



# **Communication with Mitsubishi R04ENCPU Ethernet V1.0**

**Website:** <https://docs.we-con.com.cn/bin/view/Home/>

**Email:** support@we-con.com.cn



# Overview

This document describes the communication between Wecon HMI PI3102ig and Mitsubishi R04EN CPU via Ethernet port, and introduces it in three parts:

- Software Configurations of PLC
- Software Configurations of HMI
- Cable Wiring

## 1 GX Works3 Software Configuration

### 1.1 New PLC Project

① Open the GX Works3, click [Project] on the toolbar, then click [New...]

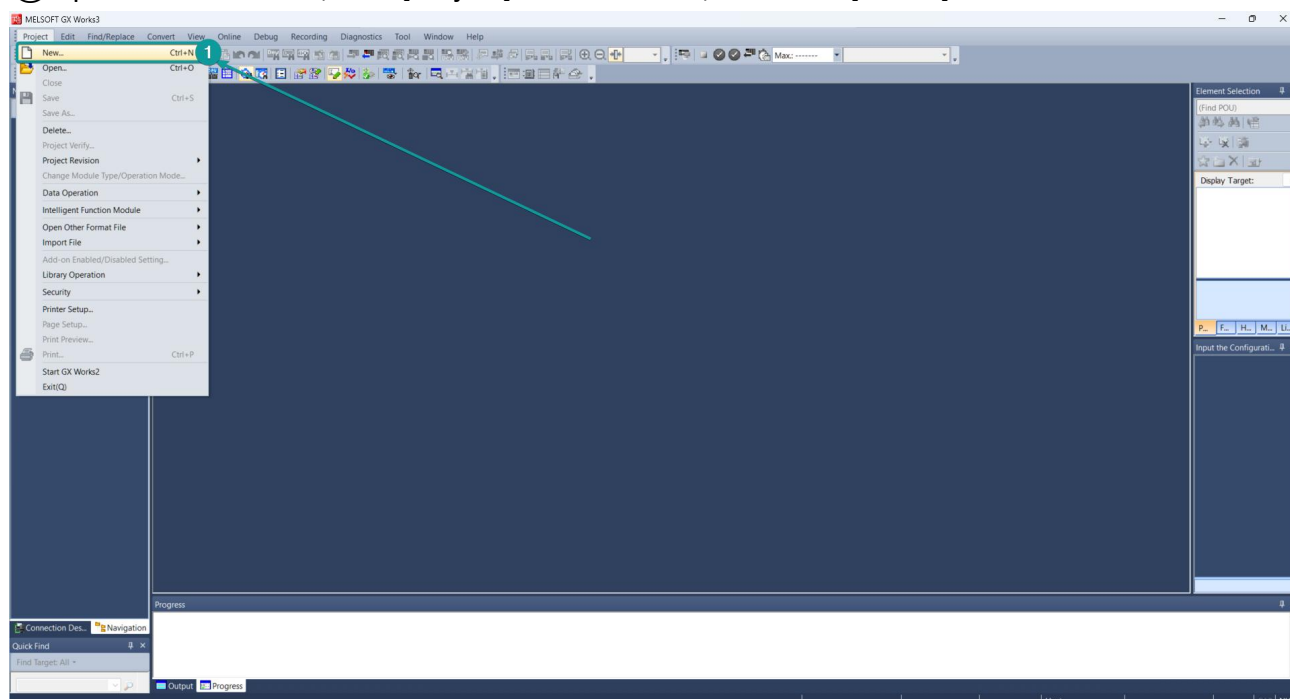


Figure 1-1

② Select the RCPUR option in Series

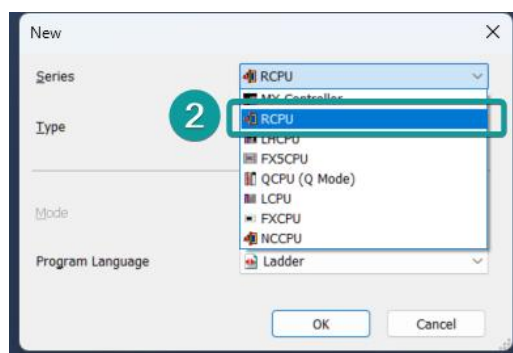


Figure1-2

③ Select the R04EN option in Type



Figure 1-3

④ Select Program Language as user wanted, then click [OK] to finish

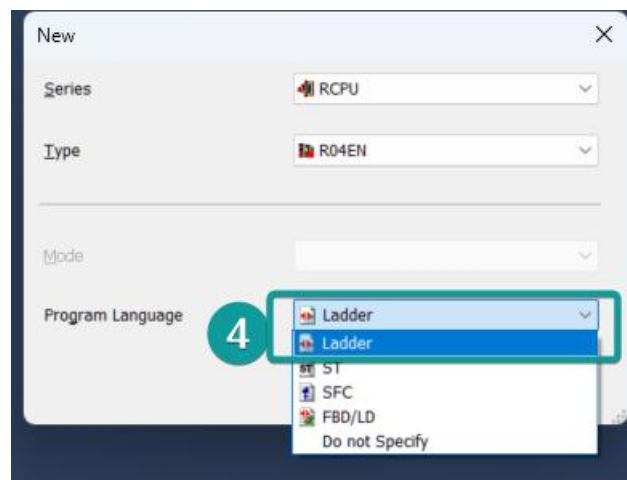


Figure 1-4

## 1.2 Set up PC Connection Method

① Click [Current Connection Destination...] from toolbar [Online]

