YASKAWA Electric Corporation YAS_MPEE_19 3/2025

MP Ethernet/ MECHATROLINK Driver

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IMPORTANT •	The below Displays are no longer sold nor maintained by Pro-face. To reduce unplanned downtime due to aged hardware and to maximize your cyber security environment we recommend replacing your devices with a new, successor model. For details, please visit our homepage for "Recommended Substitution". Discontinued from GP-Pro EX 5.00 onwards: GP3000 Series, LT3000 Series, ST3000 Series, GP-4100 Series (Monochrome model), PL Series, PS3000/4000 Series, PE4000 Series.
•	For details on the Displays supported by the driver, please check the "Connectable Devices" on our website.

http://www.pro-face.com/trans/en/manual/1064.html

Introduction

This manual describes how to connect the Display and the External Device (target PLC). In this manual, the connection procedure will be described in the sections identified below:

1	System Configuration This section lists the types of External Devices and SIO that you can connect.	"1 System Configuration" (page 3)
2	External Device Selection Select a model (series) of the External Device and its connection method.	"2 External Device Selection" (page 28)
3	Communication Settings This section shows setting examples for communicating between the Display and the External Device.	"3 Communication Settings" (page 29)
4	Setup Items This section describes communication setup items on the Display. Set the Display's communication settings in GP Pro-EX or in offline mode.	ঞ্চে"4 Setup Items" (page 157)
	Operation	

1 System Configuration

The system configuration in the case when the External Device and the Display are connected is shown.

1.1 MP Series

Series	CPU	Link I/F	SIO Type	Setting Example
	MP2300	Ethernet port on 218IF-01	Ethernet (UDP)	"3.1 Setting Example 1" (page 29)
	MP2200	Ethernet port on 218IF-02	Ethernet (UDP)	"3.4 Setting Example 4" (page 38)
		Ethernet Connector on CPU unit	Ethernet (UDP)	"3.2 Setting Example 2" (page 32)
MP2000	MP2310 MP2300S	Ethernet port on 218IF-01	Ethernet (UDP)	"3.3 Setting Example 3" (page 35)
		Ethernet port on 218IF-02	Ethernet (UDP)	"3.4 Setting Example 4" (page 38)
	MP2400	Ethernet Connector on CPU unit	Ethernet (UDP)	"3.2 Setting Example 2" (page 32)
	MPU-01 ^{*1}	Ethernet port on Main CPU ^{*2} or Ethernet port on 218IF-01	Ethernet (UDP)	"3.12 Setting Example 12" (page 59)
MP3000	CPU-201 CPU-301 CPU-302	Ethernet Connector on CPU unit	Ethernet (UDP)	"3.9 Setting Example 9" (page 53)
	CPU-201(SUB) ^{*3}	Ethernet Connector on Main CPU (CPU201)	Ethernet (UDP)	"3.15 Setting Example 15" (page 67)
		Ethernet Connector on CPU201(SUB)	Ethernet (UDP)	"3.9 Setting Example 9" (page 53)
	Σ -7C ^{*4}	Ethernet Port on CPU unit	Ethernet (UDP)	"3.9 Setting Example 9" (page 53)

*1 The firmware version of the MPU-01 to be supported is Ver. 2.86 or later.

*2 Please refer to the MPU-01 Manual for the supported list of Main CPUs.

*3 The firmware version of the CPU-201 to be supported is Ver. 1.06 or later.

*4 The Display communicates with the Σ -7C controller section.

Connection Configuration

- MP Series / Σ -7C (Controller Section)
 - 1:1 Connection



MP2000 (218IF-01): 10BASE-T MP3000 / Σ-7C (Controller section): 100Base-T

1:n Connection



*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

MPU-01

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1:1 Connection



*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

• When connecting to the MPU-01 via the main CPU, do not make communications from two or more devices (e.g. Display and Ladder software) at the same time. If so, the MPU-01 may make no response.

^(GP*) "4.1 Setup Items in GP-Pro EX" (page 157)

Sub CPU

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1:1 Connection

			Main CPU	Sub CPU
1:n Connection		M		4
		waximum nu	1mber: 64 ***	1
	Main CPU	Sub CPU	Main Cl	PU Sub CPU

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

NOTE	•	A Sub CPU can be communicated via a Main CPU or in direct connection.
	•	When connecting to the Sub CPU via the main CPU, do not make communications from two or
		more devices (e.g. Display and Ladder software) at the same time. If so, the Sub CPU may make no
		response.

1.2 Inverter Series

Series	CPU ^{*1}	Link I/F	Communication	Setting Example
V1000	CIMR-VA A	V1000 Option MECHATROLINK-II (SI-T3/V)	Ethernet (UDP) and MECHATROLINK-II	"3.10 Setting Example 10" (page 55)
A1000	CIMR-ADD ADDDD	A1000 MECHATROLINK-II (SI-T3)	Ethernet (UDP) and MECHATROLINK-II	"3.11 Setting Example 11" (page 57)

*1 The \Box symbol in the inverter model name represents the maximum applicable motor capacity and other specifications.

Connection Configuration

• 1:1 Connection



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and Inverter series: MECHATROLINK connection

• 1:n Connection

Maximum number: 64 *1

Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and Inverter series: MECHATROLINK connection Between Inverter series and Inverter series: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

^(GP) "4.1 Setup Items in GP-Pro EX" (page 157)

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1.3 Servo

Series	CPU	Link I/F	SIO Type	Setting Example
Σ-V Series Rotary Motors (M-II)	SGDV- 000011 0000000	MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-II	"3.5 Setting Example 5" (page 41)
Σ-V Series Linear Motors (M-II)	SGDV- 00015 000000	MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-II	"3.6 Setting Example 6" (page 44)
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.7 Setting Example 7" (page 47)
Σ-V Series Rotary Motors (M-III)	SGDV- 00021 000000	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.13 Setting Example 13" (page 61)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.16 Setting Example 16" (page 69)
	SGDV- 00025 000000	MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.8 Setting Example 8" (page 50)
Σ-V Series Linear Motors (M-III)		MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.14 Setting Example 14" (page 64)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.17 Setting Example 17" (page 72)
Σ-7 Series Single-axis SERVOPACKs (M-II)	SGD7S- 	MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-II	"3.18 Setting Example 18" (page 75)
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.19 Setting Example 19" (page 78)
∑-7 Series Single-axis SERVOPACKs (M-III)	SGD7S- 	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.20 Setting Example 20" (page 81)
(M-III)		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.21 Setting Example 21" (page 84)

Series	CPU	Link I/F	SIO Type	Setting Example
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.22 Setting Example 22" (page 87)
Σ-7 Series 2-axis SERVO- PACKs (M-III)	SGD7W- □□□□20 □□□□□□□	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.23 Setting Example 23" (page 90)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.24 Setting Example 24" (page 93)
Σ-7 Series 2-axis SERVO- PACKs with built- in controller (M-III)	SGD7C- \Box \Box \Box \Box Δ MAA \Box \Box \Box \Box *1	Ethernet Connector (CN12)	Ethernet (UDP) and MECHATROLINK-III	"3.40 Setting Example 40" (page 137)
	SGDXS- Ks □□□A	MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.41 Setting Example 41" (page 139)
Σ-X Series Single-axis SERVOPACKs (M-III)		MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.42 Setting Example 42" (page 142)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.43 Setting Example 43" (page 145)
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.44 Setting Example 44" (page 148)
Σ-X Series 2-axis SERVO- PACKs (M-III)	SGDXW- □□□A	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.45 Setting Example 45" (page 151)
(m-11)		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.46 Setting Example 46" (page 154)

*1 The Display communicates with the Σ -7C servo section.

Connection Configuration

• 1:1 Connection When the MP series is relayed



Between MP series and Servo series: MECHATROLINK connection





Between Display and Σ -7C: Ethernet connection

• 1:n Connection

When the MP series / Σ -7C (Controller section) is relayed



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and Servo series: MECHATROLINK connection Between Servo series and Servo series: MECHATROLINK connection

When the Σ -7C is used



*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

- Connection via MPU-01 • 1:1 Connection Main CPU MPU-01 RECECCER Servo series Between Display and Main CPU: Ethernet connection Between MPU-01 and Servo series: MECHATROLINK connection 1:n Connection Maximum number: 64 *1 MainCPU MPU-01 MPU-01 Servo series Servo series - STARTER Servo series Servo series Between Display and Main CPU: Ethernet connection Between MPU-01 and Servo series: MECHATROLINK connection Servo series and Servo series: MECHATROLINK connection
 - *1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

⁽³⁷⁾ "4.1 Setup Items in GP-Pro EX" (page 157)



1:1 Connection





*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

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Between Display and Main CPU: Ethernet connection Between MPU-01 and Servo series: MECHATROLINK connection Servo series and Servo series: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

1.4 I/O(M-System)

Series	CPU	Link I/F	SIO Type	Setting Example
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.25 Setting Example 25" (page 96)
	R7G4HML3-6- LC2	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.26 Setting Example 26" (page 98)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.27 Setting Example 27" (page 101)
	R7G4HML3-6- STYVS1 R7G4HML3-6- LC2A	MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.34 Setting Example 34" (page 121)
M-System Co., Ltd. Remote I/O		MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.35 Setting Example 35" (page 123)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.36 Setting Example 36" (page 126)
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.37 Setting Example 37" (page 129)
		MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.38 Setting Example 38" (page 131)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.39 Setting Example 39" (page 134)

Connection Configuration

1:1 Connection



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and I/O: MECHATROLINK connection

• 1:n Connection

Maximum number: 64 *1



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and I/O: MECHATROLINK connection Between I/O and I/O: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

"4.1 Setup Items in GP-Pro EX" (page 157)

- 1:1 Connection Main CPU MPU-01 SCHOOL ST I/O Between Display and Main CPU: Ethernet connection Between MPU-01 and I/O: MECHATROLINK connection 1:n Connection Maximum number: 64 *1 MPU-01 MainCPU MPU-01 1/0 1/0 BBBBBBB I/O I/O Between Display and Main CPU: Ethernet connection Between MPU-01 and I/O: MECHATROLINK connection I/O and I/O: MECHATROLINK connection
 - *1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

^(GP) "4.1 Setup Items in GP-Pro EX" (page 157)

Connection via MPU-01

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- Connection via Sub CPU • 1:1 Connection Main CPU Sub CPU 1/0 Between Display and Main CPU (or Sub CPU): Ethernet connection Between Sub CPU and I/O: MECHATROLINK connection 1:n Connection Maximum number: 64 *1 Sub CPU Main CPU I/O 1/0 **BBBBBB** Between Display and Main CPU (or Sub CPU): Ethernet connection Between SUB CPU and I/O: MECHATROLINK connection I/O and I/O: MECHATROLINK connection
 - *1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

- Connection via Sub CPU and MPU-01
 - 1:1 Connection



Between Display and Main CPU: Ethernet connection Between MPU-01 and I/O: MECHATROLINK connection



*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

1.5 I/O(Azbil)

Series	CPU	Link I/F	SIO Type	Setting Example
		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.28 Setting Example 28" (page 104)
Azbil Corporation K1G Series	K1G-C04M	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.29 Setting Example 29" (page 107)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.30 Setting Example 30" (page 110)

- Connection Configuration
 - 1:1 Connection



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and I/O: MECHATROLINK connection

• 1:n Connection



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and I/O: MECHATROLINK connection Between I/O and I/O: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

- 1:1 Connection Main CPU MPU-01 SCHOOL ST I/O Between Display and Main CPU: Ethernet connection Between MPU-01 and I/O: MECHATROLINK connection 1:n Connection Maximum number: 64 *1 MPU-01 MainCPU MPU-01 1/0 1/0 BBBBBBB I/O I/O Between Display and Main CPU: Ethernet connection Between MPU-01 and I/O: MECHATROLINK connection I/O and I/O: MECHATROLINK connection
 - *1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

^(GP) "4.1 Setup Items in GP-Pro EX" (page 157)

Connection via MPU-01

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- Connection via Sub CPU • 1:1 Connection Main CPU Sub CPU 1/0 Between Display and Main CPU (or Sub CPU): Ethernet connection Between Sub CPU and I/O: MECHATROLINK connection 1:n Connection Maximum number: 64 *1 Sub CPU Main CPU I/O 1/0 **BBBBBB** Between Display and Main CPU (or Sub CPU): Ethernet connection Between SUB CPU and I/O: MECHATROLINK connection I/O and I/O: MECHATROLINK connection
 - *1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

- Connection via Sub CPU and MPU-01
 - 1:1 Connection



Between Display and Main CPU: Ethernet connection Between MPU-01 and I/O: MECHATROLINK connection



*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

Series	CPU	Link I/F	SIO Type	Setting Example
ODIENTAL		MECHATROLINK Communications Connectors (CN6A/CN6B)	Ethernet (UDP) and MECHATROLINK-III	"3.31 Setting Example 31" (page 113)
ORIENTAL MOTOR Co., Ltd. AZ Series	AZD2A-KM3 AZD3A-KM3 AZD4A-KM3	MECHATROLINK Communications Connectors on MPU-01	Ethernet (UDP) and MECHATROLINK-III	"3.32 Setting Example 32" (page 115)
		MECHATROLINK Communications Connectors on Sub CPU	Ethernet (UDP) and MECHATROLINK-III	"3.33 Setting Example 33" (page 118)

1.6 Stepping(Orientalmotor)

Connection Configuration





Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and Stepping: MECHATROLINK connection

• 1:n Connection



Between Display and MP series / Σ -7C (Controller section): Ethernet connection Between MP series / Σ -7C (Controller section) and Stepping: MECHATROLINK connection Between Stepping and Stepping: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

"4.1 Setup Items in GP-Pro EX" (page 157)

- Connection via MPU-01
 - 1:1 Connection





Between Display and Main CPU: Ethernet connection Between MPU-01 and Stepping: MECHATROLINK connection Stepping and Stepping: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].



- *1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].
 - "4.1 Setup Items in GP-Pro EX" (page 157)

- Connection via Sub CPU and MPU-01
 - 1:1 Connection



Stepping

Between Display and Main CPU: Ethernet connection Between MPU-01 and Stepping: MECHATROLINK connection



Stepping and Stepping: MECHATROLINK connection

*1 When 33 or more External Devices are connected, it is necessary to check [Increase allowable number of Devices/PLCs].

2 External Device Selection

Select the External Device to be connected to the Display.

GP-Pro EX Numb	er of Devices/PLCs	
	Device/PLC 1	
Manut	facturer YASKAWA Electric Corporation	•
Series	s MP Ethernet/MECHATROLINK	•
Port	Ethernet (UDP)	•
	Refer to the manual of this Device/PLC	
	Recent Device/PLC	
		1
		×.
	se System Area	Device Information

Setup Items	Setup Description
Number of Devices/ PLCs	Use an integer from 1 to 4 to enter the number of Devices/PLCs to connect to the display.
Manufacturer	Select the manufacturer of the External Device to be connected. Select "YASKAWA Electric Corporation".
Series	Select a model (series) of the External Device to be connected and connection method. Select "MP Ethernet/MECHATROLINK". Check the External Device which can be connected in "MP Ethernet/MECHATROLINK" in system configuration. "I System Configuration" (page 3)
Port	Select the Display port to be connected to the External Device.
Use System Area	 Check this option to synchronize the system data area of the Display and the device (memory) of the External Device. When synchronized, you can use the External Device's ladder program to switch the display or display the window on the Display. Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)" This feature can also be set in GP-Pro EX or in the Display's offline mode. Cf. GP-Pro EX Reference Manual "System Settings [Display Unit] - [System Area] Settings Guide" Cf. Maintenance/Troubleshooting Guide "Main Unit - System Area Settings"

3 Communication Settings

Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

3.1 Setting Example 1

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settings	S	
Port No.	1024 🗾 🗹 Auto	
Timeout	3 (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	s	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings	Device
👗 1 🛛 PLC1	Series=MP2000 Series,Access to MPU-01=OFF,IP Add	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual D	evice Settings	ĸ
PLC1		
Product	MP2000 Series 💌	
	Access to MPU-01	
If you change the address settings	product or series, please reconfirm all	
IP Address	192. 168. 0. 1	
	Default	
	OK (O) Cancel	

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Use the ladder software (MPE720) to set up communication settings for the communication module 218IF-01. For details on communication settings, please refer to the manual of the External Device. The setup procedure differs depending on the version of your ladder software.

- ◆ Ladder Software Setting (for MPE720 Ver.5)
- 1 Start the ladder software, and in the root folder make the order and PLC folders.
- 2 Right-click the generated External Device, and from the shortcut menu select Logon.

• In the shortcut menu, please confirm there is no check mark beside the [Online] command before logging on.

- · For methods on logging on, refer to the User's Manual of the External Device.
- **3** From the PLC folder, double-click the [Definition folder]'s [Module Configuration] to display the [Engineering Manager].
- **4** In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	This Station IP address	PLC IP address

Please make the connection parameter blank.
 Communication is not possible when a connection parameter is set.

6 Double-click "No.1" and set up serial communication.

Serial communication is used to transfer communication settings to the PLC.

7 Save the settings and exit [Engineering Manager].

IMPORTANT

- 8 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **9** Transfer the settings to the communication module.
- 10 While online, logon to the External Device. Write the transferred data to FLASH memory.
- 11 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

- Ladder Software Setting (for MPE720 Ver.6)
- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

4 In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	Transmission parameter This Station IP address	

IMPORTANT

Please make the connection parameter blank.
 Communication is not possible when a connection parameter is set.

6 Double-click "No.1" and set up serial communication.

Serial communication is used to transfer communication settings to the PLC.

- 7 Save the settings and exit [Engineering Manager].
- $\mathbf{8}$ After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **9** Write the settings to the communication module.

IMPORTANT
 To write the settings, select the [Save to flash after transferring to the controller] check box.
 If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

10 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.2 Setting Example 2

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YAS	KAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settin	gs	
Port No.	1024 😴 🔽 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Settin	igs	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Nam	e Settings	Device
👗 1 PLC1	Series=MP2000 Series,Access to MPU-01=OFF,IP Add	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual D	evice Settings
PLC1	
Product	MP2000 Series
	Access to MPU-01
If you change the address settings.	product or series, please reconfirm all
IP Address	192. 168. 0. 1
	Default
	OK (O) Cancel

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Use the ladder software (MPE720) to set up communication settings for the communication module CPU unit. For details on communication settings, please refer to the manual of the External Device. The setup procedure differs depending on the version of your ladder software.

- ◆ Ladder Software Setting (for MPE720 Ver.5)
- 1 Start the ladder software, and in the root folder make the order and PLC folders.
- 2 Right-click the generated External Device, and from the shortcut menu select Logon.

