparison of AJ71QLP21S/A1SJ71QLP21S and QJ71LP21S-25

O: Compatible,	\triangle : Partial	change required,	×: Incompatible
----------------	-----------------------	------------------	-----------------

		Specifications		Compet	Procautions for
Item		AJ71QLP21S/ A1SJ71QLP21S	QJ71LP21S-25 (MELSECNET/10 mode)	ibility	replacement
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points		0	
network	W	8192 points		0	
Maximum number points per station	of link	$\{(Y + B) \div 8 + (2 \times W)\} \leq 2$	$(Y + B) \div 8 + (2 \times W) \le 2000$ bytes		
Communication sp	eed	10Mbps		0	
Communication m	ethod	Token ring method		0	
Synchronous type		Frame synchronization met	thod	0	
Encoding method		NRZI coding (Non Return to	o Zero Inverted)	0	
Transmission meth	nod	Duplex loop		0	
Transmission form	at	HDLC standards (frame for	mat)	0	
Maximum number	of networks	239 (Total number of PLC to I/O networks)	o PLC networks and remote	0	
Maximum number	of groups	9		0	
Number of stations	connected	64 stations (Control station	: 1 normal station: 63)	0	
in one network			. 1, normal station. 05)	0	
		SI optical cable			
Applicable cable		H-PCF optical cable		0	
		Broad-band H-PCF optical	cable	Ū	
Overall distance				0	
Overall distance		SUKITI		0	
		H-PCF optical cable: 1km Broad-band H-PCF optical cable: 1km		0	
Distance between	stations				
		QSI optical cable: 1km			
Error control system		$CRC(X^{16} + X^{12} + X^5 + 1)$ a	nd retry by a time over	0	
,		Loop-back function due t	o error detection or broken	~	
RAS function		 cable Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmission		 N:N communication (e.g. monitor, program up/download) Dedicated link instruction 	 N:N communication (e.g. monitor, program up/download) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 4.6.2.
	Voltage	20.4VDC to 31.2VDC	20.4VDC to 31.2VDC	0	
External power	Current	0.2A	0.20A	0	-
supply	Applicable cable size	0.75 to 2mm ²	0.3 to 1.25mm ²	Δ	Cables of 1.25mm ² or more should be replaced with cables of 0.3 to 1.25mm.
			48 points 2 slots		
Number of occupie points	ed I/O	32 points per slot (I/O assignment: special 32 points)	(I/O assignment: <u>first half</u>) empty 16 points, <u>second half</u> intelli. 32	Δ	Set the [Empty 16 points] of first half to the [Empty 0 point] with I/O assignment.
			points)		

(c) Performance comparison of AJ71QLP21G and QJ71LP21G

Item		Specifications		Compat	Brocoutions for
		AJ71QLP21G	QJ71LP21G (MELSECNET/10 mode)	ibility	replacement
Maximumnumber	X/Y	8192 points		0	
of link points per	В	8192 points		0	
network	W	8192 points		0	
Maximum number points per station	of link	$\{(Y + B) \div 8 + (2 \times W)\} \leq 20$	000 bytes	0	
Communication sp	eed	10Mbps		0	
Communication m	ethod	Token ring method		0	
Synchronous type		Frame synchronization met	hod	0	
Encoding method		NRZI coding (Non Return to	o Zero Inverted)	0	
Transmission meth	nod	Duplex loop		0	
Transmission form	at	HDLC standards (frame for	mat)	0	
Maximum number of networks		239 (Total number of PLC to PLC networks and remote I/O networks)		0	
Maximum number	Maximum number of groups 9			0	
Number of stations connected in one network		64 stations (Control station: 1, normal station: 63)		0	
Applicable cable		GI optical cable		0	
Overall distance		30km		0	
Distance between stations		GI optical cable: 2km		0	
Error control syste	m	$CRC(X^{16} + X^{12} + X^5 + 1)$ and retry by a time over		0	
RAS function		 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmis	sion	N:N communication (e.g. monitor, program up/download) Dedicated link instruction 32 points per slot (I/O	N:N communication (e.g. monitor, program up/download) Dedicated link instruction 32 points per slot (I/O	Δ	For comparison of dedicated link instruction, refer to Section 4.6.2.
Number of occupie points	ed I/O	assignment: special 32 points)	assignment: intelli. 32 points)	0	

(d) Performance comparison of AJ71QLR21/A1SJ71QLR21 and QJ71BR11

\bigcirc : Compatible, \triangle : Partial change	required, ×: Incompatible

		Specifications		Compat-	Precautions for
Item		AJ71QLR21/	QJ71BR11	ibility	replacement
		A1SJ71QLR21	(MELSECNET/10 mode)	lionity	
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points		0	
network	W	8192 points		0	
Maximum number points per station	of link	$\{(Y + B) \div 8 + (2 \times W)\} \leq 20$	000 bytes	0	
Communication sp	eed	10Mbps		0	
Communication me	ethod	Token ring method	Token bus method	Δ	Nothing to be noted though the communication method differs.
Synchronous type		Frame synchronization met	hod	0	
Encoding method		NRZI coding (Non Return to Zero Inverted)	Manchester code	Δ	Noting to be noted though the encoding methods are different.
Transmission method		Duplex loop	Single bus	Δ	The coaxial bus system cannot use the loopback function and multiplex transmission function. Using the optical loop system is recommended for using the loopback function and multiplex transmission function.
Transmission form	at	HDLC standards (frame format)		0	
Maximum number of networks		239 (Total number of PLC to PLC networks and remote I/O networks)		0	
Maximum number	of groups	9		0	
Number of stations in one network	connected	64 stations (Control station: 1, normal station: 63)	32 stations (Control station: 1, normal station: 31)	Δ	Up to 31 stations are available as the normal station of coaxial bus system. Using the optical loop system is recommended for connecting 32 normal stations or more.
Applicable cable		3C-2V 5C-2V		0	
Overall distance		3C-2V: 19.2km 5C-2V: 30km	3C-2V: 300m 5C-2V: 500m	Δ	Using the optical loop system or A6BR10/A6BR10-DC repeater unit is recommended.
Distance between	stations	3C-2V: 300m 5C-2V: 500m		0	
Error control syste	m	$CRC(X^{16} + X^{12} + X^5 + 1)$ ar	nd retry by a time over	0	

4 REPLACEMENT OF THE MELSECNET/10 (PLC TO PLC NETWORK)

MELSEC

	Specifications		Compat	Proceutions for
Item	AJ71QLR21/	QJ71BR11	ibility	replacement
	A1SJ71QLR21	(MELSECNET/10 mode)		
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	 Diagnostic function for checking local link lines Prevention of system down by switching the control station Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Transient transmission	 N:N communication (e.g. monitor, program up/download) Dedicated link instruction 	 N:N communication (e.g. monitor, program up/download) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 4.6.2.
Number of occupied I/O points	32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	0	

(e) Performance comparison of AJ71QBR11/A1SJ71QBR11 and QJ71BR11

		Specifications			Precautions for
Item		AJ/1QBR11/		ibility	replacement
	MAG	A1SJ/1QBR11	(MELSECNET/10 mode)		
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points		0	
network	W	8192 points		0	
Maximum number	of link	$\{(Y + B) \div 8 + (2 \times W)\} \le 20$	000 bytes	0	
points per station		$((\cdot \cdot \cdot b), \cdot \cdot \cdot (b \cdot \cdot (b \cdot \cdot v))) = b$			
Communication sp	eed	10Mbps		0	
Communication me	ethod	Token bus method		0	
Synchronous type		Frame synchronization met	hod	0	
Encoding method		Manchester code		0	
Transmission meth	nod	Single bus		0	
Transmission form	at	HDLC standards (frame for	mat)	0	
	of motionarily	239 (Total number of PLC to	o PLC networks and remote	~	
Maximum number of networks		I/O networks)		0	
Maximum number of groups		9		0	
Number of stations connected		22 stations (Control stations	1 normal station: 21)	0	
in one network		SZ STATIONS (CONTROL STATION:	. i, normal station: 31)	0	
Applicable cable		3C-2V		0	
		5C-2V		0	
Overall distance		3C-2V: 300m		0	
		5C-2V: 500m		0	
Distance between	stations	3C-2V: 300m		0	
		5C-2V: 500m		<u> </u>	
Error control syste	m	$CRC(X^{16} + X^{12} + X^5 + 1)$ and retry by a time over		0	
		Diagnostic function for ch	necking local link lines		
		Prevention of system dov	wn by switching the control		
RAS function		station		0	
		Abnormal detection using	g link special relays and link		
		special registers			
		Network monitoring and	various diagnostic functions		
		N:N communication	N:N communication		
_		(e.g. monitor, program	(e.g. monitor, program		For comparison of dedicated
Transient transmission		up/download)	up/download)	Δ	link instruction, refer to
		Dedicated link	Dedicated link		Section 4.6.2.
Number of occupie	ed I/O	32 points per slot (I/O	32 points per slot (I/O		
points		assignment: special 32	assignment: intelli. 32	0	
		(points)	points)		1

4.2.2 Cable performance comparisons

(1) Optical fiber cable

Overall distance and distance between stations do not differ depending on the optical fiber cable. For overall distance and distance between stations, refer to Section 4.2.1.

(2) Coaxial cable

(a) Overall distance

 \bigcirc : Compatible, \bigtriangleup : Partial change required, ×: Incompatible Specifications A/AnS/QnA/QnAS series Q series Compat-**Precautions for** Туре **MELSECNET/10 module MELSECNET/H module** ibility replacement Coaxial bus Coaxial loop (Coaxial bus) 3C-2V 300m 300m 19.2km Δ Refer to^{*1} below 5C-2V 500m 500m 30km Refer to^{*1} below Δ

*1 When the overall distance does not satisfy the MELSECNET/H specifications, either use an A6BR10/A6BR10-DC type repeater unit in the network, or configure a separate network.

(b) Distance between stations

		Specific			
Turno	A/AnS/QnA/QnAS series		Q series	Compat-	Precautions for
туре	MELSECNET/10 module		MELSECNET/H module	ibility	replacement
	Coaxial bus	Coaxial loop	(Coaxial bus)		
3C-2V	300m	300m	300m	0	
5C-2V	500m	500m	500m	0	

The following shows the extension method when a repeater unit for the A6BR10/A6BR10-DC type MELSECNET/10 coaxial bus system is used.

For details, refer to the Repeater Unit for the MELSECNET/10 Coaxial Bus System type A6BR10/ A6BR10-DC User's Manual (IB-66499).

(1) The distance between stations of 500m (5C-2V) and 300m (3C-2V) can be extended.



(2) Up to four repeater units can be used in a single network.^{*2}

The overall distance can be extended to a maximum distance of 2.5 km.



*2 It is necessary to add terminal resistor A6RCON-R75 (sold separately).

4.3 Functional Comparisons

(1) A/AnS series

		Descr	iption	Comment	
	Item	A/AnS series MELSECNET/10 module	Q series MELSECNET/H module	ibility	Precautions for replacement
	Communication using B/W (1:N communication)	Performs communications w relay and link register. (Com	ith all stations using link munication using B/W)	0	
function	Communication using X/Y (1:1 communication)	Performs communications be and the other station in pairs	etween I/O master station . (Communication using X/Y)	0	
ansfer	Constant link scan function	Keeps link scan time constar	nt.	0	
yclic tr	Data link stop/restart function	Stops cyclic transmission ten etc.	nporarily with GX Developer,	0	
U	Inter-link data transfer function	Transfers link data to multiple all at once, when multiple net programmable controller.	e networks using parameters tworks are connected to one	Δ	Disabled when mounted to the Q00J/Q00/Q01CPU. Use QCPUs other than those above.
nt transmission function	Transient transmission function	Communicates only when co issued between each station dedicated link instruction and	ommunication requests are s. (Communication using d GX Developer, etc.)	Δ	 LRDP instruction and LWTP instruction cannot be used. Change them to ZNRD instruction, ZNWR instruction, READ instruction and WRITE instruction. For comparison of dedicated link instruction, refer to Section 4.6.2.
ransie	Routing function	Performs transient transmiss network No. are different.	ion to other stations of which	0	
	Group function	Performs transient transmiss group with an instruction.	ion to all stations in the	0	
Con func	trol station shift tion	Enables to continue data link by switching normal station to sub-control station, even if control station is in failure.			
Mult func	tiplex transmission tion	Performs high-speed communication using duplex transmission channel (forward loop/reverse loop).			
	Automatic return function	Returns the station disconne system when it goes to norm link.	cted from data link to the al status and restarts data	0	
ion	Loopback function	Keeps normal operation betw disconnecting faulty area at o cable break.	veen operable stations by error occurrence such as	0	
S funct	Station detach function	Keeps normal operation betw except faulty stations and sta	veen operable stations ations switched off.	0	
RAS	Diagnostic function	Checks line conditions of the conditions of the module.	Checks line conditions of the network and setting conditions of the module.		Set diagnostic items for station- to-station test and forward loop/ reverse loop test in GX Developer network parameters.
	Data link status	Detects faulty area with data of link special relay and link			
detect function Reserved station function		Treats the stations, which are future, as reserved stations. By specifying the stations, w reserved stations, communic	e to be connected in the hich are not connected, as ation error does not occur.	0	

MELSEC

(2) QnA/QnAS series

		Descr	iption	Compat	Precautions for replacement
	Item	QnA/QnAS series	Q series	ibility	
	O	MELSECNET/10 module	MELSECNET/H module		
		Performs communications w	Ith all stations using link	0	
		relay and link register. (Com	munication using B/W)		
	Communication	Performs communications be	etween I/O master station	0	
		and the other station in pairs.	(Communication using X/Y)		
	Cyclic transmission	Stops cyclic transmission ten	porarily with GX Developer,	0	
_	stop/restart	etc.		_	
ction	Inter Coloriate	Transfers link data to multiple	e networks using parameters		Disabled when mounted to the
innc	Inter-link data	all at once, when multiple net	works are connected to one	Δ	
er 1	transfer function	programmable controller.			Use QCPUs other than those
ansl		Decide to with a citize attactive for weather	Bala da da a f de a carto carlo		above.
c tra	Direct access to the	Reads/writes directly from/to	link device of the network	0	
ycli		module on the sequence pro	gram.		
Ö	Increase of sending	Allows multiple modules, of v	vhich the network No. are		Disabled when mounted to the
	points by mounting	the same, to be mounted to c	one programmable controller		Q00J/Q00/Q01CPU.
	multiple modules of	and increases sending points	s per one station up to 8000	Δ	Use QCPUs other than those
	the same network	bytes.			above.
	NO.	Elization that we function and an array	atom a atting hurring		
	Default of network	Eliminates the refresh param	leters setting by using	0	
	reiresn parameter	Communication only when an	amelers.		
	Transient	Communicates only when communication requests are			
	transmission function	dedicated link instruction and		0	
E		Performs transient transmission to other stations of which			
nctic	Routing function	network No, are different			
ן fu		Performs transient transmiss	ion to all stations in the		
sion	Group function	group with an instruction.		0	
mis	Dedicated link	Performs communications wi	th other station at desired	_	
ans	instruction	timing using dedicated link in	struction.	0	
nt tı	Specification of	Processes the requests that	cannot specify network No.	0	
Isie	default network	of access path.		0	
Trar	Clock setup for				
	stations on network	Performs clock setup to CPU	I modules connected to the	0	
	with peripheral	network with GX Developer.		0	
device					
Control station shift		Enables to continue data link	by switching normal station	0	
function		to sub-control station, even if control station is in failure.			
Multiplex transmission		Performs high-speed communication using duplex			
fund	tion	transmission channel (forwar	rd loop/reverse loop).	0	
		Treats the stations, which are	e to be connected in the		
Res	erved station function	future, as reserved stations.		0	
		By specifying the stations, w	hich are not connected, as	0	
		reserved stations, communic	ation error does not occur.		

 \bigcirc : Compatible, $\ {\bigtriangleup}$: Partial change required, ×: Incompatible

(To next page)

○ : Compatible.	∧ : Partial chan	ae required.	Incompatible
O . Compatible,		go roquirou,	. moomputible

		Descr	iption	Compot	
Item		QnA/QnAS series	Q series	Compat-	Precautions for replacement
		MELSECNET/10 module	MELSECNET/H module	IDIIILY	
Simple dual-structured network		Switches link data refresh target to the standby network to continue data link when break causes error in regular network.			Disabled when mounted to the Q00J/Q00/Q01/Q12PRH/ Q25PRHCPU. Use QCPUs other than those above.
Using SB/SW as user flag		Sends desired control data to status (SW01F0 to SW01F3)	o all stations using user-flag without using link device.	Δ	Change UFSET, UFRST and UFOUT instructions to a sequence program that uses the link relay and link register.
Automatic return function		Returns the station disconner system when it goes to norm link.	cted from data link to the al status and restarts data	0	
	Loopback function	Keeps normal operation betw disconnecting faulty area at e cable break.	veen operable stations by error occurrence such as	0	
	Prevention of station failure by using external power supply	Prevents loopback due to shi controller.	utdown of programmable	0	
_	Station detach function	Keeps normal operation betw except faulty stations and sta	veen operable stations tions switched off.	0	
RAS function	Transient transmission available even if programmable controller CPU is in error	Checks the errors for CPU m occurs, via network from the	odules of which a stop error GX Developer, etc.	0	
	Checking the transient transmission abnormal detection time	Checks error completion time network number and abnorm of transient transmission.	e, abnormal detection al detection station number	0	
	Diagnostic function	Checks line conditions of the conditions of the module.	network and setting	Δ	Set diagnostic items for station- to-station test and forward loop/ reverse loop test in GX Developer network parameters.

4.4 Switch Settings Comparisons

(1) A/AnS series

	Desci				
Switch name	A/AnS series MELSECNET/10 module	Q series MELSECNET/H module (MELSECNET/10 mode)	Compat- ibility	Precautions for replacement	
Network No. setting switch	Sets the network No.	-	Δ	 Set in GX Developer network parameters. Network No.240 to No.255 cannot be set. Alternate them with unused network Nos. 	
Group No. setting switch	Sets the group No.	-	Δ	Set in GX Developer network parameters.	
Mode setting switch	Sets the mode. <setting range=""> 0: Online 2: Offline 5: Station-to-station test (master station) 6: Station-to-station test (slave station) 7: Self-loopback test 8: Internal self-loopback test 9: H/W test D: Network No. check E: Group No. check F: Station No. check</setting>	Sets the mode. <setting range=""> 0: Online 1: Self-loopback test 2: Internal self-loopback test 3: hardware test</setting>	Δ	 Set offline, loop test and station-to-station test in GX Developer network parameters. Check network No., group No. and station No. in GX Developer network diagnostics (host information). 	
Condition setting switch	Sets the operation conditions.	-	Δ	This switch cannot make parameter setting. Set in GX Developer network parameters.	

(2) QnA/QnAS series

	Desci			
Switch name	QnA/QnAS series MELSECNET/10 module	Q series MELSECNET/H module (MELSECNET/10 mode)	Compat- ibility	Precautions for replacement
Network No. setting switch	Sets the network No.	-	Δ	Set in GX Developer network parameters.
Group No. setting switch	Sets the group No.	-	Δ	Set in GX Developer network parameters.
Mode setting switch	Sets the mode. <setting range=""> 0: Online 2: Offline 3: Loop test (forward loop) 4: Loop test (reverse loop) 5: Station-to-station test (master station) 6: Station-to-station test (slave station) 7: Self-loopback test 8: Internal self-loopback test 9: H/W test D: Network No. check E: Group No. check F: Station No. check</setting>	Sets the mode. <setting range=""> 0: Online 1: Self-loopback test 2: Internal self-loopback test 3: hardware test</setting>	Δ	 Set offline, loop test and station-to-station test in GX Developer network parameters. Check network No., group No. and station No. in GX Developer network diagnostics (host information).
Condition setting switch	Sets the operation conditions.	-	Δ	This switch cannot make parameter setting. Set in GX Developer network parameters.

 \bigcirc : Compatible, \bigtriangleup : Partial change required, ×: Incompatible

4.5 Parameter Comparisons

(1) A/AnS series

(a) Parameter of control station

				0:0	Compatible,	Δ : Partial change required, ×: Incompatible	
		Description					
Parameter name	A/AnS MELSECNE	A/AnS series MELSECNET/10 module		Q series MELSECNET/H module (MELSECNET/10 mode)		Precautions for replacement	
	Network type		Network type		0		
	Starting I/O No.		Starting I/O No.		0		
	Network No.		Network No.		Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.	
	Total number of stations	f (slave)	Total number of stations	f (slave)	0		
		-				Set the group No. in GX Developer network parameters.	
	-		Mode		Δ	Set the mode in GX Developer network parameters.	
	Network range assignment (common parameter)	Monitoring time	-	Monitoring time	0		
		LB/LW setting		LB/LW setting	0		
		LX/LY setting		LX/LY setting	0		
Network parameter		I/O master station specification	Network range assignment (common parameter)	I/O master station specification	0		
		Reserved station designation		Reserved station designation	0		
		Supplemental settings		Supplemental settings	0		
	Station inherent parameter		Station inherent parameter			Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.	
	Refresh parame	eters	Refresh parame	eters	0		
	Inter-link data ti	Inter-link data transfer		Inter-link data transfer		Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.	
	Routing parame	eters	Routing parame	eters	0		
	Valid module du station access	uring other	Valid module during other station access		0		

		O : 0	Compatible,	\bigtriangleup : Partial change required, ×: Incompatible	
	Desc	ription			
Parameter name	A/AnS series MELSECNET/10 module	Q series MELSECNET/H module (MELSECNET/10 mode)	Compat- ibility	Precautions for replacement	
	Network type	Network type	0		
	Starting I/O No.	Starting I/O No.	0		
	Network No.	Network No.	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.	
	-	Group No.	Δ	Set the group No. in GX Developer network parameters.	
Network	-	Mode	Δ	Set the mode in GX Developer network parameters.	
parameter	Station inherent parameter	Station inherent parameter		Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.	
	Refresh parameters	Refresh parameters	0		
	Inter-link data transfer	Inter-link data transfer		Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.	
	Routing parameters	Routing parameters	0		
	Valid module during other station access	Valid module during other station access	0		

(b) Parameter of normal station

(2) QnA/QnAS series

(a) Parameter of control station

				0:0	Compatible,	\triangle : Partial change required, ×: Incompatible	
		Desc	ription				
Parameter name	QnA/Qn/ MELSECNE	QnA/QnAS series MELSECNET/10 module		Q series MELSECNET/H module (MELSECNET/10 mode)		Precautions for replacement	
	Network type		Network type		0		
	Starting I/O No.		Starting I/O No.		0		
	Network No.		Network No.		0		
	Total number of	(slave)	Total number of	f (slave)	_		
	stations		stations		0		
		-	Group No.		Δ	Set the group No. in GX Developer network parameters.	
		-		Mode		Set the mode in GX Developer network parameters.	
	Network range	Monitoring time	-	Monitoring time	0		
		BW setting		LB/LW setting	0		
		XY setting		LX/LY setting	0		
		I/O master	Network range	I/O master			
Network	assignment	station	assignment	station	0		
parameter	(common	specification	(common	specification			
	parameter)	Reserved	parameter)	Reserved			
		station		station	0		
		designation	-	designation			
		Supplemental		Supplemental	0		
		settings		settings		Dischlad when mounted to the OOO I/	
	Station inheren	Station inherent parameter		Station inherent parameter		Q00/Q01CPU. Use QCPUs other than those above.	
	Refresh parame	eters	Refresh parame	eters	0		
	Inter-link data t	Inter-link data transfer		ransfer	Δ	Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.	
	Routing parame	eters	Routing parame	eters	0		
	Valid module du	uring other	Valid module di	uring other			
	station access		station access		0		

		O : 0	Compatible,	\bigtriangleup : Partial change required, ×: Incompatible
	Desc	cription		
Parameter name	QnA/QnAS series MELSECNET/10 module	Q series MELSECNET/H module (MELSECNET/10 mode)	Compat- ibility	Precautions for replacement
	Network type	Network type	0	
	Starting I/O No.	Starting I/O No.	0	
	Network No.	Network No.	0	
	-	Group No.	Δ	Set the group No. in GX Developer network parameters.
	-	Mode	Δ	Set the mode in GX Developer network parameters.
Network parameter	Station inherent parameter	Station inherent parameter		Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.
	Refresh parameters	Refresh parameters	0	
	Inter-link data transfer	Inter-link data transfer		Disabled when mounted to the Q00J/ Q00/Q01CPU. Use QCPUs other than those above.
	Routing parameters	Routing parameters	0	
	Valid module during other	Valid module during other	0	
	station access	station access	0	

(b) Parameter of normal station

(c) Parameter of standby station^{*1}

 \bigcirc : Compatible, \bigtriangleup : Partial change required, ×: Incompatible Description Parameter Q series Compat-QnA/QnAS series **Precautions for replacement MELSECNET/H module** ibility name **MELSECNET/10 module** (MELSECNET/10 mode) Network type Network type Ο Starting I/O No. Starting I/O No. Ο Network No. Network No. 0 Set the group No. in GX Developer Group No. _ Δ network parameters. Network Set the mode in GX Developer Mode Δ parameter network parameters. Standby station compatible Standby station compatible 0 module module Routing parameters Routing parameters 0 Valid module during other Valid module during other Ο station access station access

*1 Standby station is a station type of simple dual-structured system.

Only the following CPU modules support the simple dual-structured system.

High Performance model QCPU

Process CPU

4.6 Program Comparisons

4.6.1 Comparison of link special relay (SB)/link special register (SW)

The table below shows only link special relay (SB) and link special register (SW) to be used in interlock program.

Device name and device No. of MELSECNET/H module are described in link device of internal MELSECNET/H module.

Changing sequence program should be performed after checking the refreshed device of link device in refresh parameters.

(1) AnN/AnA/AnSCPU (excluding AnUS(H)CPU)

When MELSECNET/10 module is mounted to the CPU module of the AnN/AnA/AnSCPU (excluding AnUS(H)CPU), link special relay (SB) and link special register (SW) are assigned to special relay and special register of CPU module.

For replacing with a MELSECNET/H module, change sequence program in reference to the following.