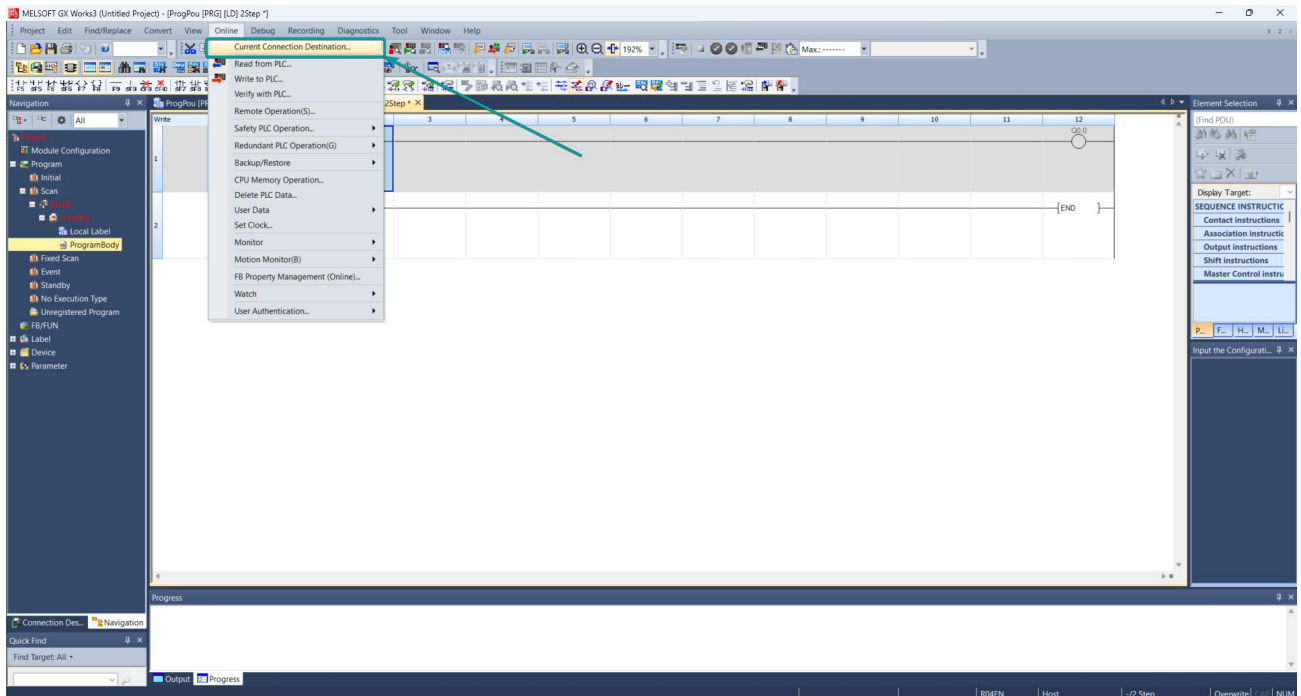


Figure 1-5

② Double click on the option [Ethernet Board] from PC side I/F, and select the correct PC network adapter option. Select the protocol as TCP, then click [OK]

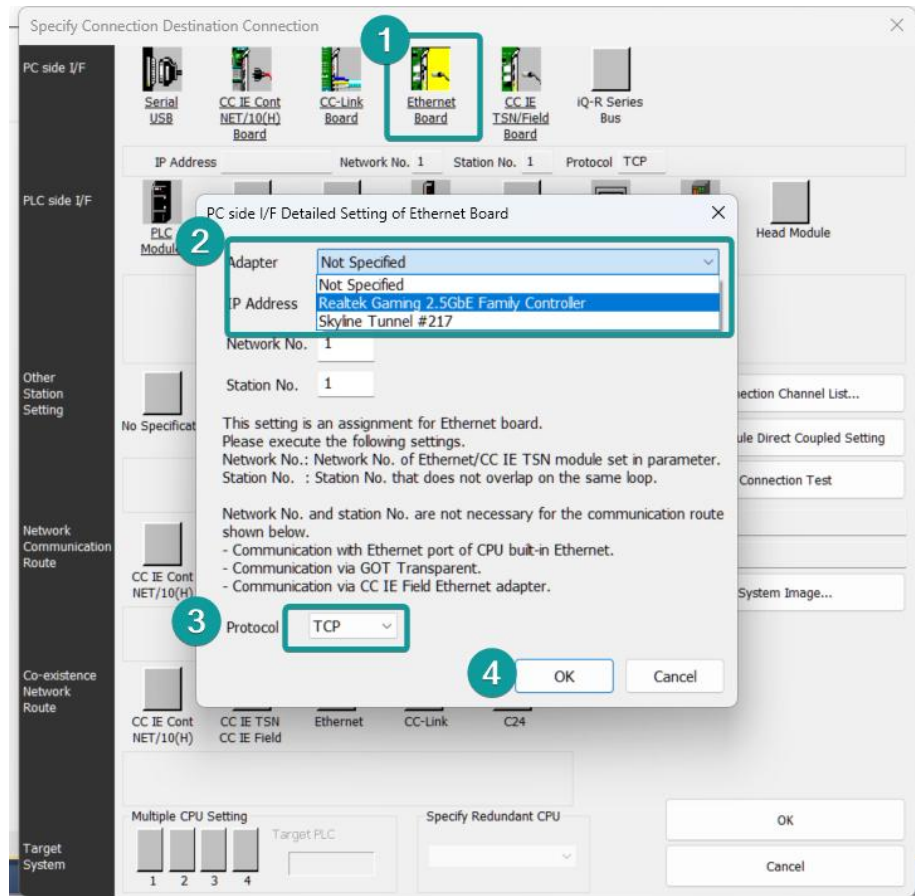


Figure 1-6

③ Click [Yes] to continue

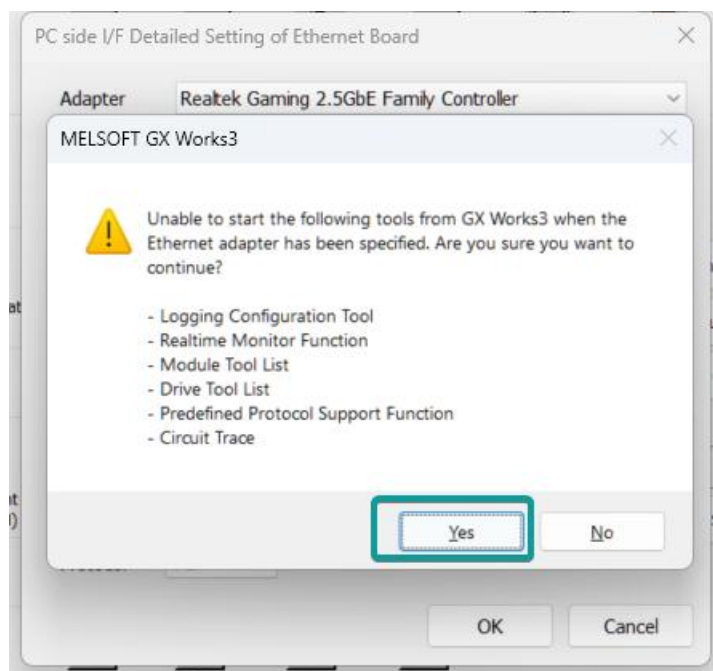


Figure 1-7

④ Click on button [CPU Module Direct Coupled Setting], select Ethernet, choose correct PC network adapter option, then click [Yes]

