

# MITSUBISHI

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# MELSECNET/10

# Network Module

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User's Manual  
(Hardware)

## A1SJ71QLP21GE

Thank you for buying the Mitsubishi general-purpose programmable controller MELSEC-QnA Series

Prior to use, please read both this manual and detailed manual thoroughly and familiarize yourself with the product.



MODEL	A1SJ71QLP21GE-U-E
MODEL CODE	13JL71
IB(NA)-66880-D(0706)MEE	

# ● SAFETY PRECAUTIONS ●

(Always read before starting use.)

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

The instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.

In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".




**DANGER**

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 medium or slight personal injury or physical damage.

Note that the  **CAUTION** level may lead to a serious consequence according to the circumstances.

Always follow the instructions of both levels because they are important to personal safety.

Please store this manual in a safe place and make it accessible when required. Always forward it to the end user.

## [INSTALLATION PRECAUTIONS]

### **CAUTION**

- Use the programmable controller in an environment that meets the general specifications contained in CPU module user's manual. Using this programmable controller in an environment outside the range of the general specifications could result in electric shock, fire, erroneous operation, and damage to or deterioration of the product.
- Fully insert the projection on the bottom of the module into the hole in the base unit, press the module into position, and tighten the module fixing screws.

Not installing the module correctly or not fixing it with the screws could result in malfunction, damage, or drop of some pieces of the product.

Always tighten the module fixing screws within the specified torque range.

Loose tightening could result in drop of some pieces of the product, short-circuit, and malfunction.

Tightening the screws too much could result in drop of some pieces of the product, short-circuit, or malfunction due to the breakage of a screw or the module.

## [INSTALLATION PRECAUTIONS]

### CAUTION

- Completely turn off the externally supplied power used in the system before mounting or removing the module.  
Not doing so could result in damage to the product.
- Do not directly touch the printed circuit board, the conducting parts and electronic parts of the module. It may cause damage or erroneous operation.
- Before handling the module, touch a grounded metal object to discharge the static electricity from the human body. Failure to do so may cause malfunction or failure of the module.

## [WIRING PRECAUTIONS]

### DANGER

- Before installation or wiring, be sure to shut off all phases of the external power supply used by the system.  
Failure to do so may cause electric shocks or damage the product.

### CAUTION

- Be sure there are no foreign substances such as sawdust or wiring debris inside the module. Such debris could cause fires, damage, or erroneous operation.
- Make sure to place the communication and power cables into a duct or fasten them using a clamp.  
Cables not placed in the duct or not clamped may hang or shift, allowing them to be accidentally pulled, which may cause a module malfunction and cable damage.
- When removing the communication cable or power cables from the module, do not pull the cable. When removing the cable with a connector, hold the connector on the side that is connected to the module.  
When removing the cable connected to the terminal block, first loosen the screws on the terminal block.  
Pulling the cable that is still connected to the module may cause malfunction or damage to the module or cable.

## About the Manuals

The following product manuals are available. Please use this table as a reference to request the appropriate manual as necessary.

Detailed Manual

Manual name	Manual No. (Model code)
For QnA/Q4AR MELSECNET/10 Network System Reference Manual	IB-66690 (13JF78)

Before use of this module, be sure to read the For QnA/Q4AR MELSECNET/10 Network System Reference Manual

### Compliance with the EMC Directive and the Low Voltage Directive

When incorporating the Mitsubishi programmable controller into other industrial machinery or equipment and keeping compliance with the EMC and low voltage directives, refer to Chapter 3 "EMC Directive and Low Voltage Instruction" of the User's Manual (Hardware) for the CPU module used or the programmable controller CPU supplied with the base unit.

The CE logo is printed on the rating plate of the programmable controller, indicating compliance with the EMC and low voltage directives.

For making this product compliant with the EMC and low voltage directives, please refer to Section 3.1.3 "Cable" in Chapter 3 of the above-mentioned user's manual.

# 1. Overview

This manual explains the specifications and names of each part, etc., of the A1SJ71QLP21GE model MELSECNET/10 network module (abbreviated as Network Modules) which are used with MELSECNET/10 network system of the MELSEC-QnA series.

(1) The use, cable used and installation position of the Network Modules are indicated on the following chart.

	Application	Cable used		Position
		Optical fiber cable	Coaxial cable	
A1SJ71QLP21GE	The control station, normal station and remote master station of MELSECNET/10	○ (GI-62.5/125 cables)	-	Main base, Extension base I/O slot

(2) After unpacking the Network Modules, confirm that any of the following products is enclosed.

Model	Description	Quantity
A1SJ71QLP21GE	Model A1SJ71QLP21GE MELSECNET/10 network module (optical loop type)	1

## 2. Performance Specifications

### 2.1 Performance specifications for the network module

The performance specifications for Network Modules are indicated as follows.

