

## Mitsubishi <8> Mitsubishi Electric Corporation

QnA Series + Link Unit (Medium) Connection



GP

Machine	Model	Remark
GP	GP70 Series	Excepting for handy types.
	GP77/77R Series	
	GP2000 Series	
GLC	GLC2000 Series	

## PLC

CPU	Computer Link Unit	Communication	Connection Cable	
	Serial Communication Unit	Method		
Q2AS	A1SJ71QC24	RS-232C	<b>Connection Method</b>	CD
O2ASH	(Serial Communication Unit)	10 2520	[1]	GP
<b>(</b>	A1SJ71UC24	RS-422	<b>Connection Method</b>	
	(Computer Link Unit)	10-422	[2]	
Q2AS-S1	A1SJ71UC24-R2	RS 232C	<b>Connection Method</b>	
	(Computer Link Unit)	K5-252C	[1]	
	A1SJ71UC24-R4	DS 122	<b>Connection Method</b>	
	(Computer Link Unit)	K5-422	[2]	
	A1SJ71QC24N	RS-232C	<b>Connection Method</b>	
	(Computer Link Unit)	10 2520	[1]	
	<b>f f f f f f f f f f</b>	RS-422	<b>Connection Method</b>	
			[2]	



Let's Connect to PLC! Mitsubishi <8> QnA Series ( QnAS ) Link (M)

### **Procedure to Connect PLC**





## Selecting PLC Type

Start up GP-PRO /PBIII.

Select the following PLC Type when creating the project file.

[Connecting via Serial Communication Unit]

(A1SJ71QC24, A1SJ71QC24N)	
A prw : Untitled - Project Manager      Project Screen/Setup Control Utility Help	
GP Setup Project Legis Program New Copen Manitur Manitur Manitur Manitur	
Varieble Print MITSUBISH	HI MELSEC QnA (LINK )
Greenee Greenee MITGUBISHI MELSEC-GRA(LINK) Pro-Face	

### [Connecting via Computer Link Unit] (A1SJ71UC24, A1SJ71UC24-R2, A1SJ71UC24-R4)

😤 a prw : Untitled - Project Manager
Poset Screen/Setup Control Littly Help GPPRO/PBIL C-Package03
Project     Logic Program     Editor     Transfer       New     Color     Screen     It Transfer       Open     Mexice     Color     Screen       Vio     Print     Marrier
MITSUBISHI MELSEC ANA (LINK)
GP2600 Control



## **Communication Setting Sample**

GP Setup		Serial Communicat	ion Unit Settings
Baud Rate	19200 bps <sup>*1</sup>	Baud Rate	19200 bps
Data Length	7 bits	Data Bit	7 bits
Stop Bit	2 bits	Stop Bit	2 bits
Parity Bit	Even	Parity Check Parity setting even/odd	Yes Even
Data Flow Control	ER Control		
Communication Format (RS-232C)	RS-232C	Mode Setup (RS-232C)	4 (Format 4 Protocol Mode)
Communication Format (RS-422)	4-wire type	Mode Setup (RS-422)	4 (Format 4 Protocol Mode)
		Sum Check	Yes
Unit No.	0	Station Number	0

\*1 A1SJ71QC24N can use a baud rate of 115200bps.



## Communication Settings [GP]

1 [GP-PRO/PB C-Package Setting]

Select [GP Setup] on Project Manager.

