# MITSUBISHI Electric Corporation MELSEC FX Series Ethernet Driver

# **MC Protocol 1E**

V1.3.0 or higher

Supported version TOP Design Studio



### CONTENTS

We would like to thank our customers for using M2I's "Touch Operation Panel (M2I TOP) Series". Read this manual and familiarize yourself with the connection method and procedures of the "TOP and external device".

#### **1.** System configuration

#### Page 2

Describes the devices required for connection, the setting of each device, cables, and configurable systems.

#### 2. External device selection Page 3

Select a TOP model and an external device.

#### **3.** TOP communication setting Page 4

Describes how to set the TOP communication.

#### 4. External device setting Page 10

Describes how to set up communication for external devices.

# 5. Supported addresses Page 15

Refer to this section to check the addresses which can communicate with an external device.



# 1. System configuration

The system configuration of TOP and "MITSUBISHI Electric Corporation - MELSEC FX Series Ethernet (MC Protocol 1E)" is as follows:

Series	CPU	Link I/F	Communication method	Communication setting	Cable
MELSEC-F	FX3U FX3UC	FX3U-ENET-L	Ethernet (TCP/UDP)	3. TOP communication setting 4. External device setting	Twisted pair cable*Note 1)

\*Note 1) Twisted pair cable

- Refer to STP (Shielded Twisted Pair Cable) or UTP (Unshielded Twisted Pair Cable) Category 3, 4, 5.

- Depending on the network configuration, you can connect to components such as the hub and transceiver, and in this case, use a direct cable.

#### ■ Connectable configuration

 $\boldsymbol{\cdot}$  1:1 connection (one TOP and one external device) connection



• 1:N (one TOP and multiple external devices) connection





## 2. External device selection

■ Select a TOP model and a port, and then select an external device.

Select Device					×
PLC select [Ethernet]					
Filter : [All]		$\sim$	Search :		
6 mg				Model	Vendor
Vendor	Model				
M2I Corporation	8	MELSEC Q Series			
MITSUBISHI Electric Corporation	8	MELSEC FX Series			
OMRON Industrial Automation		MELSEC AnN/AnS Series			
LS Industrial Systems					
MODBUS Organization		MELSEC AnA/AnU Series			
SIEMENS AG.		MELSEC iQ-R Series			
Rockwell Automation	<b>\$</b>	MELSEC iQ-F Series			
GE Fanuc Automation					
PANASONIC Electric Works					
YASKAWA Electric Corporation					
VOKOCAWA Electric Corporation					
Charaides Electric Corporation					
Schneider Electric Industries					
KDT Systems					
RS Automation					
		Back	- • I	Vext	X Cancel
Calact Davica					_
					×
PLC Setting[ MELSEC FX Series	J	Rind TD + Auto			
Interface : Ethernet		V V V AUTO	v		
Protocol : MC Protocol 1E	Binary	~		Com	m Manual
String Save Mode : First LH HL	Char	nge			
Operate Condition : AND ~					
Change Condition : 🗏 TimeOut	5	(Second)			
Condition				Ed	lit
Primary Option					
IP 102 M	58 🌲	0 🔹 1 🖨			
- 192					
Ethernet Protocol					
Ethernet Protocol TCP V Port 1025					
Ethernet Protocol TCP V Port 1025	msec				
- 192 ♥ 14 Ethernet Protocol TCP ∨ Port 1025 ♥ Timeout 1000 ♥ Send Wait 0 ♥	msec				
- 192 ♥ 14 Ethernet Protocol TCP ∨ Port 1025 ♥ Timeout 1000 ♥ Send Wait 0 ♥ HMI Port 1027 ♥	msec msec				
	msec msec				
Instrument         Instru<	msec msec				
Image: second	msec msec				

Settings		Contents			
ТОР	Model	Check the display and process of TOP to select the touch model.			
External device	Vendor	Select the vendor of the externa Please select "MITSUBISHI Electi	ease select "MITSUBISHI Electric Corporation".		
	Model	Select external device.			
		Model	Interface		Protocol
		MELSEC FX Series	Ethernet		Set Users
		Supported Protocol			
		MC Protocol 1E Binary		MC Protocol 1E AS	SCII
		Please check the system config connect is a model whose syste	juration in C m can be co	hapter 1 to see if t nfigured.	he external device you want to



# 3. TOP communication setting

The communication can be set in TOP Design Studio or TOP main menu. The communication should be set in the same way as that of the external device.

