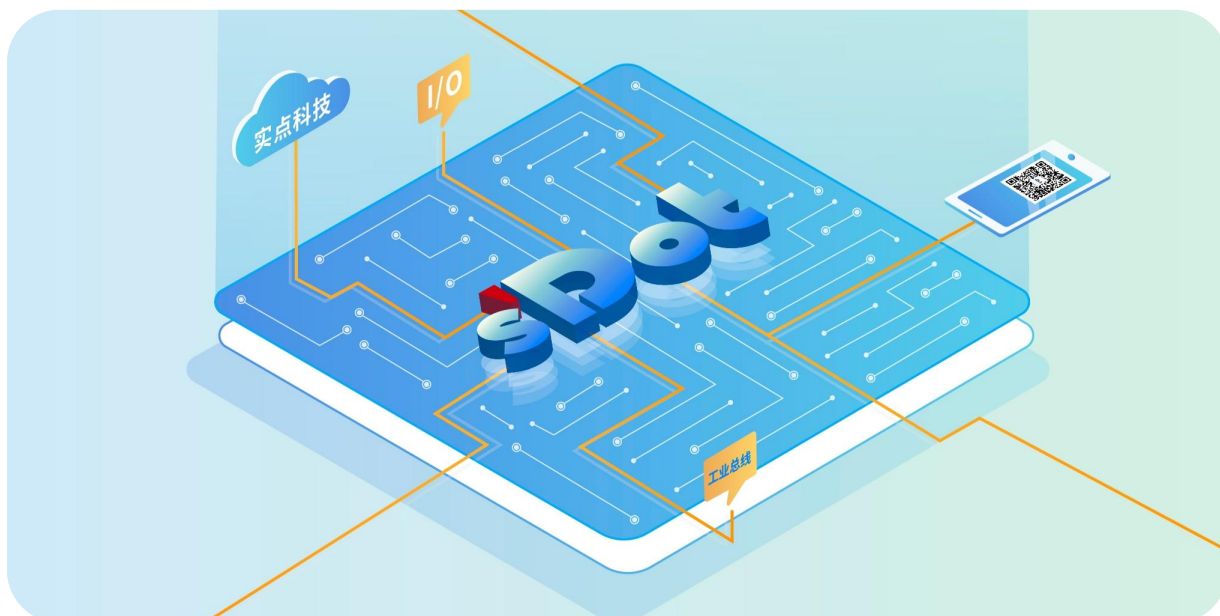




EtherCAT

EC3A Series Integrated I/O

User Manual



Nanjing Solidot Electronic Technology Co., Ltd.

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Nanjing Solidot Electronic Technology Co., Ltd.

Address: 11th Floor, Angying Building, No. 91 Shengli Road, Jiangning District, Nanjing, Jiangsu Province

Postal code: 211106

Telephone: 4007788929

Website: <http://www.solidotech.com>

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1 Product Overview

1.1 Product Introduction

The EC3A series integrated I/O modules adopt the EtherCAT industrial Ethernet bus interface and are standard I/O architecture EtherCAT slave devices. They are compatible with EtherCAT networks from multiple manufacturers, providing users with a variety of options for high-speed data acquisition, optimized system configuration, simplified field wiring, and improved system reliability.

1.2 Product Features

- **Input compatibility function**
Digital input signals are compatible with both NPN and PNP.
- **ultra-thin**
Its height is only 35 mm.
- **High-speed**
Based on a high-performance EtherCAT ASIC communication chip, with a parallel interface, it offers faster speeds.
- **Easy to diagnose**
The innovative channel indicator light design is placed close to the channel, making the channel status clear at a glance and facilitating inspection and maintenance.
- **Easy configuration**
It is easy to configure and supports major mainstream EtherCAT master stations.
- **Easy installation wiring**
Mounted on DIN 35 mm standard rails.
Screw-fixed terminal blocks ensure stable and quick wiring.

2 Naming Rules

2.1 Naming Rules

EC **3A** - **16** **16** **A**
(1) **(2)** **(3)** **(4)** **(5)** **(6)**

serial number	meaning	Value description		
(1)	bus protocol	EC: Abbreviation for EtherCAT protocol		
(2)	Product Series	3A: Integrated I/O		
(3)	I/O types	Default: Digital value		
(4)	Number of input signal points	16: 16-channel input	32: 32-channel input	00:0 channel input
(5)	Number of output signal points	16: 16-channel output	32: 32-channel output	00:0 channel output
(6)	signal type	A: NPN	B: PNP	Default: Compatible with NPN & PNP

2.2 Model List

Model	Product Description
EC3A-3200	32-channel digital input module, compatible with NPN & PNP
EC3A-1616A	16-channel digital input/output module, NPN type
EC3A-1616B	16-channel digital input/output module, PNP type

EC3A-0032A	32-channel digital output module, NPN type
EC3A-0032B	32-channel digital output module, PNP type

3 Product Parameters

3.1 General parameters

Interface parameters	
Bus protocol	EtherCAT
Number of I/O stations	According to the main station
Data transmission medium	UTP or STP of Category 5 or higher (STP recommended)
Transmission distance	≤100m (distance between stations)
Transmission rate	100Mbps
Bus interface	2×RJ45
Technical parameters	
Configuration method	Via the main station
power supply	SELV Input 24VDC (18V~36V)
Electrical isolation	500VAC
Rated current consumption	200mA
Power consumption	4.8W
weight	170g
size	100×96×35mm
Operating temperature	-20°C~+60°C
Storage temperature	-20°C~+75°C
relative humidity	95%, no condensation
Altitude	≤2000m

Pollution level	Level 2
Protection level	IP20

3.2 Digital parameters

Digital input	
Rated voltage	SELV Input 24VDC (18V~30V)
signal points	16, 32
signal type	NPN/PNP
"0" signal voltage (NPN)	15~30V
"1" signal voltage (NPN)	-3~+3V
"0" signal voltage (PNP)	-3~+3V
"1" signal voltage (PNP)	15~30V
Input filter	3ms
Input current	4mA
Isolation methods	Optical isolation
Isolation and withstand voltage	500VAC
Channel indicator lights	Green LED lights
Digital output	
Rated voltage	SELV Input 24VDC (18V~30V)
signal points	16, 32
signal type	NPN/PNP
Load type	Resistive load, inductive load
Single-channel rated current	Max: 500mA
Port protection	Overvoltage protection, overcurrent protection
Isolation methods	Optical isolation
Isolation and withstand voltage	500VAC
Channel indicator lights	Green LED lights

4 Panel

4.1 Product Structure

Product Part Names and Functional Descriptions



serial number	name	Description
①	Terminal block dust cover	Can be opened directly
②	System logos and indicator lights	Indicates power supply, module operation, and network port status.
③	Module identifier	Mark product model and channel type
④	Guide rail slot	Suitable for mounting on DIN 35 mm guide rails
⑤	Bus interface	2×RJ45
⑥	Channel type identifier	DI digital input DO digital output
⑦	Channel indicator lights	Indicates the signal status of the corresponding channel.

	and signs	
⑧	Terminal blocks	Screw-fixed terminal blocks
9	Buckle	Fixed guide rail buckle

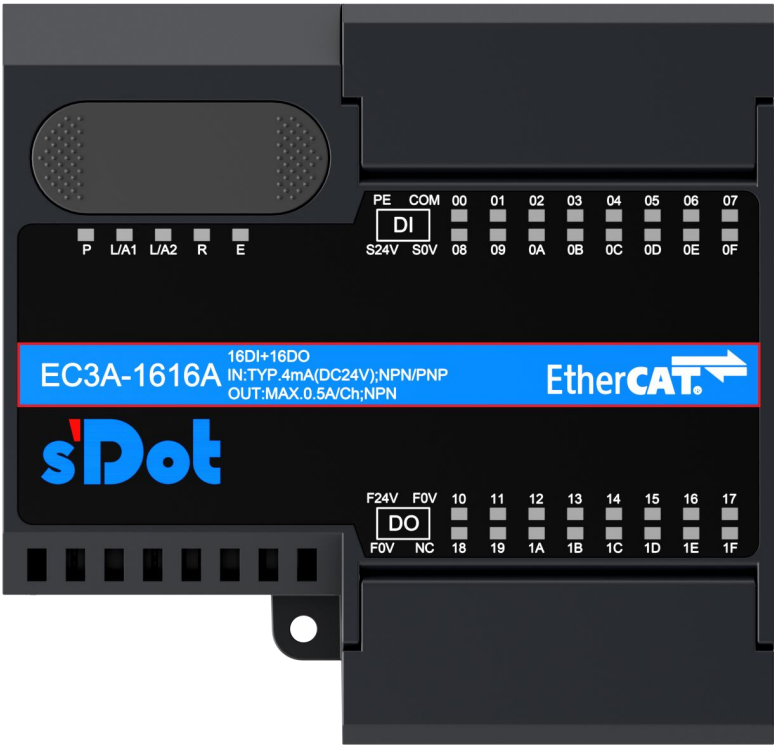
4.2 Indicator light function

name	logo	color	state	Status Description
Power indicator light	P	green	ON	Power supply is normal
			OFF	The product is not powered on or the power supply is abnormal.
Network indicator IN	L/A1	green	ON	Establish network connection
			OFF	No network connection or error
		yellow	Flashing	Connection established and data exchanged
			OFF	No data interaction or anomaly
Network indicator light OUT	L/A2	green	ON	Establish network connection
			OFF	No network connection or error
		yellow	Flashing	Connection established and data exchanged
			OFF	No data interaction or anomaly
RUN status indicator	R	green	ON	The system is running normally.
			Flashing at 3Hz	The device is in Pre-OP state
			Single flash (steady on for 200ms, then off for 1200ms, cycling through different modes)	The device is in Safe-OP state
			OFF	The device is in Init or not powered.
Fault indicator light [1]	E	red	Double flash ^[2]	EtherCAT watchdog timeout
			Single flash (steady on for 200ms, then off for 1 second, cycling through different modes).	Module local error
			Flashing at 2.5Hz	Common configuration error
			OFF	EtherCAT communication is normal.
Input channel status indicator	00 ~ 1F	green	ON	The module channel has a signal input.
			OFF	The module channel has no signal input or the signal input is abnormal.
Output channel status indicator	00 ~ 1F	green	ON	The module channel has signal output.
			OFF	The module channel has no signal output or the signal output is abnormal.

Note [1]: The EtherCAT fault indicator light of the pure input module is invalid.