(a) Link special relay (SB)

	AnN/AnA/A MELSECNET/ [,]	I/AnA/AnSCPU QCPU ECNET/10 module MELSECNET/H module C		Compat-	Precautions for replacement		
Number	Name	Description	Number	Name	Description	IDHILY	
M9204	LRDP instruction complete	OFF : Not completed ON : Completed	-	-	-	Δ	LRDP instruction cannot be used. When using it in sequence program, delete corresponding part.
M9205	LWTP instruction complete	OFF : Not completed ON : Completed	-	-	-	Δ	LWTP instruction cannot be used. When using it in sequence program, delete corresponding part.
M9211	Module status	OFF : Normal ON : Abnormal	SB0020	Module status	OFF : Normal ON : Abnormal	0	
M9240	Online host status	OFF : Online ON : Offline, self- loopback test, station-to- station test	SB0043	Online switch (host station)	OFF : Online ON : Other than online	0	
M9241	Forward loop status	OFF : Normal ON : Abnormal	SB0090	Host loop status	OFF : Normal ON : Abnormal	Δ	When SB0090 turns on, check the loop condition with SW0090, or check by host bit of SW0091 to SW0094.
M9242	Reverse loop status	OFF : Normal ON : Abnormal	SB0090	Host loop status	OFF : Normal ON : Abnormal	Δ	When SB0090 turns on, check the loop condition with SW0090, or check by host bit of SW0095 to SW0098.
M9243	Loopback status	OFF : Loopback inexecution ON : Loopback execution	SB0090	Host loop status	OFF : Normal ON : Abnormal	Δ	When SB0090 turns on, check the loop condition with SW0090, or check by SW0099 or SW009A.
M9246	Data not received (Control station)	OFF : Received ON : Not received	-	-	-	Δ	When using it in sequence program, delete corresponding part.
M9250	Parameter unreceived	OFF : Received ON : Not received	SB0054	Parameter receive status	OFF : Receive completed ON : Unreceived	0	
M9251	Communication status	OFF : Normal ON : Abnormal	SB0049	Host data link status	OFF : Normal ON : Abnormal	0	

 \bigcirc : Compatible, $\ _$: Partial change required, ×: Incompatible

(To next page)

AnN/AnA/AnSCPU MELSECNET/10 module			QCPU MELSECNET/H module			Compat-	Precautions for replacement
Number	Name	Description	Number	Name	Description	ibility	
M9252	Loop test status	OFF : Not being executed ON : Forward loop test/reverse loop test execution underway	SB00AE	Offline testing response designation	OFF : No response ON : Response	0	
M9253	Control station operation status	OFF : RUN or STEP RUN ON : STOP or PAUSE	SW0084 to SW0087	Each station CPU RUN status	Stores the CPU RUN status of each station. (Including the host)	0	
M9254	Other station operation status	OFF : All stations are in the RUN or STEP RUN status ON : Any station in the STOP or PAUSE status exist	SB0084	Each station CPU RUN status	OFF : All stations are in the RUN or STEP RUN status ON : Station in the STOP or PAUSE status exist (including the host)	0	
M9255	Other station communication status	OFF : All stations normal ON : Any error station identified	SB0074	Cyclic transmission status of each station	OFF : All stations are executing data linking ON : Stations that are not executing data linking exist	0	

O : Compatible, $\ \bigtriangleup$: Partial change required, ×: Incompatible

(b) Link special register (SW)

AnN/AnA/AnSCPU MELSECNET/10 module			QCPU MELSECNET/H module			Compat-	Precautions for replacement	
Number	Name	Description	Number	Name	Description	ibility		
D9243	Host station number	Stores the station number of the host.	SW0042	Station No.	Stores the station number of the host.	0		
D9244	Maximum station No.	Stores the maximum station No. set in network parameters.	SW0059	Total number of link stations	Stores the total number of link stations set in network parameters.	0		
D9245	Communication error count	Accumulates and stores the communication error times.	SW00B8 to SW00C7	Error counters	Accumulates and stores the various error time.	Δ	The error count for each error cause is stored.	
D9248 to D9251	Other station CPU RUN status	Stores the CPU RUN status of other station.	SW0084 to SW0087	Each station CPU RUN status	Stores the RUN status of each station. (Including the host)	0		
D9252 to D9255	Data link status of other station	Stores the data link status of other station.	SW0074 to SW0077	Cyclic transmission status of each station	Stores the cyclic transmission status of each station.	0		

(2) AnU/AnUS(H)/QnA/QnASCPU

The following device name and device No. are described in link device of internal MELSECNET/10 or MELSECNET/H module.

Changing sequence program should be performed after checking the refreshed device of link device in refresh parameters.

(a) Link special relay (SB)

		- ,		8 1 <i>7</i> 1
	Nun			
ltem	AnU/AnUS(H)/QnA/ QnASCPU MELSECNET/10 module	QCPU MELSECNET/H module	Compat- ibility	Precautions for replacement
Module status	SB0020	SB0020	0	
Baton pass status (host)	SB0047	SB0047	0	
Data link status of each station	SB0049	SB0049	0	
Baton pass status of each station	SB0070	SB0070	0	
Cyclic transmission status of each station	SB0074	SB0074	0	

(b) Link special register (SW)

 \bigcirc : Compatible, \bigtriangleup : Partial change required, ×: Incompatible

 \bigcirc : Compatible. \land : Partial change required. \times : Incompatible

	Nun					
ltem	AnU/AnUS(H)/QnA/ QnASCPU MELSECNET/10 module	QCPU MELSECNET/H module	Compat- ibility	Precautions for replacement		
Baton pass status of each station	SW0070 to SW0073	SW0070 to SW0073	0			
Cyclic transmission status of each station	SW0074 to SW0077	SW0074 to SW0077	0			

For link special relay (SB) and link special register (SW) that are not described in this section, refer to each manual.

4.6.2 Comparison of dedicated instructions

(1) A/AnSCPU

	Descr				
Instruction name	A/AnSCPU MELSECNET/10 module	A/AnSCPU QCPU MELSECNET/10 module (MELSECNET/10 module		Precautions for replacement	
ZNRD instruction	Reads the device data of othe	r station.	Δ	Instruction format differs. Change the sequence program.	
ZNWR instruction	Writes data to the device of ot	Δ	Instruction format differs. Change the sequence program.		
LRDP instruction	Reads the device data of other station only by station number designation.	-	Δ	LRDP instruction cannot be used. Change them to ZNRD or READ instruction.	
LWTP instruction	Writes data to the device of other station only by station number designation.	-	Δ	LWTP instruction cannot be used. Change them to ZNWR or WRITE instruction.	

(2) QnA/QnASCPU

 \bigcirc : Compatible, \bigtriangleup : Partial change required, ×: Incompatible

	Descr				
Instruction name	QnA/QnASCPU MELSECNET/10 module	QCPU MELSECNET/H module (MELSECNET/10 mode)	Compat- ibility	Precautions for replacement	
SEND instruction	Sends data to target station.		0		
RECV instruction	Reads data sent by SEND ins module.	truction to device of CPU	0		
READ instruction, SREAD instruction	Reads the device data of othe	r station.	0		
WRITE instruction, SWRITE instruction	Writes data to the device of ot	0			
REQ instruction	Issues "remote RUN" and "clo to other stations.	0			
ZNRD instruction	Reads the device data of othe	r station.	0		
ZNWR instruction	Writes data to the device of ot	her station.	0		
UFSET instruction	Turns user-flag which is corresponding to the host on.	-		Change to a sequence program that uses the link relay and link register.	
UFRST instruction	Turns user-flag which is corresponding to the host off.	-		Change to a sequence program that uses the link relay and link register.	
UFOUT instruction	Turns user-flag which is corresponding to the host on/ off.	-		Change to a sequence program that uses the link relay and link register.	

(3) Q series dedicated link instruction list

The table below shows the dedicated link instructions usable in Q series.

For instruction format of dedicated link instruction and precautions, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

 ${\sf O}$: Can be used by both the control and normal stations, ${\sf x}$: Cannot be used

		Execution		Target station			
Instruction	Name	QCPU	Description	QCPU	QnA/ QnAS CPU	AnU/ AnUS(H) CPU	
SEND	Data sending	0	SEND:Writes data to the target station (network module) having the target network number. RECV:Reads data sent with SEND to the CPU device.	0	0	×	
RECV	Data receiving	0	Channel 2 Logical channel 2 (channel 2) Logical channel 3 (channel 3) Logical channel 3 (channel 3) Channel 4 Logical channel 4 (channel 3) Channel 5 Logical channel 4 (channel 4) Channel 6 Logical channel 5 (channel 5) Channel 7 Logical channel 6 (channel 7) Channel 8 Logical channel 8 (channel 7)	0	0	×	
READ SREAD	Other station word device read	0	Reads the CPU device data (in 16-bit units) from the target station having the target network number. CPU Network module CPU Image: CPU Network module CPU Image: CPU Network module CPU Channel 1 Channel 2 Word device Channel 3 Channel 4 2594 Word device Channel 5 Channel 6 Channel 8 Channel 8 Channel 8	0	0	×	
WRITE SWRITE	Other station word device write	0	Writes data (in 16-bit units) to the CPU device of the target station having the target network number. (SWRITE can turn on the device of the target station.)	0	0	×	
REQ	Requesting transient transmission to other stations	0	Issues "remote RUN" and "clock data read/write" requests to other stations.	0	0	×	

(To next page)

		Execution station		Target station			
Instruction	Name	QCPU	Description	QCPU	QnA/ QnAS CPU	AnU/ AnUS(H) CPU	
RECVS	Receive message (completed in 1 scan)	0	Receives the channel data sent with SEND by the interrupt program and immediately reads it to the CPU device. The processing is completed when the instruction is executed.	0	0	x	
ZNRD	Other station word device read	0	[A-compatible instruction] Reads the CPU device data from the target station having the target network number.	0	0	0	
ZNWR	Other station word device write	0	[A-compatible instruction] Writes data to the CPU device of the target station having the target network number.	0	0	0	
RRUN	Remote RUN	0	"Remote RUN" performed for other stations' CPU modules CPU Network module Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Channel 7 Channel 8	0	x	x	

 \bigcirc : Can be used by both the control and normal stations, \times : Cannot be used

(To next page)

		Execution station		Target station		
Instruction	Name	QCPU	Description	QCPU	QnA/ QnAS CPU	AnU/ AnUS(H) CPU
RSTOP	Remote STOP	0	"Remote STOP" performed for other stations' CPU modules CPU Network module Network module CPU Channel 1 Channel 2 Channel 4 Channel 4 Channel 5 Channel 5 Channel 6 Channel 7 Channel 8	0	×	×
RTMRD	Other station clock data read	0	"Read Clock Data" performed for other stations' CPU modules <u>CPU</u> Network module Network module CPU Channel 1 Channel 3 Channel 3 Channel 4 Channel 5 Clock data Clock data Channel 7 Channel 8	0	x	x
RTMWR	Other station clock data written	0	"Write Clock Data" performed for other stations' CPU modules CPU Network module Network module CPU Channel 1 Channel 3 Channel 4 Channel 5 Channel 7 Channel 8	0	×	×

 $\ensuremath{\mathsf{O}}$: Can be used by both the control and normal stations, $\ensuremath{\mathsf{x}}$: Cannot be used
4.7 Other Precautions

(1) Processing time

The link scan time and link refresh time differ between the A/AnS/QnA/QnAS series and the Q series. For details on processing times, refer to the manual for the respective module.

(2) A/AnS series replacement precautions

Normal station of MELSECNET/H module requires network parameter setting. For replacement with the QCPU and the MELSECNET/H module, newly set network parameters.

5 REPLACEMENT OF THE MELSECNET/10 (REMOTE I/O NETWORK)

5.1 List of MELSECNET/10 Alternative Models

(1) Replacement of the A/AnS series

Network type	Station type	A/AnS series	Q series	
		AJ71LP21	0 1711 021 25	
	Remote master station	A1SJ71LP21	QJ71LF21-25	
		AJ71LP21G	QJ71LP21G	
Optical loop		AJ72LP25		
	Domoto I/O station	AJ72QLP25	QJ72LP25-25	
	Remote I/O station	A1SJ72QLP25		
		AJ72LP25G	QJ72LP25G	
	Remote master station	AJ71LR21	QJ71BR11	
		A1SJ71LR21		
Coaxial loop	Remote I/O station	AJ72LR25		
		AJ72QLR25	QJ72BR15	
		A1SJ72QLR25		
	Domoto montor station	AJ71BR11		
Coaxial bus	Remote master station	A1SJ71BR11	QJ/ IBR II	
		AJ72BR15		
	Remote I/O station	AJ72QBR15	QJ72BR15	
		A1SJ72QBR15	1	

(2) Replacement of the QnA/QnAS series

Network type	Station type	QnA/QnAS series	Q series	
		AJ71QLP21	0 1711 021 25	
		A1SJ71QLP21	QJ71LF21-25	
	Remote master station	AJ71QLP21S	0 1711 0218 25	
Ontinal loop		A1SJ71QLP21S	QJ71LP213-25	
Optical loop		AJ71QLP21G	QJ71LP21G	
		AJ72QLP25	0 1721 025 25	
	Remote I/O station	A1SJ72QLP25	QJ72LF25-25	
		AJ72QLP25G	QJ72LP25G	
	Remote master station	AJ71QLR21	0 1710011	
Coaxial loop		A1SJ71QLR21		
	Remote I/O station	AJ72QLR25	QJ72BR15	
Coaxial bus	Pomoto master station	AJ71QBR11	O 171BB11	
	Remote master station	A1SJ71QBR11		
	Remote I/O station	AJ72QBR15	O 172BP15	
		A1SJ72QBR15		

Remarks

.

System configuration in MELSECNET/10 and MELSECNET/H (remote I/O network) The following table lists CPU modules that can be installed on MELSECNET/10 and MELSECNET/H (remote I/O network). (The table shows in the case using a module for optical loop. The same applies in the case using a module for a coaxial loop/coaxial bus.)

Master statio	n	Remote I/O station				
CPU module	Network module	QJ72LP25-25	A(1S)J72QLP25	A(1S)J72LP25		
QCPU	0 1711 021 25	0	×			
(excluding Basic model QCPU)	QJ7 ILF2 I-25	0				
QCPU	0 1711 021 25	~	×			
(Basic model QCPU)	QJ71LF21-25	^				
QnA/QnASCPU	A(1S)J71QLP21	×	0			
AnU/AnUS(H)CPU	A(1S)J71LP21	×	0			
AnN/AnA/AnSCPU	A(18) 1711 D21	v		,		
(excluding AnUS(H)CPU)		^		`		

O : Can be installed, × : Cannot be installed

5.2 Performance Specifications Comparisons

5.2.1 Module performance comparisons

(1) A/AnS series

(a) Performance comparison of remote master station

1) Performance comparison of AJ71LP21/A1SJ71LP21 and QJ71LP21-25

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

Itom		Specifications		Compati-	Brocoutions for replacement
nem		AJ71LP21/A1SJ71LP21	QJ71LP21-25	bility	Precautions for replacement
Maximumnumber	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
			<remote <math="" master="" station="">\rightarrow</remote>		
			remote I/O station> ^{*2}		
			{(LY + LB) ÷ 8 + (2 × LW)}≦		
		<remote <math="" master="" station="">\rightarrow</remote>	1600 bytes		
Maximum number	of link	remote I/O station>	<multiplexed remote<="" td=""><td>~</td><td></td></multiplexed>	~	
points per station		$\{(LY + LB) \div 8 + (2 \times LW)\} \leq$	master station $\leftarrow \rightarrow$	0	
		1600 bytes	multiplexed remote sub-		
			master station>		
			${(LY + LB) \div 8 + (2 \times LW)} \le$		
			2000 bytes		
Communication sp	eed	10Mbps	25Mbps/10Mbps	0	
Communication me	ethod	Token ring method	Token ring method		
Synchronous type		Frame synchronization meth	nod	0	
Encoding method		NRZI coding (Non Return to	Zero Inverted)	0	
Transmission meth	nod	Duplex loop		0	
Transmission form	at	HDLC standards (frame form	nat)	0	
		255 (Total number of PLC	239 (Total number of PLC		Network No.240 to No.255
Maximum number	of	to PLC networks and	to PLC networks and	~	cannot be set.
networks		remote I/O networks)	remote I/O networks)		Alternate them with unused
		,	, ,		network Nos.
Number of stations	5	65 stations (Remote master	65 stations (Remote master		
connected in one r	network	station: 1, remote I/O	station: 1, remote I/O	0	
		station: 64)	station: 64) ³		
		SI optical cable			
Applicable cable		H-PCF optical cable		0	
		Broad-band H-PCF optical c	able	Ŭ	
		QSI optical cable			
Overall distance		30km		0	

(To next page)

*1 Remote master station \rightarrow remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station \rightarrow remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

\bigcirc : Compatible, \bigtriangleup : Partial change required, x : Incompati	ible
--	------

ltom	Specifications		Compat-	Brocoutions for replacement
nem	AJ71LP21/A1SJ71LP21	QJ71LP21-25	ibility	Precautions for replacement
Distance between stations	SI optical cable: 500m H-PCF optical cable: 1km	<10Mbps> SI optical cable: 500m H-PCF optical cable: 1km Broad-band H-PCF optical cable: 1km QSI optical cable: 1km	0	
	Broad-band H-PCF optical cable: 1km QSI optical cable: 1km	<25Mbps> SI optical cable: 200m H-PCF optical cable: 400m Broad-band H-PCF optical cable: 1km QSI optical cable: 1km	Δ	Use 10 Mbps when using SI optical cable and HPCF optical cable.
Error control system	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and re	etry by a time over	0	
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.
Number of occupied I/O points	32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	0	

2) Performance comparison of AJ71LP21G and QJ71LP21G

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

Itom		Specifications		Compat-	Processions for replacement
llem		AJ71LP21G	QJ71LP21G	ibility	Precautions for replacement
Maximum number	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
			<remote <math="" master="" station="">\rightarrow</remote>		
			remote I/O station> ^{*2}		
			{(LY + LB) ÷ 8 + (2 × LW)}		
		<remote <math="" master="" station="">\rightarrow</remote>	≦1600 bytes		
Maximum number	of link	remote I/O station>	<multiplexed remote<="" td=""><td>0</td><td></td></multiplexed>	0	
points per station		{(LY + LB) ÷ 8 + (2 × LW)}≦	master station $\leftarrow \rightarrow$	0	
		1600 bytes	multiplexed remote sub-		
			master station>		
			${(LY + LB) \div 8 + (2 \times LW)} \le$		
			2000 bytes		
Communication spe	eed	10Mbps		0	
Communication me	ethod	Token ring method		0	
Synchronous type		Frame synchronization meth	od	0	
Encoding method		NRZI coding (Non Return to	Zero Inverted)	0	
Transmission method		Duplex loop		0	
Transmission forma	at	HDLC standards (frame format)		0	
		255 (Total number of PLC	239 (Total number of PLC		Network No.240 to No.255
Maximum number	of	to PLC networks and	to PLC networks and	Δ	cannot be set.
networks		remote I/O networks)	remote I/O networks)		Alternate them with unused
		CE stations (Domoto mostor	65 stations (Pomoto mastor		network Nos.
Number of stations		of stations (Remote master	station: 1 remote I/O	0	
connected in one n	etwork	station: 1, remote I/O		0	
Applicable cable		GL optical cable	station. 64)	0	
		30km		0 0	
Distance between a	stations	GL ontical cable: 2km		0	
Error control system	n	$CDC (X^{16}, X^{12}, X^{5}, 4)$ and m	Ann a hinne an an an	0	
		CRC (X ^{**} +X [*] +X [*] +1) and re	erry by a time over	0	
		Diagnostic function for che	ecking local link lines		
RAS function		Abnormal detection using	link special relays and link	0	
		special registers			
		Network monitoring and va	arious diagnostic functions		
		Monitor, program up/	1:1 communication		
T		download, etc. with	(Monitor, program up/		For comparison of dedicated
I ransient transmiss	sion	peripheral device	download, etc.)	Δ	link instruction, refer to Section
		Dedicated link instruction	Dedicated link instruction		J.0.∠.
Number of occupio	d 1/O	32 points per slot	32 points per slot		
noints	u 1/0	(I/O assignment: special 32	(I/O assignment: intelli. 32	0	
pointo		points)	points)		

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

Specifications Compatltem Precautions for replacement AJ71LR21/A1SJ71LR21 ibility QJ71BR11 LX/LY 8192 points 0 Maximum number LB 8192 points of link points per 16384 points^{*1} 0 network LW 8192 points 16384 points*1 Ο <Remote master station \rightarrow Remote I/O station>*2 {(LY + LB) ÷ 8 + (2 × LW)}≦ <Remote master station → 1600 bytes Maximum number of link remote I/O station> <Multiplexed remote Ο points per station {(LY + LB) ÷ 8 + (2 × LW)}≦ master station $\leftarrow \rightarrow$ 1600 bytes multiplexed remote submaster station> $\{(LY + LB) \div 8 + (2 \times LW)\} \le$ 2000 bytes Communication speed 10Mbps Ο Nothing to be noted though the Token ring method Token bus method Communication method Δ communication method differs. Synchronous type Frame synchronization method Ο Encoding method Manchester code Ο The coaxial bus system cannot use the loopback function and multiplex transmission function. Transmission method Duplex loop Single bus Using the optical loop system Δ is recommended for using the loopback function and multiplex transmission function. Transmission format HDLC standards (frame format) 0 Network No.240 to No.255 255 (Total number of PLC 239 (Total number of PLC Maximum number of cannot be set. to PLC networks and to PLC networks and \wedge networks Alternate them with unused remote I/O networks) remote I/O networks) network Nos Up to 32 stations are available as the normal station of coaxial 33 stations (Remote master 65 stations (Remote master bus system. Number of stations station: 1, remote I/O station: 1, remote I/O Using the optical loop system Λ connected in one network station: 64) station: 32)*3 is recommended for connecting 33 normal stations or more. 3C-2V Applicable cable Ο 5C-2V Using the optical loop system 3C-2V: 19.2km 3C-2V: 300m Overall distance or A6BR10/A6BR10-DC Δ 5C-2V: 30km 5C-2V: 500m repeater unit is recommended. 3C-2V: 300m Distance between stations Ο 5C-2V: 500m CRC (X¹⁶+X¹²+X⁵+1) and retry by a time over Error control system \cap

3) Performance comparison of AJ71LR21/A1SJ71LR21 and QJ71BR11

O : Compatible, △: Partial change required, × : Incompatible

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points (To next page)

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed

remote sub-master station.

 \bigcirc : Compatible, \bigtriangleup : Partial change required, \times : Incompatible

litour	Specifications		Compat-	
Item	AJ71LR21/A1SJ71LR21	QJ71BR11	ibility	Precautions for replacement
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	 Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.
Number of occupied I/O points	32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	0	

4) Performance comparison of AJ71BR11/A1SJ71BR11 and QJ71BR11

O : Compatible, △: Partial change required, × : Incompatible

ltom		Specifications		Compat-	Dressutions for mulassement
Item		AJ71BR11/A1SJ71BR11 QJ71BR11		ibility	Precautions for replacement
Maximumnumber	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
			<remote <math="" master="" station="">\rightarrow</remote>		
			Remote I/O station>*2		
			{(LY + LB) ÷ 8 + (2 × LW)}≦		
		<remote <math="" master="" station="">\rightarrow</remote>	1600 bytes		
Maximum number	of link	remote I/O station>	<multiplexed remote<="" td=""><td></td><td></td></multiplexed>		
points per station		$\{(LY + LB) \div 8 + (2 \times LW)\} \leq$	master station $\leftarrow \rightarrow$	0	
		1600 bytes	multiplexed remote sub-		
			master station>		
			{(LY + LB) ÷ 8 + (2 × LW)}≦		
			2000 bytes		
Communication sp	eed	10Mbps		0	
Communication m	ethod	Token bus method		0	
Synchronous type		Frame synchronization meth	od	0	
Encoding method		Manchester code		0	
Transmission meth	nod	Single bus		0	
Transmission form	at	HDLC standards (frame format)		0	
		255 (Total number of DLC	220 (Total number of DLC		Network No.240 to No.255
Maximum number	of	to PLC notworks and	to PLC notworks and		cannot be set.
networks		remote I/O networks)	remote I/O networks)	Δ	Alternate them with unused
					network Nos.
Number of stations		33 stations (Remote master	33 stations (Remote master		
connected in one r	, network	station: 1, remote I/O	station: 1, remote I/O	0	
connected in one i	IELWOIK	station: 32)	station: 32) ^{*3}		
Applicable cable		3C-2V		0	
		5C-2V		0	
Overall distance		3C-2V: 300m		0	
		5C-2V: 500m		<u> </u>	
Distance between	stations	3C-2V: 300m		0	
		5C-2V: 500m		-	
Error control syste	m	CRC $(X^{10}+X^{12}+X^{3}+1)$ and re	etry by a time over	0	
		Diagnostic function for che	ecking local link lines		
RAS function		Abnormal detection using	link special relays and link	0	
		special registers	orique diagnostic functions	_	
		Network monitoring and vi			
		- Monitor, program up/			For comparison of dedicated
Transient transmis	sion	download, etc. with	(Monitor, program up/	Δ	link instruction, refer to Section
		Periprieral device Dedicated link instruction	Dodicated link instruction		5.6.2.
		32 points per slot	32 points per clot		
Number of occupie	ed I/O	(I/O assignment: energial 32	(I/O assignment: intelli 32		
points		nointe)	nointe)	0	
		points)	points)		1

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

(To next page)

(b) Performance comparison of remote I/O stations

1) Comparison between AJ72LP25 and QJ72LP25-25

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

Itom		Specifi	cations	Compat-	Propositions for replacement
nem		AJ72LP25	QJ72LP25-25	ibility	Precautions for replacement
Maximumnumber	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
Maximum number of link points per station		<remote <math="" i="" o="" station="">\rightarrow remote master station> {(LX + LB) \div 8 + (2 × LW)}\leq 1600 bytes</remote>	<remote <math="" i="" o="" station="">\rightarrow remote master station>^{*2} {(LX + LB) \div 8 + (2 × LW)}\leq 1600 bytes</remote>	0	
Max. number of I/O per remote I/O stat	D points tion	$X + Y \leq 2048$ points	$X + Y \leq 4096 \text{ points}^{*3}$	0	
	М	-	8192 points	Δ	This is a new function from MELSECNET/H.
Number of device S points per remote I/O station	SM	-	2048 points	Δ	This is a new function from MELSECNET/H.
	D	-	12288 points	Δ	This is a new function from MELSECNET/H.
	SD	-	2048 points	Δ	This is a new function from MELSECNET/H.
Communication sp	eed	10Mbps	25Mbps/10Mbps	0	
Communication me	ethod	Token ring method		0	
Synchronous type		Frame synchronization method		0	
Encoding method		NRZI coding (Non Return to Zero Inverted)		0	
Transmission meth	nod	Duplex loop		0	
Transmission form	at	HDLC standards (frame forn	nat)	0	
Maximum number networks	of	255 (Total number of PLC to PLC networks and remote I/O networks)	239 (Total number of PLC to PLC networks and remote I/O networks)	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
Number of stations connected in one r	s network	65 stations (Remote master station: 1, remote I/O station: 64)	65 stations (Remote master station: 1, remote I/O station: 64) ^{*4}	0	
Applicable cable		SI optical cable H-PCF optical cable Broad-band H-PCF optical cable QSI optical cable		0	
o veran distance		001311			

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

Itom	Specifications		Compat-	Brocoutions for replacement
ittem	AJ72LP25	QJ72LP25-25	ibility	Precautions for replacement
Distance between stations	SI optical cable: 500m H-PCF optical cable: 1km	<10Mbps> SI optical cable: 500m H-PCF optical cable: 1km Broad-band H-PCF optical cable: 1km QSI optical cable: 1km	0	
	Broad-band H-PCF optical cable: 1km QSI optical cable: 1km	<25Mbps> SI optical cable: 200m H-PCF optical cable: 400m Broad-band H-PCF optical cable: 1km QSI optical cable: 1km	Δ	Use 10 Mbps when using SI optical cable and HPCF optical cable.
Error control system	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and re	try by a time over	0	
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.