• In the shortcut menu, please confirm there is no check mark beside the [Online] command before logging on.

- · For methods on logging on, refer to the User's Manual of the External Device.
- **3** From the PLC folder, double-click the [Definition folder]'s [Module Configuration] to display the [Engineering Manager].
- **4** In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	This Station IP address	PLC IP address

IMPORTANT • Please make the connection parameter blank. Communication is not possible when a connection parameter is set.

- **6** Save the settings and exit [Engineering Manager].
- 7 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **8** Transfer the settings to the communication module.
- 9 While online, logon to the External Device. Write the transferred data to FLASH memory.
- 10 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

- Ladder Software Setting (for MPE720 Ver.6)
- 1 Start the ladder software.
- **2** Make a project file.

IMPORTANT

3 From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

4 In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter This Station IP address		PLC IP address

 Please make the connection parameter blank. Communication is not possible when a connection parameter is set.

- 6 Save the settings and exit [Engineering Manager].
- 7 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **8** Write the settings to the communication module.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

9 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.3 Setting Example 3

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YAS	KAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settin	gs	
Port No.	1024 😴 🔽 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Settin	igs	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Nam	e Settings	Device
👗 1 PLC1	Series=MP2000 Series, Access to MPU-01=OFF, IP Add	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual D	evice Settings
PLC1	
Product	MP2000 Series
	Access to MPU-01
If you change the address settings.	product or series, please reconfirm all
IP Address	192. 168. 0. 1
	Default
	OK (O) Cancel

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Use the ladder software (MPE720) to set up communication settings for the communication module 218IF-01. For details on communication settings, please refer to the manual of the External Device. The setup procedure differs depending on the version of your ladder software.

- ◆ Ladder Software Setting (for MPE720 Ver.5)
- 1 Start the ladder software, and in the root folder make the order and PLC folders.
- **2** Right-click the generated External Device, and from the shortcut menu select Logon.

• In the shortcut menu, please confirm there is no check mark beside the [Online] command before logging on.

- · For methods on logging on, refer to the User's Manual of the External Device.
- **3** From the PLC folder, double-click the [Definition folder]'s [Module Configuration] to display the [Engineering Manager].
- **4** In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	This Station IP address	PLC IP address

IMPORTANT • Please make the connection parameter blank. Communication is not possible when a connection parameter is set.

- **6** Save the settings and exit [Engineering Manager].
- 7 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **8** Transfer the settings to the communication module.
- 9 While online, logon to the External Device. Write the transferred data to FLASH memory.
- 10 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.
- Ladder Software Setting (for MPE720 Ver.6)
- 1 Start the ladder software.
- **2** Make a project file.

IMPORTANT

3 From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

4 In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	This Station IP address	PLC IP address

Please make the connection parameter blank.
Communication is not possible when a connection parameter is set.

- 6 Save the settings and exit [Engineering Manager].
- 7 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **8** Write the settings to the communication module.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

9 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

Notes

3.4 Setting Example 4

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLIN	K Port Ethemet (UDP)
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🖉 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 📩 (ms) Default	
Device-Specific Settings	
Allowable Number Add Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	Add Indicast
No. Device Name Settings	Device
1 PLC1 Series=MP2000 Series,Access to MPU-01=OFF,IP Add	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual D	evice Settings X
PLC1	
Product	MP2000 Series
	Access to MPU-01
If you change the address settings.	product or series, please reconfirm all
IP Address	192. 168. 0. 1
	Default
	Derault
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MPE720) to set up communication settings for the communication module 218IF-01. For details on communication settings, please refer to the manual of the External Device. The setup procedure differs depending on the version of your ladder software.

- ◆ Ladder Software Setting (for MPE720 Ver.5)
- 1 Start the ladder software, and in the root folder make the order and PLC folders.
- **2** Right-click the generated External Device, and from the shortcut menu select Logon.

• In the shortcut menu, please confirm there is no check mark beside the [Online] command before logging on.

- · For methods on logging on, refer to the User's Manual of the External Device.
- **3** From the PLC folder, double-click the [Definition folder]'s [Module Configuration] to display the [Engineering Manager].
- **4** In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	This Station IP address	PLC IP address

IMPORTANT • Please make the connection parameter blank. Communication is not possible when a connection parameter is set.

- **6** Save the settings and exit [Engineering Manager].
- 7 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **8** Transfer the settings to the communication module.
- 9 While online, logon to the External Device. Write the transferred data to FLASH memory.
- 10 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

- Ladder Software Setting (for MPE720 Ver.6)
- 1 Start the ladder software.
- **2** Make a project file.

IMPORTANT

3 From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

4 In the [Engineering Manager]'s [Controller], use the pull-down menu to select the rack classification and communication module.

Set the number associated with the slot number used by the communication module.

When you select the communication module, its setting information is displayed in the [Engineering Manager]'s [Module details].

5 In the in [Module details], double-click the No. field's numeric portion.

Double-click the number associated with the slot number connected to the Ethernet unit.

Setup Items		Setup Description
Transmission parameter	This Station IP address	PLC IP address

Please make the connection parameter blank.
Communication is not possible when a connection parameter is set.

- 6 Save the settings and exit [Engineering Manager].
- 7 After turning ON the communication module's "INIT" DIP Switch, turn ON the power supply.
- **8** Write the settings to the communication module.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

9 Turn OFF the External Device's power supply, turn OFF the "INIT" DIP Switch, and turn the External Device's power back ON.

Notes

3.5 Setting Example 5

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary Change Device/PLC	
Manufacturer VASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet (UDP)	
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🗾 🗹 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 📑 (ms) Default	
Device-Specific Settings	
Allowable Number Add Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings Add Indirect	
1 PLC1 Series=Sigma-V Series Rotational Motor(M-II).IP Addres	
MPORTANT • To connect Σ-V Series using a 1:n connection, [Wait To Send] must t	be 100

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings X
PLC1	
Product	Servo
Series	Sigma-V Series Rotational Motor(M-II) 💌
If you change the p address settings.	product or series, please reconfirm all
Station Address(S	iervo) 65 🗄
Relay Controle	r Setting
IP Addres	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHAT	ROLINK 🔽 1 🚍
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -V Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- 8 Click the [Link Assignments] tab, and then set [ST#]'s [01] field as follows.

Setup Items	Setup Description
TYPE	Select the type of Σ -V Series you are using.

NOTE

[ST#] is defined based on the Σ-V Series station address.
When the station address is 41H, define "ST#01".

- 9 In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- **11** Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to the MP Series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is

If the data is transferred without selecting the check box, the transferred data i deleted when restarting the External Device.

♦ Σ-V Series Setting

Set up communication settings with the DIP Switch (SW2) and the rotary switch (SW1). For example, when the SW2-3 is OFF and SW1 is 1, the station address is 41H.

- For details on communication settings, please refer to the manual for the External Device.
- DIP Switch (SW2) Setting

DIP Switch	Settings	Setup Description
1	ON	Communication speed: 10Mbps (MECHATROLINK-II)
2	Optional	Data transfer size. ON: 32-byte data transfer OFF: 17-byte data transfer
3	OFF	Define the station address in combination with the rotary switch (SW1). ON: Tenth's position of station address is 0x5 OFF: Tenth's position of station address is 0x4
4	OFF	Always OFF

• Rotary Switch (SW1) Setting

Set the station address in combination with the DIP Switch (SW2), number 3.

Rotary Switch	Settings	Setup Description
SW1	1	Ones place of the station address

Notes

3.6 Setting Example 6

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASKAWA	Electric Corporation Series MP Ethemet/MECHATROLI	NK Port Ethemet (UDP)
Text Data Mode 1	Change	
Communication Settings		
Port No.	024 🚔 🔽 Auto	
Timeout 3	(sec)	
Retry 2	· · · · · · · · · · · · · · · · · · ·	
Wait To Send	(ms) Default	
Device-Specific Settings		
Allowable Number of Devices/PLCs 32	Add Device Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=Sigma-V Series Linear Motor(M-II),IP Address=1	.
MPORTANT] • To conne	ect Σ -V Series using a 1:n connection	, [Wait To Send] must be 1

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings X
PLC1	
Product	Servo
Series	Sigma-V Series Linear Motor(M-II)
If you change the p address settings.	roduct or series, please reconfirm all
Station Address(S	ervo) 65 🗄
Relay Controle	r Setting
IP Addres	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHAT	ROLINK 💽 1 🗮
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -V Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- 8 Click the [Link Assignments] tab, and then set [ST#]'s [01] field as follows.

Setup Items	Setup Description	
TYPE	Select the type of Σ -V Series you are using.	

NOTE

[ST#] is defined based on the Σ-V Series station address.
When the station address is 41H, define "ST#01".

- 9 In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- **11** Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to the MP Series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is

deleted when restarting the External Device.

♦ Σ-V Series Setting

Set up communication settings with the DIP Switch (SW2) and the rotary switch (SW1). For example, when the SW2-3 is OFF and SW1 is 1, the station address is 41H.

- For details on communication settings, please refer to the manual for the External Device.
- DIP Switch (SW2) Setting

DIP Switch	Settings	Setup Description
1	ON	Communication speed: 10Mbps (MECHATROLINK-II)
2	Optional	Data transfer size. ON: 32-byte data transfer OFF: 17-byte data transfer
3	OFF	Define the station address in combination with the rotary switch (SW1). ON: Tenth's position of station address is 0x5 OFF: Tenth's position of station address is 0x4
4	OFF	Always OFF

• Rotary Switch (SW1) Setting

Set the station address in combination with the DIP Switch (SW2), number 3.

Rotary Switch	Settings	Setup Description
SW1	1	Ones place of the station address

Notes

3.7 Setting Example 7

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary	Change Dev	/ice/PLC
Manufacturer	YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet (UDP)
Text Data Mo	vde 1 <u>Change</u>	
Communicatio	in Settings	
Port No.	1024 📑 🔽 Auto	
Timeout	3 (sec)	
Retry	2	
Wait To S	iend 0 (ms) Default	
Device-Specif	ic Settings	
Allowable N of Devices/	umber <u>Add Device</u> <u>Increase Allowable</u> PLCs 32 Number of Devices/PLCs	
No. Devi	ce Name Settings Add Indirect Device	
👗 1 PLC	1 Series=Sigma-V Series Rotational Motor(M-III).IP Addre	
IMPORTANT	To connect Σ -V Series using a 1:n connection, [Wait To Send] m	nust be 10

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings X
PLC1	
Product	Servo
Series	Sigma-V Series Rotational Motor(M-III) 💌
If you change the p address settings.	product or series, please reconfirm all
Station Address(S	iervo) 3 🗄
Relay Controle	r Setting
IP Addres	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHAT	ROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -V Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- **8** Click the [Link Assignments] tab, and then [ST#]'s [01] as follows.

Setup Items	Setup Description
ADR	03H
ExADR	00
VENDOR	Yaskawa Electric co.
DEVICE	Σ -V Series type

NOTE

• [PROFILE], [BYTE] and [SCAN] are defined automatically.

- **9** In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- 11 Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to MP Series.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-V Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.8 Setting Example 8

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🗹 Auto	
Timeout 3 📩 (sec)	
Retry 2	
Wait To Send 0 (ms) Default	
Device-Specific Settings	
Allowable Number Add Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings	Add Indirect Device
1 PLC1 Series=Sigma-V Series Linear Motor(M-III).IP Address=	.
MPORTANT • To connect Σ-V Series using a 1:n connection, [Wait]	To Send] must be 100

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings X
PLC1	
Product	Servo 💌
Series	Sigma-V Series Linear Motor(M-III)
If you change the p address settings.	roduct or series, please reconfirm all
Station Address(S	ervo) 3 🗄
Relay Controle	r Setting
IP Address	s 192. 168. 0. 1
De	vice Type Circuit No.
1 MECHATE	ROLINK 🔽 1 🚍
	Default
	Delaurt
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -V Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- **8** Click the [Link Assignments] tab, and then [ST#]'s [01] as follows.

Setup Items	Setup Description
ADR	03H
ExADR	00
VENDOR	Yaskawa Electric co.
DEVICE	Σ -V Series type

NOTE

• [PROFILE], [BYTE] and [SCAN] are defined automatically.

- 9 In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- 11 Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to MP Series.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-V Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station autress

Notes

3.9 Setting Example 9

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	s	
Port No.	1024 🗾 🔽 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	IS	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indirect
No. Device Name	Settings	Device
👗 1 PLC1	Series=MP3000 Series,Access to Sub CPU=OFF,IP Ac	F .

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual D	Device Settings	×
PLC1		
Product	MP3000 Series	
	C Access to Sub CPU	
If you change the address settings	product or series, please reconfirm all	
IP Address	192. 168. 0. 1	
	Default	
	OK (O) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set the Display's IP address in its offline mode.

Use the ladder software (MP720 Ver.7) to set up communication settings. For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** Click [Module Configuration] to start [MC-Configurator].
- 4 Double-click [218IFD] on the CPU you want to use.
- **5** Click the [Transmission Parameters] tab.
- 6 In the [Transmission Parameters], set the [IP Address] and [Subnet Mask].

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- **7** Write the settings to the External Device.
- **8** Turn ON the External Device again.

Notes

3.10 Setting Example 10

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YAS	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settin	ngs	
Port No.	1024 🛃 Auto	
Timeout	3 (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setti	ngs	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Nam	e Settings	Device
👗 1 PLC1	Series=V1000,IP Address=192.168.000.001,Station Ac	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual De	vice Settings X	
PLC1		
Product	Inverter	
Series	V1000	
If you change the p address settings.	product or series, please reconfirm all	
Station Address(1	nverter) 33 芸	
Relay Controler Setting		
IP Addres	s 192. 168. 0. 1	
De	evice Type Circuit No.	
1 MECHAT	ROLINK 🗾 1 🚍	
	Default	
	OK (O) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set the Display's IP address in offline mode.

For details on communication settings, please refer to the manual of the External Device.

Setup Procedure

- 1 Press UP to display the Parameter Setting Mode screen. Press ENTER to change to Set Up Mode.
- 2 Press UP to display setup items. Press ENTER key to change to setup screen.
- $\mathbf{3}$ Press UP or RESET to select the setup value. Press ENTER to set up a description.

Setup Description

Setup Items	Setup value	Description
b1-02 ^{*1}	3	Run Command Selection (Option Card)
F6-20	21	MECHATROLINK station address
F6-22	0	MECHATROLINK link rate (10Mbps)

*1 Set b1-01 to 3 when you set the frequency via MECHATROLINK.

3.11 Setting Example 11

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer YASKA	AWA Electric Corporation	Series MP Ethemet/MECHATROL	INK Port Ethemet (UDP)
Text Data Mode	1 Change		
Communication Settings			
Port No.	1024 🕂 🗹 Auto		
Timeout	3 🕂 (sec)		
Retry	2 🛨		
Wait To Send	0 🔹 (ms)	Default	
Device-Specific Settings	5		
Allowable Number of Devices/PLCs	Add Device 32	Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings		Add Indirect Device
👗 1 PLC1	Series=A1000,IP	Address=192.168.000.001,Station Ac	F

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>🎬</i> Individual De	wice Settings	×
PLC1		
Product	Inverter	
Series	A1000	-
If you change the p address settings.	product or series, please reconfirm all	
Station Address(I	nverter) 33 🚊	
Relay Controler Setting		
IP Addres	s 192. 168. 0. 1	
De	evice Type Circuit No.	
1 MECHAT	ROLINK 🔽 1 芸	
	Default	
	OK (O) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set the Display's IP address in offline mode.

For details on communication settings, please refer to the manual of the External Device.

Setup Procedure

- 1 Press UP to display the Parameter Setting Mode screen. Press ENTER to change to Set Up Mode.
- 2 Press UP to display setup items. Press ENTER key to change to setup screen.
- $\mathbf{3}$ Press UP or RESET to select the setup value. Press ENTER to set up a description.

Setup Description

Setup Items	Setup value	Description
b1-02 ^{*1}	3	Run Command Selection (Option Card)
F6-20	21	MECHATROLINK station address
F6-22	0	MECHATROLINK link rate (10Mbps)

*1 Set b1-01 to 3 when you set the frequency via MECHATROLINK.

3.12 Setting Example 12

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YA	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setti	ngs	
Port No.	1024 🚊 🖌 Auto	
Timeout	3 🚖 (sec)	
Retry	2 📫	
Wait To Send	0 (ms) Default	
Device-Specific Setti	ings	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indirect
No. Device Nan	ne Settings	Device
👗 1 🛛 PLC1	Series=MP2000 Series,Access to MPU-01=ON,IP Add	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual	Device Settings	×
PLC1		
Product	MP2000 Series	
	Access to MPU-01	
If you change the address setting	e product or series, please reconfirm all s.	
-Relay Contr	oler Setting	
IP Addr	ess 192. 168. 0. 1	
	Device Type Circuit No.	
1 MPU-0	1 3 🛨	
	Default	
	OK (0) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- **4** Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- 9 Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Notes

3.13 Setting Example 13

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YA	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setti	ngs	
Port No.	1024 Auto	
Timeout	3 (sec)	
Retry	2 🔅	
Wait To Send	0 (ms) Default	
Device-Specific Sett	ings	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Nar	ne Settings	Device
👗 1 PLC1	Series=Sigma-V Series Rotational Motor(M-III), IP Addre	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings X
PLC1	
Product	Servo
Series	Sigma-V Series Rotational Motor(M-III) 💌
If you change the p address settings.	product or series, please reconfirm all
Station Address(S	Servo) 3 🗄
Relay Controle	er Setting
IP Addres	s 192. 168. 0. 1
D	evice Type Circuit No.
1 MPU-01	3 🗮
2 MECHAT	ROLINK 🗾 1 🚍
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Σ -Vseries settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- 9 Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ MPU-01 Settings

- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Σ -V series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added V-series.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-V Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.14 Setting Example 14

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settings	5	
Port No.	1024 🗾 🖌 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	s	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	Add Indianat
No. Device Name	Settings	Device
👗 1 PLC1	Series=Sigma-V Series Linear Motor(M-III),IP Address=	5

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual 🛙	Device Settings
PLC1	
Product	Servo
Series	Sigma-V Series Linear Motor(M-III) 💽
If you change the address settings	product or series, please reconfirm all
Station Address	(Servo) 3 芸
-Relay Contro	ler Setting
IP Addre	ss 192. 168. 0. 1
	Device Type Circuit No.
1 MPU-01	3
2 MECHA	TROLINK 🔽 1 🗮
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Σ -Vseries settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- **9** Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ MPU-01 Settings

- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Σ -V series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added V-series.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-V Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.15 Setting Example 15

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary Change Dr	evice/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet	(UDP)
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🖉 Auto	
Timeout 3 📩 (sec)	
Retry 2	
Wait To Send 0 🕂 (ms) Default	
Device-Specific Settings	
Allowable Number <u>Add Device</u> Increase Allowable of Devices/PLCs 32 <u>Number of Devices/PLCs</u> Add Indicase	
No. Device Name Settings Device	
1 PLC1 Series=MP3000 Series, Access to Sub CPU=ON, IP Ad	

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Indiv	idual Device Settings
PLC1	
Product	MP3000 Series 💌
	Access to Sub CPU
lf you ch address	ange the product or series, please reconfirm all settings.
Relay	Controler Setting
I	IP Address 192. 168. 0. 1
	Device Type Circuit No.
1	Sub CPU 🗾 5 🚍
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- **4** Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- 8 Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT •	To write the settings, select the [Save to flash after transferring to the controller] check
	box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Notes

3.16 Setting Example 16

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	S	
Port No.	1024 🗾 🔽 Auto	
Timeout	3 (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	s	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	Add Indiraat
No. Device Name	Settings	Device
👗 1 PLC1	Series=Sigma-V Series Rotational Motor(M-III),IP Addre	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual 🛙	Device Settings
PLC1	
Product	Servo 💌
Series	Sigma-V Series Rotational Motor(M-III) 💌
If you change the address settings	e product or series, please reconfirm all
Station Address	(Servo) 3 🚍
-Relay Contro	ler Setting
IP Addre	ess 192. 168. 0. 1
	Device Type Circuit No.
1 Sub CP	U 🔽 5 📰
2 MECHA	TROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Σ -Vseries settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- **4** Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- **8** Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Σ -V series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added V-series.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-V Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description	
S1 (x16)	0	Station address	
S2 (x1)	3		

Notes

3.17 Setting Example 17

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YAS	KAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settin	gs	
Port No.	1024 🗾 🔽 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Settin	ıgs	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	
No. Device Name	e Settings	Device
👗 1 PLC1	Series=Sigma-V Series Linear Motor(M-III),IP Address=	F .