Note [2]: Double flash means that the light stays on for 200ms and then turns off for 200ms, then stays on for 200ms and turns off for 1000ms, and so on in a cycle.

4.3 Product Model and Information Identifier



name	logo	Description
Module model	EC3A-1616A	Module model
bus protocol	EtherCAT	bus protocol
Channel type	16DI+16DO	16-channel digital input + 16-channel digital output
	IN: TYP.4mA (DC24V); NPN/PNP	Input channel: 4mA current, 24V voltage, compatible with NPN & PNP
	OUT: Max. 0.5A/Ch; NPN	Output channels: Maximum current of 0.5A per channel, NPN type

4.4 Terminal block markings

EC3A-1616A/EC3A-1616B



logo	Description
S24V	System-side power supply
S0V	
PE	Protective Earth
COM	Input public terminal
DI	Digital input channel
00~0F	Input Channel
F24V	Field-side power supply
F0V	
NC	Empty terminal
DO	Digital output channel
10~1F	Output Channel

Note: The terminal markings for EC3A-1616A and EC3A-1616B are the same.

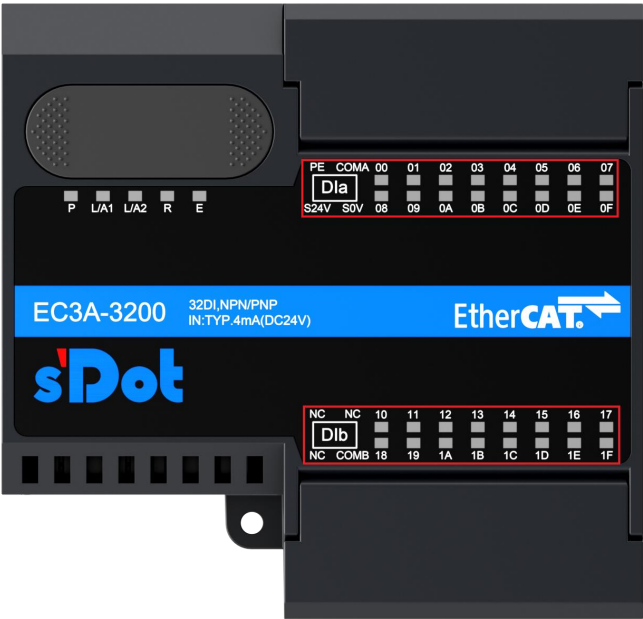
EC3A-0032A/EC3A-0032B



logo	Description
S24V	System-side power supply
S0V	
PE	Protective Earth
NC	Empty terminal
DOa	Digital output channel
DOb	
00~0F	Output Channel
10~1F	
F24V	Field-side power supply
F0V	

Note: The terminal markings for EC3A-0032A and EC3A-0032B are the same.

EC3A-3200



logo	Description
S24V	System-side power supply
S0V	
PE	Protective Earth
COMA	Input public terminal
COMB	
DIA	Digital input channel
Dlb	
00~0F	Input Channel
10~1F	
NC	Empty terminal

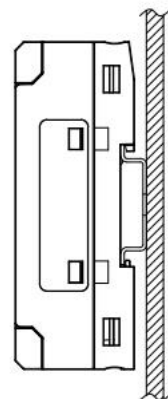
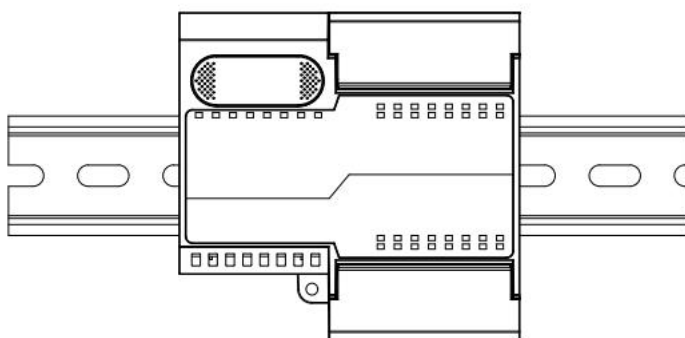
5 Installation and removal

Installation/Removal Precautions

- Ensure that the server rack has good ventilation (such as installing exhaust fans in the server rack).
- Do not install this device next to or above equipment that may cause overheating.
- Make sure the module is installed vertically and that there is sufficient clearance between the module and surrounding equipment.
- Installation/removal must be performed with the power off.

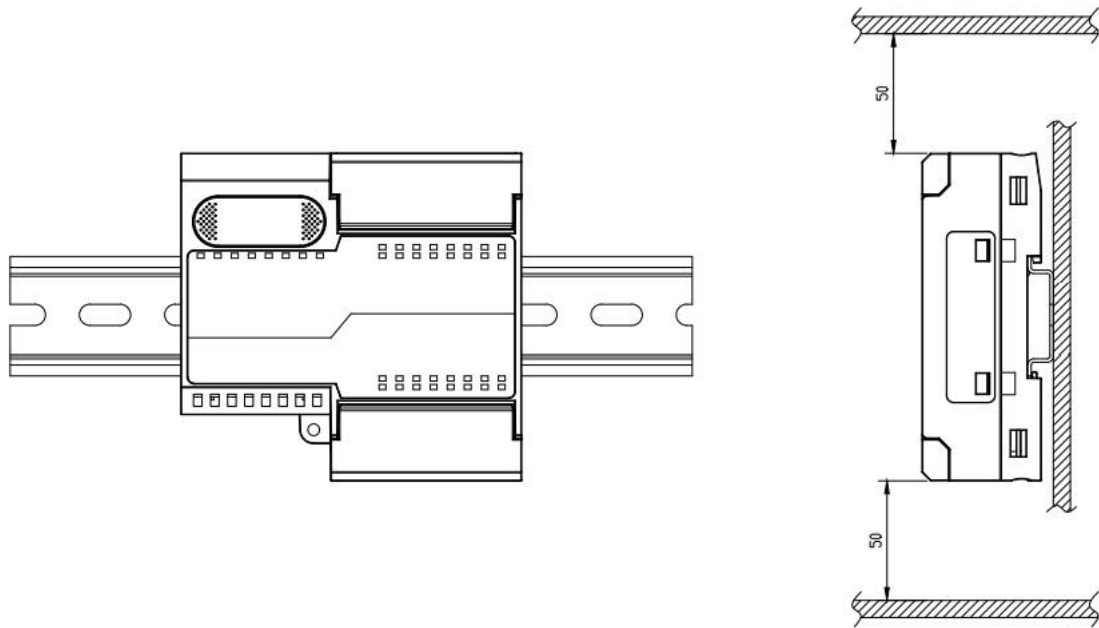
Installation direction

To ensure proper heat dissipation, the module must be installed vertically to ensure unobstructed airflow inside the module.



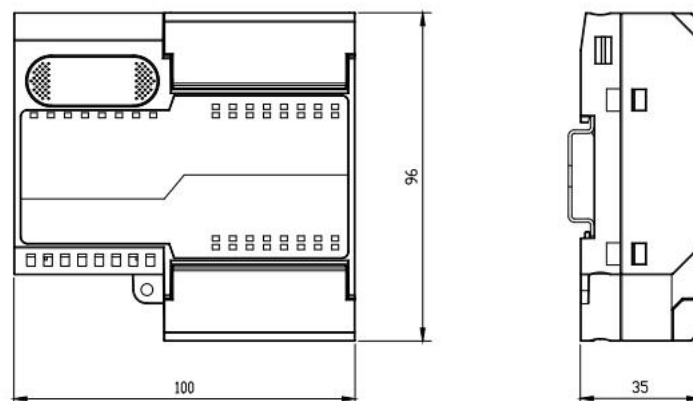
Minimum spacing

The module has an IP20 protection rating and must be installed inside a box or cabinet. During installation, please maintain the minimum spacing (unit: mm) between the module and other modules or heat-generating devices, or between the module and other devices or wiring channels above and below it, as shown in the figure below.



5.1 Outline dimension drawing

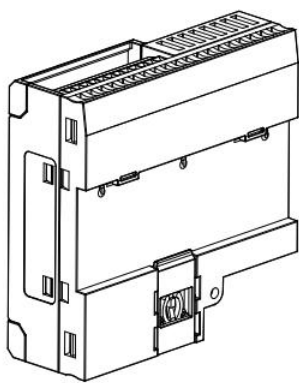
External dimensions (unit: mm)



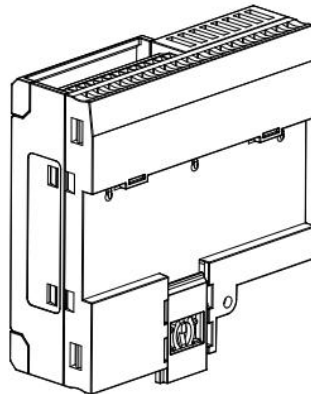
5.2 Installation and removal

Installation

step

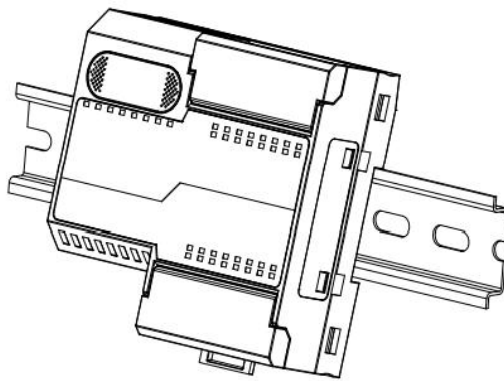


①



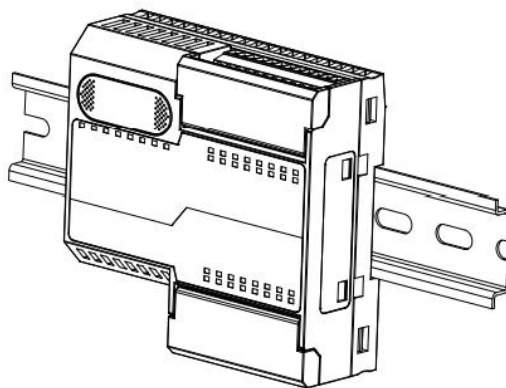
②

Push the latch at the bottom of the module outwards, as shown in Figure ①, until you hear a "click" sound.



