

EtherNet/IP C2S-EI Series Valve Terminal User Manual



Guangdong Coyo Precision Machinery Manufacturing Co., Ltd

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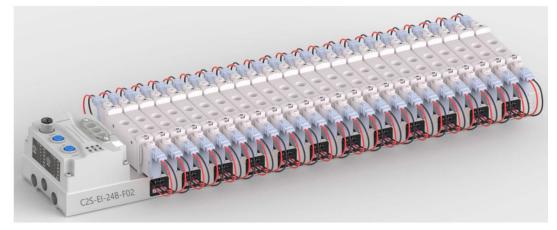
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Product Overview

1.1 Product Introduction

The C2S-EI series valve terminal is a control module integrating valve terminal technology and EtherNet/IP bus technology. It can realize centralized and distributed control, optimize system design, facilitate construction, and simplify debugging, performance testing & diagnostic maintenance of complex systems in the industrial field. The product adopts a modular structure and occupies little space with the addition of pluggable terminals, leading to fast wiring. Moreover, it has easy configuration and supports most of the mainstream EtherNet/IP master stations, so it can be widely used in industrial control systems.



1.2 Product Features

- Support EtherNet/IP industrial Ethernet protocol
- Support cascade communication with M12 bus interface
- Support up to 24 double solenoid valves
- Modular structure and small footprint
- Simple wiring, fast construction and easy maintenance
- Support mainstream solenoid valves and customization, providing easy and fast choices
- Support remote diagnosis, which reduces troubleshooting difficulties

2 Designation Rules

2.1 Designation Rules

$\frac{C2S}{(1)} - \frac{EI}{(2)} - \frac{24}{(3)} \frac{B}{(4)} - \frac{F01}{(5)}$

Item	Value	Description of the values								
(1)	Product line	C2S	C2S							
(2)	Bus type	EI: EtherNet/IP								
(3)	Valve positions	08: 8	12: 12	16: 16	20: 20	24: 24				
(4)	Valve Type	B: Double solenoid (Single solenoid supported)								
(5)	Solenoid valves	See below Sole	enoid Valve Mode	el Code Table						
(3)	model number	<u></u>								

Solenoid Valve	Model	Code	Table:
----------------	-------	------	--------

Brand	Code	Valve Distance	Seires	Supported Solenoid Valve Models
	A01	19	4V1	4V110/ 4V120/ 4V130
	A02	23	4V2	4V210/ 4V220/ 4V230
	A04	10.5	7V0	7V0510/ 7V0520/ 7V0530
AirTAC	A05	16	7V1	7V110/ 7V120/ 7V130
	A06	19	7V2	7V210/ 7V220/ 7V230
	A07	19	5V1	5V110/ 5V120/ 5V130
	A08	23	5V2	5V210/ 5V220/ 5V230
			VUVG-LK10	vuvg-lk10-t32/ vuvg-lk10-m52
	F01 10.5 VUVG-L10 vuvg-li	10.5	VUVG-LKTU	vuvg-lk10-B52/ vuvg-lk10-p52
		10.5		vuvg-l10-t32/ vuvg-l10-m52
FESTO		vuvg-I10-B52/ vuvg-I10-p52		
FESTO			VUVG-LK14	vuvg-lk14-t32/ vuvg-lk14-m52
	F02	16	VUVG-LK14	vuvg-lk14-B52/ vuvg-lk14-p52
			VUVG-L14	vuvg-l14-t32/ vuvg-l14-m52
			VUVG-L14	vuvg-l14-B52/ vuvg-l14-p52
	S01	10.5	SY3	SY3120/ SY3220/ SY3320
	501	10.5	515	SY3420/ SY3520
SMC	S02	16	SY5	SY5120/ SY5220/ SY5320
SiviC	502	10	313	SY5420/ SY5520
	S03	19	SY7	SY7120/ SY7220/ SY7320/
	303	19	317	SY7420/ SY7520
	C01	10.5	4GD1	4gd119r/ 4gd129r/ 4gd139r
СКД	001	10.5	4001	4GD149R/ 4GD159R
	C02	16	4GD2	4gd219r/ 4gd229r/ 4gd239r
	002	10	4602	4GD249R/ 4GD259R

Note: Valve spacing (K value) in mm.

2.2 Model List

Model Number	Product Description
C2S-EI-08B-()	Valve terminal with 8 valve positions (double solenoid valves)
C2S-EI-12B-()	Valve terminal with 12 valve positions (double solenoid valves)
C2S-EI-16B-()	Valve terminal with 16 valve positions (double solenoid valves)
C2S-EI-20B-()	Valve terminal with 20 valve positions (double solenoid valves)
C2S-EI-24B-()	Valve terminal with 24 valve positions (double solenoid valves)

Note: "()" represent solenoid valve model code, support customization.