#### 3.1 Communication setting in TOP Design Studio

#### (1) Communication interface setting

- [ Project > Project Property > TOP Setting ] → [ Project Options > "Use HMI Setup" Check > Edit > Ethernet ]
  - Set the TOP communication interface in TOP Design Studio.



Items	ТОР	External device	Remarks
IP Address	192.168.0.100	192.168.0.50	*Note *Note 2)
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

\* The above settings are examples recommended by the company.

\*Note 1) The network addresses of the TOP and the external device (the first three digits of the IP, <u>192</u>. <u>168</u>. <u>0</u>. 0) should match.

\*Note 2) Do not use duplicate IP addresses over the same network.

Items	Description
IP Address	Set the IP address of the TOP.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.



#### (2) Communication option setting

- [ Project > Project Property > PLC Settings > ETHERNET > "PLC1 : MELSEC-FX Series"]
  - Set the options of the MELSEC FX Series Ethernet (MC Protocol 1E) communication driver in TOP Design Studio.

Project Option		×
Change HMI[ <u>H</u> ] Kadd PL	A Change PLC[C] Notes PLC[D]	
Change HMI[H] Change HMI[H] TOP Setting SYS : RD 1520X Option Module Setting FieldBus (0) RFID (0) COM2 (0) COM3 (0) Fibernet (1) Fibernet (1) Wireless (0) USBDevice (0)	Image Change PLCIC       Image PLCIC       Delete PLCID         PLC Setting[ MELSEC FX Series ]       Alias Name :       PLC1       Bind JP         Interface :       Ethernet       ✓       Protocol :       MC Protocol 1E Binary       ✓         Protocol :       MC Protocol 1E Binary       ✓       Operate Condition :       Image PLCIC       Image PLCIC       Image PLCIC       Bind JP         Iverate Condition :       MC Protocol 1E Binary       ✓       ✓       Operate Condition :       Image PLCIC       Image PL	P : Auto
		Anth
		Apply Close

Items	Settings	Remarks
Interface	Select "Ethernet". Refer to "2. Externa	
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Select the Ethernet protocol between the TOP and an external device.	
Port	Enter the Ethernet communication port number of an external device.	
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	
HMI Port	Enter the Ethernet communication port number of the TOP.	
PC No	Enter the prefix of PLC.	*Note 1)

\*Note 1) The PLC number identifies which PLC to connect to on the CC-Link IE controller network, CC-Link IE field network, and MELSECNET/H, MELSECNET/10 network. The initial value is 255 (dec) and is 255 or in the range of 0 to 64 when configuring a multi-CPU.



#### 3.2. Communication setting in TOP

\* This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.

■ Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.



#### (1) Communication interface setting

■ [ Main Screen > Control Panel > Ethernet ]



Items	ТОР	External device	Remarks
IP Address	192.168.0.100	192.168.0.50	*Note *Note 2)
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

 $^{\ast}$  The above settings are  $\underline{\text{examples}}$  recommended by the company.

\*Note 1) The network addresses of the TOP and the external device (the first three digits of the IP, <u>192</u>. <u>168</u>. <u>0</u>. 0) should match.

\*Note 2) Do not use duplicate IP addresses over the same network.

Items	Description
IP Address	Set the IP address of the TOP.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.



#### (2) Communication option setting

■ [ Main Screen > Control Panel > PLC ]

	Ö	<b></b>	PLC		
Bun	🔯 System	Driver(ETH)	PLC1(MELSEC FX Series) -		
		Interface	Ethernet 💌		
		Protocol	MC Protocol 1E Bine -		
	PLC	Bind IP	Auto		
YNC		IP	192 🗣 168 🜩 0 🌩 50 🜩		
Yiewer	l Gai I	Ethernet	TCP -		
	Ethernet	Port	5000		
		Timeout	1000 🖨 msec		
Screen	word	Send Wait	0 🖨 msec		
shot	Inili	HMI Port	1025		
	Diagnostic	Pc No	255		
	[System]	Diagnostic	Ping Test	Apply Cancel	

Items	Settings	Remarks
Interface	Select "Ethernet". Refer to "2. Externa	
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Select the Ethernet protocol between the TOP and an external device.	
Port	Enter the Ethernet communication port number of an external device.	
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	
HMI Port	Enter the Ethernet communication port number of the TOP.	
PC No	Enter the prefix of PLC.	*Note 1)

\*Note 1) The PLC number identifies which PLC to connect to on the CC-Link IE controller network, CC-Link IE field network, and MELSECNET/H, MELSECNET/10 network. The initial value is 255 (dec) and is 255 or in the range of 0 to 64 when configuring a multi-CPU.