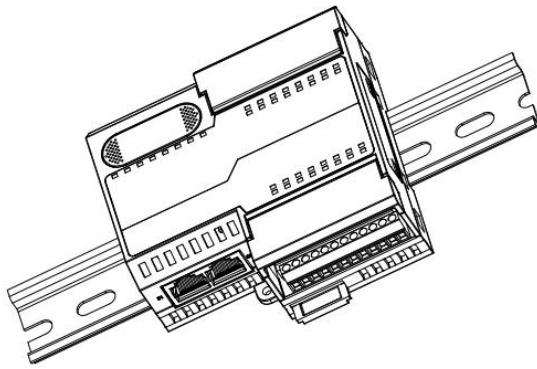
③

Align the upper edge of the module clip with the upper edge of the guide rail, and place the module into the guide rail, as shown in Figure ③.



④

The modules are placed as shown in Figure ④.

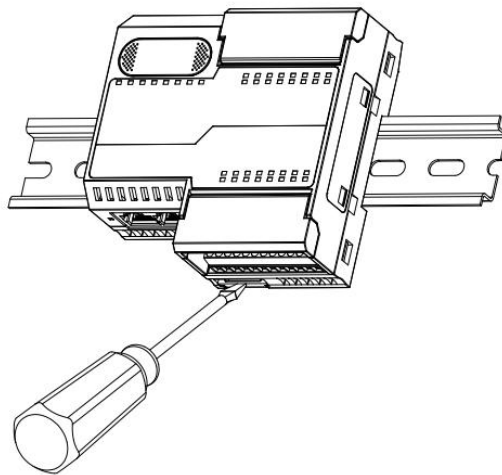


⑤

Push the clip along the guide rail until you hear a click, indicating that the module installation is complete, as shown in Figure ⑤.

Disassembly

step



⑥

Insert the flathead screwdriver into the clip and apply force towards the module (you will hear a sound) as shown in Figure ⑥. Then, remove the module by performing the reverse operation of installing the module.

6 Wiring

6.1 Terminal blocks

Terminal blocks		
Power and signal line terminals	Number of poles	2 × 20P
	wire diameter	24~17 AWG 0.2~1.0 mm²
Bus interface	2 × RJ45	UTP or STP of Category 5 or higher (STP recommended)

6.2 Wiring instructions and requirements

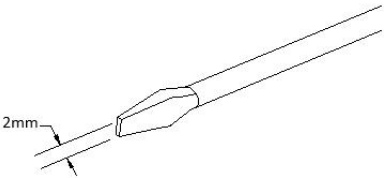
Power connection precautions

- The power supply for the module system side and the power supply for the field side should be configured and used separately. Do not mix them.
- The PE element must be reliably grounded.

Wiring tool requirements

The terminals use a fixing screw design, allowing for easy installation and removal of cables.

Flathead screwdriver operation (size: ≤2mm).



Stripping length requirements

Recommended stripping length: 6mm.



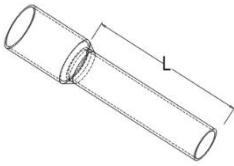
Wiring method

For single-strand rigid wires, after stripping the wire to the corresponding length, insert the wire into the terminal and tighten the screw with a screwdriver.



After stripping the wires to the corresponding length, use the corresponding standard cold-pressed terminals (tubular insulated terminals, as shown in the table below) to insert the wires into the terminals and tighten the screws with a screwdriver.



Tubular Insulated Ferrule Specification Table		
Specifications	model	conductor cross-sectional area (mm²)
 The length of tubular insulated terminal L is ≥6mm	E0306	0.3
	E0506	0.5
	E0508	
	E7506	0.75
	E7508	
	E1006	1.0
	E1008	

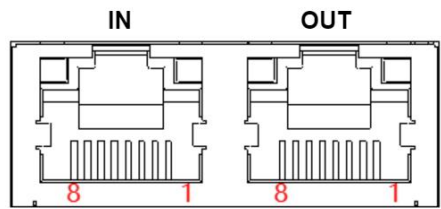
● Signal terminal wiring requirements

Refer to the corresponding I/O module wiring diagram and wiring method to press the signal cables into the terminal blocks.

● **Bus wiring requirements**

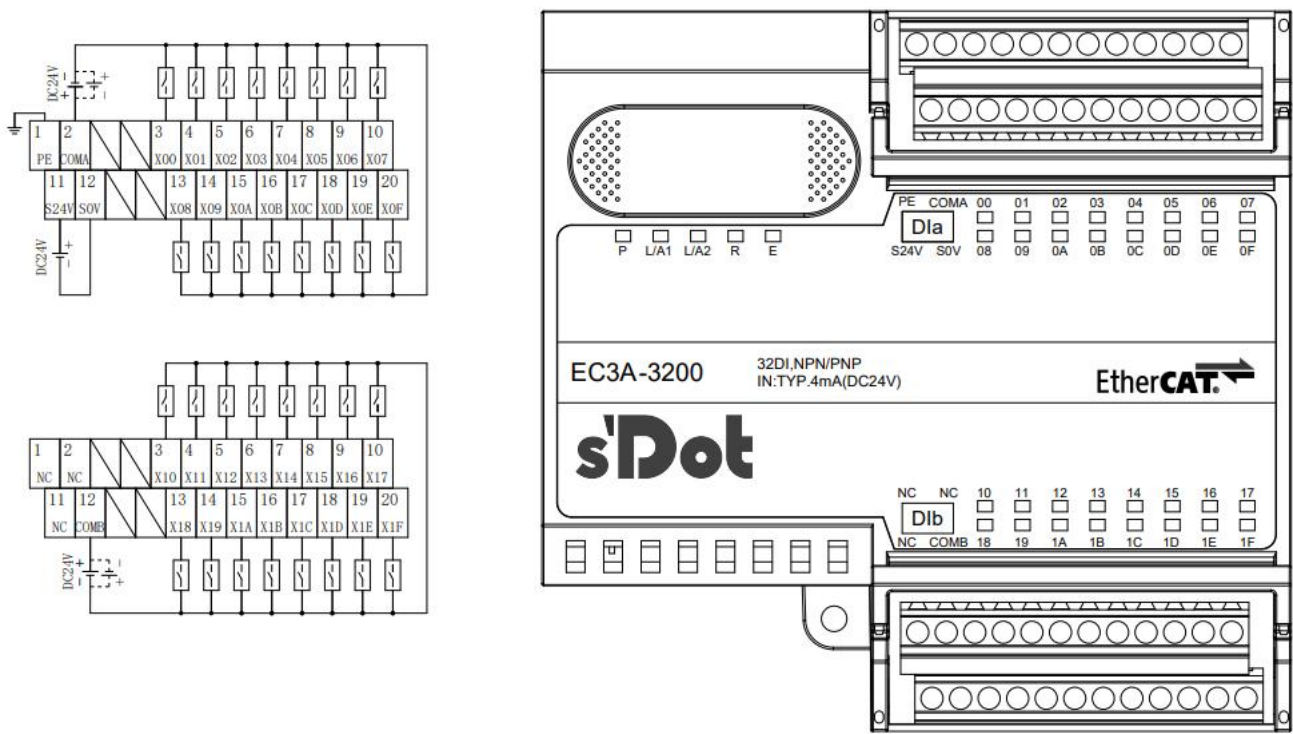
- Uses a standard RJ45 network interface and a standard crystal connector.
- The length of the cable between devices must not exceed 100m.

Pin No.	Signal
1	TD+
2	TD-
3	RD+
4	—
5	—
6	RD-
7	—
8	—



6.3 I/O module wiring diagram

6.3.1 EC3A-3200



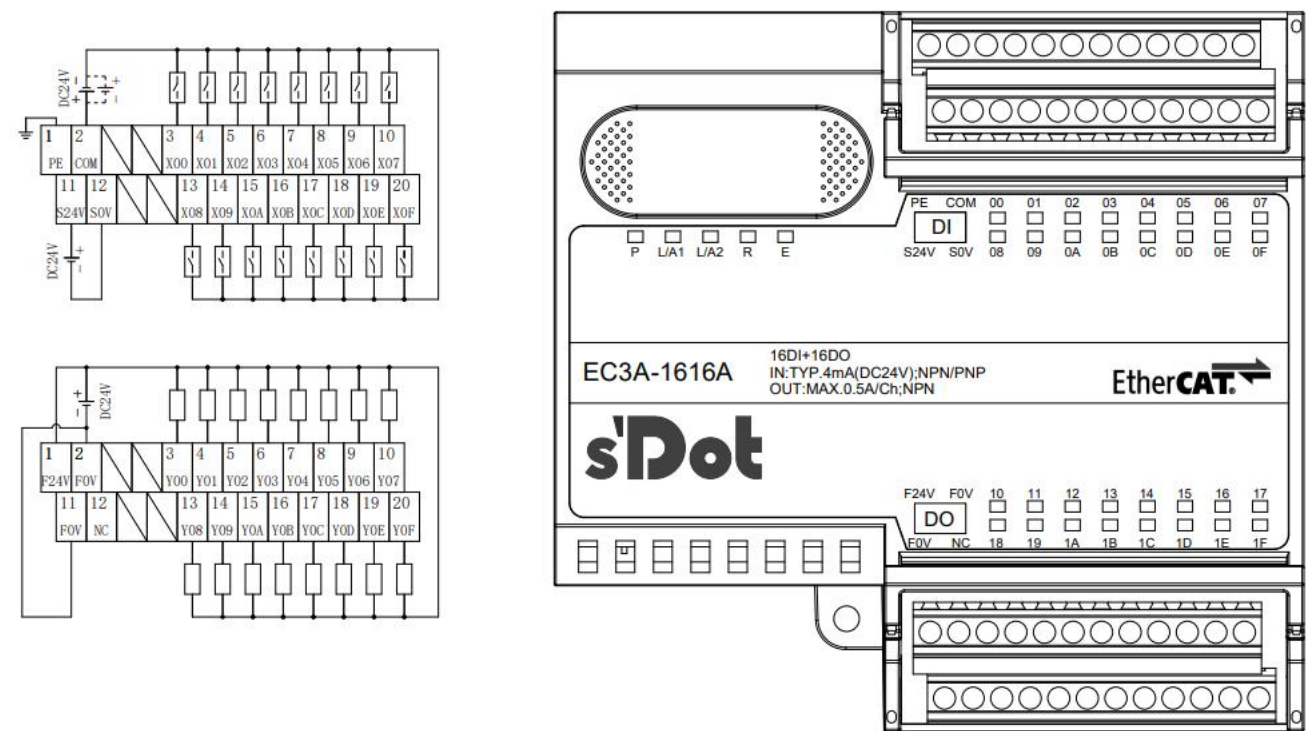
*COMA and COMB are not interconnected.