3 Product Parameters

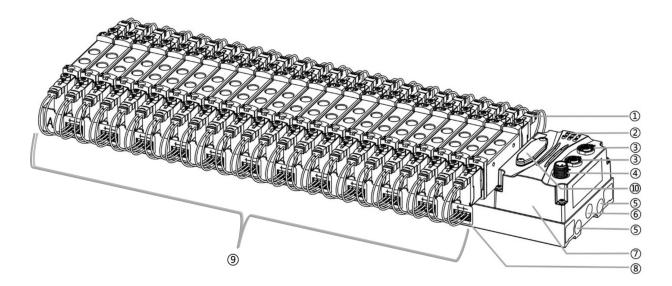
3.1 General Parameters

Interface Parameter					
Bus protocol	EtherNet/IP				
Data transmission medium	CAT5e: UTP or STP (STP recommended)				
Transmission distance	≤100 m (distance between stations)				
Transmission rate	100 Mbps				
Bus interface	2xM12, 4Pin, D-code, female				
Technical Parameters					
System power supply	18~36 VDC				
Rated current consumption	30 mA				
Electrical isolation	500 V				
Load power	24 VDC (±25%)				
Number of outputs	0~48				
Single channel current	Max: 250 mA				
Power interface	M12, 5Pin, A-code, male				
Power interface surge protection	YES				
Power interface reverse connection protection	YES				
Channel short circuit protection	YES				
Channel open-circuit diagnostics	YES				
Channel short-circuit diagnostics	YES				
Weight	Depand on different models				
Size	Depand on different models (See 5.1 Outline Dimensional				
	Drawing)				
Working temperature	-5~+50℃				
Storage temperature	-20~+75℃				
Relative humidity	95%, non-condensing				
Protection degree	IP20				

4 Panel

4.1 Product Structure

Name and function description of each parts of the product



Code	Name	Description
1	Solenoid valves	See "Solenoid Valve Model Code Table"
2	LED indicator	Power ID, operation and bus status
3	Bus interface	2×M12, 4Pin, D-code, female
4	Power interface	1×M12, 5Pin, A-code, male
5	Exhaust port	G1/4
6	Intake port	G1/4
\overline{O}	Communication unit	Valve terminal communication and controller
8	Solenoid valve wiring socket	4Pin
9	Manifold base	Main structure, silk screened with "A" and "B" on both ends
10	Rotary switch	Set IP address, reset settings

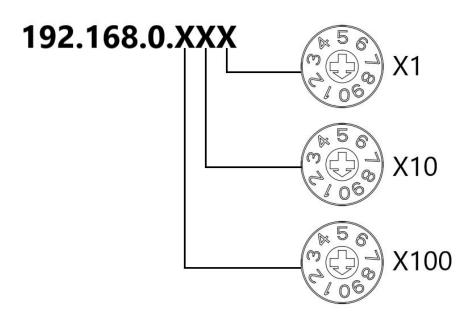
4.2 Indicator Function

Name	ID	Color	Status	Status description
System power	US	Green	ON	Normal status of working power supply
indicator			OFF	Unpowered or abnormal power supply
Load power	UL	Green	ON	Normal status of working power supply
indicator			OFF	Unpowered or abnormal power supply
Network indicator	L/A0	Green	Flashing	Network connection established with data interaction
IN			OFF	No data interaction or abnormal connection
Network indicator	L/A1	Green	Flashing	Network connection established with data interaction
OUT			OFF	No data interaction or abnormal connection
Operation status	RUN	Green	ON	Network connection established
indicator			Flashing	1Hz: The device has not established a connection, but
				an IP address was obtained; the IP address is
				duplicated; the device is undergoing a power-up test
			OFF	The device has not been given an IP address or is in an
				unpowered state
Alarm indicator	ERR	Red	ON	The valve is shorted/over-tempered or is being restored
				to factory settings
			OFF	Normal system operation or power off

4.3 Rotary Switch

IP address setting

A rotary switch can be used to specify the setting method of the module IP address.



Set value (decimal)	IP address setting method						
001 to 254	Set IP address low 1Byte. Set the IP address in the range of 1 to 254 with "x100" for						
	the hundredth digit, " \times 10" for the tenth digit, and " \times 1" for the single digit.						
	IP Address High 3Byte continues the value previously set via the host computer.						
	When the IP address is set to a value other than 000 by rotary switch in the factory						
	factory state, the high 3Byte is 192.168.0.						
000, 255-998	When the rotary switch is set to 255 or above, after the module is powered up, start						
	in the same way as the previous startup and parameters.						
999	Reset Settings.						

The factory rotary switch is set to "000".

Remarks:

1、 Tool selection

Screwdriver specifications: 2 mm opening.

2. The rotary switch IP must be set in the event of a power off. If the IP address needs to be changed during communication, the new setting must be re-powered to take effect.

Reset function

Restoration of factory settings can be executed by special operation of the rotary switch. For details on how to do this, see: <u>7.4 Restoring Factory Settings</u>.

