HBTECH - TCeye(Monitoring)

Ethernet Driver

Supported version TOP Design Studio V1.0 or higher

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

The system configuration of TOP and "HBTECH - Monitor" is as follows:

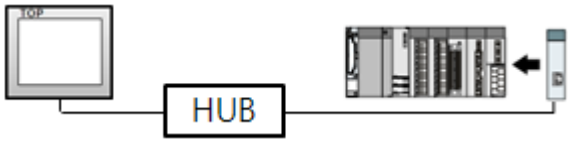
Series	Link I/F	Communication method	System setting	Cable
TCeye(Monitoring)	-	Ethernet (TCP)	3. TOP communication setting 4.1. External device setting 1	Twisted pair cable*Note 1)

*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.

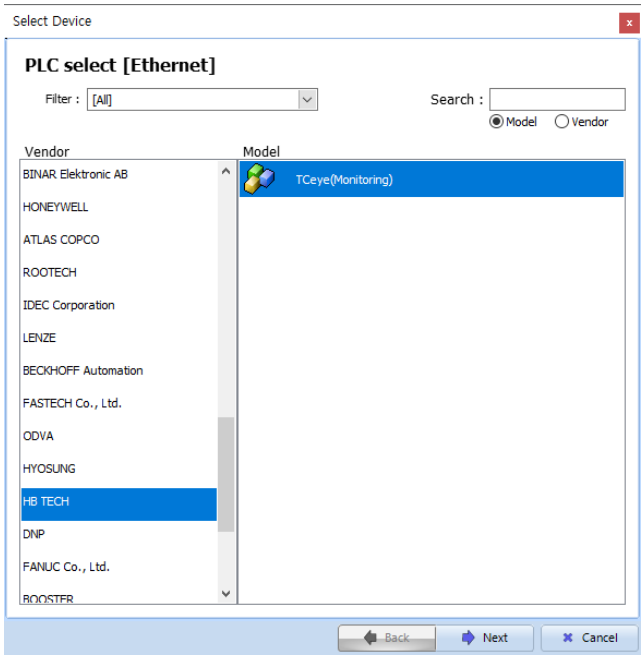
■ Connectable configuration

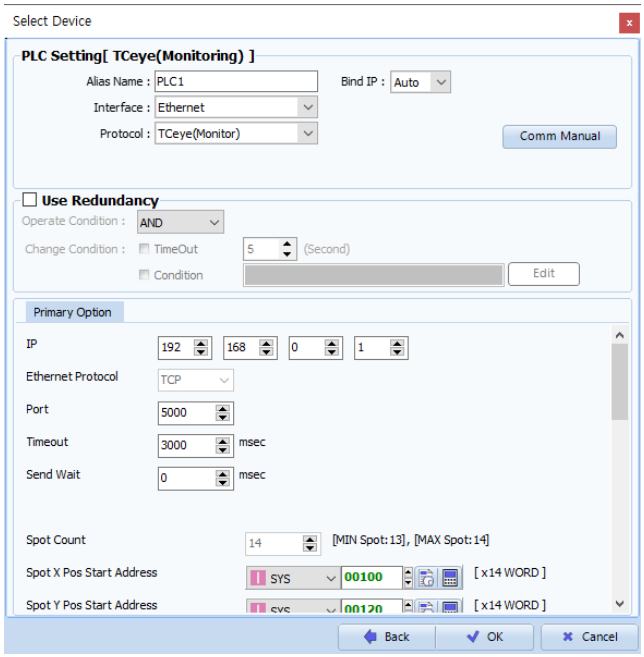
・1:1 connection (one TOP and one external device) connection



2. External device selection

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





Settings		Contents
TOP	Model	Check the TOP display and process to select the touch model.
External device	Vendor	Select the vendor of the external device to be connected to TOP. Select "TCeye (Monitoring)".
	PLC	Select the external device to be connected to the TOP.

Model	Interface	Protocol
TCeye	Ethernet	TCeye(Monitor)

Please check the system configuration in Chapter 1 to see if the external device you want to connect is a model whose system can be configured.