Pin No.	direction	Signal name	Pin No.	direction	Signal name
1	Input	PE	11	Input	S24V
2	Input	COMA	12	Input	S0V
3	Input	X00	13	Input	X08
4	Input	X01	14	Input	X09
5	Input	X02	15	Input	X0A
6	Input	X03	16	Input	X0B

7	Input	X04		17	Input	X0C
8	Input	X05		18	Input	X0D
9	Input	X06		19	Input	X0E
10	Input	X07		20	Input	X0F

Pin No.	direction	Signal name		Pin No.	direction	Signal name
1	none	NC		11	none	NC
2	none	NC		12	Input	COMB
3	Input	X10		13	Input	X18
4	Input	X11		14	Input	X19
5	Input	X12		15	Input	X1A
6	Input	X13		16	Input	X1B
7	Input	X14		17	Input	X1C
8	Input	X15		18	Input	X1D
9	Input	X16		19	Input	X1E
10	Input	X17		20	Input	X1F

6.3.2 EC3A-1616A



*F0V internal conduction

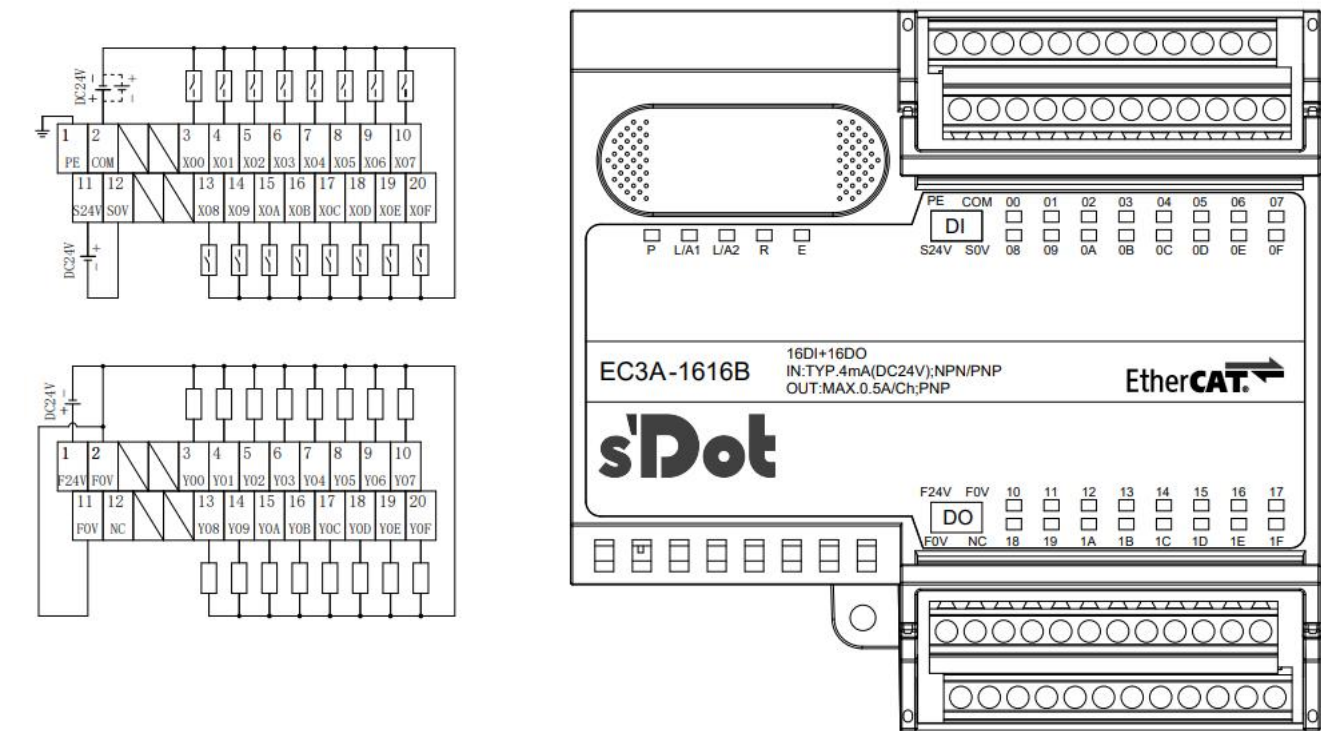
Pin No.	direction	Signal name		Pin No.	direction	Signal name
1	Input	PE		11	Input	S24V

2	Input	COM		12	Input	S0V
3	Input	X00		13	Input	X08
4	Input	X01		14	Input	X09
5	Input	X02		15	Input	X0A
6	Input	X03		16	Input	X0B
7	Input	X04		17	Input	X0C
8	Input	X05		18	Input	X0D
9	Input	X06		19	Input	X0E
10	Input	X07		20	Input	X0F

Pin No.	direction	Signal name		Pin No.	direction	Signal name
1	Input	F24V		11	Input	F0V
2	Input	F0V		12	none	NC
3	Output	Y00		13	Output	Y08
4	Output	Y01		14	Output	Y09
5	Output	Y02		15	Output	Y0A
6	Output	Y03		16	Output	Y0B
7	Output	Y04		17	Output	Y0C
8	Output	Y05		18	Output	Y0D
9	Output	Y06		19	Output	Y0E
10	Output	Y07		20	Output	Y0F

Note: The rated current of the module terminal block is 8A. When the total output load current of the module channel exceeds 8A, both F0V ports need to be connected.

6.3.3 EC3A-1616B



*F0V internal conduction

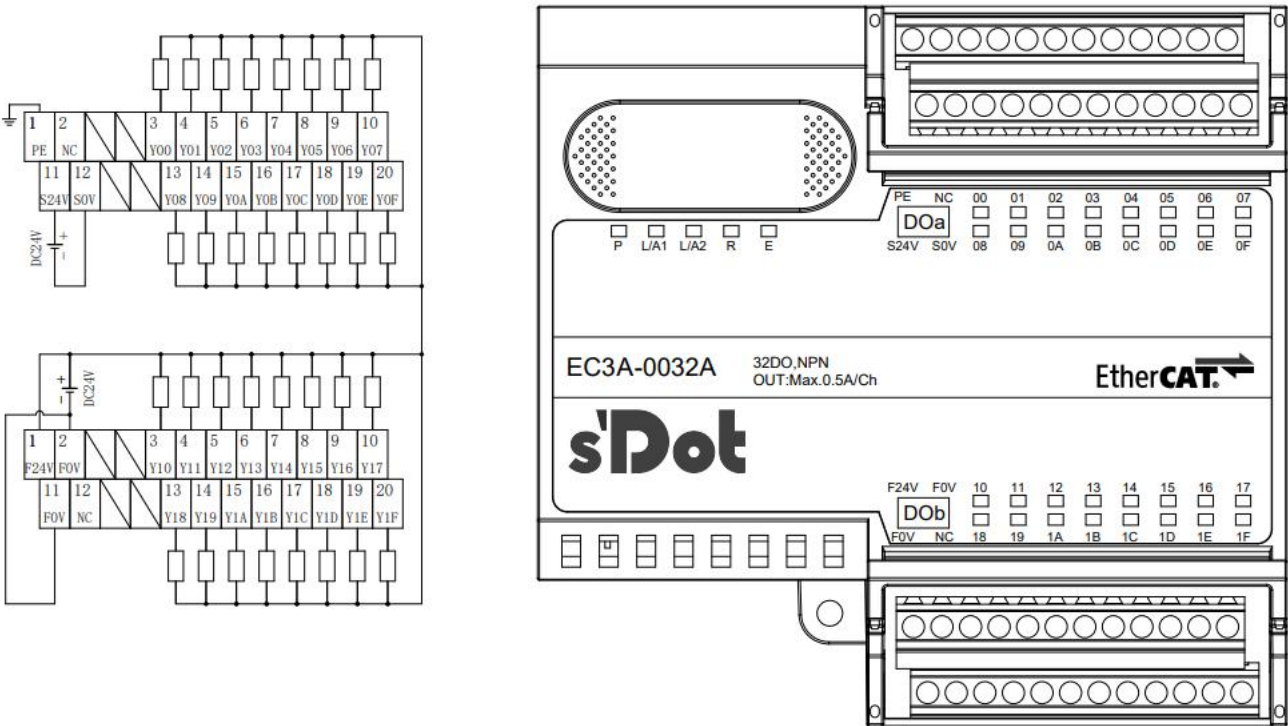
Pin No.	direction	Signal name	Pin No.	direction	Signal name
1	Input	PE	11	Input	S24V
2	Input	COM	12	Input	S0V
3	Input	X00	13	Input	X08
4	Input	X01	14	Input	X09
5	Input	X02	15	Input	X0A
6	Input	X03	16	Input	X0B
7	Input	X04	17	Input	X0C
8	Input	X05	18	Input	X0D
9	Input	X06	19	Input	X0E
10	Input	X07	20	Input	X0F

Pin No.	direction	Signal name	Pin No.	direction	Signal name
1	Input	F24V	11	Input	F0V
2	Input	F0V	12	none	NC
3	Output	Y00	13	Output	Y08
4	Output	Y01	14	Output	Y09
5	Output	Y02	15	Output	Y0A
6	Output	Y03	16	Output	Y0B

7	Output	Y04		17	Output	Y0C
8	Output	Y05		18	Output	Y0D
9	Output	Y06		19	Output	Y0E
10	Output	Y07		20	Output	Y0F

Note: The rated current of the module terminal block is 8A. When the total output load current of the module channel exceeds 8A, both F0V ports need to be connected.