5 Installation

5.1 Outline Dimensional Drawing

Outline Specifications (mm) $\emptyset 4.5$ Through Blocked connector Ø8 Ø10 connector e 0 55 Blocked connecto . 20 Silence Fieldbus interface K 71 6 Ρ

	L size										
Position	4	6	8	10	12	14	16	18	20	22	24
K=10.5	59.5	80.5	101.5	122.5	143.5	164.5	185.5	206.5	227.5	248.5	269.5
K=16	76	108	140	172	204	236	268	300	332	364	396
K=19	88	126	164	202	240	278	316	354	392	430	468
K=23	103	149	195	241	287	333	379	425	471	517	563
					P si	ze					
Position	4	6	8	10	12	14	16	18	20	22	24
K=10.5	136.5	157.5	178.5	199.5	220.5	241.5	262.5	283.5	304.5	325.5	346.5
K=16	153	185	217	249	281	313	345	377	409	441	473
K=19	165	203	241	279	317	355	393	431	469	507	545
K=23	180	226	272	318	364	410	456	502	548	594	640

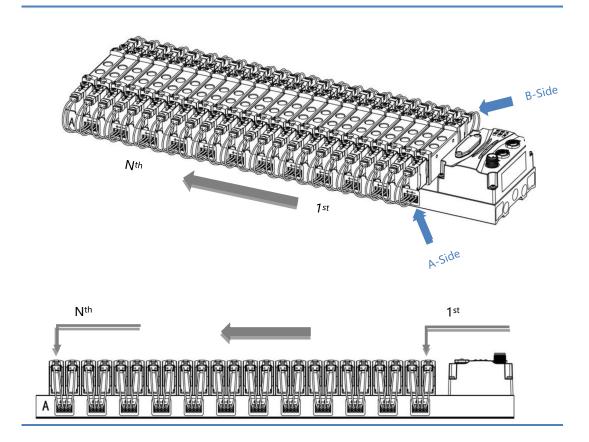
5.2 Solenoid Valve Assembly Sequence

• Supported solenoid valve for valve terminal For details, see <u>Solenoid Valve Model Code Table</u>

• Solenoid valve assembly sequence

The solenoid valves are installed in order from the communication unit end. Assembly sequence for double solenoid valves: Starting from the communication unit end, install valves from the 1st to the Nth position in sequence, as is shown in the figure below.

Assembly sequence for single solenoid valves: Starting from the communication unit end, install valves from the 1st to the Nth positio on the A side, as is shown in the figure below.

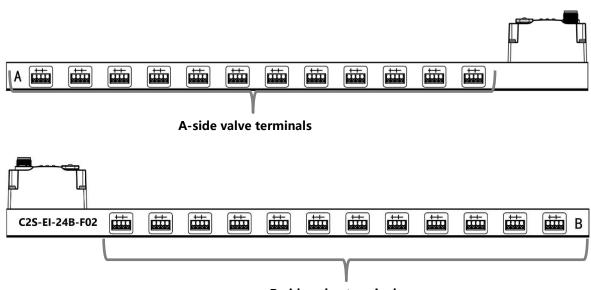


6 Wiring

6.1 Solenoid Valve Wiring

Terminal Connectors Distribution

Terminal connectors are distributed on both sides of the valve terminal manifold base, A-side and B-side respectively. A and B side can be distinguished according to the silkscreen on the end of the manifold base. Take C2S-EI-24B-F02 as an example, the distribution of A-side and B-side terminal connectors is shown in the figure below.



B-side val	lve term	ninals
------------	----------	--------

Wiring Terminals		
Taureinal	Number of poles	4P
Terminal	Wire gauge	22~17 AWG 0.3~1.0 mm ²

6 Wiring

Wiring Tool Requirements

As the terminals are based on a screw-free design, cable installation and removal can be realized with a slotted screwdriver (size: ≤ 2 mm).

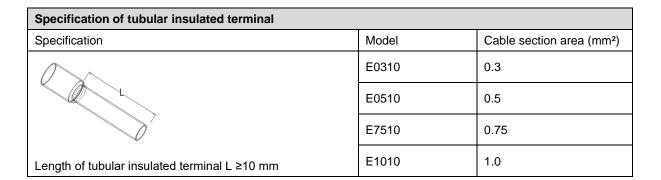
Stripping length requirements

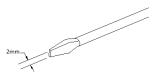
Recommended stripping length: 10 mm

Wiring Method

For a single-strand hard wire, after stripping a required length, press the button while inserting the single-strand wire

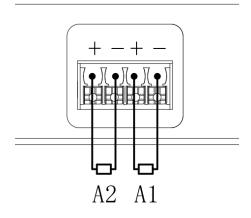
For a multi-strand flexible wire, after stripping a required length, directly connect it or use a compatible cold-pressed terminal (tubular insulated terminal, as shown in the table below). Press the button whiling inserting the wire.