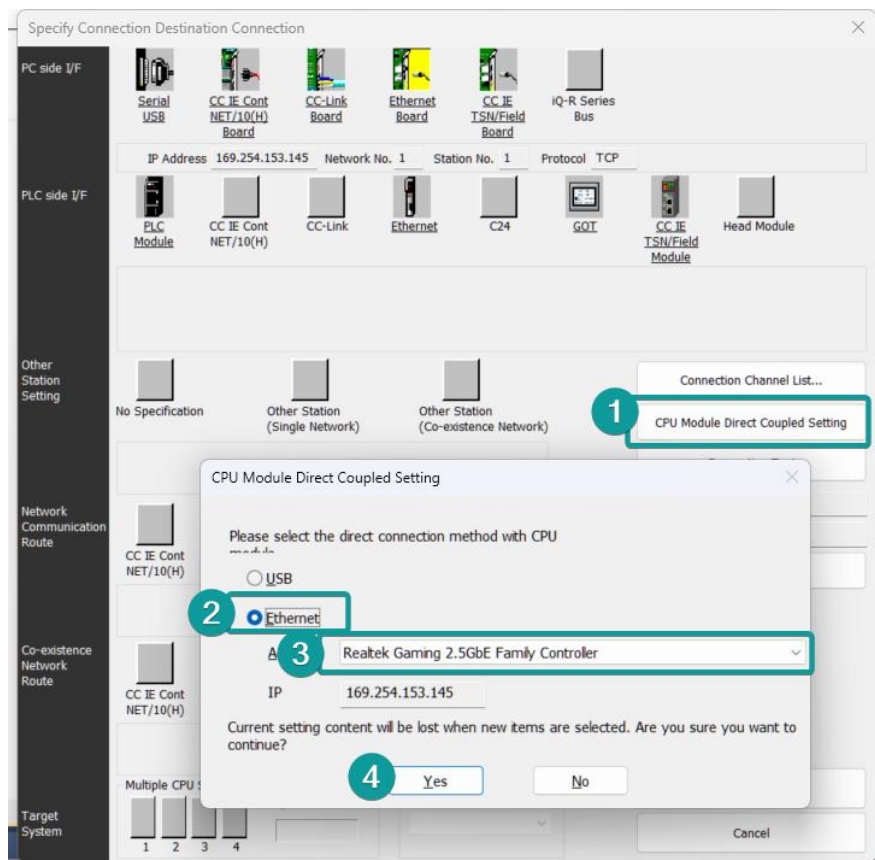


Figure 1-8

⑤ Finally, click [Connection Test], if pop up the success window, then means PC connect to the CPU

successfully, then click OK.

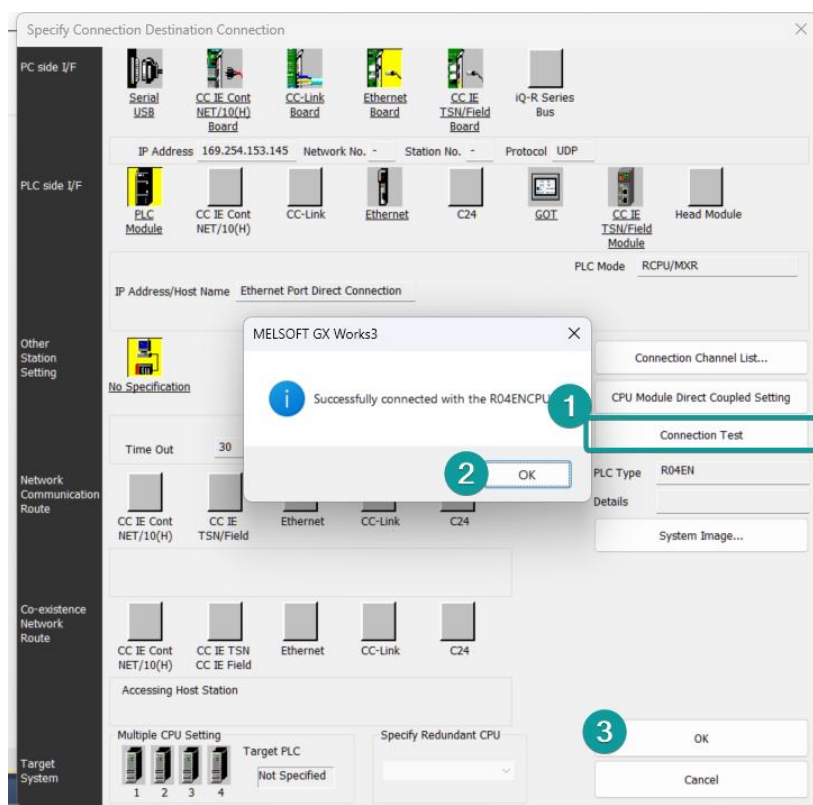


Figure 1-9

## 1.3 Configure Module Communication Parameters

① Expand the project tree node, double click on the node [Module Parameter], click the [External Device Configuration] from Item list. Double click <Detailed Setting>

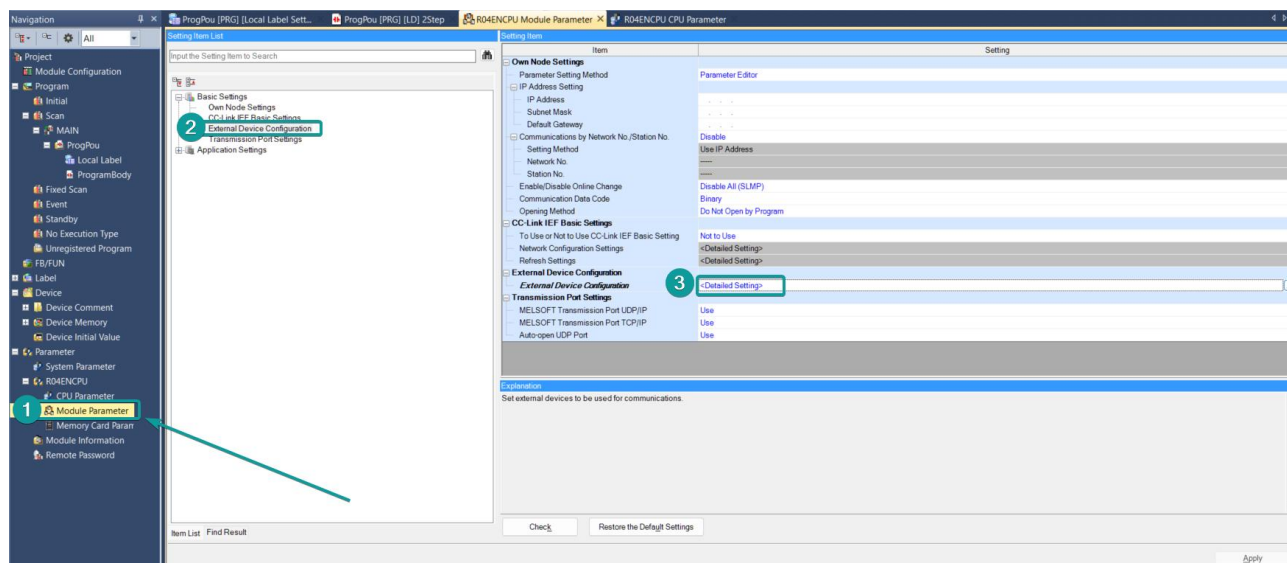


Figure 1-10

② Expand the tree node of [Ethernet Device (General)], find the option of [SLMP Connection Module]