6.3.4 EC3A-0032A



*F0V internal conduction

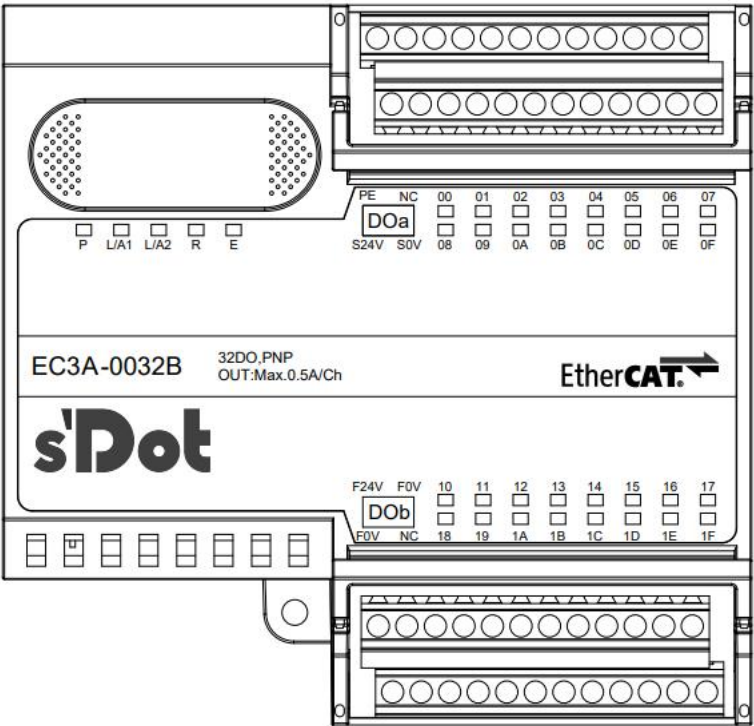
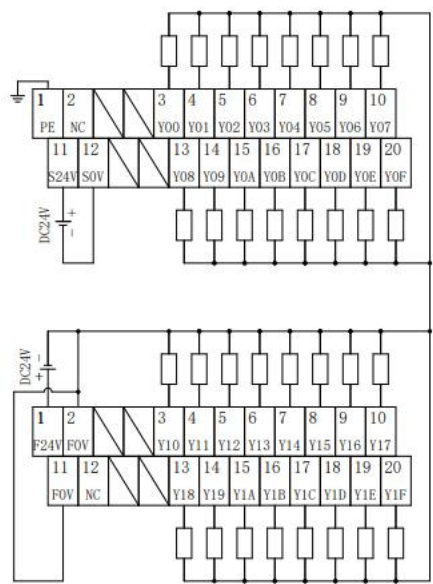
Pin No.	direction	Signal name		Pin No.	direction	Signal name
1	Input	PE		11	Input	S24V
2	none	NC		12	Input	S0V
3	Output	Y00		13	Output	Y08
4	Output	Y01		14	Output	Y09
5	Output	Y02		15	Output	Y0A
6	Output	Y03		16	Output	Y0B
7	Output	Y04		17	Output	Y0C
8	Output	Y05		18	Output	Y0D
9	Output	Y06		19	Output	Y0E
10	Output	Y07		20	Output	Y0F

Pin No.	direction	Signal name		Pin	direction	Signal name
---------	-----------	-------------	--	-----	-----------	-------------

			No.		
1	Input	F24V	11	Input	F0V
2	Input	F0V	12	none	NC
3	Output	Y10	13	Output	Y18
4	Output	Y11	14	Output	Y19
5	Output	Y12	15	Output	Y1A
6	Output	Y13	16	Output	Y1B
7	Output	Y14	17	Output	Y1C
8	Output	Y15	18	Output	Y1D
9	Output	Y16	19	Output	Y1E
10	Output	Y17	20	Output	Y1F

Note: The rated current of the module terminal block is 8A. When the total output load current of the module channel exceeds 8A, both F0V ports need to be connected.

6.3.5 EC3A-0032B



*F0V internal conduction

Pin No.	direction	Signal name		Pin No.	direction	Signal name
1	Input	PE		11	Input	S24V
2	none	NC		12	Input	S0V
3	Output	Y00		13	Output	Y08
4	Output	Y01		14	Output	Y09
5	Output	Y02		15	Output	Y0A
6	Output	Y03		16	Output	Y0B
7	Output	Y04		17	Output	Y0C
8	Output	Y05		18	Output	Y0D
9	Output	Y06		19	Output	Y0E
10	Output	Y07		20	Output	Y0F

Pin No.	direction	Signal name		Pin No.	direction	Signal name
1	Input	F24V		11	Input	F0V
2	Input	F0V		12	none	NC
3	Output	Y10		13	Output	Y18
4	Output	Y11		14	Output	Y19
5	Output	Y12		15	Output	Y1A
6	Output	Y13		16	Output	Y1B
7	Output	Y14		17	Output	Y1C
8	Output	Y15		18	Output	Y1D
9	Output	Y16		19	Output	Y1E
10	Output	Y17		20	Output	Y1F

Note: The rated current of the module terminal block is 8A. When the total output load current of the module channel exceeds 8A, both F0V ports need to be connected.

7 Use

7.1 Parameter Description

7.1.1 Digital input filter

Digital input filter prevents unexpected rapid changes in the input signal from causing the program to respond, which may be due to switch contact skipping or electrical noise. Digital input filter is currently fixed at 3ms, filter out noise within that 3ms range; individual channels cannot be configured.

A 3ms input filter time means that a single signal changing from "0" to "1" or from "1" to "0" takes 3ms to be detected, while a single high pulse or low pulse shorter than 3ms will not be detected.

7.1.2 Clear/Hold digital output signal

The clear/hold function is for modules with outputs. This function can be configured to handle module output actions in the event of a bus exception.

Clear output: When communication is disconnected, the module's output channel will automatically clear the output;

Hold Output: The module's output channel continues to output even when communication is interrupted.

In the event of a bus malfunction, the default state is cleared.

7.2 Module configuration instructions

7.2.1 Application in the TwinCAT3 software environment

1、Preparation

- **Hardware environment**

- **Module model EC3A-1616A**
- **One computer, pre-installed with TwinCAT3 software.**
- **EtherCAT dedicated shielded cable**
- **One switching power supply**
- **Module mounting rails and rail fasteners**
- **Device configuration file**

Configuration file retrieval address:

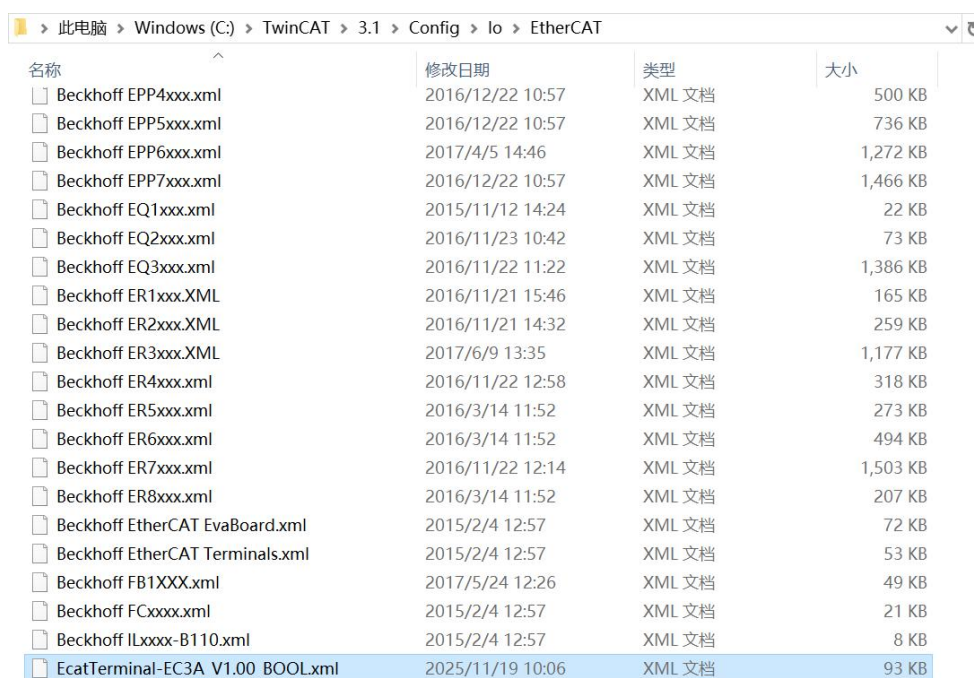
<https://www.solidotech.com/cn/resources/configuration-files>

- **Hardware configuration and wiring**

Please follow the instructions "[5. Installation and Removal](#)" "[6. Wiring](#)"

2、Pre-configured configuration files

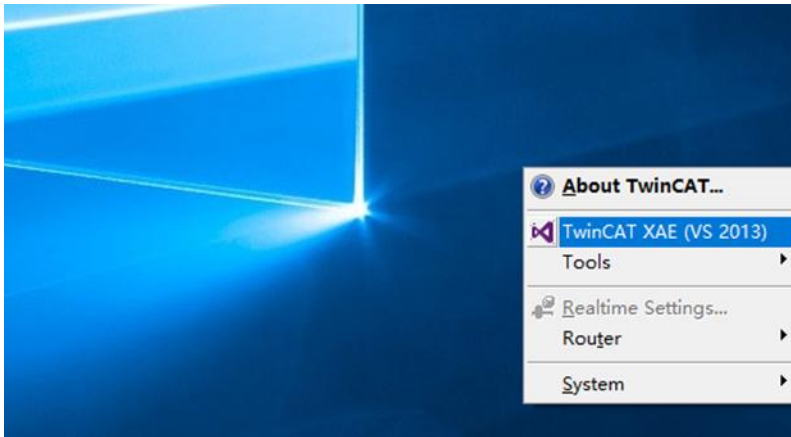
- Place the ESI configuration file (EcatTerminal-EC3A_V1.00_BOOL.xml) in the TwinCAT installation directory "C:\TwinCAT\3.1\Config\Io\EtherCAT", as shown in the image below.



