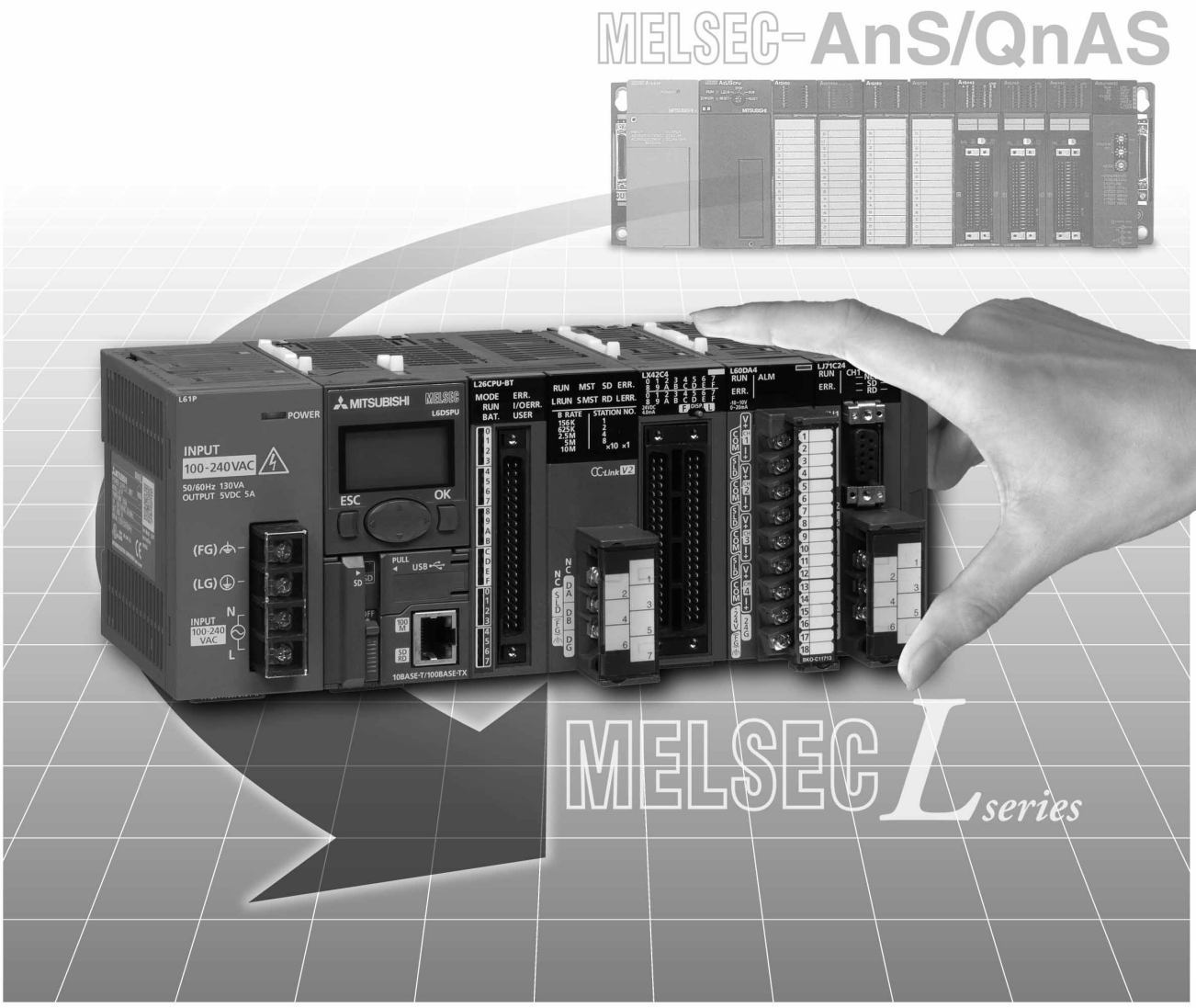
MITSUBISHI

Mitsubishi Programmable Controller

Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook

(Network Modules)



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● 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.
The precautions given in this handbook are concerned with this product only. For the safety precautions of the programmable controller system, refer to the user's manual for the CPU module used.

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

⚠WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠CAUTION" 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]

⚠WARNING

- For the operating status of each station after a communication failure in the data link or the network, refer to the manuals for the modules used.
  Incorrect output or malfunction due to a communication failure may result in an accident.
- 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.

[Design Precautions]

⚠WARNING

- 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" signal 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, such as M and L, 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 manuals for the modules used.
- If a communication 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.

[Design Precautions]

⚠CAUTION

- 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]

⚠WARNING

- Shut off the external power supply (all phases) used in the system before connecting or disconnecting a module.
  Failure to do so may result in electric shock or cause the module to fail or malfunction.

[Installation Precautions]

⚠CAUTION

- Use the programmable controller in an environment that meets the general specifications in the Safety Guidelines provided with the CPU module or head module.
  Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- To interconnect modules, engage the respective connectors and securely lock the module joint levers.
  Incorrect interconnection may cause malfunction, failure, or drop of the module.
- 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]

⚠WARNING

- 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.

[Wiring Precautions]

⚠CAUTION

- Use applicable solderless terminals and tighten them within the specified torque range.
  If any spade solderless terminal is used, it may be disconnected when a terminal block screw comes loose, resulting in failure.
- 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 block screws within the specified torque range.
  Undertightening can cause short circuit, fire, 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 screw.
  Pulling the cable connected to the module may result in malfunction or damage to the module or cable.
- 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 a 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 manuals for the modules used.
  If not, normal data transmission is not guaranteed.

[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 block screws.
  Failure to do so may result in electric shock.

[Startup and Maintenance Precautions]

⚠CAUTION

- Do not disassemble or modify the modules. Doing so may cause failure, malfunction, injury, or a fire.
- Shut off the external power supply (all phases) used in the system before connecting or disconnecting a module.
  Failure to do so may cause the module to fail or malfunction.
- Tighten the terminal block screws 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 (module and terminal block), the number of connections/ disconnections is limited to 50 times (in accordance with IEC 61131-2).
  Exceeding the limit may cause malfunction.
- Before handling the module, touch a conducting object such as a grounded metal to discharge the static electricity from the human body.
  Failure to do so may cause the module to fail or malfunction.

[Disposal Precautions]

⚠CAUTION

- 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
October, 2012	L(NA)08260ENG-A	First edition

Japanese Handbook Version L08256-A

CONTENTS

- 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	The abbreviation for large types of Mitsubishi MELSEC-A series programmable controllers
AnS series	The abbreviation for small types of Mitsubishi MELSEC-A series programmable controllers
A/AnS series	A generic term for A series and AnS series
QnA series	The abbreviation for large types of Mitsubishi MELSEC-QnA series programmable controllers
QnAS series	The abbreviation for small types of Mitsubishi MELSEC-QnA series programmable controllers
QnA/QnAS series	A generic term for QnA series and QnAS series
A/AnS/QnA/QnAS series	A generic term for A series, AnS series, QnA series, and QnAS series
Q series	The abbreviation for Mitsubishi MELSEC-Q series programmable controllers
L series	The abbreviation for Mitsubishi MELSEC-L series programmable controllers
■CPU module type	
CPU module	A generic term for A series, AnS series, QnA series, QnAS series, Q series, and L series CPU modules
Basic model QCPU	A generic term for the Q00JCPU, Q00CPU, and Q01CPU
High Performance model QCPU	A generic term for the Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, and Q25HCPU * This handbook mainly explains the Q02CPU, Q02HCPU, Q06HCPU, and Q12HCPU.
Process CPU	A generic term for the Q02PHCPU, Q06PHCPU, Q12PHCPU, and Q25PHCPU
Redundant CPU	A generic term for the Q12PRHCPU and Q25PRHCPU
Universal model QCPU	A 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 * This handbook mainly explains the Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, and Q06UDHCPU as modules that replace the AnS/QnAS series modules. The Q10UDEHCPU to Q100UDEHCPU have larger program and memory capacities than other Universal model QCPUs. (All other specifications and functions are the same.)
LCPU	A generic term for the L02CPU, L02CPU-P, L26CPU-BT, and L26CPU-PBT
■CPU module model	
ACPU	A generic term for MELSEC-A series CPU modules
AnSCPU	A generic term for MELSEC-AnS series CPU modules
AnNCPU	A generic term for the A1NCPU, A1NCPUP21/R21, A1NCPUP21-S3, A2NCPU, A2NCPU-S1, A2NCPUP21/R21, A2NCPUP21/R21-S1, A2NCPUP21-S3(S4), A3NCPU, A3NCPUP21/R21, and A3NCPUP21-S3
AnACPU	A generic term for the A2ACPU, A2ACPU-S1, A3ACPU, A2ACPUP21/R21, A2ACPUP21/R21-S1, and A3ACPUP21/R21
AnUCPU	A generic term for the A2UCPU, A2UCPU-S1, A3UCPU, A4UCPU, A2USCPU, A2USCPU-S1, and A2USHCPU-S1
AnUS(H)CPU	A generic term for the A2USCPU, A2USCPU-S1, and A2USHCPU-S1
A/AnSCPU	A generic term for the ACPU and AnSCPU
AnN/AnACPU	A generic term for the AnNCPU and AnACPU
AnN/AnA/AnSCPU	A generic term for the AnNCPU, AnACPU, and AnSCPU
QnACPU	A generic term for MELSEC-QnA series CPU modules
QnASCPU	A generic term for MELSEC-QnAS series CPU modules
QnA/QnASCPU	A generic term for QnACPU and QnASCPU
A/AnS/QnA/QnASCPU	A generic term for ACPU, AnSCPU, QnACPU, and QnASCPU
QCPU	A generic term for MELSEC-Q series CPU modules
LCPU	A generic term for MELSEC-L series CPU modules