1) Communication Settings	1) Communication Settings
GP Settings       L/D Settings       Mode Settings         Initial Screen Settings       Extended Settings       Communication Settings         Initial Screen Settings       Transmission Speed       19200         Initial Screen Settings       Parky BR       Communication Settings         Initial Screen Settings       Parky BR       Communication Speed         Initial Screen Settings       Nore       Communication Speed         Initial Screen Settings       Nore       Communication Speed         Initial Screen Settings <t< td=""><td>Transmission Speed : 19200bps *1 Data Length : 7 Bits Stop Bit: 2 Bits Parity Bit: Even Busy Ready Control : DTR / ER RS-232C/ RS-422 RS-232C Connection: RS-232C RS-422 Connection: 4 Line *1 A1SJ71QC24N can use a baud rate of 115200bps. * Select one in depending on the communication method.</td></t<>	Transmission Speed : 19200bps *1 Data Length : 7 Bits Stop Bit: 2 Bits Parity Bit: Even Busy Ready Control : DTR / ER RS-232C/ RS-422 RS-232C Connection: RS-232C RS-422 Connection: 4 Line *1 A1SJ71QC24N can use a baud rate of 115200bps. * Select one in depending on the communication method.
2) Mode Settings	2) Mode Settings
GP Settings - 0 provided Settings         Initial Screen Settings         Mode Settings         Customere         Read Area Size         Customere         Customere         Node Setup         Node Setup         Node Setup         Node Setup         Opcore         Opcore         Opcore         Opcore         Opcore         Opcore	System Start Address: Arbitrary Address Machine No.: 0 Link Protocol Type: 1:1



Select [Transfer]> [Setup]> [Transfer Settings].		
3) Transfer Settings		
Send Information		
© <u>C</u> OM		
Comm Port COM1 Retry Count 5		
Data Trans Func CSV Data(CF card)     Baud Rate     115.2K     (bps)		
C Ethemet		
Transfer Method IP Address 0. 0. 0. 0 Port 8000		
C Automatically Send Changed Screens C Send Liser Selected Screens C Ethernet: Auto Acquistion		
C Memory Loader		
C       Preparation for a transfer and a transfer are made simultaneous.         C       It is transferred after preparation for a transfer is finished.         Setup       Use Extended Program :         C       Automatic Setup       Use Extended Program :         E Force System Setup       Image: Simulation         C       Do NOT Perform Setup         Setup CFG file :       System Screen         Setup CFG file :       G         Japanese       C:\Program Files\pro-face\ProPBWin\protocol\         Browse       Erowse		
OK Cancel Help		
3) Transfer Settings GP System Settings: Checked		

Transfer to GP after settings completed.



2 [GP Settings]





3) Setting up Operation Surroundings	3) Setting up Operation Surroundings
MAIN MENU INITIALIZE 2 SET UP 1/0 3 PLC SETUP 4 INITIALIZE MEMIRY 5 SET UP TIME 6 SET UP SCREEN	$[MAIN MENU] \downarrow \\ [INITIALIZE] \downarrow \\ [PLC SETUP] \downarrow \\ [PLC SETUP]$
SET UP OPERATION SURPONDENCE VENU 1: n:1 1 SET UP OPERATION SURPONDUNSS	SET UP OPERATION SURROUNDINGS MENU: 1:1
SET UP OPERATION SURROUNDINGS STARTING ADDRESS OF SYSTEM DATA AREA [ 000000 ] UNIT NO. [0 ] SYSTEM AREA READING AREA SIZE (0-256) [0 ] RESET GP ON DATA HRITE ERROR MONITOR RECORD MODE SET 1 2 3 4 5 6 7 8 9 0 ↑ ↓ BS ↓ ↓ BS	Starting Address of System Data Area: Arbitrary Address Unit No.: 0 * Select one in

# NOTE

#### **Monitor Record Mode Set**

- Mode 1:
  - This mode is valid when the number of the devices of the tags set on one screen is 64 or more. The communication speed is improved by this mode. Select this mode when using 64 or more devices.
- Mode 2: This mode is valid when the number of the devices of the tags set on one screen is less than. The communication speed is improved by this mode. Select this mode when using less than 64 devices.