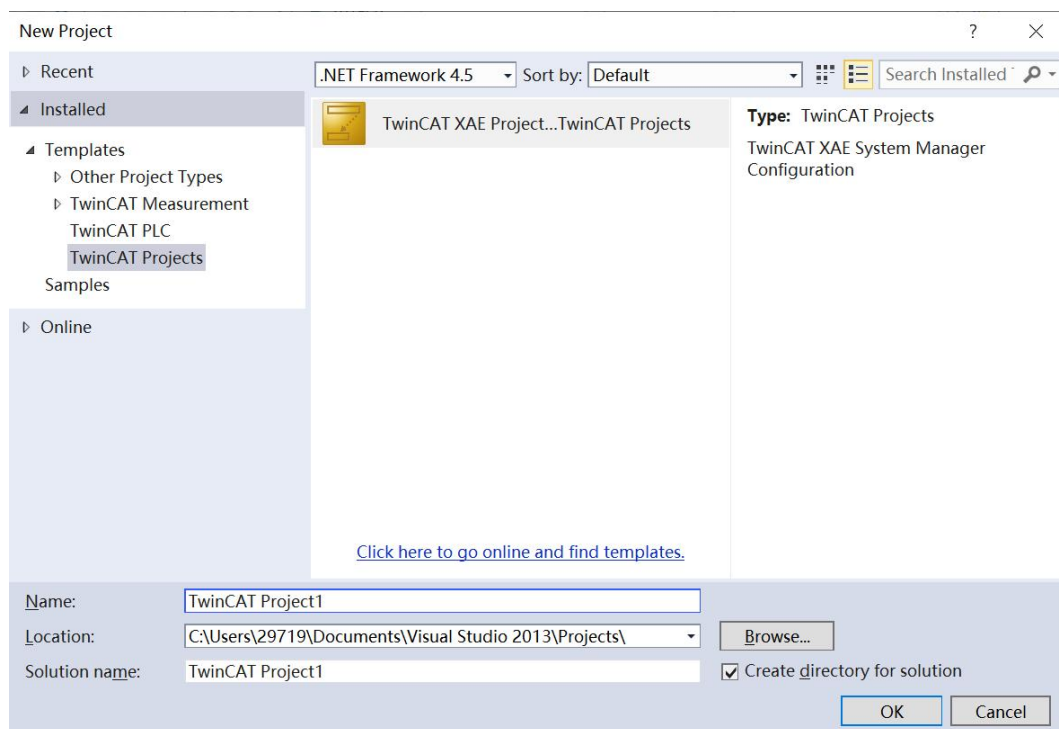
名称	修改日期	类型	大小
Beckhoff EPP4xxx.xml	2016/12/22 10:57	XML 文档	500 KB
Beckhoff EPP5xxx.xml	2016/12/22 10:57	XML 文档	736 KB
Beckhoff EPP6xxx.xml	2017/4/5 14:46	XML 文档	1,272 KB
Beckhoff EPP7xxx.xml	2016/12/22 10:57	XML 文档	1,466 KB
Beckhoff EQ1xxx.xml	2015/11/12 14:24	XML 文档	22 KB
Beckhoff EQ2xxx.xml	2016/11/23 10:42	XML 文档	73 KB
Beckhoff EQ3xxx.xml	2016/11/22 11:22	XML 文档	1,386 KB
Beckhoff ER1xxx.XML	2016/11/21 15:46	XML 文档	165 KB
Beckhoff ER2xxx.XML	2016/11/21 14:32	XML 文档	259 KB
Beckhoff ER3xxx.XML	2017/6/9 13:35	XML 文档	1,177 KB
Beckhoff ER4xxx.xml	2016/11/22 12:58	XML 文档	318 KB
Beckhoff ER5xxx.xml	2016/3/14 11:52	XML 文档	273 KB
Beckhoff ER6xxx.xml	2016/3/14 11:52	XML 文档	494 KB
Beckhoff ER7xxx.xml	2016/11/22 12:14	XML 文档	1,503 KB
Beckhoff ER8xxx.xml	2016/3/14 11:52	XML 文档	207 KB
Beckhoff EtherCAT EvaBoard.xml	2015/2/4 12:57	XML 文档	72 KB
Beckhoff EtherCAT Terminals.xml	2015/2/4 12:57	XML 文档	53 KB
Beckhoff FB1XXX.xml	2017/5/24 12:26	XML 文档	49 KB
Beckhoff FCxxx.xml	2015/2/4 12:57	XML 文档	21 KB
Beckhoff ILxxx-B110.xml	2015/2/4 12:57	XML 文档	8 KB
EcatTerminal-EC3A_V1.00_BOOL.xml	2025/11/19 10:06	XML 文档	93 KB

3. Create a project

- a. Click the TwinCAT icon in the lower right corner of the desktop, select "TwinCAT XAE (VS xxxx)" to open the TwinCAT software, as shown in the image below.

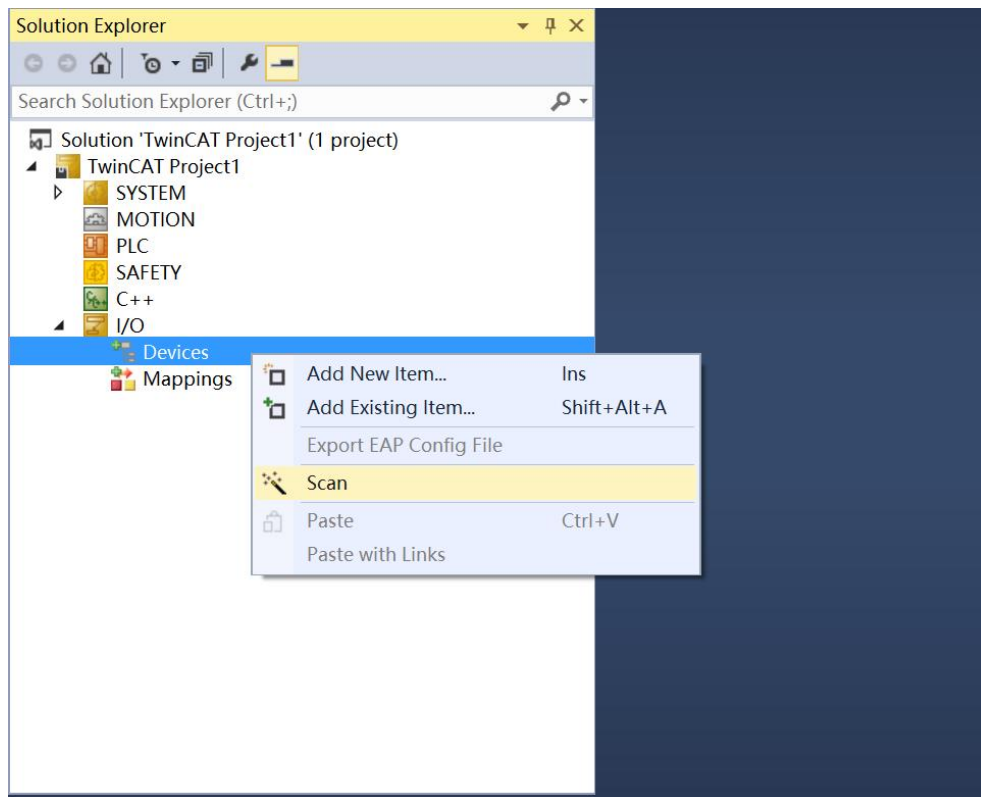


- b. Click "New TwinCAT Project". In the pop-up window, "Name" and "Solution name" correspond to the project name and solution name, respectively, and "Location" corresponds to the project path. These three items can be left as default. Then click "OK". The project will be created successfully, as shown in the figure below.



4. Scanning equipment

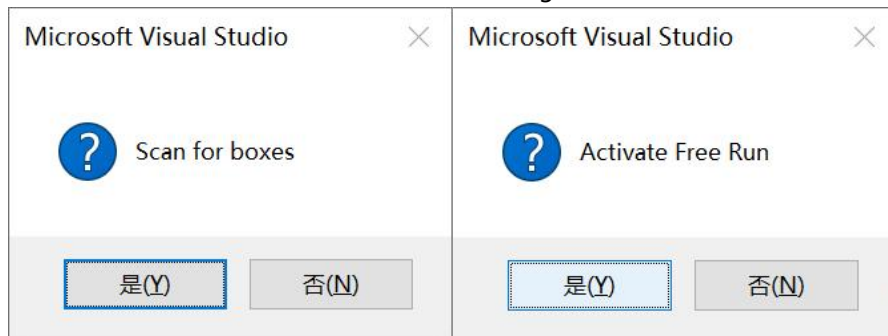
- a. After creating the project, right-click the "Scan" option under "I/O -> Devices" to scan for slave devices, as shown in the figure below.



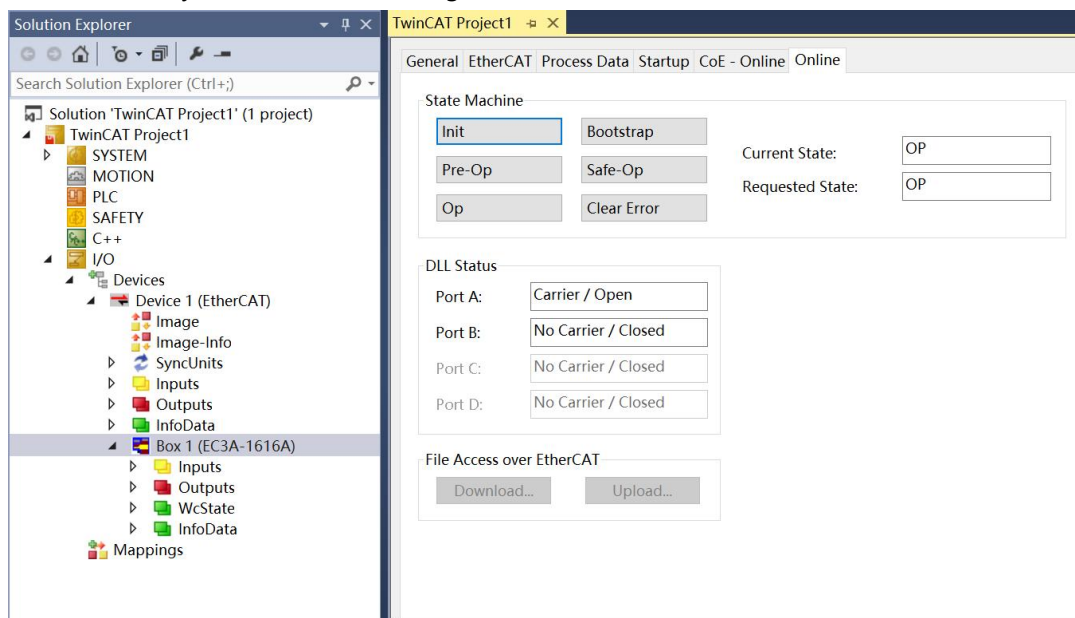
- b. Select the "Local Area Connection" network adapter, as shown in the image below.



- c. In the pop-up window "Scan for boxes", click to select "Yes"; in the pop-up window "Activate Free Run", click to select "Yes", as shown in the image below.

