Mitsubishi Electric Corporation

iQ-R/F Ethernet (SLMP Client) Driver

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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

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

Series	CPU	Link I/F	SIO Type	Setting Example	
	R00CPU R01CPU R01CPU R02CPU R04CPU R08CPU R16CPU R120CPU R120CPU R04ENCPU R08ENCPU R16ENCPU R120ENCPU R120ENCPU R120PCPU R120PCPU R120PCPU R120PCPU R120SFCPU	Ethernet Port on CPU Unit	Ethernet (UDP)	Setting Example 1 (page 8)	
			Ethernet (TCP)	Setting Example 2 (page 11)	
			Ethernet (UDP)	Setting Example 3 (page 14)	
iQ-R Series		R120CPU R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU R16PCPU R32PCPU R120PCPU R120PCPU R120PCPU R120PCPU R16SFCPU R16SFCPU R16SFCPU R16SFCPU R16SFCPU R120SFCPU R120SFCPU R16PSFCPU R120SFCPU R16PSFCPU	R04ENCPU R04ENCPU R08ENCPU R16ENCPU R32ENCPU R32ENCPU R120ENCPU R18PCPU R16PCPU R120PCPU R08SFCPU R120SFCPU R120SFCPU R16PSFCPU R16PSFCPU R120PSFCPU R120PSFCPU	RJ71EN71	Ethernet (TCP)
iQ-F Series	FX5UCPU FX5UCCPU Et FX5UJCPU	Ethernet Port on CPU Unit	Ethernet (UDP)	Setting Example 5 (page 20)	
			Ethernet (TCP)	Setting Example 6 (page 23)	

Connection Configuration

• 1:1 Connection



• 1:n Connection



• 1:n Connection (When using the iQ-R Series as a relay to access the network)



The following is an example setup on a network. Check the details of the setup items in "Setup Items" ** "4 Setup Items" (page 26)



Communication settings

	IP Address	Port No.
Display	192.168.1.1	1025

[Individual Device Settings] dialog box

External					Request	Request
External		De et Nie *2		DO No	destination	destination
Device to	IP Address	Port No	Network No.	PC NO.	module	module
Access					I/O No.	Station No.
PLC1	192.168.1.2	1025	0	255	1023	0
PLC2	192.168.1.2	1026	2	6	1023	0
PLC3	192.168.1.2	1027	3	8	32	15

*1 Set the IP address of the relay station (PLC1).

*2 The defined port number must be opened on the relay station (PLC1).

• n:1 Connection



RJ71EN71: 64

iQ-F series: 8

2 External Device Selection

Select the External Device to be connected to the Display.

🖆 Welcome to GP-Pro EX X				
67-7ro 🕅	Device/PLC Number of Devices/PLCs			
		Device/PLC 1		
	Manufacturer	Mitsubishi Electric Corporation		
	Series	iQ-R/F Ethemet(SLMP Client) V		
	Port	Ethernet (UDP)		
		Refer to the manual of this Device/PLC		
		Recent Device/PLC		
	<	>		
	Use System	n Area Device Information		
	Back (B	Communication Settings New Logic New Screen Cancel		

Setup Items	Setup Description		
Number of Devices/ PLCs	Enter an integer from 1 to 4 to define the number of Devices/PLCs to connect to the display.		
Manufacturer	Select the manufacturer of the External Device to connect. Select "Mitsubishi Electric Corporation".		
Series	Select the External Device model (series) and the connection method. Select "iQ-R/F Ethernet(SLMP Client)". In System configuration, make sure the External Device you are connecting is supported by "iQ-R/F Ethernet(SLMP Client)".		
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

This section provides examples of communication settings recommended by Pro-face for the Display and the External Device.

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	Mitsubishi Electric Corporation Series iQ-R/F Ethemet(SLMP Client)	Port Ethemet (UDP)
Text Data Mode	2 Change	
Communication S	iettings	
Port No.	1025	
Timeout	3 (sec)	
Retry	2	
Wait To Sen	d 0 (ms) Default	
Device-Specific	Settings	
Allowable Num of Devices/PL	ber <u>Add Device</u> <u>Increase Allowable</u> Cs 32 <u>Number of Devices/PLCs</u>	
No. Device	Name Settings	Add Indirect Device
👗 1 PLC1	Eries=iQ-R,IP Address=192.168.003.039,Port No.=10	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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

[=]					
🎒 Indiv	vidual Device Sett	ings			×
PLC1					
Basic	Other Station Acc	ess f	Remote I	Passwo	rd 💶 🕨
Seri	es	iQ-R			~
lf yo "Oth	u change the serie her Station Access	es, plea and al	se recor I addres	nfirm s settii	ngs.
IP A	ddress	192	168.	3.	39
Port	No.	1025	-		
Con Data	munication Code	Binary			\sim
Bit	set in word address	s operat	ion		
c	Other bits in this w	ord		Clear	
			0	Do not o	clear
N ti a r	lote on when select he ladder program address during the esulting data may	cting "D writes read/w be inco	o not cle data to t rite proc rrect.	ear" : If he wor ess, th	d e
				De	fault
		OK (O)		Cano	cel

[Remote Password] tab

[Basic] tab

🎒 Individual Device Setting	ps X
PLC1	
Basic Other Station Access	Remote Password ••
Network No.	0
PC No.	255 🜲
Request destination modu	ule
I/O No.	1023 🜲
Station No.	0
	Default
	Delaut
OK	(O) Cancel

[Labels] tab



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.

External Device Settings

Use the programming software MELSOFT GX Works3 to set up communication settings on the External Device.

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

- 1 Start the programming software.
- **2** Open the [Module Parameter] window for the target CPU.
- **3** From the [Basic Settings], set up the following in [Own Node Settings].

Setup Items	Setup Description
IP Address	192.168.3.39
Subnet Mask	255.255.255.0
Enable/Disable Online Change	Enable All(SLMP)
Communication Data Code	Binary
Opening Method	Do Not Open by Program

- 4 From [External Device Configuration], click [Detailed Setting] and the [Ethernet Configuration] window opens.
- **5** From the [Module List] window's [Ethernet Device (General)] area, select [SLMP Connection Module] and drag and drop to the settings screen.
- 6 In the settings screen's [SLMP Connection Module], set up the following.

Setup Items	Setup Description
Protocol	UDP
PLC Port No.	1025
Existence Confirmation	UDP

7 To save the settings, in the [Module Parameter] window click [Apply].

8 The project is saved and sent to the External Device.

Make sure the [Module Parameter] check box is selected.

9 Either turn the External Device power OFF/ON, or reset the External Device, to verify the changes.

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 Mitsubishi Electric Corporation Series	iQ-R/F Ethemet(SLMP Client) Port Ethemet (TCP)
Text Data Mode 2 Change	
Communication Settings	
Port No. 1025 🖨 🗋 Auto	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 🚖 (ms) Defa	ault
Device-Specific Settings	
Allowable Number <u>Add Device</u> of Devices/PLCs 16	<u>increase Allowable</u> Number of Devices/PLCs
No. Device Name Settings	Add Indirect Device
L PLC1 In Series=iQ-R,IP Address=19	92.168.003.039,Port No.=10

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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

[Basic] tab

🎒 Indiv	vidual Device Set	tings					×
PLC1							
Basic	Other Station Ac	cess	R	emote P	asswo	ord 🖣	F
Seri	es	iQ-R				~	-
lf yo "Oth	u change the seri er Station Access	es, ple and	as all	e recon addres:	firm s setti	ngs.	
IP A	ddress	19	2.	168.	3.	39	
Port	No.	1025		-			
Con Data	munication a Code	Binar	у			~	
Bit	set in word addres	s oper	atio	on			
c	Other bits in this w	ord		• C	lear		
					o not	clear	
N ti a	lote on when sele he ladder program ddress during the esulting data may	cting " write read/ be inc	'Do s d wri	o not cle lata to th ite proce rect.	ar" : If e wor ess, th	d le	
					De	efault	
		0K (0)		Can	cel	

🎒 Individual Device Settings × PLC1 Basic Other Station Access Remote Password Network No. 0 ÷ PC No. 255 ÷ Request destination module I/O No. 1023 ÷ Station No. 0 + Default OK (O) Cancel

[Other Station Access] tab

🖆 Individual Device Settings 🛛 🗙 🗙	Individual Device Settings
PLC1	PLC1
Other Station Access Remote Password Labels	Remote Password Labels
Enable Remote Password	Label Data
	Use Label Data
	×
valid password range: 6-32 single-byte characters, numeric characters, alphabet A-Z, a-z, single-byte	New Edit
i assimutus ale case seristitve.	If you change the "Use Label Data" setting, please reconfirm all address settings.
Default	Default
OK (0) Cancel	OK (O) Cancel

[Labels] tab

[Remote Password] tab

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.