Item		Specifications
Maximum link points per network	X/Y	8192 points
	B	8192 points
	W	8192 points
Maximum link points per station	PLC to PLC network	$\left\{ \frac{Y+B}{8} + (2 \times W) \right\} \leq 2000$ bytes
	Remote I/O network	<ul style="list-style-type: none"> <li>• Remote master station → remote I/O station  <math>\left\{ \frac{Y+B}{8} + (2 \times W) \right\} \leq 1600</math> bytes</li> <li>• Remote I/O station → remote master station  <math>\left\{ \frac{X+B}{8} + (2 \times W) \right\} \leq 1600</math> bytes</li> <li>• Remote master station → remote sub master station            Remote sub master station → remote master station  <math>\left\{ \frac{Y+B}{8} + (2 \times W) \right\} \leq 2000</math> bytes</li> </ul>
Communication speed		10Mbps (equivalent to 20Mbps for multiple transmission)
Communication method		Token ring
Synchronization method		Frame synchronization
Encoding method		NRZI encoding (Non Return to Zero Inverted)
Transmission route format		Duplex optical loop
Transmission format		Conform to HDLC (frame format)
Maximum number of networks		239 (The sum total of PLC to PLC network and remote I/O network)
Maximum number of groups		9 (Only for PLC to PLC network)
Number of stations for connection per network	PLC to PLC network	64 stations (Control station: 1 Normal stations: 63)
	Remote I/O network	65 stations (Remote master station: 1 Remote I/O stations: 64)
Overall distance (Station-to-station distance)		30km (2km)
Error control method		Retry by CRC ( $X^{16}+X^{12}+X^5+1$ ) and overtime
RAS function		<ul style="list-style-type: none"> <li>• Loop back function due to abnormality detection and cable disconnection</li> <li>• Diagnostic function for local link circuit check</li> <li>• Prevention of system down due to shifting to control station (Only for PLC to PLC networks)</li> <li>• Abnormality detection by link special relay, resistor</li> <li>• Network monitor, each type of diagnostic function</li> <li>• Transient transmission possible even when there is programmable controller CPU abnormality (cause of abnormality can be verified from other station)</li> </ul>
Transient transmission		N:N communication (Monitor, program upload/download, etc.)
Connection cable		GI-62.5/125 optical fiber cable (Arranged by user *1)
Applicable connector		1-core optical connector plug (Arranged by user *1)
5VDC current consumption		0.47A
Weight		0.18kg *2
No. of occupied I/O points		32 points (I/O assignment: 32 points as special)

\*1: Specialised training and specific tools are required to connect the connector to the optical fiber cable; the connector itself is a custom product. Please contact your nearest Mitsubishi Electric System Service Corporation when purchasing these items.

\*2: The weight for the hardware version C or earlier is 0.27kg.

For general specifications of the network module, refer to the user's manual for the programmable controller CPU that is to be used.

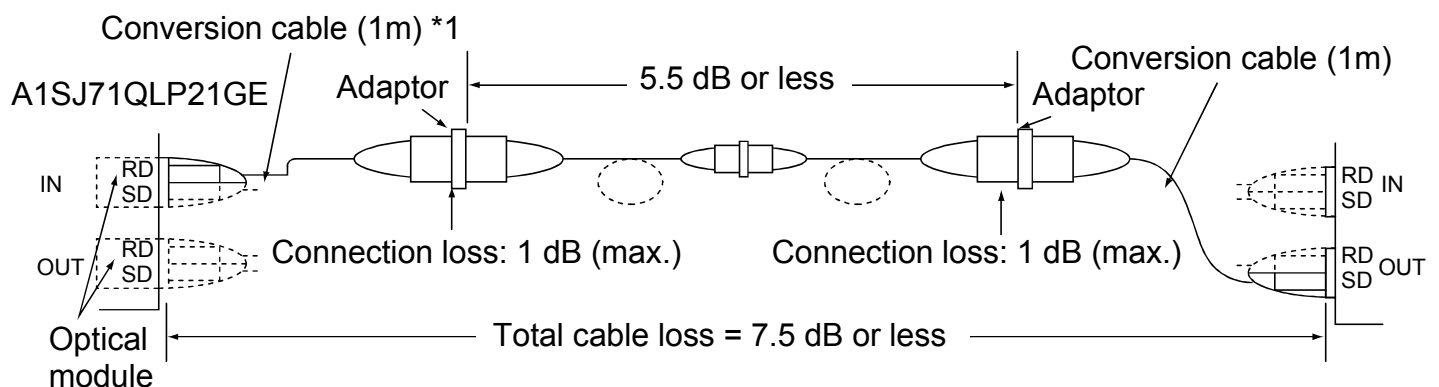
## 2.2 GI-62.5/125 optical fiber cable specifications

### (1) Applicable cable specifications

- The specifications for the GI-62.5/125 cable are given below.
- If you prepare a GI-62.5/125 cable yourself, it must comply with the specifications indicated below.

