



User Manual 用户手册



JP Fence Screw Type Distributed I/O

CC LINK FIELD BASIC protocol

Remote IO Module

Distributed IO Module

CATALOGUE

1.Preface	3
1.1 Document Usage Instructions	4
1.2 Safety Matters	4
1.3 Document History	4
2.Product Overview	5
2.1 Model List	6
2.2 JP-CE Specification Parameters	7
2.2.1 DI specification	7
2.2.2 DQ Specification	7
2.2.3 CC-Link IE Field Basic Communication specification	8
2.2.4 Power supply specifications	8
3. Structure description	9
3.1 Shell	10
3.2 Installation method	10
4.Hardware description	11
4.1 JP-CE Structure diagram 16 points	12
4.2 JP-CE Structure diagram 32 points	13
4.3 Communication interface	14
4.4 LED Instruction	14
4.4.1 System status indicates the working condition of the system as shown in the table.	14
4.4.2 I/O Status Indication	15
4.4.3 RJ45 indicator light	15
4.5 Communication power supply	15
4.6 Module terminal wiring diagram	16
5.Ethernet protocol	28
5.1 What is CC-Link IE Field Basic ?	29
5.2 Network topology	29
5.3 Module parameters	30
6.Module connection and configuration	36
6.1 Connection and configuration of GX Words 3 with the CC-Link IE Field Basic protocol IO module	37
6.1.1 Distributed IO Address Configuration	37
6.1.2 New construction project	37
6.1.3 CC-Link IE Field Basic Parameter settings	37
6.1.4 IO mapping configuration	40
6.1.5 Diagnose communication status	41



1.Preface

1.1 Document Usage Instructions

This document describes the product's functional specifications, installation, operation, and settings, as well as relevant network protocol content. This document is only intended for use by trained electrical automation engineers.

(1) Disclaimer

The author has conducted necessary checks on the document. However, as the product evolves and upgrades, the document may contain technical parameter or editing errors. We reserve the right to make adjustments and modifications without prior notice to users.

(2) Trademark

The industrial Ethernet protocol (CC-Link IE Field Basic) is developed by Mitsubishi.

(3) Patent Notice

The designer of this product has applied for patent protection for the product's appearance and technical implementation methods. Any attempt to copy, imitate, or reverse engineer may violate the law.

(4) Copyright

Reproduction, distribution, and use of this document without the author's authorization are prohibited.

1.2 Safety Matters

This product is a professional equipment for industrial use and can only be operated by personnel with electrical operation experience. Before use, please carefully read this manual and follow the instructions to avoid causing personal injury or product damage.

This product is designed with an IP20 protection level. When using it, it needs to be installed in a distribution cabinet with dust-proof and moisture-proof functions.

1.3 Document History

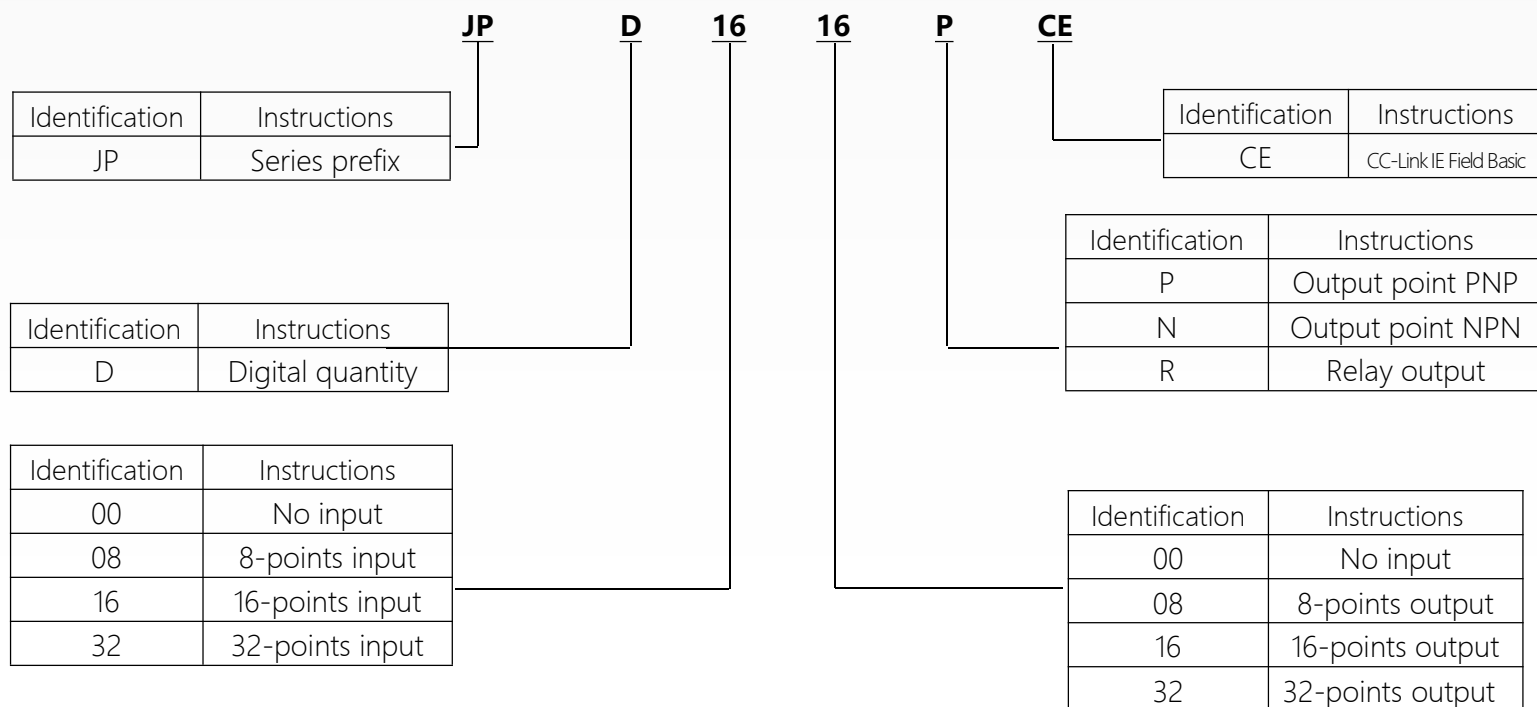
Version	Date	Explanation
V1.0	2023.02.10	First release



2.Product Overview

2.1 Model List

The JP-CE series of remote I/O products support the standard CC-Link IE Field Basic industrial Ethernet communication protocol. Through the digital integration within the module body, high-performance input and output functions can be directly provided without the need for other bus couplers.



Note: The input and output types of the 8-in-8-out module are consistent. For the other models, both PNP and NPN input points are supported.

Number	Model number	Explanation
1	JP-D0808P-CE	Digital quantity 8 input and 8 output, PNP, CC-Link IE Field Basic slave station interface 2×RJ45
2	JP-D0808N-CE	Digital quantity 8 input and 8 output, NPN, CC-Link IE Field Basic slave station interface 2×RJ45
3	JP-D1600-CE	Digital quantity 16 points input, PNP & NPN, CC-Link IE Field Basic slave station interface 2×RJ45
4	JP-D0016P-CE	Digital quantity 16 points output, PNP, CC-Link IE Field Basic slave station interface 2×RJ45
5	JP-D0016N-CE	Digital quantity 16 points output, NPN, CC-Link IE Field Basic slave station interface 2×RJ45
6	JP-D3200-CE	Digital quantity 32 points input, PNP & NPN, CC-Link IE Field Basic slave station interface 2×RJ45
7	JP-D0032P-CE	Digital quantity 32 points output, PNP, CC-Link IE Field Basic slave station interface 2×RJ45
8	JP-D0032N-CE	Digital quantity 32 points output, NPN, CC-Link IE Field Basic slave station interface 2×RJ45
9	JP-D1616P-CE	Digital quantity 16 input and 16 output, PNP, CC-Link IE Field Basic slave station interface 2×RJ45
10	JP-D1616N-CE	Digital quantity 16 input and 16 output, NPN, CC-Link IE Field Basic slave station interface 2×RJ45
11	JP-D0008R-CE	Relay 8 points output, 5A 250VAC/30VDC, CC-Link IE Field Basic slave station interface 2×RJ45
12	JP-D0016R-CE	Relay 16-point output, 5A 250VAC/30VDC, CC-Link IE Field Basic slave station interface 2×RJ45

Table 1 CC-Link IE Field Basic Remote I/O Module

2.2 JP-CE Specification Parameters

This article only provides explanations regarding the product specification parameters of JP-CE. For the specification parameters of other models, please contact your supplier for information.

2.2.1 DI specification

The specifications for digital input (DI) are shown in Table 2.

Number	Project	Specification
1	Number of channels	16
2	Access type	2 bytes
3	Ton	Type. 18uS / Max. 35uS
4	Toff	Type. 135uS / Max. 250uS
5	Input type	Source type or leakage type
6	Input connector	E-CON connector
7	Rated input voltage	24 V DC (-15 %/+20 %), (IEC 61131-2, type 2)
8	"0" signal level	-3...+5 V (IEC 61131-2, type 2)
9	"1" signal level	15...30 V (IEC 61131-2, type 2)
10	Input current	Typ. 10mA/Ch (IEC 61131-2, type 2)
11	Electrical isolation	Input/Control Area:500V DC

Table2 Specifications for Digital Input Quantity

2.2.2 DQ Specification

The specifications and parameters of the MOSFET digital output (DQ) are shown in Table 3.

Number	Project	Specification
1	Number of channels	16
2	Access type Ton	2 bytes
3	Toff	Type. 12uS / Max. 25uS
4	Output type	Type. 10mS / Max. 20mS (空载)
5	Output connector	Source type or leakage type
6	Load type	Barbed screw connector
7	Rated output voltage	Pure resistive, inductive, bulb 24 V DC (-15 %/+20 %), (IEC 61131-2, type 2)
8	Maximum output current	Max. 0.5 A /Ch, independent short-circuit protection for each channel
9	Rated total output current	Source type or leakage type
10	Number of channels	8A

Table 3 Output Specifications of MOSFET

2.2.3 CC-Link IE Field Basic Communication specification

The parameters of the CC-Link IE Field Basic communication specification are shown in Table 4.

Number	Project	Specification
1	Agreement	CC-Link IE Field Basic (IEC 61158 Type3)
2	Transmission rate	10/100 Mbaud, automatically detects transmission speed
3	Bus interface	Equipped with dual RJ45 switches (industrial Ethernet compliant with IEEE 802.xx standard, featuring auto negotiation and auto crossover functions)
4	Communication address	The only globally unique MAC address
5	Transmission cable	CAT5e shielded cable
6	CC-Link IE Field Basic features	Media redundancy protocol (MRP), shared devices, synchronous communication
7	Port protection	Transformer isolation, 1500V DC (IEC61000-4-2)

Table 4 CC-Link IE Field Basic Communication Specifications

2.2.4 Power supply specifications

The module power supply is divided into three independent parts: the control part, the digital input, and the MOSFET digital output, which are isolated from each other. Therefore, three separate power supplies need to be provided for each part of the circuit or they can be directly connected in parallel.

- (1) The control voltage uses 24V DC (-15% / +20%), with a maximum current consumption of 0.5A, and has polarity reverse protection; the electrical isolation withstand voltage between this component and other I/O parts is 500V DC.
- (2) The input voltage for digital quantity is 24V DC (-15% / +20%), with a maximum current consumption of 16*10mA; the electrical isolation withstand voltage between this part and other I/O components is 500V DC.
- (3) The digital output section of the MOSFET uses 24V DC (-15% / +20%), with a maximum current consumption of 16 * 0.5A, and has independent overcurrent protection for each channel. The electrical isolation withstand voltage between this section and other I/O sections is 500V DC.