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual D	evice Settings
PLC1	
Product	Servo 💌
Series	Sigma-V Series Linear Motor(M-III) 💽
If you change the address settings	product or series, please reconfirm all
Station Address	(Servo) 3 芸
-Relay Contro	ler Setting
IP Addre	ss 192. 168. 0. 1
[Device Type Circuit No.
1 Sub CPI	J 💌 5 🔅
2 MECHA	TROLINK 🔽 1 芸
	Default
	OK (O) Cancel

- · Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.
Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Σ -Vseries settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- **8** Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a sub CPU to be used from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Σ -V series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added V-series.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-V Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.18 Setting Example 18

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

	Device/PLC 1			
	Summary			Change Device/PLC
	Manufacturer YASKA	WA Electric Corporation	Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
	Text Data Mode	1 Change		
	Communication Settings			
	Port No.	1024 📑 🔽 Auto		
	Timeout	3 ÷ (sec)		
	Retry	2 🕂		
	Wait To Send	0 🕂 (ms)	Default	
	Device-Specific Settings			
	Allowable Number	Add Device	Increase Allowable Number of Devices/PLCs	
	No. Device Name	Settings	<u></u>	Add Indirect Device
	👗 1 🛛 PLC1	Series=Sigma-7S	Series Servo pack(M-II),IP Address=1	F .
IMPORT	ANT I • To con	nect Σ -7 Series	using a 1:n connection.	Wait To SendI must be

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings
PLC1	
Product	Servo
Series	Sigma-7S series Servo pack(M-II)
If you change the p address settings.	product or series, please reconfirm all
Station Address(S	iervo) 65 🚞
Relay Controle	r Setting
IP Address	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHATE	ROLINK 🔽 1 🚍
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -7 Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- 8 Click the [Link Assignments] tab, and then set [ST#]'s [01] field as follows.

Setup Items	Setup Description
TYPE	Select the type of Σ -7 Series you are using.

NOTE

[ST#] is defined based on the Σ-7 Series station address.
When the station address is 41H, define "ST#01".

- 9 In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- **11** Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to the MP Series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-7 Series Setting

Set up communication settings with the DIP Switch (SW2) and the rotary switch (SW1). For example, when the SW2-3 is OFF and SW1 is 1, the station address is 41H.

- For details on communication settings, please refer to the manual for the External Device.
- DIP Switch (SW2) Setting

DIP Switch	Settings	Setup Description
1	ON	Communication speed: 10Mbps (MECHATROLINK-II)
2	Optional	Data transfer size. ON: 32-byte data transfer OFF: 17-byte data transfer
3	OFF	Define the station address in combination with the rotary switch (SW1). ON: Tenth's position of station address is 0x5 OFF: Tenth's position of station address is 0x4
4	OFF	Always OFF

• Rotary Switch (SW1) Setting

Set the station address in combination with the DIP Switch (SW2), number 3.

Rotary Switch	Settings	Setup Description
SW1	1	Ones place of the station address

Notes

3.19 Setting Example 19

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary Change Device/PLC	2
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet (UDP)	
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 Z Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 (ms) Default	
Device-Specific Settings	
Allowable Number <u>Add Device</u> Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings Add Indirect	
1 PLC1 III Series=Sigma-7S series Servo pack(M-III),IP Address=	
IPORTANT • To connect Σ-7 Series using a 1:n connection, [Wait To Send] must b	e 100

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings
PLC1	
Product	Servo
Series	Sigma-7S series Servo pack(M-III)
If you change the p address settings.	product or series, please reconfirm all
Station Address(S	iervo) 3 🗄
Relay Controle	r Setting
IP Address	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHATE	ROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -7 Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- **8** Click the [Link Assignments] tab, and then [ST#]'s [01] as follows.

Setup Items	Setup Description
ADR	03H
ExADR	00
VENDOR	Yaskawa Electric co.
DEVICE	Σ -7 Series type

NOTE

• [PROFILE], [BYTE] and [SCAN] are defined automatically.

- **9** In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- 11 Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to MP Series.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-7 Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.20 Setting Example 20

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YA	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setti	ngs	
Port No.	1024 🔁 🖌 Auto	
Timeout	3 :: (sec)	
Retry	2 🔅	
Wait To Send	0 (ms) Default	
Device-Specific Setti	ings	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indirect
No. Device Nan	ne Settings	Device
👗 1 PLC1	Series=Sigma-7S series Servo pack(M-III),IP Address=	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual 🛙	Device Settings
PLC1	
Product	Servo 💌
Series	Sigma-7S series Servo pack(M-Ⅲ) 💽
If you change the address settings	product or series, please reconfirm all
Station Address	(Servo) 3 🚍
-Relay Contro	ler Setting
IP Addre	ss 192. 168. 0. 1
	Device Type Circuit No.
1 MPU-01	3
2 MECHA	TROLINK 🔽 1 🗮
	Default
	UK (U) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Σ -7 series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- **9** Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ MPU-01 Settings

- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Σ -7 series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -7 series.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-7 Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.21 Setting Example 21

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YA	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setti	ngs	
Port No.	1024 🔁 🖌 Auto	
Timeout	3 :: (sec)	
Retry	2 🔅	
Wait To Send	0 (ms) Default	
Device-Specific Setti	ings	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indirect
No. Device Nan	ne Settings	Device
👗 1 🛛 PLC1	Series=Sigma-7S series Servo pack(M-III),IP Address=	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings X
PLC1	
Product	Servo
Series	Sigma-7S series Servo pack(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(Servo) 3 🛨
Relay Control	er Setting
IP Addres	ss 192. 168. 0. 1
D	evice Type Circuit No.
1 Sub CPU	5
2 MECHAT	ROLINK 💌 1 芸
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Σ -7 series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- **4** Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- **8** Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Σ -7 series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -7 series.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-7 Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.22 Setting Example 22

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1
Summary Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet (UDP)
Text Data Mode 1 Change
Communication Settings
Port No. 1024 💆 Auto
Timeout 3 (sec)
Retry 2
Wait To Send 0 (ms) Default
Device-Specific Settings
Allowable Number <u>Add Device</u> Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs
Add Indirect No. Device Name Settings Device
1 PLC1 III Series=Sigma-7W series Servo pack(M-III),IP Address=
PORTANT • To connect Σ -7 Series using a 1:n connection, [Wait To Send] must be γ

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings	×
PLC1		
Product	Servo 💌	
Series	Sigma-7W series Servo pack(M-III)	•
If you change the p address settings.	product or series, please reconfirm all	
Station Address(S	Servo) 🛛 👔 🚊 Axis No.	1 🗄
Relay Controle	er Setting	
IP Addres	s 192. 168. 0. 1	
De	evice Type Circuit No	
1 MECHAT	ROLINK 🔽 1 🗮	
	D	efault
	OK (O) Can	cel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -7 Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- **8** Click the [Link Assignments] tab, and then [ST#]'s [01] as follows.

Setup Items	Setup Description
ADR	03H
ExADR	00
VENDOR	Yaskawa Electric co.
DEVICE	Σ -7 Series type

NOTE

• [PROFILE], [BYTE] and [SCAN] are defined automatically.

- **9** In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- 11 Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to MP Series.

IMPORTANT

 To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-7 Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.23 Setting Example 23

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	s	
Port No.	1024 🗾 🗹 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	js	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=Sigma-7W series Servo pack(M-III),IP Address=	F i

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual D	Device Settings
PLC1	
Product	Servo
Series	Sigma-7W series Servo pack(M-III)
If you change the address settings	product or series, please reconfirm all
Station Address	(Servo) 3 芸 Axis No. 1 芸
-Relay Contro	ler Setting
IP Addre	ess 192. 168. 0. 1
1	Device Type Circuit No.
1 MPU-01	3
2 MECHA	TROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Σ -7 series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- **9** Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ MPU-01 Settings

- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Σ -7 series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -7 series.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-7 Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.24 Setting Example 24

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer Y	ASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Se	ttings	
Port No.	1024 Auto	
Timeout	3 (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Se	ttings	
Allowable Numb of Devices/PLCs	er <u>Add Device</u> Increase Allowable 32 <u>Number of Devices/PLCs</u>	Add Indiana
No. Device N	ame Settings	Device
👗 1 🛛 PLC1	Series=Sigma-7W series Servo pack(M-III),IP Address=	1

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings X
PLC1	
Product	Servo
Series	Sigma-7W series Servo pack(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(S	Servo) 3 芸 Axis No. 1 芸
Relay Controle	er Setting
IP Addres	s 192. 168. 0. 1
D	evice Type Circuit No.
1 Sub CPU	5
2 MECHAT	ROLINK 💌 1 芸
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Σ -7 series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- **4** Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- **8** Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Σ -7 series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -7 series.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-7 Series Setting

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.25 Setting Example 25

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🗹 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 📩 (ms) Default	
Device-Specific Settings	
Allowable Number Add Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings	Add Indirect Device
1 PLC1 Series=R7G4HML3-LC2(M-III),IP Address=192.168.00	F
MPORTANT • To connect Remote I/O Series using a 1:n connection	on, [Wait To Send] m
100ms or more.	

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings	×
PLC1		
Product	I/O(M-System)	
Series	R7G4HML3-LC2(M-III)	-
If you change the address settings.	product or series, please reconfirm all	
Station Address()	I/O) <u>3</u>	
Relay Controle	er Setting	
IP Addres	s 192. 168. 0. 1	
D	evice Type Circuit No.	
1 MECHAT	ROLINK 🔽 1 🗮	
	Default	
	OK (0) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

(2) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	

7 On the CPU you want to use, set the [SVC32] circuit number to "1".

Set up the same value as the Display's circuit number.

- **8** On the CPU you want to use, open [SVC32], and double-click [01 UNDEFINED].
- 9 In the tree view, from [I/O]-[Other], select [WILDCARD I/O], and click [OK].
- 10 For the [WILDCARD I/O] station number, set "3".
- **11** Write the settings to the External Device.

To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.26 Setting Example 26

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	5	
Port No.	1024 🛨 🔽 Auto	
Timeout	3 (sec)	
Retry	2 🔹	
Wait To Send	0 (ms) Default	
Device-Specific Setting	s	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	Add Indirect
No. Device Name	Settings	Device
👗 1 PLC1	Series=R7G4HML3-LC2(M-III),IP Address=192.168.00	5

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	Jndividual Device Settings		
PLC1			
Product	I/O(M-System) ▼		
Series	R7G4HML3-LC2(M-III)		
If you change the p address settings.	product or series, please reconfirm all		
Station Address(L	/0) 👔 🚍		
Relay Controle	r Setting		
IP Addres:	s 192. 168. 0. 1		
De	evice Type Circuit No.		
1 MPU-01	3		
2 MECHATI	ROLINK 🔽 1 🗮		
	Default		
	OK (0) Cancel		

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number associated with the option slot attached to MPU-01 in the [MC-Configurator].
- 8 In the [Module] dialog box, select [MPU-01] and click [OK].
- 9 In the [MC-Configurator], set [MPU-01]'s circuit number to "3".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ MPU-01 Settings
- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Remote I/O of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Remote I/O.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.27 Setting Example 27

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	S	
Port No.	1024 🗾 🗹 Auto	
Timeout	3 * (sec)	
Retry	2	
Wait To Send	0 (ms) Default	
Device-Specific Setting	S	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	Add Indirect
No. Device Name	Settings	Device
👗 1 PLC1	Series=R7G4HML3-LC2(M-III),IP Address=192.168.00	5

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings X
PLC1	
Product	I/O(M-System)
Series	R7G4HML3-LC2(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(I/O) <u>3</u>
Relay Control	er Setting
IP Addres	ss 192. 168. 0. 1
D	evice Type Circuit No.
1 Sub CPU	5
2 MECHAT	ROLINK 💌 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	

- 7 Double-click the module number attached to the sub CPU in the [MC-Configurator].
- 8 In the [Module] dialog box, select the sub CPU in use and click [OK].
- **9** In the [MC-Configurator], set the sub CPU circuit number to "5".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Remote I/O of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Remote I/O.

8 Write the settings to the Sub CPU.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.28 Setting Example 28

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

	Device/PLC 1			
	Summary			Change Device/PLC
	Manufacturer Y	SKAWA Electric Corporation Series MP Et	nemet/MECHATROLINK	Port Ethemet (UDP)
	Text Data Mode	1 Change		
	Communication Sett	ings		
	Port No.	1024 🗾 🗹 Auto		
	Timeout	3 (sec)		
	Retry	2 -		
	Wait To Send	0 (ms) Default		
	Device-Specific Set	ings		
	Allowable Numbe of Devices/PLCs	Add Device Increase 32 Number	Allowable of Devices/PLCs	
	No. Device Na	me Settings		Add Indirect Device
	👗 1 PLC1	Series=K1G(M-III),IP Address=192.	168.000.001,Statior	I
MPORT	ΆΝΤ 🕴 🗖 Το α	connect Remote I/O Series us	ing a 1:n connection	, [Wait To Send] mu
	100	ms or more.		

Device Setting

I

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings X
PLC1	
Product	I/O(Azbil)
Series	K1G(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(L	/O) 3 芸
Relay Controle	r Setting
IP Addres:	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHATI	ROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

(2) Controller settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

7 On the CPU you want to use, set the [SVC32] circuit number to "1".

Set up the same value as the Display's circuit number.

- **8** On the CPU you want to use, open [SVC32], and double-click [01 UNDEFINED].
- 9 In the tree view, from [I/O]-[Other], select [WILDCARD I/O], and click [OK].
- 10 For the [WILDCARD I/O] station number, set "3".
- **11** Write the settings to the External Device.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Controller Settings

To configure communication settings for the External Device, use the CPU unit's Run, para, enter and cursor keys. Refer to your External Device manual for details.

Procedure

- **1** When [Run] is lit, press and hold the Run key for 3 seconds.
- **2** Press the para key to display parameters.
- $\mathbf{3}$ Use the up/down cursor keys to display the setup items. (Setup items will blink.)
- 4 Press the enter key to select a setup item.
- 5 Select the settings with the cursor keys. (Settings will blink.)
- 6 Press the enter key to confirm the settings.
- 7 Press the Run key, and [Run] is lit.

Settings

Setup Items	Settings	Setup Description
A09	3	MECHATROLINK-III station address

Notes

3.29 Setting Example 29

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YA	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setti	ngs	
Port No.	1024 🖆 🖌 Auto	
Timeout	3 🙁 (sec)	
Retry	2 📫	
Wait To Send	0 (ms) Default	
Device-Specific Sett	ings	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Nar	ne Settings	Device
👗 1 🛛 PLC1	Series=K1G(M-III),IP Address=192.168.000.001,Station	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🚰 Individual Device Settings 🛛 🔀		
PLC1		
Product	I/O(Azbil)	
Series	К1G(М-Ш)	
If you change the address settings.	product or series, please reconfirm all	
Station Address(I/O) 3		
Relay Control	er Setting	
IP Addres	s 192. 168. 0. 1	
D	evice Type Circuit No.	
1 MPU-01	3 😳	
2 MECHAT	ROLINK 🔽 1 🗮	
	Default	
	OK (O) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- ., .
- (2) MPU-01 settings
- (3) Controller settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number associated with the option slot attached to MPU-01 in the [MC-Configurator].
- 8 In the [Module] dialog box, select [MPU-01] and click [OK].
- 9 In the [MC-Configurator], set [MPU-01]'s circuit number to "3".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ MPU-01 Settings
- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Controller of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Controller.
8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Controller Settings

To configure communication settings for the External Device, use the CPU unit's Run, para, enter and cursor keys. Refer to your External Device manual for details.

Procedure

- **1** When [Run] is lit, press and hold the Run key for 3 seconds.
- **2** Press the para key to display parameters.
- $\mathbf{3}$ Use the up/down cursor keys to display the setup items. (Setup items will blink.)
- **4** Press the enter key to select a setup item.
- 5 Select the settings with the cursor keys. (Settings will blink.)
- 6 Press the enter key to confirm the settings.
- 7 Press the Run key, and [Run] is lit.