External Device Settings

Use the programming software MELSOFT GX Works3 to set up communication settings on the External Device.

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

- 1 Start the programming software.
- **2** Open the [Module Parameter] window for the target CPU.
- **3** From the [Basic Settings], set up the following in [Own Node Settings].

Setup Items	Setup Description
IP Address	192.168.3.39
Subnet Mask	255.255.255.0
Enable/Disable Online Change	Enable All(SLMP)
Communication Data Code	Binary
Opening Method	Do Not Open by Program

- 4 From [External Device Configuration], click [Detailed Setting] and the [Ethernet Configuration] window opens.
- **5** From the [Module List] window's [Ethernet Device (General)] area, select [SLMP Connection Module] and drag and drop to the settings screen.
- 6 In the settings screen's [SLMP Connection Module], set up the following.

Setup Items	Setup Description
Protocol	ТСР
PLC Port No.	1025
Existence Confirmation	KeepAlive(Default)

7 To save the settings, in the [Module Parameter] window click [Apply].

8 The project is saved and sent to the External Device.

Make sure the [Module Parameter] check box is selected.

9 Either turn the External Device power OFF/ON, or reset the External Device, to verify the changes.

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 Mitsubishi Electric Corporat	tion Series iQ-R/F Ethernet(SLMP Client)	Port Ethemet (UDP)
Text Data Mode 2 Change		
Communication Settings		
Port No. 1025 🚖		
Timeout 3 🚖 (e	sec)	
Retry 2		
Wait To Send 0 🚖 (r	ms) Default	
Device-Specific Settings		
Allowable Number Add D of Devices/PLCs 32	Device Increase Allowable Number of Devices/PLCs	
No. Device Name Settings	<u></u>	Add Indirect Device
👗 1 PLC1 🏦 Series=i	Q-R,IP Address=192.168.003.040,Port No.=10	F 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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

[Basic] tab

🎒 Indiv	vidual Device Sett	tings					×
PLC1							
Basic	Other Station Acc	cess	R	emote F	asswo	ord 1	ŀ
Seri	es	iQ-R				~	1
lf ya "Oth	u change the serie er Station Access	es, ple and	as all	e recon addres:	firm s setti	ngs.	
IP A	ddress	19	2.	168.	3.	40	
Port	No.	1025		•			
Con Data	munication Code	Binar	y			~	
Bit set in word address operation							
c	Other bits in this w	ord		•	lear		
				0	lo not	clear	
N ti a r	lote on when sele he ladder program ddress during the esulting data may	cting " write read/ be inc	Do s d wri	not cle ata to th te proce rect.	ar": H ne wor ess, th	d le	
					De	efault	
		OK (0))		Can	cel	

[Other Station Access] tab

🎒 Indiv	vidual Device Setting	gs X
Basic	Other Station Acces	S Remote Password
Dualo		
Net	work No.	0 ≑
PC	No.	255 ≑
Req	uest destination mod	ule
1	/O No.	1023
9	Station No.	0
		Default
	OK	(O) Cancel

🍜 Individual Device Settings 🛛 🗙 🗙	Individual Device Settings
PLC1	PLC1
Other Station Access Remote Password Labels	Remote Password Labels
Enable Remote Password	Label Data
Valid password range: 6-32 single-byte characters, numeric characters, alphabet A-Z, a-z, single-byte space and 1"#\$%&()*+,-/;(<=>?@[¥]{}^_{(})~ Passwords are case-sensitive.	New Edit
	please reconfirm all address settings.
Default	Default
OK (O) Cancel	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.

[Remote Password] tab

[Labels] tab

External Device Settings

Use the programming software MELSOFT GX Works3 to set up communication settings on the External Device.

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

- **1** Start the programming software.
- **2** From the navigation window's [Module Information], open the [Port 1 Module Parameter] window for the target link I/F.
- **3** From the [Basic Settings], set up the following in [Own Node Settings].

Setup Items	Setup Description
IP Address	192.168.3.40
Subnet Mask	255.255.255.0
Enable/Disable Online Change	Enable All(SLMP)
Communication Data Code	Binary
Opening Method	Do Not Open by Program
Communications by Network No./ Station No.	Disable

- 4 From [External Device Configuration], click [Detailed Setting] and the [Ethernet Configuration] window opens.
- **5** From the [Module List] window's [Ethernet Device (General)] area, select [SLMP Connection Module] and drag and drop to the settings screen.
- **6** In the settings screen's [SLMP Connection Module], set up the following.

Setup Items	Setup Description
Protocol	UDP
PLC Port No.	1025
Existence Confirmation	UDP

- 7 To save the settings, in the [Module Parameter] window click [Apply].
- **8** The project is saved and sent to the External Device.

Make sure the [Module Parameter] check box is selected.

9 Either turn the External Device power OFF/ON, or reset the External Device, to verify the changes.

Notes

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

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 Mitsubishi 8	Electric Corporation Series iQ-R/F Ethernet(SLMP Client)	Port Ethernet (TCP)
Text Data Mode 2	2 Change	
Communication Settings		
Port No.	1025 🖨 🗋 Auto	
Timeout	3 (sec)	
Retry 2	2	
Wait To Send	0 (ms) Default	
Device-Specific Settings		
Allowable Number of Devices/PLCs 16	Add Device Increase Allowable Number of Devices/PLCs	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Eries=iQ-R,IP Address=192.168.003.040,Port No.=10	F 7

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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

[Basic] tab

🖆 Individual Device Settings 🛛 🗙 🗙							
PLC1							
Basic	Other Station Acc	cess	R	emote f	asswo	ord	F
Seri	es	iQ-R					~
lf ya "Oth	u change the serie er Station Access	es, ple and	as all	e recor addres	ifirm s setti	ngs.	
IP A	ddress	19	2.	168.	3.	40	
Port	No.	1025		*			
Con Data	Communication Binary ~						
Bit set in word address operation							
Other bits in this word							
◯ Do not clear							
Note on when selecting "Do not clear" : If the ladder program writes data to the word address during the read/write process, the resulting data may be incorrect.							
Default							
		0K (0)		Can	cel	

[Other Station Access] tab

ELC1	vidual Device Setting	gs	×
Basic	Other Station Acces	s Remote	e Password 💶 🕨
Net	work No.	0	*
PC	No.	255	*
Req	uest destination mod	ule	
1	/O No.	1023	▲ ▼
5	Station No.	0	
			Default
	OK	(0)	Cancel

Sindividual Device Settings X	🎒 Individual Device Settings 🛛 🗙 🗙
PLC1	PLC1
Other Station Access Remote Password Labels	Remote Password Labels
Enable Remote Password	Label Data
	Use Label Data
Valid password range: 6-32 single-byte characters, numeric characters, alphabet A-Z, a-z, single-byte space and I"#\$%&\frac{1}{2} - (<=>?@\frac{2}{2} Mill^{5-1}()^{-2}	New Edit
Passwords are case-sensitive.	If you change the "Use Label Data" setting, please reconfirm all address settings.
Default	Default
OK (O) Cancel	OK (O) Cancel

[Labels] tab

[Remote Password] tab

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.