1 INTRODUCTION

1.1 Transition from CC-Link for AnS/QnAS series to CC-Link for L series

This handbook describes how to replace A1SJ61BT11 or A1SJ61QBT11 type CC-Link system master/local modules with LJ61BT11 type CC-Link system master/local modules or the built-in CC-Link function of the CPU module.
CC-Link dedicated cables, remote I/O stations, remote device stations, and intelligent device stations currently used in the system can be utilized as is, except for some models.
For the models that cannot be utilized, refer to Section 2.7.

Memo

2 CC-LINK MODULE REPLACEMENT

2.1 List of CC-Link Modules to be Replaced

(1) AnS series

AnS series	L series alternative model
A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function), LJ61BT11*1

(2) QnAS series

QnAS series model	L series alternative model
A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function), LJ61BT11*1

*1 The number of CC-Link modules that can be connected to an LCPU is as follows:
L02CPU/-P: Up to two modules
L26CPU-BT/PBT: Up to four modules
This is the number of modules to which parameters can be set using a programming tool. If dedicated instructions are used to set parameters, CC-Link modules can be connected up to the maximum number of modules connectable to the LCPU. For dedicated instructions, refer to the manual for the module used.
The built-in CPU function of the L26CPU-BT/PBT is counted as one module.

2.2 Performance Specifications Comparison

2.2.1 Module performance specifications

(1) AnS series

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

Item	Specifications			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Transmission speed	Can be selected from 156kbps/625kbps/2.5Mbps/5Mbps/10Mbps.			○	
Maximum station-to-station distance (maximum transmission distance)	Differs depending on the transmission speed. (Refer to the manual.)			○	
Maximum number of connected modules (when set as a master station)	64 modules Note that the following conditions must be satisfied. {(1 × a) + (2 × b) + (3 × c) + (4 × d)} ≤ 64 a: Number of 1-station occupied modules b: Number of 2-station occupied modules c: Number of 3-station occupied modules d: Number of 4-station occupied modules {(16 × A) + (54 × B) + (88 × C)} ≤ 2304 A: Number of remote I/O stations ≤ 64 stations B: Number of remote device stations ≤ 42 stations C: Number of local stations, standby master stations and intelligent device stations ≤ 26 stations			○	
Number of occupied stations (when set as a local station)	1 to 4 stations (Switched with DIP switch)	1 to 4 stations (Switched with GX Developer parameter settings)		○	The specifications are the same although the setting methods are different.
Maximum number of link points per system	Remote I/O (RX, RY): 2048 points Remote register (RWw): 256 points Remote register (RWr): 256 points			○	
Number of link points per remote station/local station	Remote I/O (RX, RY): 32 points (Local station: 30 points) Remote register (RWw): 4 points Remote register (RWr): 4 points			○	
Communication method	Broadcast polling			○	
Synchronization method	Frame synchronization			○	
Encoding method	NRZI method			○	
Transmission method	Bus (RS-485)			○	
Transmission format	High-Level Data Link Control (HDLC)			○	
Error control system	CRC ($X^{16}+X^{12}+X^5+1$)			○	
Connection cable	CC-Link dedicated cable/CC-Link dedicated high-performance cable/Ver.1.10-compatible CC-Link dedicated cable			○	Refer to Section 2.2.2.
RAS function	• Automatic return function • Slave station cut-off function • Error detection by the link special relay/register			○	
Number of parameter registrations to E^2PROM	10000 times	-		△	GX Developer parameter settings are performed instead of the parameter registration to E^2PROM.
Number of occupied I/O points	32 points (I/O assignment: special 32 points)	32 points (I/O assignment: intelli 32 points)		○	
Internal current consumption (5VDC)	0.4A	*1	0.46A	△	Recalculation of internal current consumption (5VDC) is required.
Weight	0.25kg	*1	0.15kg	○	

*1 Refer to the MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection).

(2) QnAS series

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

Item	Specifications			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Transmission speed	Can be selected from 156kbps/625kbps/2.5Mbps/5Mbps/10Mbps.			○	
Maximum station-to-station distance (maximum transmission distance)	Differs depending on the transmission speed. (Refer to the manual.)			○	
Maximum number of connected modules (when set as a master station)	64 modules Note that the following conditions must be satisfied. {(1 × a) + (2 × b) + (3 × c) + (4 × d)} ≤ 64 a: Number of 1-station occupied modules b: Number of 2-station occupied modules c: Number of 3-station occupied modules d: Number of 4-station occupied modules {(16 × A) + (54 × B) + (88 × C)} ≤ 2304 A: Number of remote I/O stations ≤ 64 stations B: Number of remote device stations ≤ 42 stations C: Number of local stations, standby master stations, and intelligent device stations ≤ 26 stations			○	
Number of occupied stations (when set as a local station)	1 to 4 stations (Switched with DIP switch)	1 to 4 stations (Switched with GX Developer parameter settings)		○	The specifications are the same although the setting methods are different.
Maximum number of link points per system	Remote I/O (RX, RY) : 2048 points Remote register (RWw) : 256 points Remote register (RWr): 256 points			○	
Number of link points per remote station/local station	Remote I/O (RX, RY): 32 points (Local station: 30 points) Remote register (RWw): 4 points Remote register (RWr): 4 points			○	
Communication method	Broadcast polling			○	
Synchronization method	Frame synchronization			○	
Encoding method	NRZI method			○	
Transmission method	Bus (RS-485)			○	
Transmission format	High-Level Data Link Control (HDLC)			○	
Error control system	CRC ($X^{16}+X^{12}+X^5+1$)			○	
Connection cable	CC-Link dedicated cable/CC-Link dedicated high-performance cable/Ver.1.10-compatible CC-Link dedicated cable			○	Refer to Section 2.2.2.
RAS function	• Automatic return function • Slave station cut-off function • Error detection by the link special relay/register			○	
Number of parameter registrations to E^2PROM	10000 times	-		△	GX Developer parameter settings are performed instead of the parameter registration to E^2PROM.
Number of occupied I/O points	32 points (I/O assignment: special 32 points)	32 points (I/O assignment: intelli 32 points)		○	
Internal current consumption (5VDC)	0.4A	*1	0.46A	△	Recalculation of internal current consumption (5VDC) is required.
Weight	0.25kg	*1	0.15kg	○	

*1 Refer to the MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection).

2.2.2 Cable performance specifications

According to the specifications for the L series CC-Link modules, the Ver.1.10-compatible CC-Link dedicated cables shall be used. When modules are replaced, however, the CC-Link connection cables are common between AnS/QnAS and L series.
Even after the modules are replaced, the CC-Link dedicated cables used for the AnS/QnAS series modules can be utilized as is for the L series modules.
When a new network is constructed using the L series CC-Link modules, use the Ver.1.10-compatible CC-Link dedicated cables.
For the CC-Link dedicated cables specifications, visit the CC-Link Partner Association web site: http://www.cc-link.org/.