3. Structure description

3.1 Shell

The module adopts the standard shell design of the JP series remote I/O module. The dimensions of 16 points are: 111 * 50 * 40 (W/H/D, mm); for 32 points, they are: (180 * 50 * 40 (W/H/D, mm), the height of the lower guide rail clip is h = 5.5 mm, and it supports the IP20 protection level.

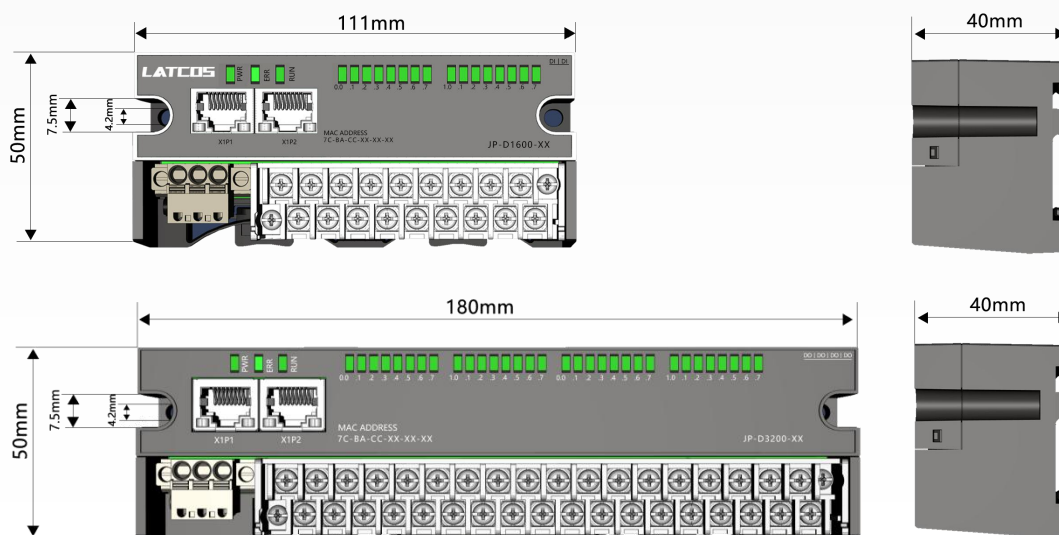


Figure 1 Module Dimension Diagram

3.2 Installation method

The design of the module adopts natural convection cooling method. At least 25 mm of space must be left above and below the device to facilitate normal heat dissipation. The distance between the front panel and the back panel should also be maintained at least 75 mm.

The module can be easily installed on a standard DIN rail or the back panel of a control cabinet. The rail specification is TS35/7.5, as shown in Figure 2.

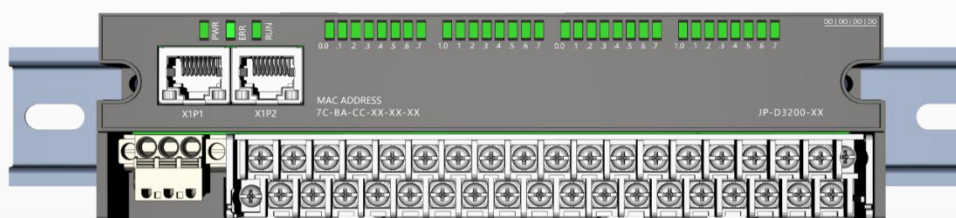


Figure 2 Installation Diagram of DIN Rails



4. Hardware description

4.1 JP-CE Structure diagram 16 points

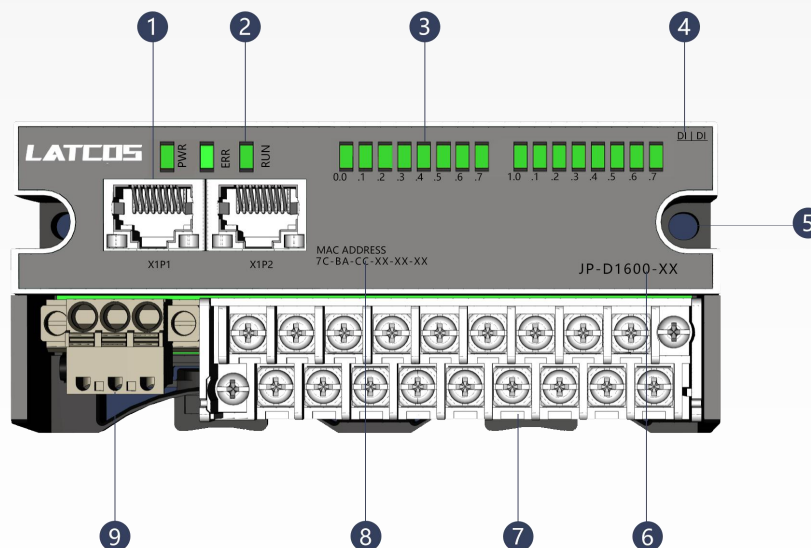


Figure 3 Module Wiring Diagram

Number	Interface Name	Function Definition
①	2 RJ45 ports Indicator light	Ethernet interface, connecting to PLC or PC end
②	Indicator light	Power supply, communication status indicator light
③	Module type	IO status indicator light
④	Installation hole	Grouped every 8 points, indicating input/output type -
⑤	Module model	-
⑥	IO terminal block	-
⑦	MAC code	Receive input and output signals, provide IO power supply
⑧	Communication power connection terminal	Unique MAC code
⑨	2 RJ45 ports Indicator light	Communication power supply

4.2 JP-CE Structure diagram 32 points

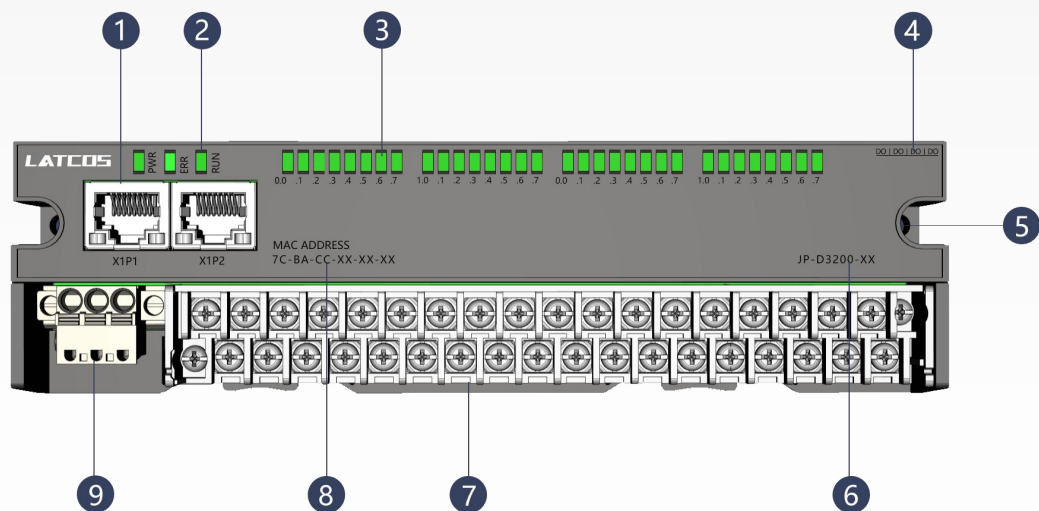


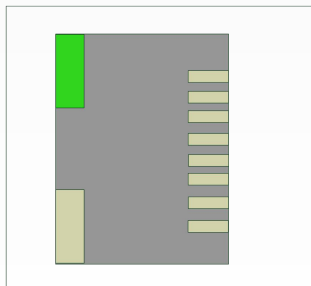
Figure 4 Module Wiring Diagram

Number	Interface Name	Function Definition
①	2 RJ45 ports Indicator light	Ethernet interface, connecting to PLC or PC end
②	Indicator light	Power supply, communication status indicator light
③	Indicator light	IO status indicator light
④	Module type	Grouped every 8 points, indicating input/output type
⑤	Installation hole	-
⑥	Module model	-
⑦	IO terminal block	Receive input and output signals, provide IO power supply
⑧	MAC code	Unique MAC code
⑨	Communication power connection terminal	Communication power supply

4.3 Communication interface

The module uses a physical interface with dual RJ45 sockets for communication, and the module itself has the function of a switch. They are respectively labeled as X1P1 and X1P2. Each port has an independent MAC address that is adjacent to the identifier on the module.

Table 5 CC-Link IE Field Basic Communication Interface



Pin	Signal	Description
1	TD+	Data transmission positive terminal
2	TD-	Data transmission negative terminal
3	RD+	Data reception positive terminal
4	NC	Unused
5	NC	Unused
6	RX-	Data reception negative terminal
7	NC	Unused
8	NC	Unused

4.4 LED Instruction

The LED indicators of the module are divided into three parts: system status indicator, I/O status indicator, and RJ45 link indicator.

4.4.1 System status indicates the working condition of the system as shown in the table.

ERR(red)	RUN(green)	PWR(green)	Explanation
○	○	○	Power supply abnormality
●	○	●	Communication interface failure
○	●	●	The module has successfully entered the operating (operate) state and successfully established a cyclic data exchange with the main station.

Table 8 System Status Indicators ● Indicates that the green light remains constantly on

● Indicates that the red light remains constantly on ○ Indicates that it is not lit

4.4.2 I/O Status Indication

The digital input/output ports use green LEDs to indicate the status of the corresponding channels. When the light is on, it indicates that the logic state of the input/output port is "1", and when the light is off, it indicates that the logic state of the input/output port is "0".

4.4.3 RJ45 indicator light

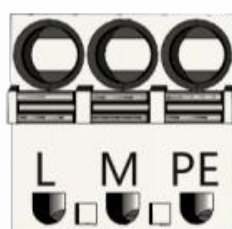
Under normal circumstances, the RJ45 port indicator lights should be the green light constantly on and the yellow light flashing. If this is not the case, it indicates that a fault has occurred. If the green light is not on, it means there is a connection fault with the RJ45 port that is connected to a Hub or switch; if the yellow light is not on, it might be a fault with the module itself.

As shown in Table 7: RJ45 Indicator Light Explanation

LINK1/LINK2	ACT1/ACT2	Explanation
○	Not related	The RJ45 port is not connected to a network cable or the connection is poor.
●	Not related	The RJ45 port has correctly identified the Ethernet network.
Not related	○	There is no data exchange at the RJ45 port.
Not related	●	There is data exchange at the RJ45 port.