3. TOP communication setting

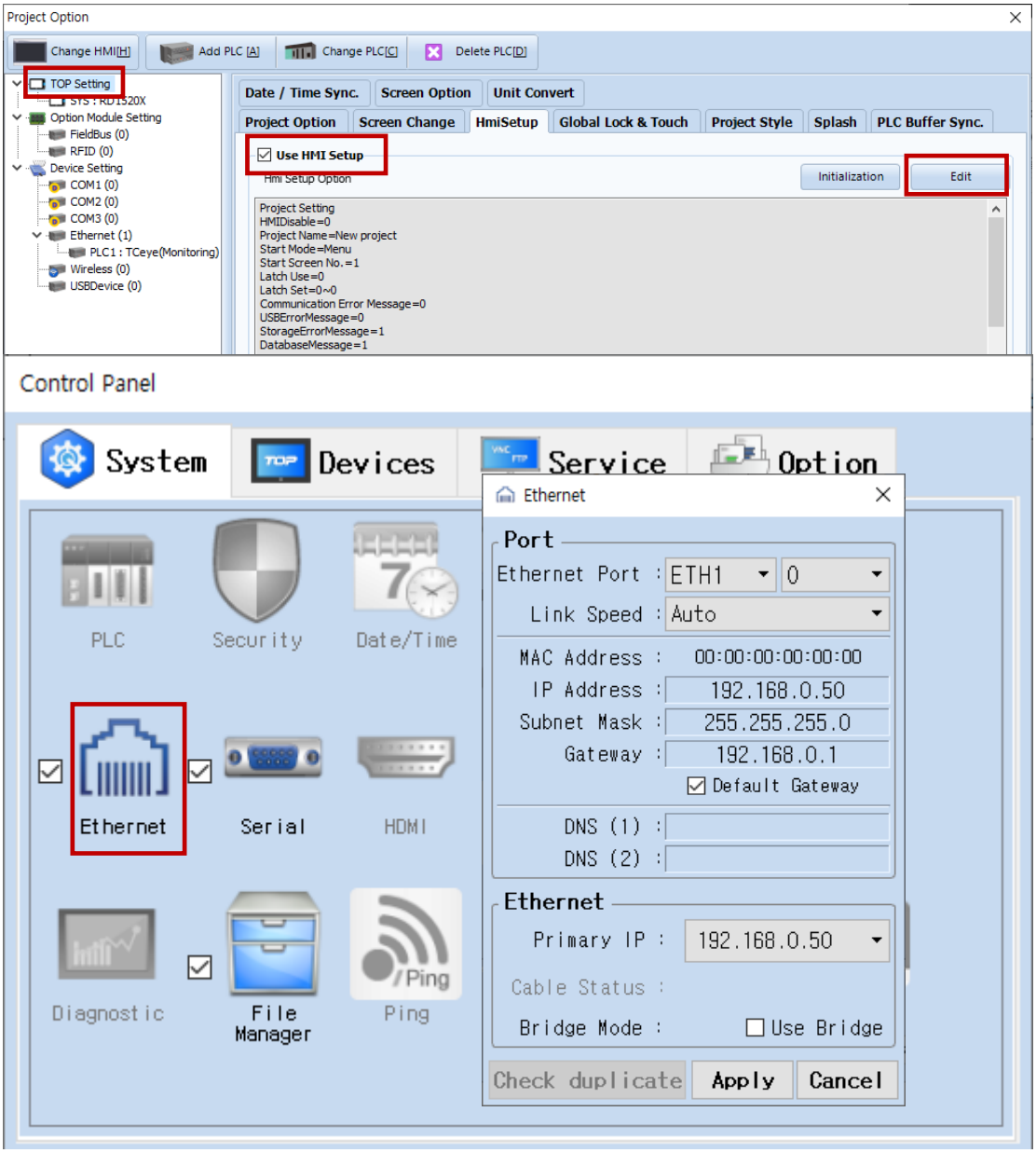
The communication can be set in TOP Design Studio or TOP main menu. The communication should be set in the same way as that of the external device.

3.1 Communication setting in TOP Design Studio

(1) Communication interface setting

■ [Project > Project Property > TOP Setting] → [Project Option > "Use HMI Setup" Check > Edit > Ethernet]

– Set the TOP communication interface in TOP Design Studio.