Settings

Setup Items	Settings	Setup Description
A09	3	MECHATROLINK-III station address

Notes

3.30 Setting Example 30

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YA	SKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setti	ings	
Port No.	1024 Auto	
Timeout	3 (sec)	
Retry	2 📫	
Wait To Send	0 (ms) Default	
Device-Specific Sett	ings	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Nar	ne Settings	Device
👗 1 🛛 PLC1	Series=K1G(M-III),IP Address=192.168.000.001,Station	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

SIndividual Device Settings		
PLC1		
Product	I/O(Azbil)	
Series	К 1G(M-III)	
If you change the address settings	e product or series, please reconfirm all	
Station Address(I/O) <u>3</u>	
Relay Control	ler Setting	
IP Addre	ss 192. 168. 0. 1	
C	Device Type Circuit No.	
1 Sub CPL	J 🔻 5 芸	
2 MECHA	TROLINK 💌 1 芸	
	Default	
	OK (O) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Controller settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number attached to the sub CPU in the [MC-Configurator].
- 8 In the [Module] dialog box, select the sub CPU in use and click [OK].
- **9** In the [MC-Configurator], set the sub CPU circuit number to "5".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Controller of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Controller.

8 Write the settings to the Sub CPU.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Controller Settings

To configure communication settings for the External Device, use the CPU unit's Run, para, enter and cursor keys. Refer to your External Device manual for details.

Procedure

- **1** When [Run] is lit, press and hold the Run key for 3 seconds.
- **2** Press the para key to display parameters.
- **3** Use the up/down cursor keys to display the setup items. (Setup items will blink.)
- **4** Press the enter key to select a setup item.
- 5 Select the settings with the cursor keys. (Settings will blink.)
- 6 Press the enter key to confirm the settings.
- 7 Press the Run key, and [Run] is lit.

Settings

Setup Items	Settings	Setup Description
A09	3	MECHATROLINK-III station address

Notes

3.31 Setting Example 31

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🖾 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 (ms) Default	
Device-Specific Settings	
Allowable Number Add Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings	Add Indirect Device
1 PLC1 Series=AZ Series Multi-Axis Driver(M-III).IP Address=15	_
RTANT • To connect AZ Series using a 1:n connection, [W	ait To Send] must be

Device Setting

more.

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	vice Settings X
PLC1	
Product	Stepping(Orientalmotor)
Series	AZ Series Multi-Axis Driver(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(S	Stepping) 3 📑 Axis No. 1 🚍
Relay Controle	r Setting
IP Addres	s 192. 168. 0. 1
De	evice Type Circuit No.
1 MECHAT	ROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7.33.0100) to set up communication settings. Set the next contents. (1) Main CPU settings

(2) Stepping motor settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

7 On the CPU you want to use, set the [SVC32] circuit number to "1".

Set up the same value as the Display's circuit number.

- 8 On the CPU you want to use, open [SVC32], and double-click [01 UNDEFINED].
- 9 In the tree view, from [Stepping], select [Wild Card SteppingMotorDRV], and click [OK].
- 10 For the [Wild Card SteppingMotorDRV] station number, set "3".
- **11** Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Stepping Motor Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x10)	0	Station address
S2 (x1)	3	

Notes

3.32 Setting Example 32

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary Change Device/F	<u>LC</u>
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet (UDP)	1
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 🚔 🔽 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 (ms) Default	
Device-Specific Settings	
Allowable Number Add Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings Add Indirect Device	
1 PLC1 III Series=AZ Series Multi-Axis Driver(M-III),IP Address=15	

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings	×
PLC1		
Product	Product Stepping(Orientalmotor)	
Series	AZ Series Multi-Axis Driver(M-III)	•
If you change the address settings.	product or series, please reconfirm a	.11
Station Address(Stepping) 3 🕂 Axis No. 1		
Relay Controle	er Setting	
IP Addres	s 192. 168. 0. 1	
De	evice Type Circuit No.	
1 MPU-01	3 🗄	
2 MECHAT	ROLINK 🔽 1 🗄	
	De	efault
	OK (0) Canc	el

- · Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Stepping motor settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- **1** Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration]. [MC-Configurator] starts up.
- 4 On the CPU you want to use, double-click [218IFD].
- **5** Click the [Parameters] tab.
- **6** In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number associated with the option slot attached to MPU-01 in the [MC-Configurator].
- **8** In the [Module] dialog box, select [MPU-01] and click [OK].
- 9 In the [MC-Configurator], set [MPU-01]'s circuit number to "3".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is

deleted when restarting the External Device.

- ♦ MPU-01 Settings
- 1 Start the ladder software.
- **2** Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 In the tree view of [Slave] dialog box, from [Stepping], select [Wild Card SteppingMotorDRV], and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Wild Card SteppingMotorDRV.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Stepping Motor Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x10)	0	Station address
S2 (x1)	3	

Notes

3.33 Setting Example 33

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASKA	WA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settings		
Port No.	1024 🛒 🖌 Auto	
Timeout	3 (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Settings		
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=AZ Series Multi-Axis Driver(M-III),IP Address=15	F .

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III . To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings	×
PLC1		
Product	Stepping(Orientalmotor)	┓
Series	AZ Series Multi-Axis Driver(M-III)	•
If you change the address settings.	product or series, please reconfirm all	
Station Address(S	Stepping) 🛛 🔁 Axis No. 👔	<u>.</u>
-Relay Controle	er Setting	
IP Addres	s 192. 168. 0. 1	
De	evice Type Circuit No.	
1 Sub CPU	5 🗄	
2 MECHAT	ROLINK 🔽 1 🗮	
	Default	
	OK (0) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Stepping motor settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration]. [MC-Configurator] starts up.
- 4 On the CPU you want to use, double-click [218IFD].
- **5** Click the [Parameters] tab.
- **6** In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number attached to the sub CPU in the [MC-Configurator].
- **8** In the [Module] dialog box, select the sub CPU in use and click [OK].
- **9** In the [MC-Configurator], set the sub CPU circuit number to "5".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 In the tree view of [Slave] dialog box, from [Stepping], select [Wild Card SteppingMotorDRV], and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Wild Card SteppingMotorDRV.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Stepping Motor Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x10)	0	Station address
S2 (x1)	3	Station address

Notes

3.34 Setting Example 34

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1
Summary Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK Port Ethemet (UDP)
Text Data Mode 1 Change
Communication Settings
Port No. 1024 🚅 🗹 Auto
Timeout 3 (sec)
Retry 2
Wait To Send 0 (ms) Default
Device-Specific Settings
Allowable Number <u>Add Device</u> <u>Increase Allowable</u> of Devices/PLCs 32 Number of Devices/PLCs
No. Device Name Settings Add Indirect
1 PLC1 Series=R7G4HML3-STYVS1(M-III),IP Address=192.16
PORTANT • To connect Remote I/O Series using a 1:n connection, [Wait To Send] n
100ms or more.

Device Setting

I

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings X
PLC1	
Product	I/O(M-System)
Series	R7G4HML3-STYVS1(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(]	/0) 3 🚍
Relay Controle	er Setting
IP Addres	s 192. 168. 0. 1
D	evice Type Circuit No.
1 MECHAT	ROLINK 🔽 1 🚍
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

(2) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

7 On the CPU you want to use, set the [SVC32] circuit number to "1".

Set up the same value as the Display's circuit number.

- **8** On the CPU you want to use, open [SVC32], and double-click [01 UNDEFINED].
- 9 In the tree view, from [I/O]-[Other], select [WILDCARD I/O], and click [OK].
- 10 For the [WILDCARD I/O] station number, set "3".
- **11** Write the settings to the External Device.

To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.35 Setting Example 35

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	s	
Port No.	1024 🗾 🔽 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	15	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indirect
No. Device Name	Settings	Device
👗 1 PLC1	Series=R7G4HML3-STYVS1(M-III),IP Address=192.16	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i> I</i> ndividual D	Device Settings	×
PLC1		
Product	I/O(M-System)	-
Series	R7G4HML3-STYVS1(M-III)	•
If you change th address settings	e product or series, please reconfirm all	
Station Address	(1/0) 3 🛨	
-Relay Contro	ler Setting	
IP Addre	ss 192. 168. 0. 1	
[Device Type Circuit No.	
1 MPU-01	▼ 3 🗄	
2 MECHA	TROLINK 🔽 1 🗮	
	Default	
	OK (O) Cancel	1

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number associated with the option slot attached to MPU-01 in the [MC-Configurator].
- 8 In the [Module] dialog box, select [MPU-01] and click [OK].
- 9 In the [MC-Configurator], set [MPU-01]'s circuit number to "3".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ MPU-01 Settings
- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Remote I/O of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Remote I/O.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.36 Setting Example 36

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	s	
Port No.	1024 🗾 🔽 Auto	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	15	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indirect
No. Device Name	Settings	Device
👗 1 PLC1	Series=R7G4HML3-STYVS1(M-III),IP Address=192.16	.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual D	evice Settings X
PLC1	
Product	I/O(M-System)
Series	R7G4HML3-STYVS1(M-III)
If you change the address settings	e product or series, please reconfirm all
Station Address(I/O) <u>3</u>
Relay Control	er Setting
IP Addres	ss 192. 168. 0. 1
C	levice Type Circuit No.
1 Sub CPL	5
2 MECHAT	
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number attached to the sub CPU in the [MC-Configurator].
- 8 In the [Module] dialog box, select the sub CPU in use and click [OK].
- **9** In the [MC-Configurator], set the sub CPU circuit number to "5".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Remote I/O of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Remote I/O.

8 Write the settings to the Sub CPU.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.37 Setting Example 37

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer YASKAWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethernet (UDP)
Text Data Mode 1 Change	
Communication Settings	
Port No. 1024 📰 🗹 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 (ms) Default	
Device-Specific Settings	
Allowable Number Ald Device Increase Allowable of Devices/PLCs 32 Number of Devices/PLCs	
No. Device Name Settings	Add Indirect Device
1 PLC1 In Series=R7G4HML3-LC2A(M-III),IP Address=192.168.0	I
MPORTANT • To connect Remote I/O Series using a 1:n connect	ction, [Wait To Send] mu
100ms or more.	

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual De	evice Settings X
PLC1	
Product	I/O(M-System)
Series	R7G4HML3-LC2A(M-III)
If you change the address settings.	product or series, please reconfirm all
Station Address(]	/0) 3 🗄
Relay Controle	er Setting
IP Addres	s 192. 168. 0. 1
D	evice Type Circuit No.
1 MECHAT	ROLINK 🔽 1 🚍
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

(2) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

7 On the CPU you want to use, set the [SVC32] circuit number to "1".

Set up the same value as the Display's circuit number.

- **8** On the CPU you want to use, open [SVC32], and double-click [01 UNDEFINED].
- 9 In the tree view, from [I/O]-[Other], select [WILDCARD I/O], and click [OK].
- 10 For the [WILDCARD I/O] station number, set "3".
- **11** Write the settings to the External Device.

To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.38 Setting Example 38

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer YASKAWA	Electric Corporation Series	MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode 1	<u>Change</u>		
Communication Settings			
Port No.)24 🕂 🔽 Auto		
Timeout 3	÷ (sec)		
Retry 2	*		
Wait To Send	🗧 (ms) Def	ault	
Device-Specific Settings			
Allowable Number of Devices/PLCs 32	Add Device	Increase Allowable Number of Devices/PLCs	Add Indicast
No. Device Name	Settings		Device
👗 1 PLC1	Series=R7G4HML3-LC2A	(M-III),IP Address=192.168.0	5

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual D	evice Settings
PLC1	
Product	L/O(M-System)
Series	R7G4HML3-LC2A(M-III)
If you change the address settings	e product or series, please reconfirm all
Station Address(I/O) <u>3</u>
Relay Control	ler Setting
IP Addre	ss 192. 168. 0. 1
[Device Type Circuit No.
1 MPU-01	3 🗄
2 MECHAT	TROLINK 🔽 1 🗮
	Default
	OK (0) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number associated with the option slot attached to MPU-01 in the [MC-Configurator].
- 8 In the [Module] dialog box, select [MPU-01] and click [OK].
- 9 In the [MC-Configurator], set [MPU-01]'s circuit number to "3".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ MPU-01 Settings
- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Remote I/O of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Remote I/O.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.39 Setting Example 39

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer YASKAWA	Electric Corporation Series	MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode 1	<u>Change</u>		
Communication Settings			
Port No.)24 🕂 🔽 Auto		
Timeout 3	÷ (sec)		
Retry 2	*		
Wait To Send	🗧 (ms) Def	ault	
Device-Specific Settings			
Allowable Number of Devices/PLCs 32	Add Device	Increase Allowable Number of Devices/PLCs	Add Indicast
No. Device Name	Settings		Device
👗 1 PLC1	Series=R7G4HML3-LC2A	(M-III),IP Address=192.168.0	5

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

<i>拳</i> Individual D	evice Settings
PLC1	
Product	I/O(M-System)
Series	R7G4HML3-LC2A(M-III)
If you change the address settings	e product or series, please reconfirm all
Station Address((1/0) 3 芸
Relay Control	ler Setting
IP Addre	ss 192. 168. 0. 1
C	Device Type Circuit No.
1 Sub CPL	J 🔽 5 🗮
2 MECHA	TROLINK 🔽 1 🗮
	Default
	OK (O) Cancel

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Remote I/O settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. From the [Model] list, select the main CPU.
- **3** From the [Start] tab, click [Module Configuration].

[MC-Configurator] starts up.

- 4 On the CPU you want to use, double-click [218IFD].
- 5 Click the [Parameters] tab.
- 6 In the [Transmission Parameters] group define the [IP Address] and [Subnet Mask] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number attached to the sub CPU in the [MC-Configurator].
- 8 In the [Module] dialog box, select the sub CPU in use and click [OK].
- **9** In the [MC-Configurator], set the sub CPU circuit number to "5".

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
To write the settings, select the [Save to flash after transferring to the controller] check box.
If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Remote I/O of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Remote I/O.

8 Write the settings to the Sub CPU.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Remote I/O Settings

Set up communication settings with rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	Station address

Notes

3.40 Setting Example 40

Settings of GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Setting	s	
Port No.	1024 🔀 Auto	
Timeout	3	
Retry	2 *	
Wait To Send	0 (ms) Default	
Device-Specific Setting	js	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	Add Indicast
No. Device Name	Settings	Device
👗 1 PLC1	Series=Sigma-7C Series Servo pack(M-III),IP Address=	-

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individual D	evice Settings	×
PLC1		
Product	Servo	•
Series	Sigma-7C Series Servo pack(M-III)	•
If you change th address settings	e product or series, please reconfirm all	
Station Address	(Servo) 1 🚍 Axis No. 1	Ð
Controler Set	ting	
IP Addre	ss 192. 168. 0. 1	
[Device Type Circuit No.	
1 SVD	1 🚞	
	Default	
	OK (0) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set the Display's IP address in its offline mode.

Use the ladder software (MP720 Ver.7) to set up communication settings. For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.

In the [TypeSelect] area, set the [Series] and [Controller].

Setup Items	Setup Description
Series	MP3000
Controller	SIGMA-7C

- **3** Click [Module Configuration] to start [MC-Configurator].
- 4 Double-click [218IFD] on the CPU you want to use.
- 5 Click the [Transmission Parameters] tab.
- 6 In [Transmission Parameters], set the [IP Address] and [Subnet Mask].

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 For the CPU you want to use in [MC-Configurator], set [SVD] to [Circuit No1].
- $\mathbf{8}$ Write the settings to the External Device.
- **9** Turn ON the External Device again.

Notes

3.41 Setting Example 41

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Summary		Change Device
Manufacturer YASK	WA Electric Corporation Series MP Ethemet/MECHATR	OLINK Port Ethemet (UI
Text Data Mode	1 Change	
Communication Settings		
Port No.	1024 🔹 🗹 Auto	
Timeout	3 (sec)	
Retry	2	
Wait To Send	0 (ms) Default	
Device-Specific Setting	3	
Allowable Number of Devices/PLCs	32 Add Device Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=Sigma-XS Series Servo pack(M-III),IP Address	- 7

IMPORTANT

To connect Σ -X Series using a 1:n connection, [Wait To Send] must be 100ms or more.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🎒 Individ	🖆 Individual Device Settings 🛛 🗙 🗙		
PLC1			
Product		Servo	\sim
Series		Sigma-XS Series Servo pack(M-III)	\sim
If you cha address se	nge the ettings.	product or series, please reconfirm all	
Station Ac	ldress(S	ervo) 3 🜩	
-Relay C	Controler	Setting	
IP	Address	192. 168. 0. 1	
	De	vice Type Circuit No.	
1 M	ECHATE	ROLINK V 1	
		Default	:
		OK (O) Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Set communication settings for both MP and Σ -X Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- **8** Click the [Link Assignments] tab, and then [ST#]'s [01] as follows.

Setup Items	Setup Description
ADR	03H
ExADR	00
VENDOR	Yaskawa Electric co.
DEVICE	Σ -X Series type

NOTE

• [PROFILE], [BYTE] and [SCAN] are defined automatically.

- **9** In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- 11 Set [Transmission Parameters] as follows.