2.3 Functional Comparison

(1) AnS series

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

Item	Description			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Communication with remote I/O stations	Performs on/off data communication with remote I/O stations.			○	
Communication with remote device stations	Performs on/off data and numeric data communication with remote device stations.			○	
Communication with local stations	Performs on/off data and numeric data communication with local stations.			○	
Communication with intelligent device stations	Performs cyclic transmission and transient transmission with intelligent device stations.			○	
Reserved station function	Sets remote and local stations that will be connected in the future as reserved stations to prevents these stations from being treated as data link faulty stations. If the currently connected module is specified, data link can no longer be performed.			○	
Error invalid station setting function	Prevents remote and local stations that may be powered off in the system configuration from being treated as data link faulty stations.			○	
Data link status setting when the master station CPU module has an error	Sets the data link status after an operation continuation error occurred in the master station CPU module.			○	
Parameter registration to E^2PROM	Eliminates the necessity to write the parameters to the E^2PROM each time the master module starts up.	-		△	Set parameters using GX Developer instead of registering parameters to the E^2PROM.
Setting the status of input data from a data link faulty station	Sets the status (clear or hold) of input (receive) data from a station where a data link error has been detected due to a reason such as power-off.			○	
Module reset function from a sequence program	Resets the CPU module using a sequence program when the switch setting is changed or an error occurred with the module.	-		×	If the switch setting is changed, power off and on the programmable controller system or reset the CPU module.
Data link stop/restart	Stops or restarts the data link that is being executed.			○	
Automatic return function	Allows the module which has been disconnected from the network due to a reason such as power-off to automatically join the data link after it returns to the normal status.			○	
Slave station cut-off function	Disconnects a slave station that cannot continue the data link due to a reason such as power-off so that data link can continue among normal slave stations only.			○	
Data link status check (SB/SW)	Checks the data link status. This check can be used for an interlock of sequence program.			○	

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

Item	Description			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Offline test	The following tests are performed. • Hardware test: Checks the operation of a module itself. • Line test: Checks the connection status of a module. • Parameter verification test: Checks the parameter settings.	The following tests are performed. • Hardware test: Checks the operation of a module itself. • Loop test: Checks the connection status of a module.		△	The specification method of hardware test/line test differs. For details, refer to the manual for the module used. Check the set parameter contents in network parameters using GX Developer.
Parameter registration function	Sets the following two types of parameters using the sequence program (TO instruction) or dedicated instruction. • Network parameter • Automatic refresh parameter	Sets the following two types of parameters using GX Developer. • Network parameter • Automatic refresh parameter		△	Parameter setting methods are changed.
Scan synchronous function	Synchronous mode: Performs data link in synchronization with the sequence program. Asynchronous mode: Performs data link out of synchronization with the sequence program.			○	
Standby master function	Continues the data link by switching the control from the master station to the standby master station when a problem occurs in the master station.			○	
Dedicated instruction (RIRD, RIWT, RIRCV, RISEND, RIFR, RITO)	Enables transient transmission to intelligent device or local stations.			△	Modify the sequence program because the instruction formats are different.
Remote I/O net mode	Enables communication between master and remote I/O stations.			△	Delete the RRPA instruction and set parameters using GX Developer.
Temporary error invalid station setting function	Replaces modules used as remote stations during online without detecting an error.			○	

(2) QnAS series

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

Item	Description			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Communication with remote I/O stations	Performs on/off data communication with remote I/O stations.			○	
Communication with remote device stations	Performs on/off data and numeric data communication with remote device stations.			○	
Communication with local stations	Performs on/off data and numeric data communication with local stations.			○	
Communication with intelligent device stations	Performs cyclic transmission and transient transmission with intelligent device stations.			○	
Reserved station function	Sets remote and local stations that will be connected in the future as reserved stations to prevents these stations from being treated as data link faulty stations. If the currently connected module is specified, data link can no longer be performed.			○	
Error invalid station setting function	Prevents remote and local stations that may be powered off in the system configuration from being treated as data link faulty stations.			○	
Data link status setting when the master station CPU module has an error	Sets the data link status after an operation continuation error occurred in the master station CPU module.			○	
Parameter registration to E^2PROM	Eliminates the necessity to write the parameters to the E^2PROM each time the master module starts up.	-		△	Set parameters using GX Developer instead of registering parameters to the E^2PROM.
Setting the status of input data from a data link faulty station	Sets the status (clear or hold) of input (receive) data from a station where a data link error has been detected due to a reason such as power-off.			○	
Module reset function from a sequence program	Resets the CPU module using a sequence program when the switch setting is changed or an error occurred with the module.	-		×	If the switch setting is changed, power off and on the programmable controller system or reset the CPU module.
Data link stop/restart	Stops or restarts the data link that is being executed.			○	
Automatic return function	Allows the module which has been disconnected from the network due to a reason such as power-off to automatically join the data link after it returns to the normal status.			○	
Slave station cut-off function	Disconnects a slave station that cannot continue the data link due to a reason such as power-off so that data link can continue among normal slave stations only.			○	
Data link status check (SB/SW)	Checks the data link status. This check can be used for an interlock of sequence program.			○	

(To the next page)

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

Item	Description			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Offline test	The following tests are performed. • Hardware test: Checks the operation of a module itself. • Line test: Checks the connection status of a module. • Parameter verification test: Checks the parameter settings.	The following tests are performed. • Hardware test: Checks the operation of a module itself. • Loop test: Checks the connection status of a module.		△	The specification method of hardware test/line test differs. For details, refer to the manual for the module used. Check the set parameter contents in network parameters using GX Developer.
Parameter registration function	Sets the following two types of parameters using GX Developer. • Network parameter • Automatic refresh parameter			○	
Scan synchronous function	Synchronous mode: Performs data link in synchronization with the sequence program. Asynchronous mode: Performs data link out of synchronization with the sequence program.			○	
Standby master function	Continues the data link by switching the control from the master station to the standby master station when a problem occurs in the master station.			○	
Dedicated instruction (RIRD, RIWT, RIRCV, RISEND, RIFR, RITO)	Enables transient transmission to intelligent device or local stations.			△	Modify the sequence program because the instruction formats are different.
Communication instruction (SEND, RECV, READ, SREAD, WRITE, SWRITE, REQ)	Sends/receives data to/from other stations on the CC-Link network, and reads/writes data from/to other stations.	-		△	Replace the READ and WRITE instructions with the dedicated instructions (RIRD, RIWT). Any other instructions cannot be replaced.
Remote I/O net mode	Enables communication between master and remote I/O stations.			△	Set parameters using GX Developer.
Temporary error invalid station setting function	Replaces modules used as remote stations during online without detecting an error.			○	
Online test function	Enables GX Developer to perform the loop test and start/stop the link.			○	
Monitor/diagnosis function	Enables GX Developer to perform monitor diagnosis.			○	

2.4 Switch Setting Comparison

(1) AnS series

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

Switch name	Description			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Station number setting switch	The station number of a module is set using two rotary switches. [Setting range] • In remote net mode Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64 • In remote I/O net mode Master station: 1 to 64 (The last remote I/O station number shall be set.)	There is no switch. The station number of a module is set in network parameter ("Station No.") using GX Developer. [Setting range] Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64		△	When the module is in remote I/O net mode, set the last station number in network parameter "All connect count" using GX Developer.
Mode setting switch	The operation status of a module is set using a rotary switch.	There is no switch. The operation status of a module is set in network parameter ("Mode") using GX Developer.		△	The remote net mode and remote I/O net mode are specified in network parameter using GX Developer.
Transmission speed setting switch	The transmission speed of a module is set using a rotary switch.	There is no switch. The transmission speed of a module is set in network parameter "Transmission speed" using GX Developer.		△	
Condition setting switch	The operation conditions are set using the DIP switches. [Settings] • Station type • Input data status of the data link error station • Number of occupied stations • Module mode (intelligent mode, I/O mode)	There is on switch. The conditions are set in network parameters using GX Developer.		△	The module mode setting is included in the parameter settings.