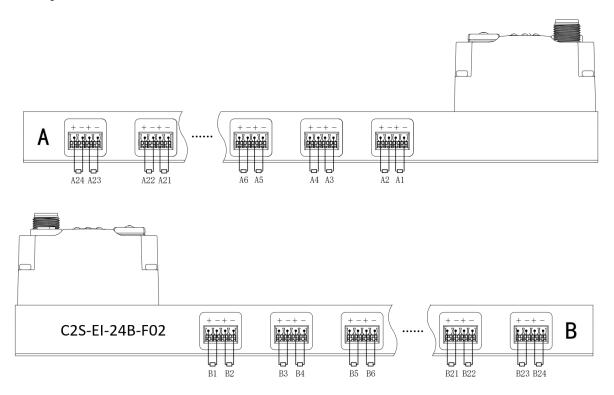
• Solenoid valve wiring

The number of 4-pin sockets, which are installed on both side of the manifold base, based on the number of valve positions of different valve terminal models. A pair of "+" and "-" can drive a solenoid valve coil. As shown in the figure below, A1 and A2 can drive a solenoid valve coil respectively.



• Valve terminal wiring

Starting from the communication unit end, the solenoid valve coils on the A side of the manifold base correspond to B side, and the correspondence between the channels and the solenoid valve coils is shown in the figure below.



Solenoid valve wiring principles:

- Install the solenoid valve in accordance with "<u>5.2 Solenoid Valve Assembly Sequence</u>".
- AX and BX can be connected to a double solenoid valve, and AX can be connected to a single solenoid valve. For wiring, please strictly follow the table below, otherwise the solenoid valve will not work or misoperate. "X" means no wiring.

Double solenoid valve wiring (all valves are double solenoid valves)										
Terminals A1 B1 A2 B2 A3 B3 A4 B4										
Solenoid valve number	1 2 3 4									

Terminals	 A22	B22	A23	B23	A24	B24
Solenoid valve number	 2	2	2	<pre> 4 </pre>	2	4

Note: C2S-EI-24B-() valve terminal and 24 solenoid valves were taken as an example. Wirings are different

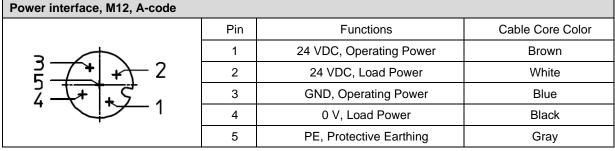
considering different specifications of the valve terminal.

Double solenoid valve wiring (all valves are single solenoid valves)										
Terminals	A1	B1	A2	B2	A3	B3	A4	B4		
Solenoid valve number	1	\times	2	\times	3	\times	4	\times		

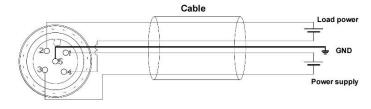
Terminals	 A22	B22	A23	B23	A24	B24
Solenoid valve number	 22	\times	23	\times	24	\times

Note: C2S-EI-24B-() valve terminal and single solenoid valve were taken as an example. Wirings are different considering different specifications of the valve terminal.

6.2 Power Wiring



The power supply wiring is shown below:



Precautions

- The module system-side power supply and the field-side power supply are configured and used separately, so do not mix them.
 - PE needs to be reliably grounded.

6.3 Bus Wiring

Fieldbus Interface, M12, D-code		
	Pin	Function
	1	TD+, Transmit Data+
1701072	2	RD+, Receive Data+
4 70 05 3	3	TD-, Transmit Data-
	4	RD-, Receive Data-
	-	Housing, Shielded/Protected Ground

Precautions

• Double shielded cables of category 5 or higher (braided mesh + aluminum foil) like STP cables are recommended.

• The length of the cables between the devices must not exceed 100 m.

7 Operation

7.1 Control Method

Solenoid valves installed on the valve terminal are controled by bytes and one byte control 4 valves. They can also be controlled by bits, in which 8 bits in a group, controlling 1 to 8 channels. The channel value of 1 means solenoid valve is open, the channel value of 0 means solenoid valve is closed. 24 duoble solenoid valves have 6 groups of control positions and control 48 channels. Take 24-position double solenoid valve as an example to introduce the output control function of the valve terminal, the control mode is shown in the table below.

Control Method		valve[14]									
Channel Address	valve [14] [0]	valve [14] [1]	valve [14] [2]	valve [14] [3]	valve [14] [4]	valve [14] [5]	valve [14] [6]	valve [14] [7]			
Coils	A1	B1	A2	B2	A3	B3	A4	B4			
Solenoid Valve Number	1		2		:	3	2	4			

Control Method		valve[58]									
	valve [58]										
Channel Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]			
Coils	A5	B5	A6	B6	A7	B7	A8	B8			
Solenoid Valve Number		5		6		7	1	8			

Control Method		valve [912]									
	valve [912]										
Channel Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]			
Coils	A9	B9	A10	B10	A11	B11	A12	B12			
Solenoid Valve Number		9		10		1		12			