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to MP Series.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-X Series Setting

Set up communication settings with the DIP Switch (SW3) and the rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

• DIP Switch (SW3) Setting

DIP Switch	Settings	Setup Description
1	Ontional	Transmission byte size
2	Optional	
3	ON	Communication protocol: MECHATROLINK-III
4	OFF	Always OFF

• Rotary switches (S1 and S2) Setting

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

3.42 Setting Example 42

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer YASk	KAWA Electric Corporation	Series MP Ethernet/MECHATROL	INK Port Ethemet (UDP)
Text Data Mode	1 Change		
Communication Setting	s		
Port No.	1024 🔶 🖌 Auto		
Timeout	3 ≑ (sec)		
Retry	2		
Wait To Send	0 🔶 (ms)	Default	
Device-Specific Setting	js		
Allowable Number of Devices/PLCs	Add Device	Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings		Add Indirect Device
👗 1 PLC1	Series=Sigma-XS	Series Servo pack(M-III), IP Address=	=

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🕌 Individual Device Settings 🛛 🗙 🗙						
PLC1						
Produc	Product Servo			\sim		
Series		Sigma-XS Series Servo pack(M-III)			(м-ш)	\sim
If you change the product or series, please reconfirm all address settings.						
Station Address(Servo) 3						
Rela	ay Controlei	Setting-				
	IP Addres:	3	192. 168.	0.	1	
	De	vice Type		Circ	uit No.	
1	MPU-01		\sim	3	\$	
2	MECHATI	ROLINK	\sim	1	÷	
					Defau	lt
			OK (O)		Cancel	

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Σ -X series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description
IP Address	192.168.0.1
Subnet Mask	255.255.255.0

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- **9** Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ MPU-01 Settings

- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Σ -X series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -X series.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-X Series Setting

Set up communication settings with the DIP Switch (SW3) and the rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

• DIP Switch (SW3) Setting

DIP Switch	Settings	Setup Description	
1	– Optional	Transmission hyte size	
2			
3	ON	Communication protocol: MECHATROLINK-III	
4	OFF	Always OFF	

• Rotary switches (S1 and S2) Setting

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

♦ Notes
3.43 Setting Example 43

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

	Device/PLC 1		
	Summary		Change Device/PLC
	Manufacturer YASK/	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
	Text Data Mode	1 Change	
	Communication Settings	à	
	Port No.	1024 🔶 🖌 Auto	
	Timeout	3 (sec)	
	Retry	2	
	Wait To Send	0 (ms) Default	
	Device-Specific Settings	S	
	Allowable Number of Devices/PLCs	Add Device Increase Allowable Number of Devices/PLCs	
	No. Device Name	Settings	Add Indirect Device
	👗 1 PLC1	Series=Sigma-XS Series Servo pack(M-III),IP Address=	F 1
- 1			

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🍜 Individual Device Settings 🛛 🗙 🗙				
PLC1				
Product		Servo	\sim	
Series		Sigma-XS Series Servo pack(M-III)	\sim	
If you addres	change the s settings.	product or series, please reconfirm all		
Station	h Address(S	ervo) 3 🌩		
Rela	ay Controlei	Setting		
	IP Addres:	s 192. 168. O. 1		
	De	wice Type Circuit No.		
1	Sub CPU	~ 5 🜩		
2	2 MECHATROLINK 🗸 1 🚖			
Default				
		OK (O) Cancel		

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Σ -X series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- **8** Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
 To write the settings, select the [Save to flash after transferring to the controller] check box.
 If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Σ -X series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -X series.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-X Series Setting

Set up communication settings with the DIP Switch (SW3) and the rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

• DIP Switch (SW3) Setting

DIP Switch	Settings	Setup Description	
1	Optional	Transmission byte size	
2	Optional		
3	ON	Communication protocol: MECHATROLINK-III	
4	OFF	Always OFF	

• Rotary switches (S1 and S2) Setting

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.44 Setting Example 44

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Summary		Change Device
Manufacturer YASKA	VA Electric Corporation Series MP Ethemet/MECH	ATROLINK Port Ethemet (UD
Text Data Mode	1 Change	
Communication Settings		
Port No.	1024 🗘 🗘 Auto	
Timeout	3 🚖 (sec)	
Retry	2	
Wait To Send	0 (ms) Default	
Device-Specific Settings		
Allowable Number of Devices/PLCs	Add Device Increase Allowable Number of Devices/P	LCs
No. Device Name	Settings	Device
👗 1 PLC1	Series=Sigma-XW Series Servo pack(M-III),IP Ad	idress 🔛

IMPORTANT

To connect Σ -X Series using a 1:n connection, [Wait To Send] must be 100ms or more.

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🖆 Individual Device Settings 🛛 🗙 🗙				
PLC1				
Product	Servo	\sim		
Series	Sigma-XW Series Servo pack(M-III)	\sim		
If you change t address setting	the product or series, please reconfirm all gs.			
Station Addres	s(Servo) 3 🔹 Axis No. 1	*		
-Relay Contr	oler Setting			
IP Add	ress 192. 168. 0. 1			
	Device Type Circuit No.			
1 MECH	ATROLINK 🗸 1 🚖			
	Defau	lt		
	OK (O) Cancel			

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Set communication settings for both MP and Σ -X Series.

MP Series Setting

Use the ladder software (MPE720) to set up communication settings.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start the ladder software.
- **2** Make a project file.
- **3** From the tree view, double-click [Module Configuration].

[Engineering Manager] starts.

- 4 In the [Create new file] dialog box, click [OK].
- 5 In the [Engineering Manager]'s [Controller], use the pull-down menu to select MECHATROLINK connection module.

Select the number associated with the slot number used by the module.

When you select the MECHATROLINK connection module, its setting information is displayed in the

[Engineering Manger]'s [Module details].

6 In the [module Details]'s [Circuit Number] field, enter "01".

Set up the same value as the Display's circuit number.

- 7 In [Details], double-click [MECHATROLINK].
- **8** Click the [Link Assignments] tab, and then [ST#]'s [01] as follows.

Setup Items	Setup Description	
ADR	03H	
ExADR	00	
VENDOR	Yaskawa Electric co.	
DEVICE	Σ-X Series type	

NOTE

• [PROFILE], [BYTE] and [SCAN] are defined automatically.

- 9 In the [Engineering Manager]'s [Controller], select CPU.
- 10 In the [Module details], double-click the communication module's No. field.
- 11 Set [Transmission Parameters] as follows.

Setup Items	Setup Description	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	

- 12 From the [File] menu select [Save] to save your settings, and exit [Engineering Manager].
- **13** Write the settings to MP Series.

IMPORTANT

• To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

Σ-X Series Setting

Set up communication settings with the DIP Switch (SW3) and the rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

• DIP Switch (SW3) Setting

DIP Switch	Settings	Setup Description	
1	Ontional	Transmission byte size	
2	Optional		
3	ON	Communication protocol: MECHATROLINK-III	
4	OFF	Always OFF	

• Rotary switches (S1 and S2) Setting

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.45 Setting Example 45

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer YASK	AWA Electric Corporation	Series MP Ethemet/MECHATRO	LINK Port Ethemet (UDP)
Text Data Mode	1 Change		
Communication Setting	s		
Port No.	1024 📫 🖌 Auto		
Timeout	3 🚖 (sec)		
Retry	2		
Wait To Send	0 🔶 (ms)	Default	
Device-Specific Setting	IS		
Allowable Number of Devices/PLCs	Add Device	Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings		Add Indirect Device
👗 1 PLC1	Series=Sigma-XW	Series Servo pack(M-III), IP Address	FR

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🍜 Individual Device Settings 🛛 🗙 🗙					
PLC1					
Product		Servo			\sim
Series		Sigma-XW	Sigma-XW Series Servo pack(M-III) 🛛 🗸		
If you change the product or series, please reconfirm all address settings.					
Station Address(Servo) 3 🜩 Axis No. 1 🜩					-
Rela	ay Controlei	Setting			
IP Address 192. 168. 0. 1					
	De	vice Type		Circuit No.	
1	MPU-01		\sim	3 🚔	
2	MECHATI	ROLINK	\sim	1 🜲	
				Defaul	t
			OK (O)	Cancel	

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) MPU-01 settings
- (3) Σ -X series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	

- 7 Double-click the module number corresponding to the option slot which attaches MPU-01 in the [MC-Configurator]
- **8** Select [MPU-01] in the [Module] dialog box, and click [OK].
- **9** Set "3" to the circuit number of MPU-01 that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

• To write the settings, select the [Save to flash after transferring to the controller] check box. If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ MPU-01 Settings

- 1 Start the ladder software.
- 2 Make a project file. Select "MPU-01" from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of [MPU-01] module, and double-click [01 UNDEFINED].
- 5 Select the using Σ -X series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -X series.

8 Write the settings to the MPU-01 series.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-X Series Setting

Set up communication settings with the DIP Switch (SW3) and the rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

• DIP Switch (SW3) Setting

DIP Switch	Settings	Setup Description	
1	Optional	Transmission hyte size	
2	Optional		
3	ON	Communication protocol: MECHATROLINK-III	
4	OFF	Always OFF	

• Rotary switches (S1 and S2) Setting

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

♦ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.46 Setting Example 46

- Settings of GP-Pro EX
- Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer YASK	AWA Electric Corporation	Series MP Ethemet/MECHATRO	LINK Port Ethemet (UDP)
Text Data Mode	1 Change		
Communication Setting	s		
Port No.	1024 📫 🖌 Auto		
Timeout	3 🚖 (sec)		
Retry	2		
Wait To Send	0 🔶 (ms)	Default	
Device-Specific Setting	IS		
Allowable Number of Devices/PLCs	Add Device	Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings		Add Indirect Device
👗 1 PLC1	Series=Sigma-XW	Series Servo pack(M-III), IP Address	FR

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] I. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

🍜 Individual Device Settings 🛛 🗙 🗙					
PLC1					
Product		Servo	~		
Series		Sigma-XW Series Servo pa	ck(M-Ⅲ) ∨		
If you change the product or series, please reconfirm all address settings.					
Station Address(Servo) 3 🜩 Axis No. 1 🜩					
Rela	Relay Controler Setting				
IP Address 192. 168. 0. 1			1		
	De	vice Type Ci	rcuit No.		
1	Sub CPU	~ 5	÷		
2	2 MECHATROLINK ~ 1				
			Default		
		OK (O)	Cancel		

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

Settings of External Device

Use the ladder software (MP720 Ver.7) to set up communication settings. Set the next contents. (1) Main CPU settings

- (2) Sub CPU settings
- (3) Σ -X series settings

For details on communication settings, please refer to the manual of the External Device.

Main CPU Settings

- 1 Start the ladder software.
- **2** Make a project file. Select the main CPU models from [Model].
- **3** From the tree view, double-click [Module Configuration].

[MC-Configurator] starts.

- 4 Double-click [218IFD] on the CPU to use.
- 5 Click [Parameters] tab.
- 6 Set "IP Address" and "Subnet Mask" of "Transmission Parameters".

Setup Items	Setup Description	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	

- 7 Double-click the number of module which attaches a sub CPU in [MC-Configurator].
- **8** Select a sub CPU to be used in the [Module] dialog box, and click [OK].
- 9 Set "5" to the circuit number of Sub CPU that displayed in the [MC-Configurator].

Set up the same value as the Display's circuit number.

10 Write the settings to the External Device.

IMPORTANT
 To write the settings, select the [Save to flash after transferring to the controller] check box.
 If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

- ♦ Sub CPU Settings
- 1 Start the ladder software.
- **2** Make a project file. Select a Sub CPU to be used from [Model].
- **3** From the tree view, double-click [Module Configuration]. [MC-Configurator] starts.
- 4 Expand [SVC] of Sub CPU, and double-click [01 UNDEFINED].
- 5 Select the using Σ -X series of [Slave] dialog box, and click [OK].
- 6 Set "1" to the circuit number of [SVC].
- 7 Set "3" to the station address of the added Σ -X series.

8 Write the settings to the Sub CPU.

IMPORTANT • To write the settings, select the [Save to flash after transferring to the controller] check box.

If the data is transferred without selecting the check box, the transferred data is deleted when restarting the External Device.

♦ Σ-X Series Setting

Set up communication settings with the DIP Switch (SW3) and the rotary switches (S1 and S2). For details on communication settings, please refer to the manual of the External Device.

• DIP Switch (SW3) Setting

DIP Switch	Settings	Setup Description
1	Optional	Transmission byte size
2	Optional	
3	ON	Communication protocol: MECHATROLINK-III
4	OFF	Always OFF

• Rotary switches (S1 and S2) Setting

Rotary Switch	Settings	Setup Description
S1 (x16)	0	Station address
S2 (x1)	3	

Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

4 Setup Items

Set up the Display's communication settings in GP Pro-EX or in the Display's offline mode. The setting of each parameter must match that of the External Device. "3 Communication Settings" (page 29)

• Set the Display's IP address in offline mode. Cf. Maintenance/Troubleshooting Guide "Ethernet Settings"

4.1 Setup Items in GP-Pro EX

Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer YASK	AWA Electric Corporation Series MP Ethemet/MECHATROLINK	Port Ethemet (UDP)
Text Data Mode	1 Change	
Communication Settings	i	
Port No.	1024 🔄 🖌 Auto	
Timeout	3 (sec)	
Retry	2 🕂	
Wait To Send	0 (ms) Default	
Device-Specific Setting	5	
Allowable Number of Devices/PLCs	Add Device Increase Allowable 32 Number of Devices/PLCs	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=MP2000 Series, Access to MPU-01=OFF, IP Add	.

Setup Items	Setup Description	
Port No.	Enter a port number of the External Device, using 1024 to 65535. Check into [Auto], and a port number is set automatically.	
TimeoutUse an integer from 1 to 127 to enter the time (s) for which Display waits fo from External Device.		
Retry In case of no response from the External Device, use an integer from 0 to 2 many times the Display retransmits the command.		
Wait To SendUse an integer from 0 to 255 to enter standby time (ms) for the Display from packets to transmitting next commands.		
Increase Allowable Number of Devices/ PLCs	When clicked, the [Increase Allowable Number of Devices/PLCs] dialog box is displayed. When you check [Increase allowable number of Devices/PLCs], the settings for [Allowable Number of Devices/PLCs] can be extended to "64". Increase Allowable Number of Devices/PLCs OK (0) Cancel	

NOTE

• Refer to the GP-Pro EX Reference Manual for Indirect Device.

Cf. GP-Pro EX Reference Manual "Changing the Device/PLC at Runtime (Indirect Device)"

Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] III. To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

MP2000 Series	MP3000 Series
➢Individual Device Settings	🕌 Individual Device Settings 🛛 🔀
PLC1	PLC1
Product MP2000 Series	Product MP3000 Series
Access to MPU-01	C Access to Sub CPU
If you change the product or series, please reconfirm all address settings.	If you change the product or series, please reconfirm all address settings.
IP Address 192. 168. 0. 1	IP Address 192. 168. 0. 1
Default	Default
OK (0) Cancel	OK (0) Cancel

Setup Items	Setup Description	
Product	Select the product name of the External Device.	
Access to MPU-01 / Access to Sub CPU	Uncheck the check box when communicating with MP2000 series / MP3000 series.	
	Set IP address of the External Device.	
IP Address	 NOTE Check with a network administrator about IP address. Do not set the duplicate IP address. 	

MPU-01

Sub CPU

SIndividual Device Settings	🕌 Individual Device Settings
PLC1	PLC1
Product MP2000 Series	Product MP3000 Series
Access to MPU-01	☑ Access to Sub CPU
If you change the product or series, please reconfirm all address settings.	If you change the product or series, please reconfirm all address settings.
Relay Controler Setting IP Address 192, 168, 0, 1 Device Type Circuit No. 1 MPU-01 I 3	Relay Controler Setting IP Address 192. 168. 0. 1 Device Type Circuit No. 1 Sub CPU 7 5
Default OK (0) Cancel	Default OK (0) Cancel

Setup Items	Setup Description		
Product	Select the product name of the External Device.		
Access to MPU-01 / Access to Sub CPU	Check the check box when using MPU-01 and Sub CPU. NOTE Uncheck the check box when using an Ethernet port on the Sub CPU.		
IP Address	 Set IP address of the relay device (MP series / Σ-7C (Controller section)). NOTE Check with a network administrator about IP address. Do not set the duplicate IP address. 		
Device Type	Select a device type to be used for relay.		
Circuit No.	Enter the circuit number, from 1 to 16.		

×

•

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🎒 Individual D	evice Settings	
PLC1		
Product	Inverter	
Series	V1000 •	
If you change the address settings.	product or series, please reconfirm all	
Station Address(Inverter) 33 🗄	
Relay Control	er Setting	
IP Address 192. 168. 0. 1		
[Device Type Circuit No.	
1 MECHAT		
	Default	
	OK (0) Cancel	

Inverter Series

Servo Series

🎒 Individual De	vice Settings	×		
PLC1				
Product	Product Servo			
Series	Sigma-7W series Servo	pack(M-III)		
If you change the p address settings.	If you change the product or series, please reconfirm all address settings.			
Station Address(S	iervo) <u>3</u>	Axis No. 1		
Relay Controle	r Setting			
IP Addres:	s 192. 168.	0. 1		
De	evice Type	Circuit No.		
1 MPU-01	•	3 🗄		
2 MECHATI	ROLINK 🔽	1 🗄		
		Default		
	OK (O)	Cancel		

Stepping

I/O	Stepping
₩Individual Device Settings	🕌 Individual Device Settings
PLC1	PLC1
Product I/O(M-System)	Product Stepping(Orientalmotor)
Series R7G4HML3-LC2(M-III)	Series AZ Series Multi-Axis Driver(M-III)
If you change the product or series, please reconfirm all address settings.	If you change the product or series, please reconfirm all address settings.
Station Address(I/O) 3	Station Address(Stepping) 3 🔆 Axis No. 1
Relay Controler Setting IP Address 192 168 0. 1 Device Type Circuit No. 1 MECHATROLINK 1 1	Relay Controler Setting IP Address 192. 168. 0. 1 Device Type Circuit No. 1 MECHATROLINK I 1 🚟
OK (0) Cancel	OK (O) Cancel

Setup Items	Setup Description		
Product	Select the product name of the External Device.		
Series	Select the series of the External Device.		
Station Address	Inverter Series: Enter the station number, from 1 to 255. Servo Series: Enter the station number as follows. MECHATROLINK-II: "65 to 79" and "80 to 95" MECHATROLINK-III: "3 to 239" I/O: Enter the station address, from 3 to 239. Stepping: Enter the station address, from 3 to 239.		
Axis No.	Σ -7W/ Σ -7C series: Enter the Axis number, from 1 to 2. AZ series: Enter the Axis number of stepping, from 1 to 255.		
IP Address	 Set IP address of the relay device (MP series / Σ-7C (Controller section)). NOTE Check with a network administrator about IP address. Do not set the duplicate IP address. 		
Device Type	Select a device type to be used for relay.		

Setup Items	Setup Description	
Circuit No.	Enter the circuit number, from 1 to 16.	
IMPORTANT • V	When communicating with the Servo Series, the first three octets in the subnet mask	
s	hould be set to 255.	
e	.g.: 255.255.255.0	

4.2 Setup Items in Offline Mode

• Please refer to Maintenance/Troubleshooting Guide for more information on how to enter offline mode or about operation.

Cf. Maintenance/Troubleshooting Guide "Offline Mode"

• The number of the setup items to be displayed for 1 page in the offline mode depends on the Display in use. Please refer to the Reference manual for details.

Communication Settings

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in offline mode. Touch the External Device you want to set from the displayed list.

Device			
ATROLINK		[UDP]	Page 1/1
and Ma		- A.L.	
ort No.	C Fixed	● Auto 1024 ▼ ▲	
imeout(s)		3 ▼ ▲	-
lait To Send(ms)). 		
Exit		Back	2014/11/19
	ATROLINK ort No. imeout(s) etry ait To Send(ms) Exit	ATROLINK ort No. Fixed imeout(s) etry ait To Send(ms) Exit	ATROLINK [UDP] ort No. Fixed • Auto imeout(s) etry 2 • A ait To Send(ms) Ø • A

Setup Items	Setup Description	
Port No.	Enter a port number of the Display. Select either of "Fixed" "Auto". Enter a port number of the Display with "1024-65535", when select "Fixed". Assign automatically without affecting the input value, when select "Auto".	
Timeout	Use an integer from 1 to 127 to enter the time (s) for which Display waits for the response from External Device.	
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.	
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.	