(2) QnAS series

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

Switch name	Description			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Station number setting switch	The station number of a module is set using two rotary switches. [Setting range] • In remote net mode Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64 • In remote I/O net mode Master station: 1 to 64 (The last remote I/O station number shall be set.)	There is no switch. The station number of a module is set in network parameter ("Station No.") using GX Developer. [Setting range] Master station: 0 Local station: 1 to 64 Standby master station: 1 to 64		△	When the module is in remote I/O net mode, set the last station number in network parameter "All connect count" using GX Developer.
Mode setting switch	The operation status of a module is set using a rotary switch.	There is no switch. The operation status of a module is set in network parameter ("Mode") using GX Developer.		△	The remote net mode and remote I/O net mode are specified in network parameter using GX Developer.
Transmission speed setting switch	The transmission speed of a module is set using a rotary switch.	There is no switch. The transmission speed of a module is set in network parameter "Transmission speed" using GX Developer.		△	
Condition setting switch	The operation conditions are set using the DIP switches. [Settings] • Station type • Input data status of the data link error station • Number of occupied stations	There is on switch. The conditions are set in network parameters using GX Developer.		△	The module mode setting is included in the parameter settings.

2.5 Parameter Comparison

(1) AnS series

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

Parameter name	Description			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Network parameter	Set parameters in a sequence program (TO instruction), or using the dedicated instruction (RLPA).	Set parameters using GX Developer, or the dedicated instruction (RLPASET).		△	Set new network parameters using GX Developer or the dedicated instruction (RLPASET).*1*2 For the mode, specify "Remote net[Ver.1 mode]" or "Remote I/O net mode".
Automatic refresh parameter	Read/write cyclic data using the FROM and TO instructions, or set parameters using the dedicated instruction (RRPA).	Set parameters using GX Developer, or read/write cyclic data using the FROM and TO instructions.		△	Set parameters using GX Developer, or read/write cyclic data using the FROM and TO instructions. If the dedicated instruction (RLPASET) was used to set network parameters, read/write cyclic data using the FROM and TO instructions.

(2) QnAS series

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

Parameter name	Description			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Network parameter	Set parameters using GX Developer or the sequence program (TO instruction).	Set parameters using GX Developer, or the dedicated instruction (RLPASET).		△	Set new network parameters using GX Developer or the dedicated instruction (RLPASET).*1*2 For the mode, specify "Remote net[Ver.1 mode]" or "Remote I/O net mode".
Automatic refresh parameter	Set parameters using GX Developer, or read/write cyclic data using the FROM and TO instructions.	Set parameters using GX Developer, or read/write cyclic data using the FROM and TO instructions.		△	Set parameters using GX Developer, or read/write cyclic data using the FROM and TO instructions. If the dedicated instruction (RLPASET) was used to set network parameters, read/write cyclic data using the FROM and TO instructions.

*1 Setting L series CC-Link module parameters
Parameters can be set up to four modules using GX Developer. For the fifth and subsequent modules, use the dedicated instruction to set parameters.
For details, refer to the MELSEC-L CC-Link System Master Local Module User's Manual.

*2 Delete the existing network parameter setting program.

2.6 Program Comparison

2.6.1 I/O signal comparison

(1) AnS series

(a) Input signals

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

Input signal	Signal name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
X0	Module error	Module error		○	
X1	Data link status at host station	Host data link status		○	
X2	Parameter setting status	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and check with SB006D (Parameter setting status).
X3	Data link status at other stations	Other station data link status		○	
X4	Module reset acceptance complete	Use prohibited		×	Delete the part corresponding to the function from the sequence program. If the switch setting is changed, power off and on the programmable controller system or reset the CPU module.
X5	Use prohibited	Use prohibited		○	
X6	Data link startup by buffer memory parameter normal completion	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
X7	Data link startup by buffer memory parameter error completion				
X8	Data link startup by E^2PROM parameter normal completion				
X9	Data link startup by E^2PROM parameter error completion				
XA	Parameter registration to E^2PROM normal completion				
XB	Parameter registration to E^2PROM error completion				
XC	Use prohibited	Use prohibited		○	
XD	E^2PROM erasure normal completion	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
XE	E^2PROM erasure abnormal completion				
XF	Module ready	Module ready		○	
X10	Use prohibited	Use prohibited		○	
X11					
X12					
X13					
X14					
X15					
X16					
X17					
X18					
X19					
X1A					
X1B					
X1C					
X1D					
X1E					
X1F					

(b) Output signals

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

Output signal	Signal name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Y0	Refresh instruction	Use prohibited		△	Data are automatically refreshed. Delete the part corresponding to the function from the sequence program.
Y1	Use prohibited	Use prohibited		○	
Y2					
Y3					
Y4	Module reset request	Use prohibited		×	Delete the part corresponding to the function from the sequence program. If the switch setting is changed, power off and on the programmable controller system or reset the CPU module.
Y5	Use prohibited	Use prohibited		○	
Y6	Data link startup request from buffer memory parameters	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
Y7	Use prohibited	Use prohibited		○	
Y8	Data link startup request from the E^2PROM parameters	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
Y9	Use prohibited	Use prohibited		○	
YA	Parameter registration request to E^2PROM	Use prohibited		○	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
YB	Use prohibited	Use prohibited		○	
YC					
YD	E^2PROM erasure request	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
YE	Use prohibited	Use prohibited		○	
YF					
Y10					
Y11					
Y12					
Y13					
Y14					
Y15					
Y16					
Y17					
Y18					
Y19					
Y1A					
Y1B					
Y1C	Bank switch specification of buffer memory	Use prohibited		△	Bank switching is not required (refer to Section 2.6.2).
Y1D					
Y1E	Use prohibited	Use prohibited		○	
Y1F					

(2) QnAS series

(a) Input signals

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

Input signal	Signal name			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
X0	Module error	Module error		○	
X1	Data link status at host station	Host data link status		○	
X2	Parameter setting status	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and check with SB006D (Parameter setting status).
X3	Data link status at other stations	Other station data link status		○	
X4	Module reset acceptance complete	Use prohibited		×	Delete the part corresponding to the function from the sequence program. If the switch setting is changed, power off and on the programmable controller system or reset the CPU module.
X5	Use prohibited	Use prohibited		○	
X6	Data link startup by buffer memory parameter normal completion	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
X7	Data link startup by buffer memory parameter error completion				
X8	Data link startup by E^2PROM parameter normal completion				
X9	Data link startup by E^2PROM parameter error completion				
XA	Parameter registration to E^2PROM normal completion				
XB	Parameter registration to E^2PROM error completion				
XC	Use prohibited	Use prohibited		○	
XD	E^2PROM erasure normal completion	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
XE	E^2PROM erasure abnormal completion				
XF	Module ready	Module ready		○	
X10	Use prohibited	Use prohibited		○	
X11					
X12					
X13					
X14					
X15					
X16					
X17					
X18					
X19					
X1A					
X1B					
X1C					
X1D					
X1E					
X1F					

(b) Output signals

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

Output signal	Signal name			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
Y0	Refresh instruction	Use prohibited		△	Data are automatically refreshed. Delete the part corresponding to the function from the sequence program.
Y1	Use prohibited	Use prohibited		○	
Y2					
Y3					
Y4	Module reset request	Use prohibited		×	Delete the part corresponding to the function from the sequence program. If the switch setting is changed, power off and on the programmable controller system or reset the CPU module.
Y5	Use prohibited	Use prohibited		○	
Y6	Data link startup request from buffer memory parameters	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
Y7	Use prohibited	Use prohibited		○	
Y8	Data link startup request from the E^2PROM parameters	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
Y9	Use prohibited	Use prohibited		○	
YA	Parameter registration request to E^2PROM	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
YB	Use prohibited	Use prohibited		○	
YC					
YD	E^2PROM erasure request	Use prohibited		△	Delete the part corresponding to the function from the sequence program, and set parameters using GX Developer or the dedicated instruction (RLPASET).
YE	Use prohibited	Use prohibited		○	
YF					
Y10					
Y11					
Y12					
Y13					
Y14					
Y15					
Y16					
Y17					
Y18					
Y19					
Y1A					
Y1B					
Y1C					
Y1D					
Y1E					
Y1F					