External Device Settings

Use the programming software MELSOFT GX Works3 to set up communication settings on the External Device.

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

- 1 Start the programming software.
- **2** From the navigation window's [Module Information], open the [Port 1 Module Parameter] window for the target link I/F.
- **3** From the [Basic Settings], set up the following in [Own Node Settings].

Setup Items	Setup Description
IP Address	192.168.3.40
Subnet Mask	255.255.255.0
Enable/Disable Online Change	Enable All(SLMP)
Communication Data Code	Binary
Opening Method	Do Not Open by Program
Communications by Network No./ Station No.	Disable

- 4 From [External Device Configuration], click [Detailed Setting] and the [Ethernet Configuration] window opens.
- **5** From the [Module List] window's [Ethernet Device (General)] area, select [SLMP Connection Module] and drag and drop to the settings screen.
- 6 In the settings screen's [SLMP Connection Module], set up the following.

Setup Items	Setup Description
Protocol	ТСР
PLC Port No.	1025
Existence Confirmation	KeepAlive(Default)

- 7 To save the settings, in the [Module Parameter] window click [Apply].
- **8** The project is saved and sent to the External Device.

Make sure the [Module Parameter] check box is selected.

9 Either turn the External Device power OFF/ON, or reset the External Device, to verify the changes.

Notes

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

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 Mitsubishi Electric Corporation	Series iQ-R/F Ethemet(SLMP Client)	Port Ethernet (UDP)
Text Data Mode 2 Change		
Communication Settings		
Port No. 1025 🜩		
Timeout 3 (sec)		
Retry 2		
Wait To Send 0 🚖 (ms)	Default	
Device-Specific Settings		
Allowable Number Add Devices/PLCs 22	2e Increase Allowable Number of Devices/PLCs	
No. Device Name Settings	<u></u>	Add Indirect Device
👗 1 PLC1 🏦 Series=iQ-F,	P Address=192.168.003.250,Port No.=10.	

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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

[Basic] tab

🎒 Indiv	🎒 Individual Device Settings 🛛 🗙 🗙					
PLC1						
Basic	Other Station Acc	cess	Remote P	asswo	ord 💶	
Serie	es	iQ-F			\sim	
lf yo "Oth	u change the serie er Station Access	es, ple " and	ase recon all address	firm s settii	ngs.	
IP A	ddress	19	2. 168.	3.	250	
Port	No.	1025	-			
Communication Binary ~						
Bit set in word address operation						
Other bits in this word						
◯ Do not clear						
Note on when selecting "Do not clear" : If the ladder program writes data to the word address during the read/write process, the resulting data may be incorrect.						
				De	efault]
		OK (O)	Can	cel	

[Other Station Access] tab

🎒 Indiv	vidual Device Setting	js	×
PLC1			
Basic	Other Station Acces	Rem	ote Password 💶 🕨
Netv PC I	work No. No.	0 255	•
Req	uest destination mod	ule	
l l	/O No.	1023	÷
S	Station No.	0	÷
			Default
	ОК	(0)	Cancel

🍜 Individual Device Settings 🛛 🗙 🗙	Individual Device Settings
PLC1	PLC1
Other Station Access Remote Password Labels	Remote Password Labels
Enable Remote Password	Label Data
Valid password range: 6-32 single-byte characters, numeric characters, alphabet A-Z, a-z, single-byte space and !"#\$%&0'+,/:<=>?@[¥]{}^_()~ Passwords are case-sensitive.	New Edit: If you change the "Use Label Data" setting, please reconfirm all address settings.
Default	Default
OK (O) Cancel	OK (0) 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.

[Labels] tab

External Device Settings

Use the programming software MELSOFT GX Works3 to set up communication settings on the External Device.

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

- 1 Start the programming software.
- **2** Open the [Module Parameter] window for the target CPU.
- **3** From the [Basic Settings], set up the following in [Own Node Settings].

Setup Items	Setup Description
IP Address	192.168.3.250
Subnet Mask	255.255.255.0
Communication Data Code	Binary

- 4 From [External Device Configuration], click [Detailed Setting] and the [Ethernet Configuration] window opens.
- **5** From the [Module List] window's [Ethernet Device (General)] area, select [SLMP Connection Module] and drag and drop to the settings screen.
- **6** In the settings screen's [SLMP Connection Module], set up the following.

Setup Items	Setup Description
Protocol	UDP
PLC Port No.	1025
Sensor/Device IP Address	192.168.3.10 (Display's IP Address)

- 7 To save the settings, in the [Module Parameter] window click [Apply].
- **8** The project is saved and sent to the External Device.

Make sure the [Module Parameter] check box is selected.

9 Either turn the External Device power OFF/ON, or reset the External Device, to verify the changes.

Notes

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

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 Mitsubishi Electric Corpora	ation Series iQ-R/F Ethernet(SLMP Client)	Port Ethemet (TCP)
Text Data Mode 2 Change		
Communication Settings		
Port No. 1025 🜩	Auto	
Timeout 3	(sec)	
Retry 2		
Wait To Send 0	(ms) Default	
Device-Specific Settings		
Allowable Number Add of Devices/PLCs 16	Device Increase Allowable Number of Devices/PLCs	
No. Device Name Settings	§	Add Indirect Device
👗 1 PLC1 🏦 Series=	=iQ-F,IP Address=192.168.003.250,Port No.=10.	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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

[Basic] tab

🕌 Individual Device Settings 🛛 🗙 🗙					
PLC1					
Basic	Other Station Acc	cess	Remote F	assw	ord 💶
Series		iQ-F			~
lf yo "Oth	u change the serie er Station Access	es, ple " and ;	ase recor all addres	ifirm s setti	ings.
IP A	ddress	192	2. 168.	3.	250
Port	No.	1025	-		
Communication Data Code		Binar	у		~
Bit set in word address operation					
Other bits in this word					
◯ Do not clear			clear		
Note on when selecting "Do not clear" : If the ladder program writes data to the word address during the read/write process, the resulting data may be incorrect.					
Default					
		OK (0))	Can	cel

[Other Station Access] tab

🎒 Indiv	vidual Device Settin	gs X
Basic	Other Station Acces	Remote Password • •
Net PC	work No. No.	0 🔶 255 🚖
Req I	uest destination mod /O No. Station No.	ule 1023 ÷ 0 ÷
		Default
	OK	((O) Cancel

🗳 Individual Device Settings 🛛 🗙	🕌 Individual Device Settings 🛛 🗙
PLC1	PLC1
Other Station Access Remote Password Labels • •	Remote Password Labels
Enable Remote Password	Label Data
Valid password range: 6-32 single-byte characters, numeric characters, alphabet A-Z, a-z, single-byte space and !''#\$%&0'+,-/::<=>?@[¥]{^_'()~ Passwords are case-sensitive.	New Edit: If you change the "Use Label Data" setting, please reconfirm all address settings.
Default	Default
OK (O) Cancel	OK (0) Cancel

Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address. ٠
- Set IP address on the External Device address in the [Individual Device Settings] dialog box. ٠
- ٠ You need to set IP address on the Display in the offline mode of the Display.

[Remote Password] tab

External Device Settings

Use the programming software MELSOFT GX Works3 to set up communication settings on the External Device.

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

- 1 Start the programming software.
- **2** Open the [Module Parameter] window for the target CPU.
- **3** From the [Basic Settings], set up the following in [Own Node Settings].