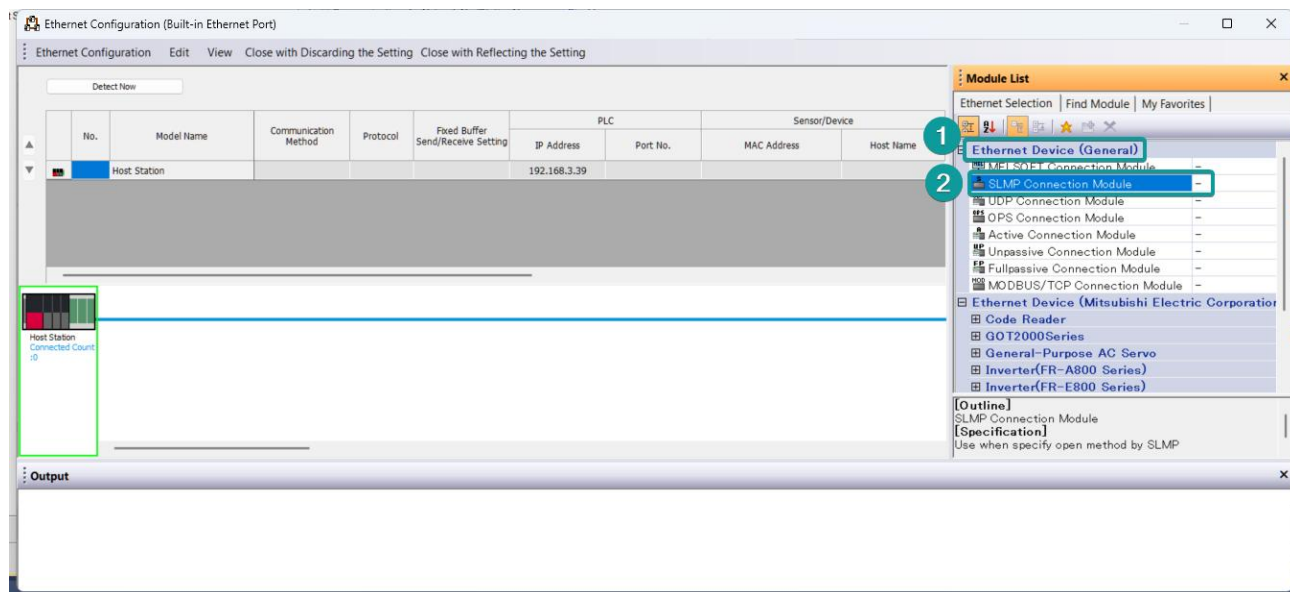


Figure 1-11

③ Drag the [SLMP Connection Module] into bus layout, and configure the Protocol as TCP and Port No. as 4999, click [Close with Reflecting the setting]

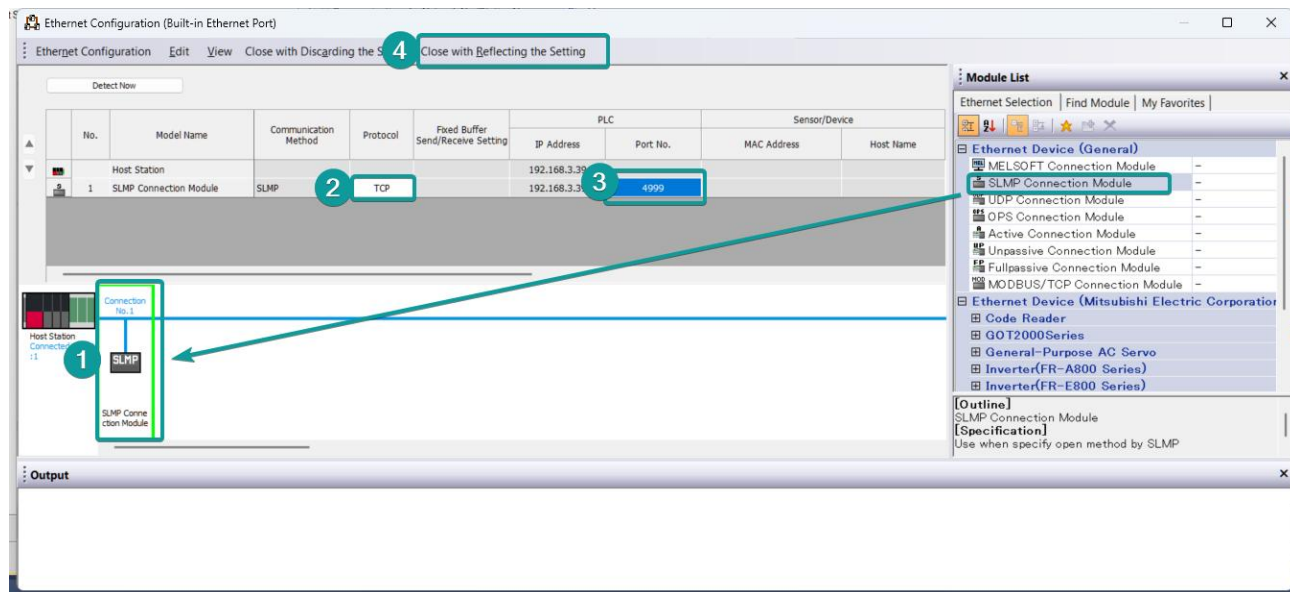


Figure 1-12

- ④ To connect the CPU with multiple HMIs, drag multiple SLMP modules into the bus layout and assign a different port number to each module.