Item	Specification
Fiber type	GI (graded index) type multimode quartz glass
Core diameter	62.5 $\mu$ m
Clad diameter	125 $\mu$ m
Transmission loss	3dB/km or less
Wave length	0.85 $\mu$ m
Transmission band	300 MHz km or more

### (2) Cable loss



#### \*1: Conversion cable

Conversion Type	Cable
CA type $\leftrightarrow$ FC type	AGE-1P-CA/FC1.5M-A
CA type $\leftrightarrow$ ST type	AGE-1P-CA/ST1.5M-A
CA type $\leftrightarrow$ SMA type	AGE-1P-CA/SMA1.5M-A

Purchased from: Mitsubishi Electric Europe GmbH

## 3. Handling

### 3.1 Cable length restrictions between stations

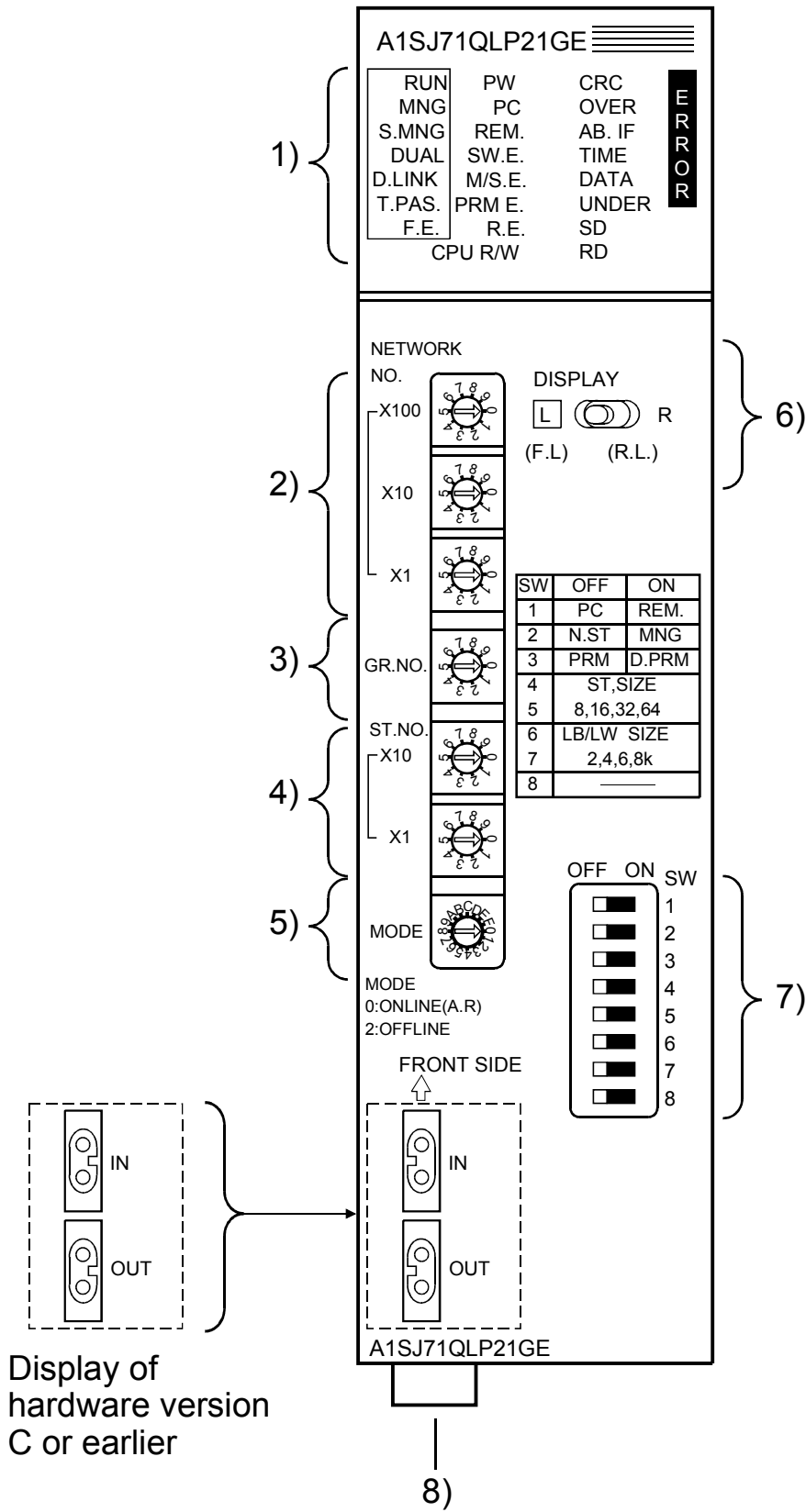
- (1) The main modules case is made of plastic, so do not drop it or subject it to strong impacts.
- (2) Do not dismount the printed wiring board from the case. It may damage the module.
- (3) When wiring, be careful never to let foreign matter from the above module such as wiring scraps get inside the module. If something goes in, get rid of it.
- (4) The module installation screw should be kept within the following range.