Device Setting

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in offline mode. Touch the External Device you want to set from the displayed list, and touch [Device].

Comm.	Device			
MP Ethernet/MEC	HATROLINK		[UDP]	Page 1/6
Devic	e/PLC Name	PLC1		
S	Series		MP2000 Series	
Ι	P Address		192 168 Ø	1
				•
	Exit		Back	2014/11/19 17:11:39

Setup Items	Setup Description	
Device/PLC Name	Select the External Device for device setting. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1])	
Series	Display the series of the External Device.	
	Set IP addresses used by the External Device or relay device (MP series / Σ -7C (Controller section)).	
IP Address	 NOTE Check with a network administrator about IP address. Do not set the duplicate IP address. 	

• MP2000/MP3000 Series (Page 2 - 3)

Comm.	Device			
MP Ethernet/MEC	HATROL INK		[UDP]	Page 3/6
Devic	e/PLC Name PL	C1		
	Product		MP3000 Series	
Access to Sub CPU		νU	ON	
Device Type 1 Sub CPU			Circuit No. 5	
				+ +
	Exit		Back	2014/11/19 17:27:18

Setup Items	Setup Description
Device/PLC Name	Select the External Device for device setting. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1])
Product	Display the product to connect.
Access to MPU-01 / Access to Sub CPU	Display the setting state.
Device Type	Displays the device type to be used for the relay.
Circuit No.	Display the circuit number.

• Servo Series (Page 4)

Comm.	Device			
MP Ethernet/MEC	HATROL INK		[UDP]	Page 4/6
Devic	e/PLC Name PL	C1		•
	Product		Servo	
	Station Address Axis No.		65 	
1 2 3	Device Type MECHATROLINK-II 		Circuit No. 1 	
				+ +
	Exit		Back	2014/11/19 17:16:23

Setup Items	Setup Description
Device/PLC Name	Select the External Device for device setting. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1])
Product	Display the product to connect.
Station Address	Display the station address.
Axis No.	Display the Axis number. Available with Σ -7W/ Σ -7C series only.
Device Type	Displays the device type to be used for the relay.
Circuit No.	Display the circuit number.

• Inverter Series / I/O / Stepping (Page 5 - 6)

Comm.	Device			
MP Ethernet/MEC	HATROL INK		[UDP]	Page 6/6
Devic	e/PLC Name PL	01		
	Product		I/O(M-System)	
	Station Address		3	
Device Type 1 MECHATROLINK-III 2 3		I	Circuit No. 1 	
				+
	Exit		Back	2015/07/13 14:15:34

Setup Items	Setup Description
Device/PLC Name	Select the External Device for device setting. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1])
Product	Display the product to connect.
Station Address	Display the station address.
Device Type	Displays the device type to be used for the relay.
Circuit No.	Display the circuit number.

5 Supported Devices

Range of supported device address is shown in the table below. Please note that the actually supported range of the devices varies depending on the External Device to be used. Please check the actual range in the manual of your External Device.

5.1 MP2000 Series / MPU-01



This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
System registers	SB000000 - SB08191F	SW00000 - SW08191		
Input registers	IB00000 - IBFFFFF	IW0000 - IWFFFF	-1 / H)	*1
Output registers	OB00000 - OBFFFFF	OW0000 - OWFFFF		*1
Data registers	MB000000 - MB65534F	MW00000 - MW65534		

*1 As for Input and Output registers, device 0x9000-0xFFFF cannot be written.

NOTE

E

• Please refer to the GP-Pro EX Reference Manual for system data area.

Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

5.2 MP3000 Series / Sub CPU

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
System registers	SB000000 - SB65534F	SW00000 - SW65534		
Input registers	IB000000 - IB27FFFF	IW00000 - IW27FFF		*1
Output registers	OB000000 - OB27FFFF	OW00000 - OW27FFF		*1
Data registers	MB00000000 - MB1048575F	MW0000000 - MW1048575		
G registers	GB000000000 - GB02097151F	GW00000000 - GW02097151		

*1 As for Input and Output registers, device 0x9000-0xFFFF cannot be written.

NOTE

• Please refer to the GP-Pro EX Reference Manual for system data area.

Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"

• Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

5.3 Inverter Series

Ε

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Bit registers ^{*1}	BR0000.0 - BR195C.F	-	-	*2
Registers ^{*1}	-	0000 - 195C	[L / H]	<u>Bit</u> F] *2

*1 In the Inverter, bit registers and registers use the same device. Bit registers are used only for bit addresses.

The access method when specifying bits varies depending on the device.

Registers

*2 The available register numbers and available read/write operations differ depending on the External Device model. For further information, refer to the instruction manual for your External Device.

NOTE

• You can only set the Read Area Size for the system area in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.

- Please refer to the GP-Pro EX Reference Manual for system data area.
 Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.
 - "Manual Symbols and Terminology"

5.4 Σ-V Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Normal Parameters Area	0000.0 - 0FFF.F	0000 - 0FFF		*1 *2
Temporary Parameters Area	1000.0 - 1FFF.F	1000 - 1FFF	[<u>[</u>]	*1 *2
Monitor Area	E000.0 - EFFF.F	E000 - EFFF		*1 *2

*1 When you write to the bit address, the Display reads the entire word, sets the defined bit, then returns the new word value to the External Device. If the ladder program writes data to this word address during the bit write process, the resulting data may be incorrect.

*2 The following addresses are 32 bit parameters. Please use two words when reading or writing.

 Normal Parameters Area

 020AH /
 020EH /
 0210H /
 0212H /
 0282H /
 051BH /
 0520H /
 0522H /
 0524H /
 0526H /
 0531H /

 0804H /
 0806H /
 0808H /
 0814H /
 0819H /
 0820H /
 0822H /
 0834H /
 0836H /
 0838H /
 083AH /

 083CH /
 083EH /
 0840H /
 0890H /
 0892H /
 0894H /
 0896H /
 0898H /
 089AH /
 089CH /
 089EH /

 08A0H /
 08A2H /
 08A4H /
 08A6H /
 0894H /
 0896H /
 0898H /
 089AH /
 089CH /
 089EH /

 08A0H /
 08A2H /
 08A4H /
 08A6H /
 08A8H /
 08A2H /
 089AH /
 089CH /
 089EH /

 08B6H /
 08A2H /
 08A6H /
 08A6H /
 08A2H /
 0A02H /
 0A04H /
 0A06H /
 0A0AH /
 0A0CH /

 0A0EH /
 0A10H /
 0A12H /
 0A14H /
 0A16H /
 0A18H /
 0A42H /
 0A44H /
 0A46H /
 0A48H /
 0A42H /

 0A4CH /
 0A4EH /
 0A50H /
 0A52H /
 0A82H /
 0A84H /
 0A82H /<

Temporary Parameters Area

 120AH / 120EH / 1210H / 1212H / 1282H / 151BH / 1520H / 1522H / 1524H / 1526H / 1531H /

 1804H / 1806H / 1808H / 1814H / 1819H / 1820H / 1822H / 1834H / 1836H / 1838H / 183AH /

 183CH / 183EH / 1840H / 1890H / 1892H / 1894H / 1896H / 1898H / 189AH / 189CH / 189EH /

 18A0H / 18A2H / 1840H / 1890H / 1892H / 1894H / 1896H / 1898H / 189AH / 189CH / 189EH /

 18A0H / 18A2H / 18A4H / 18A6H / 18A8H / 18AAH / 18ACH / 18AEH / 180H / 189CH / 189EH /

 18B6H / 18B8H / 18BAH / 18BCH / 18BEH / 1A02H / 1A04H / 1A06H / 1A08H / 1A0AH / 1A0CH /

 1A0EH / 1A10H / 1A12H / 1A14H / 1A16H / 1A18H / 1A42H / 1A44H / 1A46H / 1A48H / 1A4AH /

 1A4CH / 1A4EH / 1A50H / 1A52H / 1A82H / 1A84H / 1A86H / 1A88H / 1A8AH / 1A8CH / 1A8EH /

 1A90H / 1A92H / 1AC2H / 1AC4H / 1AC6H / 1AC8H / 1ACAH / 1ACCH / 1ACEH / 1B02H / 1B04H /

 1B06H / 1B08H / 1B0AH / 1B0CH / 1B0EH / 1B10H / 1B12H / 1B14H / 1B16H / 1B18H / 1B1AH /

 1B1CH / 1B1EH / 1B20H / 1B22H / 1B24H / 1B26H /

Monitor Area

E003H / E009H / E00EH / E010H / E012H / E016H / E01BH / E084H / E52AH / E52CH / E52EH / E530H / E532H / E534H / E536H / E538H / E53AH / E53CH / E601H / E603H / E605H / E707H

NOTE	• You can only set the Read Area Size for the system area available to use in the External
	Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.
	Please refer to the GP-Pro EX Reference Manual for system data area.
	Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
	• Please refer to the precautions on manual notation for icons in the table.
	"Manual Symbols and Terminology"

Normal Parameters Area

This area is used to map the External Device's user constant parameters. The register number is defined by adding the Pn number and the offset value. The normal parameters area offset value is 0000H. For details on the Pn number and register mapping, please refer to the manual of the External Device.

Operation	Description
Read	Reads volatile memory such as RAM for values. Unable to read values from non-volatile memory such as EEPROM.
Write	Writes values to volatile memory such as RAM, and non-volatile memory such as EEPROM.
NOTE	 You cannot run consecutive reads from, or consecutive writes to, different register groups. Example: When consecutively reading from or writing to 07FFH to 0800H, the message "Data Consistency Error (33H)" or "Access Denied Error (31H)" is displayed. If you specify a nonexistent register number, the message "Access Denied Error (31H)," is displayed.

Temporary Parameters Area

This area is used to map the External Device's user constant parameters. The register number is defined by adding the Pn number and the offset value. The temporary parameters area offset value is 1000H. For details on the Pn number and register mapping, please refer to the manual of the External Device.

Operation	Description
Read	Reads volatile memory such as RAM for values.
Write	Writes values to volatile memory such as RAM.

Since writing to Temporary Parameters Area is run in volatile memory (such as RAM), values are cleared when the External Device is turned OFF.

If there is an operation, such as servo tuning, that requires an extreme number of write operations to memory, running the operation in the Temporary Parameters Area generates the following advantages.

- You can increase the life of non-volatile memory.
- You can reduce processing time.

• You cannot run consecutive reads from, or consecutive writes to, different register groups. Example: When consecutively reading from or writing to 17FFH to 1800H, the message "Data Consistency Error (33H)" or "Access Denied Error (31H)" is displayed.

• If you specify a nonexistent register number, the message "Access Denied Error (31H)," is displayed.

Monitor Area

This area is used to reference internal information (such as operating condition, alarm status, and various status flags) on the External Device. By referring to the value of a register number, you can check the status of the External Device. While the External Device is running, register values change constantly.

Register No.	Name	Unit	No. of Registers	Sign	Remarks	
E000H	Motor Rotational/Translational Speed	Rotary: min ⁻¹	1	v	Up000	
Looon	Notor Rotational Translational Speed	Linear: mm/s		5		
E001H	Reference Speed	Rotary: min ⁻¹	1	S	Up001	
Loom	Kererence specu	Linear: mm/s		5	01001	
E002H	Internal Torque/Thrust Force Reference	%	1	S	Un002	
E003H	Rotational Angle 1 (Number of Pulses from the Origin)	Pulse	2	U	Un003	
E005H	Rotational Angle 2 (Angle from the Origin)	deg	1	U	Un004	
E006H	Input Signal Monitor	-	1	-	Un005	
E007H	Output Signal Monitor	-	1	-	Un006	
EUUSH	Input Pafaranca Dulsa Speed	Rotary: min ⁻¹	1	S	L m007	
LOOGI	input Reference Fulse Speed	Linear: mm/s		3	01007	
E009H	Position Error Counter	Reference unit	2	S	Un008	
E00BH	Accumulated Load Rate	%(10s cycle)	1	U	Un009	
E00CH	Regenerative Load Rate	%(10s cycle)	1	U	Un00A	
E00DH	Dynamic Break Consumption Power	%(10s cycle)	1	U	Un00B	
E00EH	Input Reference Pulse Counter (32bit)	Pulse	2	S	Un00C	
E010H	Feedback Pulse Counter (32bit)	Pulse	2	S	Un00D	
E012H	Fully-closed Feedback Pulse Counter (32bit)	Pulse	2	S	Un00E	
E016H	Total Operation Time	100ms	2	U	Un012	
E018H	Upper Limit of Maximum Motor Speed	mm/s	1	U	Un010 (Available only in linear motor)	
E019H	Upper Limit of Divided Pulse Output Setting	Pulse/Pitch	1	U	Un010 (Available only in linear motor)	
E01AH	Magnetic Pole Sensor Information	-	1	-	Un011	
E01BH	Feedback Pulse Counter	Reference unit	2	S	Un013	
E01DH	Effective Gain Set Number	-	1	U	Un014	
E01EH	Safety I/O Signal Monitor	-	1	-	Un015	
E084H	Linear Scale Pitch	pm	2	U	Un084	
E086H	Linear Scale Pitch Scaling Exponent	Power of Ten	1	S	Un085	
E500H	Alarm History Alarm Code No. = 0	Code	1	U	Fn000-0	

Register No.	Name	Unit	No. of Registers	Sign	Remarks
E501H	Alarm History Alarm Code No. = 1	Code	1	U	Fn000-1
E502H	Alarm History Alarm Code No. = 2	Code	1	U	Fn000-2
E503H	Alarm History Alarm Code No. = 3	Code	1	U	Fn000-3
E504H	Alarm History Alarm Code No. = 4	Code	1	U	Fn000-4
E505H	Alarm History Alarm Code No. = 5	Code	1	U	Fn000-5
E506H	Alarm History Alarm Code No. = 6	Code	1	U	Fn000-6
E507H	Alarm History Alarm Code No. = 7	Code	1	U	Fn000-7
E508H	Alarm History Alarm Code No. = 8	Code	1	U	Fn000-8
E509H	Alarm History Alarm Code No. = 9	Code	1	U	Fn000-9
E50AH	Current Alarm Information	Code	1	U	
E51BH	Servo Running Status	-	1	U	
E51CH	Control Mode Status	-	1	U	
E52AH	Alarm History Time Stamp No. = 0	100ms	2	U	
E52CH	Alarm History Time Stamp No. = 1	100ms	2	U	
E52EH	Alarm History Time Stamp No. = 2	100ms	2	U	
E530H	Alarm History Time Stamp No. = 3	100ms	2	U	
E532H	Alarm History Time Stamp No. = 4	100ms	2	U	
E534H	Alarm History Time Stamp No. = 5	100ms	2	U	
E536H	Alarm History Time Stamp No. = 6	100ms	2	U	
E538H	Alarm History Time Stamp No. = 7	100ms	2	U	
E53AH	Alarm History Time Stamp No. = 8	100ms	2	U	
E53CH	Alarm History Time Stamp No. = 9	100ms	2	U	

 Input Signal Monitor (E006H) MECHATROLINK Interface Type

Bit	Status Signal	Logic	Un No.
0	SI0(CN1-13)	0 = Lo (Close) 1 = Hi (Open)	
1	SII(CN1-7)	0 = Lo (Close) 1 = Hi (Open)	
2	SI2(CN1-8)	0 = Lo (Close) 1 = Hi (Open)	
3	SI3(CN1-9)	0 = Lo (Close) 1 = Hi (Open)	Un005
4	SI4(CN1-10)	0 = Lo (Close) 1 = Hi (Open)	
5	SI5(CN1-11)	0 = Lo (Close) 1 = Hi (Open)	
6	SI6(CN1-12)	0 = Lo (Close) 1 = Hi (Open)	
7	Reserved		

 Output Signal Monitor (E007H) MECHATROLINK Interface Type

Bit	Status Signal	Logic	Un No.
0	ALM(CN1-3,4)	0 = Lo (Close) 1 = Hi (Open)	
1	SO1(CN1-1,2)	0 = Lo (Close) 1 = Hi (Open)	
2	SO2(CN1-23,24)	0 = Lo (Close) 1 = Hi (Open)	
3	SO3(CN1-25,26)	0 = Lo (Close) 1 = Hi (Open)	Un006
4	Reserved		
5	Reserved		
6	Reserved		
7	Reserved		

Safety I/O Signal Monitor (E01EH)

Bit	Status Signal	Logic	Un No.
0	/HWBB1(CN8-3,4)	0 = Lo (Close) 1 = Hi (Open)	
1	/HWBB2(CN8-5,6)	0 = Lo (Close) 1 = Hi (Open)	Un015
2 to 7	Reserved		

NOTE

•

• /HWBB1 and /HWBB2 are valid only when the safety option card is not connected. When the safety option card is connected, they become indefinite.

• Servo Running Status (E51BH)

Reading	Description
0000H	Reserved (Initial State)
0001H	Alarm Occurred (A.***)
0002H	Hardwired Base Blocked (HWBB)
0003H	Forward / Reverse Run Prohibited (PTNT)
0004H	Forward Run Prohibited (P-OT)
0005H	Reverse Run Prohibited (N-OT)
0006H	Base Blocked (BB)
0007H	Base Enabled (RUN)
0008H	Magnetic Pole Detecting (PDET)

• Control Mode Status (E51CH)

Reading	Description
0000H	Speed Control Mode
0001H	Position Control Mode
0002H	Torque Control Mode

NOTE

• JOG Drive Mode, Origin Search Mode, and Internally Set Speed Control Mode become Speed control mode.

• Programmed JOG Drive Mode, Advanced Auto-Tuning Mode, and Easy FFT Mode become Position Control Mode.

5.5 Σ-7 Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Normal Parameters Area	0000.0 - 0FFF.F	0000 - 0FFF		*1 *2 *3
Temporary Parameters Area	1000.0 - 1FFF.F	1000 - 1FFF		*1 *2 *3
Monitor Area	E000.0 - EFFF.F	E000 - EFFF		*1 *3

*1 When you write to the bit address, the Display reads the entire word, sets the defined bit, then returns the new word value to the External Device. If the ladder program writes data to this word address during the bit write process, the resulting data may be incorrect.