Table 7 RJ45 Indicator Light Explanation

4.5 Communication power supply



24V	24V, positive terminal of the DC power supply
0V	0V, negative terminal of the DC power supply
PE	Connect to the ground

Table 8 Power Connection Terminals

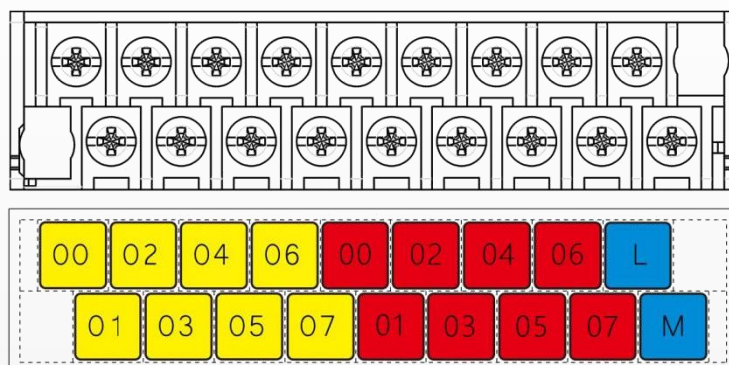
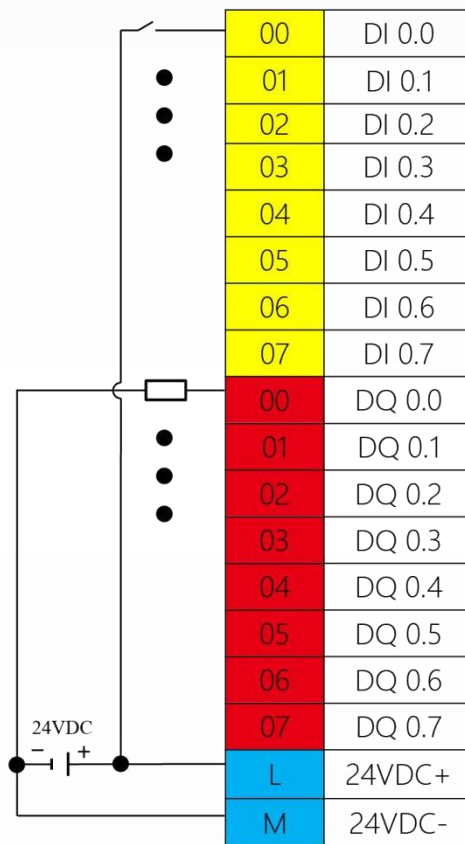
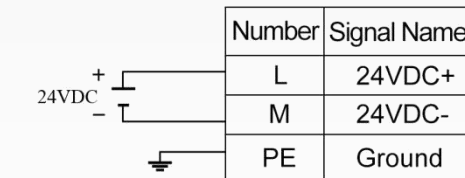
The control voltage uses 24V DC (-15% / +20%), with a maximum current consumption of 0.5A, and has polarity reverse protection; the electrical isolation withstand voltage between it and other I/O components is 500V DC.

4.6 Module terminal wiring diagram

JP-D0808P-CE

8-point digital input (PNP)

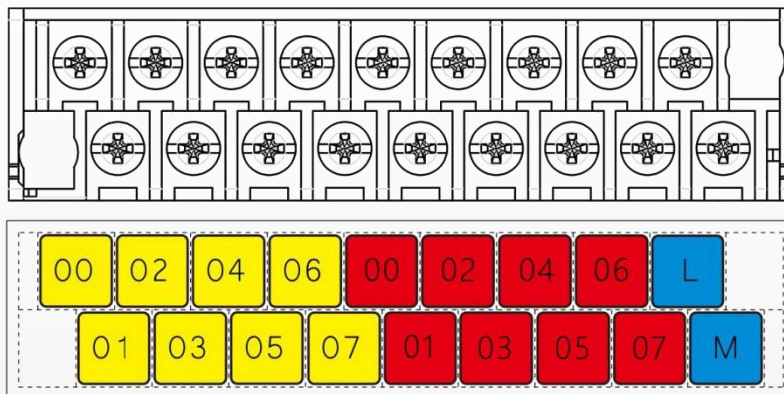
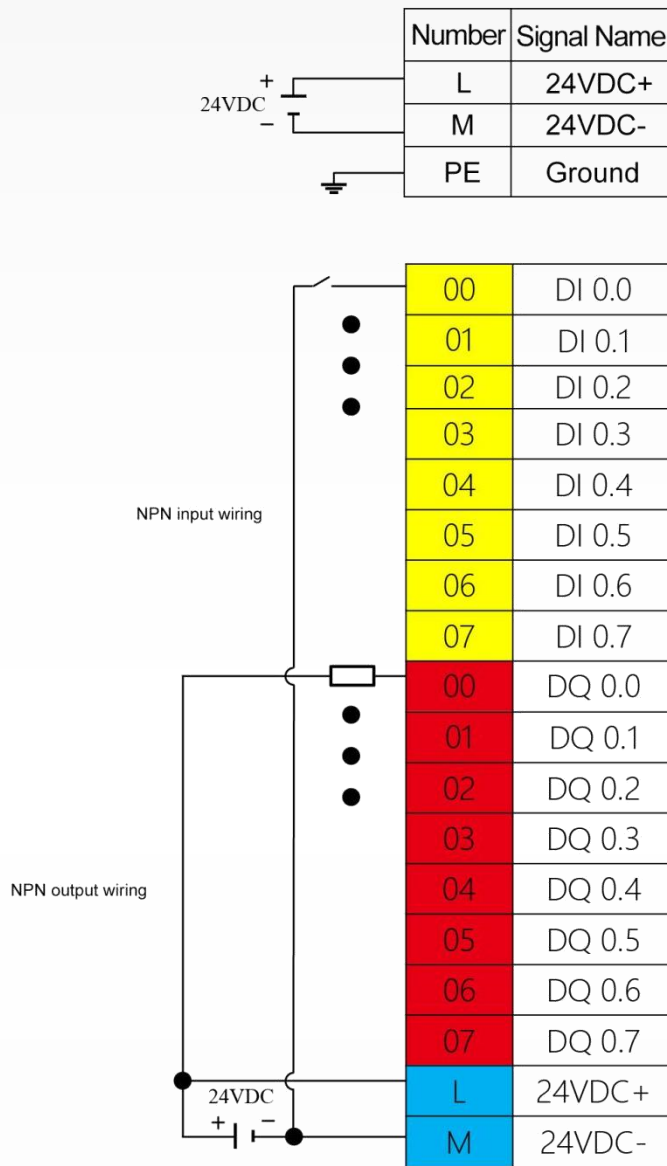
8-point digital output (PNP)



JP-D0808N-CE

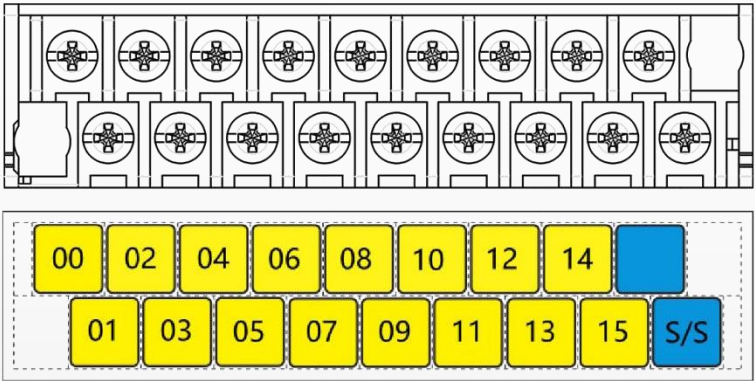
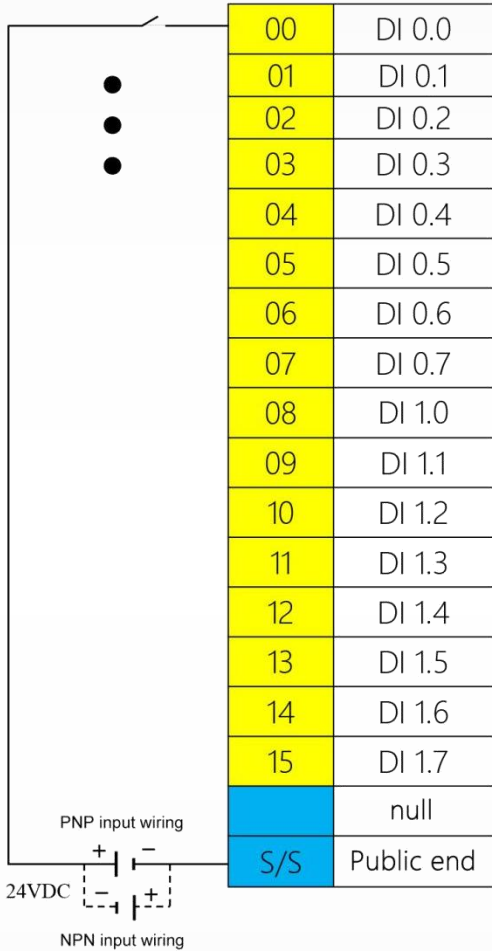
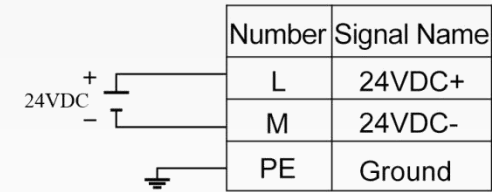
8-point digital input (NPN)

8-point digital output (NPN)



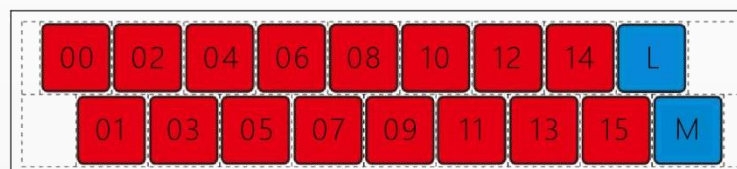
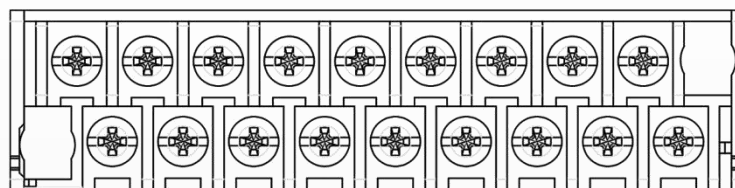
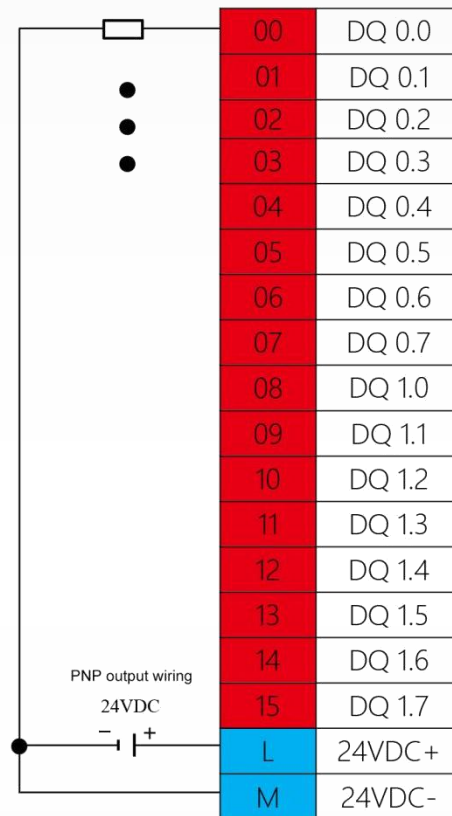
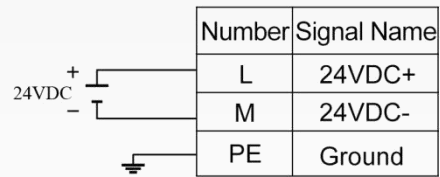
JP-D1600-CE

16-bit digital input PNP/NPN



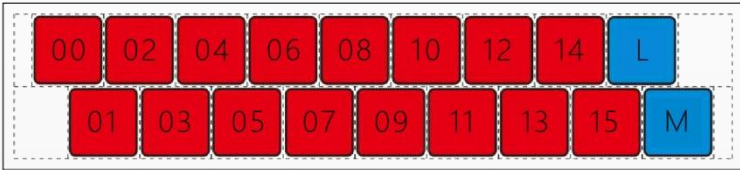
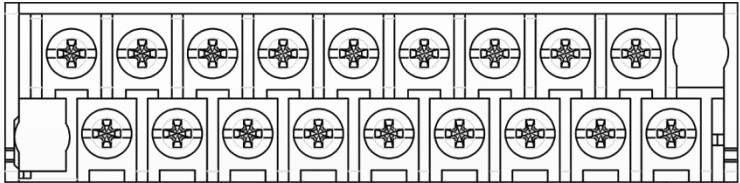
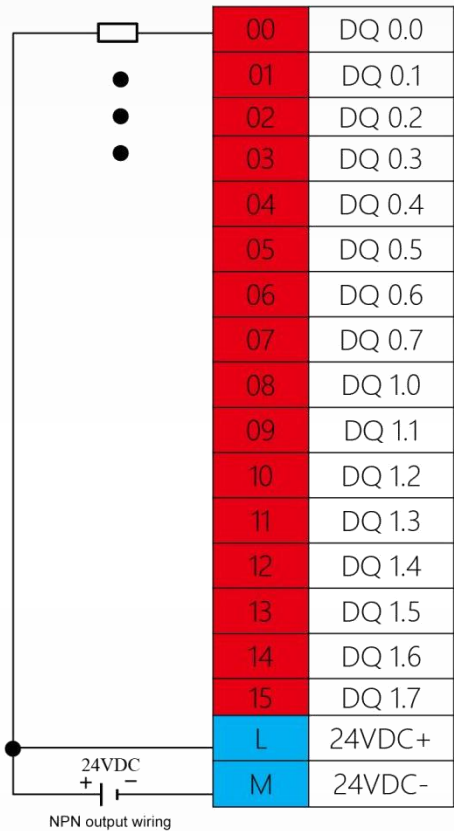
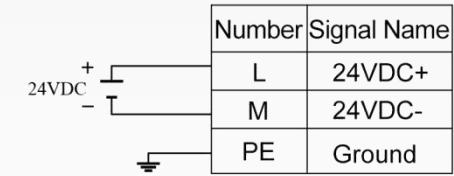
JP-D0016P-CE