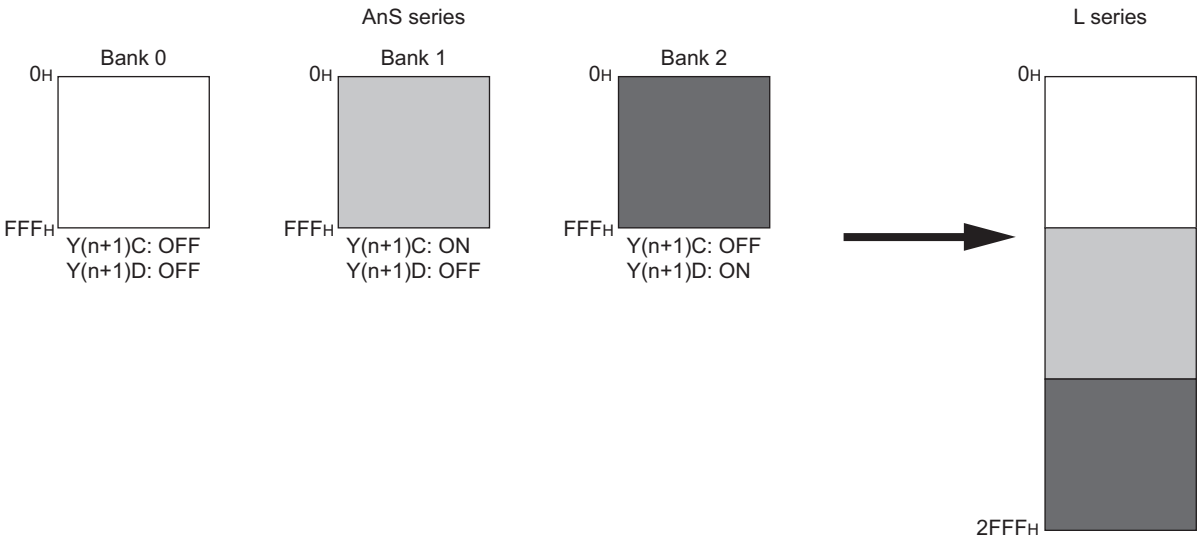
2.6.2 Buffer memory address comparison

(1) AnS series

The buffer memory of the AnS series module is separated into three banks, bank 0, 1, and 2. The banks can be switched by turning on/off Y1C and Y1D.
With the L series modules, however, the buffer memory is not separated and bank switching is not required.
For this reason, the buffer memory addresses for the communication buffer and the automatic update buffer differ between the AnS and L series modules. (The addresses in parenthesis are for the L series modules.)

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

Address			Name			Compatibility	Precautions for replacement
Bank	Hexadecimal	Decimal	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
0	0_H to $5F_H$	0 to 95	Parameter information area	Parameter information area		○	
	60_H to $7F_H$	96 to 127	Use prohibited	Use prohibited		○	
	80_H to CD_H	128 to 205	Parameter information area	Parameter information area		○	
	CE_H to DF_H	206 to 223	Use prohibited	Parameter information area		△	These addresses are added for the remote net Ver.2 mode, and not used after replacement.
	$E0_H$ to $15F_H$	224 to 351	Remote input (RX)	Remote input (RX)		○	
	160_H to $1DF_H$	352 to 479	Remote output (RY)	Remote output (RY)		○	
	$1E0_H$ to $2DF_H$	480 to 735	Remote register (RWw)	Remote register (RWw)		○	
	$2E0_H$ to $3DF_H$	736 to 991	Remote register (RWr)	Remote register (RWr)		○	
	$3E0_H$ to $5DF_H$	992 to 1503	Use prohibited	Slave station offset, size information		△	These addresses are added for the remote net Ver.2 mode, and not used after replacement.
	$5E0_H$ to $5FF_H$	1504 to 1535	Link special relay (SB)	Link special relay (SB)		○	
	600_H to $7FF_H$	1536 to 2047	Link special register (SW)	Link special register (SW)		○	
	800_H to $9FF_H$	2048 to 2559	Use prohibited	Use prohibited		○	
	$A00_H$ to FFF_H	2560 to 4095	Random access buffer	Random access buffer		○	
1	0 to FFF_H (1000_H to $1FFF_H$)	0 to 4095 (4096 to 8191)	Communication buffer	Communication buffers		△	Delete the bank switching processing program.
2	0 to FFF_H (2000_H to $2FFF_H$)	0 to 4095 (8192 to 12287)	Automatic updating buffer	Automatic update buffer		△	Delete the bank switching processing program.
-	- (3000_H to $3FFF_H$)	- (12288 to 16383)	-	Use prohibited		-	
-	- (4000_H to $53FF_H$)	- (16384 to 21503)		Ver.2 compatible area		△	These addresses are used when the remote net Ver.2 mode or remote net additional mode is selected, and not used after replacement.
-	- (5400_H to $7FFF_H$)	- (21504 to 32767)		Use prohibited		-	



(2) QnAS series

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

Buffer memory address		Buffer memory name			Compatibility	Precautions for replacement
Hexadecimal	Decimal	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
0_H to $5F_H$	0 to 95	Parameter information area	Parameter information area		○	
60_H to $7F_H$	96 to 127	Use prohibited	Use prohibited		○	
80_H to CD_H	128 to 205	Parameter information area	Parameter information area		○	
CE_H to DF_H	206 to 223	Use prohibited	Parameter information area		△	These addresses are added for the remote net Ver.2 mode, and not used after replacement.
$E0_H$ to $15F_H$	224 to 351	Remote input (RX)	Remote input (RX)		○	
160_H to $1DF_H$	352 to 479	Remote output (RY)	Remote output (RY)		○	
$1E0_H$ to $2DF_H$	480 to 735	Remote register (RWw)	Remote register (RWw)		○	
$2E0_H$ to $3DF_H$	736 to 991	Remote register (RWr)	Remote register (RWr)		○	
$3E0_H$ to $5DF_H$	992 to 1503	Use prohibited	Slave station offset, size information		△	These addresses are added for the remote net Ver.2 mode, and not used after replacement.
$5E0_H$ to $5FF_H$	1504 to 1535	Link special relay (SB)	Link special relay (SB)		○	
600_H to $7FF_H$	1536 to 2047	Link special register (SW)	Link special register (SW)		○	
800_H to $9FF_H$	2048 to 2559	Use prohibited	Use prohibited		○	
$A00_H$ to FFF_H	2560 to 4095	Random access buffer	Random access buffer		○	
1000_H to $1FFF_H$	4096 to 8191	Transmission and receiving buffer	Communication buffers		○	
2000_H to $2FFF_H$	8192 to 12287	Automatic updating buffer	Automatic update buffer		○	
- (3000_H to $3FFF_H$)	- (12288 to 16383)	-	Use prohibited		-	
- (4000_H to $53FF_H$)	- (16384 to 21503)		Ver.2 compatible area		△	These areas are added for the L series modules, and not used after replacement.
- (5400_H to $7FFF_H$)	- (21504 to 32767)		Use prohibited		-	

2.6.3 Link special relay (SB)/link special register (SW) comparison

(1) AnS series

The following table lists SB/SW areas which have different application between the AnS series and L series.

(a) Link special relay (SB)

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

Number	Name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
SB0001	Master station switching data link start	Refresh instruction at standby master switching		○	The specifications are the same.
SB0003	-	Refresh instruction when changing parameters by the dedicated instruction		△	Use this area to set network parameters using the RLPASET instruction.
SB0007		Master station duplication error canceling request		△	These areas are added for the L series modules, and not used after replacement.
SB000B		Transmission speed test request			
SB000C		Forced master switching			
SB000D		Remote device station initialization procedure registration instruction			
SB0042	Master station switch data link start acceptance	Refresh instruction acknowledgement status at standby master switching		△	These areas are added for the L series modules, and not used after replacement.
SB0043	Master station switch data link start complete	Refresh instruction complete status at standby master switching			
SB0046	-	Forced master switching executable status			
SB004E	Parameter setting test acceptance status	Parameter information read acknowledgement status		×	The application was changed. Delete the part corresponding to the function from the sequence program because the parameter setting test function is not required in L series.
SB004F	Parameter setting test complete status	Parameter information read completion status			
SB0057	-	Master station duplication error canceling acknowledgement		△	These areas are added for the L series modules, and not used after replacement.
SB0058		Master station duplication error canceling complete			
SB005A		Master switching request acknowledgement			
SB005B		Master switching request complete			
SB005C		Forced master switching request acknowledgement			
SB005D		Forced master switching request complete			
SB005E		Execution status of remote device station initialization procedure			
SB005F		Completion status of remote device station initialization procedure			
SB0069	Module mode	-		△	Set the mode in network parameter for the L series modules. (The mode can be checked in SW0060.)