Setup Items	Setup Description
IP Address	192.168.3.250
Subnet Mask	255.255.255.0
Communication Data Code	Binary

- 4 From [External Device Configuration], click [Detailed Setting] and the [Ethernet Configuration] window opens.
- **5** From the [Module List] window's [Ethernet Device (General)] area, select [SLMP Connection Module] and drag and drop to the settings screen.
- 6 In the settings screen's [SLMP Connection Module], set up the following.

Setup Items	Setup Description
Protocol	ТСР
PLC Port No.	1025

- 7 To save the settings, in the [Module Parameter] window click [Apply].
- 8 The project is saved and sent to the External Device. Make sure the [Module Parameter] check box is selected.
- 9 Either turn the External Device power OFF/ON, or reset the External Device, to verify the changes.

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 8)
```

NOTE

• 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 Mitsub	ishi Electric Corporation Series iQ-R/F Ethemet(SLMP Client)	Port Ethernet (TCP)
Text Data Mode	2 Change	
Communication Settings		
Port No.	1025 🚔 🗋 Auto	
Timeout	3 (sec)	
Retry	2	
Wait To Send	0 (ms) Default	
Device-Specific Settings	5	
Allowable Number	Add Device Increase Allowable	
No. Device Name	Settings	Add Indirect Device
X 1 PLC1	Series=iQ-R,IP Address=192.168.003.039,Port No.=10	5

Setup Items	Setup Description
	Enter a port number of the External Device, using 1025 to 65535. Check into [Auto], and a port number is set automatically.
Port No.	 NOTE • [Auto] option is available to set only when you select "Ethernet (TCP)" in [Connecting Method].
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.
	efer 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]

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

♦ [Basic] tab

🎒 Indiv	idual Device Sett	tings					×
PLC1							
Basic	Other Station Acc	ess	Remo	te Pas	swo	rd 🔳	Þ
Serie	es	iQ-R				~	
lf yo "Oth	u change the serie er Station Access	es, plea "and a	ase re II add	confir ress s	m settir	igs.	
IP A	ddress	192	168	8.	3.	39	
Port	No.	1025	ŀ	•			
Communication Data Code		Binary	1			~	
Bit	set in word addres	s opera	tion				
C)ther bits in this w	ord		Cle	ar		
	◯ Do not clear						
N th a re	lote on when sele ne ladder program ddress during the esulting data may	cting "[writes read/w be inco	Donot data t rrite pr prrect	clear to the roces	": If word s, the	i e	
					De	fault	
		OK (O)		(Cano	el:	

Setup Items	Setup Description		
Series	Select a model of the External Device.		
	Set IP address of the External Device.		
IP Address	• Check with a network administrator about IP address. Do not set the duplicate IP address.		
Port No.	Use an integer from 1025 to 65535 to enter the port No. of the External Device.		
	Select a format for the communication data. The format that you can select depends on the selected external device model.		
Communication Data	Series	Code	
Code	iQ-R Series	"Binary" or "ASCII"	
	iQ-F Series	"Binary", "ASCII (X.Y OCT)" or "ASCII (X.Y HEX)"	
Other bits in this word	Select "Clear" or "Do not clear" for the handling of other bit data in the same word when a bit operation is performed to a bit specified word address.		

♦ Other Station Access] tab

🎒 Individual Device Setting	gs X
PLC1	
Basic Other Station Acces	s Remote Password
Network No. PC No.	0 ÷
Request destination mod	ule
I/O No.	1023 🜩
Station No.	0
	Default
ОК	(O) Cancel

Setup Items	Setup Description
Network No.	Set up this property when you communicate via the network. Use an integer from 0 to 239 or 254 to define the Network No. of the associated External Device. If communication is not done via a network, enter 0.
PC No.	Set up this property when you communicate via the network. Use an integer from 0 to 120 or 125 to 126 to define the PC No. of the associated External Device. If communication is not done via a network, enter 255.
I/O No.	Set up this property when you communicate via the network. Use an integer from 0 to 511 to define the I/O No. of the associated External Device. If communication is not done via a network, enter 1023.
Station No.	Enter the station number of the External Device, from 0 to 31.

♦ [Remote Password] tab

🖆 Individual Device Settings 🛛 🗙 🗙
PLC1
Other Station Access Remote Password Labels
Enable Remote Password

Valid password range: 6-32 single-byte characters, numeric characters, alphabet A/Z, a-z, single-byte space and !!#\$%&(}
Default
OK (O) Cancel

Setup Items	Setup Description
Enable Remote Password	To use a remote password, select the check box and enter the remote password.

♦ [Labels] tab

🎒 Individual Devie	ce Settin	gs			×
PLC1					
Remote Password	Labels				• •
Label Data					
Use Label Da	ta				_
					\sim
		W			
If you change the please reconfirm	e "Use La all addr	abel Data' ess settin	'settin gs.	ng,	
				Defa	ault
	Oł	(O)		Cance	1

Setup Items	Setup Description
Use Label Data	Select The check box when using the label data (Symbol Address), and select the label data to be used.
 When iQ-F series is selected, you cannot select Use Label Data. When GP-4100 series is selected, you cannot select Use Label Data. 	

4.2 Setup Items in Offline Mode

NOTE

• Refer to the Maintenance/Troubleshooting guide for information on how to enter offline mode or about the operation.

Cf. Maintenance/Troubleshooting Guide "Offline Mode"

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 list that appears.

Comm.	Device			
iQ-R/F Ethernet	(SLMP Client)		[UDP]	Page 1/1
	Port No.	● Fixed	Auto 1025 _▼ ▲	
	Timeout(s) Retry		3 V A	
	Wait To Send(ms)			
	Exit		Back	2022/12/04 11:56:43

Setup Items	Setup Description
Port No.	Set the Port No. of the display. In UDP connection, entered port No. will be assigned regardless of whether you select [Fixed] or [Auto]. In TCP connection, select either of [Fixed] or [Auto]. When you select [Fixed], use an integer from 1025 to 65535 to enter the port No. of the display. When you select [Auto], the port No. will be automatically assigned regardless of the entered value.
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]. Touch the External Device you want to set from the displayed list, and touch [Device].

(Page 1/2)



Setup Items	Setup Description
Device/PLC Name	Select the External Device to set. Device/PLC name is the title of the External Device set with GP-Pro EX. (Initial value [PLC1])
Series	Display a model of the External Device.
IP Address	 Set IP addresses used by the External Device. NOTE • Check with a network administrator about IP address. Do not set the duplicate IP address.