Screw Locations	Tightening Torque Range
Module installation screws (M4 screws)	78 to 118N•cm

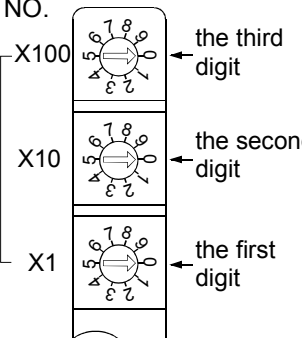
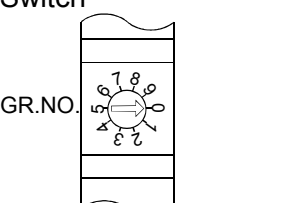
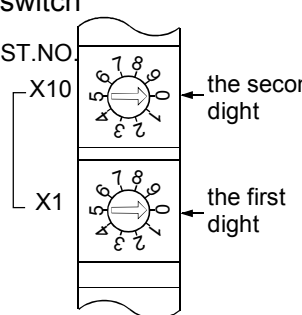
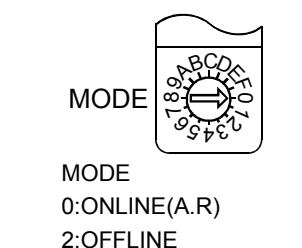


# 4. The Name and Setting of Each Part

Indicates the name and setting of each part of Network Modules.



No.	Name	Contents																											
1)	<div style="border: 1px solid black; padding: 5px;"> <p>A1SJ71QLP21GE</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">RUN</td> <td style="width: 33%;">PW</td> <td style="width: 33%;">CRC</td> <td rowspan="14" style="writing-mode: vertical-rl; text-orientation: mixed; border: 1px solid black; text-align: center;">RORRM</td> </tr> <tr> <td>MNG</td> <td>PC</td> <td>OVER</td> </tr> <tr> <td>S.MNG</td> <td>REM.</td> <td>AB. IF</td> </tr> <tr> <td>DUAL</td> <td>SW.E.</td> <td>TIME</td> </tr> <tr> <td>D.LINK</td> <td>M/S.E.</td> <td>DATA</td> </tr> <tr> <td>T.PAS.</td> <td>PRM.E.</td> <td>UNDER</td> </tr> <tr> <td>F.E.</td> <td>R.E.</td> <td>SD</td> </tr> <tr> <td>CPU R/W</td> <td>RD</td> <td></td> </tr> </table> </div>	RUN	PW	CRC	RORRM	MNG	PC	OVER	S.MNG	REM.	AB. IF	DUAL	SW.E.	TIME	D.LINK	M/S.E.	DATA	T.PAS.	PRM.E.	UNDER	F.E.	R.E.	SD	CPU R/W	RD		Name	Status	Contents
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		F.E.	R.E.	SD																									
		CPU R/W	RD																										
		RUN	ON	Normally operating.			<p>The position of switch for the display switch over of 6) is valid when it is on the left side.</p> <p>The position of switch for the display switch over of 6) is valid when it is on the right side.</p>																						
				WDT error occurred (hardware failure)																									
		MNG	ON	Operating as control station or remote master station																									
		S.MNG		Operating as sub-control station or remote sub-master station																									
		DUAL		Multiplex transfer in execution (OFF: Multiplex transfer not executed)																									
		D.LINK		Data link being performed (OFF: Data link stopped)																									
		T.PAS.		Participating in token passing (Transient transmission is available.)																									
		F.E.		Forward loop (F.LOOP) is faulty. <Cause> Power-off of adjacent station, cable disconnection, no connection, etc.																									
		PW		Power being supplied (OFF: No power being supplied)																									
		PC		Set as PLC to PLC network (SW1 turned OFF)																									
		REM.		Set as remote I/O network (SW1 turned ON)																									
		SW.E.		Incorrect setting of switches 2) to 5) and 7)																									
		M/S.E.		Station number or control/remote master station status is duplicated on the same network.																									
		PRM.E.		<ul style="list-style-type: none"> <li>Duplication of network refreshes parameters when multiple modules are mounted.</li> <li>Inconsistency between the common and station specific parameters</li> <li>Difference between parameter received from sub-control station and the one of the host (received from control station).</li> </ul>																									
		R.E.		Reverse loop (R.LOOP) is faulty. <Cause> Power-off of adjacent station, cable disconnection, no connection, etc.																									
		CPU R/W		Communicating with CPU																									
		CRC		Error detected in code check of receive data <Cause> Timing at which station sending data to target station is disconnected from network, hardware failure, cable fault, noise, etc.																									
OVER	Error occurred when receive data processing is delayed <Cause> Hardware failure, cable fault, noise, etc.																												
AB.IF	<ul style="list-style-type: none"> <li>Consecutive 1s exceeding the specified number were received.</li> <li>Length of received data is too short.</li> </ul> <Cause> Timing at which station sending data to target station is disconnected from network, too short monitoring time, cable fault, noise, etc.																												
TIME	Token has not reached host within monitoring time. <Cause> Monitoring time too short, cable fault, noise, etc.																												
DATA	Data with erroneous code was received. <Cause> Cable fault, noise, etc.																												
UNDER	Internal send data processing is not done at fixed intervals. <Cause> Hardware failure																												
SD	Dimly	Data being sent																											
RD	ON	Data being received																											