16-bit digital output PNP



JP-DO016N-CE

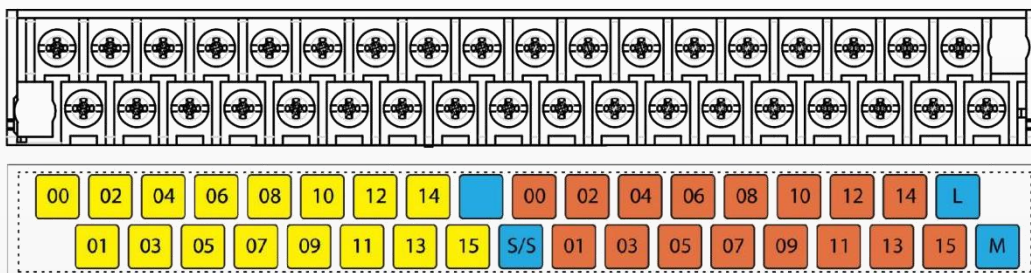
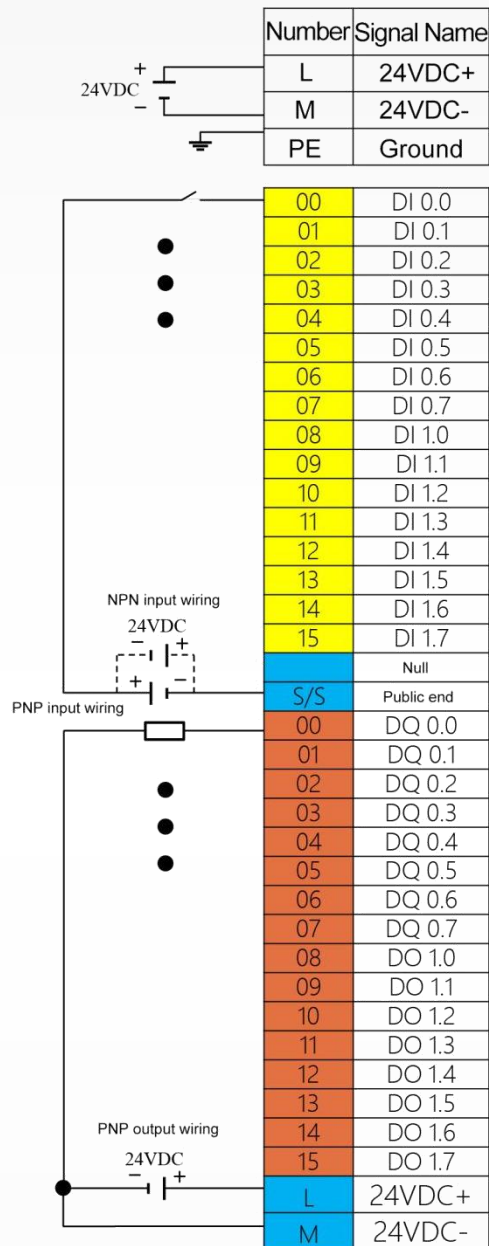
16-bit digital output NPN



JP-D1616P-CE

16-bit digital input PNP/NPN

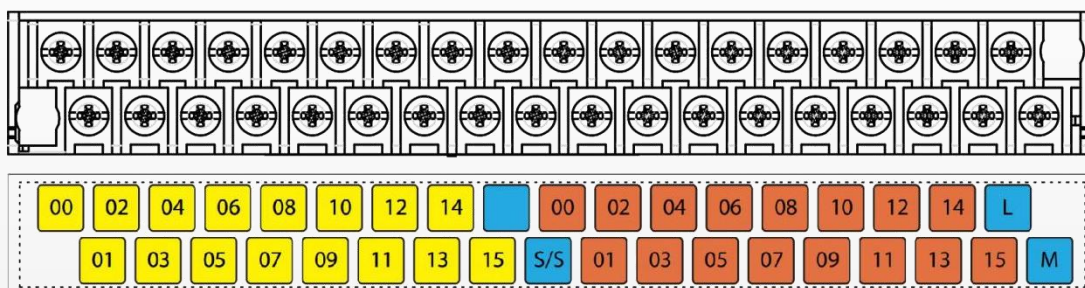
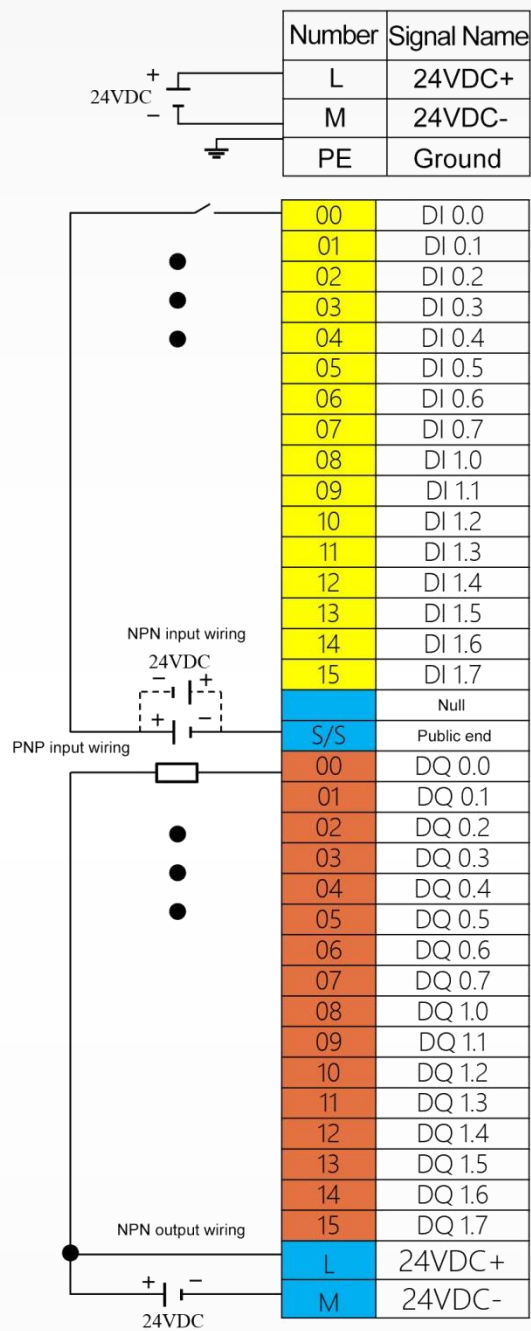
16-bit digital output PNP



JP-D1616N-CE

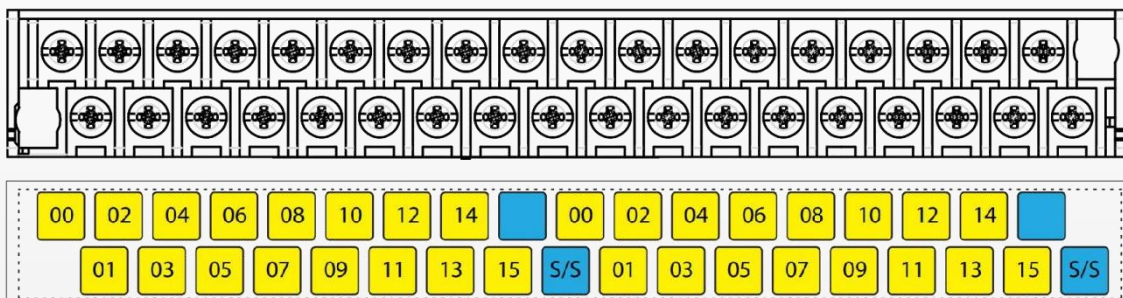
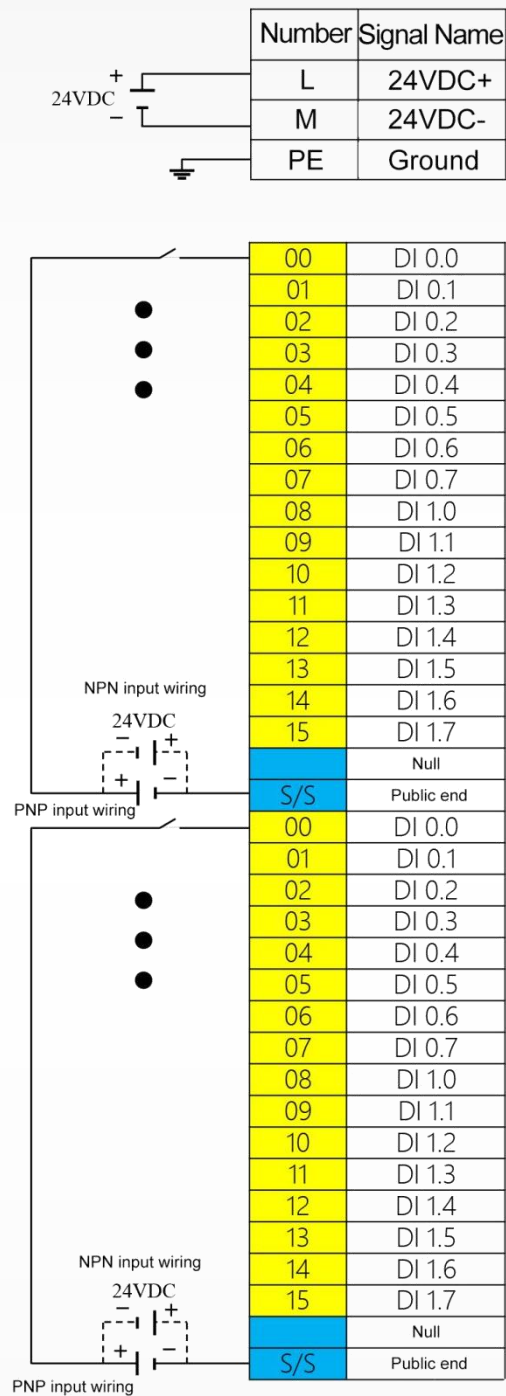
16-bit digital input PNP/NPN