2) Performance comparison of AJ72LP25G and QJ72LP25G

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

Itom		Specifications		Compat-	Processions for repleasement
item		AJ72LP25G	QJ72LP25G	ibility	Precautions for replacement
Maximum number	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
		<remote <math="" i="" o="" station="">\rightarrow</remote>	<remote <math="" i="" o="" station="">\rightarrow</remote>		
Maximum number	of link	remote master station>	remote master station> ^{*2}	0	
points per station		{(LX + LB) ÷ 8 + (2 × LW)}≦	{(LX + LB) ÷ 8 + (2 × LW)}≦	0	
		1600 bytes	1600 bytes		
Max. number of I/C) points	$V + V \leq 2048$ points	$V \downarrow V \leq 4006 \text{ pointo}^{*3}$	0	
per remote I/O stat	tion	$x + t \ge 2046 \text{ points}$	$X + Y \ge 4090$ points	0	
	М	_	8192 points	~	This is a new function from
				Δ	MELSECNET/H.
Number of device	SM	-	2048 points	~	This is a new function from
points per remote					MELSECNET/H.
I/O station	D	-	12288 points	~	This is a new function from
					MELSECNET/H.
	SD	-	2048 points	~	This is a new function from
					MELSECNET/H.
Communication speed		10Mbps		0	
Communication method Token ring method		0			
Synchronous type		Frame synchronization meth	nod	0	
Encoding method NRZ		NRZI coding (Non Return to Zero Inverted)		0	
Transmission method		Duplex loop		0	
Transmission form	at	HDLC standards (frame format)		0	
		255 (Total number of PLC	239 (Total number of PLC		Network No.240 to No.255
Maximum number	of	to PI C networks and	to PI C networks and	~	cannot be set.
networks		remote I/O networks)	remote I/O networks)		Alternate them with unused
					network Nos.
Number of stations		65 stations (Remote master	65 stations (Remote master		
connected in one r	, network	station: 1, remote I/O	station: 1, remote I/O	0	
	letwont	station: 64)	station: 64) ^{*4}		
Applicable cable		GI optical cable		0	
Overall distance		30km		0	
Distance between	stations	GI optical cable: 2km		0	
Error control syste	m	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and ret	try by a time over	0	
		 Loop-back function due to 	error detection or broken		
		cable			
PAS function		Diagnostic function for che	ecking local link lines	0	
RAS IUTICIIOT		Abnormal detection using	link special relays and link	0	
		special registers			
		Network monitoring and value	arious diagnostic functions		
		 Monitor, program up/ 	1:1 communication		For comparison of dodicated
Transiont transmis	sion	download, etc. with	(Monitor, program up/		
riansient transmis	5011	peripheral device	download, etc.)	Δ	
		Dedicated link instruction	Dedicated link instruction		0.0.2.

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

			O : Compa	tible, ∆: Pa	rtial change required, × : Incompatible
ltem		Specifications			Precautions for replacement
		AJ72LR25	QJ72BR15	ibility	
Maximum number	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
		<remote <math="" i="" o="" station="">\rightarrow</remote>	<remote <math="" i="" o="" station="">\rightarrow</remote>		
Maximum number	of link	remote master station>	remote master station>*2	~	
points per station		{(LX + LB) ÷ 8 + (2 × LW)}≦ 1600 bytes	{(LX + LB) ÷ 8 + (2 × LW)}≦ 1600 bytes	0	
Max. number of I/0 per remote I/O sta	D points tion	$X + Y \leq 2048$ points	$X + Y \leq 4096 \text{ points}^{*3}$	0	
	М	-	8192 points	Δ	This is a new function from MELSECNET/H.
Number of device	SM	-	2048 points	Δ	This is a new function from MELSECNET/H.
I/O station	D	-	12288 points	Δ	This is a new function from MELSECNET/H.
	SD	-	2048 points	Δ	This is a new function from MELSECNET/H.
Communication sp	beed	10Mbps	·	0	
Communication m	ethod	Token ring method	Token bus method	Δ	Nothing to be noted though the communication method differs.
Synchronous type		Frame synchronization meth	nod	0	
Encoding method		Manchester code		0	
Transmission method		Duplex loop	Single bus	Δ	The coaxial bus system cannot use the loopback function and multiplex transmission function. Using the optical loop system is recommended for using the loopback function and multiplex transmission function.
Transmission form	at	HDLC standards (frame format)		0	
Maximum number networks	of	255 (Total number of PLC to PLC networks and remote I/O networks)	239 (Total number of PLC to PLC networks and remote I/O networks)	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
Number of stations connected in one network		65 stations (Remote master station: 1, remote I/O station: 64)	33 stations (Remote master station: 1, remote I/O station: 32) ^{*4}	Δ	Up to 32 stations are available as the normal station of coaxial bus system. Using the optical loop system is recommended for connecting 33 normal stations or more.
Applicable cable		3C-2V 5C-2V		0	
Overall distance		3C-2V: 19.2km 5C-2V: 30km	3C-2V: 300m 5C-2V: 500m	Δ	Using the optical loop system or A6BR10/A6BR10-DC repeater unit is recommended.

3) Performance comparison of AJ72LR25 and QJ72BR15

(To next page)

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

ltem	Specifications		Compat-	Precautions for replacement
i com	AJ72LR25	QJ72BR15	ibility	
Distance between stations	3C-2V: 300m 5C-2V: 500m		0	
Error control system	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and re	etry by a time over	0	
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	 Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

4) Performance comparison of AJ72BR15 and QJ72BR15

O : Compatible, △: Partial change required, × : Incompatible

ltom		Specifications		Compat-	Dressutions for mulassment
Item		AJ72BR15	QJ72BR15	ibility	Precautions for replacement
Maximumnumber	LX/LY	8192 points		0	
of link points per	LB	8192 points	16384 points ^{*1}	0	
network	LW	8192 points	16384 points ^{*1}	0	
		<remote <math="" i="" o="" station="">\rightarrow</remote>	<remote <math="" i="" o="" station="">\rightarrow</remote>		
Maximum number	of link	remote master station>	remote master station>*2	~	
points per station		{(LX + LB) ÷ 8 + (2 × LW)}≦ 1600 bytes	{(LX + LB) ÷ 8 + (2 × LW)}≦ 1600 bytes	0	
Max. number of I/O per remote I/O state	D points tion	X + Y \leq 2048 points	$X + Y \leq 4096 \text{ points}^{*3}$	0	
	М	-	8192 points	Δ	This is a new function from MELSECNET/H.
Number of device	SM	-	2048 points	Δ	This is a new function from MELSECNET/H.
I/O station	D	-	12288 points	Δ	This is a new function from MELSECNET/H.
	SD	-	2048 points	Δ	This is a new function from MELSECNET/H.
Communication sp	eed	10Mbps		0	
Communication method		Token bus method		0	
Synchronous type		Frame synchronization meth	nod	0	
Encoding method		Manchester code		0	
Transmission meth	nod	Single bus			
Transmission form	at	HDLC standards (frame format)			
Maximum number networks	Maximum number of networks 255 (Total num to PLC networ remote I/O net		239 (Total number of PLC to PLC networks and remote I/O networks)	Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
Number of stations connected in one network		33 stations (Remote master station: 1, remote I/O station: 32)	33 stations (Remote master station: 1, remote I/O station: 32) ^{*4}	0	
Applicable cable		3C-2V 5C-2V		0	
Overall distance		3C-2V: 300m 5C-2V: 500m		0	
Distance between	stations	3C-2V: 300m 5C-2V: 500m		0	
Error control syste	m	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and re	etry by a time over	0	
RAS function		 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0	
Transient transmis	sion	 Monitor, program up/ download, etc. with peripheral device Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.

*1 Remote master station \rightarrow remote sub-master station, remote I/O station: 8192 points

Remote sub-master station, remote I/O station \rightarrow remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

(2) QnA/QnAS series

(a) Performance comparison of remote master stations

1) Performance comparison between AJ71QLP21/A1SJ71QLP21 and QJ71LP21-25

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

Itom		Specifications		Compat-	Precautions for
Item		AJ71QLP21/A1SJ71QLP21	QJ71LP21-25	ibility	replacement
Maximumnumber	X/Y	8192 points		0	
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
		<remote <math="" master="" station="">\rightarrow Re</remote>	emote I/O station> ^{*2}		
Maximum numbor	oflink	{(Y + B) ÷ 8 + (2 × W)}≦ 1600) bytes		
noints per station		<multiplexed master="" remote="" st<="" td=""><td>tation $\leftarrow \rightarrow$ multiplexed remote</td><td>0</td><td></td></multiplexed>	tation $\leftarrow \rightarrow$ multiplexed remote	0	
points per station		sub-master station>			
		{(Y + B) ÷ 8 + (2 × W)}≦ 2000) bytes		
Communication sp	eed	10Mbps	25Mbps/10Mbps	0	
Communication me	ethod	Token ring method		0	
Synchronous type		Frame synchronization metho	d	0	
Encoding method		NRZI coding (Non Return to Z	Zero Inverted)	0	
Transmission meth	nod	Duplex loop		0	
Transmission form	at	HDLC standards (frame forma	at)	0	
Maximum number	of	239 (Total number of PLC to F	PLC networks and remote I/O	0	
networks		networks)		0	
Number of stations	6	65 stations (Remote master s	tation: 1, remote I/O station:	0	
connected in one r	network	64) ^{*3}		0	
		SI optical cable			
Applicable cable		H-PCF optical cable			
		Broad-band H-PCF optical cable			
		QSI optical cable			
Overall distance		30km		0	
			<10Mbps>		
			Si optical cable: 500m		
			H-PCF optical cable: 1km	0	
		SI optical cable: 500m	Broad-band H-PCF optical	-	
Distance between		H-PCF optical cable: 1km	Cable: 1km		
Distance between		Broad-band H-PCF optical			
Stations		cable: 1km	<201000052		
		QSI optical cable: 1km	H-PCE ontical cable: 400m		Use 10 Mbps when using SI
			Broad-band H-PCE optical	\bigtriangleup	optical cable and H-PCF
			cable: 1km		optical cable.
			QSI optical cable: 1km		
Error control syste	m	CRC ($X^{16}+X^{12}+X^{5}+1$) and ret	ry by a time over	0	
		Loop-back function due to e	error detection or broken cable	0	
		Diagnostic function for check	king local link lines		
RAS function		Abnormal detection using lip	nk special relays and link	0	
		special registers		0	
		Network monitoring and var	ious diagnostic functions		
		Monitor, program up/			
		download, etc. with	1:1 communication		For comparison of dedicated
Transient transmis	aian	peripheral device	(Monitor, program up/		For comparison of dedicated
	51011	 Intelligent function 	download, etc.)	Δ	Section 5.6.2
		modules applicable	 Dedicated link instruction 		060001 0.0.Z.
		Dedicated link instruction			
Number of occupie	o/Lb	32 points per slot	32 points per slot		
points		(I/O assignment: special 32	(I/O assignment: intelli. 32	0	
		points)	points)		

- *1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points
- *2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.
- *3 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

2) Performance comparison of AJ71QLP21S/A1SJ71QLP21S and QJ71LP21S-25

		Specifications			Dressutions for
ltem		AJ71QLP21S/	O 1711 P218-25	ibility	replacement
		A1SJ71QLP21S	QJ/1LF213-25	ionity	replacement
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
		<remote <math="" master="" station="">\rightarrow Re</remote>	emote I/O station> ^{*2}		
Maximum numbor	oflink	{(Y + B) ÷ 8 + (2 × W)}≦ 1600) bytes		
noints per station		<multiplexed master="" remote="" st<="" td=""><td>tation $\leftarrow \rightarrow$ multiplexed remote</td><td>0</td><td></td></multiplexed>	tation $\leftarrow \rightarrow$ multiplexed remote	0	
points per station		sub-master station>			
		{(Y + B) ÷ 8 + (2 × W)}≦ 2000) bytes		
Communication sp	eed	10Mbps	25Mbps/10Mbps	0	
Communication me	ethod	Token ring method		0	
Synchronous type		Frame synchronization metho	d	0	
Encoding method		NRZI coding (Non Return to Z	Zero Inverted)	0	
Transmission meth	od	Duplex loop		0	
Transmission form	at	HDLC standards (frame forma	at)	0	
Maximum number	of	239 (Total number of PLC to F	PLC networks and remote I/O	_	
networks		networks)			
Number of stations	;	65 stations (Remote master station: 1, remote I/O station:			
connected in one r	network	64) ^{*3}			
		SI optical cable H-PCF optical cable Broad-band H-PCF optical cable			
Applicable coble					
Applicable cable					
		QSI optical cable			
Overall distance		30km		0	
			<10Mbps>		
			SI optical cable: 500m		
			H-PCF optical cable: 1km	0	
		SLoptical cable: 500m	Broad-band H-PCF optical	0	
		H-PCF optical cable: 1km	cable: 1km		
Distance between		Broad-band H-PCF optical	QSI optical cable: 1km		
stations		cable: 1km	<25Mbps>		
		QSI optical cable: 1km	SI optical cable: 200m		Use 10 Mbps when using SI
			H-PCF optical cable: 400m		optical cable and H-PCF
			Broad-band H-PCF optical		optical cable.
			Cable: TKm		
Error control system	m	CPC (V16+V12+V5+1) and rat		0	
LITOI CONITOI SYSTEM		• Loop back function due to c	ry by a line over	0	
RAS function		Diagnostic function for check			
		Abnormal detection using li	nk special relays and link	0	
		special registers	in opeoid relays and link	0	
		Network monitoring and var	rious diagnostic functions		
		Monitor program up/			
		download, etc. with	1:1 communication		
		peripheral device	(Monitor, program up/		For comparison of dedicated
Transient transmis	sion	Intelligent function	download, etc.)	Δ	link instruction, refer to
		modules applicable	Dedicated link instruction		Section 5.6.2.
		Dedicated link instruction			

(To next page)

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

Item		Specifications			Due continue for
		AJ71QLP21S/ A1SJ71QLP21S	QJ71LP21S-25	ibility	replacement
	Voltage	20.4VDC to 31.2VDC	20.4VDC to 31.2VDC	0	
	Current	0.2A	0.20A	0	
External power supply	Applicable cable size	0.75 to 2mm ²	0.3 to 1.25mm ²	Δ	Cables of 1.25mm ² or more should be replaced with cables of 0.3 to 1.25mm.
Number of occupied I/O points		32 points per slot (I/O assignment: special 32 points)	48 points 2 slots (I/O assignment: <u>first half</u> empty 16 points, <u>second half</u> intelli. 32 points)	Δ	Set the [Empty 16 points] of first half to the [Empty 0 point] with I/O assignment.

 \bigcirc : Compatible, \bigtriangleup : Partial change required, \times : Incompatible

3)	Performance	comparison	of AJ71QLP21G	and QJ71LP21G
----	-------------	------------	---------------	---------------

			O : Compatib	le, ∆: Partia	I change required, × : Incompatible
Itom		Specifications			Precautions for
item		AJ71QLP21G	QJ71LP21G	ibility	replacement
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
		<remote <math="" master="" station="">\rightarrow Re</remote>	emote I/O station> ^{*2}		
Maximum number	oflink	{(Y + B) ÷ 8 + (2 × W)}≦ 1600	bytes		
noints per station	Of milk	<multiplexed master="" remote="" st<="" td=""><td>ation $\leftarrow \rightarrow$ multiplexed remote</td><td>0</td><td></td></multiplexed>	ation $\leftarrow \rightarrow$ multiplexed remote	0	
		sub-master station>			
		{(Y + B) ÷ 8 + (2 × W)}≦ 2000	bytes		
Communication sp	eed	10Mbps		0	
Communication m	ethod	Token ring method		0	
Synchronous type		Frame synchronization metho	d	0	
Encoding method		NRZI coding (Non Return to Z	Zero Inverted)	0	
Transmission meth	nod	Duplex loop			
Transmission form	at	HDLC standards (frame forma	at)	0	
Maximum number	of	239 (Total number of PLC to F	PLC networks and remote I/O	0	
networks	networks)		0		
Number of stations		65 stations (Remote master st	tation: 1, Remote I/O station:	~	
connected in one network		64) ^{*3}			
Applicable cable		GI optical cable			
Overall distance		30km			
Distance between		GL optical cable: 2km		0	
stations				0	
Error control system		CRC ($X^{16}+X^{12}+X^{5}+1$) and retry by a time over		0	
		 Loop-back function due to e 	error detection or broken cable		
		 Diagnostic function for check 	king local link lines		
RAS function		 Abnormal detection using lin 	nk special relays and link	0	
		special registers			
		Network monitoring and var	ious diagnostic functions		
		Monitor, program up/			
		download, etc. with	• 1:1 communication		For comparison of dedicated
Transient transmis	sion	peripheral device	(Monitor, program up/	Δ	link instruction, refer to
		Intelligent function	download, etc.)	_	Section 5.6.2.
		modules applicable	 Dedicated link instruction 		
		Dedicated link instruction			
Number of occupie	ed I/O	32 points per slot	32 points per slot		
points		(I/O assignment: special 32	(I/O assignment: intelli. 32	0	
P 0		points)	points)		

*1 Remote master station \rightarrow remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station \rightarrow remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

4) Performance comparison of AJ71QLR21/A1SJ71QLR21 and QJ71BR11

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

		Specifi	cations	Compat	Processions for
ltem		AJ71QLR21/ A1SJ71QLR21	QJ71BR11	ibility	replacement
Maximumnumber	X/Y	8192 points		0	
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
Maximum number points per station	of link	<remote <math="" master="" station="">\rightarrow Remote I/O station>^{*2} {(Y + B) \div 8 + (2 × W)}\leq 1600 bytes <multiplexed <math="" master="" remote="" station="">\leftarrow \rightarrow multiplexed remote sub-master station></multiplexed></remote>		0	
Communication sp	eed	10Mbps	-	0	
Communication me	ethod	Token ring method	Token bus method	Δ	Nothing to be noted though the communication method differs.
Synchronous type		Frame synchronization mether	nod	0	
Encoding method		NRZI coding (Non Return to Zero Inverted)	Manchester code		Noting to be noted though the encoding methods are different.
Transmission method		Duplex loop	Single bus	Δ	The coaxial bus system cannot use the loopback function and multiplex transmission function. Using the optical loop system is recommended for using the loopback function and multiplex transmission function.
Transmission formation	at	HDLC standards (frame format)		0	
Maximum number	of networks	239 (Total number PLC to PLC networks and remote I/O networks)		0	
Number of stations connected in one network		65 stations (Remote master station: 1, remote I/O station: 64) ^{*3}	33 stations (Remote master station: 1, remote I/O station: 32) ^{*4}	Δ	Up to 32 stations are available as the normal station of coaxial bus system. Using the optical loop system is recommended for connecting 33 normal stations or more.
Applicable cable		3C-2V		0	
		5C-2V	[Listen de condición
Overall distance		3C-2V: 19.2km 5C-2V: 30km	3C-2V: 300m 5C-2V: 500m	Δ	Using the optical loop system or A6BR10/A6BR10- DC repeater unit is recommended.
Distance between	stations	3C-2V: 300m		0	
Error control over	m	00-2V: 000M			
Error control system		LCRC (X ' + X ' + X + 1) and re	etry by a time over	0	

(To next page)

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

*4 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

	Specifi	cations	Compet	Precautions for replacement
ltem	AJ71QLR21/ A1SJ71QLR21	QJ71BR11	ibility	
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	 Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Intelligent function modules applicable Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.
Number of occupied I/O points	32 points per slot (I/O assignment: special 32 points)	32 points per slot (I/O assignment: intelli. 32 points)	0	

5) Performance comparison of AJ71QBR11/A1SJ71BR11 and QJ71BR11

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

		Specifications			Due coutiene for
ltem		AJ71QBR11/ O I71BB11		Compat-	Precautions for
		A1SJ71QBR11	QJ/IBRII	IDIIIty	replacement
Maximum number	X/Y	8192 points		0	
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
		<remote <math="" master="" station="">\rightarrow</remote>	remote I/O station> ^{*2}		
Maximum number	oflink	{(Y + B) ÷ 8 + (2 × W)}≦ 16	00 bytes		
naximum number	OFILLIK	<multiplexed master<="" remote="" td=""><td>station $\leftarrow \rightarrow$ multiplexed</td><td>0</td><td></td></multiplexed>	station $\leftarrow \rightarrow$ multiplexed	0	
points per station		remote sub-master station>			
		{(Y + B) ÷ 8 + (2 × W)}≦ 20	00 bytes		
Communication sp	eed	10Mbps		0	
Communication m	ethod	Token bus method		0	
Synchronous type		Frame synchronization mether	nod	0	
Encoding method		Manchester code		0	
Transmission meth	nod	Single bus		0	
Transmission form	at	HDLC standards (frame format)		0	
Maximum numbor	of notworks	239 (Total number of PLC to PLC networks and remote		0	
Maximum number	OTTELWORKS	I/O networks)		0	
Number of stations connected		33 stations (Remote master station: 1, remote I/O		~	
in one network		station: 32) ^{*3}		0	
Applicable cable		3C-2V		0	
		5C-2V		0	
Overall distance		3C-2V: 300m		0	
		5C-2V: 500m		<u> </u>	
Distance between	stations	3C-2V: 300m		0	
		5C-2V: 500m			
Error control syste	m	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and r	etry by a time over	0	
		 Diagnostic function for ch 	ecking local link lines		
RAS function		 Abnormal detection using 	link special relays and link	0	
		special registers		Ŭ	
		Network monitoring and v	arious diagnostic functions		
		Monitor, program up/			
		download, etc. with	1:1 communication		For comparison of dedicated
Transient transmis	sion	peripheral device	(Monitor, program up/	~	link instruction, refer to
		 Intelligent function 	download, etc.)		Section 5.6.2.
		modules applicable	 Dedicated link instruction 		
		Dedicated link instruction			
Number of occupie	ed I/O	32 points per slot	32 points per slot		
points		(I/O assignment: special 32	(I/O assignment: intelli. 32	0	
pointo		points)	points)		

*1 Remote master station \rightarrow remote sub-master station, remote I/O station: 8192 points

Remote sub-master station, remote I/O station → remote master station: 8192 points
 *2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

(b) Performance comparison of remote I/O stations

1) Comparison between AJ72QLP25/A1SJ72QLP25 and QJ72LP25-25

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

		Specifications			Proceutions for
Item		AJ72QLP25/ A1SJ72QLP25	QJ72LP25-25	ibility	replacement
Maximumnumber	X/Y	8192 points		0	
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
Maximum number	of link	<remote <math="" i="" o="" station="">\rightarrow remo</remote>	ote master station> ^{*2}	_	
points per station		{(X + B) ÷ 8 + (2 × W)}≦ 160	00 bytes	0	
Max. number of I/C) points per	*2	*2	_	
remote I/O station		$X + Y \leq 2048$ points ³	$X + Y \leq 4096$ points ³	0	
	М	-	8192 points	Δ	This is a new function from MELSECNET/H
					This is a new function from
Number of device	SM	-	2048 points	\triangle	MELSECNET/H.
points per remote	D		10000 nainta		This is a new function from
I/O station	D	-	12288 points	Δ	MELSECNET/H.
	SD	-	2048 points	Δ	This is a new function from
Communication on	ood	10Mbpa	25Mbpo/10Mbpo		MELSECNET/H.
Communication sp		Token ring method		0	
Synchronous type	ethou	Frame synchronization method			
Encoding method		NR7I coding (Non Return to	Zero Inverted)	0	
Transmission meth	nod			0	
Transmission format		HDLC standards (frame for	nat)	0	
		239 (Total number of PLC to PLC networks and remote			
Maximum number	of networks	I/O networks)			
Number of stations	connected	65 stations (Remote master station: 1, remote I/O			
in one network		station: 64)*4			
		SI optical cable			
Applicable cable		H-PCF optical cable		0	
		Broad-band H-PCF optical of	cable	0	
		QSI optical cable			
Overall distance		30km	1	0	
			<10Mbps>		
			SI optical cable: 500m		
			H-PCF optical cable: 1km	0	
		SI optical cable: 500m	Broad-band H-PCF optical	Ŭ	
		H-PCF optical cable: 1km	cable: 1km		
Distance between	stations	Broad-band H-PCF optical	QSI optical cable: 1km		
		cable: 1km	<25Mbps>		
		OSI ontical cable: 1km	SI optical cable: 200m		Use 10 Mbps when using SL
			H-PCF optical cable: 400m	^	optical cable and HPCF
			Broad-band H-PCF optical		ontical cable
			cable: 1km		
			QSI optical cable: 1km		
Error control syste	m	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and re	etry by a time over	0	

(To next page)

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

○ · Compatible	∧ · Partial c	hange required	٠x ا	Incompatible
O. Compatible,		nange required	1, ^ .	mcompauble

	Specifi	Compat	Precautions for	
Item	AJ72QLP25/	O 1721 P25-25	ibility	replacement
	A1SJ72QLP25	QJ/2LF23-23	ionity	replacement
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 			
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Intelligent function modules applicable Dedicated link instruction 		Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.

2) Performance comparison of AJ72QLP25G and QJ72LP25G

O : Compatible, ∆: Partial change required, × : Incompatible						
Item		Specifi	cations	Compat-	Precautions for	
		AJ72QLP25G	QJ72LP25G	ibility	replacement	
Maximum number	X/Y	8192 points		0		
of link points per	В	8192 points	16384 points ^{*1}	0		
network	W	8192 points	16384 points ^{*1}	0		
Maximum number	of link	<remote <math="" i="" o="" station="">\rightarrow rem</remote>	ote master station> ^{*2}			
points per station		{(X + B) ÷ 8 + (2 × W)}≦ 16	00 bytes	0		
Max. number of I/O remote I/O station) points per	$X + Y \leq 2048 \text{ points}^{*3}$	$X + Y \leq 4096 \text{ points}^{*3}$	0		
	М	-	8192 points	Δ	This is a new function from MELSECNET/H.	
Number of device	SM	-	2048 points	Δ	This is a new function from MELSECNET/H.	
I/O station	D	-	12288 points	Δ	This is a new function from MELSECNET/H.	
	SD	-	2048 points	Δ	This is a new function from MELSECNET/H.	
Communication speed		10Mbps				
Communication me	ethod	Token ring method		0		
Synchronous type		Frame synchronization mether	hod	0		
Encoding method		NRZI coding (Non Return to	Zero Inverted)	0		
Transmission method		Duplex loop		0		
Transmission form	at	HDLC standards (frame forr	mat)	0		
Maximum number	of networks	239 (Total number of PLC to PLC networks and remote I/O networks)				
Number of stations	connected	65 stations (Remote master	station: 1, remote I/O	0		
in one network		station: 64) ^{*4}		0		
Applicable cable		GI optical cable		0		
Overall distance		30km		0		
Distance between	stations	GI optical cable: 2km		0		
Error control syste	m	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and r	etry by a time over	0		
RAS function		 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 		0		
Transient transmis	sion	 Monitor, program up/ download, etc. with peripheral device Intelligent function modules applicable Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.	