Items	TOP	External device	Remarks
IP Address*Note 1) Note 2)	192.168.0.50	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

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

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

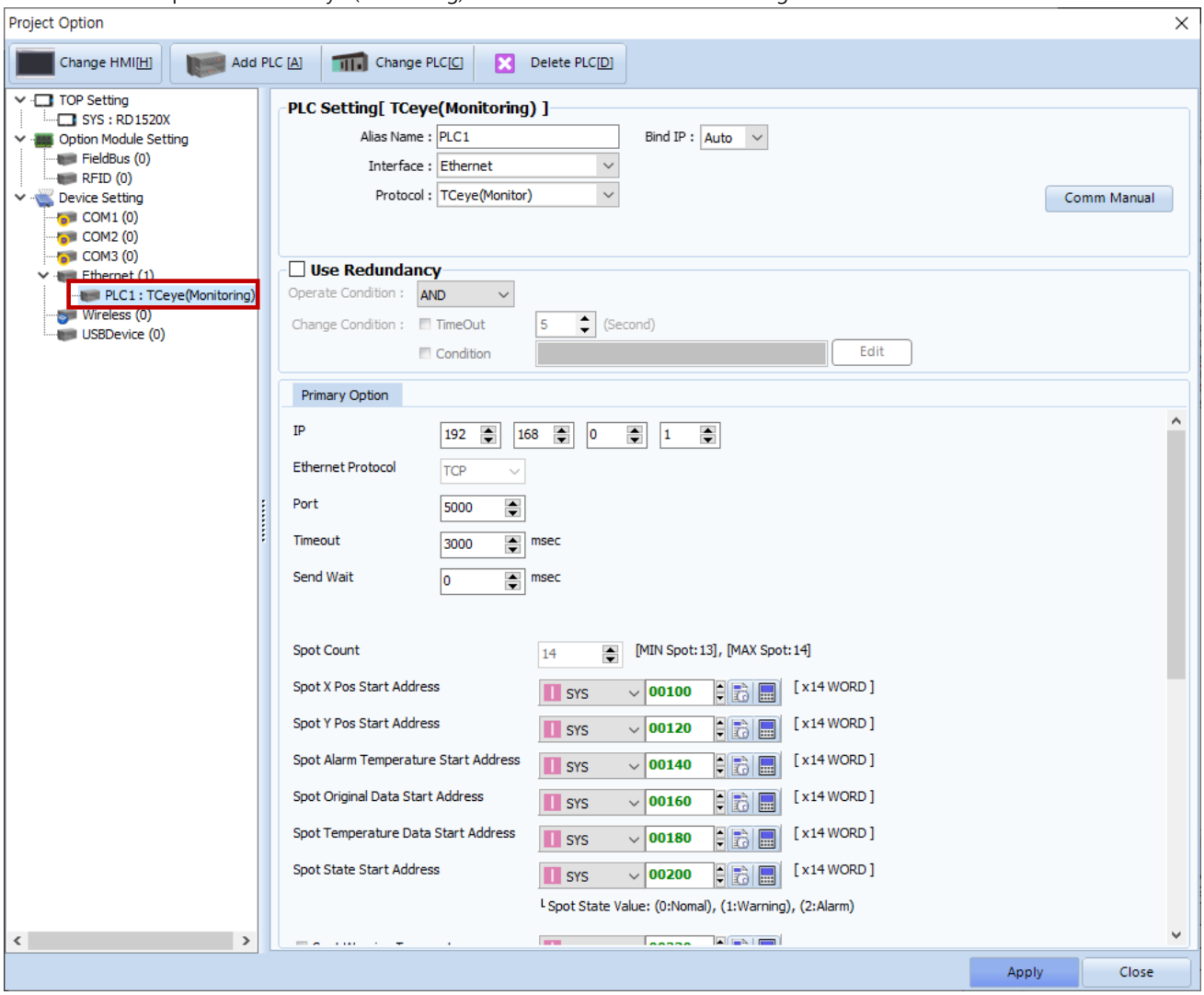
* The above settings are examples recommended by the company.

Items	Description
IP Address	Set an IP address to be used by the TOP to use over the network.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.

(2) Communication option setting

■ [Project > Project Property > Device Setting > ETHERNET > "PLC1: TCeye (Monitoring)"]

– Set the options of the TCeye (Monitoring) communication driver in TOP Design Studio.



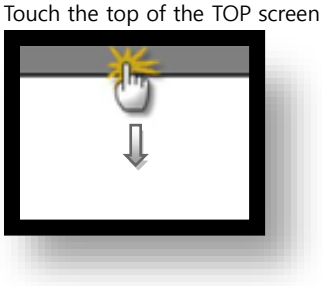
* The above settings are examples recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External device selection".
Protocol	Select "TCeye (Monitor)".	
IP	Enter the IP address of the 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.	
Capture Signal	Configure the Capture Signal Address.	
Spot Counter	Configure the Spot Counter Address.	Fixed
Spot X Pos Start Address	Configure the Spot X Pos start address.	
Spot Alarm Temp Start Address	Configure the Sport Alarm Temp start address.	
Spot Meta Data Start Address	Configure the Spot Meta Data start address.	
Spot State Start Address	Configure the Spot State start address.	
Area Counter	Configure the Area Counter.	Fixed
Area Max Spot X Start Address	Configure the Area Max Spot X start address.	
Area Max Spot Y Start Address	Configure the Area Max Spot Y start address.	
Area Alarm Temp Start Address	Configure the Area Alarm Temp start address.	
Area Original Data Start Address	Configure the Area Original Data start address.	
Area Meta Data Start Address	Configure the Area Meta Data start address.	
Spot State Start Address	Configure the Spot State start address.	