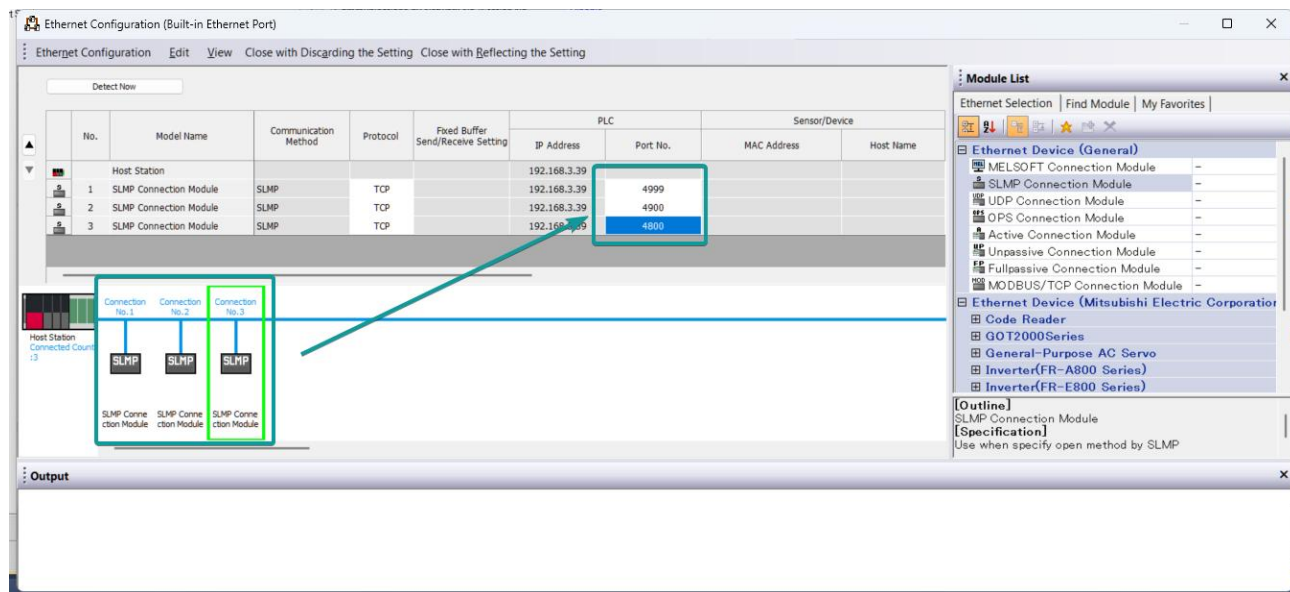


Figure 1-13

- ⑤ Click [Apply] to apply the module settings

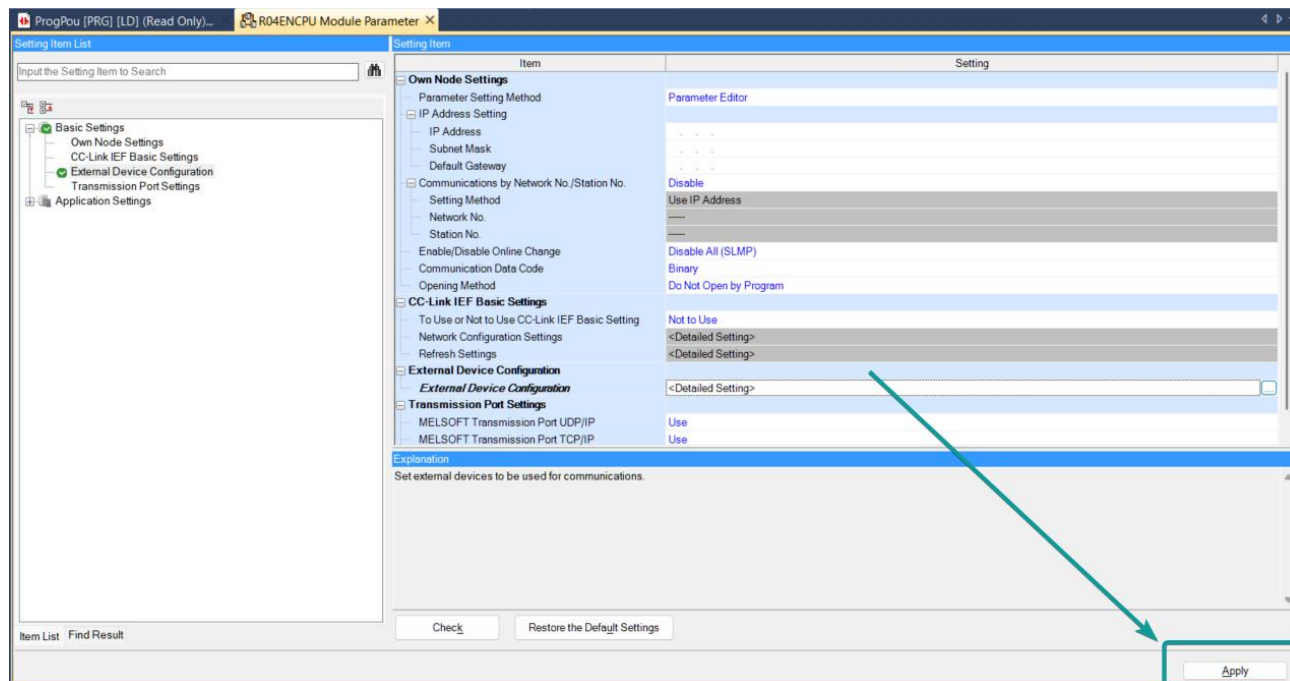


Figure 1-14

## 1.4 Program PLC Project

Program the main program POU

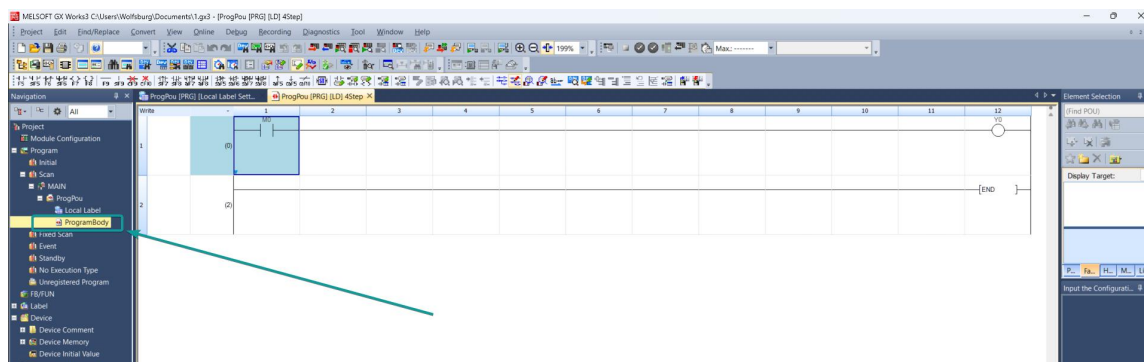


Figure 1-15

## 1.5 Download PLC Project

① Click [Convert] to build the whole project file