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

3) Performance comparison of AJ72QLR25/A1SJ72QLR25 and QJ72BR15

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

		Specifi	cations	0		
Item		AJ72QLR25/ A1SJ72QLR25	QJ72BR15	ibility	Precautions for replacement	
Maximum number	X/Y	8192 points		0		
of link points per	В	8192 points	16384 points ^{*1}	0		
network	W	8192 points	16384 points ^{*1}	0		
Maximum number	of link	<remote <math="" i="" o="" station="">\rightarrow rem</remote>	note master station> ^{*2}			
points per station		$\{(X + B) \div 8 + (2 \times W)\} \le 16$	600 bytes	0		
Max. number of I/C per remote I/O stat) points ion	$X + Y \leq 2048 \text{ points}^{*3}$	$X + Y \leq 4096 \text{ points}^{*3}$	0		
	М	-	8192 points	Δ	This is a new function from MELSECNET/H.	
Number of device	SM	-	2048 points	Δ	This is a new function from MELSECNET/H.	
I/O station	D	-	12288 points	Δ	This is a new function from MELSECNET/H.	
	SD	-	2048 points	Δ	This is a new function from MELSECNET/H.	
Communication sp	eed	10Mbps		0		
Communication me	ethod	Token ring method	Token bus method	Δ	Nothing to be noted though the communication method differs.	
Synchronous type		Frame synchronization me	thod	0		
Encoding method		NRZI coding (Non Return to Zero Inverted)	Manchester code	Δ	Noting to be noted though the encoding methods are different.	
Transmission method		Duplex loop	Single bus	Δ	The coaxial bus system cannot use the loopback function and multiplex transmission function. Using the optical loop system is recommended for using the loopback function and multiplex transmission function.	
Transmission forma	at	HDLC standards (frame for	rmat)	0		
Maximum number networks	of	239 (Total number of PLC t remote I/O networks)	to PLC networks and	0		
Number of stations connected in one n	etwork	65 stations (Remote master station: 1, remote I/O station: 64) ^{*4}	33 stations (Remote master station: 1, remote I/O station: 32) ^{*5}	Δ	Up to 32 stations are available as the normal station of coaxial bus system. Using the optical loop system is recommended for connecting 33 normal stations or more.	
Applicable cable		3C-2V 5C-2V		0		
Overall distance		3C-2V: 19.2km 5C-2V: 30km	3C-2V: 300m 5C-2V: 500m		Using the optical loop system or A6BR10/A6BR10-DC repeater unit is recommended.	

(To next page)

*1 Remote master station → remote sub-master station, remote I/O station: 8192 points Remote sub-master station, remote I/O station → remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 64 stations of the remote I/O station is used for the multiplexed remote sub-master station.

*5 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

	Specifications			Due continue for	
ltem	AJ72QLR25/ A1SJ72QLR25	QJ72BR15	ibility	replacement	
Distance between stations	3C-2V: 300m 5C-2V: 500m		0		
Error control system	CRC (X ¹⁶ +X ¹² +X ⁵ +1) and re	etry by a time over	0		
RAS function	 Loop-back function due to error detection or broken cable Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	 Diagnostic function for checking local link lines Abnormal detection using link special relays and link special registers Network monitoring and various diagnostic functions 	Δ	The loopback function cannot be used on a coaxial bus system. To use the loopback function, using an optical loop system is recommended.	
Transient transmission	 Monitor, program up/ download, etc. with peripheral device Intelligent function modules applicable Dedicated link instruction 	 1:1 communication (Monitor, program up/ download, etc.) Dedicated link instruction 	Δ	For comparison of dedicated link instruction, refer to Section 5.6.2.	

 ${\sf O}$: Compatible, \bigtriangleup : Partial change required, ${\sf x}$: Incompatible

4) Performance comparison of AJ72QBR15/A1SJ72QBR15 and QJ72BR15

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

		Specifications			
ltem		AJ72QBR15/ A1SJ72QBR15	QJ72BR15	Compat- ibility	Precautions for replacement
Maximum number	X/Y	8192 points			
of link points per	В	8192 points	16384 points ^{*1}	0	
network	W	8192 points	16384 points ^{*1}	0	
Maximum number	of link	<remote <math="" i="" o="" station="">\rightarrow rem</remote>	ote master station>*2	-	
points per station		{(X + B) ÷ 8 + (2 × W)}≦ 16	00 bytes	0	
Max. number of I/0	O points	*2	. *9		
per remote I/O sta	tion	$X + Y \leq 2048$ points ³	$X + Y \leq 4096$ points ³	0	
	М	-	8192 points	Δ	This is a new function from MELSECNET/H.
Number of device	SM	-	2048 points	Δ	This is a new function from MELSECNET/H.
I/O station	D	-	12288 points	Δ	This is a new function from MELSECNET/H.
	SD	-	2048 points	Δ	This is a new function from MELSECNET/H.
Communication sp	beed	10Mbps		0	
Communication m	ethod	Token bus method		0	
Synchronous type	type Frame synchronization method		0		
Encoding method Manchester code			0		
Transmission method		Single bus		0	
Transmission format		HDLC standards (frame forr	mat)	0	
Maximum number	of	239 (Total number of PLC to PLC networks and remote			
networks		I/O networks)			
Number of stations	S	33 stations (Remote master station: 1, Remote I/O			
connected in one i	network	station: 32) ^{*4}	station: 32) ^{*4}		
Applicable cable		3C-2V		0	
		5C-2V			
Overall distance		3C-2V: 300m		0	
		5C-2V: 500m		_	
Distance between	stations	5C-2V. 500m		0	
Error control syste	m	CDC (V16, V12, V5, 4) and r	-	0	
		$CRC(X^{+}+X^{+}+X^{+}+1)$ and r	etry by a time over	0	
		Diagnostic function for ch	ecking local link lines		
RAS function		Abnormal detection using	link special relays and link	0	
		special registers			
		Network monitoring and v	arious diagnostic functions		
		Monitor, program up/	<u> </u>		
		download, etc. with	 1:1 communication 		
Transient transmis	nion	peripheral device	(Monitor, program up/		For comparison of dedicated
transient transmis	sion	Intelligent function	download, etc.)	Δ	In the instruction, refer to Section
		modules applicable	Dedicated link instruction		0.0.2.
		Dedicated link instruction			

*1 Remote master station \rightarrow remote sub-master station, remote I/O station: 8192 points

Remote sub-master station, remote I/O station \rightarrow remote master station: 8192 points

*2 The remote master station includes the multiplexed remote master station and multiplexed remote sub-master station.

*3 When the X/Y numbers are duplicate, one side only is taken into consideration.

*4 For the multiplexed remote I/O network, one station in 32 stations of the remote I/O station is used for the multiplexed remote sub-master station.

5.2.2 Cable performance comparisons

(1) Optical fiber cable

(a) Overall distance

The overall distance (30km) does not differ according to the optical fiber cable.

(b) Distance between stations

1) SI optical fiber cable

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

	Speci				
	A/AnS/QnA/QnAS	Q series MELSECNET/H module (optical loop)		Compot	Precautions for replacement
Туре	series			Compat-	
	MELSECNET/10 module			ibility	
	(optical loop)	10Mpbs	25Mbps		
SI optical fiber cable	500m	500m	200m	Δ	Refer to ^{*1} below.
H-PCF optical fiber cable	1km	1km	400m	Δ	Refer to ^{*1} below.
Broad-band H-PCF optical	1km	1km		0	
fiber cable				0	

*1 When the distance between stations do not satisfy with specifications of MELSECNET/H, use at 10 Mbps of communication speed, change the type of optical fiber cable or set the gateway station on the existing cable.

2) GI optical fiber cable

 \bigcirc : Compatible, \bigtriangleup : Partial change required, × : Incompatible

	Specific			
Туре	A/AnS/QnA/QnAS series Q series		Compat-	Precautions for
	MELSECNET/10 module	MELSECNET/H module	ibility	replacement
	(optical loop)	(optical loop)		
GI optical fiber cable	2km	2km	0	

(2) Coaxial cable

(a) Overall distance

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

Tour	Specifications				
	A/AnS/QnA/QnAS series		Q series	Compat-	Precautions for
туре	MELSECNET/10 module		MELSECNET/H module	ibility	replacement
	Coaxial bus	Coaxial loop	(Coaxial bus)		
3C-2V	300m	19.2km	300m	Δ	Refer to ^{*1} below.
5C-2V	500m	30km	500m	Δ	Refer to ^{*1} below.

*1 When the overall distance does not satisfy the MELSECNET/H specifications, either use an A6BR10/A6BR10-DC type repeater unit in the network, or configure a separate network.

(b) Distance between stations

 \bigcirc : Compatible, \triangle : Partial change required, × : Incompatible

		Specific			
T	A/AnS/QnA/QnAS series		Q series	Compat-	Precautions for
туре	MELSECNET/10 module		MELSECNET/H module	ibility	replacement
	Coaxial bus	Coaxial loop	(Coaxial bus)		
3C-2V	300m	300m	300m	0	
5C-2V	500m	500m	500m	0	

Remarks

The following shows the extension method when a repeater unit for the A6BR10/A6BR10-DC type MELSECNET/10 coaxial bus system is used.

For details, refer to the Repeater Unit for the MELSECNET/10 Coaxial Bus System type A6BR10/ A6BR10-DC User's Manual (IB-66499).

(1) The distance between stations of 500m (5C-2V) and 300m (3C-2V) can be extended.



(2) Up to four repeater units can be used in a single network.^{*2} The overall distance can be extended to a maximum distance of 2.5 km.



*2 It is necessary to add terminal resistor A6RCON-R75 (sold separately).