#### **3.3 Communication diagnostics**

■ Check the interface setting status between the TOP and an external device.

- Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.
- Check if the port (ETH1/ETH2) settings you want to use in [Control Panel > Ethernet] are the same as those of the external device.
- Diagnosis of whether the port communication is normal or not
- Touch "Communication diagnostics" in [Control Panel > PLC ].
- The Diagnostics dialog box pops up on the screen and determines the diagnostic status.

ОК	Communication setting normal
Time Out Error	Communication setting abnormal
	- Check the cable, TOP, and external device setting status. (Reference: Communication diagnostics sheet)

#### Communication diagnostics sheet

- If there is a problem with the communication connection with an external terminal, please check the settings in the sheet below.

Items	Conte	ents	Ch	eck	Remarks			
System	How to connect the sys	stem	OK	NG	1 Custom configuration			
configuration	Connection cable name	2	OK	NG	1. System configuration			
ТОР	Version information		OK	NG				
	Port in use		OK	NG				
	Driver name		OK	NG				
	Other detailed settings		OK	NG				
	Relative prefix	Project setting	OK	NG	2. External device selection			
		Communication diagnostics	ОК	NG	3. Communication setting			
	Ethernet port setting	IP Address	OK	NG				
		Subnet Mask	OK	NG				
		Gateway	OK	NG				
External device	CPU name		OK	NG				
	Communication port na	Communication port name (module name)						
	Protocol (mode)	OK	NG					
	Setup Prefix		OK	NG	4 External device setting			
	Other detailed settings		OK	NG	4. External device setting			
	Ethernet port setting	IP Address	OK	NG				
		Subnet Mask	OK	NG				
		Gateway	OK	NG				
	Check address range		ОК	NG	<u>5. Supported addresses</u> (For details, please refer to the PLC vendor's manual.)			



# 4. External device setting

For a more detailed setting method than described in this example, refer to the corresponding vendor's user manual for the external device.

#### (1) Setting in GX Developer

% FX3U-ENET-L Configuration Tool must be installed.

#### **Step 1.** [Tools] $\rightarrow$ [FX special function utility] $\rightarrow$ [FX3U-ENET-L Congifuration Tool]

BALSOFT series GX Developer (Unset project) -	(LD(Edit mode) MAIN	1 Step]						Be marrie	- 0	×
Project Edit Find/Replace Convert View	Online Diagnostics	ools Window	Help						-	. 5 ×
		Check program	m ect memory size							
Program		Merge data								
F5 sF5 F6 F7 F6 F9 sF9 dF9 dF0	HIF HE HIP HE HP sF7 sF8 aF7 aF8 saF5	Check parame	eter							
	🔕 II PP	Delete unused	d comments	'L						
	* <u></u> + <u></u> -	Clear all parar	neters	aF	aFI0 cF9					
X		IC memory ca	rd	•				<b>F</b> =	_	Â.
Unset project)	0	Start ladder lo	ogic test					Геир	4	
Bevice comment		Set TEL data								
Device memory		Start LCPU Lo	gging Configuration Tool							
		Intelligent fun	ction utility							
		Customize ke	ys							
		Options	iy color							
		Create start-u	p setting file							
		FX special fun	ction utility	•	FX Configurator-EN					
					FX3U-ENET-L Config	guration Tool				
							_			
Project										-
Ready				FX3U(C	C) Host station	۱		Ovrwrte	NUM	
ſ	EX3U-ENET-L	Configuratio	n Tool (Unset file)	- IEthern	et settings]		• ×			
	File Minus He	- Conniguration	in roor (onset me)	Ternem	er settingsj					
		ip a								
		9								
		Ethernet M	odule settings			1				
			Module None	• •	<b>•</b>					
			Operational set	tings						
			Initial setting	js						
			Open setting	IS						
			Router relay para	meter						
			E-mail setting	gs						
		-				1				
					Default					
	Necessary se	etting( No set	tting / Already se	t )	Derault					
	Set if it is nee	ded( No set	tting / Already se	t )	Check					
	Online									
			1			1				
	Transfe	er setup	PLC remote ope	eration	Diagn	ostics				
			1							
	W	ite	Read		Ver	rify				
					-					
	Ready						FX3I			