16-bit digital output NPN



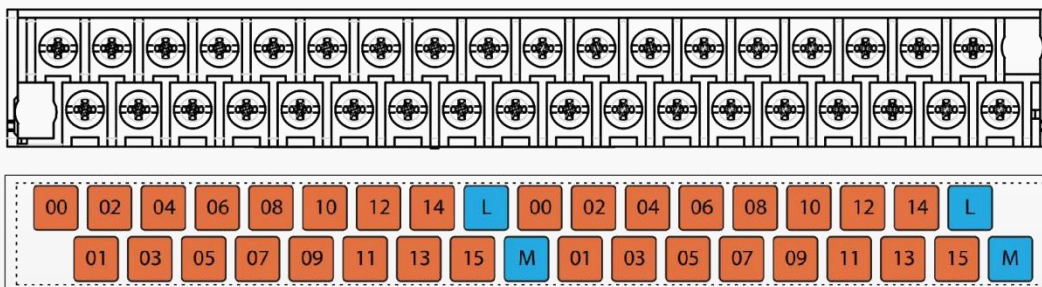
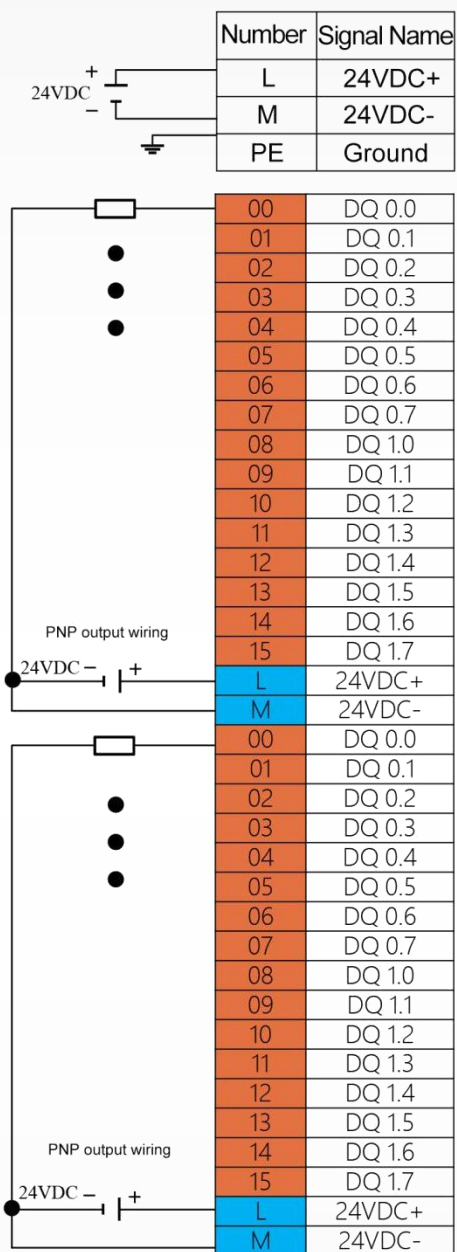
JP-D3200-CE

32-point digital input, PNP/NPN type



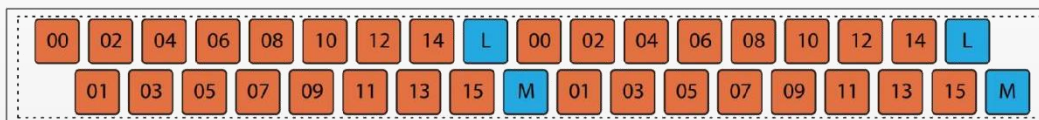
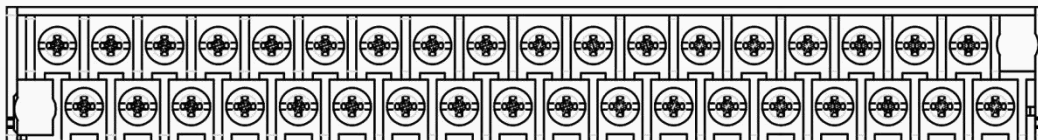
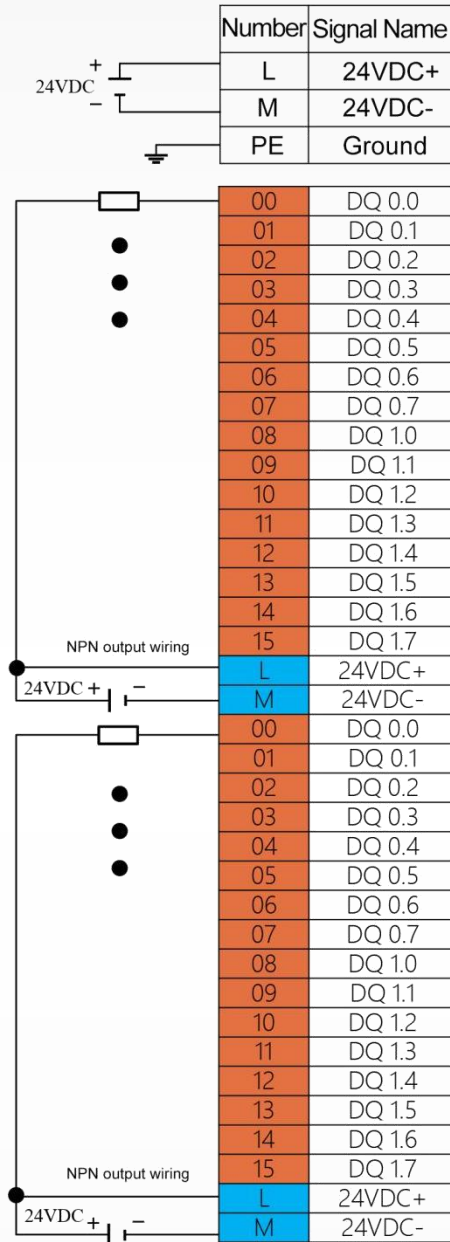
JP-D0032P-CE

32-point digital output PNP



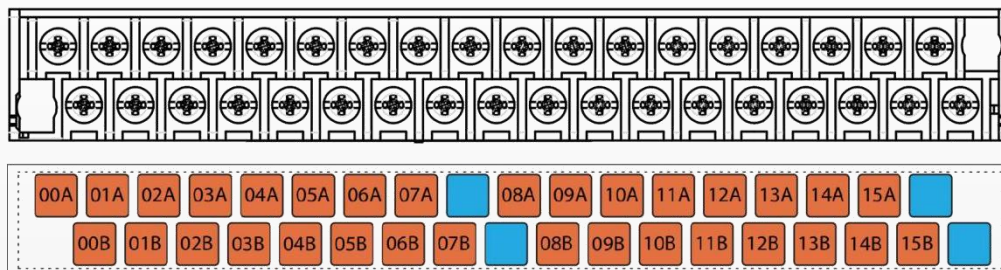
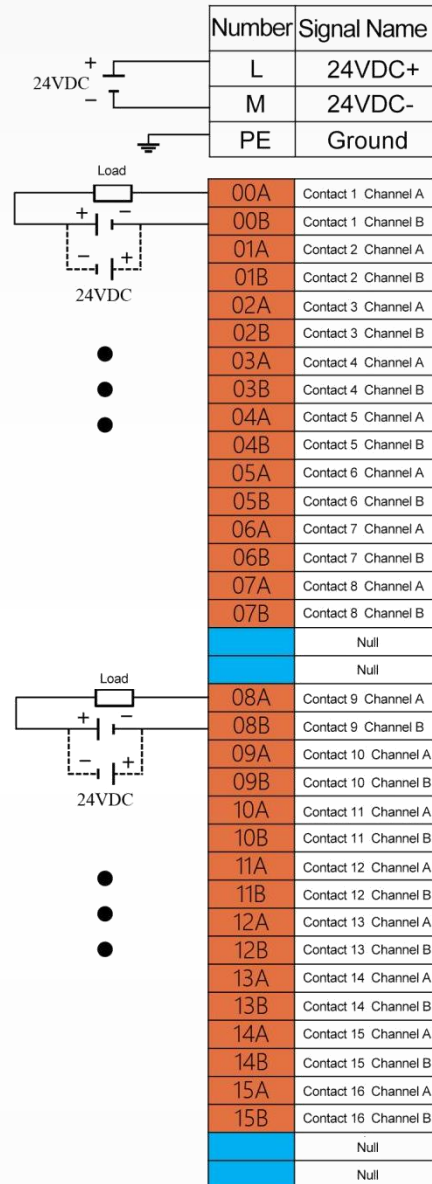
JP-D0032N-CE

32-point digital output NPN



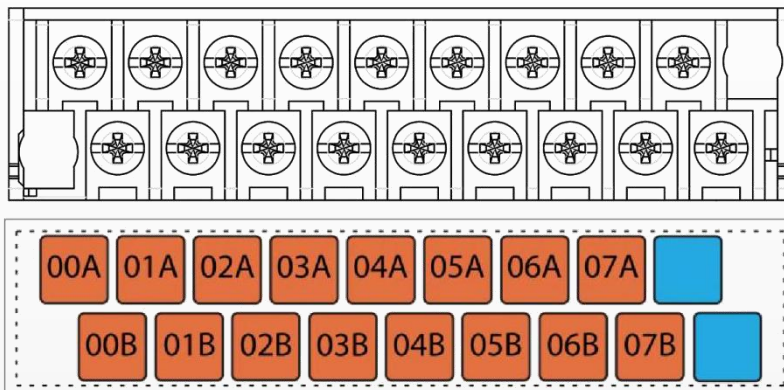
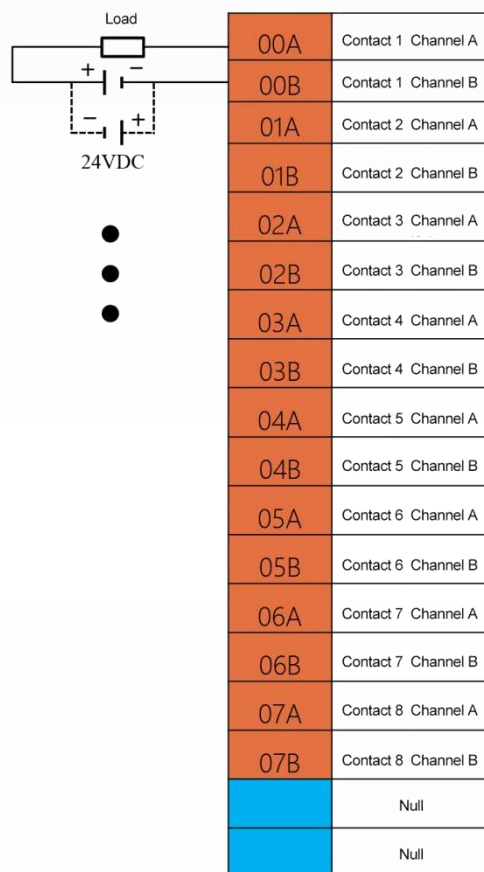
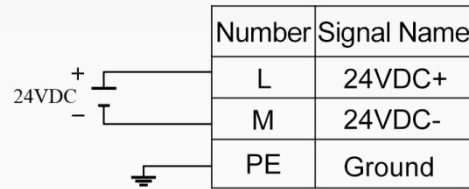
JP-D0016R-CE

Digital 16-point relay output PNP/NPN



JP-D0008R-CE

Digital 8-point relay output PNP/NPN





5.Ethernet protocol

5.1 What is CC-Link IE Field Basic ?

- In small-scale field network equipment, CC-Link IE Field Basic communication is achieved using standard Ethernet.
- The communication of CC-Link IE Field Basic using standard Ethernet technology is very easy to apply to small-scale devices. It does not require high-speed control or more convenient application and development. The cyclic communication of CC-Link IE Field Basic is implemented by software.
- The system is easier to develop and can provide rich corresponding equipment more quickly.
- This communication can also be accomplished using standard Ethernet TCP/IT communication (HTTP, FTP, etc.).
- There is no need for dedicated wiring control. Use the unified Ethernet.
- The master station can be easily realized using IPC or personal computers.
- The master station does not require a dedicated interface to achieve.
- The cyclic communication is completed based on the example source code through the development of application software on the Ethernet.
- The field network system compatible with standard Ethernet communication can be constructed at a low cost.