5.3 Functional Comparisons

(1) A/AnS series

C	C: Compatible.	∆: Partial	change	required.	× : Incom	patible
```	g : compatible,		onlango	roquirou,		

Item		Description		Compat	
		A/AnS series MELSECNET/10 module	Q series MELSECNET/H module	ibility	Precautions for replacement
Cyclic transfer function	Communicating with I/O module	Performs communications with the I/O module of the remote I/O station using X/Y (LX/LY).		0	
	Communicating with special function module	Performs communications with the special function module of the remote I/O station using X/Y (LX/LY) and B/W (LB/LW).		0	
	Data link stop/restart function	Stops cyclic transmission temporarily with GX Developer, etc.		0	
Transient transmission function	N:N communication function	Communicates only when communication requests are issued between each stations. (Communication using dedicated link instruction and GX Developer, etc.)		Δ	ZNFR instruction and ZNTO instruction cannot be used. Change them to REMFR instruction and REMTO instruction.
	Routing function	Performs transient transmission to other stations of which network No. are different.		0	
Reserved station function		Treats the stations, which are to be connected in the future, as reserved stations. By specifying the stations, which are not connected, as reserved stations, communication error does not occur.		0	
I/O assignment function		Sets the module configuration of the remote I/O station.		Δ	Set the function with the PLC parameter of the remote I/O module.
	Constant link scan function	Keeps link scan time constar	nt.	0	
ions	Multiplex transmission function	Performs high-speed communication using duplex transmission path (forward loop/reverse loop).		0	
Extension funct	Return sequence station number setting function	Sets the number of stations that can return to system during one link scan.		0	
	ZNFR/ZNTO instruction access number setting function	Sets the number of transient entire one network) that can scan.	transmissions (a total of be executed during one link	Δ	The number of transient transmissions executed during one link scan is two (fixed).

(To next page)

Item		Description		0	
		A/AnS series MELSECNET/10 module	Q series MELSECNET/H module	ibility	Precautions for replacement
RAS function	Automatic return function	Returns the station disconnected from data link to the system when it goes to normal status and restarts data link.		0	
	Loopback function	Keeps normal operation between operable stations by disconnecting faulty area at error occurrence such as cable break.		0	
	Station detach function	Keeps normal operation between operable stations except faulty stations and stations switched off.		0	
	Diagnostic function	Checks line conditions of the network and setting conditions of the module.		Δ	<ul> <li>Substitute the forward loop/ reverse loop test for the station-to-station test.</li> <li>Set diagnostic items for station-to-station test and forward loop/reverse loop test in GX Developer network parameters.</li> </ul>
	Blown fuse error and input/output verification error check disabled function	Sets the error check of the blown fuse error and the input/ output verification error.		Δ	Set the function with the PLC parameter of the remote I/O module.

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

#### (2) Comparison with QnA/QnAS series

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

Item		Description		Compat	
		QnA/QnAS series	Q series	ibility	Precautions for replacement
		MELSECNET/10 module	MELSECNET/H module	ibility	
	Communicating with	Performs communications with the I/O module of the		0	
Cyclic transfer function	I/O module	remote I/O station using X/Y (LX/LY).			
	Communicating with	Performs communications with the special function			
	special function	module of the remote I/O station using X/Y (LX/LY) and		0	
	module	B/W (LB/LW).			
	Cyclic transmission	Stops cyclic transmission temporarily with GX Developer,		0	
	stop/restart	etc.			
	Direct access to the	Reads/writes directly from/to	link device of the network	0	
	link devices	module on the sequence pro	gram.	0	
	Default of network	Eliminates the refresh param	eters setting by using		
	refresh parameter	default values of refresh para	ameters.	0	

(To next page)

		Descr			
Item		QnA/QnAS series MELSECNET/10 module	Q series MELSECNET/H module	Compat- ibility	Precautions for replacement
it transmission function	Transient transmission function	Communicates only when co issued between each station: (Communication using dedic Developer, etc.)	mmunication requests are s. ated link instruction and GX	0	
	Routing function	Performs transient transmissinetwork No. are different.	ion to other stations of which	0	
	Dedicated link instruction	Performs communications with other station at desired timing using dedicated link instruction.		Δ	ZNFR instruction and ZNTO instruction cannot be used. Change them to REMFR instruction and REMTO instruction.
<b>Fransie</b>	Specification of default network	Processes the requests that cannot specify network No. of access path.		0	
F	Clock setup for stations on network with peripheral device	Performs clock setup to CPU modules connected to the network with GX Developer.		0	
Muli func	tiplex transmission	Performs high-speed communication using duplex transmission path (forward loop/reverse loop).		0	
Reserved station function		Treats the stations, which are to be connected in the future, as reserved stations. By specifying the stations, which are not connected, as reserved stations, communication error does not occur.		0	
Multiplex master system		Allows the remote sub-master station to automatically control the remote I/O stations in the case of the multiplexed remote master station failure.		Δ	<ul> <li>The function is available only when mounted on Q12PH/ Q25PH/Q12PRH/Q25PRH CPU.</li> <li>The multiplexed remote master station and the multiplexed remote sub- master station cannot be mounted on the same programmable controller CPU.</li> <li>Mount on separate programmable controller CPU.</li> </ul>
Parallel master system		Sets two remote master stations in the same network.		Δ	Cannot be configured on the remote I/O network of MELSECNET/H. Configure two networks.
Settings of remote I/O station output status in the case of system failure with programmable controller CPU error		Retains the output status of the remote I/O station in the case of the remote master station error.		Δ	Set the function with the PLC parameter of the remote I/O module.

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

# 5 REPLACEMENT OF THE MELSECNET/10 (REMOTE I/O NETWORK)

# MELSEC

ltem		Description		0	
		QnA/QnAS series	Q series	Compat-	Precautions for replacement
		MELSECNET/10 module	MELSECNET/H module	IDIIIty	
	Automatic return	Returns the station disconnected from data link to the		0	
	function	system when it goes to normal status and restarts data			
		link.			
		Keeps normal operation between operable stations by			
	Loopback function	disconnecting faulty area at error occurrence such as		0	
		cable break.			
	Station detach	Keeps normal operation between operable stations		$\circ$	
	function	except faulty stations and stations switched off.		0	
	Transient				
	transmission				
	available even if	Checks the errors for CPU modules of which a stop error			
	programmable	occurs, via network from the GX Developer.			
	controller CPU is in				
	error				
tion	Checking the				
nuc	transient	Checks error completion time	e, abnormal detection		
Sfl	transmission	network number and abnorm	al detection station number	0	
RA	abnormal detection	of transient transmission.			
	time				
	Diagnostic function Checks line conditions of conditions of the module				Substitute the forward loop/
					atotion to station tost
		Chacks line conditions of the	notwork and sotting		• Sot diagnostic itoms for
		conditions of the module		Δ	station to station tost and
				forward loop/rovorso loop tost	
					in GX Developer network
					parameters.
	Blown fuse error and	Sets the error check of the blown fuse error and the input/			
	input/output			Δ	Set the function with the PLC
	verification error				parameter of the remote I/O
	check disabled	output verification error.			module.
	function				

## 5.4 Switch Settings Comparisons

## (1) A/AnS series

## (a) Switch settings comparisons of remote master station

 $\bigcirc$  : Compatible,  $\bigtriangleup$ : Partial change required, × : Incompatible

	Description			
Switch name	A/AnS series	Q series	ibility	Precautions for replacement
	MELSECNET/10 module	MELSECNET/H module	ibility	
Network No. setting switch	Sets the network No.	-	Δ	<ul> <li>Set in GX Developer network parameters.</li> <li>Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.</li> </ul>
Mode setting switch	<ul> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>Online</li> <li>Offline</li> <li>Loop test (forward loop)</li> <li>Loop test (reverse loop)</li> <li>Station-to-station test (master station)</li> <li>Station-to-station test (slave station)</li> <li>Self-loopback test</li> <li>Internal self-loopback test</li> <li>H/W test</li> <li>Network No. check</li> <li>Group No. check</li> <li>Station No. check</li> </ul>	<ul> <li>[Using QJ71LP21-25 and QJ71LP21S-25]</li> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>Online (10Mbps)</li> <li>1: Self-loopback test (10Mbps)</li> <li>2: Internal self-loopback test (10Mbps)</li> <li>3: Hardware test (10Mbps)</li> <li>4: Online (25Mbps)</li> <li>5: Self-loopback test (25Mbps)</li> <li>6: Internal self-loopback test (25Mbps)</li> <li>7: Hardware test (25Mbps)</li> <li>[Using QJ71LP21G and QJ71BR11]</li> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>0: Online</li> <li>1: Self-loopback test</li> <li>2: Internal self-loopback test</li> <li>2: Internal self-loopback test</li> <li>3: Hardware test</li> </ul>	Δ	<ul> <li>Set offline and loop test in GX Developer network parameters.</li> <li>Substitute the forward loop/ reverse loop test for the station- to-station test.</li> <li>Check network No., group No. and station No. in GX Developer network diagnostics (host information).</li> </ul>
Condition setting switch	Sets the operation conditions.	-	Δ	Set in GX Developer network parameters.
		0.00		i araa onango roqanoa, i moompaasio
------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
	Desc	ription	Compat-	
Switch name	A/AnS series	Q series	ikiliki	Precautions for replacement
	MELSECNET/10 module	MELSECNET/H module	IDIIIty	
Mode setting switch	Sets the mode. <setting range=""> 0: Online 2: Offline 3: Loop test (forward loop) 4: Loop test (reverse loop) 5: Station-to-station test (master station) 6: Station-to-station test (slave station) 7: Self-loopback test 8: Internal self-loopback test 9: H/W test F: Station No. check</setting>	<ul> <li>[Using QJ72LP25-25]</li> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>Online (10Mbps)</li> <li>Self-loopback test (10Mbps)</li> <li>Internal self-loopback test (10Mbps)</li> <li>Hardware test (10Mbps)</li> <li>Hardware test (10Mbps)</li> <li>Self-loopback test (25Mbps)</li> <li>Internal self-loopback test (25Mbps)</li> <li>Internal self-loopback test (25Mbps)</li> <li>Internal self-loopback test (25Mbps)</li> <li>Hardware test (25Mbps)</li> <li>Hardware test (25Mbps)</li> <li>Hardware test (25Mbps)</li> <li>Using QJ72LP25G and QJ72BR15]</li> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>Online</li> <li>Self-loopback test</li> <li>Internal self-loopback test</li> <li>Hardware test</li> </ul>	Δ	<ul> <li>Set offline and loop test in GX Developer network parameters.</li> <li>Substitute the forward loop/ reverse loop test for the station- to-station test.</li> <li>Check network No., group No. and station No. in GX Developer network diagnostics (host information).</li> </ul>

## (b) Switch settings comparisons of remote I/O station

O : Compatible, △: Partial change required, × : Incompatible

## (2) QnA/QnAS series

## (a) Remote master station switch settings comparisons

		O : Co	mpatible, $\triangle$	Partial change required, × : Incompatible
	Desc	ription	Compat	
Switch name	QnA/QnAS series	Q series	Compat-	Precautions for replacement
	MELSECNET/10 module	MELSECNET/H module	IDIIIty	
Network No. setting switch	Sets the network No.	-	Δ	Set in GX Developer network parameters.
Mode setting switch	Sets the mode. <setting range=""> 0: Online 2: Offline 3: Loop test (forward loop) 4: Loop test (reverse loop) 5: Station-to-station test (master station) 6: Station-to-station test (slave station) 7: Self-loopback test 8: Internal self-loopback test 9: H/W test D: Network No. check E: Group No. check F: Station No. check</setting>	[Using QJ71LP21-25 and QJ71LP21S-25] Sets the mode. <setting range=""> 0: Online (10Mbps) 1: Self-loopback test (10Mbps) 2: Internal self-loopback test (10Mbps) 3: Hardware test (10Mbps) 4: Online (25Mbps) 5: Self-loopback test (25Mbps) 6: Internal self-loopback test (25Mbps) 7: Hardware test (25Mbps) [Using QJ71LP21G and QJ71BR11] Sets the mode. <setting range=""> 0: Online 1: Self-loopback test 2: Internal self-loopback test 3: Hardware test</setting></setting>	Δ	<ul> <li>Set offline and loop test in GX Developer network parameters.</li> <li>Substitute the forward loop/ reverse loop test for the station- to-station test.</li> <li>Check network No., group No. and station No. in GX Developer network diagnostics (host information).</li> </ul>
setting switch	Sets the operation conditions.	-	Δ	Set in GX Developer network parameters.

		0:00		Tartial change required, ~ : incompatible
	Desci	ription	Compat	
Switch name	QnA/QnAS series	Q series	ibility	Precautions for replacement
	MELSECNET/10 module	MELSECNET/H module	IDIIIty	
Mode setting switch	Sets the mode. <setting range=""> 0: Online 2: Offline 3: Loop test (forward loop) 4: Loop test (reverse loop) 5: Station-to-station test (master station) 6: Station-to-station test (slave station) 7: Self-loopback test 8: Internal self-loopback test 9: H/W test F: Station No. check</setting>	<ul> <li>[Using QJ72LP25-25]</li> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>Online (10Mbps)</li> <li>1: Self-loopback test (10Mbps)</li> <li>2: Internal self-loopback test (10Mbps)</li> <li>3: Hardware test (10Mbps)</li> <li>4: Online (25Mbps)</li> <li>5: Self-loopback test (25Mbps)</li> <li>6: Internal self-loopback test (25Mbps)</li> <li>7: Hardware test (25Mbps)</li> <li>[Using QJ72LP25G and QJ72BR15]</li> <li>Sets the mode.</li> <li><setting range=""></setting></li> <li>0: Online</li> <li>1: Self-loopback test</li> <li>2: Internal self-loopback test</li> <li>2: Internal self-loopback test</li> <li>3: Hardware test (25Mbps)</li> </ul>		<ul> <li>Set offline and loop test in GX Developer network parameters.</li> <li>Substitute the forward loop/ reverse loop test for the station- to-station test.</li> <li>Check network No., group No. and station No. in GX Developer network diagnostics (host information).</li> </ul>
setting switch	Sets the operation conditions.	-	Δ	Nothing to be noted for the MELSECNET/H.

## (b) Remote I/O station switch settings comparisons

O : Compatible, △: Partial change required, × : Incompatible

# **5.5 Parameter Comparisons**

## (1) A/AnS series

## (a) Parameter of remote master station

O: Compatible,	∆: Partial change	e required,	× : Incomp	oatible

Paramotor	Description				Compat	
name	A/AnS MELSECNE	series T/10 module	Q se MELSECNE	eries T/H module	ibility	Precautions for replacement
	Network type		Network type		0	
	Starting I/O No.		Starting I/O No.		0	
	Network No.		Network No.		Δ	Network No.240 to No.255 cannot be set. Alternate them with unused network Nos.
	Total number of	(slave) stations	Total number of	(slave) stations	0	
	-		Mode			Set the mode in GX Developer network parameters.
		Monitoring time		Monitoring time	0	
Notwork		LB/LW setting		BW setting	0	
narameter		LX/LY setting		XY setting	0	
parameter	Network range	Reserved	Network range	Reserved		
	assignment	station	assignment	station	0	
	(common	designation	(common	designation		
	parameter)	I/O assignment setting	parameter)	-	Δ	Set with the PLC parameter of each remote I/O station.
		Supplemental settings		Supplemental settings	0	
	Refresh parame	ters	Refresh parame	ters	0	
	Routing parame	ters	Routing parame	ters	0	
	Valid module du station access	ring other	Valid module du station access	ring other	0	

#### (b) Parameter of remote I/O station

When mounting the intelligent function module on the remote I/O station, set the parameter. When mounting only I/O modules, the operation is available even if the parameter is not set. (It is operated with default value.)

Boromotor	Description			
Farameter	A/AnS series	Q series	ibility	Precautions for replacement
name	MELSECNET/10 module	MELSECNET/H module	IDIIILY	
				New parameter of MELSECNET/H
	-	PLC system setting	Δ	(The number of empty slots, etc. is
				set.)
				New parameter of MELSECNET/H
	-	PLC RAS setting	$\triangle$	(The operation mode and error
PLC				check at an error are set.)
parameters				New parameter of MELSECNET/H
	-	Operation setting	Δ	(The parameters for transmitting
				between devices are set.)
	-	I/O assignment setting		New parameter of MELSECNET/H
			Δ	(The I/O assignment of remote I/O
				station, etc. is set.)
		Ethernet		New parameter of MELSECNET/H
			Δ	(The network parameter of
				Ethernet module mounted on the
Network				remote I/O station is set.)
parameter				New parameter of MELSECNET/H
		CC-Link	~	(The network parameter of CC-
				Link module mounted on the
				remote I/O station is set.)
				New parameter of MELSECNET/H
Remote		Remote password setting		(The remote password of Ethernet
nassword	-		$\bigtriangleup$	module and serial communication
password				module, etc. mounted on the
				remote I/O station is set.)

 $\bigcirc$  : Compatible,  $\bigtriangleup$ : Partial change required, × : Incompatible

# (2) QnA/QnAS series

# (a) Parameter of remote master station

Boromotor	Description			Compat		
name	QnA/Qn/	AS series		eries	ibility	Precautions for replacement
		T/TO module	MELSEGNE	T/H module		
	Network type		Network type		0	
	Starting I/O No.		Starting I/O No.		0	
	Network No.		Network No.		0	
	Total number of	(slave) stations	Total number of	(slave) stations	0	
	-		Mada			Set the mode in GX Developer
			Mode		Δ	network parameters.
		Monitoring time		Monitoring time	0	
		BW setting		BW setting	0	
		XY setting		XY setting	0	
Network	Network range	Reserved	Network range	Reserved		
parameter	assignment	station	assignment	station	0	
	(common	designation	(common	designation		
	parameter)	I/O assignment	parameter)			Set with the PLC parameter of
		setting		- A	Δ	each remote I/O station.
		Supplemental		Supplemental	<u> </u>	
		settings		settings	0	
	Refresh parame	ters	Refresh parame	ters	0	
	Routing parameters		Routing parame	ters	0	
	Valid module du	ring other	Valid module du	ring other		
	station access		station access		0	

Deremeter		Description				
name	QnA/QnAS series MELSECNET/10 module		Q se MELSECNE	eries T/H module	ibility	Precautions for replacement
	Network type		Network type		0	
	Starting I/O No.		Starting I/O No.		0	
	Network No.		Network No.		0	
	Total number of	(slave) stations	Total number of	(slave) stations	0	
	-		Group No.		Δ	The group No. is not used in the remote I/O network. Set to [0].
	-		Mode		Δ	Set the mode in GX Developer network parameters.
	Network range	Monitoring time	Network range	Monitoring time	0	
		BW setting		BW setting	0	
Network		XY setting		XY setting	0	
parameter		Reserved station designation		Reserved station designation	0	
	assignment	Remote sub-	loommon	Remote sub-		
	(common parameter)	master station specification	parameter)	master station specification	0	
		I/O assignment setting		-	Δ	Set with the PLC parameter of each remote I/O station.
		Supplemental settings		Supplemental settings	0	
	Refresh parame	eters	Refresh parame	ters	0	
	Routing parame	eters	Routing parame	ters	0	

# (b) Parameter of multiplexed remote master station^{*1}

 $\bigcirc$  : Compatible,  $\bigtriangleup$ : Partial change required, × : Incompatible

*1 The multiplexed remote master station is the station type of the multiplex master system.

Only the following CPU modules support the multiplex master system.

Process CPU

Redundant CPU

			() : Co	mpatible, $ riangle$	Partial change required, × : Incompatible
Deverator	Desc	ription		Compat	
Parameter	QnA/QnAS series	Q s	eries	compat-	Precautions for replacement
name	MELSECNET/10 module	MELSECNE	T/H module	IDIIILY	
	Network type	Network type		0	
	Starting I/O No.	Starting I/O No.		0	
	Network No.	Network No.		0	
					New parameter of MELSECNET/H
					(To enable the multiplexed remote
	-	Total number of	(slave) stations	$\triangle$	sub-master station to control the
					remote I/O station, the setting is
					required.)
					The group No. is not used in the
	-	Group No.		$\triangle$	remote I/O network.
					Set to [0].
	_	Mode		^	Set the mode in GX Developer
					network parameters.
Network			Monitoring time	Δ	
parameter			BW setting	Δ	
		Network range	XY setting	Δ	
			Reserved		New parameter of MELSECNET/H
			station	$\triangle$	(To enable the multiplexed remote
	-	(common	designation		sub-master station to control the
		parameter)	Remote sub-		remote I/O station, the setting is
		, ,	master station	$\triangle$	required.)
			specification		
			Supplemental	~	
			settings		
	Refresh parameters	Refresh parame	eters	0	
	Routing parameters	Routing parame	ters	0	
	Valid module during other	Valid module du	iring other	0	
	station access	station access		Ŭ	

# (c) Parameter of multiplexed remote sub-master station^{*1}

*1 The multiplexed remote sub-master station is the station type of the multiplex master system. Only the following CPU modules support the multiplex master system.

• Process CPU

Redundant CPU

			O : C	ompatible, ∆	: Partial change required, × : Incompatible
Devementer		Descr	iption	Compat	
name	QnA/Qn/	AS series	Q series	ibility	Precautions for replacement
	MELSECNE	T/10 module	MELSECNET/H module	ionity	
	Network type			Δ	
	Starting I/O No.			Δ	
	Network No.			Δ	
	Total number of	(slave) stations		Δ	
		Monitoring time		Δ	
		BW setting		Δ	
		XY setting		Δ	
		Sub-BW setting	-	Δ	
		Sub-XY setting		Δ	
	Network range	Remote sub-		Δ	Cannot be configured on the remote I/O network of MELSECNET/H. Configure two networks.
Network	assignment (common parameter)	master station			
parameter		specification			
		Reserved			
		station			
		designation			
		I/O assignment			
		setting			
		Supplemental		~	
		settings			
	Refresh parame	eters		Δ	
	Routing parame	eters		Δ	
	Valid module du	iring other		~	
	station access				

## (d) Parameter of parallel remote master station

#### (e) Parameter of parallel remote sub-master station

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

Paramotor	Descr	iption	Compat- ibility	
name	QnA/QnAS series	Q series		Precautions for replacement
	MELSECNET/10 module	MELSECNET/H module		
	Network type		Δ	
	Starting I/O No.		Δ	Cannot be configured on the
Notwork	Network No.		Δ	romoto I/O notwork of
narameter	Refresh parameters	-	Δ	MELSECNET/H
parameter	Routing parameters		Δ	
	Valid module during other			Configure two networks.
	station access			

#### (f) Parameter of remote I/O station

When mounting the intelligent function module on the remote I/O station, set the parameter. When mounting only I/O modules, the operation is available even if the parameter is not set. (It is operated with default value.)

O : Compatible, △: Partia	I change required	, × : Incompatible
---------------------------	-------------------	--------------------

Daramoter	Desci	ription	Compat	Precautions for replacement	
name	QnA/QnAS series	Q series	ibility		
name	MELSECNET/10 module	MELSECNET/H module	Ibility		
				New parameter of MELSECNET/H	
	-	PLC system setting	$\triangle$	(The number of empty slots, etc. is	
				set.)	
				New parameter of MELSECNET/H	
	-	PLC RAS setting	$\bigtriangleup$	(The operation mode and error	
PLC				check at an error are set.)	
parameters				New parameter of MELSECNET/H	
	-	Operation setting	Δ	(The parameters for transmitting	
				between devices are set.)	
	-	I/O assignment setting	Δ	New parameter of MELSECNET/H	
				(The I/O assignment of remote I/O	
				station, etc. is set.)	
		Ethernet	Δ	New parameter of MELSECNET/H	
	_			(The network parameter of	
				Ethernet module mounted on the	
Network				remote I/O station is set.)	
parameter				New parameter of MELSECNET/H	
		CC-Link	^	(The network parameter of CC-	
				Link module mounted on the	
				remote I/O station is set.)	
				New parameter of MELSECNET/H	
Remote				(The remote password of Ethernet	
	-	Remote password setting	$\triangle$	module and serial communication	
pasonora				module, etc. mounted on the	
				remote I/O station is set.)	

# **5.6 Program Comparisons**

## 5.6.1 Comparison of link special relay (SB)/link special register (SW)

The table below shows only link special relay (SB) and link special register (SW) to be used in interlock program.

The following device name and device No. are described in link device of internal MELSECNET/10 or MELSECNET/H module.

Changing sequence program should be performed after checking the refreshed device of link device in refresh parameters.

#### (1) A/AnS series

#### (a) Link special relay (SB)

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

	Nun	Compat	Proceutions for	
Item	A/AnS series	Q series	ibility	replacement
	MELSECNET/10 module	MELSECNET/H module		
Module status	SB0020	SB0020	0	
Baton pass status (host)	SB0047	SB0047	0	
Data link status of each	SP0040	SB0040	0	
station	560049	380049		
Baton pass status of	SP0070	SB0070		
each station	360070	380070	0	
Cyclic transmission	SB0074	SB0074		
status of each station	360074	380074	0	

#### (b) Link special register (SW)

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

	Nun	Compat	Precautions for replacement	
ltem	A/AnS series Q series MELSECNET/10 module MELSECNET/H module			ibility
Baton pass status of each station	SW0070 to SW0073	SW0070 to SW0073	0	
Cyclic transmission status of each station	SW0074 to SW0077	SW0074 to SW0077	0	

#### (2) QnA/QnAS series

#### (a) Link special relay (SB)

O : Compatible,  $\triangle$ : Partial change required, × : Incompatible

	Nun	Compat	Procentions for	
Item	QnA/QnAS series	Q series	ibility	roplacement
	MELSECNET/10 module	MELSECNET/H module	ionity	replacement
Module status	SB0020	SB0020	0	
Baton pass status (host)	SB0047	SB0047	0	
Data link status of each	SB0049	SB0049	0	
station	50004	380049	0	
Baton pass status of	SB0070	SB0070	0	
each station	566676	360070	0	
Cyclic transmission	SB0074	SP0074	0	
status of each station	050014	323074		

## (b) Link special register (SW)

		⊖ : Compatible,	∆: Partial ch	nange required, × : Incompatible	
	Nun	nber	Compat		
Item	QnA/QnAS series	Q series	Compat-	replacement	
	MELSECNET/10 module	MELSECNET/H module	ionity		
Baton pass status of	SW0070 to SW0073	SW0070 to SW0073	0		
each station	30007010 300075	50007010 500075	0		
Cyclic transmission	SW0074 to SW0077	SW0074 to SW0077			
status of each station	300074 10 300077	500074 10 500077	0		

Remarks

For link special relay (SB) and link special register (SW) that are not described in this section, refer to each manual.

# 5.6.2 Comparison of dedicated instruction

## (1) A/AnS series

		⊖ : Compatible,	∆: Partial cl	hange required, × : Incompatible	
	Descr	iption	Compat		
Instruction name	A/AnS series	Q series	ibility	reclautions for	
	MELSECNET/10 module	MELSECNET/10 module MELSECNET/H module		replacement	
	Reads data from the buffer	Reads data from the buffer		ZNFR instruction cannot	
	memory of special function	memory of the intelligent		be used.	
	module in the target remote I/O	function module in the target	Δ	Change it to REMFR	
	station. remote I/O station.		instruction.		
	Writes data to the buffer	Writes data to the buffer		ZNTO instruction cannot	
ZNTO instruction	memory of special function	memory of the intelligent		be used.	
	module in the target remote I/O	function module in the target	Δ	Change it to REMFR	
	station.	remote I/O station.		instruction.	

### (2) QnA/QnAS series

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required, × : Incompatible

	Descr	Compat	Procentions for	
Instruction name	QnA/QnAS series	Q series	ibility	replacement
	MELSECNET/10 module	MELSECNET/H module	IDIIILY	replacement
	Reads data from the buffer	Reads data from the buffer		ZNFR instruction cannot
ZNER instruction	memory of special function memory of the intelligent			be used.
	module in the target remote I/O	function module in the target	Δ	Change it to REMFR
	station.	remote I/O station.		instruction.
	Writes data to the buffer	Writes data to the buffer		ZNTO instruction cannot
ZNITO instruction	memory of special function	memory of the intelligent		be used.
ZNTO Instruction	module in the target remote I/O	the target remote I/O function module in the target $\triangle$		Change it to REMFR
	station.	remote I/O station.		instruction.
SEND instruction	Sends data to target station.		0	
RECV instruction	Reads data sent by SEND instru	uction to device of CPU module.	0	
READ instruction,	Poads the device data of other	station	_	
SREAD instruction		station.	0	
WRITE instruction,	Writes data to the device of othe	or station	0	
SWRITE instruction			0	
	Issues "remote RUN/STOP" and	d "clock data read/write"	0	
	requests to other stations.			
ZNRD instruction	Reads the device data of other s	station.	0	
ZNWR instruction	Writes data to the device of othe	er station.	0	

# (3) Q series dedicated link instruction list

The table below shows the dedicated link instructions usable in Q series.

For instruction format of dedicated link instruction and precautions, refer to the following manual.

- Q corresponding MELSECNET/H Network System Reference Manual (Remote I/O network)
- Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

# (a) For remote I/O station

Execution **Target station** Instruction Name station Description Remote I/O module QCPU Reads data from the remote I/O station intelligent function module buffer memory. Remote I/O Intelligent CPU Master module module function module Read remote I/O Channel 1 Buffer memory station intelligent | [ REMFR] Channel 2 REMFR 0 Ο function module Channel 3 Channel 4 221 buffer memory Word device Channel 5 Channel 6 221 Channel 7 Channel 8 Writes data to object remote I/O station intelligent function module buffer memory. (Not processed at the execution from multiplexed remote sub-master station.) Remote I/O Intelligent Write remote I/O CPU Master module module function module station intelligent Buffer memory Channel 1 REMTO Ο Ο Channel 2 function module Channel 3 buffer memory H-[REMTO] Channel 4 754 Channel 5 Channel 6 Channel 7 Channel 8 Reads remote I/O station device data for object network number. (in 16-bit units) Remote I/O module Master module CPU Read other Channel 1 Word device READ station word 0 H-[ READ ] Channel 2 Ο Channel 3 device 2594 Channel 4 Word device Channel 5 2594 Channel 6 Channel 7 Channel 8 Writes device to object network number remote I/O station. (in 16-bit units) Remote I/O CPU Master module module Write other Channel 1 Word device WRITE station word Ο Channel 2 Ο Channel 3 device WRITE 361 Channel 4 Channel 5 Channel 6 Channel 7 Channel 8

○ : Can be used, × : Cannot be used

# (b) For multiplexed remote master station and multiplexed remote sub-master station

O : Can be used, × : Cannot be used

MELSEC

	Execution station			Target station		
Instruction	Name	QnPH CPU	QnPRH CPU	Description	Multiplexed remote master station	Multiplexed remote sub-master station
SEND	Data sending	0	×	SEND:Writes data to the target station (network module) of the target network No. RECV:Reads the data sent by SEND to the CPU device.	0	0