Control Method		valve [1316]									
Channel Address	Valve [1316] [0]	Valve [1316] [1]	Valve [1316] [2]	Valve [1316] [3]	Valve [1316] [4]	Valve [1316] [5]	Valve [1316] [6]	valve [1316] [7]			
Coils	A13	B13	A14	B14	A15	B15	A16	B16			
Solenoid Valve Number		13	1	4	1	5	1	6			

Control Method		valve[1720]									
Channel Address	valve [1720] [0]	valve [1720] [1]	Valve [1720] [2]	valve [1720] [3]	valve [1720] [4]	valve [1720] [5]	valve [1720] [6]	valve [1720] [7]			
Coils	A17	B17	A18	B18	A19	B19	A20	B20			
Solenoid Valve Number		All Blo Allo Blo Allo Blo Allo Blo Blo Allo Blo Blo									

Control Method		valve [2124]										
Channel	valve	valve [2124]										
Address	[2124] [0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]				
Coils	A21	B21	A22	B22	A23	B23	A24	B24				
Solenoid Valve		21	2	2	2	2	2	Λ				
Number		21	2	۷	2	3	2	4				

7.2 Diagnostic Function

The C2S-EI valve terminal has an open load, a short-circuit and over temperature detection. An open load can only be monitored if the valve is closed and a short circuit can only be monitored if the valve is open.

The diagnostic function works the same as the control method as it sends diagnostic information in byte or bit. Under the condition that the valve is closed, the value 0 means normal status and 1 means the valve is in opencircuit condition. Under the condition that the valve is opened, the value 0 means normal status and 1 means the valve is in short-circuit or over temperature condition.

The channel diagnostic information of open load, short-circuit and over temperature corresponds the solenoid valve coils. Taking open-circuit diagnosis as an example, the correspondence is shown in the table below.

Diagnostic Function				Open loa	ad[07]			
Channel	Open [07]	Open[07]	Open [07]	Open [07]	Open [07]	Open [07]	Open[07]	Open[07]
Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coils	A1	B1	A2	B2	A3	B3	A4	B4
Solenoid		1	0		,)		1
Valve Number		I	2		3)	2	÷

Note: Open load is abbreviated as Open in the table, same as all below tables.

Diagnostic Function				Open lo	ad[815]			
Channel	Open [815]							
Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coils	A5	B5	A6	B6	A7	B7	A8	B8
Solenoid Valve		-			_	-		L
Number		5	e e	6		7	8	
Diagnostic				Onen la				
Function				Open lo	ad[1623]			
Channel	Open [1623]							
Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coils	A9	B9	A10	B10	A11	B11	A12	B12
Solenoid Valve Number	Ş	9	1	0	1	1	12	

Diagnostic Function				Open loa	id[2431]			
Channel	Open [2431]							
Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coils	A13	B13	A14	B14	A15	B15	A16	B16
Solenoid Valve	4	0	4	4	4	Г		0
Number	1	3	1	4	1	5	1	6

Diagnostic Function				Open loa	ad [3239]			
Channel	Open [3239]							
Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coils	A17	B17	A18	B18	A19	B19	A20	B20
Solenoid	1	7	4	0	4	0	0	0
Valve Number	1	7	1	8	1	9	2	.0

Diagnostic Function				Open loa	id[4047]			
Channel	Open [4047]							
Address	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coils	A21	B21	A22	B22	A23	B23	A24	B24
Solenoid Valve	2	4	2	0	2	2	2	4
Number	2	. I	2	2	2	3	2	4

7.3 IP Settings and Modifications

7.3.1 Setting the IP Address by Rotary Switch

> Set the IP address with the rotary switch in the factory state

IP address is 192.168.0.XXX (XXX is the setting value of the rotary switch, range 1~254).

Set the IP address with the rotary switch in a state where the IP address has already been set by the host computer

The IP address follows the high 3byte and the low 1byte of the IP address set via the host computer as the setting value of the rotary switch.

For example, when changing the setting of the rotary switch after setting it to 172.10.0.12 via the upper unit, the IP address is 172.10.0.XXX (XXX is the setting value of the rotary switch (1 to 254).

Precautions

For the description and operation of the rotary switch, see "<u>4.3 Rotary Switch</u>".

- When the module is shipped from the factory, the rotary switch is set to "000" and the IP address defaults to 192.168.0.120.
- After the modification by the host computer is completed, the module modifies the startup method to fixed IP startup and restarts automatically. The module starts with the IP address consisting of the rotary switch setting value and the assigned network segment.
- Abnormal rotary switch setting: When the rotary switch is set to 255 or 255 or more, the module starts with the previous startup parameters and method after powering up.

7.3.2 Setting the IP Address via the Host Computer Software

This section introduces how to change the IP address with the KEYENCE KV-8000 and the upper computer KV STUDIO Ver.10G as examples.

a. After finding the device, click the <u>"IP address"</u> to modify it, and select <u>"Fixed IP start"</u> as the IP address setting method. Click the "OK" button after the modification is completed, as shown in the figure below.