No.	Name	Contents																																						
2) *1	<b>Network number setting switch</b> NETWORK NO. 	Network number setting (factory setting at time of shipping: 1) <Setting range> 1 to 239 : Network number Other than 1 to 239 : Setting error (The SW.E. LED turns ON) Becomes off-line condition																																						
3) *1	<b>Group number setting Switch</b> GR.NO. 	Group number setting (factory setting at time of shipping: 0) <Setting range> 0 : No specified group 1 to 9 : Group number ] Enabled for PLC to PLC network																																						
4) *1	<b>Station number setting switch</b> ST.NO. 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" data-bbox="499 875 711 909">Type</th> <th data-bbox="711 875 1525 909">Setting</th> </tr> </thead> <tbody> <tr> <td data-bbox="499 909 711 981">PLC to PLC network</td> <td data-bbox="711 909 906 981">1 to 64</td> <td data-bbox="906 909 1525 981">: Station number Other than 1 to 64: Setting error (The SW.E. LED turns ON)</td> </tr> <tr> <td data-bbox="499 981 711 1218">Remote I/O network</td> <td data-bbox="711 981 906 1218">0 1 to 64</td> <td data-bbox="906 981 1525 1218">: Remote master station : Remote sub-master station Other than 0 to 64: Setting error (The SW.E. LED turns ON)</td> </tr> </tbody> </table>	Type		Setting	PLC to PLC network	1 to 64	: Station number Other than 1 to 64: Setting error (The SW.E. LED turns ON)	Remote I/O network	0 1 to 64	: Remote master station : Remote sub-master station Other than 0 to 64: Setting error (The SW.E. LED turns ON)																													
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5) *1	<b>Mode setting switch</b> 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" data-bbox="499 1229 1525 1263">Mode setting (factory setting at time of shipping: 0)</th> </tr> <tr> <th data-bbox="499 1263 587 1296">Mode</th> <th data-bbox="587 1263 906 1296">Name</th> <th data-bbox="906 1263 1525 1296">Contents</th> </tr> </thead> <tbody> <tr> <td data-bbox="499 1296 587 1352">0</td> <td data-bbox="587 1296 906 1352">Online (automatic online return effective)</td> <td data-bbox="906 1296 1525 1352">Data link with automatic online return effective</td> </tr> <tr> <td data-bbox="499 1352 587 1397">1</td> <td data-bbox="587 1352 906 1397">Not used (Setting to this turns on the SW.E. LED.)</td> <td data-bbox="906 1352 1525 1397"></td> </tr> <tr> <td data-bbox="499 1397 587 1442">2</td> <td data-bbox="587 1397 906 1442">Offline</td> <td data-bbox="906 1397 1525 1442">Disconnects the host station.</td> </tr> <tr> <td data-bbox="499 1442 587 1498">3</td> <td data-bbox="587 1442 906 1498">Forward loop test</td> <td data-bbox="906 1442 1525 1498">Checks the forward loop of the whole network system.</td> </tr> <tr> <td data-bbox="499 1498 587 1554">4</td> <td data-bbox="587 1498 906 1554">Reverse loop test</td> <td data-bbox="906 1498 1525 1554">Checks the reverse loop of the whole network system.</td> </tr> <tr> <td data-bbox="499 1554 587 1632">5</td> <td data-bbox="587 1554 906 1632">Station-to-station test (master station)</td> <td data-bbox="906 1554 1525 1632" rowspan="2">The mode for a line check between two stations, in which the station with the smaller number is regarded as the master station and the other is considered the slave station.</td> </tr> <tr> <td data-bbox="499 1632 587 1688">6</td> <td data-bbox="587 1632 906 1688">Station-to-station test (slave station)</td> </tr> <tr> <td data-bbox="499 1688 587 1800">7</td> <td data-bbox="587 1688 906 1800">Self-loopback test</td> <td data-bbox="906 1688 1525 1800">Check the hardware of a module in isolation, including the communication circuit and cables of the transmission system.</td> </tr> <tr> <td data-bbox="499 1800 587 1901">8</td> <td data-bbox="587 1800 906 1901">Internal self-loopback test</td> <td data-bbox="906 1800 1525 1901">Check the hardware of a module in isolation, including the communication circuit of the transmission system.</td> </tr> <tr> <td data-bbox="499 1901 587 1957">9</td> <td data-bbox="587 1901 906 1957">Hardware test</td> <td data-bbox="906 1901 1525 1957">Check the hardware inside the network module.</td> </tr> <tr> <td data-bbox="499 1957 587 1998">A to F</td> <td data-bbox="587 1957 906 1998">Not used</td> <td data-bbox="906 1957 1525 1998">(Do not set the mode.)</td> </tr> </tbody> </table>	Mode setting (factory setting at time of shipping: 0)			Mode	Name	Contents	0	Online (automatic online return effective)	Data link with automatic online return effective	1	Not used (Setting to this turns on the SW.E. LED.)		2	Offline	Disconnects the host station.	3	Forward loop test	Checks the forward loop of the whole network system.	4	Reverse loop test	Checks the reverse loop of the whole network system.	5	Station-to-station test (master station)	The mode for a line check between two stations, in which the station with the smaller number is regarded as the master station and the other is considered the slave station.	6	Station-to-station test (slave station)	7	Self-loopback test	Check the hardware of a module in isolation, including the communication circuit and cables of the transmission system.	8	Internal self-loopback test	Check the hardware of a module in isolation, including the communication circuit of the transmission system.	9	Hardware test	Check the hardware inside the network module.	A to F	Not used	(Do not set the mode.)
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A to F	Not used	(Do not set the mode.)																																						