RECV	Data receiving	0	×	HI-[ SEND ]       Channel 3 Channel 4 Channel 4       Logical channel 2 Logical channel 3 Logical channel 4 (Channel 3) Logical channel 5 Channel 6 Channel 6 Channel 6       H-[ RECV ]         Channel 3 Channel 6 Channel 7 Channel 8       Logical channel 5 Logical channel 6 Logical channel 6 Channel 6       Logical channel 5 Logical channel 6 Logical channel 6 Channel 6		0
READ SREAD	Other station word device read	0	0	Reads the CPU device data of the target station of the target network         No. (in 16-bit units).         CPU       Network module       CPU         HH READ       Channel 1       Word device         Channel 4       Channel 4       2594         Channel 7       Channel 7       Channel 8	0	0
WRITE SWRITE	Other station word device write	0	0	Writes data to the CPU device of the target station of the target network No. (in 16-bit units). (SWRITE can turn ON the device of the target station.) CPU Network module Network module CPU Channel 1 Channel 2 Channel 4 Channel 5 Channel 5 Channel 6 Channel 7 Channel 8	0	0
REQ	Requesting transient transmission to other stations	0	0	Issues "remote RUN" and "clock data read/write" requests to other stations.	0	0

(To next page)

# MELSEC

Execution Target station station Multiplexed Multiplexed Instruction Name Description QnPRH QnPH remote remote CPU CPU master sub-master station station Receives the channel data, which was sent by SEND, within an interrupt program and reads that data to the CPU device immediately. Processing is completed when the instruction is executed. Receive CPU Network module Network module CPU message RECVS × 0 Channel 1 Logical channel 1 (Channel 1) Ο Ο (completed in Logical channel 2 (Channel 2) Channel 2 HH [ SEND ] 1 scan) Channel 3 Logical channel 3 (Channel 3) Logical channel 4 (Channel 4) Channel 4 upt progra Channel 5 Logical channel 5 (Channel 5) Channel 6 Logical channel 6 (Channel 6) 110 HH[RECVS] Channel 7 Logical channel 7 (Channel 7) Logical channel 8 (Channel 8) Channel 8 [A-compatible instruction] Reads the CPU device data of the target station of the target network No. CPU Network module Network module CPU Other station Channel 1 Word device ZNRD HH-[ ZNRD ] * Fixed word device Ο Ο Ο Ο read 2594 Word device 2594 [A-compatible instruction] Writes data to the CPU device of the target station of the target network No. CPU CPU Network module Network module Word device Other station ZNWR Channel 2 word device 0 0 0 Ο * Fixed write H-[ZNWR] 361 Performs "remote RUN" to the CPU module of the other station. CPU CPU Network module Network module Channel 1 Channel 2 Channel 3 RRUN Remote RUN Ο Ο Ο Ο H-[RRUN] RUN Channel 4 Channel 5 Channel 6 Channel 7 Channel 8

O : Can be used, × : Cannot be used

(To next page)

# **MELSEC**

		Exe sta	cution ation		Target	station
Instruction	Name	QnPH CPU	QnPRH CPU	Description	Multiplexed remote master station	Multiplexed remote sub-master station
RSTOP	Remote STOP	0	0	Performs "remote STOP" to the CPU module of the other station.           CPU         Network module         Network module         CPU           Channel 1         Channel 2         Channel 3         STOP         STOP           HI[RSTOP]         Channel 5         Channel 6         Channel 7         Channel 8         STOP	0	0
RTMRD	Other station clock data read	0	0	Performs "clock data read" to the CPU module of the other station.          CPU       Network module       Network module       CPU         Channel 1       Channel 2       Channel 3         Channel 3       Channel 4       Channel 4         Word device       Channel 6       Clock data         Clock data       Channel 8       Channel 8	0	0
RTMWR	Other station clock data written	0	0	"Write clock data" to the CPU module of other station. CPU Network module Network module CPU Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Channel 8	0	0

#### O : Can be used, × : Cannot be used

#### (1) Remote I/O network replacement precautions

Replace modules of all the remote master stations and the remote I/O stations with MELSECNET/H module of the Q series.

The remote I/O network of MELSECNET/H cannot connect MELSECNET/10 modules of the A/AnS/ QnA/QnAS series and MELSECNET/H modules of the Q series mixed.

#### (2) Processing time

The link scan time and link refresh time differ between the A/AnS/QnA/QnAS series and the Q series. For details on processing time, refer to the manual for the respective module.

### (3) Interface of remote I/O station

The interface to connect programming tools such as GX Developer differs between the A/AnS/QnA/ QnAS series and the Q series.

- A/AnS/QnA/QnAS series:RS-422 interface
- Q series:RS-232 interface

When connecting to the Q series, use the following RS-232 cable.

RS-232 cable: QC30R2

#### (4) Precautions for replacement of QnA/QnAS series

#### (a) Parallel master system

The parallel master system cannot be configured in the MELSECNET/H. Configure two networks.



#### (b) Multiplex master system

- 1) MELSECNET/H can establish the system only when mounting on the following CPU.
  - Process CPU (Q12PHCPU, Q25PHCPU)
  - Redundant CPU (Q12PRHCPU, Q25PRHCPU)
- 2) For the MELSECNET/H, the multiplexed remote master station and the multiplexed remote submaster station cannot be mounted on the same CPU.

Mount the multiplexed remote master station and the multiplexed remote sub-master station on separate CPUs.

# 6 CONNECTING MELSECNET/10 TO EXISTING MELSECNET(II), /B WITH A GATEWAY STATION

When adding QCPU to the exisiting MELSECNET(II) network system or replacing some programmable controller CPUs in the system with QCPUs, data will be shared by installing a gateway station, which relays cyclic communication data, between MELSECNET/10 and MELSECNET(II). This chapter describes the method to perform cyclic communication data relay between the existing MELSECNET(II) network system and the new MELSECNET/10 network system using a gateway set.

# 6.1 Applicaton of Gateway Station Using Gateway Set

Gateway set is a set of modules required to work as a gateway station, where passes and shares the link data between MELSECNET(II) and MELSECNET/10, based on the network system (communication medium (cable)).

### (1) Adding QCPU to the existing MELSECNET(II) network system

(Example)



Since QCPUs are imcompatible with MELSECNET(II), the network system is built in MELSECNET/10 by adding a gateway station to the existing MELSECNET(II) network system.

The gateway station passes and shares the link data between MELSECNET(II) and MELSECNET/10 by inter-link data transfer parameter or sequence program.

## (2) Replacing CPU in existing MELSECNET(II) with QCPU in stages





The system is shifted to the MELSECNET/H(10) network system by replacing A/AnS/QnA/QnASCPUs in the existing MELSECNET(II) network system with QCPUs in stages until all CPUs are replaced by QCPUs.

When the existing network is the remote I/O network or the network comprising local stations and remote I/O stations, the remote I/O stations must be replaced all at once.

Mount two modules for PLC to PLC network control station or normal station and remote I/O network master station to the replaced QCPU, and then replace remote I/O stations all at once.

## ⊠ Point

- (1) Parameter settings when the gateway station CPU does not have a control program When data transmission/reception between the gateway station CPU and network module is not necessary, data can be relayed only by setting network parameters and inter-link data transfer parameters. (Refer to Section 6.4)
- (2) Parameter settings when the cyclic transmission data is read to the gateway station CPU When the cyclic transmission data is read to the gateway station CPU, the network parameter and inter-link data transfer parameter, depending on the setting contents, sometimes do not match with the link refresh parameter. In this case, perform cyclic transmission data relay between MELSECNET(II) and MELSECNET/10 by sequence program. (Refer to Section 6.5)
- (3) Number of B/W points assigned to one station Maximum points can be relayed are 1k bytes (first half)/1k bytes (second half) for MELSECNET(II) and 2000 bytes for MELSECNET/10. For this reason, cyclic data of entire network may not be relayed. It is necessary to narrow down the range of cyclic data to be relayed by setting priorities.

# 6.2 List of Gateway Set Models

The following list shows gateway set models for a gateway station.

Select a model based on the existing MELSECNET(II) system configuration and the newly added MELSECNET/10 system configuration.

If the system configuration does not apply to any gateway set models in the list, select and purchase each module for base part, MELSECNET(II) part, and MELSECNET/10 part individually, and then set them up as a gateway station.

#### ■List of gateway set models

Set model		Base		MELSECNET(II), /B	MELSECNET/10
Q6KT-NETGW-SS		A1S61PN	Q2ASCPU	A1SJ71AP21	A1SJ71QLP21
Q6KT-NETGW-RS				A19 171AD21	A1SJ71QLP21
Q6KT-NETGW-RB	A1S35B				A1SJ71QBR11
Q6KT-NETGW-TS					A1SJ71QLP21
Q6KT-NETGW-TB				AISJ/IAIZIB	A1SJ71QBR11

How to read <u>Q6KT-N</u> model name _{Gatev}	NETGW- T T way set 1) 2)	1) Network type: MELSECNET(II) S: SI optical fiber cable (double loop) R: Coaxial cable (double loop) T: Twisted pair cable (bus)	2) Network type: MELSECNET/10 S: SI optical fiber cable (double loop) B: Coaxial cable (bus)
----------------------------------------------------------	--------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------

# 6.3 Precautions for Use of Gateway Set

### (1) Link data and function

The following shows link data and function.

Item	Detailed description
Number of link date*1	MELSECNET(II) to MELSECNET/10: 2000 bytes
Number of link data	MELSECNET/10 to MELSECNET(II): first half 1024 bytes, second half 1024 bytes
Link data	Cyclic data (LB/LW)
LINK data	(Cyclic data (LX/LY), link special relay/register, and transient transmission cannot be relayed.)
Network diagnostics ^{*2}	Diagnostics are required in the MELSECNET(II) and MELSECNET/10 respectively.

*1 The number of B/W points assigned to one station is limited.

Since all data cannot be relayed, narrow down the data to be relayed by setting priorities.

*2 Both network diagnostics can be performed by connecting GX Developer to the gateway station.

#### (2) Cyclic data transmission delay

Transmission delay shall be the time that relay processing delay time is added to each cyclic transmission delay time in the MELSECNET(II) system and the MELSECNET/10 system. Confirm that the delay does not affect the control on modules.

### (3) Restrictions on system configuration

(a) Set the MELSECNET(II) side of gateway station as local station in the second tier. According to the MELSECNET(II) specifications, local station cannot be mounted as a gateway station on one CPU because of the local station in the second tier and master station for the third tier combination restriction.

When the existing master station is AnU/AnUS(H)CPU or QnA/QnASCPU and the MELSECNET/10 module is added as a gateway station with the existing MELSECNET(II) configured as is, there are no restrictions.

(b) At the gateway station, elongation and variation of the scan time may occur due to link refreshes of both MELSECNET(II) and MELSECNET/10.

It is recommended that the gateway station only shall relay the link data and avoid control program.

[Common precautions]

 For a relay station, use the AnU/AnUS(H)/QnA/QnASCPU that supports MELSECNET(II) and MELSECNET/10 modules.

Modules other than those cannot serve as a relay station.

 Due to link refresh among the CPU module, MELSECNET(II) module, and MELSECNET/10 module on the relay station, the scan time may be delayed or varied. Using the CPU module only for link refresh processing is recommended.

# 6.4 Communication Between Existing ACPU in MELSECNET(II) and Added QCPU (Data Transmission/Reception by Inter-link Data Transfer)

This section describes the method to perform data transmission/reception between exsiting A/AnSCPU in MELSECNET(II) and added QCPU by inter-link data transfer using a gateway set.

#### (1) System configuration example

#### (a) Configuration of the existing MELSECNET(II)

An example of the existing system configuration is as follows: master station (M:A3ACPU), local station 1 (L1:A2ACPU), and local station 2 (L2:A1SHCPU).



#### (b) Configuration after QCPU addition

By newly adding the gateway station (Q2ASCPU:L3/1Mp1) to the above configuration 1) and connecting it to the QCPU (1Ns2) in MELSECNET/10, link data relay is performed between MELSECNET(II) and MELSECNET/10.



Gateway set (Gateway station)

## (2) Network range assignment for MELSECNET(II)

# (a) Existing B/W network range assignment



### (b) B/W network range assignment after addition of the gateway station (L3/1Mp1)



MELSECNET/10 data receiving area by inter-link data transfer

When the data is transferred from MELSECNET/10 to MELSECNET(II), B/W300 to 3FF shall be the transfer area.

### (3) Network range assignment for MELSECNET/10



MELSECNET(II) data receiving area by inter-link data transfer

When the data is transferred from MELSECNET(II) to MELSECNET/10, B/W1000 to 11FF shall be the transfer area.

Since all points cannot be transferred from MELSECNET(II) to MELSECNET/10, narrow down the data to be relayed by setting priorities.

Set the data to be transferred at the inter-link data transfer.

## (4) Example of inter-link data transfer



#### Up to 2000 bytes transferable

#### (5) Network parameter settings

#### (a) MELSECNET master station

The following shows the network parameter settings of the MELSECNET master station (A3ACPU). • Network parameter settings (A3ACPU:MELSECNET master station)

	Module No.1	Module No.2	Module No.3	Module No.4 🔺
Network type	MNET(Master station)	None 👻	None 👻	None 🗾
Start I/O No.		1		
Network No.				
Total stations	3			
Group No.				
Station No.				
	Network range assignment			
				<b></b>
•				Þ
Necessary setting(	Nosetting / Alreadyset ) Set if it is ne	eded( Nosetting / Alreadyset )		
	Start I/O No.:	Valid module		
Interlink transmission paramet	ers Input the start I/O No. installed in th	ne module in 16-point unit.	on access	
Acknowledge XY assignme	nt Routing parameters Ch	eck End	Cancel	

Network range assignment LB/LW settings (A3ACPU:MELSECNET master station)

Setup commo	n parameti	ers											
Assignment met Points/Sta	hod art	Mor Tot- stat	nitoring time al slave ions	e 200 3	× 10ms	Swito	h screens	LB/LV	/ settings		•		
	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station	M stati	on -> Rista	ation	M stati	on <- Rist	ation	
L/R		LB			LW			LW			LW		
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO	256	0000	OOFF	256	0000	00FF							
L 1	256	0100	01FF	256	0100	01FF							
L 2	256	0200	02FF	256	0200	02FF							
L 3	256	0300	03FF	256	0300	03FF							-
•												•	

### (b) Gateway station (Q2ASCPU:L3/1Mp1)

The following shows the network parameter settings of the gateway station (Q2ASCPU:L3/1Mp1).

#### Network parameter settings (Q2ASCPU:L3/1Mp1)

	Module No.1	Module No.2	Module No.3	Module No.4
Network type	MNET (Local station) 🗸 🗸	MNET/10(Controlling station)	None 🗸	None 🚽 📃
Start I/O No.	0000	0020		
Network No.		1		
Total stations		2		
Group No.				
Station No.				
IP addressDEC				
		Network range assignment		
	Refresh parameters	Refresh parameters		-
•				Þ
Necessary setting(	Nosetting / Alreadyset ) Set if it is ne Start I/O No.: Input the start I/O No. installed in th	eded( Nosetting / Alreadyset ) Valid module during other stat e module in 16-point unit.	ion access 1 💌	
Acknowledge XY assignme	nt Routing parameters Che	eck End	Cancel	

#### Network range assignment BW settings (Q2ASCPU:L3/1Mp1)

Setup common a	Setup common and station inherent parameters.												
Assignment method		Monitorin	ng time	200 × 1	Oms	Parameter	name						
Start/End		Total sla stations	ve	2		Switch sci	reens E	3W setting		•			
	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station							
StationNo.		В			W								
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
1	512	1000	11FF	512	1000	11FF							
2	256	1200	12FF	256	1200	12FF							-
•													

#### Module 1 (MNET local station) refresh parameter

Assignment method Points/Start Start/End	Transient transmission error history status

		Link side				PLC side		-
	Points	Start	End		Points	Start	End	
B transmission				+				
W transmission				+				
X/Y transmission		0000		+				-

-

#### (c) Module 2 (MNET/10 control station) refresh parameter

Assignment method Points/Start Start/End			Transient tran	nsmission en e CH	ror history statu Iold	\$		
		Link side				PLC side		
	Points	Start	End		Points	Start	End	
B transmission				+				
W transmission				+				
X transmission				+				

#### (d) Inter-link data transfer module 1

Y transmission

Since all points cannot be transferred from MELSECNET(II) to MELSECNET/10, narrow down the data to be relayed by setting priorities.

As (	signmen Points Start/	nt method s/Start /End												
Mod	dule 1 ->	2 Module 2	-> 1											
				В						W				•
			Transfer from	B		Transfer to			Transfer from	W		Transfer to		•
	No.	MNET (Loc	Transfer from al station)	B	MNET/10(C	Transfer to Controlling sta	ition)	MNET (Loc	Transfer fron al station)	W	MNET/10(0	Transfer to Controlling sta	tion)	<b>^</b>
	No.	MNET (Loc Points	Transfer from al station) Start	B n End	MNET/10(C Points	Transferto Controllingsta Start	tion) End	MNET (Loc Points	Transfer fron al station) Start	W 1 End	MNET/10(0 Points	Transferto Controllingsta Start	tion) End	
	No.	MNET (Loc Points 128	Transfer from al station) Start 0000	B n End 007F	MNET/10(C Points 128	Transferto Controllingsta Start 1000	tion) End 107F	MNET (Loc Points 128	Transfer fron al station) Start 0000	W End 007F	MNET/10(0 Points 128	Transferto Controllingsta Start 1000	tion) End 107F	•
	No.	MNET (Loc Points 128 64	Transfer from al station) Start 0000 0040	B n End 007F 00DF	MNET/10(C Points 128 64	Transferto Controllingsta Start 1000 1080	tion) End 107F 10BF	MNET (Loc Points 128 64	Transfer fron al station) Start 0000 0040	W End 007F 00DF	MNET/10(0 Points 128 64	Transfer to Controlling sta Start 1000 1080	tion) End 107F 10BF	
	No.	MNET (Loc Points 128 64 128	Transfer from al station) Start 0000 00A0 0100	B n End 007F 00DF 017F	MNET/10(C Points 128 64 128	Transferto Controllingsta Start 1000 1080 1000	tion) End 107F 10BF 113F	MNET (Loc Points 128 64 128	Transfer fron al station) Start 0000 0040 0100	W End 007F 00DF 017F	MNET/10(0 Points 128 64 128	Transfer to Controlling sta Start 1000 1080 10C0	tion) End 107F 10BF 113F	•
	No.	MNET (Loc Points 128 64 128 64	Transfer from al station) Start 0000 00A0 0100 01A0	B n End 007F 00DF 017F 01DF	MNET/10(C Points 128 64 128 64	Transfer to Controlling sta Start 1000 1080 10C0 1140	tion) End 107F 10BF 113F 117F	MNET (Loc Points 128 64 128 64	Transfer from al station) Start 0000 00A0 0100 01A0	W End 007F 007F 007F 017F 01DF	MNET/10(0 Points 128 64 128 64	Transfer to Controlling stat Start 1000 1080 10C0 1140	tion) End 107F 108F 113F 117F	
	No.	MNET (Loc. Points 128 64 128 64 128	Transfer from al station) Start 0000 00A0 0100 01A0 0200	B End 007F 00DF 017F 01DF 027F	MNET/10(C Points 128 64 128 64 128 64	Transfer to Controlling sta Start 1000 1080 1000 1140 1180	tion) End 107F 108F 113F 117F 11FF	MNET (Loc Points 128 64 128 64 128	Transfer from al station) Start 0000 0040 0100 0140 0200	W End 007F 007F 017F 01DF 027F	MNET/10(0 Points 128 64 128 64 128	Transfer to Controlling sta Start 1000 1080 1000 1140 1180	tion) End 107F 10BF 113F 117F 11FF	
	No. 1 2 3 4 5 6	MNET (Loc Points 128 64 128 64 128	Transfer from al station) Start 0000 0000 0100 0100 01A0 0200	B 0 007F 007F 000F 017F 01DF 027F	MNET/10(C Points 128 64 128 64 128	Transfer to Controlling sta Start 1000 1080 1000 1140 1180	tion) End 107F 10BF 113F 117F 11FF	MNET (Loc Points 128 64 128 64 128	Transfer from al station) Start 0000 0040 0100 01A0 0200	W End 007F 00DF 017F 01DF 027F	MNET/10(0 Points 128 64 128 64 128	Transfer to Controlling sta Start 1000 1080 1000 1140 1180	tion) End 107F 10BF 113F 117F 11FF	

#### • From MELSECNET/10 to MELSECNET(II)

Assignment method	
r looigrimorit motriod	
O Points/Start	
Start/End	

Module 1 -> 2 Module 2 -> 1

			В				W						•
		Transfer from Transfer to						Transfer from	n		Transfer to		
No.	MNET/10(0	Controlling sta	tion)	MNET (Local station)			MNET/10(Controlling station)			MNET (Local station)			
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
1	256	1200	12FF	256	0300	03FF	256	1200	12FF	256	0300	03FF	
2													
3													

# 6.5 Communication Between Existing ACPU in MELSECNET(II) and Added QCPU Using Gateway Set (Data Transmission/Reception by Sequence Program)

This section describes the method to perform data transmission/reception between existing A/AnSCPU in MELSECNET(II) and added QCPU by sequence program using a gateway set. This method is useful when the link refresh parameter in the inter-link data transfer cannot be set because the transmission range of MELSECNET(II) is located in the middle.

### (1) System configuration example

## (a) Configuration of the existing MELSECNET(II)

An example of the existing system configuration is as follows: master station (M:A3ACPU), local station 1 (L1:A2ACPU), local station 2 (L2:A1SHCPU), remote I/O station 3 (R3), and remote I/O station 4 (R4).



### (b) Configuration after QCPU addition

By newly adding the gataway station (Q2ASCPU:L5/1Mp1) to the above configuration 1) and connecting it to the QCPU (1Ns2) in MELSECNET/10, link data relay is performed between MELSECNET(II) and MELSECNET/10.



Gateway set (Gateway station)

# (2) Network range assignment for MELSECNET(II)

# (a) LX/LY network range assignment



# (b) BW network range assignment before addition of the gateway station (L5/1Mp1) (Assignment in the area of 200 to 3FF is W only.)



# (c) BW network range assignment after addition of the gateway station (L5/1Mp1) (Assignment in the area of 200 to 3FF is W only.)



When the data is transferred from MELSECNET/10 to MELSECNET(II), B/W260 to 3FF shall be the transfer area.

Note that only the data required for QCPU(1Ns2) are transferred to MELSECNET(II).

## (3) Network range assignment for MELSECNET/10



by inter-link data transfer

When the data is transferred from MELSECNET(II) to MELSECNET/10, B/W1000 to 11FF shall be the transfer area.

Since all points cannot be transferred from MELSECNET(II) to MELSECNET/10, narrow down the data to be transferd by setting priorities.

#### (4) Network parameter settings

#### (a) MELSECNET II composite master station

The following shows the network parameter settings of the MELSECNET II composite master station (A3ACPU).

#### Network parameter settings (A3ACPU:MELSECNET II composite master station)

	Module No.1	Module No.2	Module No.3	Module No.4 🔶
Network type	MNET II comp. (Master station) 🛛 🗸	None 🗸	None 🗸	None 🗾
Start I/O No.				
Network No.				
Total stations	5			
Group No.				
Station No.				
	Network range assignment			
				<b></b>
•				Þ
Necessary setting(	Nosetting / Alreadyset ) Set if it is ne	eded( Nosetting / Alreadyset )		
	Start I/O No.:	Valid module		
Interlink transmission paramet	ers Input the start I/O No. installed in th	during other stat	ion access 📋 🔛	
Acknowledge XY assignment	nt Routing parameters Ch	eck End	Cancel	

#### Network range assignment LX/LY (A3ACPU:MELSECNET II composite master station)

Setup commo	on parameti	ers											
Assignment mel Points/Sta Start/End	thod art	Mor Tota stati	hitoring tim al slave ions	e 200	×10ms	Swite	ch screens	LX/LY	settings		•		
			M station	-> L/R stal	tion				M station	k-L/Ristal	tion		
L/R		LY			LX/LY			LX			LY/LX		
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO													
∥L 1													
L 2													
R 3	256	0400	04FF	256	0000	OOFF	256	0400	04FF	256	0000	OOFF	
R 4	256	0500	05FF	256	0000	OOFF	256	0500	05FF	256	0000	OOFF	
IL 5													-
•												•	

#### Network range assignment first half LB/LW settings (A3ACPU:MELSECNET II composite master station)

Setup commo	in parameti	ers											
Assignment met Points/Sta	thod Monitoring time art Total slave I stations		e 200	×10ms	Swite	h screens	First h	alf LB/LW	setting	•			
	Send ra	ange for ea	ich station	Sendira	ange for ea	ach station	M stati	ion -> R sta	ation	M stati	ion <- Rista	ation	
L/R		First half L	irst half LB		First half LW		LW			LW			
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO	256	0000	00FF	256	0000	00FF							
∥L 1	256	0100	01FF	256	0100	01FF							
L 2	96	0200	025F	96	0200	025F							
R 3							64	0300	033F	64	0380	03BF	
R 4							64	0340	037F	64	03C0	03FF	
∥L 5	160	0260	02FF	160	0260	02FF							-
•												•	

 Network range assignment first half LB/LW settings (A3ACPU:MELSECNET II composite master station)

Setup commo	n paramete	ers											
Assignment method Monitoring time Points/Start Total slave Start/End stations		<b>200</b>	× 10ms	Swite	ch screens	Secon	id half LB/	LW settin_	•				
	Send ra	ange for ea	ach station	Sendira	ange for ea	ach station							
L/R		Second h	alf LB		Second h	ialf LW							
station No.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
MO	256	0400	04FF	256	0400	04FF							
IIL 1	256	0500	05FF	256	0500	05FF							
L 2													
R 3													
R 4													
IIL 5	256	0600	06FF	256	0600	06FF							-
•												•	

#### (b) Gateway station (Q2ASCPU:L5/1Mp1)

The following shows the network parameter settings of the gateway station (Q2ASCPU:L5/1Mp1).

#### • Network parameter settings (Q2ASCPU:L5/1Mp1)

	Module No.1	Module No.2	Module No.3	Module No.4 🔺			
Network type	MNET II comp. (Local station) 🛛 🗸 🗸	MNET/10(Controlling station)	None 👻	None 🗾			
Start I/O No.	0000	0020					
Network No.		1					
Total stations		2					
Group No.							
Station No.							
IP addressDEC							
		Network range assignment					
	Refresh parameters	Refresh parameters		<b></b>			
•							
Necessary setting( Interlink transmission paramet	g( No setting / Already set )       Set if it is needed( No setting / Already set )         Start I/D No.:       Valid module during other station access         Input the start I/D No. installed in the module in 16-point unit.						
Acknowledge XY assignme	nt Routing parameters Che	eck End	Cancel				

#### • Network range assignment BW settings (Q2ASCPU:L5/1Mp1)

Assignment method Points/Start Start/End		Monitorin Total slav	ng time 🗍	200 ×1	Oms	Parameter Switch sc	name	W setting		•			
StationNo.	Send r	ange for ea	ach station	Sendira	ange for ea W	ach station					_	_	
	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
1	512	1000	11FF	512	1000	11FF							
2	256	1200	12FF	256	1200	12FF							-
•		-				-						J	•

Setup common and station inherent parameters.

06FF

12FF 12FF

07FF 🔻

0000

0000

1000

#### Module 1 (MELSECNET local station) refresh parameter

1792

2048

768

Assignment method Points/Start Start/End		[	Transient tran	nsmission err e CH	ror history statu: Iold	8	
		Link side				PLC side	▲
	Points	Start	End		Points	Start	End
B transmission	1792	0000	06FF	+	1792	0000	06FF

06FF

07FF

1792

2048

768

#### Module 2 (MELSECNET/10 control station) refresh parameter

0000

0000

Assignment method Points/Start Start/End			Transient trar Overwrite	ismission eri e	ror history statu Iold	\$		
	Deinte	Link side	E.J.		Deixte	PLC side	<b>F</b> ud	
	Points	l Start	End E		i Points	l Start	End	

12FF

W transmission	768	1000	12FF	+	768	1000	
X transmission				+			
Y transmission				+			

1000

#### (5) How to transfer data

B transmission

W transmission

X/Y transmission

#### (a) Transfer from MELSECNET(II) to MELSECNET/10

Write the data of MELSECNET(II) into the host station range of the gateway station (1Mp1) using the BMOV instruction.

Since all points cannot be transferred from MELSECNET(II) to MELSECNET/10, narrow down the data to be relayed by setting priorities.

#### (b) Transfer from MELSECNET/10 to MELSECNET(II)

Write all data of MELSECNET/10 into the host station range of the gateway station (L5) using the **BMOV** instruction.

Write all data to be used in the master station (M:A3ACPU), local station 1 (L1:A2ACPU), and local station 2 (L2:A1SHCPU) into the first half LB/LW of L5.

Data cannot be used in the local station 2 (L2:A1SHCPU), which is imcompatible with MELSECNET II, can be transferred using the second half LB/LW of L5.

#### Sample program



# CONNECTING THE QCPU TO THE MELSECNET(II), /B AS THE LOCAL STATION

When adding the QCPU to or replacing a module with the QCPU in the existing MELSECNET(II), /B, connect the QCPU as the local station without changing the existing network and perform cyclic communication for sharing data.

This chapter describes methods for connecting the QCPU to the existing MELSECNET(II), /B as the local station.

# 7.1 Application that Connects the QCPU as the Local Station

## (1) Replacing a module with the QCPU without changing the existing network

(Example)



By mounting the local station data link module, the QCPU replaced by the A/AnSCPU can communicate as the local station without changing the existing network link assignment even after CPU replacement.

# ⊠Point

For precautions of when connecting the QCPU as a local station, refer to Section 1.1.3.

## (2) Adding the QCPU to the existing network





When the QCPU is added to the existing network, it can communicate as the local station using the existing network link assignment by mounting the local station data link module.

# ⊠Point ·

For precautions of when connecting the QCPU as a local station, refer to Section 1.1.3.

# 7.2 List of Local Station Data Link Module

The following models are available to connect the QCPU with the existing MELSECNET(II), /B. Select a model according to the existing network system.

Model	Product name
A1SJ71AP23Q	MELSECNET(II) local station data link module for optical fiber cable (SI)
A1SJ71AR23Q	MELSECNET(II) local station data link module for coaxial cable
A1S71AT23BQ	MELSECNET/B local station data link module for shielded twisted pair cable

# 7.3 Precautions for Using Local Station Data Link Module

This section describes precautions for using the local station data link module.

#### (1) Precautions for selection

When connecting the QCPU to the MELSECNET(II), /B, the existing data link module cannot be used. Make sure to select a module from Model list in Section 7.2.

#### (2) Available CPUs and mountable base units

For details on QCPUs where a local station data link module can be used and on mountable base units, refer to Section 1.1.3.

#### (3) Number of mountable modules

Up to six local station data link modules can be mounted to one CPU module. When using the module such as the AD51H, which can be mounted to the "QA1S6DB" or "QA6DB" but the number of mountable modules are restricted,

#### (4) Precautions for three-tier system

If the replaced station is the master station for the third tier, since the QCPU cannot be the MELSECNET(II) master station, measures such as replacing the MELSECNET/H (10) to the third tier are required.
This section describes network parameter for local station data link module.

#### (1) Setting the number of MELSECNET/Ethernet cards

The local station data link module does not require network parameter setting.

After configuring the network, the module performs parameter communications with the master station, and automatically acquires information necessarily for the network such as send range assignment for each station.

#### (2) Network refresh parameter

Link refresh is not automatically performed.

Therefore, create the sequence program which sends/receives data using the FROM/TO instructions for data transfer.

For details of I/O signals for program creation and buffer memory address, refer to the following manual. Reference manual

MELSECNET, MELSECNET/B Local Station Data Link Module User's Manual

A necessary program for link refresh is offered by the "A/QnA -> Q conversion support tool" as a sample program. By integrating the sample program as the QCPU scan execution type program, creating a program becomes unnecessary.