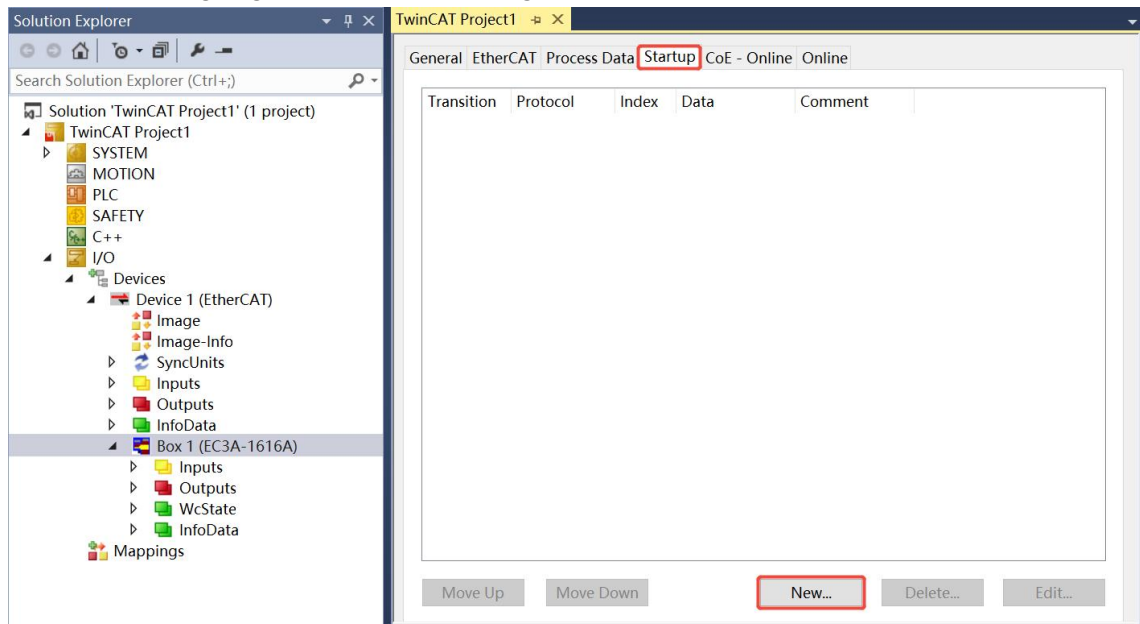


- d. After the device is scanned, you can see Box1 (EC3A-1616A) in the left navigation tree. Under "Online", you can see that TwinCAT is in "OP" state. You can observe that the R light of the slave device is steady on, as shown in the figure below.

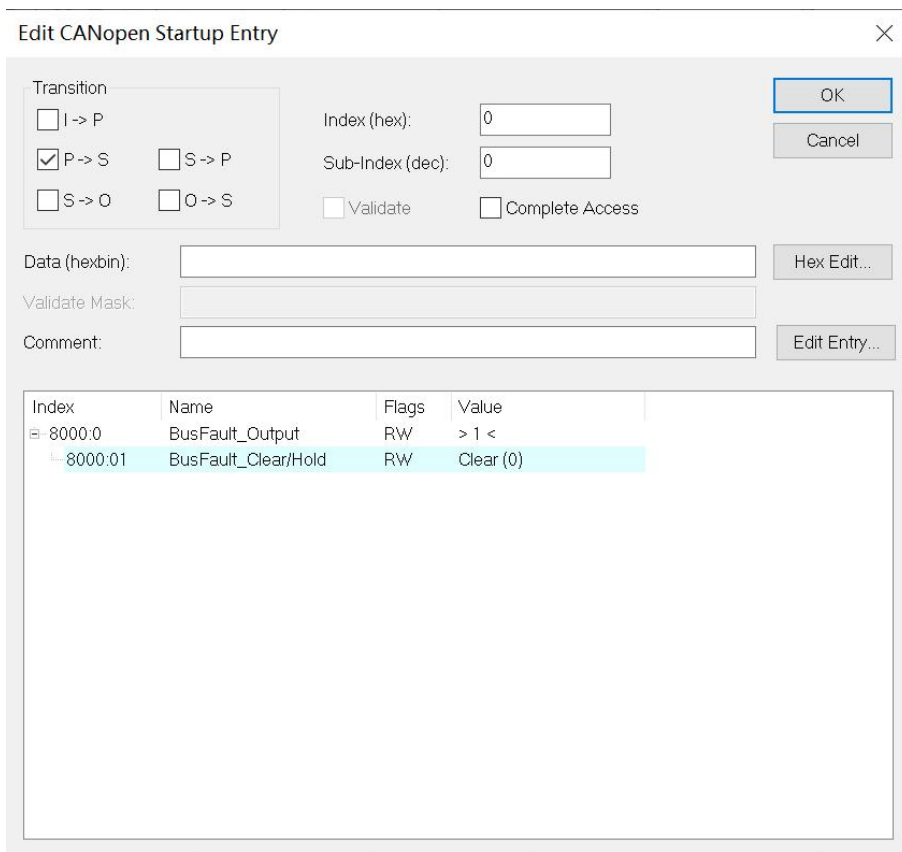


5. Verify basic functions

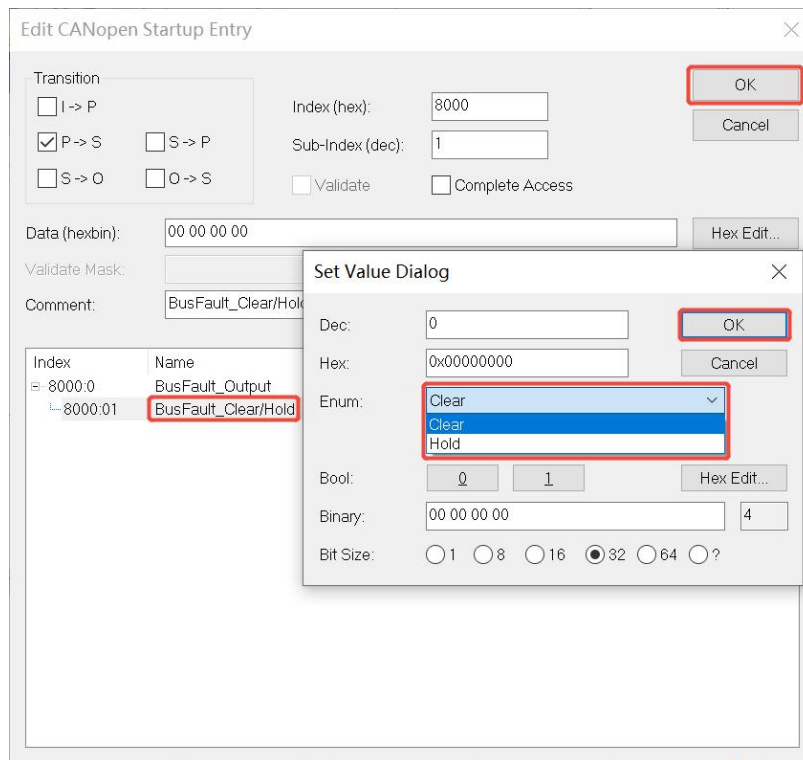
- a. Clicking "Box1 -> Startup -> New" in the left navigation tree will take you to the configuration parameter editing page, as shown in the image below.



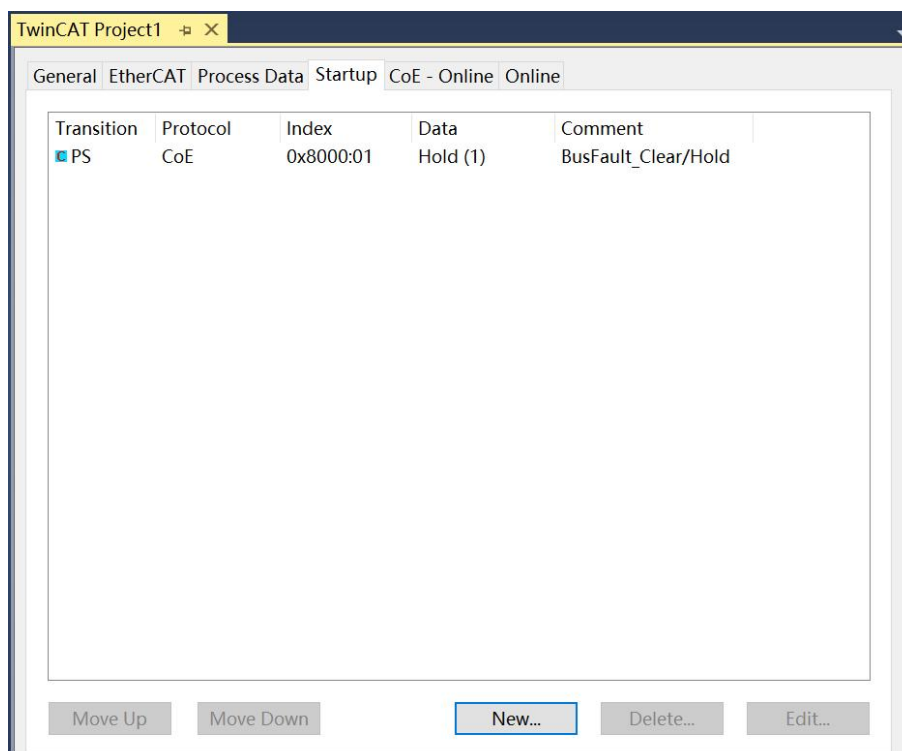
- b. In the Edit CANopen Startup Entry pop-up window, click the "+" in front of Index 8000:0 to expand the configuration parameter menu. You can see the configuration parameters. Double-click the parameter to configure it, as shown in the figure below.



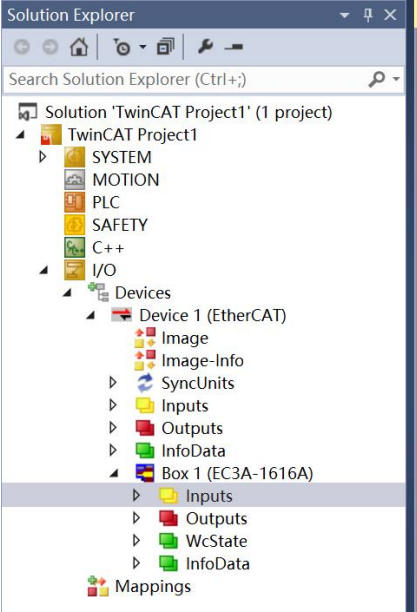
- c. Double-click “BusFault_Clear/Hold” and modify the parameter value as shown in the figure below.



- d. After modifying the parameters, you can see the modified parameter items and values below Startup, as shown in the image below. After setting the parameters, a Reload operation and a power-on restart of the module are required to enable the main station to automatically distribute the parameter settings.