Port No.	Use an integer from 1025 to 65535 to enter the port No. of the External Device.
Com Data Code	Displays the communication data format.
Network No.	Set up this property when you communicate via the network. Use an integer from 0 to 239 or 254 to define the Network No. of the associated External Device. If communication is not done via a network, enter 0.
PC No.	Set up this property when you communicate via the network. Use an integer from 0 to 120 or 125 to 126 to define the PC No. of the associated External Device. If communication is not done via a network, enter 255.
I/O No.	Set up this property when you communicate via the network. Use an integer from 0 to 511 to define the I/O No. of the associated External Device. If communication is not done via a network, enter 1023.
Station No.	Enter the station number of the External Device, from 0 to 31.
Remote Password	Set whether or not to use the Remote Password. Enter the Remote Password when using this feature.

(Page	2/2)
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Comm.	Device			
iQ-R/F Ethernet	(SLMP Client)		[UDP]	Page 2/2
Devic	e/PLC Name PL	01		•
	Bit set in word	address operatio	n	
	Other bits	Clear		
				-
	Exit		Back	2022/12/04 11:57:22

Setup Items	Setup Description
Device/PLC Name	Select the External Device to set. Device/PLC name is the title of the External Device set with GP-Pro EX. (Initial value [PLC1])
Bit set in word address operation	Displays "Clear" or "Do not clear" for the handling of other bit data in the same word when a bit operation is performed to a bit specified word address. (Cannot be set in offline mode.)

5 Supported Devices

The following table shows the range of supported device addresses. Please note that the actual 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 MELSEC iQ-R Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Remarks
Input Relay	X0000 - X2FFF	X0000 - X2FF0		*1 ***
Output Relay	Y0000 - Y2FFF	Y0000 - Y2FF0		*2 ***
Internal Relay	M00000000 - M999999999	M00000000 - M99999984		÷ 16)
Special Relay	SM0000 - SM4095	SM0000 - SM4080		÷ 16)
Latch Relay	L00000 - L32767	L000000 - L32752		÷ 16)
Annunciator	F00000 - F32767	F00000 - F32752		÷ 16)
Edge Relay	V00000 - V32767	V00000 - V32752		÷ 16)
Link Relay	B0000000 - B9A61FFF	B0000000 - B9A61FF0		
Special Link Relay	SB0000000 - SB9A61FFF	SB0000000 - SB9A61FF0		
Timer (Contact)	TS0000000 - TS8993439	-		
Timer (Coil)	TC0000000 - TC8993439	-		
Retentive Timer (Contact)	SS0000000 - SS8993439	-		
Retentive Timer (Coil)	SC0000000 - SC8993439	-		
Counter (Contact)	CS0000000 - CS8993439	-		
Counter (Coil)	CC0000000 - CC8993439	-		
Timer (Current Value)	-	TN0000000 - TN8993439		
Retentive Timer (Current value)	-	SN0000000 - SN8993439		
Long Timer (Current Value)	-	L_TN0000000 - L_TN2529407		
Long Retentive Timer (Current value)	-	L_SN0000000 - L_SN2529407		
Counter (Current Value)	-	CN0000000 - CN8993439		
Long Counter (Current Value)	-	L_CN0000000 - L_CN4761215		
Data Register	-	D00000000 - D10117631]	Bit F] *3
Special Register	-	SD0000 - SD4095	Ĭ	$[\mathbf{B} i \mathbf{t} \mathbf{F}]^{*3}$
Link Register	-	W000000 - W9A61FF	1	Bit F] *3
Special Link Register	-	SW000000 - SW9A61FF	1	$\mathbb{E}_{it} \mathbb{F}^{*3}$
Link Input	J001-X0000 - J255-X3FFF	J001-X0000 - J255-X3FF0		*4

Device	Bit Address	Word Address	32 bits	Remarks
Link Output	J001-Y0000 - J255-Y3FFF	J001-Y0000 - J255-Y3FF0		*** 0] *4
Link Relay	J001-B0000 - J255-B7FFF	J001-B0000 - J255-B7FF0		*** 0
Link Special Relay	J001-SB0000 - J255-SB1FFF	J001-SB0000 - J255-SB1FF0		*4 ***
Link Register	-	J001-W00000 - J255-W1FFFF		Bit F] *3 *4
Link Special Register	-	J001-SW000 - J255-SW1FF		B i t F] *3 *4
Module Access Device	-	U000-G00000000 - U1FF-G999999999		Bit F] *3 *5
CPU Buffer Memory Access Device	-	U3E0-G00000000 - U3E3-G999999999		Bit F] *3 *6
CPU Buffer Memory (Periodic Communica- tion Area)	-	U3E0-HG00000 - U3E3-HG12287	[L / H]	_{віт} F] *3 *6
File Register (Normal)	-	R00000 - R32767		B i t F] *3
File Register (Block switching is not necessary)	-	ZR00000000 - ZR10027007		<u>₿ i t</u> F] *3
	-	0R00000 - 0R32767		B i t F] *3
	-	1R00000 - 1R32767		B i t F] *3
File Register	-	2R00000 - 2R32767	Ī	Bit F] *3
(0R - 31R)	:	:	Ī	B i t F] *3
	-	30R00000 - 30R32767	Ī	B i t F] *3
	-	31R00000 - 31R32767	Ī	B i t F] *3

*1 If the CPU is R00CPU/R01CPU/R02CPU, the bit address is "X0000 - X1FFF" and the word address is "X0000 - X1FF0".

[Clear] B i t F]

[Do not clear] 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 ladder program while the Display is reading data from, and writing data to, the External Device.

- *4 Link direct device to access the network link module's internal memory. The first three digits of the address is the network number (1-255).
- *5 Device for accessing SLMP compatible devices, as well as the intelligent function unit's buffer memory. The first three digits of the address specifies the intelligent module's starting I/O number.
- *6 Device that can access CPU buffer memory. The first three digits of the address specifies the CPU number:

3E0H: CPU No.1 3E1H: CPU No.2 3E2H: CPU No.3 3E3H: CPU No.4

^{*2} If the CPU is R00CPU/R01CPU/R02CPU, the bit address is "Y0000 - Y1FFF" and the word address is "Y0000 - Y1FF0".

^{*3} The access method when specifying bits is different depending on the setting of "Other bits in this word" in "Individual Device Settings".

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)"

- Refer to the precautions on manual notation for icons in the table.
 - "Manual Symbols and Terminology"

5.2 MELSEC iQ-R Series (when communicating via the network)

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Remarks
Input Relay	X0000 - X2FFF	X0000 - X2FF0		*** 0] *1
Output Relay	Y0000 - Y2FFF	Y0000 - Y2FF0		*** ()
Internal Relay	M000000 - M999999	M000000 - M999984		÷ 16) *3
Special Relay	SM0000 - SM4095	SM0000 - SM4080		÷16)
Latch Relay	L00000 - L32767	L00000 - L32752		÷16)
Annunciator	F00000 - F32767	F00000 - F32752		÷16)
Edge Relay	V00000 - V32767	V00000 - V32752		÷16)
Link Relay	B000000 - BFFFFFF	B000000 - BFFFFF0		*** () *3
Special Link Relay	SB000000 - SBFFFFFF	SB000000 - SBFFFFF0		*** () *3
Timer (Contact)	TS000000 - TS999999	-		*3
Timer (Coil)	TC000000 - TC9999999	-		*3
Retentive Timer (Contact)	SS000000 - SS9999999	-		*3
Retentive Timer (Coil)	SC000000 - SC999999	-		*3
Counter (Contact)	CS000000 - CS999999	-		*3
Counter (Coil)	CC000000 - CC9999999	-		*3