For "A/QnA to Q conversion support tool", contact your local representative.

#### (3) Sample program

The following shows conditions of a sample program for link refresh.

#### 1) Condition 1 (Only for the MELSECNET mode and second tier)

- Number of mounted local station data link modules: 1
- Module mounting address: X/Y200 to 21F slot
- Network type: MELSECNET mode
- · Send range for each station setting: Only first half set
- Master station for the third tier B/W receive program: None
- Program for receiving LRDP instruction: None
- Program for receiving LWDP instruction: None
- X/Y link: None
- Refresh device (bit): B00 to 3FF
- Refresh device (word): W00 to 3FF



SM400			-Гмоу	Z0	SD2042 -	Saves the relevant device data in the save area.
			L		-	
			-[MOV	Z1	SD2043 -	ł
	,		_моv	Z2	SD2044	ł
X201		 [вмоур	W0	U20\ G1024	K4096	When powered ON, initializes B/W devices. Transfers W to the local module.
		[BMOVP	K4B0	U20\ G592	K256	Transfers B to the local module.
				-[SET	DY210	RUN status
				-[SET	DY216	Refresh request
SM402			-[омол	К0	SD2040	In refresh ready status, starts refresh. No refresh request
X207						
SM402	×207			-[SET	DY211	Refresh in execution
			-[DMOV	U20\ G0	SD2040	Obtains whether the refresh information table is present or not.
SD2040.0			-[омоу	U20\ G2	Z0	W device transmission (First half): Start No. = Z0, No. of words = Z1
		[вмоу	W0Z0	U20\ G1024Z0	Z1	Transfers W of the host station to the local module. (First half)
SD2040.3	,		-[DMOV	U20\ G8	Z0	B device transmission (First half): Start No. = Z0, No. of words = Z1
			-[моv	Z0	Z2	
			-[SFR	Z2	K4	Divides the buffer memory address by 16 (bits).
		 <b>[</b> вмоv	K4B0Z0	U20\ G592Z2	Z1 -	Transfers B of the host station to the local module. (First half)

# 7 connecting the QCPU to the melsecnet(II), /B as the local

## W device reception 1 (First half): Start No. = Z0, No. of words = Z1 Obtains W of the other stations from the local module. (First half) W device reception 2 (First half): Start No. = Z0, No. of words = Z1 Obtains W of the other stations from the local module. (First half) B device reception 1 (First half): Start No. = Z0, No. of words = Z1 Divides the buffer memory address by 16 (bits). Obtains B of the other stations from the local module. (First half) B device reception 2 (First half): Start No. = Z0, No. of words = Z1 Divides the buffer memory address by 16 (bits). Obtains B of the other stations from the local Transfers data of the special relay (for link) (from M9240) to the area starting from SM1240. Transfers data of the special register (for link) (from D9243) to the area starting from SD1243. Obtained of the det of the coercial sclew (for link) Obtains data of the special relay (for link). Obtains data of the special register (for link). Refresh completion

MELSEC

Refresh completion Turns OFF the refresh in execution.

Turns OFF the refresh request.

Turns ON the refresh request. Restores the relevant device data.

SD2040 1			1120\	
		-[омол	G4	Z0
	Евмои	U20\ G1024Z0	W0Z0	Z1
sb2040.2		-[омол	U20\ G6	Z0
	вмоч	U20\ G1024Z0	W0Z0	Z1
SD2040.4		-Гомоу	U20\ G10	Z0
		- -[моv	Z0	Z2
		- SFR	Z2	K4
	БМОУ	– U20\ G592Z2	K4B0Z0	Z1
SD2040.5	-	-[рмоу	U20\ G12	Z0
		-[моv	Z0	Z2
		-[SFR	Z2	K4
	Евмоч	U20\ G592Z2	K4B0Z0	Z1
SD2040.F	[вмоv	U20\ G259	K4SM1240	K1
	[вмоv	U20\ G315	SD1243	K13
X207			-[RST	DY211
			-[RST	DY216
			-[SET	DY216
SM400		-[моv	SD2042	Z0
		-[моv	SD2043	Z1
		-[MOV	SD2044	Z2

7 - 6

#### 2) Condition 2 (Only for the MELSECNET II mode three-tier system)

- Number of mounted local station data link modules: 1
- Module mounting address: X/Y200 to 21F slot
- Network type: MELSECNET II mode
- Send range for each station setting: Both first half and latter half set
- Master station for the third tier B/W receive program: Exists
- Program for receiving LRDP instruction: Exists
- Program for receiving LWDP instruction: Exists
- X/Y link: Exists
- Refresh device (bit): B00 to FFF
- Refresh device (word): W00 to FFF



SM400		<b>-</b> MOV	70	SD2042	Saves the relevant device data in the save area.
		Luov	20	ODEOTE	-
		Гмоч	Z1	SD2043	3
		Гмоv	Z2	SD2044	J.
X201	[ВМО\	/P W0	U20\ G1024	K4096	When powered ON, initializes B/W devices.           Transfers W to the local module.
	Евиоу	/P K4B0	U20\ G592	K256	Transfers B to the local module.
	-		SET	DY210	RUN status
			Set	DY216	- Refresh request
SM402		Грмоу	L KO	802040	In refresh ready status, starts refresh.
X207			Ro	502040	
SM402	V207				
			SET	DY211	Refresh in execution
		Стол	U20\ G0	SD2040	Obtains whether the refresh information table is present or not.
	Евмо	U20\ / G2	W1002	H26	Saves the refresh information table into W.
SD2040.0		[омоу	W1002	Z0	W device transmission (First half): Start No. = Z0, No. of words = Z1
	Евио	/ W0Z0	U20\ G1024Z0	Z1	Transfers W of the host station to the local module. (First half)
SD2040.8		[DMOV	W1014	Z0	W device transmission (Latter half): Start No. = Z0, No. of words = Z1
	Гвмо	/ W0Z0	U20\ G1024Z0	Z1	Transfers W of the host station to the local module.
SD2040.6		<b>— Г</b> рмоу	W100E	Z0	Y device transmission: Start No. = Z0, No. of words = Z1
		[MOV	ZO	Z2	3
		SFR	Z2	K4	Divides the buffer memory address by 16 (bits).
	[вмоу к4у100	0Z0	U20\ G464Z2	Z1	Transfers Y of the host station to the local module.
SD2040.3		[DMOV	W1008	Z0	Start No. = Z0, No. of words = Z1
		[моv	Z0	Z2	3
		SFR	Z2	K4	Divides the buffer memory address by 16 (bits).
	[вмо\	/ K4B0Z0	U20\ G592Z2	Z1	Transfers B of the host station to the local module. (First half)
SD2040.B	-	[омоу	W101A	Z0	B device transmission (Latter half): Start No. = Z0, No. of words = Z1
		[моv	Z0	Z2	3
		- Fa	70		Divides the buffer memory address by 16 /bits)
		-L ^{SER}	∠2 U20\	К4	<ul> <li>Transfers B of the host station to the local module.</li> </ul>
	[BMO\	/ K4B0Z0	G592Z2	Z1	(Latter half)

# MELSEC

SD2040.1			-Гомоу	W1004	Z0
		-Гвмоу	L U20\ G1024Z0	W0Z0	Z1
SD2040.2		-	-Гомоу	W1006	Z0
			L U20\ G102470	W0Z0	71
SD2040.9		Lawar		W1016	70
		Брмоу		w070	20
SD2040.A		-L ^{BMOV}	G102420	W020	21
				W1018	20
SD2040.7		-[вмоу	G1024Z0	W0Z0	Z1
			-[омол	W1011	Z0
			-[моv	ZO	Z2
			-[SFR	Z2	K4
	Евмоч	U20\ G336Z2	K4X1000Z	D	Z1
SD2040.4			-[рмоу	W100A	Z0
			-[моч	Z0	Z2
			-[SFR	Z2	K4
		-Гвмоу	U20\ G592Z2	K4B0Z0	Z1
SD2040.5		-	-Гомоу	W100C	Z0
			- -Гмоу	Z0	Z2
				72	KA
			U20\	K4P070	71
SD2040.C			<b>F</b> RMOV	N4B020	21
				W101C	20
			-[мол	Z0	Z2
			-[SFR	Z2	K4
		Евмои	G592Z2	K4B0Z0	Z1
			-[омол	W101E	Z0
			-[моv	Z0	Z2
			-[SFR	Z2	K4
		-[вмои	U20\ G592Z2	K4B0Z0	Z1
1					

start No. = Z0, No. of words = Z1
Dbtains W of the other stations from the local nodule. (First half)
V device reception 2 (First half): Start No. = Z0, No. of words = Z1
Dbtains W of the other stations from the local nodule. (First half)
V device reception 1 (Latter half): start No. = Z0, No. of words = Z1
Dbtains W of the other stations from the local nodule. (Latter half)
V device reception 2 (Latter half): Start No. = Z0, No. of words = Z1
Dbtains W of the other stations from the local nodule. (Latter half)
( device reception: start No. = Z0, No. of words = Z1
Divides the buffer memory address by 16 (bits).
Dbtains X of the host station from the local nodule.
device reception 1 (First half): Start No. = Z0. No. of words = Z1
Divides the buffer memory address by 16 (bits).
Dbtains B of the other stations from the local
nodule. (First half)
start No. = Z0, No. of words = Z1
Divides the buffer memory address by 16 (bits).
Dbtains B of the other stations from the local nodule. (First half)
device reception 1 (Latter half): start No. = Z0, No. of words = Z1
Divides the buffer memory address by 16 (bits).
Dbtains B of the other stations from the local
device reception 2 (Latter half):
$\frac{1}{100}$ = 20, NO. OF WORDS = 21
Divides the buffer memory address by 16 (bits).

ntion 1 (First half)

Obtains B of the other stations from the local module. (Latter half)

]

# **7** CONNECTING THE QCPU TO THE MELSECNET(II), /B AS THE LOCAL

# MELSEC

SD2040.F								F	U20\		_	Transfers data of the special relay (for link) (from M9240) to the area starting from SM1240. Transfers data of the special register (for link) (from D9243) to the area starting from SD1243.
$\vdash$								_вмоч	G259	K4SM1240	К1 ]	Obtains data of the special relay (for link).
								Вмоу	020\ G315	SD1243	к13 ]	Obtains data of the special register (for link).
X207	<b>-</b> [=	K4	U20\ G172	٦						U20\ G176	z0 1	LRDP instruction receive processing
	L			-					L	U20\	L	device No.
									-[MOV	G179	Z2 ]	Obtains the read data length.
								[FMOV	H0	U20\ G176	к40 ]	Clears the LRDP instruction work area to zero.
				E=	H544E	Z0	]	[вмоv	T0Z1	U20\ G180	Z2 ]	Transfers the T device value to the work area.
				[=	H434E	Z0	]	[вмоv	C0Z1	U20\ G180	Z2 ]	Transfers the C device value to the work area.
				E=	H4420	Z0	]	[вмоv	D0Z1	U20\ G180	Z2 ]	Transfers the D device value to the work area.
				[=	H5720	Z0	]	ВМОV	W0Z1	U20\ G180	Z2 ]	Transfers the W device value to the work area.
									-[моч	K5	U20\ G172 ]	LRDP instruction receive request (5 = Processing completion)
	-[=	К4	U20\ G174	J					-[омоу	U20\ G216	zo ]	LWTP Instruction receive processing Obtains the write start device name and start
									-[моv	U20\ G219	Z2 ]	Obtains the write data length.
				[=	H544E	Z0	]	[вмоу	U20\ G220	T0Z1	Z2 ]	Transfers the work area value to T device.
				<b>[</b> =	H434E	Z0	]	-Евмоу	U20\ G220	C0Z1	Z2 ]	Transfers the work area value to C device.
				<b>[</b> =	H4420	Z0	]	[вмоv	U20\ G220	D0Z1	Z2 ]	Transfers the work area value to D device.
				<b>[</b> =	H5720	Z0	]	[вмоv	U20\ G220	W0Z1	Z2 ]	Transfers the work area value to W device.
								[FMOV	H0	U20\ G216	к40 ]	Clears the LWTP instruction work area to zero.
									-[моv	K5	U20\ G174 ]	LWTP instruction receive request (5 = Processing completion)
SD2041.0	1								-[омоу	W1020	zo T	For a local station in the third tier, receives the data of the second-tier master station.
								[вмоv	– U20\ G1024Z0	W0Z0	Z1	Start No. = Z0, No. of words = Z1 Obtains W of the master station from the local
SD2041.1								-		W1024	- 20 <b>1</b>	module. (First half) W device reception (Latter half):
									U20\		-~ 1	Start No. = Z0, No. of words = Z1
	L							_вмоч	G1024Z0	W0Z0	Z1 ]	Obtains W of the master station from the local module. (Latter half)
									-[рмол	W1022	zo ]	B device reception (First half): Start No. = Z0, No. of words = Z1
									-[моч	ZO	Z2 ]	
									-[SFR	Z2	к4 ]	Divides the buffer memory address by 16 (bits).
								[вмоv	U20\ G592Z2	K4B0Z0	Z1 ]	Obtains B of the master station from the local module. (First half)

# MELSEC



# **8** REPLACEMENT OF CC-LINK

## 8.1 List of CC-Link Alternative Models

#### (1) Replacement of the A/AnS series

A/AnS series	Alternative models				
AJ61BT11					
A1SJ61BT11					

#### (2) Replacement of the QnA/QnAS series

QnA/QnAS series	Alternative models				
AJ61QBT11					
A1SJ61QBT11					

*1 The number of mountable CC-Link modules depending on Q series CPU module type is as follows:

Basic model QCPU: 2

High Performance model QCPU: 64

Universal model QCPU: 64

Up to eight modules can be set using the parameter of GX Developer. To use more than eight modules, set the parameter using dedicated instructions.

For details, refer to the CC-Link System Master/Local Module User's Manual.

# 8.2 Performance Specifications Comparisons

#### 8.2.1 Module performance comparisons

#### (1) A/AnS series

	⊖ : Compatible,	$\triangle$ : Partial change required, × : Incompatible			
Itom	Specifi	Compat-	Precautions for		
nem	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	replacement	
Transmission speed	Can be selected from 156kbps/6 10Mbps.	25kbps/2.5Mbps/5Mbps/	0		
Max. cable overall	Differe depending on th	no transmission anod			
distance (Max.	Differs depending on the		0		
transmission distance)					
	64 stations Note that it has to be satisfied w				
	$\{(1 \times a) + (2 \times b) + (3 \times c) + (4 \times c)\}$	d)} ≦ 64			
	a: Number of 1-station occupied	modules			
	b: Number of 2-station occupied	modules			
Max number of stations	c. Number of 3-station occupied	modules			
(For master station)	d: Number of 4-station occupied	modules	0		
	$\{(16 \times A) + (54 \times B) + (88 \times C)\}$ A: Number of remote I/O station: B: Number of remote device stat				
	C. Number of local stations, star				
Number of committee	Intelligent device stations $\leq 26$ s	stations			
stations (For local station)	to 4 stations (Switched with DIP switch) 1 to 4 stations (Switched with GX Developer parameter settings)		Δ	GX Developer parameter settings are required.	
Maximum number of link points per system	Remote I/O (RX, RY) : 2048 poin Remote register (RWw) : 256 po Remote register (RWr) : 256 poi	0			
Remote station/local	Remote I/O (RX, RY) : 32 points	(Local station: 30 points)			
station	Remote register (RWw) : 4 point	Ś	0		
Link points per station	Remote register (RWr) : 4 points	3	-		
Communication method	Broad cast p	olling method	0		
Synchronous type	Frame synchronization method	Flag synchronization method	Δ	Nothing to be noted though the methods are different.	
Encoding method	NRZI r	nethod	0		
Transmission method	Bus (R	RS-485)	0		
Transmission format	HDLC s	tandards	0		
Error control system	CRC (X ¹⁶ + )	$X^{12} + X^5 + 1$	0		
Connection cable	CC-Link dedicated cable/CC-Lin cable/Ver.1.10 compatible CC-Li	0			
RAS function	Automatic return function     Slave station detach function     Error detection with link specia	0			
Number of parameter registrations to E ² PROM	10,000 times	-		GX Developer parameter settings are performed instead of the parameter registration to E ² PROM.	
Number of occupied I/O points	32 points (I/O assignment: special 32 points)	32 points (I/O assignment: intelli 32 points)	0		

#### (2) QnA/QnAS series

Item	Specifi AJ61QBT11/A1SJ61QBT11	QJ61BT11N	Compat- ibility	Precautions for replacement
Trenewiesien en eed	Can be selected		<u> </u>	
I ransmission speed	from 156kbps/625kbps/2.5Mbps	/5Mbps/10Mbps.	0	
Max. cable overall				
distance	Differs depending on the	ne transmission speed.	~	
(Max. transmission	(Refer to th	ne manual.)	0	
distance)				
	64 stations			
	Note that it has to be satisfied w	ith the following conditions.		
	${(1 \times a) + (2 \times b) + (3 \times c) + (4 \times c)}$	d)} ≦ 64		
	a: Number of 1-station occupied	modules		
	b: Number of 2-station occupied	modules		
Max. number of stations	c: Number of 3-station occupied	modules		
(For master station)	d: Number of 4-station occupied	modules	0	
	${(16 \times A) + (54 \times B) + (88 \times C)}$	≦ 2304		
	A: Number of remote I/O stations	s $\leq$ 64 stations		
	B: Number of remote device stat	tions $\leq$ 42 stations		
	C: Number of local stations, star			
	intelligent device stations $\leq$ 26 s			
Number of occupied		1 to 4 stations (Switched with		
stations	1 to 4 stations (Switched with	GX Developer parameter	~	GX Developer parameter
(For local station)	DIP switch)	settings)		settings are required.
	Remote I/O (RX, RY) : 2048 poir			
Maximum number of link	Remote register (RWw) : 256 po	0		
points per system	Remote register (RWr) : 256 poi			
Remote station/local	Remote I/O(RX, RY) : 32 points	(Local station: 30 points)		
station	Remote register (RWw) : 4 point	s	0	
Link points per station	Remote register (RWr) : 4 points	;		
Communication method	Broad cast p	olling method	0	
			Δ	Nothing to be noted
Synchronous type	Frame synchronization method	Flag synchronization method		though the methods are
				different.
Encoding method	NRZI r	nethod	0	
Transmission method	Bus (R	S-485)	0	
Transmission format	HDLC st	tandards	0	
Error control system	CRC (X ¹⁶ + 2	$X^{12} + X^5 + 1)$	0	
Connection cable	CC-Link dedicated cable/CC-Lin	0		
	cable/Ver.1.10 compatible CC-Li	nk dedicated cable	0	
	<ul> <li>Automatic return function</li> </ul>			
RAS function	Slave station detach function		0	
	Error detection with link specia	al relay/register		
Number of parameter				GX Developer parameter
registrations to	10 000 times	_		settings are performed
E ² PROM		_		instead of the parameter
				registration to E ² PROM.
Number of occupied I/O	32 points (I/O assignment:	32 points (I/O assignment:	<u> </u>	
points	special 32 points)	intelli 32 points)	0	

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

#### 8.2.2 Cable performance comparisons

CC-Link dedicated cable used on the A/AnS/QnA/QnAS series can be also used on the Q series. For specifications of CC-Link dedicated cable, refer to CC-Link Partner Association home page: http://www.cc-link.org/.

# 8.3 Functional Comparisons

#### (1) A/AnS series

láo vo	Specific	Compat-	Precautions for	
item	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	replacement
Communication	The communication of ON/OFF i	nformation with remote I/O		
between master station	station is performed		0	
and remote I/O station				
Communication	The communication of ON/OFF i	nformation and numerical data		
between master and	with remote device station is perf	formed	0	
remote device stations				
Communication	The communication of ON/OFF i	nformation and numerical data		
between master station	with local station is performed.		0	
and local station				
Communication				
between master and	The communication is performed	I with intelligent device station	0	
intelligent device	using cyclic transmission and tra	nsient transmission.	Ŭ	
stations				
	By setting remote station and loc	al station, which are to be		
Reserved station	connected in the future, as reserv	ved stations, these stations are	0	
function	not treated as data link faulty stat	Ŭ		
	If a connected module is specifie	d, no data link is available.		
Error invalid station	Remote station and local station	that cannot perform data link		
function	due to the power supply off, etc.	0		
	faulty stations with this function.			
Data link status setting				
at master station	The data link status when operati	0		
programmable controller	the master station programmable			
CPU error				
	Parameter writing is not			GX Developer parameter
Parameter registration	required at each startup of			settings are performed
	master module by registering	-	Δ	instead of the parameter
	parameters to E ² PROM of			registration to $E^2 D D O M$
	master module.			
Data link faulty station	The input (received) data status (	(cleared/hold) from the station		
input data status sotting	that has data link error caused by	0		
input data status setting	be set.			
	Resetting can be performed by			When the switch setting is
	the sequence program without			changed, turn the power
Module reset function by	resetting programmable			supply of programmable
sequence program	controller CPLL in the case the	-	×	controller system OFF $\rightarrow$
	switch setting is changed or an			ON or reset the
	error has occurred in a module			programmable controller
	end has occurred in a module.			CPU.
Data link stop/restart	The stop and restart of data link i	is available during the data link	~	
Data inik stop/restart	execution.		0	
Automatic return	The module disconnected from d	ata link by the power supply off,		
function	etc. can automatically return to d	ata link, when restored to the	0	
	normal status.			
Slave station detach	The module that cannot perform	data link due to the power		
function	supply off, etc. is disconnected a	nd data link is kept with normal	0	
	modules only.			
Data link status check	Data link status can be checked.			
(SR/SW)	This check can be used for the in	nterlock etc. of sequence	0	
(30/377)	program.			

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required, × : Incompatible

(To next page)

	Specifi	Compat-	Precautions for	
Item	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	replacement
Offline test	<ul> <li>The following tests can be performed.</li> <li>Hardware test: Standalone module operation check</li> <li>Line test: Module connection status check</li> <li>Parameter check test: Parameter setting check</li> </ul>	<ul> <li>The following tests can be performed.</li> <li>Hardware test: Standalone module operation check</li> <li>Line test: Module connection status check</li> </ul>	Δ	The specification method of hardware test/line test differs. For details on the specification method, refer to the manual. Check the set parameter in GX Developer network parameters.
Parameter registration function	The following two types of parameters are set using the sequence program (TO instruction) or dedicated instructions. • Network parameter • Automatic refresh parameter	Δ	Change from the parameter settings in the sequence program (TO instruction) or with dedicated instructions to the parameter settings with GX Developer.	
Scan synchronous function	Synchronous mode: Data link wi sequence program is available. Asynchronous mode: Data link r program is available.	0		
Standby master function	Data link can be continuously pe standby master station at the ma	erformed by switching to the aster station error.	0	
Dedicated instruction (RIRD, RIWT, RIRCV, RISEND, RIFR, RITO)	Transient transmission to intellig station is available using dedicat	Δ	Change the sequence program as instruction formats differ.	
Remote I/O net mode	Communication is available for r station only.	Δ	Delete RRPA instruction and set parameters with GX Developer.	
Temporary error invalid station specify function	Module replacement is available faulty remote station during onlir	without detecting error of the ne.	0	

#### (2) QnA/QnAS series

	Specifications	Compat-	Precautions for
Item	AJ61QBT11/A1SJ61QBT11 QJ61BT11	IN ibility	replacement
Communication between master station and remote I/O station	The communication of ON/OFF information with remo station is performed.	ote I/O O	
Communication between master and remote device stations	The communication of ON/OFF information and nume with remote device station is performed.	erical data	
Communication between master station and local station	The communication of ON/OFF information and nume with local station is performed.	erical data O	
Communication between master and intelligent device stations	The communication is performed with intelligent devic using cyclic transmission and transient transmission.	ce station	
Reserved station function	By setting remote station and local station, which are connected in the future, as reserved stations, these sinot treated as data link faulty stations. If a connected module is specified, no data link is available.	to be tations are oilable.	
Error invalid station function	Remote station and local station that cannot perform of due to the power supply off, etc. will not be treated as faulty stations with this function.	data link S data link	
Data link status setting at master station programmable controller CPU error	The data link status when operation continuation error the master station programmable controller CPU can	r occurs on be set.	
Parameter registration to E ² PROM	Parameter writing is not required at each startup of master module by registering	Δ	GX Developer parameter settings are performed instead of the parameter registration to E ² PROM.
Data link faulty station input data status setting	The input (received) data status (cleared/held) from the that has data link error caused by the power supply of be set.	he station ff, etc. can	
Module reset function by sequence program	Resetting can be performed by the sequence program without resetting programmable controller CPU in the case the switch setting is changed or an error has occurred in a module.	×	When the switch setting is changed, turn the power supply of programmable controller system OFF $\rightarrow$ ON or reset the programmable controller CPU.
Data link stop/restart	The stop and restart of data link is available during the execution.	e data link	
Automatic return function	The module disconnected from data link by the power etc. can automatically return to data link, when restore normal status.	ed to the	
Slave station detach function	The module that cannot perform data link due to the p supply off, etc. is disconnected and data link is kept w modules only.	vith normal	
Data link status check (SB/SW)	Data link status can be checked. This check can be used for the interlock etc.of sequer	nce O	

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatiblee

(To next page)

	Specifi	cations	Compat-	Precautions for
Item	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	replacement
Offline test	The following tests can be performed.The following tests can be performed.• Hardware test: Standalone module operation check• Hardware test: Standalone module operation check• Line test: Module connection status check• Line test: Module connection status check• Parameter check test: Parameter setting check• Module connection status check			The specification method of hardware test/line test differs. For details on the specification method, refer to the manual. Check the set parameter in GX Developer network parameters.
Parameter registration function	The following two types of paran Developer. • Network parameter • Automatic refresh parameter	0		
Scan synchronous function	Synchronous mode: Data link with scan synchronized with sequence program is available. Asynchronous mode: Data link not synchronized with sequence program is available.			
Standby master function	Data link can be continuously performed by switching to the standby master station at the master station error.			
Dedicated instruction (RIRD, RIWT, RIRCV, RISEND, RIFR, RITO)	Transient transmission to intelligent device station and local station is available using dedicated instructions.			Change the sequence program as instruction formats differ.
Send/receive instruction (SEND, RECV, READ, SREAD, WRITE, SWRITE, REQ)	Data sending/receiving to/from other station on CC-Link is available. Data reading/writing from/to other station is also available.	-	Δ	Replace READ, WRITE instructions with dedicated instructions (RIRD, RIWT). Other instruction cannot be replaced.
Remote I/O net mode	Communication is available for master station and remote I/O station only.			Set parameters with GX Developer.
Temporary error invalid	Module replacement is available	without detecting error of the	0	
station specify function	faulty remote station during onlin		Ŭ	
Online test function	Developer.	can be performed with GX	0	
Monitoring and diagnostics	Monitoring and diagnosing can b Developer.	be performed from GX	0	

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatible

# 8.4 Switch Settings Comparisons

#### (1) A/AnS series

Quuitab mana	Specifications			Precautions for
Switch name	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	replacement
Station number setting switch	Sets the station No. of the module. <setting range=""> • For remote net mode Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64 • For remote I/O net mode Master station: 1 to 64 (The last station No. of remote I/O station is set.)</setting>	Sets the station No. of the module. <setting range=""> Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64</setting>	Δ	Sets the last station No. at remote I/O net mode with GX Developer.
Mode setting switch Transmission speed setting switch	Sets the operation status of the module. Sets the transmission speed of the module.	Sets the transmission speed and operating status of the module.	Δ	The mode setting and the transmission rate setting are performed with one switch. The remote net mode and remote I/O net mode are specified in GX Developer parameter settings.
Condition setting switch	Sets the operation conditions. <settings> • Station type • Input data status of data link faulty station • Number of occupied stations • Module mode</settings>	-	Δ	The operating conditions are set in the parameter settings of GX Developer. Module mode setting is not required.

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

## (2) QnA/QnAS series

Quiteb nome	Specifications			Precautions for
Switch name	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	replacement
Station number setting switch	Sets the station No. of the module. <setting range=""> • For remote net mode Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64 • For remote I/O net mode Master station: 1 to 64 (The last station No. of remote I/O station is set.)</setting>	Sets the station No. of the module. <setting range=""> Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64</setting>	Δ	Sets the last station No. at remote I/O net mode with GX Developer.
Mode setting switch	Sets the operation status of the module.			The mode setting and the transmission rate setting
Transmission speed setting switch	Sets the transmission speed of the module.	Sets the transmission speed and operating status of the module.	Δ	are performed with one switch. The remote net mode and remote I/O net mode are specified in GX Developer parameter settings.
Condition setting switch	Sets the operation conditions. <settings> • Station type • Input data status of data link faulty station • Number of occupied stations</settings>	-	Δ	The operating conditions are set in the parameter settings of GX Developer.

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\star$  : Incompatible

## 8.5 Parameter Comparisons

#### (1) A/AnS series

$\bigcirc$ : Compatible, $\triangle$ : Partial change required, × : Incompatiblee					
Devementary manage	Specifications			Precautions for	
Farameter name	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	replacement	
Network parameter	Set this parameter with the sequence program (TO instruction) or with dedicated instruction (RLPA instruction).	Set this parameter with GX Developer or with dedicated instruction (RLPASET instruction).	Δ	Newly set the parameter with GX Developer or the dedicated instruction (RLPASET instruction). ^{*1 *2} Specify [Remote net Ver.1 mode] or [Remote I/O net mode] for the mode.	
Automatic refresh parameter	Read/write cyclic data with FROM/TO instruction or set this parameter with dedicated instruction (RRPA instruction).	Perform the automatic refresh setting with GX Developer or read/write cyclic data with FROM/TO instruction.	Δ	Perform the automatic refresh setting with GX Developer or read/write cyclic data with FROM/TO instruction. When setting the network parameter with dedicated instruction (RLPASET instruction), read/write cyclic data with FROM/TO instruction.	

#### (2) QnA/QnAS series

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

Baramatar nama	Specifications			Precautions for
Parameter name	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	replacement
Network parameter	Set this parameter with GX Developer or sequence program (TO instruction).	Set this parameter with GX Developer or with dedicated instruction (RLPASET instruction).	Δ	Newly set the parameter with GX Developer or the dedicated instruction (RLPASET instruction). ^{*1 *2} Up to 4 modules can be set when setting with GX Developer. Specify [Remote net Ver.1 mode] or [Remote I/O net mode] for the mode.
Automatic refresh parameter	Perform the automatic refresh setting with GX Developer or read/write cyclic data with FROM/TO instruction.	Perform the automatic refresh setting with GX Developer or read/write cyclic data with FROM/TO instruction.	Δ	Set the automatic refresh with GX Developer or read/ write cyclic data with FROM/TO instruction. When setting the network parameter with dedicated instruction (RLPASET instruction), read/write cyclic data with FROM/TO instruction.

*1 Parameter setting of Q series CC-Link modules Parameters can be set on up to eight modules using GX Developer. For the settings of the 9th module or later, use the dedicated instruction.

For details, refer to the CC-Link System Master/Local Module User's Manual.

*2 Delete the program for the network parameter setting of the existing module.

## 8.6 Program Comparisons

#### 8.6.1 Comparison of I/O signals

#### (1) A/AnS series

(a) Input signal

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

Input signal	Signal name			Processitions for replacement	