Number	Name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
SB006F	-	Setting status of block guarantee of cyclic data per station		△	These areas are added for the L series modules, and not used after replacement.
SB0079		Master station return specification information			
SB007B		Host master/standby master operation status			
SB007C		Slave station refresh/compulsory clear setting status in case of CPU module STOP			
SB00B4		Standby master station test result			
SB0184		Transmission speed test result for standby master station			
SB0185		Transmission speed test accept status			
SB0186		Transmission speed test completion status			

(b) Link special register (SW)

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

Number	Name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
SW000B	-	Dedicated instruction retry count setting		△	These areas are added for the L series modules, and not used after replacement.
SW0014 to SW0017		Specification of remote device station to be initialized			
SW0043	Master station switch data link start result	Refresh instruction at standby master switching result		○	The specifications are the same.
SW0052	-	Automatic CC-Link startup execution result		△	These areas are added for the L series modules, and not used after replacement.
SW0057		Master station duplication error canceling result			
SW0058		Detailed LED display status			
SW0059		Transmission speed setting status			
SW005D		Forced master switching instruction result			
SW005F		Remote device station initialization procedure registration instruction result			
SW0062	Condition setting switch status	Module operating status		△	In the L series modules, parameter setting status is stored.
SW00B9	E^2PROM registration status	-		△	These areas are not used because there is no E^2PROM in the L series modules (refer to Section 2.7).
SW00BA	E^2PROM erasure result				
SW00BB	Checks the number of times when parameters can be registered to E^2PROM.				
SW0110 to SW011F	-	Remote device station initialization procedure registration execution individual information (targets 1 to 16)		△	These areas are added for the L series modules, and not used after replacement.
SW0140 to SW0143		Compatible CC-Link ver. information			
SW0144 to SW0147		CC-Link ver. installation/parameter matching status			
SW0148		Parameter mode			
SW0149		Host parameter mode			
SW183		Transmission speed test result			
SW0184 to SW0187		Transmission speed test result for standby master station			

(2) QnAS series

The following table lists SB/SW areas which have different application between the QnAS series and L series.

(a) Link special relay (SB)

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

Number	Name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
SB0001	Master station switching data link start	Refresh instruction at standby master switching		○	The specifications are the same.
SB0003	-	Refresh instruction when changing parameters by the dedicated instruction		△	These areas are added for the L series modules, and not used after replacement.
SB0007		Master station duplication error canceling request			
SB000B		Transmission speed test request			
SB000C		Forced master switching			
SB000D		Remote device station initialization procedure registration instruction			
SB0030	Communication instruction (1) acceptance	-		△	These areas are not used in the L series modules. Delete the part corresponding to the function from the sequence program, and replace the READ and WRITE instructions with the RIRD and RIWT instructions.
SB0031	Communication instruction (1) complete				
SB0032	Communication instruction (2) acceptance				
SB0033	Communication instruction (2) complete				
SB0046	-	Forced master switching executable status		△	These areas are added for the L series modules, and not used after replacement.
SB0057		Master station duplication error canceling acknowledgement			
SB0058		Master station duplication error canceling complete			
SB005A		Master switching request acknowledgement			
SB005B		Master switching request complete			
SB005C		Forced master switching request acknowledgement			
SB005D		Forced master switching request complete			
SB005E		Execution status of remote device station initialization procedure			
SB005F		Completion status of remote device station initialization procedure			
SB0069	Module mode	-		△	Set the mode in network parameter for the L series modules. (The mode can be checked in SW0060.)
SB006F	-	Setting status of block guarantee of cyclic data per station		△	These areas are added for the L series modules, and not used after replacement.
SB0079		Master station return specification information			
SB007B		Host master/standby master operation status			
SB007C		Slave station refresh/compulsory clear setting status in case of CPU module STOP			

Number	Name			Compatibility	Precautions for replacement
	A1SJ61BT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
SB00A0	RECV instruction (1) execution request flag	-		△	These areas are not used in the L series modules. Delete the part corresponding to the function from the sequence program.
SB00A1	RECV instruction (2) execution request flag				
SB00B4	-	Standby master station test result		△	These areas are added for the L series modules, and not used after replacement.
SB0184		Transmission speed test result for standby master station			
SB0185		Transmission speed test accept status			
SB0186		Transmission speed test completion status			

(b) Link special register (SW)

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

Number	Name			Compatibility	Precautions for replacement
	A1SJ61QBT11	L26CPU-BT/PBT (Built-in CC-Link function)	LJ61BT11		
SW000B	-	Dedicated instruction retry count setting		△	These areas are added for the L series modules, and not used after replacement.
SW0014 to SW0017		Specification of remote device station to be initialized			
SW0052		Automatic CC-Link startup execution result			
SW0057		Master station duplication error canceling result			
SW0058		Detailed LED display status			
SW0059		Transmission speed setting status			
SW005D		Forced master switching instruction result			
SW005F		Remote device station initialization procedure registration instruction result			
SW0062	Condition setting switch status	Module operating status		△	The parameter setting status is stored in the L series modules.
SW00B9	E^2PROM registration status	-		△	These areas are not used because there is no E^2PROM in the L series modules (refer to Section 2.7).
SW00BA	E^2PROM erasure result				
SW00BB	Check the number of times when parameters can be registered to E^2PROM.				
SW0110 to SW011F	-	Remote device station initialization procedure registration execution individual information (targets 1 to 16)		△	These areas are added for the L series modules, and not used after replacement.
SW0140 to SW0143		Compatible CC-Link ver. information			
SW0144 to SW0147		CC-Link ver. installation/parameter matching status			
SW0148		Parameter mode			
SW0149		Host parameter mode			
SW0183		Transmission speed test result			
SW0184 to SW0187		Transmission speed test result for each station			

2.7 Other Precautions

This section describes other precautions for module replacement.

(1) Peripheral connection modules

If an AJ65BT-G4 type peripheral connection module has been used in the AnS/QnAS series system, replace it with an AJ65BT-R2N type CC-Link system RS-232C interface module (setting to MELSOFT connection).
The AJ65BT-G4 type peripheral connection module cannot be used in the L series system.
(The AJ65BT-G4-S3 type peripheral connection module can also be used in the L series system.)

(2) Processing time

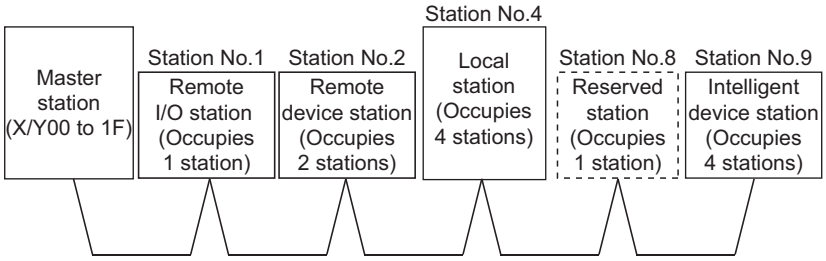
The sequence scan time and link refresh time differs between AnS/QnAS and L series.
For the processing time, refer to the manual for the module used.

(3) Parameter registration to E^2PROM

Since the L 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.
To register parameters in the CPU module, set network parameters for the L series CC-Link system master/local module using GX Developer.