### Communication Settings [PLC]

- 1. RS-232C Connection
  - 1-1 [Connecting via Serial Communication Unit A1SJ71QC24 / A1SJ71QC24N]

1) Mode Setup	1) Mode Setup
MODE	4 (Format 4 Protocol)
2) Communication Settings	2) Communication Settings
Set switches to the black.	
$ \rightarrow 0 N \\ 01 \\ 02 \\ 03 \\ 04 \\ 05 \\ 06 \\ 07 \\ 08 \\ 09 \\ 10 \\ 11 \\ 12 \\ 12 \\ 0 $	Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes
3) Node Settings	3) Node Settings
STATION NO	<u>5 / 11000 Bottings</u>
$\frac{1}{\varepsilon}$	Station Number: 0



1) Mode Setup	1) Mode Setup
MODE	4 (Format 4 Protocol)
2) Communication Settings	2) Communication Settings
Set switches to the black.	
	Baud Rate :19200bps
ON ←	Data Bit :7 Bits
	Stop Bit :2 Bits
03 未使用	Parity Check : Yes
04	Parity Setting Even/Odd :Even
ON ←	Write Possible in RUN Mode: Possible
05	Sum Check :Yes
06	
07	
09	
10	
11	
12	

1-2 [Connecting via Computer Link Unit A1SJ71UC24-R2]



2. RS-422 Connection

2-1 [Connecting via Serial Communication Unit A1SJ71QC24N]

1) Mode Setup	1) Mode Setup
MODE	4 (Format 4 Protocol)
2) Communication Settings	2) Communication Settings
Set switches to the black.	
$ \rightarrow 0 \text{ N} \\ 01 & 1 & 1 \\ 02 & 1 & 1 \\ 03 & 1 & 1 \\ 03 & 1 & 1 \\ 04 & 1 & 1 \\ 05 & 1 & 1 \\ 06 & 1 & 1 \\ 08 & 1 & 1 \\ 10 & 1 & 1 \\ 12 $	Baud Rate:19200bpsData Bit:7 BitsStop Bit:2 BitsParity Check:YesParity Setting Even/Odd:EvenWrite Possible in RUN Mode: PossibleSum Check:Yes
3) Node Settings	3) Node Settings
STATION NO STATION NO 5000000000000000000000000000000000000	Station Number: 0



1) Mada Satur	1) Mada Satur	
<u>1) Mode Setup</u>	<u>1) Mode Setup</u>	
MODE	8 (Format 4 Protocol)	
2) Communication Settings	2) Communication Settings	
Set switches to the black.		
0N ← 01 <u>末使用</u> 02 03 <u>末使用</u> 04 01 <u>末使用</u> 04 00 00 00 00 00 00 00 00 00	Baud Rate:19200bpsData Bit:7 BitsStop Bit:2 BitsParity Check:YesParity Setting Even/Odd:EvenWrite Possible in RUN Mode: PossibleSum Check:Yes	
3) Node Settings	3) Node Settings	
STATION NO	- <u>·</u>	
$\frac{1}{\varepsilon} \frac{1}{\varepsilon} \frac{1}$	Station Number: 0	

2-2 [Connecting via Computer Link Unit A1SJ71UC24, A1SJ71UC24-R4]



### **Connection Method**

1. RS-232C Connection





### \* If a communication cable is used, it must be connected to the SG.

NOTE
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The optional cable, GP000-IS02-MS is 3m long. If you need a longer cable or shorter, please use a User-Created cable to connect.

### **Recommended Products**

Connecter/Cover for GP	D-sub 25 pin Plug	XM2A-2501 <omron co.=""></omron>
	Cover for D-sub 25 pin	XM2S-2511 <omron co.=""></omron>
	Jack Screw	XM2Z-0071 <omron co.=""></omron>
Cable	CO-MA-VV-SB5P × 28AWG <hitachi cable="" ltd.=""></hitachi>	
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45	



2. RS-422 Connection



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- \* If a communication cable is used, it must be connected to the SG. \* Termination Resistance
  - PLC / between SDA and SDB, between RDA and RDB : 330 (with wattage specified on PLC) GP Unit / as required (Refer to Cable Diagrams) : 330
    - (with wattage specified on PLC)

### **Recommended Products**

Connecter/Cover for GP	D-sub 25 pin Plug	XM2A-2501 <omron co.=""></omron>	
	Cover for D-sub 25 pin	XM2S-2511 <omron co.=""></omron>	
	Jack Screw	XM2Z-0071 <omron co.=""></omron>	
Cable	SPEV(SB)-MPC-0.2*3P   <		
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45		