3.2. Communication setting in TOP

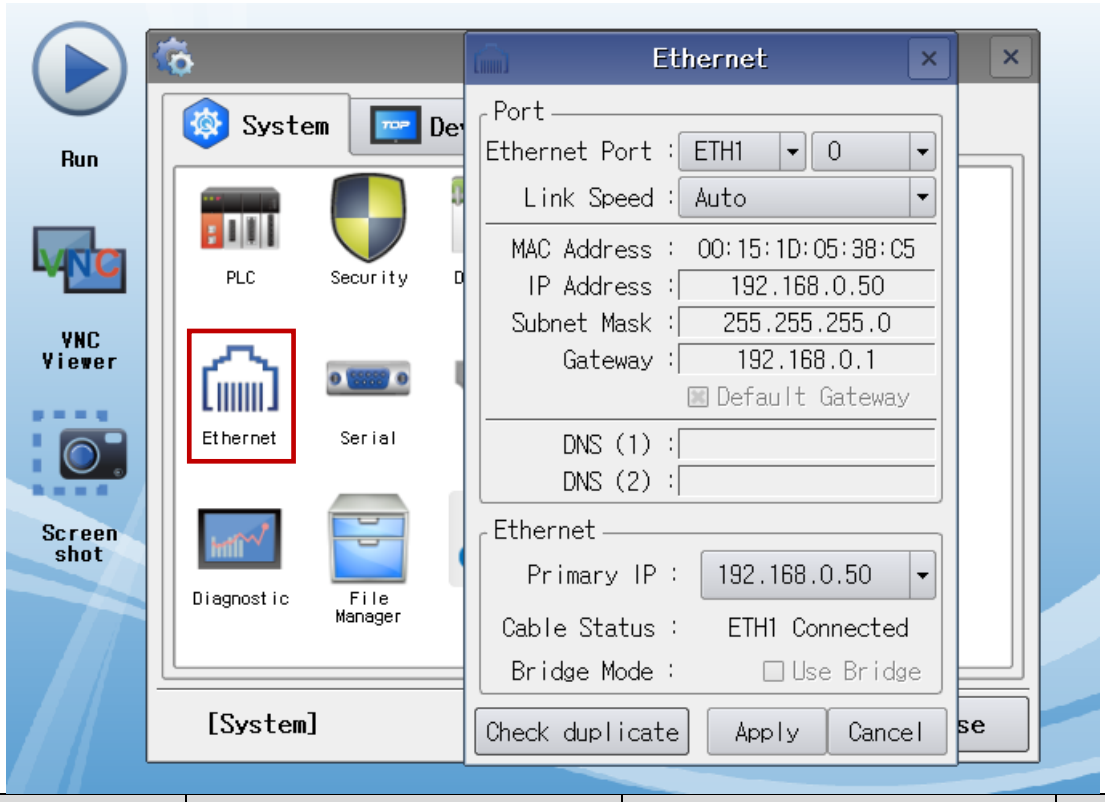
*** This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.**

■ 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	TOP	External device	Remarks
IP Address*Note 1) Note 2)	192.168.0.50	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