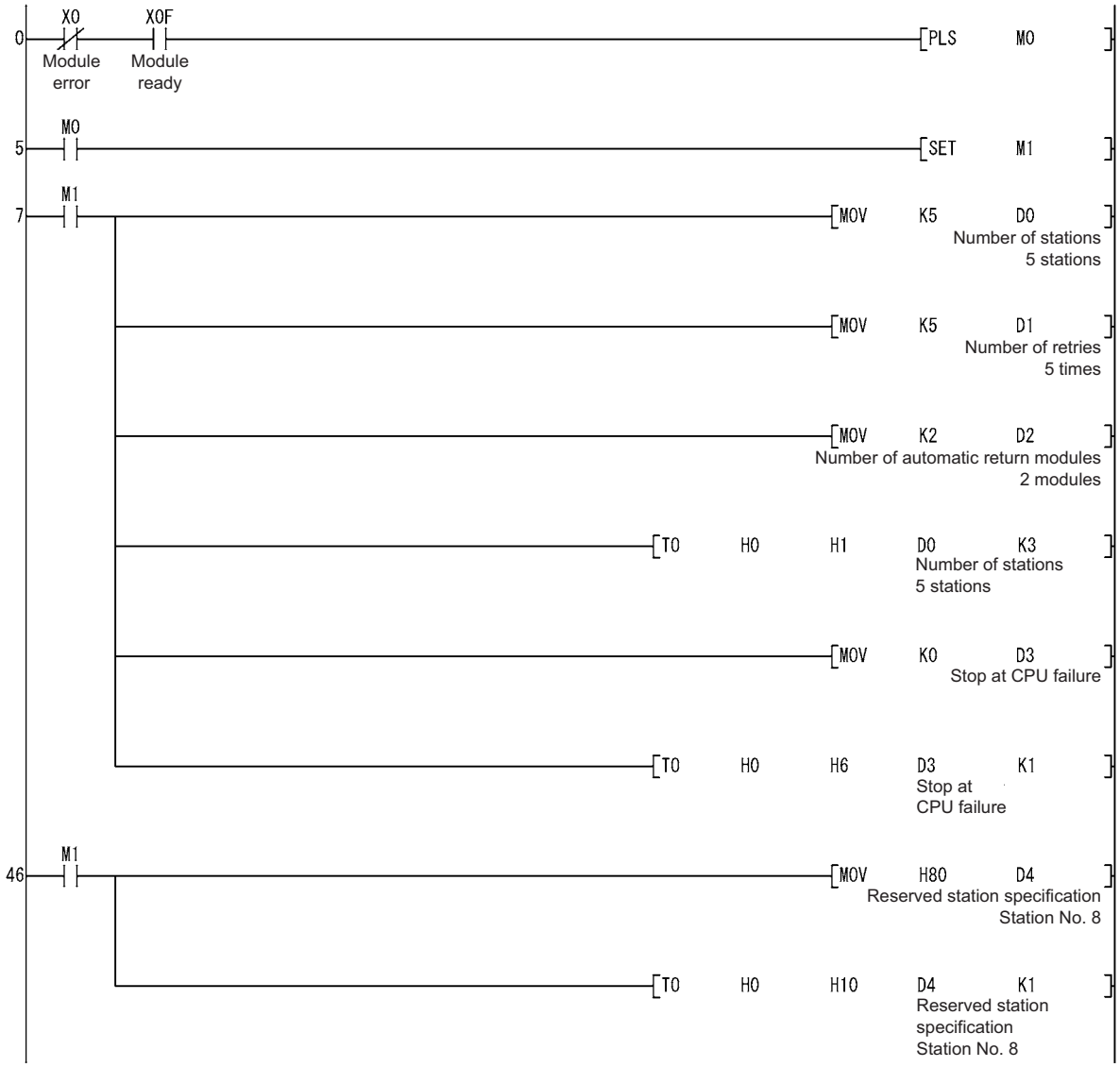
2.8 Parameter Setting Examples

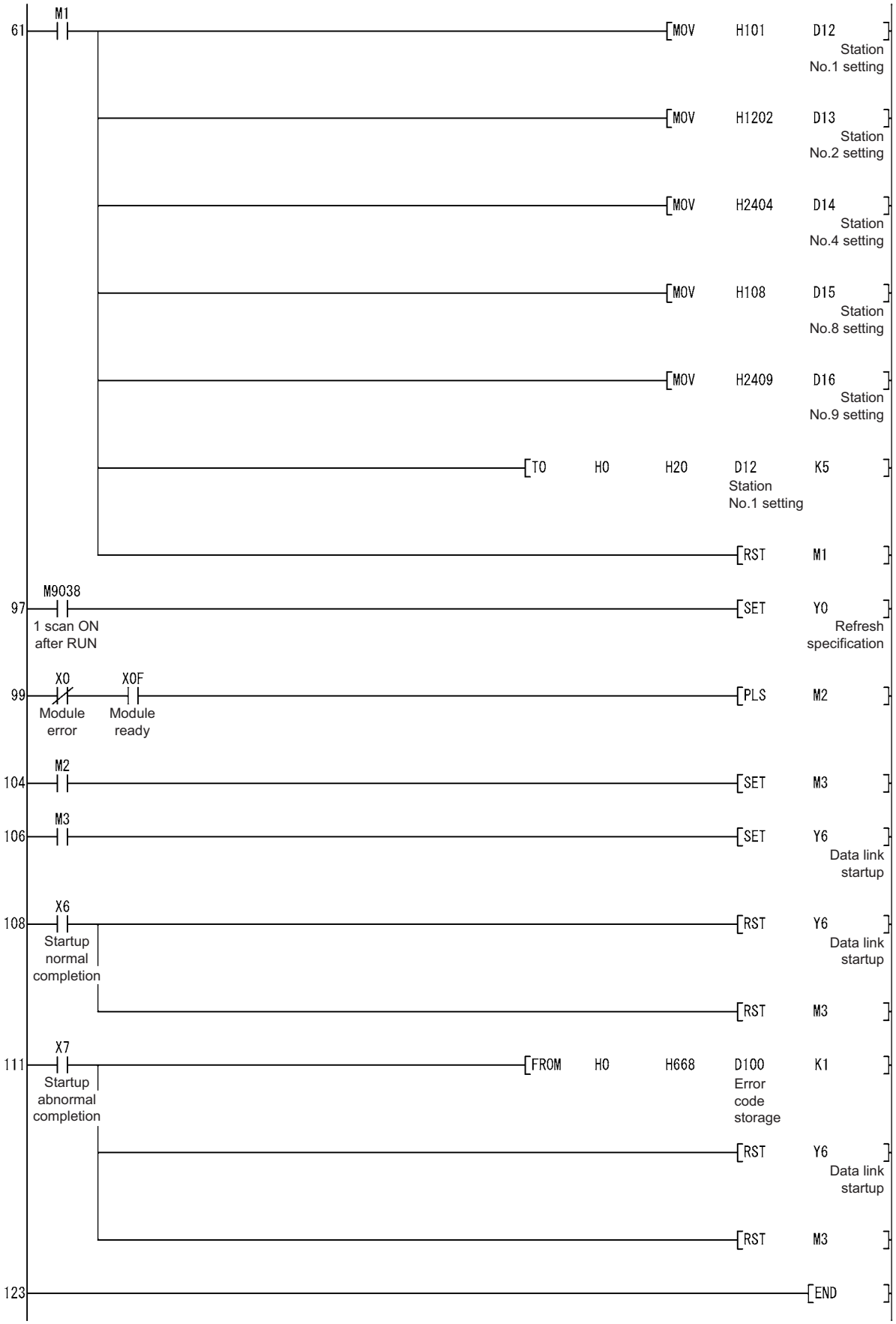
This section shows examples of parameter settings for AnS series systems and L series systems. In AnS series systems, parameters are set using a sequence program (TO instruction), while parameters are set using GX Developer in L series systems.
The system configuration will be as follows.