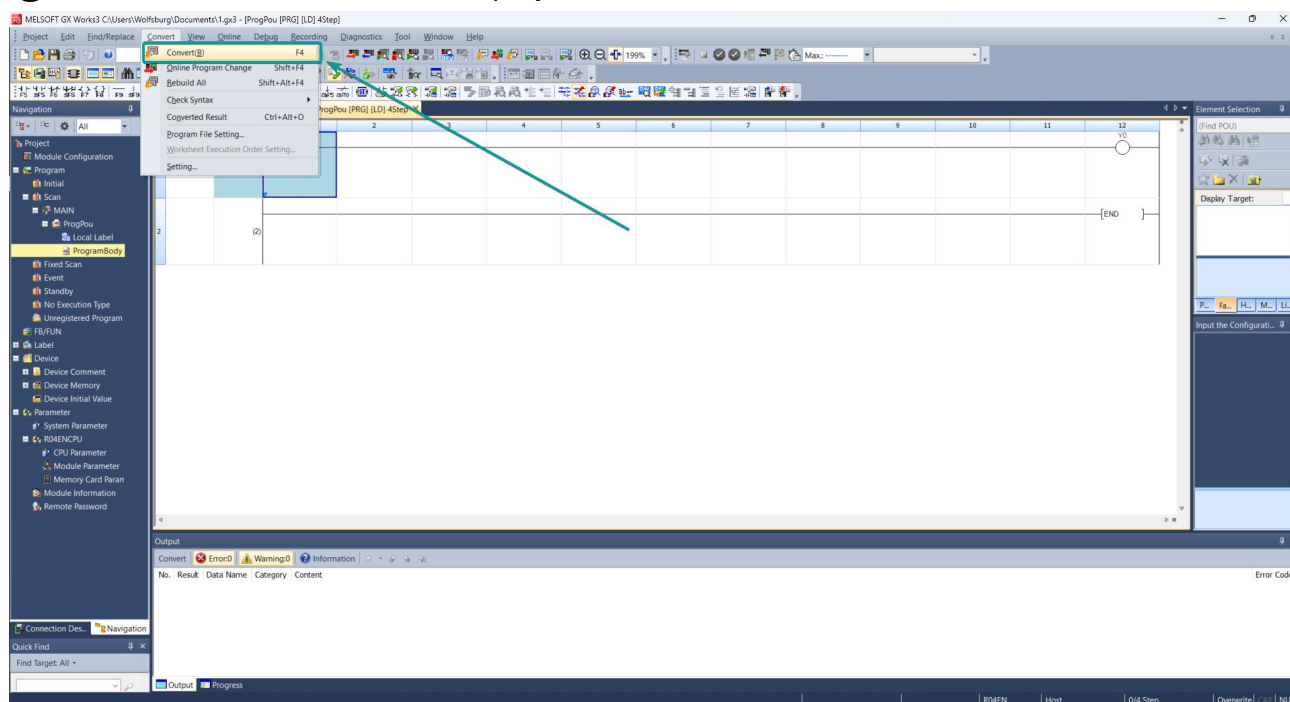


Figure 1-16

② Then click [Write to PLC...]

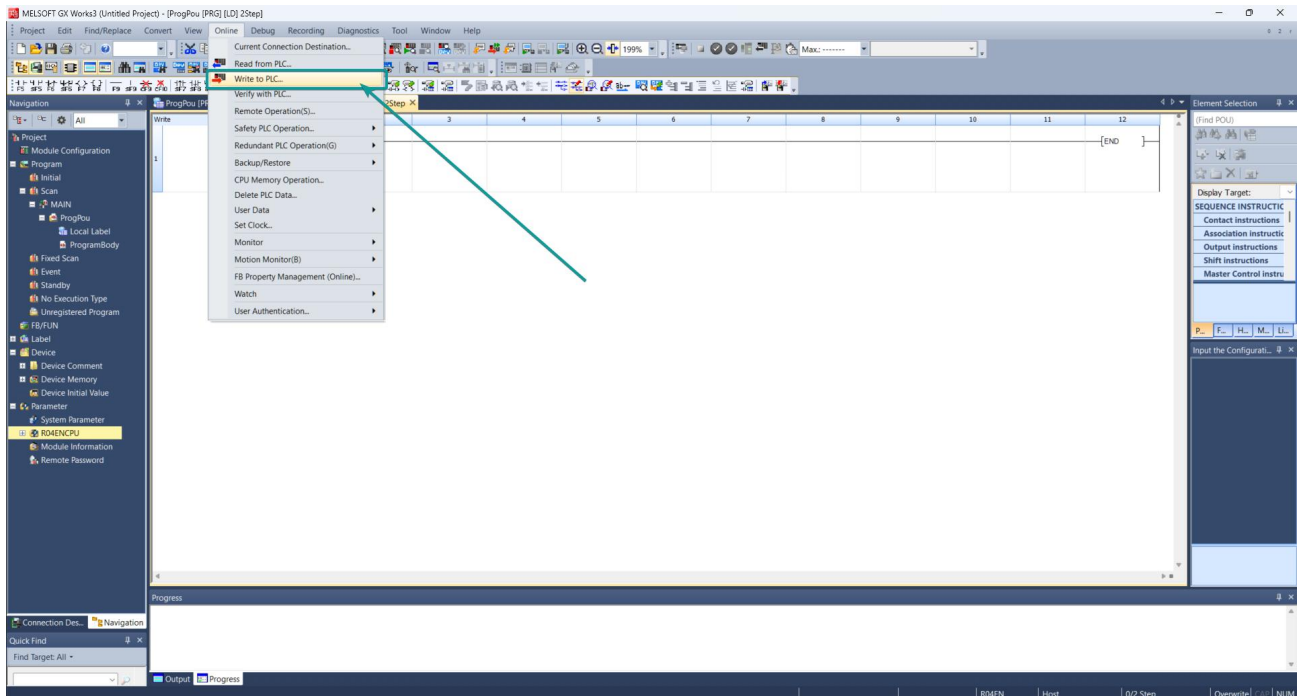


Figure 1-17

③Click [Parameter + Program] to enable which parts download into the PLC, then click [Execute], remember to restart PLC after download successfully.