No.	Name	Contents																																																						
6)	Switch for mode switch over	Switch over of forward/reverse loop of the error display of CRC to UNDER and the display switch over of RUN to F.E./PW to R.E. (factory setting at the time of shipping: left side)																																																						
		Switch position	Contents																																																					
		L(F.L.)	The CRC to UNDER error display is set to the forward loop side and the RUN to F.E. display is set to valid. (PW to R.E. display is invalid)																																																					
		R(R.L.)	The CRC to UNDER error display is set to the reverse loop side and the PW to R.E. display is set to valid. (RUN to F.E. display is invalid)																																																					
7) *1	<table border="1"> <thead> <tr> <th>SW</th> <th>OFF</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PC</td> <td>REM.</td> </tr> <tr> <td>2</td> <td>N.ST/ D.S.M</td> <td>MNG/ P.S.M</td> </tr> <tr> <td>3</td> <td>PRM</td> <td>D.PRM</td> </tr> <tr> <td>4</td> <td colspan="2">ST. SIZE</td> </tr> <tr> <td>5</td> <td colspan="2">8,16,32,64</td> </tr> <tr> <td>6</td> <td colspan="2">LB/LW SIZE</td> </tr> <tr> <td>7</td> <td colspan="2">2,4,6,8k</td> </tr> <tr> <td>8</td> <td colspan="2"></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>OFF</th> <th>ON</th> <th>SW</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>1</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>2</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>4</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>5</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>7</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>8</td> </tr> </tbody> </table> *3	SW	OFF	ON	1	PC	REM.	2	N.ST/ D.S.M	MNG/ P.S.M	3	PRM	D.PRM	4	ST. SIZE		5	8,16,32,64		6	LB/LW SIZE		7	2,4,6,8k		8			OFF	ON	SW	<input type="checkbox"/>	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	2	<input type="checkbox"/>	<input type="checkbox"/>	3	<input type="checkbox"/>	<input type="checkbox"/>	4	<input type="checkbox"/>	<input type="checkbox"/>	5	<input type="checkbox"/>	<input type="checkbox"/>	6	<input type="checkbox"/>	<input type="checkbox"/>	7	<input type="checkbox"/>	<input type="checkbox"/>	8	Operation condition setting (factory setting at the time of shipping: all off)
		SW	OFF	ON																																																				
		1	PC	REM.																																																				
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<input type="checkbox"/>	<input type="checkbox"/>	6																																																						
<input type="checkbox"/>	<input type="checkbox"/>	7																																																						
<input type="checkbox"/>	<input type="checkbox"/>	8																																																						
SW	Contents	OFF	ON																																																					
1	Network type	PLC to PLC network	Remote I/O network																																																					
2	Station type	Normal station/ Multiple sub master station *2	Control station/ parallel sub masters station *2																																																					
3	Use parameters	Parameters in common	Default Parameters																																																					
4	Number of stations	OFF	8 stations	ON	16 stations	OFF	32 stations	ON	64 stations																																															
5		[ Valid when SW3 is ON ]	OFF		OFF		ON		ON																																															
6	B/W number of general point	OFF	2k points	ON	4k points	OFF	6k points	ON	8k points																																															
7		[ Valid when SW3 is ON ]	OFF		OFF		ON		ON																																															
8	Not used (always off)																																																							
8)	Connector	Connect the optical fiber cable. Hardware version D or later																																																						
		<p>Hardware version C or earlier</p>																																																						

\*1: When the setting has been changed with the Q2AS(H)CPU(-S1) powered ON, reset the Q2AS(H)CPU(-S1) (Shift the RUN/STOP key switch from RESET to any other than RESET.)