2.8.1 AnS series parameter setting example

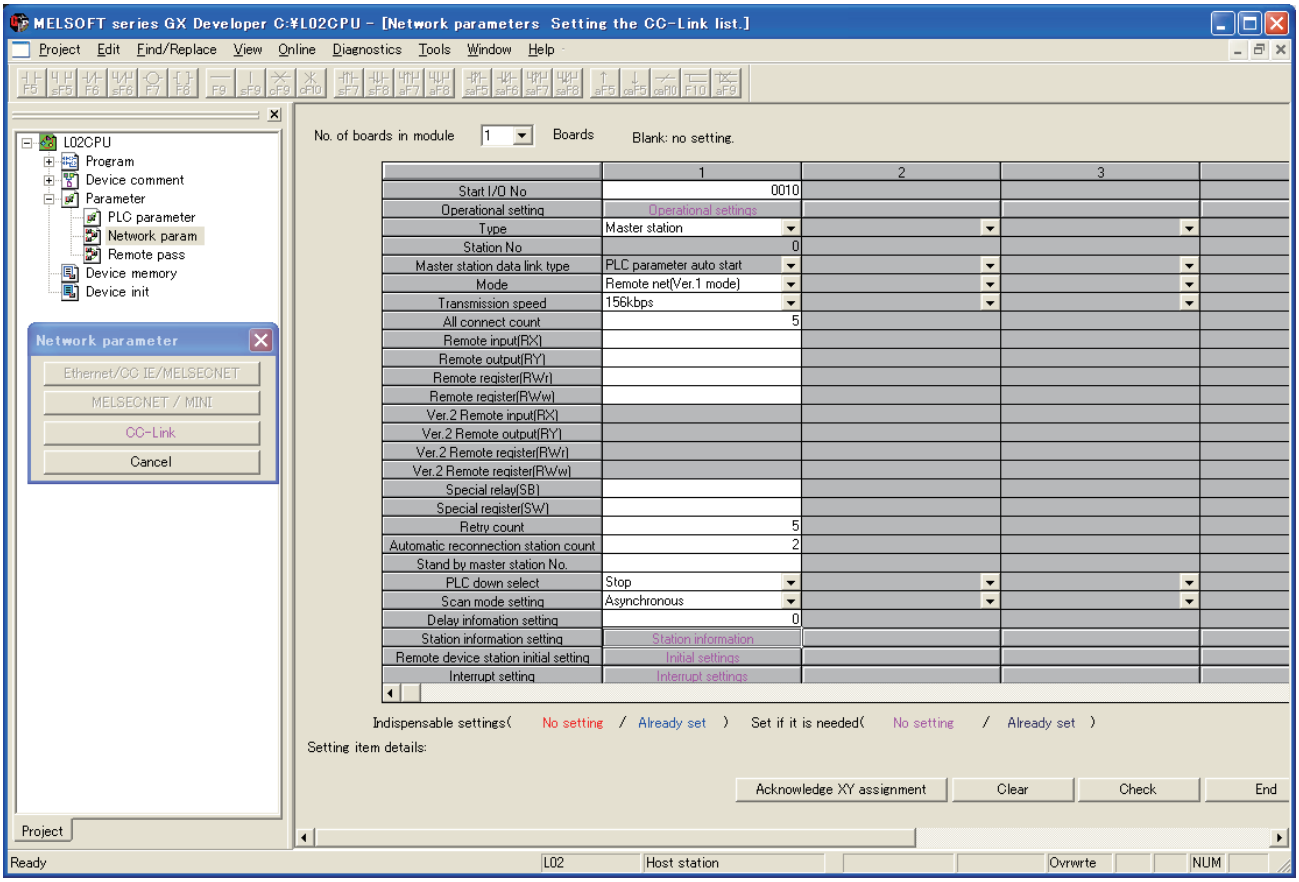
The following is a parameter setting example using a sequence program (TO instruction).

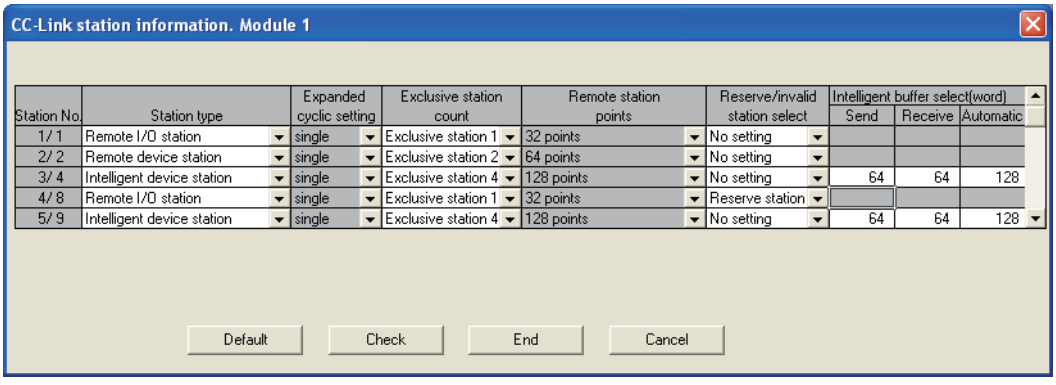



61
M1
MOV H101 D12
Station No.1 setting
MOV H1202 D13
Station No.2 setting
MOV H2404 D14
Station No.4 setting
MOV H108 D15
Station No.8 setting
MOV H2409 D16
Station No.9 setting
TO H0 H20 D12 K5
Station No.1 setting
RST M1
97
M9038
1 scan ON after RUN
SET Y0
Refresh specification
99
X0
Module error
X0F
Module ready
PLS M2
104
M2
SET M3
106
M3
SET Y6
Data link startup
108
X6
Startup normal completion
RST Y6
Data link startup
RST M3
111
X7
Startup abnormal completion
FROM H0 H668 D100 K1
Error code storage
RST Y6
Data link startup
RST M3
123
END

2.8.2 L series parameter setting example

The following is a parameter setting example using GX Developer.





3 EXTERNAL DIMENSIONS

3.1 External Dimensions

For external dimensions of modules described in this handbook, refer to the user's manual for each module.
For external dimensions of base units for the MELSEC-AnS/QnAS (small type) series, refer to the following.

No.	Handbook	Manual number	Transition target	
			AnS/ QnAS	L
1	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook (Fundamentals)	L08258ENG	○	○

Memo

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 condition with less dust or no corrosive gas.

(4) The battery capacity of an A6BAT or A8BAT battery or a lithium-coin battery (commercially available) for memory card will be decreased by its self-discharging even when not used. Replace it with a 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 use 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
CPU module (Power supply built-in type)	A1SJHCPU
Power supply module	A1S61PN, A1S62PN, A1S63P
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 once a year to activate it. Or, rotate products at the periodic inspection (in every 1 year or two).

[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 Relevant Manuals

Appendix 2.1 Replacement handbooks

(1) Transition guides

No.	Manual name	Manual number	Transition target	
			A (large)	AnS (small)
1	MELSEC-A/QnA Series Transition Guide	L-08077E	○	×
2	MELSEC-AnS/QnAS Series Transition Guide	-	×	○

(2) Transition handbooks

No.	Manual name	Manual number	Transition target	
			A (large)	AnS (small)
1	Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook (Fundamentals)	L-08043ENG	○	×
	Transition from MELSEC-AnS/QnAS (Small Type) Series to Q Series Handbook (Fundamentals)	L-08219ENG	×	○
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook (Fundamentals)	L08258ENG	×	○
2	Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook (Intelligent Function Modules)	L-08046ENG	○	×
	Transition from MELSEC-AnS/QnAS (Small Type) Series to Q Series Handbook (Intelligent Function Modules)	L-08220ENG	×	○
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook (Intelligent Function Modules)	L008259ENG	×	○
3	Transition from MELSEC-A/QnA (Large Type), AnS/QnAS (Small Type) Series to Q Series Handbook (Network Modules)	L-08048ENG	○	○
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook (Network Modules)	L08260ENG	×	○
4	Transition from MELSEC-A/QnA (Large Type), AnS/QnAS (Small Type) Series to Q Series Handbook (Communications)	L-08050ENG	○	○
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook (Communications)	L08261ENG	×	○
5	Transition from MELSEC-A0J2H Series to Q Series Handbook	L-08060ENG	○	○
6	Transition from MELSECNET/MINI-S3, A2C(I/O) to CC-Link Handbook	L-08061ENG	○	○
7	Transition from MELSEC-I/OLINK to CC-Link/LT Handbook	L-08062ENG	○	○
8	Transition of CPUs in MELSEC Redundant System Handbook (Transition from Q4ARCPU to QnPRHCPU)	L-08117ENG	○	×

(3) Transition examples manual

No.	Manual name	Manual number	Transition target	
			A (large)	AnS (small)
1	MELSEC-A/QnA Series Transition Examples	L-08121E	○	○

(4) Others

No.	Manual name	Manual number	Transition target	
			A (large)	AnS (small)
1	Procedures for Replacing Positioning Module AD71 with QD75	FA-A-0060	○	○
2	Precautions for replacing A/QnA (large type) series CPU with Universal model QCPU	FA-A-0068	○	×

Appendix 2.2 AnS series

No.	Manual name	Manual number	Model code
1	CC-Link System Master/Local Module Type AJ61BT11/A1SJ61BT11 User's Manual	IB-66721	13J872

Appendix 2.3 QnAS series

No.	Manual name	Manual number	Model code
1	CC-Link System Master/Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual	IB-66722	13J873

Appendix 2.4 L series

No.	Manual name	Manual number	Model code
1	MELSEC-L CC-Link System Master/Local Module User's Manual	SH-080895ENG	13JZ41

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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.

L(NA)08260ENG-A

Mitsubishi Programmable Controller

MITSUBISHI ELECTRIC CORPORATION

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NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN

Specifications subject to change without notice.

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