Timer (Current Value)	-	TN000000 - TN999999		*3
Retentive Timer (Current value)	-	SN000000 - SN999999		*3
Counter (Current Value)	-	CN000000 - CN999999		*3
Data Register	-	D000000 - D999999		B i t F] *3 *4
Special Register	-	SD0000 - SD4095	1	<u>₿ i t</u> F) *4
Link Register	-	W000000 - W9A61FF		<u>₿ i t</u> F) *4
Special Link Register	-	SW000000 - SW9A61FF		_{віt} F) *4
Link Input	J001-X0000 - J255-X3FFF	J001-X0000 - J255-X3FF0		*** ()
Link Output	J001-Y0000 - J255-Y3FFF	J001-Y0000 - J255-Y3FF0		*** ()
Link Relay	J001-B0000 - J255-B7FFF	J001-B0000 - J255-B7FF0		*** ()
Link Special Relay	J001-SB0000 - J255-SB1FFF	J001-SB0000 - J255-SB1FF0		*** ()
Link Register	-	J001-W00000 - J255-W1FFFF		_{віt} F] ^{*4 *5}
Link Special Register	-	J001-SW000 - J255-SW1FF		_{віt} F] ^{*4 *5}
CPU Buffer Memory Access Device	-	U3E0-G000000 - U3E3-G9999999		_{віт} F) ^{*4 *6}
CPU Buffer Memory (Periodic Communica- tion Area)	-	U3E0-HG00000 - U3E3-HG12287		_{віт} F) *4 *6

Device	Bit Address	Word Address	32 bits	Remarks
File Register (Normal)	-	R00000 - R32767		_{віt} F ^{*4}
File Register (Block switching is not necessary)	-	- ZR00000000 - ZR10027007		_{віt} F) *4
	-	0R00000 - 0R32767		<u>₿ i t</u> F] *4
	-	1R00000 - 1R32767	[L / H]	<u>віt</u> F
File Register (0R - 31R)	-	2R00000 - 2R32767		_{віt} F) ^{*4}
	:	:		_{віt} F ^{*4}
	-	30R00000 - 30R32767		<u>віt</u> F) *4
	-	31R00000 - 31R32767		_{віт} F) ^{*4}

*1 If the CPU is R00CPU/R01CPU/R02CPU, the bit address is "X0000 - X1FFF" and the word address is "X0000 - X1FF0".

*2 If the CPU is R00CPU/R01CPU/R02CPU, the bit address is "Y0000 - Y1FFF" and the word address is "Y0000 - Y1FF0".

*3 Device range is limited.

*4 The access method when specifying bits is different depending on the setting of "Other bits in this word" in "Individual Device Settings".

 $[Clear] \dots F_{\underline{B \ i \ t}} F_{\underline{I}}$

[Do not clear] 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 ladder program while the Display is reading data from, and writing data to, the External Device.

- *5 Link direct device to access the network link module's internal memory. The first three digits of the address is the network number (1-255).
- *6 Device that can access CPU buffer memory. The first three digits of the address specifies the CPU number: 3E0H: CPU No.1
 - 3E1H: CPU No.2 3E2H: CPU No.3 3E3H: CPU No.4

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)"

• Refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

MELSEC iQ-R Series (Label) 5.3

: This address can be specified as system data area.

Data Type		Bit Address	Word Address	32bits	Note
	Single Tag	<labelname></labelname>			
BOOL	1D Array	<labelname>[xl] - <labelname>[xh]</labelname></labelname>		_	*1 *2 *3
BOOL	2D Array	<labelname>[xl,yl] - <labelname>[xh,yh]</labelname></labelname>		-	
	3D Array	<labelname>[xl,yl,zl] - <labelname>[xh,yh,zh]</labelname></labelname>			
	Single Tag	<labelname>.00 - <labelname>.15</labelname></labelname>	<labelname></labelname>		
INT	1D Array	<labelname>[xl].00 - <labelname>[xh].15</labelname></labelname>	<labelname>[xl] - <labelname>[xh]</labelname></labelname>		*1 *2 *3 *4
WORD	2D Array	<labelname>[xl,yl].00 - <labelname>[xh,yh].15</labelname></labelname>	<labelname>[xl,yl] - <labelname>[xh,yh]</labelname></labelname>		
	3D Array	<labelname>[xl,yl,zl].00 - <labelname>[xh,yh,zh].15</labelname></labelname>	<labelname>[xl,yl,zl] - <labelname>[xh,yh,zh]</labelname></labelname>		
	Single Tag		<labelname></labelname>		
REAL	1D Array		<labelname>[xl] - <labelname>[xh]</labelname></labelname>		*1 *2 *3
TIME	2D Array	-	<labelname>[xl,yl] - <labelname>[xh,yh]</labelname></labelname>	-	
	3D Array		<labelname>[xl,yl,zl] - <labelname>[xh,yh,zh]</labelname></labelname>		
	Single Tag	<labelname>.00 - <labelname>.31</labelname></labelname>	<labelname></labelname>		
DINT	1D Array	<labelname>[xl].00 - <labelname>[xh].31</labelname></labelname>	<labelname>[xl] - <labelname>[xh]</labelname></labelname>		*1 *2 *3
DWORD	2D Array	<labelname>[xl,yl].00 - <labelname>[xh,yh].31</labelname></labelname>	<labelname>[xl,yl] - <labelname>[xh,yh]</labelname></labelname>	_	
	3D Array	<labelname>[xl,yl,zl].00 - <labelname>[xh,yh,zh].31</labelname></labelname>	<labelname>[xl,yl,zl] - <labelname>[xh,yh,zh]</labelname></labelname>		
	Single Tag		<labelname></labelname>		
STRING	1D Array		<labelname>[xl] - <labelname>[xh]</labelname></labelname>		*1 *2 *3
UTAING	2D Array		<labelname>[xl,yl] - <labelname>[xh,yh]</labelname></labelname>		*5
	3D Array		<labelname>[xl,yl,zl] - <labelname>[xh,yh,zh]</labelname></labelname>		

Data Type		Bit Address	Word Address	32bits	Note
	С	<labelname>.C</labelname>			
TIMER	S	<labelname>.S</labelname>		-	*6
	Ν	-	<labelname>.N</labelname>	[L / H]	
	С	<labelname>.C</labelname>			
RETENTIVE TIMER	S	<labelname>.S</labelname>		-	*6
	Ν	-	<labelname>.N</labelname>	[L / H]	
	С	<labelname>.C</labelname>			
COUNTER	S	<labelname>.S</labelname>		_	*6
	Ν	-	<labelname>.N</labelname>	[L / H]	
	С	<labelname>.C</labelname>			
LTIMER	S	<labelname>.S</labelname>		-	*7
	Ν	-	<labelname>.N</labelname>		
	С	<labelname>.C</labelname>			
TIMER	S	<labelname>.S</labelname>		-	*7
	Ν	-	<labelname>.N</labelname>		
	С	<labelname>.C</labelname>			
LCOUNTER	S	<labelname>.S</labelname>		-	*7
	Ν	-	<labelname>.N</labelname>		

*1 <LABELNAME>: For structures, the LABELNAME will include the structure name. The maximum number of characters for the LABELNAME is 255, which includes the delimiter and address. Example)

1 /	
BOOL type single Label:	"BOOLVAR"
BOOL array element:	"BOOLARRAY[0012]"
INT type single Label:	"INTVAR"
DINT type bit address:	"DINTVAR.30"
REAL type 3D array:	"REALARRAY[1,2,3]"
INT member of a structure ("TIMER"):	"TIMERVAR.N"
STRING type variable:	"MYSTRINGVAR"

The following input rules apply to LABELNAME and member names.

- Maximum of 255 single-byte characters.
- You can use alphanumeric characters (uppercase, lowercase), underscore, and double-byte characters (such as kanji).
- The first character cannot be a number.
- You cannot start names with any of the following text: LS, USR, SCR, PRT
- You cannot use ! " # \$ % ' * & +, . / : ; <=> ? @ [\] ^ ` { | } ~ and spaces.
- You cannot use data type keywords. ("WORD", "BOOL", "ARRAY", and so on)
- Label names are case-insensitive.
- You cannot use names reserved by IEC instructions. (*)
- You cannot use device names defined in MELSEC. (*)
- You cannot use function blocks or function names defined by the manufacturer or MELSEC instruction names. (*)