\*2: For use in the remote I/O network, it is enabled when the station number is any of 1 to 64.

\*3: The settings are enabled when the module is a control station in the PLC to PLC network.

## 5. Wiring

### 5.1 Precautions for Laying Optical Fiber Cables

- (1) When connecting an optical fiber cable, the following restrictions on the bending radius must be observed.

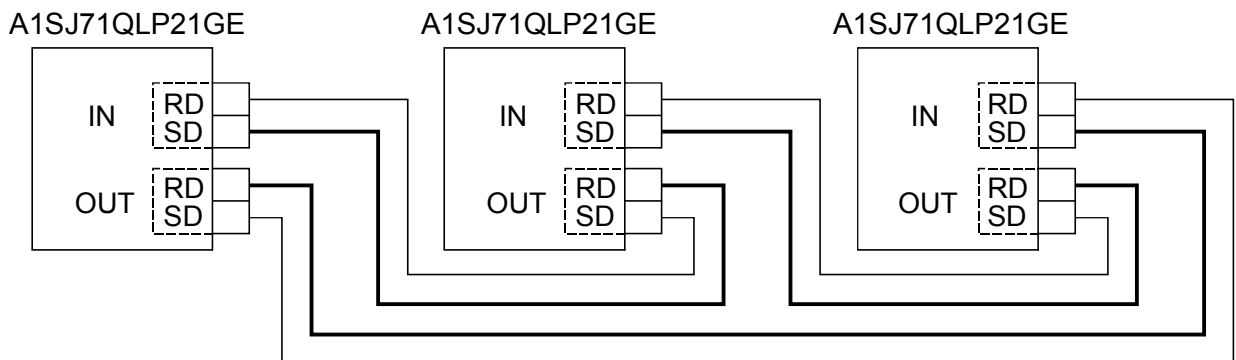
Make sure of the specifications of the cable to be used.

- (2) The optical fiber cable is wired in the following manner.

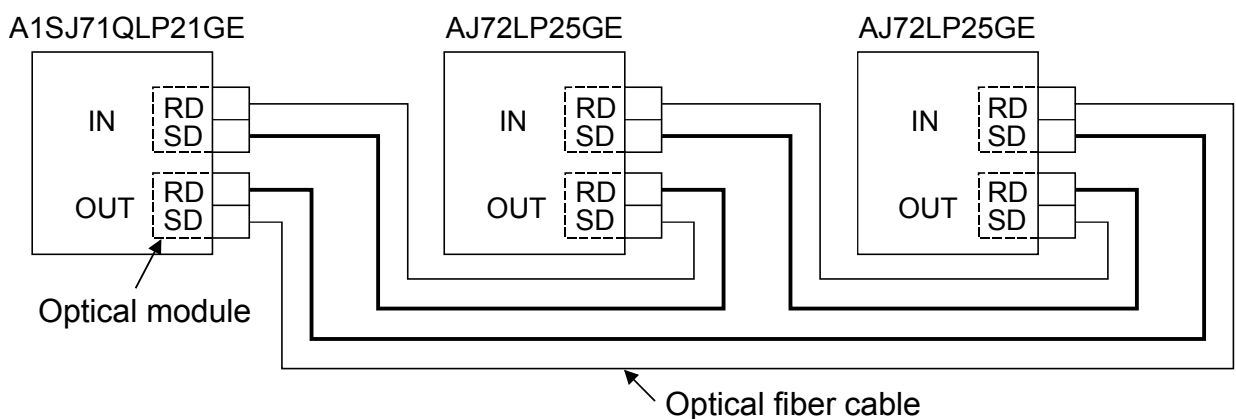
There is no problem even if not wiring in order of the station number.

There is no problem even if station how many become control station.