Input signal	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	Frecautions for replacement	
Xn0	Module error	Module error	0		
Xn1	Data link status at host station	Data link status at host station	0		
Xn2	Parameter setting status	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and check with SB006D (Parameter setting status).	
Xn3	Data link status of other station	Data link status of other station	0		
Xn4	Module reset acceptance complete	Prohibited to use	×	Delete the sequence program of the section corresponding to the function. When the switch setting is changed, turn the power supply of programmable controller system OFF $\rightarrow$ ON or reset the programmable controller CPU.	
Xn5	Prohibited to use	Prohibited to use	0		
Xn6	Data link startup by buffer memory parameter normal completion				
Xn7	Data link startup by buffer memory parameter error completion			Delete the sequence program of the section	
Xn8	Data link startup by E ² PROM parameter normal completion	Prohibited to use	Δ	corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
Xn9	Data link startup by E ² PROM parameter error completion				
XnA	Parameter registration to E ² PROM normal completion				
XnB	Parameter registration to E ² PROM error completion				
XnC	Prohibited to use	Prohibited to use	0		
XnD	E ² PROM erasure normal completion	Prohibited to use		Delete the sequence program of the section corresponding to the function, and set parameters	
XnE	E ² PROM erasure abnormal completion		Δ	with GX Developer or with dedicated instruction (RLPASET instruction).	
XnF	Module ready	Module ready	0		
X(n+1)0					
X(n+1)1					
X(n+1)2					
X(n+1)3					
X(n+1)4					
X(n+1)6					
X(n+1)7					
X(n+1)8	Prohibited to use	Prohibited to use	0		
X(n+1)9					
X(n+1)A					
X(n+1)B					
X(n+1)C					
X(n+1)D					
X(n+1)E					
X(n+1)F					

#### (b) Output signal

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatible

	Signal name			Precautions for replacement	
output signal	AJ61BT11/A1SJ61BT11 QJ61BT11N		ibility	Precautions for replacement	
Yn0	Refresh specification	Prohibited to use	Δ	Refreshed automatically. Delete the sequence program of the section corresponding to the function.	
Yn1					
Yn2	Prohibited to use	Prohibited to use	0		
Yn3					
Yn4	Module reset request	Prohibited to use	×	Delete the sequence program of the section corresponding to the function. When the switch setting is changed, turn the power supply of programmable controller system OFF $\rightarrow$ ON or reset the programmable controller CPU.	
Yn5	Prohibited to use	Prohibited to use	0		
Yn6	Data link startup request from buffer memory parameters	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
Yn7	Prohibited to use	Prohibited to use	0		
Yn8	Data link startup request from E ² PROM parameters	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
Yn9	Prohibited to use	Prohibited to use	0		
YnA	Parameter registration request to E ² PROM	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
YnB YnC	Prohibited to use	Prohibited to use	0		
YnD	E ² PROM erasure request	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
YnE					
YnF					
Y(n+1)0					
Y(n+1)1					
Y(n+1)2					
Y(n+1)3					
Y(n+1)4	Prohibited to use	Prohibited to use	0		
Y(n+1)5			-		
Y(n+1)6					
Y(n+1)/					
Y(n+1)0					
Y(n+1)Δ					
Y(n+1)B					
Y(n+1)C	Bank switch specification of			Bank switching is not required (Refer to Section	
Y(n+1)D	buffer memory	Prohibited to use	$\triangle$	8.6.2.)	
Y(n+1)E				<u> </u>	
Y(n+1)F	Prohibited to use	Prohibited to use	0		

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatible

#### (2) QnA/QnAS series

#### (a) Input signal

	Signal name		Compat-			
Input signal	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	Precautions for replacement		
Xn0	Module error	Module error	0			
Xn1	Data link status at host station	Data link status at host station	0			
Xn2	Parameter setting status	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and check with SB006D (Parameter setting status).		
Xn3	Data link status of other station	Data link status of other station	0			
Xn4	Module reset acceptance complete	Prohibited to use	×	Delete the sequence program of the section corresponding to the function. When the switch setting is changed, turn the power supply of programmable controller system OFF $\rightarrow$ ON or reset the programmable controller CPU.		
Xn5	Prohibited to use	Prohibited to use	0			
Xn6	Data link startup by buffer memory parameter normal completion					
Xn7	Data link startup by buffer memory parameter error completion					
Xn8	Data link startup by E ² PROM parameter normal completion	Prohibited to use	Δ	corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).		
Xn9	Data link startup by E ² PROM parameter error completion					
XnA	Parameter registration to E ² PROM normal completion					
XnB	Parameter registration to E ² PROM error completion					
XnC	Prohibited to use	Prohibited to use	0			
XnD	E ² PROM erasure normal completion	Drahibitad to use		Delete the sequence program of the section corresponding to the function, and set parameters		
XnE	E ² PROM erasure abnormal completion			with GX Developer or with dedicated instruction (RLPASET instruction).		
XnF	Module ready	Module ready	0			
X(n+1)0						
X(n+1)1						
X(n+1)2						
X(n+1)3						
X(n+1)4						
X(n+1)5						
$\chi(n+1)$						
X(n+1)	Prohibited to use	Prohibited to use	0			
X(n+1)9						
X(n+1)A						
X(n+1)B						
X(n+1)C						
X(n+1)D						
X(n+1)E	1					
X(n+1)F	1					

#### (b) Output signal

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatible

	Signal name		Compat-	Descentions for multiple and	
Output signal	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	Precautions for replacement	
Yn0	Refresh specification	Prohibited to use	Δ	Refreshed automatically. Delete the sequence program of the section corresponding to the function.	
Yn1					
Yn2	Prohibited to use	Prohibited to use	0		
Yn3					
Yn4	Module reset request	Prohibited to use	×	Delete the sequence program of the section corresponding to the function. When the switch setting is changed, turn the power supply of programmable controller system OFF $\rightarrow$ ON or reset the programmable controller CPU.	
Yn5	Prohibited to use	Prohibited to use	0		
Yn6	Data link startup request from buffer memory parameters	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
Yn7	Prohibited to use	Prohibited to use	0		
Yn8	Data link startup request from E ² PROM parameters	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
Yn9	Prohibited to use	Prohibited to use	0		
YnA	Parameter registration request to E ² PROM	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
YnB	Drobibited to use	Drahibitad to use	_		
YnC	Frombled to use	Fiolibiled to use	0		
YnD	E ² PROM erasure request	Prohibited to use	Δ	Delete the sequence program of the section corresponding to the function, and set parameters with GX Developer or with dedicated instruction (RLPASET instruction).	
YnE					
YnF					
Y(n+1)0					
Y(n+1)1					
Y(n+1)2					
Y(n+1)3					
Y(n+1)4					
Y(n+1)5					
Y(n+1)6	Prohibited to use	Prohibited to use	~		
Y(n+1)7			0		
Y(n+1)8					
Y(n+1)9					
Y(n+1)A					
Y(n+1)B					
Y(n+1)C					
Y(n+1)D					
Y(n+1)E					
Y(n+1)F					

#### 8.6.2 Buffer memory comparisons

#### (1) A/AnS series

Buffer memory is divided into bank0 to bank2 on the A/AnS series, but it is one area on the Q series. Bank is switched with ON/OFF of Y (n+1)C, Y(n+1)D.

Buffer memory address of the Q series is shown in parenthesis, as buffer memory addresses of communication buffer and automatic updating buffer are different.

				O : Compatible, △	: Partial ch	nange required, × : Incompatible
	Buffer memory	address	Buffer mei	mory name	Compat-	Precautions for
Bank	Hex.	Dec.	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	replacement
	0н to 5Fн	0 to 95	Parameter information area	Parameter information area	0	
	60н to 7Fн	96 to 127	Prohibited to use	Prohibited to use	0	
	80н to CDн	128 to 205	Parameter information area	Parameter information area	0	
	CEH to DFH	206 to 223	Prohibited to use	Parameter information area	Δ	Added with the remote net Ver.2 mode. Replacement is not applied.
	E0H to 15FH	224 to 351	Remote input (RX)	Remote input (RX)	0	
0	160н to 1DFн	352 to 479	Remote output (RY)	Remote output (RY)	0	
	1E0н to 2DFн	480 to 735	Remote register (RWw)	Remote register (RWw)	0	
	2E0н to 3DFн	736 to 991	Remote register (RWr)	Remote register (RWr)	0	
-	3E0н to 5DFн	992 to 1503	Prohibited to use	Slave station offset, size information	Δ	Added with the remote net Ver.2 mode. Replacement is not applied.
İ	5E0н to 5FFн	1504 to 1535	Link special relay (SB)	Link special relay (SB)	0	
İ	600н to 7FFн	1536 to 2047	Link special register (SW)	Link special register (SW)	0	
	800н to 9FFн	2048 to 2559	Prohibited to use	Prohibited to use	0	
	A00H to FFFH	2560 to 4095	Random access buffer	Random access buffer	0	
1	0 to FFFн (1000н to 1FFFн)	0 to 4095 (4096 to 8191)	Communication buffer	Communication buffer	Δ	Delete the program for bank switching.
2	0 to FFFн (2000н to 2FFFн)	0 to 4095 (8192 to 12287)	Automatic updating buffer	Automatic updating buffer	Δ	Delete the program for bank switching.
-	- (3000н to 3FFFн)	- (12288 to 16383)		Prohibited to use	-	
-	- (4000н to 53FFн)	- (16384 to 21503)	-	Area for Ver.2	Δ	The function was added to Q series modules.
-	- (5400н to 7FFFн)	- (21504 to 32767)		Prohibited to use	-	



2FFFн

#### (2) QnA/QnAS series

Buffer memory address		Buffer memory name		0	
Hex.	Dec.	AJ61QBT11/ A1SJ61QBT11	QJ61BT11N	ibility	Precautions for replacement
0н to 5Fн	0 to 95	Parameter information area	Parameter information area	0	
60н to 7Fн	96 to 127	Prohibited to use	Prohibited to use	0	
80н to CDн	128 to 205	Parameter information area	Parameter information area	0	
CEH to DFH	206 to 223	Prohibited to use	Parameter information area	Δ	Added with the remote net Ver.2 mode. Replacement is not applied.
E0н to 15Fн	224 to 351	Remote input (RX)	Remote input (RX)	0	
160н to 1DFн	352 to 479	Remote output (RY)	Remote output (RY)	0	
1E0н to 2DFн	480 to 735	Remote register (RWw)	Remote register (RWw)	0	
2E0н to 3DFн	736 to 991	Remote register (RWr)	Remote register (RWr)	0	
3E0н to 5DFн	992 to 1503	Prohibited to use	Slave station offset, size information	Δ	Added with the remote net Ver.2 mode. Replacement is not applied.
5E0н to 5FFн	1504 to 1535	Link special relay (SB)	Link special relay (SB)	0	
600н to 7FFн	1536 to 2047	Link special register (SW)	Link special register (SW)	0	
800н to 9FFн	2048 to 2559	Prohibited to use	Prohibited to use	0	
A00H to FFFH	2560 to 4095	Random access buffer	Random access buffer	0	
1000н to 1FFFн	4096 to 8191	Communication buffer	Communication buffer	0	
2000н to 2FFFн	8192 to 12287	Automatic updating buffer	Automatic updating buffer	0	
- (3000н to 3FFFн)	- (12288 to 16383)		Prohibited to use	-	
- (4000н to 53FFн)	- (16384 to 21503)	-	Area for Ver.2	Δ	The function was added to Q series modules.
- (5400н to 7FFFн)	- (21504 to 32767)		Prohibited to use	-	

O : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatible

#### 8.6.3 Comparison of link special relay (SB)/link special register (SW)

#### (1) A/AnS series

The following table shows SB/SW which have different application on the A series and the Q series.

#### (a) Link special relay (SB)

○ : Compatible.	∆: Partial chan	ae required. ×	: Incompatible
O . compatible,		go roquirou,	. moompaable

Number	Na	me	Compat-	Procautions for replacement	
Number	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	r recautions for replacement	
SB0001	Master station switching data link start	Refresh instruction at standby master switching	0	The specifications of A/AnS series and Q series are the	
		Defrech instruction when		same.	
SB0002		changing parameters by the			
300003		dedicated instruction	Δ	parameters with REFASE I	
		Master station duplication error			
SB0007		canceling request			
	-	Transmission speed test			
SB000B		request		Added on the Q series and	
SB000C		Forced master switching	Δ	replacement is not applied.	
		Remote device station			
SB000D		initialization procedure			
		registration instruction			
	Maatar station switch data link	Refresh instruction			
SB0042	start accontance	acknowledgement status at			
	start acceptance	standby master switching			
	Master station switch data link	Refresh instruction complete	~	Added on the Q series and	
SB0043	start complete	status at standby master	Δ	replacement is not applied.	
		switching			
SB0046	-	Forced master switching			
		executable status			
SB004E	Parameter setting test	Parameter information read		The functions of A/AnS series	
	acceptance status	acknowledgement status		are different from those of Q	
SB004F	Parameter setting test complete status	Parameter information read completion status	×	series. Since the parameter setting test function is not required for the Q series, delete the sequence program for the corresponding function.	
SB0057		Master station duplication error			
000001		canceling acknowledgement			
SB0058		Master station duplication error			
		canceling complete			
SB005A		Master switching request			
		Acknowledgement			
SB005B		complete			
		Forced master switching		Added on the $\Omega$ series and	
SB005C	-	request acknowledgement	Δ	replacement is not applied	
		Forced master switching			
SB005D		request complete			
		Execution status of remote			
SB005E		device station initialization			
		procedure			
		Completion status of remote	1		
SB005F		device station initialization			
		procedure			

# MELSEC

Number	Name		Compat-	Dressutions for replacement	
Number	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	Precautions for replacement	
SB0069	Module mode	-	Δ	The mode is set on the Q series using the network parameters. (The setting can be checked in SW0060.)	
SB006F	-	Setting status of block guarantee of cyclic data per station	Δ	Added on the Q series and replacement is not applied.	
SB0079		Master station return specification information			
SB007B		Host master/standby master operation status			
SB007C		Slave station refresh/ compulsory clear setting status in case of programmable controller CPU STOP		Added on the Q series and	
SB00B4		Standby master station test result		replacement is not applied.	
SB0184		Transmission speed test result for standby master station			
SB0185		Transmission speed test accept status			
SB0186		Transmission speed test completion status			

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required, × : Incompatible

#### (b) Link special register (SW)

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required,  $\times$  : Incompatible

Numbor	Name			Processions for replacement	
Number	AJ61BT11/A1SJ61BT11	QJ61BT11N	ibility	r recautions for replacement	
SW000B		Dedicated instruction retry			
0110008	<u> </u>	count setting	~	Added on the Q series and	
SW0014 to SW0017		Specification of remote device		replacement is not applied.	
		station to be initialized.			
	Master station switch data link	Refresh instruction at standby		The specifications of A/AnS	
SW0043	start result	master switching result	0	series and Q series are the	
				same.	
SW0052		Automatic CC-Link startup			
		execution result			
SW0058		Detailed LED display status			
SW0059		Transmission rate setting		Added on the Q series and	
SW005D	-	Forced master switching	Δ	replacement is not applied.	
		instruction result			
		Remote device station			
SW005F		initialization procedure			
		registration instruction result			
SW0062	Condition setting switch status	Module operating status	Δ	On the Q series, parameter	
				setting status is stored.	
SW00B9	E ² PROM registration status				
SW00BA	E ² PROM erasure result			No $E^2 PROM$ (Refer to Section	
	Number of times when		Δ		
SW00BB	parameters can be registered			0.7.)	
	to E ² PROM				
		Remote device station			
		initialization procedure			
SW0110 to SW011F		registration execution			
		individual information (target 1			
		to 16)			
SW0140 to SW0143		Compatible CC-Link Ver.			
3000 140 10 3000 143		information		Added on the O series and	
	-	CC-Link Ver.	Δ	replacement is not applied	
SW0144 to SW0147		installation/parameter		replacement is not applied.	
		matching status			
SW0148		Parameter mode			
SW0149		Host parameter mode			
SW0183		Transmission speed test result			
SW0184 to SW0187		Transmission speed test result			
000104 10 000107		for each station			

#### (2) QnA/QnAS series

The following table shows SB/SW that have different applications on the QnA/QnAS series and the Q series.

#### (a) Link special relay (SB)

 $\bigcirc$  : Compatible,  $\triangle$ : Partial change required, × : Incompatible

Number	Na	Name		Procentions for replacement
Number	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	Precautions for replacement
SB0001	Master station switching data link start	Refresh instruction at standby master switching	0	The specifications of A/AnS series and Q series are the same.
SB0003		Refresh instruction when changing parameters by the dedicated instruction		
SB0007		Master station duplication error canceling request		
SB000B	-	Transmission speed test	Δ	Added on the Q series and replacement is not applied.
SB000C		Forced master switching		
SB000D		Remote device station initialization procedure registration instruction		
SB0030	Communication command (1) acceptance			Not used on the Q series.
SB0031	Communication command (1) complete	_	^	Delete the sequence program of the section corresponding to
SB0032	Communication command (2) acceptance			the function, and replace READ, WRITE instructions with
SB0033	Communication command (2) complete			RIRD, RIWT instructions.
SB0046		Forced master switching executable status		
SB0057		Master station duplication error canceling acknowledgement		
SB0058		Master station duplication error canceling complete		
SB005A		Master switching request acknowledgement		
SB005B		Master switching request complete		Added on the Q series and
SB005C	-	Forced master switching request acknowledgement		replacement is not applied.
SB005D		Forced master switching request complete		
SB005E		Execution status of remote device station initialization procedure		
SB005F		Completion status of remote device station initialization procedure		

(To next page)

# MELSEC

Name		me	Compat-	Durantiana farmala anna t	
Number	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	Precautions for replacement	
SB0069	Module mode	-	Δ	The mode is set on the Q series using the network parameters. (The setting can be checked in SW0060.)	
SB006F		Setting status of block guarantee of cyclic data per station			
SB0079		Master station return specification information		Added on the O series and	
SB007B	-	Host master/standby master operation status	Δ	replacement is not applied.	
SB007C		Slave station refresh/ compulsory clear setting status in case of programmable controller CPU STOP			
SB00A0	RECV instruction (1) execution request flag	_	_	Not used on the Q series. Delete the sequence program	
SB00A1	RECV instruction (2) execution request flag			of the section corresponding to the function.	
SB00B4		Standby master station test result			
SB0184		Transmission speed test result for standby master station		Added on the Q series and	
SB0185	-	Transmission speed test accept status		replacement is not applied.	
SB0186		Transmission speed test completion status	]		

 $\bigcirc$  : Compatible,  $\bigtriangleup$  : Partial change required, × : Incompatible

#### (b) Link special register (SW)

() : Coi	npatible.	∆: Partial	change	required.	× :	Incompatible
0.00.			0.10.190	.oquiou,		moonpaaolo

Numbor	Na	me	Compat-	Brocoutions for replacement
Number	AJ61QBT11/A1SJ61QBT11	QJ61BT11N	ibility	Precautions for replacement
SWOODB		Dedicated instruction retry		
300000		count setting		
SW0014 to SW0017		Specification of remote device		
300014 10 300017		station to be initialized.		
\$10052		Automatic CC-Link startup		
000002		execution result		Added on the O series and
SW0058	-	Detailed LED display status	Δ	replacement is not applied
SW0059		Transmission rate setting		replacement is not applied.
SW005D		Forced master switching		
		instruction result		
		Remote device station		
SW005F		initialization procedure		
		registration instruction result		
SW0062	Condition setting switch status	Module operating status	~	On the Q series, parameter
				setting status is stored.
SW00B9	E ² PROM registration status		Δ	
SW00BA	E ² PROM erasure result		Δ	No $E^2 PROM$ (Refer to Section
	Number of times when			
SW00BB	parameters can be registered		Δ	0.7.)
	to E ² PROM			
		Remote device station		
		initialization procedure		
SW0110 to SW011F		registration execution		
		individual information (target 1		
		to 16)		
SW0140 to SW0143		Compatible CC-Link Ver.		
000140 10 000143		information		Added on the O series and
	-	CC-Link Ver.	Δ	replacement is not applied
SW0144 to SW0147		installation/parameter		
		matching status		
SW0148		Parameter mode		
SW0149		Host parameter mode		
SW0183		Transmission speed test result		
SW0184 to SW0187		Transmission speed test result		
010101 10 000107		for each station		

## 8.7 Other Precautions

This section describes other precautions.

#### (1) Peripheral device connection module

When AJ65BT-G4 type peripheral connection module is used on the A/AnS/QnA/QnAS series, replace it with AJ65BT-G4-S3 type peripheral connection module. AJ65BT-G4 type peripheral connection module cannot be used on the Q series.

(2) Processing time

The link scan time and link refresh time differ between the A/AnS/QnA/QnAS series and the Q series. For details on processing times, refer to the manual for the respective module.

#### (3) Parameter registration to E²PROM

As the Q series CC-Link system master/local module does not have  $E^2PROM$ , delete the sequence program of the section corresponding to the parameter registration to  $E^2PROM$ . On the Q series CC-Link system master/local module, set the GX Developer network parameters to register parameters to the programmable controller CPU.

## 8.8 Parameter Setting Example

The following describes an example how to replace the system in which parameters were set using sequence program (TO instruction) on the A/AnS series with the system in which parameters are set using GX Developer on the Q series.

This section explains the above using the following system configuration example.



#### 8.8.1 Parameter setting example on the A/AnS series

The following shows a program example of parameter setting using the sequence program (TO instruction).



# MELSEC



#### 8.8.2 Parameter setting example on the Q series

#### The following shows an example of parameter setting using GX Developer.

A MELSOFT series GX Developer C:\A to Q\Q06HCPU_a - [Network parameters Setting the CC-Link list.]							
Project Edit Find/Replace	<u>Vi</u> ew <u>O</u> nline	: <u>Di</u> agnostics <u>T</u> ools <u>Wi</u> ndow <u>H</u> elp					- 8 ×
		000 44 00 5					
Program 🔽				PX			
1 H H H -1/- 4/H -0/[] F5 sF5 F6 sF6 F7 F8		- X -11H -14H 41H 44H ↑ . ) GF10	→ 1 1× F5 caPl0 F10 aF9				
×							
	No. of boa	ırds in module 🚺 💌 Boards 🛛 🛛	Blank: no setting.				
E B Program		·					
E T Device comment			1			2	
🖃 📝 Parameter		Start I/O No		0000			
🔤 📝 PLC parameter		Operational setting	Operational settings				
🔤 💓 Network param		Туре	Master station				-
🔛 🔛 Remote pass		Master station data link type	PLU parameter auto start	-			
- 🔄 Device memory		Mode	Remote net(Ver.1 mode)				<b>•</b>
🔤 🖳 Device init		All connect count		- 5			
		Bemote input[KX]					
Network parameter 📉		Remote output(RY)					
MELSECNET/Ethernet		Remote register(R\Ww)					
		Ver 2 Remote input(BX)					
MELSECNET / MINI		Ver 2 Remote output(RY)					
		Ver 2 Bemote register(BWr)					
		Ver 2 Bemote register(BWw)					
Cancel		Special relay(SB)					
		Special register(SW)					
		Retry count		5			
		Automatic reconnection station count		2			
		Stand by master station No.					
		PLC down select	Stop	-			-
		Scan mode setting	Asynchronous	-			-
		Delay infomation setting		0			
		Station information setting	Station information				
		Remote device station initial setting	Initial settings				
		Interrupt setting	Interrupt settings				
		- Provide the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of t	Alexandread () Cat (C) is a		N	1	
	l "	ndispensable settingsį No setting 7	Already set j Set init is n	eeaeal	No setting	7 Already s	etj
	Setting item	i details:					
			Acknowled	ge XY as	ssignment	Clear	Che
Project	•						►
Ready		Q02(H) Ho	ost station				Ovri //

#### × CC-Link station information. Module 1 Expanded Exclusive station Remote station Reserve/invalid Intelligent buffer select(word) Station type Send Station No cyclic setting count points station select Receive Automatic 💌 Exclusive station 1 💌 32 points 1/1 Remote I/O station 👻 single 💌 No setting -2/2 Remote device station 👻 single ▼ Exclusive station 2 ▼ 64 points 💌 No setting Ŧ ▼ Exclusive station 4 ▼ 128 points 3/4 👻 No setting 64 64 128 Intelligent device station 👻 single • 4/8 Remote I/O station ▼ Reserve station ▼ 5/9 Intelligent device station 💌 Exclusive station 4 💌 128 points 64 64 128 💌 👻 single 👻 No setting -Check Cancel Default End

# 9.1 External Dimensions

For external dimensions of modules shown in this handbook, refer to the User's Manual for each module.

MELSEC

For external dimensions of base units shown in this handbook, refer to the following.

			Relevant model			
No.	Handbook	Manual number	A/QnA	AnS/ QnAS	Q	
1	Transition from MELSEC-A/QnA (Large Type) Series to Q Series	1-08043ENG	0	×	0	
1	Handbook (Fundamentals)	E-00043ENG	0	~	0	
2	Transition from MELSEC-AnS/QnAS (Large Type) Series to Q Series		~	0	(	
2	Handbook (Fundamentals)	L-002 19ENG	^	0	0	
# APPENDICES

## Appendix 1 Spare parts storage

(1) The general specifications of programmable controllers are as follows. Please do not store spare parts under a high temperature or high humidity condition, even within the range guaranteed by the specifications.

Storage ambient temperature	-20 to 75°C
Storage ambient humidity	10 to 90%, no condensation

- (2) Store in a place avoiding direct sunlight.
- (3) Store under a condition with no dust or corrosive gas.
- (4) The capacity of the batteries (such as an A6BAT battery and an A8BAT battery) or a lithium-coin battery (commercially available) for memory card is decreased by its selfdischarging even when it is not used. Replace it with new one in 5 years as a guideline.
- (5) For a power supply module, CPU module with built-in power supply, or analog module that uses any aluminum electrolytic capacitor, which is indicated in the table below, take the following measures since the characteristics will be deteriorated when the aluminum electrolytic capacitor is left un-energized for a long time.

Product	Model
	A1NCPU, A1NCPUP21, A1NCPUR21, A1NCPUP21-S3, A2CCPU
CPU module	A2CCPUP21, A2CCPUR21, A2CCPUC24, A2CCPUC24-PRF
(Power supply built-in type)	A2CJCPU-S3
	A1SJHCPU
	A61P, A61PEU, A61P-UL, A62P, A62PEU, A63P, A68P, A61RP, A67RP
Power supply module	A2CJ66P
	A1S61PN, A1S62PN, A1S63P
	A62DA, A62DA-S1
Analog module	A1S64AD, A1S68AD, A1S62DA, A1S68DAI, A1S68DAV,
	A1S63ADA, A1S66ADA

[Countermeasures for preventing aluminum electrolytic capacitor characteristics deterioration] Apply the rated voltage to the aluminum electrolytic capacitor for several hours to activate it. Or, rotate products at the periodic inspection (in every 1 to 2 years).

[Reference]

The life of an aluminum electrolytic capacitor, even if not used, under a normal temperature decreases approximately at 1/4 speed of the case when it is energized.

# Appendix 2 Related Manuals

## Appendix 2.1 Replacement handbooks

### (1) Transition guide

No.	Manual name	Manual number	Target	
			A (large)	AnS (small)
1	MELSEC-A/QnA Series Transition Guide	L(NA)08077E	0	×
2	MELSEC-AnS/QnAS Series Transition Guide	L(NA)08236E	×	0

### (2) Transition from MELSEC-A/QnA (large type) to Q series handbook

No	Manual namo	Manual number	Та	rget
NO.		Manual number	A (large)	AnS (small)
	Transition from MELSEC-A/QnA (Large Type) Series to Q Series	1-08043ENG	0	×
1	Handbook (Fundamentals)	E-00040EINO	0	~
	Transition from MELSEC-AnS/QnAS (Small Type) Series to Q	L-080219ENG	×	0
	Series Handbook (Fundamentals)	L-0002 19LING	Â	0
	Transition from MELSEC-A/QnA (Large Type) Series to Q Series	1-08046ENG	0	×
2	Handbook (Intelligent Function Modules)	E-00040ENG	0	
2	Transition from MELSEC-AnS/QnAS (Small Type) Series to Q	L-08220ENG	×	0
	Series Handbook (Intelligent Function Modules)			
3	Transition from MELSEC-A/QnA (Large Type), AnS/QnAS	L-08048ENG	0	0
5	(Small Type) Series to Q Series Handbook (Network Modules)			
4	Transition from MELSEC-A/QnA (Large Type), AnS/QnAS			0
4	(Small Type) Series to Q Series Handbook (Communications)	L-00030ENG	0	
5	Transition from MELSEC-A0J2H Series to Q Series Handbook	L-08060ENG	0	0
6	Transition from MELSECNET/MINI-S3, A2C (I/O) to CC-Link	L-08061ENG		
0	Handbook		0	0
7	Transition from MELSEC-I/OLINK to CC-Link/LT Handbook	L-08062ENG	0	0
0	Transition of CPUs in MELSEC Redundant System Handbook		<u> </u>	6
0	(Transition from Q4ARCPU to QnPRHCPU)	L-UOTIZENG	0	0

### (3) Transition Examples

No.	Manual name	Manual number	Target	
			A (large)	AnS (small)
1	MELSEC-A/QnA (Large), AnS/QnAS (Small) Transition		0	0
1	Examples		0	0

## (4) Others

No.	Manual name	Manual number	Target	
			A (large)	AnS (small)
1	Procedures for Replacing Positioning Module AD71 with QD75	FA-A-0060	0	0

## Appendix 2.2 A/AnS series

No.	Manual name	Manual number	Model code	
1	Type MELSECNET, MELSECNET/B Data Link System	IB-66350	13 IE70	
	Referece Manual	10-00330	155170	
2	Type MELSECNET/10 Network System Reference Manual	IB-66440	1 1533	
	(PLC to PLC network)	10-00440	10200	
3	Type MELSECNET/10 Network System Reference Manual	SH 3500	13 1572	
3	(Remote I/O network)	511-5505	155272	
4	CC-Link System Master/Local Module Type AJ61BT11/	IR 66721	12 1972	
	A1SJ61BT11 User's Manual	10-00721	100012	

## Appendix 2.3 QnA/QnAS series

No.	Manual name	Manual number	Model code
1	For QnA/Q4AR MELSECNET/10 Network System Reference	IB-66600	13 IE78
	Manual	10-00090	1551 76
2	CC-Link System Master/Local Module Type AJ61QBT11/	ID 66722	12 1072
	A1SJ61QBT11 User's Manual	ID-00722	133073

## Appendix 2.4 Q series

No.	Manual name	Manual number	Model code	
1	Q Corresponding MELSECNET/H Network System	SH 080040	13JF92	
	Reference Manual(PLC to PLC network)	30-000049		
2	Q Corresponding MELSECNET/H Network System	SH 000104		
	Reference Manual(Remote I/O network)	30-000124	130-90	
3	CC-Link System Master/Local Module User's Manual		12 064	
	QJ61BT11N	3H-000394E	133K04	

Memo	

# WARRANTY

Please confirm the following product warranty details before using this product.

### 1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

### [Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
  - 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
  - 2. Failure caused by unapproved modifications, etc., to the product by the user.
  - 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
  - 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
  - 5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
  - 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
  - 7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

#### 2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued.
- Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

#### 3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

#### 4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation of damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

#### 5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

Ethernet is a registered trademark of Xerox. Co., Ltd in the United States. Other company and product names herein are either trademarks or registered trademarks of their respective owners.

# Mitsubishi Programmable Controller

# MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN

When exported from Japan, this handbook does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.