🛃 EtherNet/IP settings					>	×
File(F) Edit(E) Settings(S) View(V) Conv	vert(C) EDS file(D) Communic	ation(N) Tool(T)	Help(H)			
- 🕫 🕦 🔛 🛣 🕹 🛍 👘 👘 🔗 🕅	🙉 🔍 🗹 խ 🖿 🥝					
KV-8000[0] : 192.168.0.10			EtherNet/I	P unit		ņ
			Unit list(<u>1</u>) Unit setting(<u>2</u>)	Search unit(<u>3</u>)	
			M M <i>i</i>	🖞 Display all	~	
					address MAC a.	
			C2s-	-EI-24B	. <u>68.0.120</u> 00:08	
	IP address settings		×			
	IP address setting method(S)	Fixed IP start	~			
	IP address(I)	192 . 168 . 0) . 120			
	Advanced settings(A)	ОК	Cancel			>
			Nanjing When pow	-24B[1.1] Solidot Electric Wer on next time: e for C2S EI	Technology Co.,Ltd. Fixed IP start	
Output						ą
🗈 🛍 # 🍠 🕏 🛼 🏪						
N Node name IP	address Conne	ction	RPI[IN] RPI[(ms) (m	OUT] Time out	Refresh priority	
H + + Message Verify Setup list		. <			>	
			Editor	ОК	Cancel Apply	

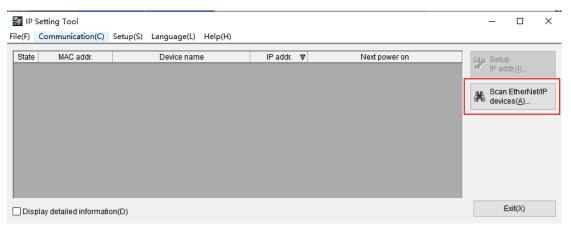
Precautions

 If you use BOOTP to modify the IP address, you need to set the request acceptance time during scanning and the timeout time during IP address setting to 60s or more, and you need to set the module as fixed IP start after the modification is completed, otherwise the assigned IP address will be lost after power off.

7.3.3 Setting the IP Address with IP Setting Tool

After the device is powered on, wait for 15s and the device will complete the network service startup. After that, the first scan will be performed by IP Setting Tool to set the IP address.

1. Open the IP Setting Tool and click the <u>"Scan EtherNet/IP devices"</u> button.



2. Set the IP segment and click OK.

🕌 IP Setting Tool				- 🗆 X
File(F) Communication(C)	Setup(S) Language(L) Help(H)			
State MAC addr.	Device name	IP addr. ▼	Next power on	con Setup
	Scan EtherNet/I	P devices	×	IP addr.([)
	IP addr. start(T)	192 . 168 .	0.1	Scan EtherNet/IP devices(<u>A</u>)
	IP addr. end(E)	192 . 168 .	0.254	
		ОК	Cancel	
Display detailed information	on(D)			Exit(X)

The scanned device is shown in the figure below.

🟭 IP	Setting Tool								_		\times
File(F)	Communication(C)	Setup(S)	Language(L)	Help(H)							
State	MAC addr. 00:08:DC:00:20:50	C2S-EI-24	Device nam 4B(EtherNet/IP)		IP addr. 192.168.0.120	-	Next powe Start with fixed IP	er on	AL Scan	p Idr.([) EtherNe ces(<u>A</u>)	et/IP
Dis	play detailed informati	on(D)							E	Exit(X)	

3. Double-click the device and set the IP address in the "Setup IP addr." pop-up window, as shown below.

🏭 IP Setting Tool					$ \Box$ \times
File(F) Communication(C)	Setup(S)	Setup IP addr.		×	
State MAC addr.		Please set the IP address.			📭 Setup
00:08:DC:00:20:50	C2S-EI-24	MAC addr.	00:08:DC:00:20:50		6 IP addr.(l)
		Device name	C2S-EI-24B(EtherNet/IP)		Scan EtherNet/IP devices(A)
		IP addr. (required)(I)	192 . 168 . 0 . 120]	
		Host name (optional)(H)	C2S-EI-24B		
		IP addr. setting at next power on(N)	Start with fixed IP ~		
Display detailed informati	on(D)	Search available IP address	es(F) OK Cancel		Exit(X)

7.4 Restore Factory Settings

If the IP address is forgotten, lost or other abnormalities occur during use, the module can be reset by the IP address reset function. The module can restore factory settings through the special operation of the rotary switch as follows:

Scenario 1: The device performs a factory reset while it's powered on and in use.

1) Set the rotary switch to 999 and wait for 2s, then the ERR indicator lights up and the module will automatically resotre factory settings;

2) After the module is restored to factory settings, the IP address is cleared and the startup method is BOOTP;

3) ① Set the rotary switch to 000, 255 or 255 or more (except 999), and the IP address will be restored to the factory address(192.168.0.120), after re-powering up.