- You cannot run block read or block write with the following addresses.
 07FFH 0800H
 17FFH 1800H
- *3 The following addresses are 32 bit parameters. Please use two words when reading or writing. Normal Parameters Area

```
      020AH /
      0210H /
      0212H /
      0231H /
      0282H /
      051BH /
      0520H /
      0524H /
      0524H /
      0526H /

      0531H /
      0804H /
      0806H /
      0808H /
      0814H /
      0819H /
      0820H /
      0822H /
      0834H /
      0836H /
      0838H /

      083AH /
      083CH /
      083EH /
      0840H /
      0842H /
      0844H /
      0890H /
      0822H /
      0834H /
      0836H /
      0838H /

      0A08H /
      0A0AH /
      0A0CH /
      0A0EH /
      0A10H /
      0A12H /
      0A14H /
      0A16H /
      0A18H /
      0A44H /

      0A46H /
      0A4AH /
      0A4CH /
      0A4EH /
      0A50H /
      0A52H /
      0A84H /
      0A86H /
      0A88H /

      0A8AH /
      0A4AH /
      0A4CH /
      0A4EH /
      0A50H /
      0A52H /
      0A84H /
      0A86H /
      0A88H /

      0A8AH /
      0A8EH /
      0A90H /
      0A92H /
      0AC2H /
      0AC4H /
      0AC4H /
      0ACCH /
      0AC2H /
      0AC4H /
      0ACAH /
      0ACCH /

      0A8AH /
      0A8CH /
      0A90H /
      0A92H /
      0AC2H /
      0AC4H /
      0AC6H /
      0ACAH /
      0ACCH /
```

Temporary Parameters Area

120AH /	120EH /	1210H /	1212H /	1282H /	151BH /	1520H /	1522H /	1524H /	1526H /	1531H/
1804H /	1806H /	1808H /	1814H /	1819H /	1820H /	1822H /	1834H /	1836H /	1838H /	183AH /
183CH /	183EH /	1840H /	1890H /	1892H /	1894H /	1896H /	1898H /	189AH /	189CH /	189EH /
18A0H /	18A2H /	18A4H /	18A6H /	18A8H /	18AAH /	18ACH /	18AEH /	18B0H /	18B2H/	18B4H/
18B6H /	18B8H /	18BAH /	18BCH /	18BEH /	1A02H/	1A04H/	1A06H/	1A08H/	1A0AH/	1A0CH /
1A0EH /	1A10H /	1A12H/	1A14H/	1A16H/	1A18H/	1A42H /	1A44H /	1A46H/	1A48H/	1A4AH /
1A4CH /	1A4EH/	1A50H/	1A52H/	1A82H/	1A84H/	1A86H/	1A88H /	1A8AH /	1A8CH/	1A8EH /
1A90H/	1A92H /	1AC2H /	1AC4H/	1AC6H/	1AC8H/	1ACAH/	1ACCH/	1ACEH /	1B02H/	1B04H/
1B06H /	1B08H /	1B0AH /	1B0CH /	1B0EH /	1B10H /	1B12H /	1B14H /	1B16H/	1B18H /	1B1AH /
1B1CH/	1B1EH /	1B20H/	1B22H /	1B24H /	1B26H/					

Monitor Area E003H / E009H / E00EH / E010H / E012H / E016H / E01BH / E030H / E032H / E035H / E037H / E084H / E52AH / E52CH / E52EH / E530H / E532H / E534H / E536H / E538H / E53AH / E53CH / E548H / E54AH / E54CH / E54EH / E550H / E552H / E554H / E556H / EC00H / EC02H / EC04H / EC06H / EC08H / EC0AH / EC0CH / EC0EH / EC10H / EC12H / EC14H / EC16H

```
NOTE
```

• You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.

- Please refer to the GP-Pro EX Reference Manual for system data area.
- Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)" • Please refer to the precautions on manual notation for icons in the table.
- "Manual Symbols and Terminology"
- GP-Pro EX Device/PLC Connection Manual

Normal Parameters Area

This area is used to map the External Device's user constant parameters. The register number is defined by adding the Pn number and the offset value. The normal parameters area offset value is 0000H. For details on the Pn number and register mapping, please refer to the manual of the External Device.

Operation	Description
Read	Reads volatile memory such as RAM for values. Unable to read values from non-volatile memory such as EEPROM.
Write	Writes values to volatile memory such as RAM, and non-volatile memory such as EEPROM.
NOTE	 You cannot run consecutive reads from, or consecutive writes to, different register groups. Example: When consecutively reading from or writing to 07FFH to 0800H, the message "Data Consistency Error (33H)" or "Access Denied Error (31H)" is displayed. If you specify a nonexistent register number, the message "Access Denied Error (31H)," is displayed.

Temporary Parameters Area

This area is used to map the External Device's user constant parameters. The register number is defined by adding the Pn number and the offset value. The temporary parameters area offset value is 1000H. For details on the Pn number and register mapping, please refer to the manual of the External Device.

Operation	Description		
Read	Reads volatile memory such as RAM for values.		
Write	Writes values to volatile memory such as RAM.		

Since writing to Temporary Parameters Area is run in volatile memory (such as RAM), values are cleared when the External Device is turned OFF.

If there is an operation, such as servo tuning, that requires an extreme number of write operations to memory, running the operation in the Temporary Parameters Area generates the following advantages.

- You can increase the life of non-volatile memory.
- You can reduce processing time.

• You cannot run consecutive reads from, or consecutive writes to, different register groups. Example: When consecutively reading from or writing to 17FFH to 1800H, the message "Data Consistency Error (33H)" or "Access Denied Error (31H)" is displayed.

• If you specify a nonexistent register number, the message "Access Denied Error (31H)," is displayed.

Monitor Area

This area is used to reference internal information (such as operating condition, alarm status, and various status flags) on the External Device. By referring to the value of a register number, you can check the status of the External Device. While the External Device is running, register values change constantly.

Register No.	Name	Unit	No. of Registers	Sign	Remarks
E000H	Motor Rotational/Translational Speed	Rotary: min ⁻¹	1	S	Un000
Looon	Wotor Rotational/Translational Speed	Linear: mm/s	1	3	Average 64 ms
E001H	Reference Speed	Rotary: min ⁻¹	- 1	S	Up001
LOOTI		Linear: mm/s		5	011001
E002H	Internal Torque/Thrust Force Reference	%	1	S	Un002
E003H	Rotational Angle 1 (Number of Pulses from the Origin)	Pulse	2	U	Un003
E005H	Rotational Angle 2 (Angle from the Origin)	deg	1	U	Un004
E006H	Input Signal Monitor	-	1	-	Un005
E007H	Output Signal Monitor	-	1	-	Un006
E008H	Input Reference Pulse Speed	Rotary: min ⁻¹	1	S	Un007 Average 64 ms
LOOGI		Linear: mm/s			
E009H	Position Error Counter	Reference unit	2	S	Un008
E00BH	Accumulated Load Rate	%(10s cycle)	1	U	Un009
E00CH	Regenerative Load Rate	%(10s cycle)	1	U	Un00A
E00DH	Dynamic Break Consumption Power	%(10s cycle)	1	U	Un00B
E00EH	Input Reference Pulse Counter (32bit)	Pulse	2	S	Un00C
E010H	Feedback Pulse Counter (32bit)	Pulse	2	S	Un00D
E012H	Fully-closed Feedback Pulse Counter (32bit)	Pulse	2	S	Un00E
E016H	Total Operation Time	100ms	2	U	Un012
E018H	Upper Limit of Maximum Motor Speed	mm/s	1	U	Un010 (Available only in linear motor)
E019H	Upper Limit of Divided Pulse Output Setting	Pulse/Pitch	1	U	Un010 (Available only in linear motor)
E01AH	Magnetic Pole Sensor Information	-	1	-	Un011
E01BH	Feedback Pulse Counter	Reference unit	2	S	Un013
E01DH	Effective Gain Set Number	-	1	U	Un014
E01EH	Safety I/O Signal Monitor	-	1	-	Un015
E02CH	Installation Environment monitor	%	1	S	Un025
E02DH	Servomotor Installation Environment Monitor	%	1	S	Un026

Register No.	Name	Unit	No. of Registers	Sign	Remarks
E02EH	Main Circuit DC Voltage	V	1	S	Un023
E030H	Backlash Compensation Amount	Reference unit	2	S	Un030
E032H	Backlash Compensation Setting Upper Limit	Reference unit	2	U	Un031
E034H	Power Consumption	[W]	1	S	Un032
E035H	Consumed Power	[Wh]	2	S	Un033
E037H	Cumulative Power Consumption (integral part)	[Wh]	2	S	Un034
E039H	Cumulative Power Consumption (decimal part)	[0.001Wh]	1	S	
E050H	Built-in Fan Remaining Life Ratio	0.01%	1	U	Un027
E051H	Capacitor Remaining Life Ratio	0.01%	1	U	Un028
E052H	Surge Prevention Circuit Remaining Life Ratio	0.01%	1	U	Un029
E053H	Dynamic Brake Circuit Remaining Life Ratio	0.01%	1	U	Un02A
E084H	Linear Scale Pitch	pm	2	U	Un084
E086H	Linear Scale Pitch Scaling Exponent	Power of Ten	1	S	Un085
E500H	Alarm History Alarm Code No. = 0	Code	1	U	Fn000-0
E501H	Alarm History Alarm Code No. = 1	Code	1	U	Fn000-1
E502H	Alarm History Alarm Code No. = 2	Code	1	U	Fn000-2
E503H	Alarm History Alarm Code No. = 3	Code	1	U	Fn000-3
E504H	Alarm History Alarm Code No. = 4	Code	1	U	Fn000-4
E505H	Alarm History Alarm Code No. = 5	Code	1	U	Fn000-5
E506H	Alarm History Alarm Code No. = 6	Code	1	U	Fn000-6
E507H	Alarm History Alarm Code No. = 7	Code	1	U	Fn000-7
E508H	Alarm History Alarm Code No. = 8	Code	1	U	Fn000-8
E509H	Alarm History Alarm Code No. = 9	Code	1	U	Fn000-9
E50AH	Current Alarm Information	Code	1	U	
E51BH	Servo Running Status	-	1	U	
E51CH	Control Mode Status	-	1	U	
E52AH	Alarm History Time Stamp No. = 0	100ms	2	U	
E52CH	Alarm History Time Stamp No. = 1	100ms	2	U	
E52EH	Alarm History Time Stamp No. = 2	100ms	2	U	
E530H	Alarm History Time Stamp No. = 3	100ms	2	U	
E532H	Alarm History Time Stamp No. = 4	100ms	2	U	
E534H	Alarm History Time Stamp No. = 5	100ms	2	U	

Register No.	Name	Unit	No. of Registers	Sign	Remarks
E536H	Alarm History Time Stamp No. = 6	100ms	2	U	
E538H	Alarm History Time Stamp No. = 7	100ms	2	U	
E53AH	Alarm History Time Stamp No. = 8	100ms	2	U	
E53CH	Alarm History Time Stamp No. = 9	100ms	2	U	
E53EH	Alarm History Counter 0	-	1	U	
E53FH	Alarm History Counter 1	-	1	U	
E540H	Alarm History Counter 2	-	1	U	
E541H	Alarm History Counter 3	-	1	U	
E542H	Alarm History Counter 4	-	1	U	
E543H	Alarm History Counter 5	-	1	U	
E544H	Alarm History Counter 6	-	1	U	
E545H	Alarm History Counter 7	-	1	U	
E546H	Alarm History Counter 8	-	1	U	
E547H	Alarm History Counter 9	-	1	U	
E548H	Alarm Trace Data Address 0	-	2	U	
E54AH	Alarm Trace Data Address 1	-	2	U	
E54CH	Alarm Trace Data Address 2	-	2	U	
E54EH	Alarm Trace Data Address 3	-	2	U	
E550H	Alarm Trace Data Address 4	-	2	U	
E552H	Alarm Trace Data Address 5	-	2	U	
E554H	Alarm Trace Data Address 6	-	2	U	
E556H	Alarm Trace Data Address 7	-	2	U	
EC00H	Feedback position (APOS)	Reference unit	2	S	
EC02H	Current FFE(CPOS)	Reference unit	2	S	
EC04H	Position deviation (PERR)	Reference unit	2	S	
EC06H	Target position in the reference coordinate system (TPOS)	Reference unit	2	S	
EC08H	Feedback latch position in the machine coordinate system1(LPOS1)	Reference unit	2	S	
EC0AH	Feedback latch position in the machine coordinate system2(LPOS2)	Reference unit	2	S	
EC0CH	Feedback latch position in the machine coordinate system3(LPOS3)	Reference unit	2	S	
EC0EH	Target Speed (TSPD)	Speed Reference unit	2	S	
EC10H	Feedback Speed (FSPD)	Speed Reference unit	2	S	

Register No.	Name	Unit	No. of Registers	Sign	Remarks
EC12H	Reference Speed (CSPD)	Speed Reference unit	2	S	
EC14H	Torque Limit(TRQ_LIM)	Torque Reference unit	2	U	
EC16H	Speed Limit(SPD_LIM)	Speed Reference unit	2	U	
EC18H	M-III Current Communications Phase	-	1	U	M-III only
EC19H	M-III Current Operating Command Code (RCMD)	-	1	U	M-III only (hexadecimal)
EC1AH	M-III Current Operating Subcommand Code (SUB_RCMD)	-	1	U	M-III only (hexadecimal)

• Input Signal Monitor (E006H)

 Σ -7S series

Bit	Status Signal	Logic	Un No.
0	SIO	0 = Lo (Close) 1 = Hi (Open)	
1	SII	0 = Lo (Close) 1 = Hi (Open)	
2	SI2	0 = Lo (Close) 1 = Hi (Open)	
3	SI3	0 = Lo (Close) 1 = Hi (Open)	Un005
4	SI4	0 = Lo (Close) 1 = Hi (Open)	
5	SI5	0 = Lo (Close) 1 = Hi (Open)	
6	SI6	0 = Lo (Close) 1 = Hi (Open)	
8 to 15	Reserved		
Bit	Status Signal	Logic	Un No.
----------	---------------	---------------------------------	--------
0	SIO	0 = Lo (Close) 1 = Hi (Open)	
1	SI1	0 = Lo (Close) 1 = Hi (Open)	
2	SI2	0 = Lo (Close) 1 = Hi (Open)	
3	SI3	0 = Lo (Close) 1 = Hi (Open)	
4	SI4	0 = Lo (Close) 1 = Hi (Open)	
5	SI5	0 = Lo (Close) 1 = Hi (Open)	
6	SI6	0 = Lo (Close) 1 = Hi (Open)	Un005
7	SI7	0 = Lo (Close) 1 = Hi (Open)	
8	SI8	0 = Lo (Close) 1 = Hi (Open)	
9	SI9	0 = Lo (Close) 1 = Hi (Open)	
10	SI10	0 = Lo (Close) 1 = Hi (Open)	
11	SI11	0 = Lo (Close) 1 = Hi (Open)	
12 to 15	Reserved		

 $\Sigma\text{-}7W/\Sigma\text{-}7C$ series

• Output Signal Monitor (E007H)

 Σ -7S series

Bit	Status Signal	Logic	Un No.
0	ALM	0 = Lo (Close) 1 = Hi (Open)	
1	SO1	0 = Lo (Close) 1 = Hi (Open)	
2	SO2	0 = Lo (Close) 1 = Hi (Open)	Un006
3	SO3	0 = Lo (Close) 1 = Hi (Open)	
7 to 15	Reserved		

 $\Sigma\text{-}7W/\Sigma\text{-}7C$ series

Bit	Status Signal	Logic	Un No.
0	ALM	0 = Lo (Close) 1 = Hi (Open)	
1	SO1	0 = Lo (Close) 1 = Hi (Open)	
2	SO2	0 = Lo (Close) 1 = Hi (Open)	
3	SO3	0 = Lo (Close) 1 = Hi (Open)	Un006
4	SO4	0 = Lo (Close) 1 = Hi (Open)	
5	SO5	0 = Lo (Close) 1 = Hi (Open)	
6	SO6	0 = Lo (Close) 1 = Hi (Open)	
7 to 15	Reserved		

• Safety I/O Signal Monitor (E01EH)

Bit	Status Signal	Logic	Un No.
0	/HWBB1	0 = Lo (Close) 1 = Hi (Open)	
1	/HWBB2	0 = Lo (Close) 1 = Hi (Open)	Un015
2 to 15	Reserved		

NOTE

• /HWBB1 and /HWBB2 are valid only when the safety option card is not connected. When the safety option card is connected, they become indefinite.

Servo Running Status (E51BH)

•

Reading	Description
0000H	Reserved (Initial State)
0001H	Alarm Occurred (A.***)
0002H	Hardwired Base Blocked (HWBB)
0003H	Forward / Reverse Run Prohibited (PTNT)
0004H	Forward Run Prohibited (P-OT)
0005H	Reverse Run Prohibited (N-OT)
0006H	Base Blocked (BB)
0007H	Base Enabled (RUN)
0008H	Magnetic Pole Detecting (PDET)
0009H	Active Mode ON(ACT)
000AH	Force Stop ON(FSTP)
0103H	Safety Function Monitor ON & Forward / Reverse Run Prohibited (PTNT)
0104H	Safety Function Monitor ON & Forward Run Prohibited (P-OT)
0105H	Safety Function Monitor ON & Reverse Run Prohibited (N-OT)
0106H	Safety Function Monitor ON & Base Blocked (BB)
0107H	Safety Function Monitor ON & Base Enabled (RUN)
0108H	Safety Function Monitor ON & Magnetic Pole Detecting (PDET)
0109H	Safety Function Monitor ON & Active Mode ON(ACT)
010AH	Safety Function Monitor ON & Force Stop ON(FSTP)
0203H	Safety Function Safe ON & Forward / Reverse Run Prohibited (PTNT)
0204H	Safety Function Safe ON & Forward Run Prohibited (P-OT)
0205H	Safety Function Safe ON & Reverse Run Prohibited (N-OT)
0206H	Safety Function Safe ON & Base Blocked (BB)
0207H	Safety Function Safe ON & Base Enabled (RUN)
0208H	Safety Function Safe ON & Magnetic Pole Detecting (PDET)
0209H	Safety Function Safe ON & Active Mode ON(ACT)
020AH	Safety Function Safe ON & Force Stop ON(FSTP)

• Control Mode Status (E51CH)

Reading	Description
0000H	Speed Control Mode
0001H	Position Control Mode
0002H	Torque Control Mode

NOTE

• JOG Drive Mode, Origin Search Mode, and Internally Set Speed Control Mode become Speed control mode.

• Programmed JOG Drive Mode, Advanced Auto-Tuning Mode, and Easy FFT Mode become Position Control Mode.