#### Step 2. [Operational settings]

TX50-LIVET-L Configurati	ion Tool (Unset file) - [Ethernet	settings] 📃 🗆 🗙
<u>F</u> ile <u>V</u> iew <u>H</u> elp		
D 🛎 🖬 🎒		
– Ethernet I	Module settings	
	Module None	-
	Operational settings	_
	Open settings	
	Router relay parameter	
	E-mail settings	
Necessary setting( No so Set if it is needed( No so	etting / Already set ) etting / Already set )	Default Check
Transfer setup	PLC remote operation	Diagnostics
Write	Read	Verify
eady FX3U-ENET-L Configuratio Eile <u>V</u> iew <u>H</u> elp	n Tool (Unset file) - [Ethernet ope	FX3I
D 📽 🖬 🚳		
Communication data code	- Initial timing	
Binary code	Do not wait for OPEN ( Commun	nications
C ASCII code	Always wait for OPEN ( Commu possible at STOP time )	unication
- IP address		Send frame setting
Input format DEC.		Ethernet(V2.0)
IP address 192	168 0 50	C IEEE802.3
IP address 192	TCP Existence	C IEEE802.3 e confirmation setting
IP address 192	TCP Existence C Use the K	C IEEE802.3 e confirmation setting
IP address 192	168         0         50           TCP Existence         C         Use the K           © Use the P         Use the P	C IEEE802.3 e confirmation setting
IP address 192	168     0     50       TCP Existence       C Use the K       Image: C Use the P       End       Cancel	C IEEE802.3 e confirmation setting

Items	Contents	Set Value	Remarks
Communication	Calact protocol data tura	Binany code	Select the same protocol
data code	select protocol data type.	Binary code	item at TOP.
	Cat time when communication is	Always wait for OPEN	
Initial timing	set time when communication is	(Communications possible at	Necessary setting
		STOP time)	
IP Address	Set PLC IP address.	192.168.0.50	
Send frame settings	Set frame type.	Ethernet(V2.0)	Necessary setting
TCP Existence	Set how TCP protocol communication	Lico the Ding	
confirmation setting	checks connections with other devices.	Ose the Ping	



#### Step 3. [Open settings]

FX3U-ENET-L Configuratio	n Tool (Unset file) - [Ethern	et settings]					
Ethernet Module settings							
	Module None	-					
	Operational settings						
	Initial settings						
	Open settings						
	Router relay parameter						
	E-mail settings						
Necessary setting( No set Set if it is needed( No set Online	ting / Alreadyset ) ting / Alreadyset )	Default Check					
Transfer setup	PLC remote operation	Diagnostics					
Write Read Verify							
Ready		FX31					

#### ① Set as TCP

1	I F	X3U-	-ENET-L C	onfiguration Tool (Uns	et file) - [Ethe	rnet open settings]	-	a des des d		Readered .		X
	File View Help PLC											
H					Port							
			Protocol	Open system	Fixed buffer	Fixed buffer communication procedure	Pairing open	Existence confirmation	Host station Port No. (DEC.)	Transmission target device IP address	Transmission target device Port No. (DEC.)	
		1	•		· •	-	-	-				
		2	•		· •	-						
		3	тср 👻	Unpassive(MC)	· •	-	-	No confirm 👻	5000			
		4	•		· ·	-	-	•				
						End	Cance	H				
F	lead	ly								FX3U-ENET	-L NUM	

#### ② Set as UDP

]	FX3U-ENET-L Configuration Tool (Unset file) - [Ethernet open settings]														
E	ile View Help PLC TOP TOP														
										Port	IP Address	Port			
Protocol Open system Fixed buffer Fixed buffer Open communication procedure Open confirmation								Host station Port No. (DEC.)	Transmission target device IP address	Transmission target device Port No. (DEC.)					
	1		-		·	•		٠	-		•				
	2		-		·	-		•	-		-				
	3	UDP	-	MC Protocol	·	-		•	-	No confirm	-	5000	192.168. 0.100	1025	
	4		•	-	·	•		•	•		•				
	End Cancel														
Re	eady												FX3U-ENET	-L NUM	11