② Set the rotary switch to 001~254, and after re-powering up, the IP address is 192.168.0.XXX (XXX is the setting value of the rotary switch, range 1~254).

Scenario 2: The device performs a factory reset while it's powered off.

1) Set the rotary switch to 999 and power up the module, the module will automatically restore factory settings;

 After the module is restored to factory settings, the IP address is cleared and the startup method is BOOTP;

3) ① Set the rotary switch to 000, 255 or 255 or more (except 999), and the IP address will be restored to the factory address (192.168.0.120) after re-powering up.

② Set the rotary switch to 001~254, and the IP address is 192.168.0.XXX after re-powering up (XXX is the setting value of the rotary switch, range 1~254).

7.5 Parameter Description

7.5.1 Output Signal Clear/Hold Function

The output signal of the valve terminal has clear/hold functio, and it can configure the output action of the valve terminal in the abnormal state of the bus.

Clear Output: When communication is disconnected, the output channel automatically clears the output signals.

Hold Output: When communication is disconnected, the output channel keeps on outputting.

The function supports all-channel setting, single-channel setting and 8-channel batch setting according to the driver chip grouping, which can better meet the actual use requirements.

This manual takes KV STUDIO Ver.10G as an example to introduce the parameter configuration method, the specific steps are detailed in <u>7.6.1 Parameter Setting</u>.

7.6 Configuration Applications

7.6.1 Application In KV STUDIO Software Environment

1, Preparations

- Hardware Environment
 - > Valve terminal model C2S-EI-24B
 - > A computer with KV STUDIO Ver.10G software
 - > Shielded cables for valve terminals
 - > One KEYENCE PLC, KV-8000 is used as an example
 - > One switching power supply
 - Device configuration files Configuration file access: <u>https://www.gdcoyo.com/bus-valve-island/bus-valve-island.html</u>
 - Note: Valve terminal configuration files of a high number of valve positions are compatible with valve terminals with a lower number of valve positions, e.g., a C2S-EI-20B valve island can use a C2S-EI-24B file.
- Hardware Configuration and Wiring Please follow "<u>5 Installation</u>" and "<u>6 Wiring</u>".

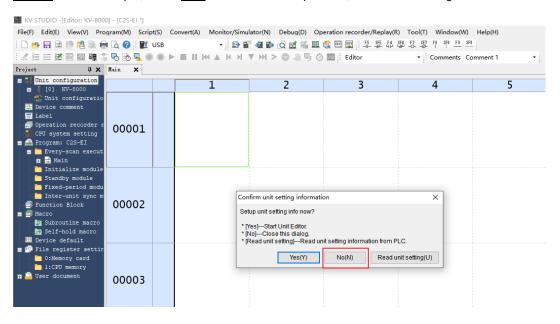
2. New project

- a. Open the KV STUDIO software, select "File" -> "New Project".
- b. In the pop-up box, fill in the <u>"Project name"</u>, select <u>"PLC model"</u>, <u>"Position"</u>, as shown in the figure below.

KV S	TUDIO									
File(F)	View(V)	Monitor/	Simulator(N	Operation recorder	r/Replay(R) Tool(T)	Window(W)	Help(H)			
i 🗅 📩		P 🔒 🗟	🖶 🗟 🕐	Ethernet	• 🗄 📾 📲 -	a 🗈 🔬 🗹			SF5 F4 SF4 F7 SF7 F8 SF8 F9 SF9	
12 1	:= 2	60° FR &	5 88			₩ > ○ .	🖳 Ó 💷		SF5 F4 SF4 F7 SF7 F8 SF8 F9 SF9 # I: Comments I: Comments I: I:	
				New project				×		
				Project name(N))	PLC mo	del(K)			
				C2S-EI		KV-8000		~		
				Position(P)						
				D:\workspace\k	v_space		Refer(S)		
				Comment(C)						
								^		
				AW display com	manteAAA			· .		
				KVS PROJECT						
				Register spe	cial device cmnts(M)	OK	Cancel			

- Project name: Customized
- PLC model: View the PLC and select the model, e.g., KV-8000.

c. The <u>"Confirm unit setting information"</u> window pops up, and you can select <u>"Yes"</u>, <u>"No"</u> or <u>"Read unit</u> setting". In this example, select "No" to ccontinue the operation, as shown in the figure below.



3、 Communication settings

Select the communication method, if the PLC and the host computer software are connected through a network cable, select "Ethernet", if connected through USB, select "USB".