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

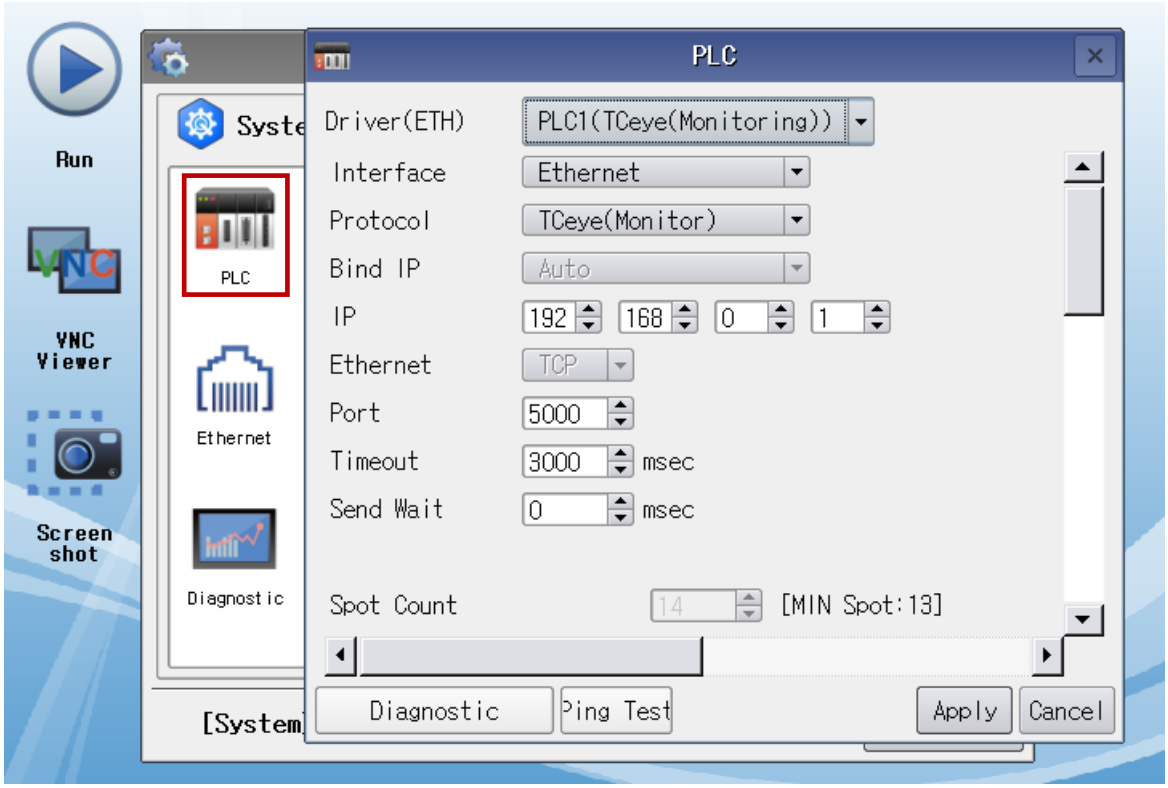
*Note 2) Do not use duplicate IP addresses over the same network.

* The above settings are examples recommended by the company.

Items	Description
IP Address	Set an IP address to be used by the TOP to use over the network.
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]



* The above settings are examples recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External device selection".
Protocol	Select "TCeye (Monitor)".	
IP	Enter the IP address of the 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.	
Capture Signal	Configure the Capture Signal Address.	
Spot Counter	Configure the Spot Counter Address.	Fixed
Spot X Pos Start Address	Configure the Spot X Pos start address.	
Spot Alarm Temp Start Address	Configure the Sport Alarm Temp start address.	
Spot Meta Data Start Address	Configure the Spot Meta Data start address.	
Spot State Start Address	Configure the Spot State start address.	
Area Counter	Configure the Area Counter.	Fixed
Area Max Spot X Start Address	Configure the Area Max Spot X start address.	
Area Max Spot Y Start Address	Configure the Area Max Spot Y start address.	
Area Alarm Temp Start Address	Configure the Area Alarm Temp start address.	
Area Original Data Start Address	Configure the Area Original Data start address.	
Area Meta Data Start Address	Configure the Area Meta Data start address.	
Spot State Start Address	Configure the Spot State start address.	

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 ETH port 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.

OK	**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	Contents		Check		Remarks
System configuration	How to connect the system		OK	NG	1. System configuration
	Connection cable name		OK	NG	
TOP	Version information		OK	NG	2. External device selection 3. Communication setting
	Port in use		OK	NG	
	Driver name		OK	NG	
	Other detailed settings		OK	NG	
	Relative prefix	Project setting	OK	NG	
		Communication diagnostics	OK	NG	
	Ethernet port setting	IP Address	OK	NG	
		Subnet Mask	OK	NG	
		Gateway	OK	NG	
External device	CPU name		OK	NG	4. External device setting
	Communication port name (module name)		OK	NG	
	Protocol (mode)		OK	NG	
	Setup Prefix		OK	NG	
	Other detailed settings		OK	NG	
	Ethernet port setting	IP Address	OK	NG	
		Subnet Mask	OK	NG	
		Gateway	OK	NG	
	Check address range		OK	NG	5. Supported addresses (For details, please refer to the PLC vendor's manual.)