#### (2) Set in GX Works2

**Step 1.** [Parameter]  $\rightarrow$  [PLC Parameter]  $\rightarrow$  [Ethernet Port]

	MEISOET Sarias GV Works2 () Intilled Brolett) _ IDBGIWrite MAIN 1 Step1	
Image: Device Low Links Section       Device Low Links Section       Device Low Links Section       Device Links Sec	a miceo ri seles ok trokse (oninee riget) - gringimte mont i stepj Depet filt Endingeses Comelle Comelle Delve Diseaster Teel Minden, Liele	
Image: Construction Description       FX Datameter       Image: Construction Description         Project       Project       Channel       Project         Image: Construction Descination       Project       Optional Settings       Optional Settings         Image: Construction Descination       Subset Value Pacework       Optional Settings       Optional Settings         Image: Construction Descination       Optional Settings       Optional Settings       Optional Settings         Image: Construction Descination       Image: Construction Descination       Optional Settings       Optional Settings         Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Optional Settings       Optional Settings         Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Image: Construction Descination         Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Image: Construction Descination         Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Image: Construction Descination         Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Image: Construction Descination       Image: Constr	; Kolet for Euclykeise Coulie Alex Coulie Alexandra (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (19 ; Kolet for Euclykeise Coulie Alexandra (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1	- ~ ^
Image: Social Device Comment         Image: Social Device Comment         Image: Social Device Comment         Image: Social Device Comment         Image: Device Water         Image: Device Comment	· L 플레이에 · · · · · · · · · · · · · · · · · · ·	
INArguoto       FX Parameter         Fright       FX         Project       PLC System(1)         PLC System(2)       Special Function Block       Postoning         Ethernet Port       FX         PLC System(2)       Special Function Block       Postoning         Ethernet Port       FX         PLC System(2)       Special Function Block       Postoning         Ethernet Port       FX         PLC System(2)       Special Function Block       Postoning         Ethernet Port       FX         Optional Setting       Device Comment         Device Comment       FX         Device Comment       Default Router IP Address         Device Memory       Subnet Mask Pattern       2255         Device Ibrary       Default Router IP Address       192         Communication Data Code       Finary Code       Optional Setting (Default / Changed )         Uset Ibrary       Disable direct connection to MELSOFT       Default       Check       End         Vatch 1       Do not respond to search for CPU on network       Default       Check       End       Cancel	的。 如此是一些一些是一些一个,我们能能能能能能能能能能。 如果是一些人们是一些人们是一个人们的是一个人们的,我们就能能能能能能能。	aF5 ⊊
Project       Performance       PLC System(1)       PLC System(2)       Special Function Block       Postborng       Ethemet Port         Project       Program       Imput Format       DEC       Imput Format       DEG       Imput Format	Navigation FX Parameter	
Image: Specie Pick Value       Pick System(1)       Pick System(2)       Specie Pick Value       Pick System(2)       Pick Sy	Project	n 🏛
PLC Parameter         PLC Clark         Special ModuleIntelligent Funct         Image: Channel         PL Address Setting         Image: Channel         PL Parameter         Image: Channel         Program         Image: Channel         Program         Image: Channel         Program         Image: Channel         Parameter         Image: Channel         Program         Image: Channel         Image: Channel         Image: Channel         Image: Channel         Image: Channel         Image: Channel <td>The state of the s</td> <td></td>	The state of the s	
Image: Vector Variander         Image: Vector	PLC Parameter	
Special ModuledIntelligent Function   Program	- Us Network Paraméter	
Watch 1           Print Window           Print Window Preview           Default         Check         End         Concell         Concell         Concert Value         Deta         Concert Value         Deta         Concert         Value         Concert	Social Module(Intelligent Fund	
Program Setting     Program     Print Window     Preview     Default     Print Window     Preview     Default     Print Window     Preview     Default     Print Window     Preview     Default     Print     P	Global Device Comment	
Input Format     Default Router IP Address     132     133     133     133     133     133     133     133     133     133     133     133     133     133     133     133     133     133     133     133     134     135        135	a sa program Setting Open Setting Open Setting	