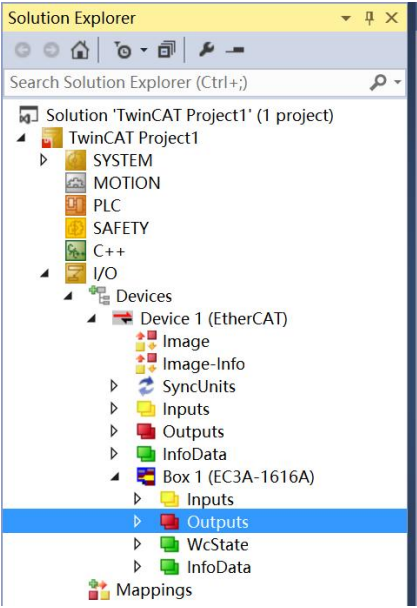


- e. The left-hand navigation tree "Box1 -> Inputs" displays the upstream data of the module, used to monitor the module's input, as shown in the figure below.



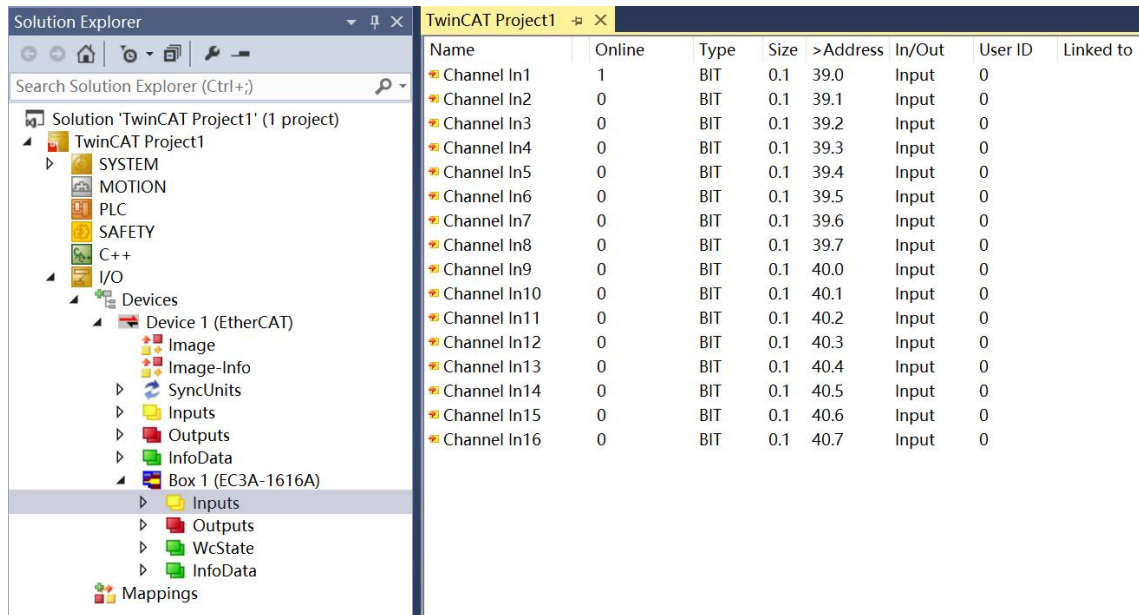
Name	Online	Type	Size	>Address	In/Out	User ID	Linked to
Channel In1	0	BIT	0.1	39.0	Input	0	
Channel In2	0	BIT	0.1	39.1	Input	0	
Channel In3	0	BIT	0.1	39.2	Input	0	
Channel In4	0	BIT	0.1	39.3	Input	0	
Channel In5	0	BIT	0.1	39.4	Input	0	
Channel In6	0	BIT	0.1	39.5	Input	0	
Channel In7	0	BIT	0.1	39.6	Input	0	
Channel In8	0	BIT	0.1	39.7	Input	0	
Channel In9	0	BIT	0.1	40.0	Input	0	
Channel In10	0	BIT	0.1	40.1	Input	0	
Channel In11	0	BIT	0.1	40.2	Input	0	
Channel In12	0	BIT	0.1	40.3	Input	0	
Channel In13	0	BIT	0.1	40.4	Input	0	
Channel In14	0	BIT	0.1	40.5	Input	0	
Channel In15	0	BIT	0.1	40.6	Input	0	
Channel In16	0	BIT	0.1	40.7	Input	0	

- f. The left-hand navigation tree "Box1 -> Outputs" displays the module's downstream data, which is used to control the module's output, as shown in the figure below.



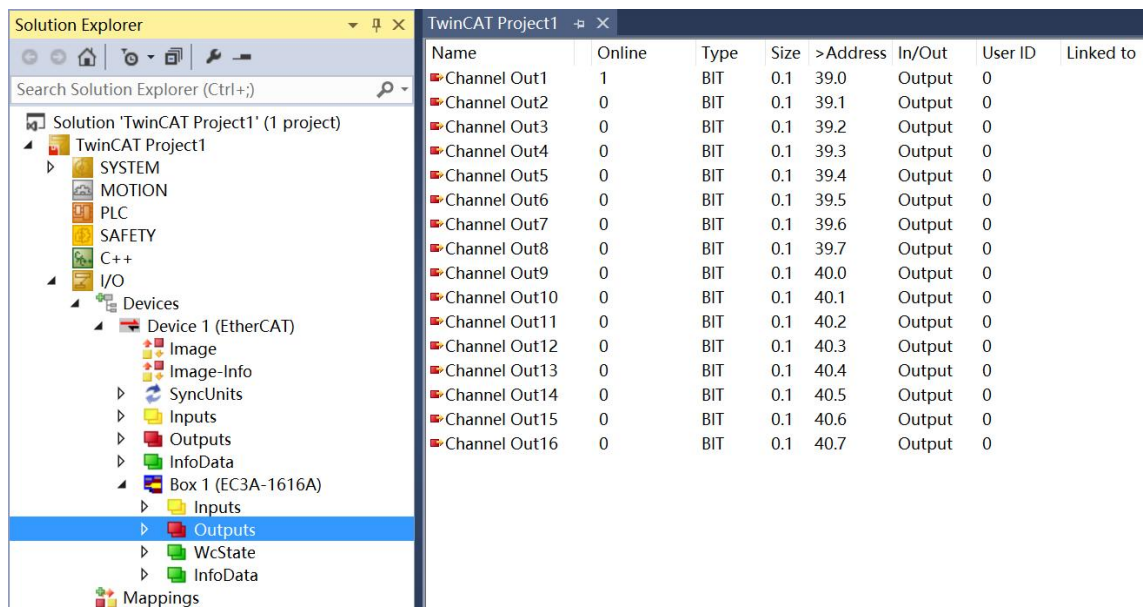
Name	Online	Type	Size	>Address	In/Out	User ID	Linked to
Channel Out1	0	BIT	0.1	39.0	Output	0	
Channel Out2	0	BIT	0.1	39.1	Output	0	
Channel Out3	0	BIT	0.1	39.2	Output	0	
Channel Out4	0	BIT	0.1	39.3	Output	0	
Channel Out5	0	BIT	0.1	39.4	Output	0	
Channel Out6	0	BIT	0.1	39.5	Output	0	
Channel Out7	0	BIT	0.1	39.6	Output	0	
Channel Out8	0	BIT	0.1	39.7	Output	0	
Channel Out9	0	BIT	0.1	40.0	Output	0	
Channel Out10	0	BIT	0.1	40.1	Output	0	
Channel Out11	0	BIT	0.1	40.2	Output	0	
Channel Out12	0	BIT	0.1	40.3	Output	0	
Channel Out13	0	BIT	0.1	40.4	Output	0	
Channel Out14	0	BIT	0.1	40.5	Output	0	
Channel Out15	0	BIT	0.1	40.6	Output	0	
Channel Out16	0	BIT	0.1	40.7	Output	0	

- g. Taking input channel 1 as an example, if there is an effective voltage input to input channel 1, it can be observed in Inputs, as shown in the figure below.



Name	Online	Type	Size	>Address	In/Out	User ID	Linked to
Channel In1	1	BIT	0.1	39.0	Input	0	
Channel In2	0	BIT	0.1	39.1	Input	0	
Channel In3	0	BIT	0.1	39.2	Input	0	
Channel In4	0	BIT	0.1	39.3	Input	0	
Channel In5	0	BIT	0.1	39.4	Input	0	
Channel In6	0	BIT	0.1	39.5	Input	0	
Channel In7	0	BIT	0.1	39.6	Input	0	
Channel In8	0	BIT	0.1	39.7	Input	0	
Channel In9	0	BIT	0.1	40.0	Input	0	
Channel In10	0	BIT	0.1	40.1	Input	0	
Channel In11	0	BIT	0.1	40.2	Input	0	
Channel In12	0	BIT	0.1	40.3	Input	0	
Channel In13	0	BIT	0.1	40.4	Input	0	
Channel In14	0	BIT	0.1	40.5	Input	0	
Channel In15	0	BIT	0.1	40.6	Input	0	
Channel In16	0	BIT	0.1	40.7	Input	0	

- h. Taking output channel 1 as an example, if you want the slave device to output digital output channel 1, you can right-click on the corresponding channel in Outputs and enter 1. You can see the corresponding channel light on the slave device, as shown in the figure below.



Name	Online	Type	Size	>Address	In/Out	User ID	Linked to
Channel Out1	1	BIT	0.1	39.0	Output	0	
Channel Out2	0	BIT	0.1	39.1	Output	0	
Channel Out3	0	BIT	0.1	39.2	Output	0	
Channel Out4	0	BIT	0.1	39.3	Output	0	
Channel Out5	0	BIT	0.1	39.4	Output	0	
Channel Out6	0	BIT	0.1	39.5	Output	0	
Channel Out7	0	BIT	0.1	39.6	Output	0	
Channel Out8	0	BIT	0.1	39.7	Output	0	
Channel Out9	0	BIT	0.1	40.0	Output	0	
Channel Out10	0	BIT	0.1	40.1	Output	0	
Channel Out11	0	BIT	0.1	40.2	Output	0	
Channel Out12	0	BIT	0.1	40.3	Output	0	
Channel Out13	0	BIT	0.1	40.4	Output	0	
Channel Out14	0	BIT	0.1	40.5	Output	0	
Channel Out15	0	BIT	0.1	40.6	Output	0	
Channel Out16	0	BIT	0.1	40.7	Output	0	

8 FAQ

8.1 The device cannot be found in the software.

1. Confirm that the ESI configuration file is installed correctly.
2. Confirm that the ESI configuration file version is accurate.
3. Confirm if the TwinCAT software was restarted after installing the ESI file.

8.2 The device cannot enter OP state.

1. Confirm that the project setup is correct.
2. Confirm the node station number settings.
3. Confirm that the power supply to the device is normal.
4. Check if the EtherCAT communication cable is working properly.
5. Confirm if the device was power-cycled (powered off and then on again) after modifying the slave node address.