5.6 Σ-X Series

Ε

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Normal Parameters Area	0000.0 - 0FFF.F	0000 - 0FFF		*1 *2
Temporary Parameters Area	1000.0 - 1FFF.F	1000 - 1FFF		*1 *2
Monitor Area	E000.0 - EFFF.F	E000 - EFFF	2711	*1
Alarm Trace Data Area	T0000.0 - TFFFF.7	T0000 - TFFFE		*1 *3

*1 When you write to the bit address, the Display reads the entire word, sets the defined bit, then returns the new word value to the External Device. If the ladder program writes data to this word address during the bit write process, the resulting data may be incorrect.

You cannot run block read or block write with the following addresses.
 07FFH - 0800H
 17FFH - 1800H

*3 For word access, only even addresses can be specified.

• You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.

- Please refer to the GP-Pro EX Reference Manual for system data area.
 - Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.
 - "Manual Symbols and Terminology"

5.7 I/O(M-System) R7G4HML3-LC2(M-III) Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Auto-Zero	-	AZ0/00 - AZ1/00		*1 *2
Zero point adjust	-	ZPA0/00 - ZPA1/00		*1 *2
Span point adjustment	-	SPA0/00 - SPA1/00		*1 *2
Average cycle	AC0/00.0 - AC1/00.F	AC0/00 - AC1/00		E i t F *2 *3
Monitor Output	-	MO0/00 - MO1/00		*1 *2
Monitor Output Release	-	MOR0/00 - MOR1/00		*1 *2
Offset Reset	-	OR0/00 - OR1/00		*1 *2
Virtual Memory Space	-	M0/0000-M0/019C		*4 *5
CR Filter Set	CR0/00.0	CR0/00		E i t F *3
Voltage Set	V0/00.0	V0/00		<u>Bit</u> F]*3

*1 Read disable

*2 When a value is written, the corresponding processing is run. The address consists of the address part and the channel part.



- *3 When you write to the bit address, the Display reads the entire word, sets the defined bit, then returns the new word value to the External Device. If the ladder program writes data to this word address during the bit write process, the resulting data may be incorrect.
- *4 Write disable
- *5 32-bit device

NOTE

- You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.
- Please refer to the GP-Pro EX Reference Manual for system data area.
 - Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

5.8 I/O(M-System) R7G4HML3-STYVS1(M-III) Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Angle Offset	-	AAZ00 - AAZ00		*1 *2
Angle Offset Read	-	AOR00 - AOR00		*3
Angle Span Setting	-	ARS00 - ARS00		
Virtual Memory Space	-	M0000-M019C		*3 *4
Linearization Count	LC00.0 - LC00.F	LC00 - LC00		*5
Linearization	L00.0 - L63.F	L00 - L63		*5 *6 *7
Output Bias	OB00.0 - OB00.F	OB00 - OB00		*5
Output Gain	OG00.0 - OG00.F	OG00 - OG00		*5

*1 Read disable

- *2 The process runs when a value is written.
- *3 Write disable
- *4 32-bit device
- *5 When you write to the bit address, the Display reads the entire word, sets the defined bit, then returns the new word value to the External Device. If the ladder program writes data to this word address during the bit write process, the resulting data may be incorrect.
- *6 The Display can access a maximum 32 linearization devices. The device addresses corresponding to linearization devices are as follows.

Device Address	Linearization Device	Description	
00	1.x		
01	1.y		
02	2.x		
03	2.y	16-bit value	
:	:		
62	32.x		
63	32.y		

*7 The Linearization Device reads and writes both X and Y as one set. And it always reads and writes from L0. To write to the specified address, the Display reads the corresponding word address range from L0 of the External Device, changes the word address value, then returns it to the External Device.

While the Display is reading and then returning data to the External Device, write processes by the ladder program to the word address could cause the writing of incorrect data.

Example:

Write to L30(16.X), read L0(1.X) to L31(16.Y). Then, change the value of L30 only and return to the External Device.

NOTE

- You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.
- Please refer to the GP-Pro EX Reference Manual for system data area.
 - Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.
 - "Manual Symbols and Terminology"

5.9 I/O(M-System) R7G4HML3-LC2A(M-III) Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Auto-Zero	-	AZ0/00 - AZ1/00		*1 *2
Zero point adjust	-	ZPA0/00 - ZPA1/00		*1 *2
Span point adjustment	-	SPA0/00 - SPA1/00		*1 *2
Average cycle	AC0/00.0 - AC1/00.F	AC0/00 - AC1/00		B i t F *2 *3
Monitor Output	-	MO0/00 - MO1/00	[L/H]	*1 *2
Monitor Output Release	-	MOR0/00 - MOR1/00		*1 *2
Offset Reset	-	OR0/00 - OR1/00		*1 *2
Virtual Memory Space	-	M0/0000-M0/019C		*4 *5
CR Filter Set	CR0/00.0	CR0/00		<u>Bit</u> F]*3

*1 Read disable

*2 When a value is written, the corresponding processing is run. The address consists of the address part and the channel part.



- *3 When you write to the bit address, the Display reads the entire word, sets the defined bit, then returns the new word value to the External Device. If the ladder program writes data to this word address during the bit write process, the resulting data may be incorrect.
- *4 Write disable
- *5 32-bit device

NOTE

- You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.
- Please refer to the GP-Pro EX Reference Manual for system data area.
- Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

5.10 I/O(Azbil) K1G Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Data	04096,00 - 36863,15 61440,00 - 65535,15	04096 - 36863 61440 - 65535	[L/H]	*1 *2

- *1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the data may not be written correctly if you write to the word address using the External Device while the Display is reading data from, and writing data to, the External Device.
- *2 The Display uses the generic Modbus address format. Please refer to the following table for supported K1G series address types and address ranges.

K1G S	Display	
Address Types	Address Ranges	Address Ranges
Monitoring area	0x1000 - 0x1FFF	04096 - 08191
Setting area	0x2000 - 0x2FFF	08192 - 12287
Channel1 area	0x3000 - 0x3FFF	12288 - 16383
Channel2 area	0x4000 - 0x4FFF	16384 - 20479
Channel3 area	0x5000 - 0x5FFF	20480 - 24575
Channel4 area	0x6000 - 0x6FFF	24576 - 28671
Intensity area	0x7000 - 0x7FFF	28672 - 32767
Operation area	0x8000 - 0x8FFF	32768 - 36863
Special Function area	0xF000 - 0xFFFF	61440 - 65535

The External Device has 32 bit addresses. Read to or write from these 32 bit addresses in 32 bit units. For information about address length, please refer to the corresponding External Device manual.

NOTE

- You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.
- Please refer to the GP-Pro EX Reference Manual for system data area.
- Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"Please refer to the precautions on manual notation for icons in the table.
 - "Manual Symbols and Terminology"

5.11 Stepping (ORIENTAL MOTOR) AZ Series

This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Notes
Parameter No.	0000.00 - 008F.31 1020.00 - 1978.31	0000 - 008F 1020 - 1978	-	*1 *2

- *1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the data may not be written correctly if you write to the word address using the External Device while the Display is reading data from, and writing data to, the External Device.
- *2 32-bit device

NOTE

Ε

- You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP-Pro EX Reference Manual for Read Area Size.
- Please refer to the GP-Pro EX Reference Manual for system data area.
- Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

6 Device Code and Address Code

Use device code and address code when you select "Device Type & Address" for the address type in data displays.

6.1 MP2000 Series / MPU-01

Device	Device Name	Device Code (HEX)	Address Code
System registers	SW/SB	0080	Word address
Input registers	IW/IB	0001	Word address
Output registers	OW/OB	0081	Word address
Data registers	MW/MB	0000	Word address

6.2 MP3000 Series / Sub CPU

Device	Device Name	Device Code (HEX)	Address Code
System registers	SW/SB	0080	Word address
Input registers	IW/IB	0001	Word address
Output registers	OW/OB	0081	Word address
Data registers	MW/MB	0000	Word address
G registers	GW/GB	0002	Word address

6.3 Inverter Series

Device	Device Name	Device Code (HEX)	Address Code
Bit registers	BR	0080	Address
Registers	-	0000	Address

6.4 Σ -V Series, Σ -7 Series

Device	Device Name	Device Code (HEX)	Address Code
Normal Parameters Area	0	0000	Word address
Temporary Parameters Area	1	0001	Word address
Monitor Area	Е	0009	Word address

6.5 Σ-X Series

Device	Device Name	Device Code (HEX)	Address Code
Normal Parameters Area	0	0000	Word address
Temporary Parameters Area	1	0001	Word address
Monitor Area	Е	0009	Word address
Alarm Trace Data Area	Т	0022	Word address ÷ 2

6.6 I/O(M-System) R7G4HML3-LC2(M-III) Series

Device	Device Name	Device Code (HEX)	Address Code
Auto-Zero	AZ	0001	Channel number × 0x10000 + Word address value
Zero point adjust	ZPA	0002	Channel number × 0x10000 + Word address value
Span point adjustment	SPA	0003	Channel number × 0x10000 + Word address value
Average cycle	AC	0000	Channel number × 0x10000 + Word address value
Monitor Output	МО	0004	Channel number × 0x10000 + Word address value
Monitor Output Release	MOR	0005	Channel number × 0x10000 + Word address value
Offset Reset	OR	0006	Channel number × 0x10000 + Word address value
Virtual Memory Space	М	0009	Word address
CR Filter Set	CR	0007	Word address
Voltage Set	V	0008	Word address

6.7 I/O(M-System) R7G4HML3-STYVS1(M-III) Series

Device	Device Name	Device Code (HEX)	Address Code
Angle Offset	AAZ	0001	Word address
Angle Span Setting	ARS	0002	Word address
Virtual Memory Space	М	0009	Word address
Linearization Count	LC	0000	Word address
Linearization	L	000A	Word address
Output Bias	OB	000C	Word address
Output Gain	OG	000D	Word address

6.8 I/O(M-System) R7G4HML3-LC2A(M-III) Series

Device	Device Name	Device Code (HEX)	Address Code
Auto-Zero	ΑZ	0001	Channel number × 0x10000 + Word address value
Zero point adjust	ZPA	0002	Channel number × 0x10000 + Word address value
Span point adjustment	SPA	0003	Channel number × 0x10000 + Word address value
Average cycle	AC	0000	Channel number × 0x10000 + Word address value
Monitor Output	МО	0004	Channel number × 0x10000 + Word address value
Monitor Output Release	MOR	0005	Channel number × 0x10000 + Word address value
Offset Reset	OR	0006	Channel number × 0x10000 + Word address value
Virtual Memory Space	М	0009	Word address
CR Filter Set	CR	0007	Word address

6.9 I/O(Azbil) K1G Series

Device	Device Name	Device Code (HEX)	Address Code
Data	-	0000	Word address

6.10 Stepping (ORIENTAL MOTOR) AZ Series

Device	Device Name	Device Code (HEX)	Address Code
Parameter No.	-	0000	Word address

7 Error Messages

Error messages are displayed on the screen of Display as follows: "No. : Device Name: Error Message (Error Occurrence Area)". Each description is shown below.

Item	Description	
No.	Error No.	
Device Name	Name of External Device where error occurs. Device name is a title of External Device set with GP-Pro EX.((Initial value [PLC1])	
Error Message	Displays messages related to the error which occurs.	
Error Occurrence Area	Displays IP address or device address of External Device where error occurs, or error codes received from External Device.	
	 NOTE IP address is displayed such as "IP address (Decimal): MAC address (Hex)". Device address is displayed such as "Address: Device address". Received error codes are displayed such as "Decimal [Hex]". 	

Display Examples of Error Messages "RHAA035: PLC1: Error has been responded for device write command (Error Code: 2 [02H])"

NOTE	•	Please refer to the manual of External Device for more detail of received error codes.
	•	Please refer to "Display-related errors" of "Maintenance/Troubleshooting Guide" for a
		common error message to the driver.

7.1 MP Series

Error Codes Unique to External Device

Error code	Description
0x90	Transfer error.
0x92	Illegal parameter.
0x96	Register No. over.
0x9C	File is modified.
0x9D	Data access error.

Error Messages Unique to External Device

Message ID	Error Message	Description
RHxx128	"(Node Name):PLC is busy now(Error Code: [Hex])"	PLC is "Busy"
RHxx129	"(Node Name):Option module is not mounted(Error Code: [Hex])"	Option module not mount.
RHxx130	"(Node Name):Module is not ready(Error Code: [Hex])"	Module is not ready
RHxx131	"(Node Name):CPU is stopped(Error Code: [Hex])"	CPU is stopped
RHxx132	"(Node Name): Write protected(Error Code: [Hex])"	Write protected

7.2 Inverter Series

Error Codes Unique to External Device

Error code	Description
0x01	Function code error
0x02	Invalid register number error
0x03	Invalid quantity error
0x21	Date setting error
0x22	Write mode error
0x23	Main circuit undervoltage (UV) error during write
0x24	Write error during processing of constants

7.3 Servo Series

Error Codes Unique to External Device

Error code	Description
0x01	Function Code ErrorUnsupported function code or sub function code.
0x02	Faulty Register NumberAccessing register number that is not registered.
0x03	 Faulty Quantity The number of read or write data for reading is not between one and the maximum quantity (as defined per model). In write mode, the number of data in the message is not the specified quantity.
0x30	Faulty Register Number (High Level)Accessing register number that is not registered.
0x31	Access Limit ErrorAccess to the specified register is not permitted.
0x32	Outside Setting Range Error • The write data value is outside the maximum and minimum limit.
0x33	Data Matching ErrorTried to access only a portion of registers in the multiple register unit.Tried to access multiple registers that exceed the register group.
0x34	 Condition Error Command message content cannot be processed due to the condition defined by the register.
0x35	Process Conflict ErrorCannot be processed due to priority issues with other channels.
0x36	 Axis number error (Σ-7W/Σ-7C series only) The extended address is using an axis number that is not available.

7.4 I/O(M-System)

■ Error Codes Unique to External Device

Error code	Description	
0x01	Function Code Error • Unsupported function code or sub function code in use.	
0x03	Faulty QuantityThe data count in read or write operations is outside the allowed range (1 to the maximum, as defined per model).In write mode, the data count in the message does not match the specified quantity.	
0x04	Data Type ErrorNot supported by the defined mode or data type.	
0x09	Process Conflict ErrorCannot process due to priority issues with other channels.	
0x81	Protocol ID Setting ErrorWhen running a vendor specific command, the protocol ID did not match the External Device.	
0x82	 Data Length Setting Error When running a vendor specific command, the data length setting for the vendor special area does not match the External Device. 	
0x83	 Vendor Special Area Error When running a vendor specific command, a vendor special error occurred in the vendor special area. 	

• If the error code is 0x83, it is displayed together with the vendor special error code.

Example)



Vendor special error code

Error code	Description
0x01	Model code errorThe specified model code does not match the External Device.
0x02	Specified channel errorExternal Device does not support the specified channel.
0x03	Setting command error • External Device does not support the setting command.
0x04	Setting command data error • Error in the setting command data.

■ Error Messages Unique to External Device

Message ID	Error Message	Description
RHxx134	(Node Name): Error has been responded for device read command (Error Code: [Hex,Hex])	The error message is displayed when the error has occurred in the read command.
RHxx135	(Node Name): Error has been responded for device write command (Error Code: [Hex,Hex])	The error message is displayed when the error has occurred in the write command.

7.5 I/O(Azbil) K1G Series

Error Codes Unique to External Device

Error code	Description
0x01	Function Code ErrorUnsupported function code or sub function code in use.
0x02	Memory Address ErrorMemory address you tried to access is not in the memory address range.
0x03	Faulty QuantityThe data count in read or write operations is outside the allowed range (1 to the maximum, as defined per model).
0x04	Data Type ErrorNot supported by the defined mode or data type.Not supported by the protocol ID or device code.
0x81	Protocol ID Setting ErrorWhen running a vendor specific command, the protocol ID did not match the External Device.
0x82	 Data Length Setting Error When running a vendor specific command, the data length setting for the vendor special area does not match the External Device.
0x83	 Vendors Special Area Error When running a vendor specific command, a vendor special error occurred in the vendor special area.

• If the error code is 0x83, and the vendor special error code is 0x01, it is displayed as follows.

Example)



Vendor special error code

Error code	Description
0x01	Azbil protocol ID setting errorThe specified Azbil protocol ID is not supported by the External Device.

• If the error code is 0x83, and the vendor special error code is 0x81, it is displayed together with the Modbus error.

Example)



Vendor special error code

Error code	Description	
0x81	MODBUS RTU abnormal responseReceived a Modbus error. For more information, check the Modbus error code table.	

Modbus error code

Error code	Description
0x01	Illegal function Unsupported function code Connected to unsupported External Device
0x02	Illegal data address Data address error (area where access is prohibited)
0x03	Illegal dataWrite out-of-range valueEquipment related, write-protected and read prohibited
0x13	Write mode error

■ Error Messages Unique to External Device

Message ID	Error Message	Description
RHxx134	(Node Name): Error has been responded for device read command (Error Code: [Hex,Hex])	The error message is displayed when the error has occurred in the read command.
RHxx135	(Node Name): Error has been responded for device write command (Error Code: [Hex,Hex])	The error message is displayed when the error has occurred in the write command.
RHxx136	(Node Name): Error has been responded for device read command (Error Code: [Hex,Hex, Hex])	The error message is displayed when the error has occurred in the read command.
RHxx137	(Node Name): Error has been responded for device write command (Error Code: [Hex,Hex, Hex])	The error message is displayed when the error has occurred in the write command.
RHxx138	(Node Name): Error has been responded for device read command (Error Code: (Decimal)[(Hex)] There are out of range devises)	The error message is displayed when the error has occurred in the read command.

Message ID	Error Message	Description
RHxx139	(Node Name): Error has been responded for device write command (Error Code: (Decimal)[(Hex)] There are out of range devises)	The error message is displayed when the error has occurred in the write command.

7.6 Stepping (ORIENTAL MOTOR) AZ Series

Error Codes Unique to External Device

Error code	Description
0x01	Function Code Error • Unsupported function code or sub function code in use.
0x02	Faulty Register NumberAccessing register number that is not registered.
0x03	 Faulty Quantity The number of read or write data for reading is not between one and the maximum quantity (as defined per model). In write mode, the number of data in the message is not the specified quantity.
0x04	Data Type ErrorNot supported by the defined mode or data type.
0x05	Access Limit Error • Access to the specified register is not permitted.
0x06	Outside Setting Range Error • The write data value is outside the maximum and minimum limit.
0x07	Data Matching ErrorTried to access only a portion of memory in the multiple register unit.Tried to access multiple registers that exceed the register group.
0x08	 Condition Error Command message content cannot be processed due to the condition defined by the register.
0x09	Process Conflict ErrorCannot be processed due to priority issues with other channels.