- * GP-Pro EX error check cannot identify these names. If you use these names, a communication error will occur. Please refer to the External Device manual for names that are used.

- *2 The number of elements in each dimension is displayed as 1 (minimum number of elements) to h (maximum number of elements).
- *3 Array element numbers defined on a label start from 0. You can calculate the size of the array with the number of elements in each dimension. Example)
 Word array "Array [0 ...15, 0 ...14, 0 ...13]", evaluates to array size of 3360 (= 16 × 15 × 14). The maximum size of each device is as follows.
 BOOL, INT, WORD, TIMER, COUNTER, RETENTIVETIMER: 2147483648
 DINT, DWORD, LTIMER, LCOUNTER, LRETENTIVETIMER, TIME: 1073741824
 - STRING: 2147483648 ÷ size of STRING device
- *4 The system data area is initially set up with 16 words of items. If you set up less than 16 words of items, after allocating a 16 word or larger array of tags in the system data area, select only the necessary items.
- *5 The STRING label defines the maximum number of characters (up to 255) in the data type settings.
- *6 C (coil) and S (contact) are BOOL type devices. N (current value) is a WORD type device.
- *7 C (coil) and S (contact) are BOOL type devices. N (current value) is a DWORD type device.

• When using the tag, it is necessary to import the label data (symbol address). Please refer to the GP-Pro EX Reference Manual for import procedure.

- Cf. GP-Pro EX Reference Manual "Using Device/PLC Tags"
- If the CPU is R00CPU/R01CPU/R02CPU, you cannot import label data (symbol address).
- The tag import feature is supported in GP-Pro EX V3.01.000 or later (or in the case of GP-4*01TM, V3.10.000 or later).

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)"
- Refer to the precautions on manual notation for icons in the table.
 - "Manual Symbols and Terminology"

Importing Label Data

- 1 In GP-Pro EX, open the [Individual Device Settings] dialog box, and from the [Series] drop-down list, select "iQ-R".
- 2 From the [Labels] tab, select the [Use Label Data] check box.

Individual Device Settings
PLC1
Remote Password Labels
Label Data
☑ Use Label Data
~
New Edit
If you change the "Use Label Data" setting, please reconfirm all address settings.
Default
OK (O) Cancel

3 Click [New] to open the [Label List] window.

Label Data type			
Name	Data type	Comment	

4 Click [Import].

Label Impo	rt			-	
Select File					Browse
Label Data	type				
Name		Data type	Comment		
		[[Calaat Unaalaat Calaat All	
🗸 Log File	C:¥Users¥user¥[Documents¥20210922-162917.html		Browse Filter	Clear Filter
				ОК	Cancel

5 From the [Select File] field, click [Browse..], and then select the CSV file.

L	abel Iı	mport			
S	elect Fil	le C:¥Users¥user¥De	sktop¥Label Data¥sample.csv		Browse
Γ	Label	Data type			
	Name		Data type	Comment	
		BOOL_1D_Min	BOOL[01151]		
		BOOL_single	BOOL		
		COUNTER_2D_Min	COUNTER[015,015,015]		
		COUNTER_single	COUNTER		
		DINT_3D_Min	DINT[015,015,015]		
		DINT_single	DINT		
		DWORD_1D_Min	DWORD[0499]		
		DWORD_single	DWORD		
		INT_2D_Min	INT[031,031]		
		INT_single	INT		
		LCOUNTER_2D_Min	LCOUNTER[015,015,015]		
		LCOUNTER_single	LCOUNTER		
		LTIMER_3D_Min	LTIMER[015,015,015]		
	M	LTIMER sinale	LTIMER		
	<u> </u>				
-	Log Fi	ile C¥Users¥user¥[Documents¥20150716-113848.html	Select Unselect Select All U Browse Filter Circ OK Ca	nselect All ar Filter

IMPORTANT •

- Generate the label data using the programming software (MELSOFT GX Works 3). Labels you can import into GP-Pro EX include "Global Label File", "User Defined Data Structure File" and "Module-Defined Data Strucuture File".
 - Place in the same folder, the label data you want to import. In GP-Pro EX, when you select [Global Label File] as the label data to import, imported data includes "User Defined Data Structure File" and "Module-Defined Data File" in the same folder.

6 Check the labels to import, and click [OK].

Label List					_ 🗆 ×
Label Data Name LabelData01					
Laber Data Name [LaberData01					
Data type <al></al>			▼ Usage <all></all>	•	Update
Label Data type					
	1-	1-			1
Name	Data type	Comment			≜
BOOL_1D_Min	BOOL[01151]				
BOOL_single	BOOL				
COUNTER_2D_Min	COUNTER[015,015,015]				
COUNTER_single	COUNTER DINTER 15.0.15.0.151				
DINT_3D_Min	DINT[U 15,U 15,U 15]				
DINI_single	DINT DWODDIA 4001				
DWORD_ID_Min	DWORD[0499]				
DWORD_single	DWORD				
INT_2D_Min	INT[U31,U31]				
LCOUNTER_2D_Min	LCOUNTER[015,015,015]				
	LCOUNTER				
LTIMER_3D_Min	LTIMER[U 15,U 15,U 15]				
	LIMER				
Import Export	Expand All Collap	se All	Add	Edit	Delete
				OK	Cancel
			_		//

5.4 MELSEC iQ-F Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bits	Remarks
Input Relay	X0000 - X1777	X0000 - X1760		ост 8] *1
Output Relay	Y0000 - Y1777	Y0000 - Y1760		ост 8] *1
Internal Relay	M00000 - M32767	M00000 - M32752		÷ 16)
Special Relay	SM0000 - SM9999	SM0000 - SM9984		÷ 16)
Latch Relay	L00000 - L32767	L000000 - L32752		÷ 16)
Annunciator	F00000 - F32767	F00000 - F32752		÷ 16)
Step Relay	S0000 - S4095	S0000 - S4080		
Link Relay	B0000 - B7FFF	B0000 - B7FF0		***
Special Link Relay	SB0000 - SB7FFF	SB0000 - SB7FF0		***
Timer (Contact)	TS0000 - TS1023	-		
Timer (Coil)	TC0000 - TC1023	-		
Retentive Timer (Contact)	SS0000 - SS1023	-		
Retentive Timer (Coil)	SC0000 - SC1023	-		
Counter (Contact)	CS0000 - CS1023	-		
Counter (Coil)	CC0000 - CC1023	-		
Long Counter (Contact)	L_CS0000 - L_CS1023	-		
Long Counter (Coil)	L_CC0000 - L_CC1023	-		
Timer (Current Value)	-	TN0000 - TN1023		
Retentive Timer (Current value)	-	SN0000 - SN1023		
Counter (Current Value)	-	CN0000 - CN1023		
Long Counter (Current Value)	-	L_CN0000 - L_CN1023		
Data Register	-	D0000 - D7999		Bit F] *2
Special Register	-	SD00000 - SD11999	-	Bit F] *2
Link Register	-	W0000 - W7FFF		Bit F] *2
Special Link Register	-	SW0000 - SW7FFF	1	_{віт} F) *2
Module Access Device	-	U000-G00000 - U1FF-G65535		<u>■ i t</u> F] *2 *3
File Register	-	R00000 - R32767		_{віт} F) ^{*2}

*1 Define the word address in increments of 20 (octal). Example: X0000, X0020, X0040...X1760

*2 The access method when specifying bits is different depending on the setting of "Other bits in this word" in "Individual Device Settings".

[Clear]....F]

[Do not clear] 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 ladder program while the Display is reading data from, and writing data to, the External Device.