IP Address       132       168       0       50         Device Memory       Subnet Mask Pattern       255       255       0         Default Router IP Address       132       168       0       1         Image: Project       Optional Setting       Optional Settings ( Default / Changed )       Optional Settings ( Default / Changed )         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project       Image: Project         Image: Project       Image: Project       Image: Project       Image: Project       Image: Project       Image: Project       Image: Projec	Program Input Format DEC	
Default Router IP Address 132 168 0 50   Log Record Setting   Subnet Mask Pattern 255 255 0   Default Router IP Address 132 168 0 1   Optional Settings ( Default / Changed )    Communication Data Code    Watch 1   Disable direct connection to MELSOFT   Disable direct connection to MELSOFT   Do not respond to search for CPU on network    Print Window, Print Window Preview Default Check End Cancel	MAIN Time Setting	
Subnet Mask Pattern       255       255       0         Default Router IP Address       192       168       0       1         Optional Settings ( Default / Changed )       0       0       0         Image: Project       Image: Project Project       Image: Project Projec	Log Device Comment IP Address 192 168 0 50	
Subnet Mask Pattern       255       255       0         Default Router IP Address       132       168       0       1         Optional Settings ( Default / Changed )       Communication Data Code       •       •         Watch 1       Obvice/Label       Current Value       Data       •       •         If Watch 1       Disable direct connection to MELSOFT       •       •       •         If Watch 1       Disable direct connection to MELSOFT       •       •       •         If Window       Print Window Preview       Default       Check       End       Cancel	# MAIN Log Record Setting	
Default Router IP Address       192       168       0       1       Optional Settings ( Default / Changed )         Image: Project       Image: Project <t< td=""><td>Subnet Mask Pattern 255 255 0</td><td></td></t<>	Subnet Mask Pattern 255 255 0	
Image: Construction of the action of the		
Image: Project       Communication Data Code         Image: User Library       Image: Binary Code         Image: Connection Destination       Image: Binary Code         Image: Connection Destination       Image: Binary Code         Image: Match 1       Image: Disable direct connection to MELSOFT         Image: Device/Label       Current Value         Image: Do not respond to search for CPU on network         Image: Print Window         Image: Print Window <td< td=""><td>192 168 U 1 Opuorai securitys ( Default / Changed )</td><td></td></td<>	192 168 U 1 Opuorai securitys ( Default / Changed )	
Wer Library       Communication Data Code         Connection Destination		
Wer Library     Gonnection Destination     Generic Value Data     Device/Label Current Value Data     Print Window Print Window Preview     Default Check End Cancel     Korean Unlabeled FX3U/FX3UC Host 0/15tep NVJ	Communication Data Code	
Connection Destination     C ASCII Code     Disable direct connection to MELSOFT     Do not respond to search for CPU on network      Print Window     Print Window Preview     Default     Check     End     Cancel     Korean     Unlabeled     FX3U/FX3UC     Host     O/1Step     NU	User Library (* Binary Code	
Watch 1       Disable direct connection to MELSOFT         Device/Label       Current Value       Data         Print Window       Print Window Preview       Default       Check       End       Cancel         Korean       Unlabeled       FX3U/FX3UC       Host       0/15tep       NU/1	Connection Destination	
Watch 1 Device/Label Current Value Data Print Window Print Window Preview Default Check End Cancel Korean Unlabeled FX3U/FX3UC Host 0/15tep NIJ	C ASCII Code	
Watch 1     Image: Current Value     Device/Label     Image: Current Value     Image: Current V	Disable direct connection to MEISOFT	
Levice/Label     Current Value     Data       Print Window     Print Window Preview     Default       Check     End       Cancel	Watch 1 Do not respond to search for CPU on network	ф ×
Print Window         Print Window Preview         Default         Check         End         Cancel           Korean         Unlabeled         FX3U/FX3UC         Host         0/1Step         NJJ	Device/Label Lumerit Value   Data	
Print Window     Print Window Preview     Default     Check     End     Cancel       Korean     Unlabeled     FX3U/FX3UC     Host     0/1Step     NU		
Korean Unlabeled FX3U/FX3UC Host 0/1Step NVJ	Print Window Print Window Preview Default Check End Cancel	
Korean Unlabeled FX3U/FX3UC Host 0/1Step NIJ		
Korean Unlabeled FX3U/FX3UC Host 0/1Step NIJ		
Korean Unlabeled FX3U/FX3UC Host 0/1Step NIJ		
	Korean Unlabeled FX3U/FX3UC Host 0/1Ste	p NIJ