#### (a) A1SJ71QLP21GE-A1SJ71QLP21GE



#### (b) A1SJ71QLP21GE-AJ72LP25GE



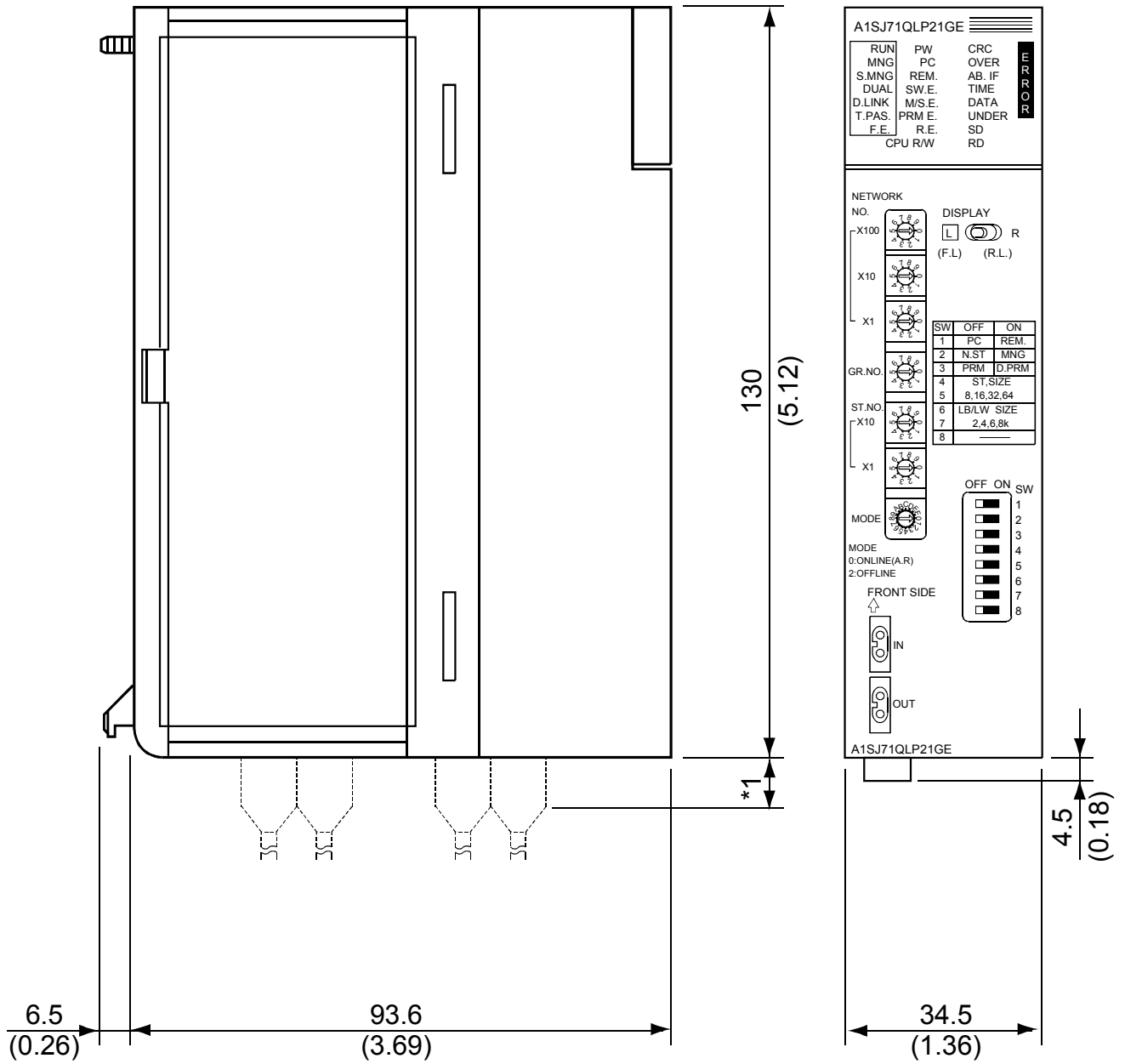
- (3) When laying the optical fiber cable, do not touch the fiber core of the cable connector or module connector, or let dirt or dust collect on it.  
If oil from the hands, dirt or dust should adhere to the core, the transmission loss will increase, causing a malfunction in the data link.  
Also, do not remove the cover from the module connector until an optical fiber cable is connected.
- (4) When attaching or detaching the optical fiber cable to/from the module, hold the cable connector securely with the hands.
- (5) Connect the cable connector and module connector securely until you hear a "click" sound.

(6) Please wire IN/OUT of the connector for the cable correctly.

Please do loopback test, the set confirmation test, and the bureau order confirmation test after wiring. It might be generated that a baton abnormal passing cannot be generated when miswiring and the downed bureau which cannot do the loopback of an arbitrary bureau do the row again even by the reclosing of the power supply.

(7) Completely turn off the externally supplied power used in the system when connecting or disconnecting the cable.

# 6. External Dimensions



Unit: mm (in.)

\*1: Please confirm details to Mitsubishi Electric System Service Corporation.

## Warranty

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

### ⚠ For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- This product has been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

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