5.2 Network topology

The following figure illustrates the typical network layout of CC-Link IE Field Basic IO. As shown in Figures 5-1, 5-2, 5-3

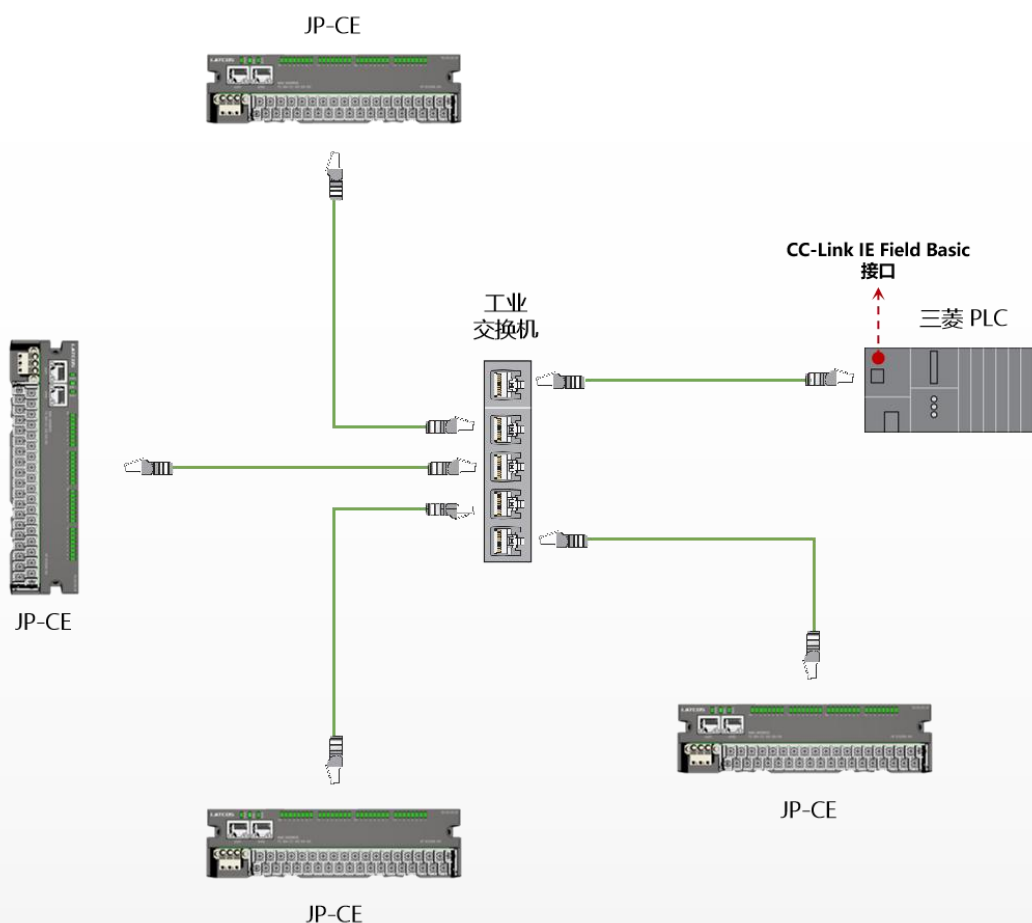


Figure 5-1 CC-Link IE Field Basic Star Network Topology Structure

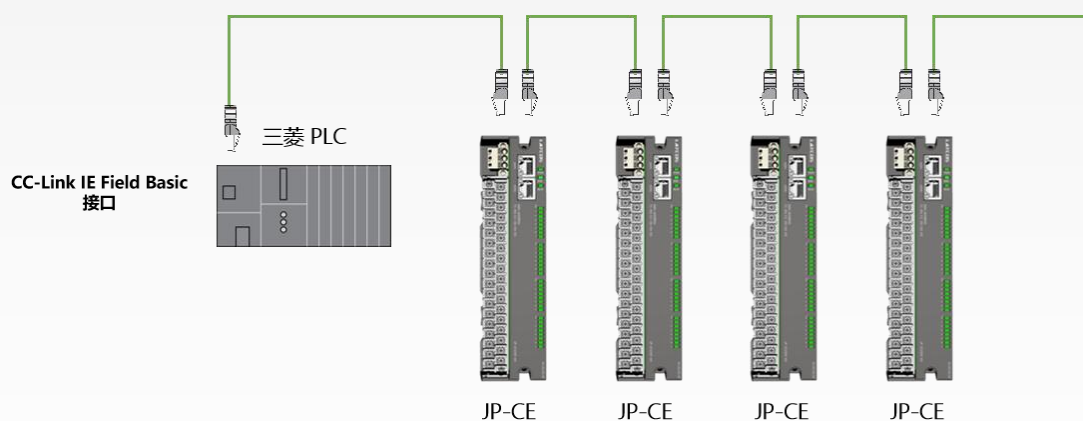


Figure 5-2 CC-Link IE Field Basic Daisy Chain Topology Structure

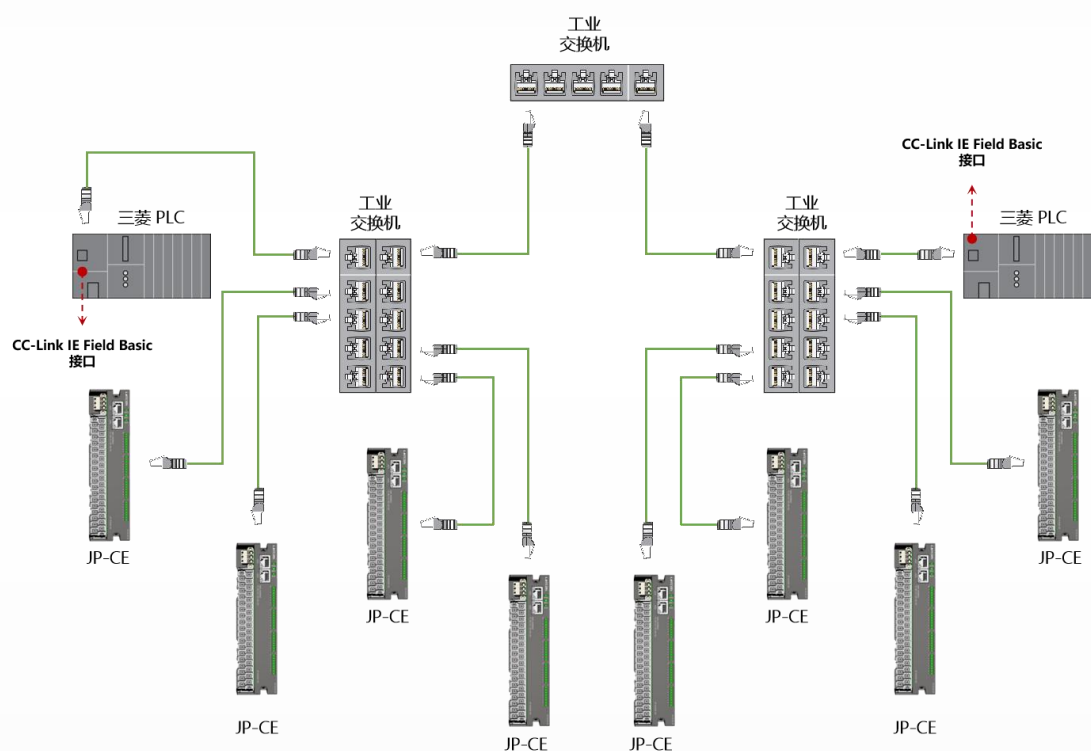


Figure 5-3 CC-Link IE Field Basic Tree Network Topology Structure

5.3 Module parameters

Each module has specific parameters, which need to be flexibly configured in the hardware setup according to the actual situation. The parameters can be configured and downloaded using the LAEconfig software. For detailed instructions, please refer to the LAEconfig manual.

JP-D0808X-CE Parameter configuration definition

Output data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	Input filtering time (Filter)							
Data Explanation								
Parameter Name		Organizati on	Format	Input ran ge	Explanation			
Chinese	English							
Input filtering time	Filter	ms	Decimal system	0-255				
				(Default: 5)				
Output data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode
(DO Error_Mode bits 0-7)	For 7	For 6	For 5	For 4	For 3	For 2	For 1	For 0
BYTE 1	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For
(DO Error_Value bits 0-7)	7	6	5	4	3	2	1	0
Data Explanation								
Parameter Name		Organizati on	Format	Input ran ge	Explanation			
Chinese	English							
Fault mode enable Fault value - Safe state value	DO Error_Mode bits	-	Decimal system	0-255	The fault safety status value of the DQ0.x port is enabled. The binary bit of this parameter corresponds to the DQ0.x port (Bit 0 corresponds to DQ-0.0, and so on). When the module enters the fault safety state, if the corresponding bit of "Error Mode" is "1", the value of the corresponding bit of "Error Value[7..0]" is output to the respective DQ0.x port.			
				(Default: 0)				
Fault mode enable	DO Error_Value bits	-	Decimal system	0-255	If the binary bit corresponding to the "Error Mode[7..0]" parameter is set to enable, when the system enters the fault-safe state, the value of this parameter will be output to the DQ port.			
				(Default: 0)				

JP-D0016X-CE Parameter configuration definition

Output data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode
(DO Error_Mode bits 0-7)	For 7	For 6	For 5	For 4	For 3	For 2	For 1	For 0
BYTE 1	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For
(DO Error_Value bits 0-7)	7	6	5	4	3	2	1	0
Data Explanation								
Parameter Name		Organization	Format	Input range	Explanation			
Chinese	English							
Fault mode enable Fault value - Safe state value	DO Error_Mode bits	-	Decimal system	0-255	The fault safety status value of the DQ0.x port is enabled. The binary bit of this parameter corresponds to the DQ0.x port (Bit 0 corresponds to DQ-0.0, and so on). When the module enters the fault safety state, if the corresponding bit of "Error Mode" is "1", the value of the corresponding bit of "Error Value[7..0]" is output to the respective DQ0.x port.			
				(Default : 0)				
Fault mode enable	DO Error_Value bits	-	Decimal system	0-255	If the binary bit corresponding to the "Error Mode[7..0]" parameter is set to enable, then when the system enters the fault-safe state, the value of this parameter will be output to the DQ port.			
				(Default : 0)				

JP-D1600-CE Parameter configuration definition

Input data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	Input filtering time (Filter)							
Data Explanation								
Parameter Name		Organizati on	Format	Input ran ge	Explanation			
Chinese	English							
Input filtering time	Filter	ms	Decimal system	0-255				

JP-D3200-CE Parameter configuration definition

Input data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	Input filtering time (Filter)							
Data Explanation								
Parameter Name		Organizati on	Format	Input ran ge	Explanation			
Chinese	English							
Input filtering time	Filter	ms	Decimal system	0-255				
				(Default: 5)				

JP-D0032X-CE Parameter configuration definition

Output data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode
(DO Error_Mode bits 0-7)	For 7	For 6	For 5	For 4	For 3	For 2	For 1	For 0
BYTE 1	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For
(DO Error_Value bits 0-7)	7	6	5	4	3	2	1	0
BYTE 2	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode	DO Error_Mode
(DO Error_Mode bits 8-15)	For 15	For 14	For 13	For 12	For 11	For 10	For 9	For 8
BYTE 3	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For	DO Error Value For
(DO Error_Value bits 8-15)	15	14	13	12	11	10	9	8
.	16-31 Refer to the above configuration							

Data Explanation

Parameter Name		Organiza tion	Format	Input ran ge	Explanation
Chinese	English				
Fault mode enable Fault value - Safe state value	DO Error_Mod e bits	-	Decimal system	0-255 (Default: 0)	The fault safety status value of the DQ0.x port is enabled. The binary bit of this parameter corresponds to the DQ0.x port (Bit 0 corresponds to DQ-0.0, and so on). When the module enters the fault safety state, if the corresponding bit of "Error Mode" is "1", the value of the corresponding bit of "Error Value[7..0]" is output to the respective DQ0.x port.
Fault mode enable	DO Error_Valu e bits	-	Decimal system	0-255 (Default: 0)	If the binary bit corresponding to the "Error Mode[7..0]" parameter is set to enable, when the system enters the fault-safe state, the value of this parameter will be output to the DQ port.