Items	Contents	Set Value	Remarks
Communication		Dinem , and a	Select the same protocol
data code	select protocol data type.	Binary code	item at TOP.
IP Address	Set PLC IP address.	192.168.0.50	
Subnet Mask Pattern	Set subnet mask.	255.255.255.0	
Default Router IP		10210001	
Address	Set router IP address.	192.168.0.1	

Step 2. [Open Setting]

FX Parameter		×
Memory Capacity Device PLC Name	PLC System(1) PLC System(2) Sp	ecial Function Block Positioning Ethernet Port
CH1		
Channel Channel		
IP Address Setting		Open Setting
	Input Format DEC	
IP Address	192 168 0 50	Time Setting
		Log Record Setting
Subnet Mask Pattern	255 255 255 0	
Default Router IP Address	192 168 0 1	Optional Settings ( Default / Changed )
Communication Data Code	]	
Binary Code     Image: Second		
C ASCII Code		
Disable direct connection to Do not respond to search f	or CPU on network	
Print Window Print Window I	Preview Default	t Check End Cancel



#### ① Set as TCP

E	thernet	Port Open Setti	ng			and the local division of the local division	×	
Г			-	PLC				
					Port number			
		Protocol	Open System		Host Station Port No.	Destination IP Address	Destination Port No.	
	1	TCP	<ul> <li>MELSOFT Connection</li> </ul>	Ŧ				
	2	TCP	<ul> <li>MELSOFT Connection</li> </ul>	•				
	3	TCP ·	<ul> <li>MC Protocol</li> </ul>	Ŧ	5000			
	4	TCP ·	<ul> <li>MELSOFT Connection</li> </ul>	•				
	4       TCP <ul> <li>MELSOFT Connection</li> <li>Input decimal value for the Host Station Port No., Destination IP Address and Destination Port No</li> <li>End</li> <li>Cancel</li> </ul>							

Items	Contents	Set Value	Remarks	
Protocol	Sat athernat protocol	TCP	Select the same protocol	
FIOLOCOI	Set ethemet protocol.		item at TOP.	
Open System	Set open method.	MC Protocol	Necessary setting	
Host Station Port No.	Set PLC port number.	5000		

#### ② Set as UDP

E	thernet	Port Open Settin	g		_	-	<b>X</b>
Г					PLC	TOP	TOP
					Port number	IP Address	Port
l		Protocol	Open System		Host Station Port No.	Destination IP Address	Destination Port No.
	1	TCP 🔹	MELSOFT Connection	•			
	2	TCP 🔹	MELSOFT Connection	•			
	3	UDP 🗸	MC Protocol	Ŧ	5000	192, 168, 0, 100	1025
	4	TCP 🔹	MELSOFT Connection	•			
	Input	: decimal value for t	he Host Station Port No., Destination IP Address and Destination Port N End Cancel				

Items	Contents	Set Value	Remarks
Protocol	Sat athernat protocol		Select the same protocol
PTOLOCOI	set ethemet protocol.	UDP	item at TOP.
Open System	Set open method.	MC Protocol	Necessary setting
Host Station Port No.	Set PLC port number.	5000	
Destination		1021000100	
IP Address	Set the IP address of the TOP.	192.168.0.100	
Destination Port No.	Enter TOP port number.	1025	



# 5. Supported addresses

#### The devices available in TOP are as follows:

The device range (address) may differ depending on the CPU module series/type. The TOP series supports the maximum address range used by the external device series. Please refer to each CPU module user manual and be take caution to not deviate from the address range supported by the device you want to use.

Device		Bit Address	Word Address	Remarks
Input Relay		X000 ~ X377	X000 ~ X360	Input data (hexadecimal)
Output Rela	ау	Y000 ~ Y377	Y000 ~ Y360	Input data (hexadecimal)
Auvilian / Do		M0000 ~ M7679	M0000 ~ M7664	
	elay	M8000 ~ M8511	M8000 ~ M8496	
Timor	Current Value		TN000 ~ TN511	
Inner	Contact	TS000 ~ TS511	TN000 ~ TN496	
	Current Value		CN000 ~ CN199	
Counter			HCN200 ~ HCN255	32 Bit address
	Contact	CS000 ~ CS255	CS000 ~ CS240	
State		S0000~S4095	S0000~S4080	
Data Regist	er	D0000.0 ~ D8511.F	D0000 ~ D8511	
Extended R	egister	R00000.0~R32767.F	R00000~R32767	