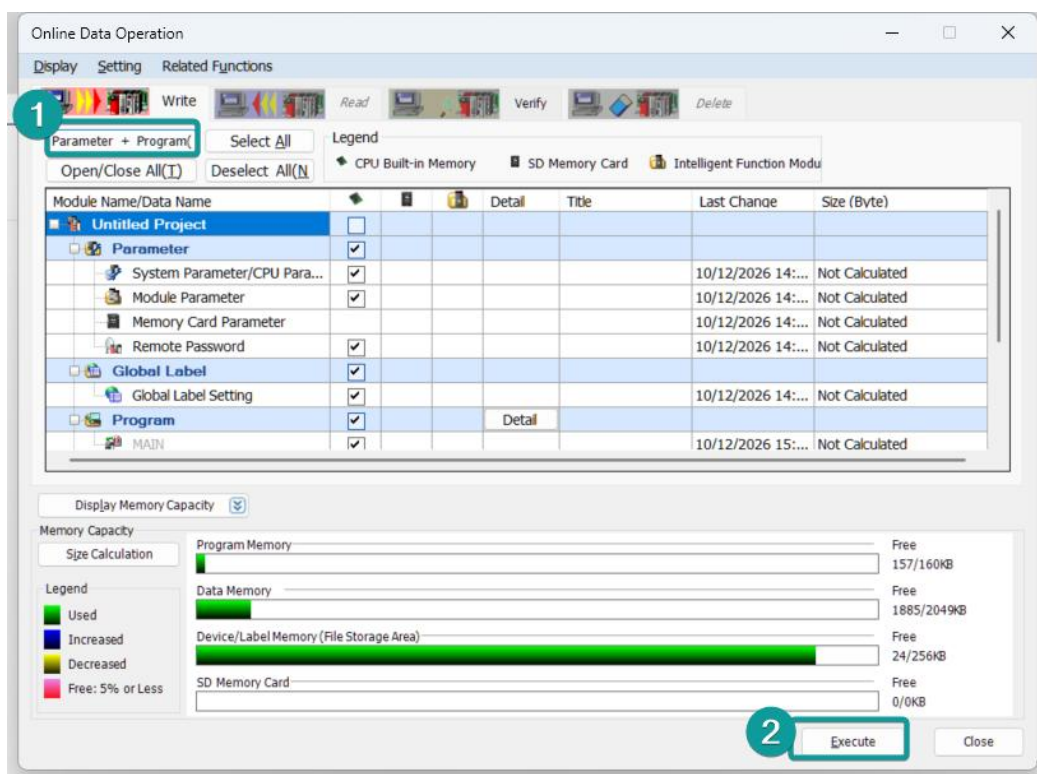


Figure 1-18

## 2 PStudio Software Configuration

### 2.1 PStudio

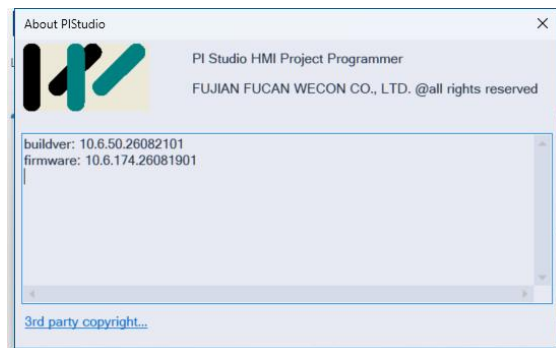


Figure 2-1

### 2.2 New HMI Project

Click [New Project], rename the project name, select the HMI Series as ig series, select model and style as user needed, then click [OK]

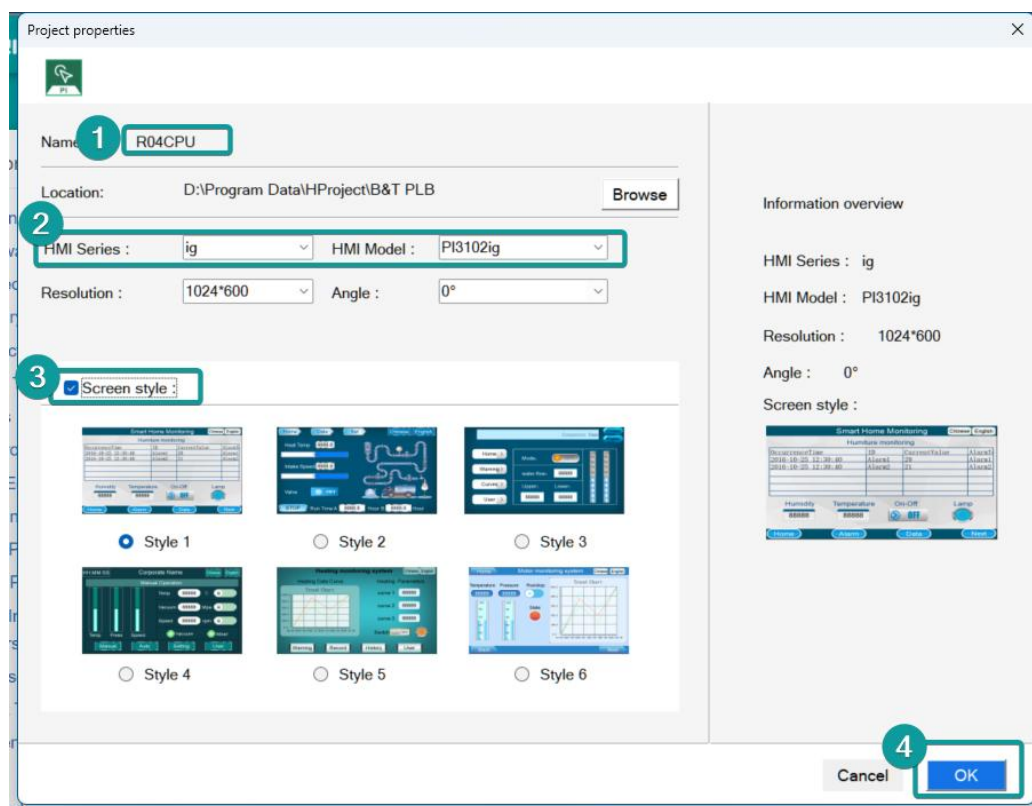


Figure 2-2

## 2.3 Communication Configuration

①[New]→[Ethernet]→[MITSUBISHI]→[MITSUBISHI iQ-R Series CPU MELSEC]