JP-D1616X-CE Parameter configuration definition

Input data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	Input filtering time (Filter)							
Data Explanation								
Parameter Name		Organization	Format	Input range	Explanation			
Chinese	English							
Input filtering time	Filter	ms	Decimal system	0-255				
				(Default: 5)				
Output data								
BIT No	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode
(DO_Error_Mode bits 0-7)	For 7	For 6	For 5	For 4	For 3	For 2	For 1	For 0
BYTE 1	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For
(DO_Error_Value bits 0-7)	7	6	5	4	3	2	1	0
BYTE 2	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode	DO_Error_Mode
(DO_Error_Mode bits 8-15)	For 15	For 14	For 13	For 12	For11	For 10	For 9	For 8
BYTE 3	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For	DO_Error_Value For
(DO_Error_V alue bits8-15)	15	14	13	12	11	10	9	8
Data Explanation								
Parameter Name		Organization	Format	Input range	Explanation			
Chinese	English							
Fault mode enable Fault value - Safe state value	DO_Error_Mode bits	-	Decimal system	0-255	The fault safety status value of the DQ0.x port is enabled. The binary bit of this parameter corresponds to the DQ0.x port (Bit 0 corresponds to DQ-0.0, and so on). When the module enters the fault safety state, if the corresponding bit of "Error Mode" is "1", the value of the corresponding bit of "Error Value[7..0]" is output to the respective DQ0.x port.			
				(Default: 0)				
Fault mode enable	DO_Error_V alue bits	-	Decimal system	0-255	If the binary bit corresponding to the "Error Mode[7..0]" parameter is set to enable, when the system enters the fault-safe state, the value of this parameter will be output to the DQ port.			
				(Default: 0)				



6.Module connection and configuration

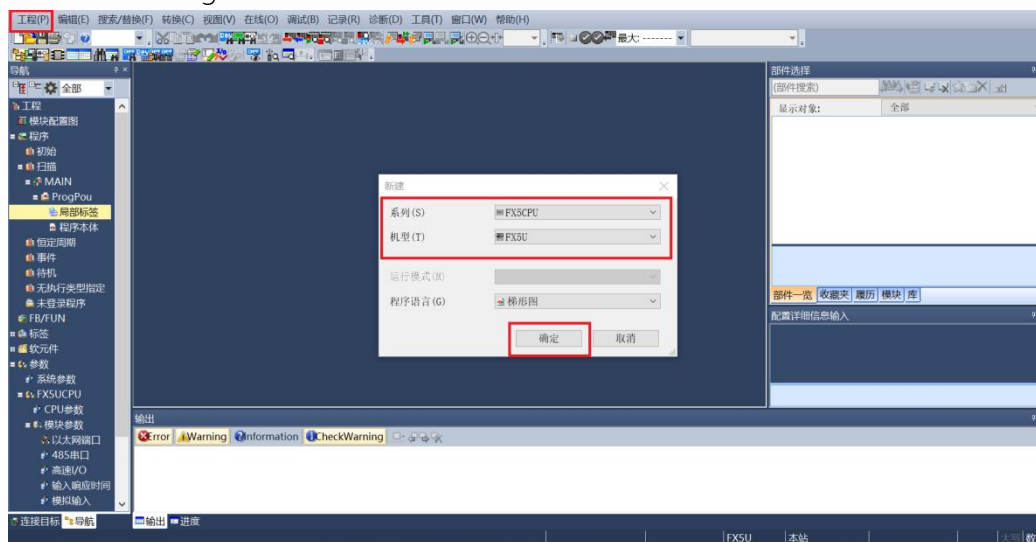
6.1 Connection and configuration of GX Words 3 with the CC-Link IE Field Basic protocol IO module

6.1.1 Distributed IO Address Configuration

Before communication, set the address of the distributed IO. For address setting, please refer to the user manual of the LAEConfig software.

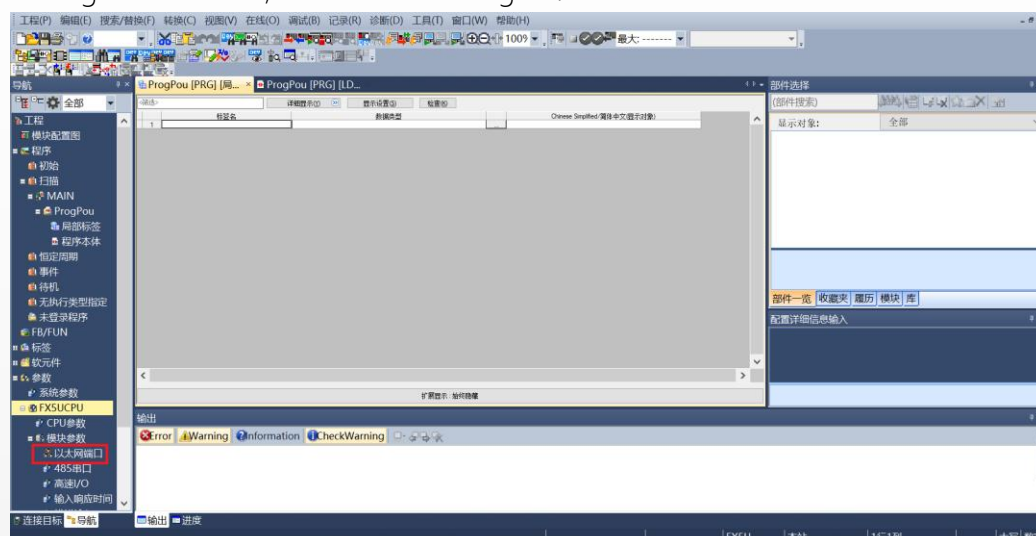
6.1.2 New construction project

Open the GX Words 3 software, select "Project" and then "New" from the menu bar. Choose the PLC series and select the CPU model. Take the 5U series CPU as an example, as shown in the figure.

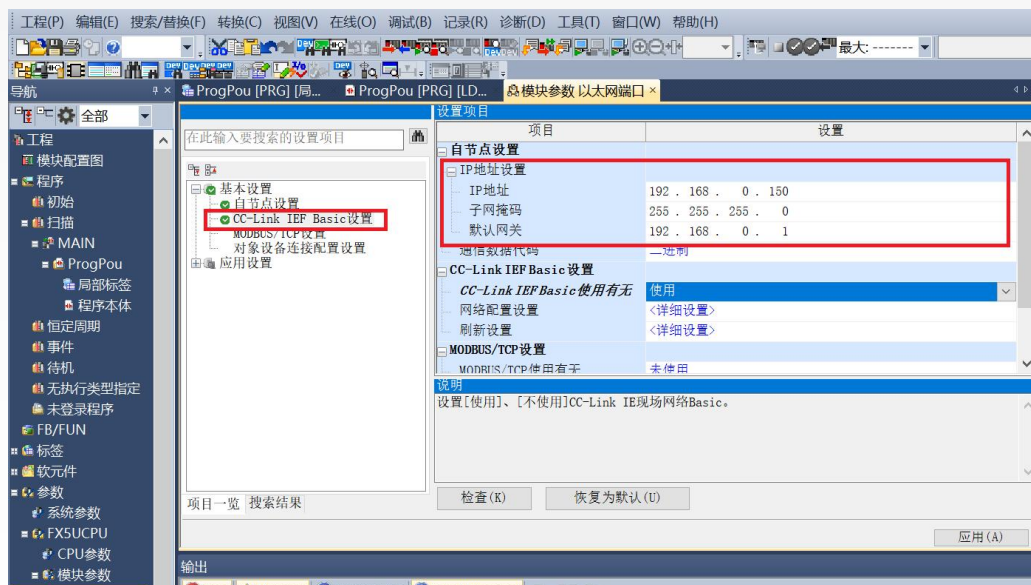


6.1.3 CC-Link IE Field Basic Parameter settings

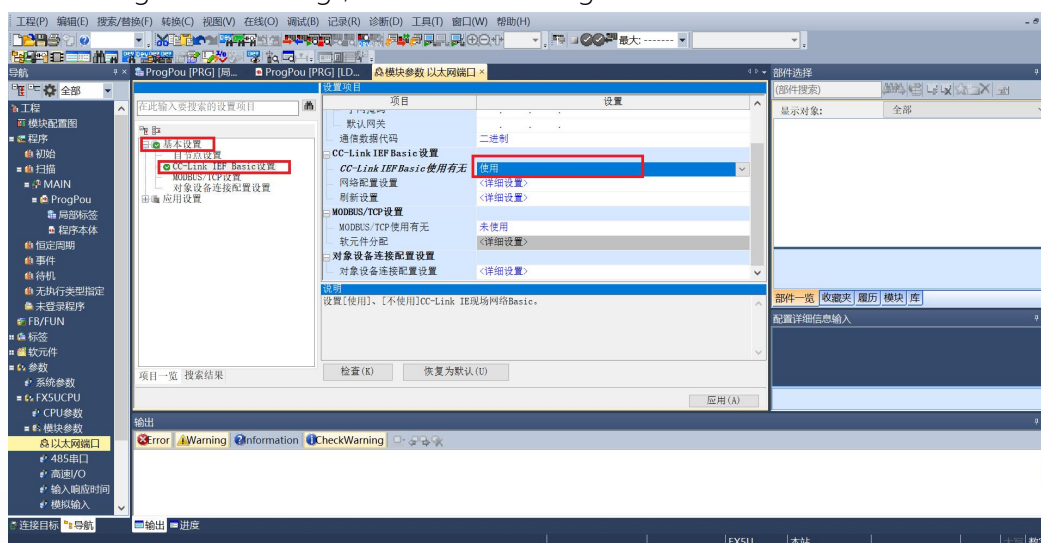
Select the "Parameters/FX5UCPU/Module Parameters/Ethernet Port" option in the left navigation window, as shown in the figure.



Set the IP address and subnet mask of the PLC master station as shown in the figure.

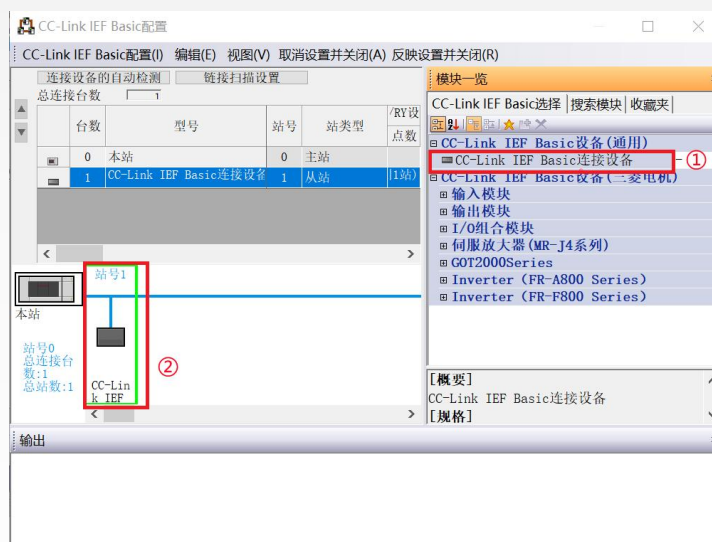


After setting the main station address and subnet mask, in the CC-Link IE Field Basic settings window, check the option to use CC-Link IE Field Basic and set the network configuration settings, as shown in the figure.