*3 Device for accessing SLMP compatible devices, as well as the intelligent function unit's buffer memory. The first three digits of the address specifies the intelligent module's starting I/O number.



• 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)"

• 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.

NOTE

• When using the label, the device code and address code can not be used.

6.1 MELSEC iQ-R Series

Device	Device Name	Device Code	Address Code
Device	Device Name	(HEX)	
	Х	0x0080	
	1/X	0x0180	
Input Relay	2/X	0x0280	Word Address $\div 0x10$
	3/X	0x0380	
	4/X	0x0480	
	Y	0x0081	
	1/Y	0x0181	
Output Relay	2/Y	0x0281	Word Address $\div 0x10$
	3/Y	0x0381	
	4/Y	0x0481	
	М	0x0082	
	1/M	0x0182	1
Internal Relay	2/M	0x0282	Word Address ÷16
	3/M	0x0382	
	4/M	0x0482	
	SM	0x0083	
	1/SM	0x0183	
Special Relay	2/SM	0x0283	Word Address ÷16
	3/SM	0x0383	1
	4/SM	0x0483	
	L	0x0084	
	1/L	0x0184	1
Latch Relay	2/L	0x0284	Word Address ÷16
	3/L	0x0384	1
	4/L	0x0484	1
	F	0x0085	
	1/F	0x0185	1
Annunciator	2/F	0x0285	Word Address ÷ 16
	3/F	0x0385	1
	4/F	0x0485	+

Device	Device Name	Device Code (HEX)	Address Code
	V	0x0086	
	1/V	0x0186	+
Edge Relay	2/V	0x0286	Word Address ÷ 16
	3/V	0x0386	+
	4/V	0x0486	-
	В	0x0088	
	1/B	0x0188	1
Link Relay	2/B	0x0288	Word Address ÷ 0x10
	3/B	0x0388	1
	4/B	0x0488	
	SB	0x0089	
	1/SB	0x0189	
Special Link Relay	2/SB	0x0289	Word Address ÷0x10
	3/SB	0x0389	
	4/SB	0x0489	
	TN	0x0060	
	1/TN	0x0160	
Timer (Current Value)	2/TN	0x0260	Word Address
	3/TN	0x0360	
	4/TN	0x0460	
	SN	0x0062	
Detentive Timer	1/SN	0x0162	
(Current Value)	2/SN	0x0262	Word Address
(,	3/SN	0x0362	
	4/SN	0x0462	
	L_TN	0x0063	
	1/L_TN	0x0163	
Long Timer (Current Value)	2/L_TN	0x0263	Word Address
	3/L_TN	0x0363	
	4/L_TN	0x0463	
	L_SN	0x0064	
Long Retentive Timer	1/L_SN	0x0164	
(Current Value)	2/L_SN	0x0264	Word Address
	3/L_SN	0x0364	
	4/L_SN	0x0464	
	CN	0x0061	
	1/CN	0x0161	1
Counter (Current Value)	2/CN	0x0261	Word Address
	3/CN	0x0361	1
	4/CN	0x0461	

Device	Device Name	Device Code (HEX)	Address Code
Long Counter (Current Value)	L_CN	0x0065	
	1/L_CN	0x0165	
	2/L_CN	0x0265	Word Address
	3/L_CN	0x0365	
	4/L_CN	0x0465	
	D	0x0000	
	1/D	0x0100	
Data Register	2/D	0x0200	Word Address
	3/D	0x0300	
	4/D	0x0400	
	SD	0x0001	
	1/SD	0x0101	*
Special Register	2/SD	0x0201	Word Address
	3/SD	0x0301	1
	4/SD	0x0401	
	W	0x0002	
	1/W	0x0102	*
Link Register	2/W	0x0202	Word Address
	3/W	0x0302	
	4/W	0x0402	
	SW	0x0003	Word Address
	1/SW	0x0103	
Special Link Register	2/SW	0x0203	
	3/SW	0x0303	
	4/SW	0x0403	
Link Input	Jn-X	0x0170 - 0xFF70	Word Address $\div 0 \times 10^{*1}$
Link Output	Jn-Y	0x0171 - 0xFF71	Word Address $\div 0 \times 10^{*1}$
Link Relay	Jn-B	0x0172 - 0xFF72	Word Address $\div 0 \times 10^{*1}$
Link Special Relay	Jn-SB	0x0173 - 0xFF73	Word Address $\div 0 \times 10^{*1}$
Link Register	Jn-W	0x0174 - 0xFF74	Word Address ^{*1}
Link Special Register	Jn-SW	0x0175 - 0xFF75	Word Address ^{*1}
Module Access Device	U000-G - U1FF-G	0x0076 - 0x1F76	Word Address ^{*2}
CPU Buffer Memory Access	U3En-G	0x3E76	Word Address
CPU Buffer Memory (Periodic)	U3En-HG	0x3E78	Word Address
File Register (Normal)	R	0x000F	
	1/R	0x010F	Word Address
	2/R	0x020F	
	3/R	0x030F	
	4/R	0x040F	

Device	Device Name	Device Code (HEX)	Address Code
File Register (Block switching is not necessary)	ZR	0x000E	
	1/ZR	0x010E	
	2/ZR	0x020E	Word Address
	3/ZR	0x030E	
	4/ZR	0x040E	
	0R	0x0010	Word Address
	1/0R	0x0110	
	2/0R	0x0210	
	3/0R	0x0310	
	4/0R	0x0410	
	1R	0x0011	
	1/1R	0x0111	
	2/1R	0x0211	Word Address
	3/1R	0x0311	1
	4/1R	0x0411	1
	2R	0x0012	
	1/2R	0x0112	Word Address
	2/2R	0x0212	
	3/2R	0x0312	
	4/2R	0x0412	
File Register	•	:	
	29R	0x002D	
	1/29R	0x012D	1
	2/29R	0x022D	Word Address
	3/29R	0x032D	
	4/29R	0x042D	
	30R	0x002E	
	1/30R	0x012E	
	2/30R	0x022E	Word Address
	3/30R	0x032E	
	4/30R	0x042E	
	31R	0x002F	
	1/31R	0x012F	Word Address
	2/31R	0x022F	
	3/31R	0x032F	
	4/31R	0x042F	

*1 Network number is defined in the device code's high byte.

*2 Specify the Device Name with the Device Code (HEX) and the value in bits 28 to 31 for the address number. For example, for **U1FF-G**, the device code is "0x1F76", and bits 28 to 31 in the address part is set to "F".

6.2 MELSEC iQ-F Series

Device	Device Name	Device Code (HEX)	Address Code
Input Relay	X	0x0080	Word Address ÷ 20 (octal)
Output Relay	Y	0x0081	Word Address ÷ 20 (octal)
Internal Relay	М	0x0082	Word Address ÷16
Special Relay	SM	0x0083	Word Address ÷16
Latch Relay	L	0x0084	Word Address ÷16
Annunciator	F	0x0085	Word Address ÷16
Step Relay	S	0x0087	Word Address ÷ 16
Link Relay	В	0x0088	Word Address ÷ 0x10
Special Link Relay	SB	0x0089	Word Address ÷0x10
Timer (Current Value)	TN	0x0060	Word Address
Retentive Timer (Current Value)	SN	0x0062	Word Address
Counter (Current Value)	CN	0x0061	Word Address
Long Counter (Current Value)	L_CN	0x0065	Word Address
Data Register	D	0x0000	Word Address
Special Register	SD	0x0001	Word Address
Link Register	W	0x0002	Word Address
Special Link Register	SW	0x0003	Word Address
Module Access Device	U000-G - U1FF-G	0x0076 - 0x1F76	Word Address ^{*1}
File Register	R	0x000F	Word Address

*1 Specify the Device Name with the Device Code (HEX) and the value in bits 28 to 31 for the address number. For example, for U1FF-G, the device code is "0x1F76", and bits 28 to 31 in the address part is set to "F".

7 Error Messages

Error messages are displayed on the Display screen as follows: "No.: Device Name: Error Message (Error Occurrence Area)". Each description is shown below.

Item	Description	
No.	Error No.	
Device Name	Name of the External Device where error occurs. Device name is a title of the 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 the External Device where error occurs, or error codes received from the External Device.	
	 NOTE IP address is displayed such as "IP address(Decimal): MAC address(Hex)". Device address is diplayed 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])"

Refer to your External Device manual for details on received error codes.
Refer to "Display-related errors" in "Maintenance/Troubleshooting Guide" for details on the error messages common to the driver.

■Error Messages Unique to External Device

Message ID	Error Message	Description
RHxx133	(Node Name): The specified password is incorrect (Error Code:[(Hex)]).	Unable to unlock because the password is incorrect.
RHxx134	(Node Name): Remote Password: Illegal Format.	Invalid password format.
• If an error related to Remote Password occurs, communication stops, regardless of the Retry setting. Reset the Remote Password in either GP-Pro EX or the offline screen.		