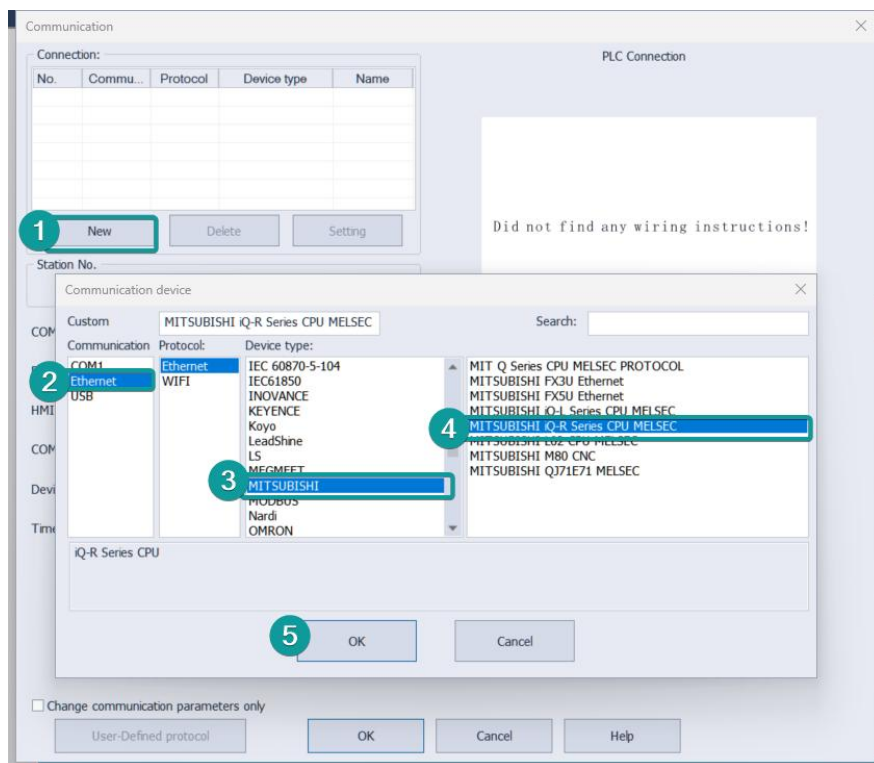


Figure 2-3

②Click [Setting], input PLC IP into the field PLC IP Address, input the 4999 into the PLC port no., then click OK

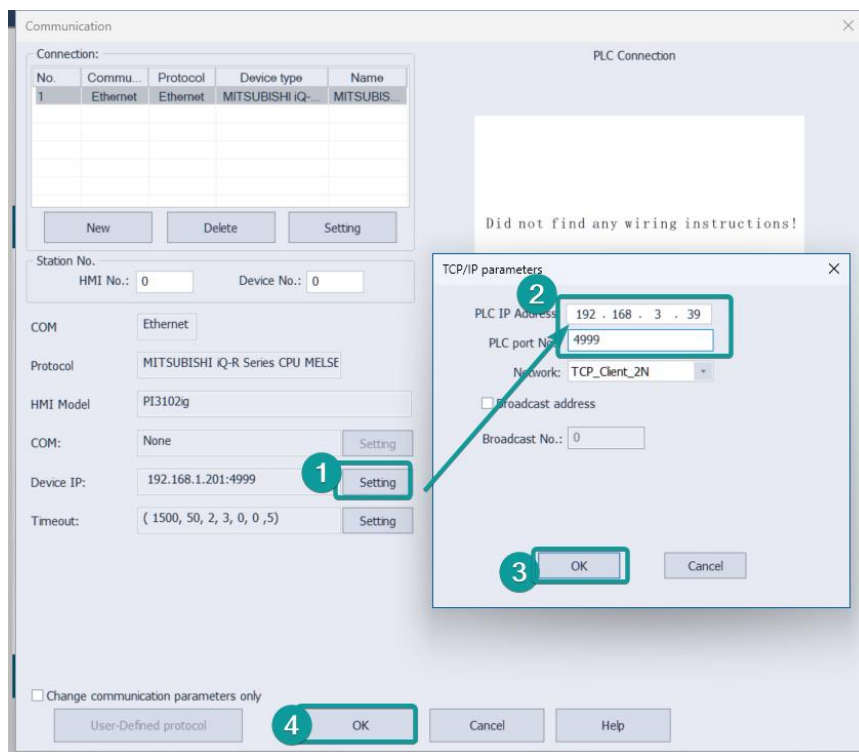


Figure 2-4

## 2.4 Program HMI Project

Program the HMI project as user requirements, then click compile to download project into HMI.

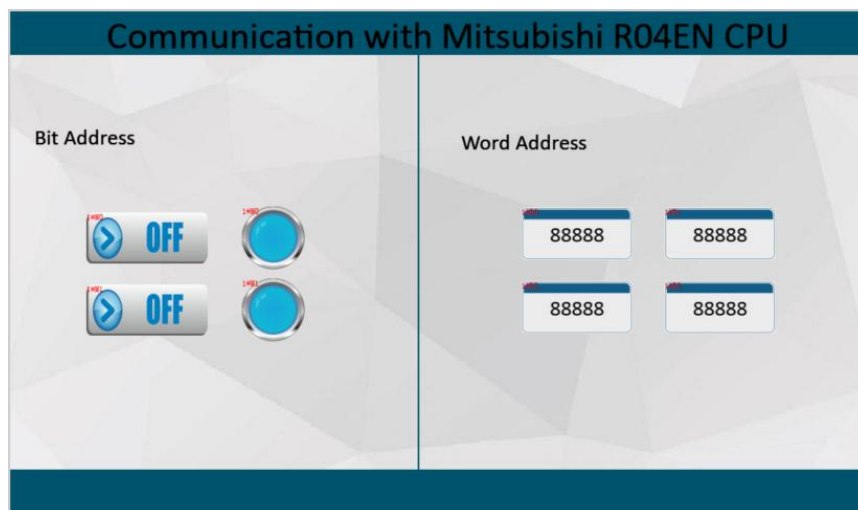


Figure 2-5

## 3 Cable Wiring

### 3.1 Cable Wiring

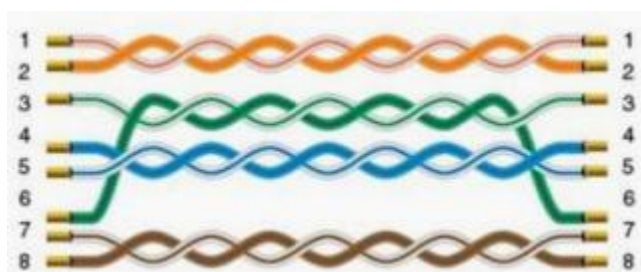


Figure 3-1