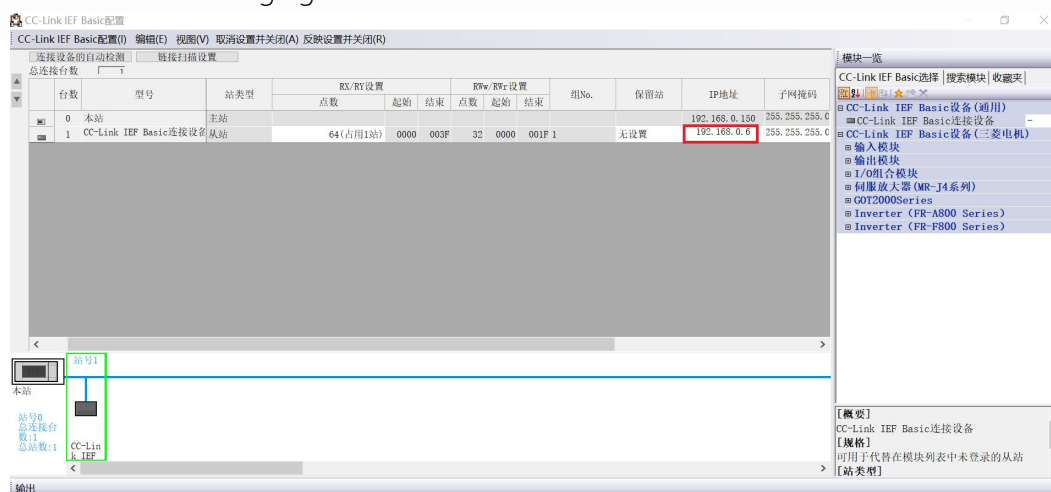


Manually add the module. In the CC-Link IE Field Basic configuration window, directly drag the right IO module onto the CPU configuration area below, as shown in the figure.

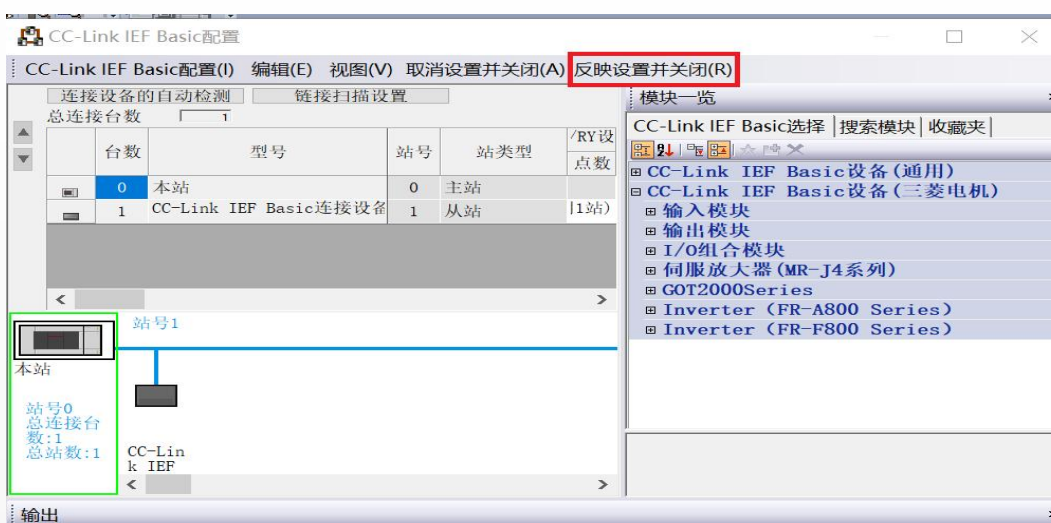




Change the IP address of CC-Link IE Field to be the same as the module address, as shown in the following figure.

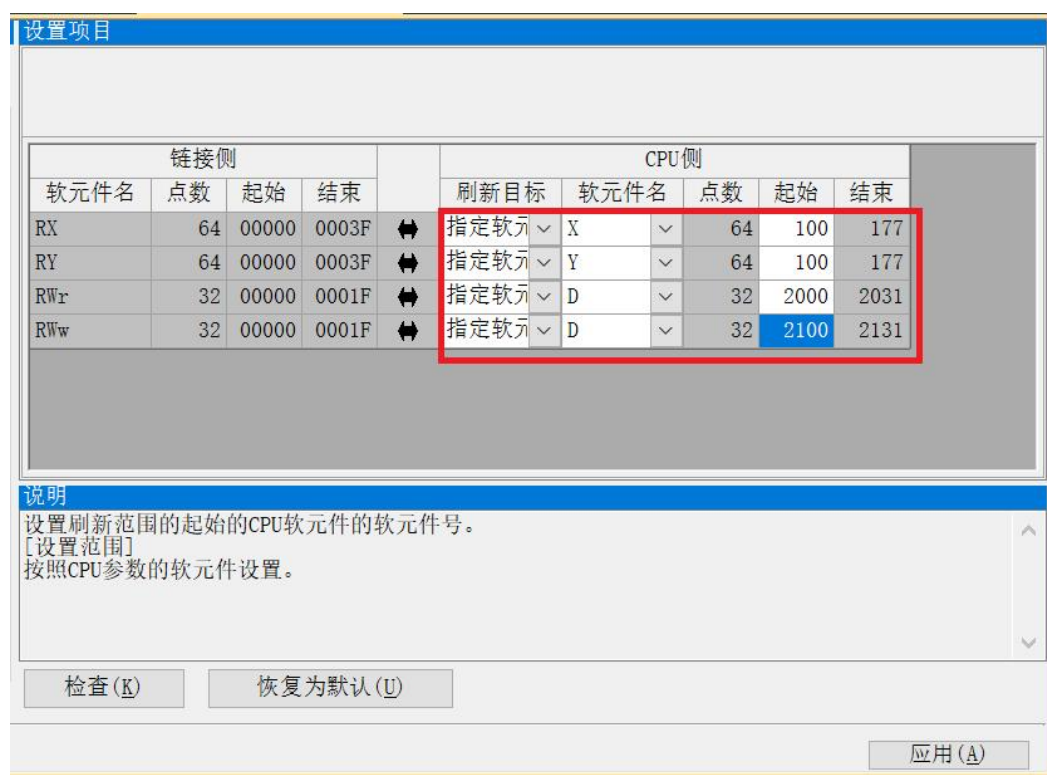
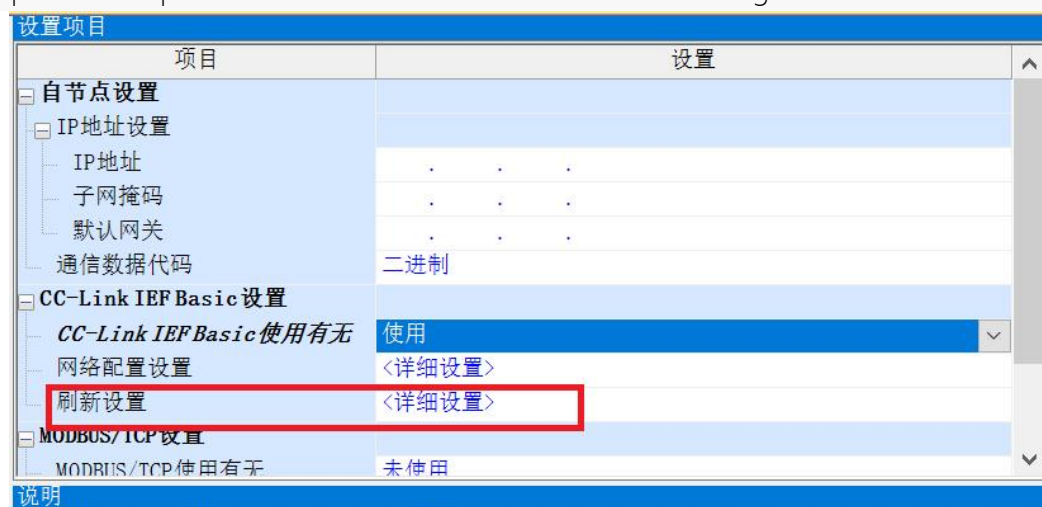


Then click "Set Feedback and Close" as shown in the figure.



6.1.4 IO mapping configuration

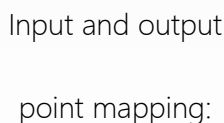
In the CC-Link IE Field Basic configuration window, set the starting points of the input and output of the remote IO module as shown in the figure.



```

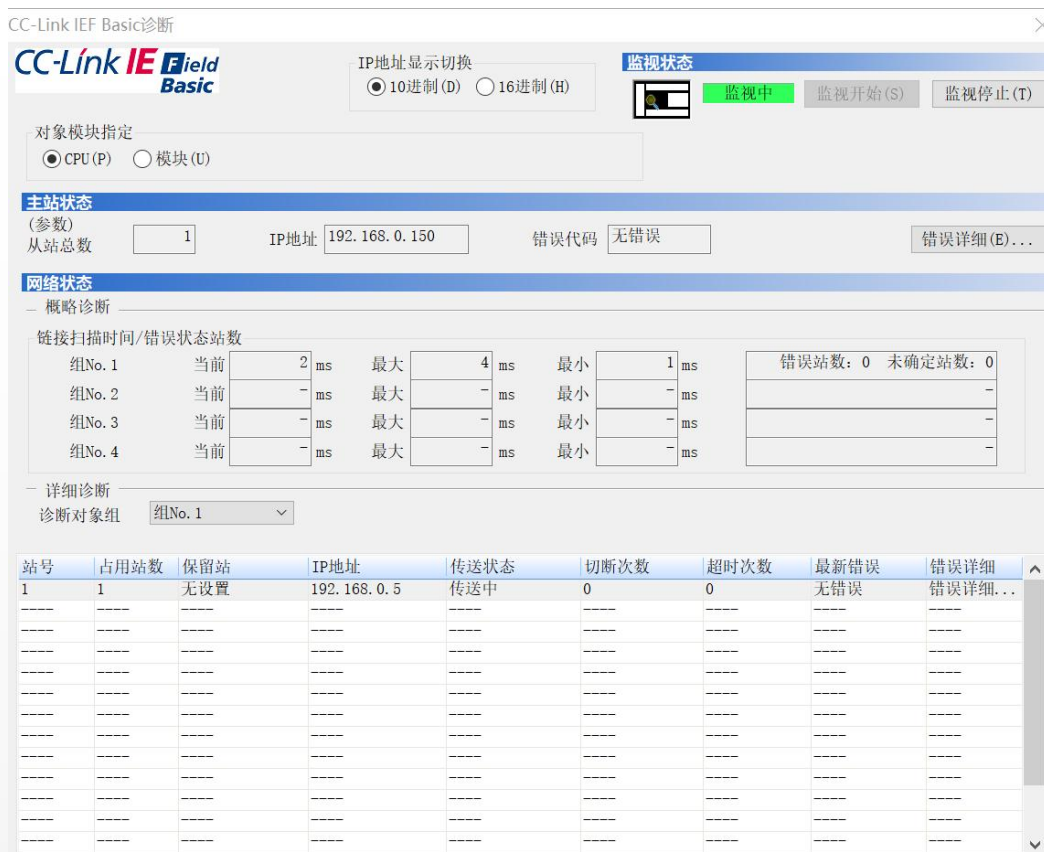
graph LR
    A["-Link IE  
and Basic  
in Station 0"] --- B["RemotelO  
Slave 1"]
    B --- C["RemotelO  
Slave 2"]
    C --- D["RemotelO  
Slave 3"]
    D --- E["RemotelO  
Slave 4"]

```



6.1.5 Diagnose communication status

After completing the parameter configuration, the project can be downloaded to the PLC. Then, the communication status can be detected through online diagnosis. In the menu bar, select "Diagnosis", and in the CC-Link IE Field Basic diagnosis window, you can view the status of the slave station IO module, as shown in the figure.



Official website



先进自动化控制及工业网络技术



Copyright © 2023Wuxi Latcos Automation Technology, Inc. All rights reserved.

Wuxi Lingke Automation Technology Co., Ltd. www.latcos.cn

Company Tel: **0510-85888030**