"Ethernet" Operations



Click the button on the menu bar to display the <u>"Comm settings"</u> window as shown below.

mm settings		
PC comm port		
O USB(U)	O Serial(S)	
-		-
O Ethernet(E)	Bluetooth(H)	O Modem(M)
USB settings		
No settings.		
no ootango.		
Routing setting(R)		
PC comm port : USB		
PC comm port : USB via VT/DT : No		
PC comm port : USB via VT/DT : No via network : No		Detail(A)
PC comm port : USB via VT/DT : No via network : No	OK	Detail(A) Cancel

Select <u>"Ethernet"</u>, click <u>"Destinations"</u>, select <u>"1 sample"</u>, configure the IP address, and click <u>"Search dest.(F)"</u>, as shown in the following figure, the IP address is configured in the <u>"192.168.0"</u> network segment.

Comm settings		>
PC comm port		
O USB(U)	O Serial(S)	
Ethernet(E)	O Bluetooth(H)	O Modem(M)
Ethernet settings		
IP address(I)	192 . 168 . 0 . 10	Search dest.(F)
Port No.(P)	8500	Conn. test(T)
PC comm port : U: via VT/DT : No		
PC comm port : U	SB	Detail(A)
PC comm port : U via VT/DT : No via network : No	SB	Detail(A) Cancel
PC comm port : U: via VT/DT : No via network: No Connected model Destinations(L) Add to des	SB :	

c. In the <u>"Search destination</u>" pop-up window, select the network card and click <u>"Execute(S)</u>", as shown in the following figure.

Search destination				×							
Select network card											
Network card (N) Realte	k PCle GbE Family Controlle	r		\sim							
IP address 192.1	68.0.252										
Subnet mask 255.2	.255.255.0										
200220.200											
Port No.(P) 8500	Execute(S) Stop(B)									
Find Ethernet unit where br	oadcast packets reach. (KV	√ only)									
*Network load may increa	se according to the number	r of connected units.									
Result											
MAC address	Connected Unit type	IP address	Project name								
-											
-											
			Q-last	Oreast							
			Select	Cancel							

d. Select the found PLC and click "Select" as shown in the following figure.

Search destination	ו				×
Select network ca					
Network card (N		k PCle GbE Family Controlle	ſ	~	
IP address	192.1	68.0.252			
Subnet mask	255.2	255.255.0			
	8500	Execute(S			
		oadcast packets reach. (K) se according to the numbe			
Result					
MAC address		Connected Unit type	IP address	Project name	
00-01-FC-ED-53-73		KV-8000	192.168.0.10	E阀岛重复上下电点亮通…	
-					
-					
				Select Cancel	

e. Click the "OK" button on the Communication Settings window.

"USB" Operations

Select <u>"USB"</u> on the "Comm settings" screen.

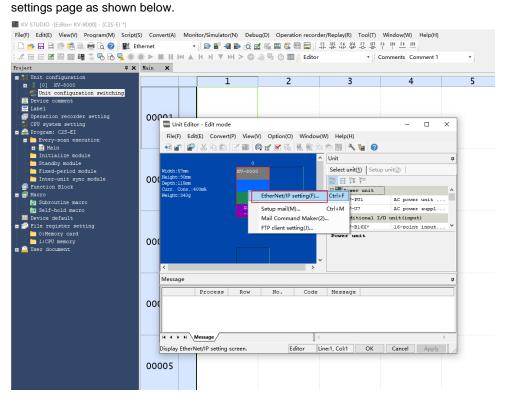
4、 EtherNet/IP settings

a. Double click <u>"Unit Configuration -> KV-8000"</u> in the left navigation tree to bring up the <u>"EtherNet/IP</u> settings" window. Select <u>"Manual"</u> or <u>"Auto Configuration"</u> based on needs. Select <u>"Manual"</u> to continue the operation as shown in the figure below. When the setting is completed, click <u>"OK"</u> to close the window.

KV STUDIO -[Editor: KV-8000] - [C2S-EI							
File(F) Edit(E) View(V) Program(M)							
! D 😝 🕄 🗎 100 🛤 🐘 🖶 D, 🥝 !! !	-		1 🐔 🏛 🗳 🔤 🔛 🎚 .		Comments Comment 1		
	4 × Main ×				comments comment i	•	
 Unit configuration [0] KV-8000 Unit configuration switching 	a	1	2	3	4	5	6
E Device comment E Jabel Geration recorder setting Coperation setting Program: C2S-EI	00001 Unit Editor - Edit m	node			- 0	×	
Every-scan execution	LetherNet/IP settings		0 Ontion(O) Window			-	
Initialize module Standby module Fixed-period module	File(F) Edit(E) Settings(S) Viev			nication(N) Tool(T)			
Inter-unit sync module	KV-8000[0] : 192.168.0.1				EtherNet/IP unit		ņ
Function Block					Unit list(1) Unit se		t(3)
🕞 Subroutine macro							
Self-hold macro Device default					Unit nam		EDS fil ^
🝙 👘 File register setting					kv-5500		KV-5500
0:Memory card					m KV−7500		KV-7500
1:CPU memory User document					0000 kv		KV-8000
					E RV-EP02		EtherNe
					KV-N16ER		16-poin 16-poin
		EtherNet/IP	settings		6EX		16-poin
					AM		2+1ch a
			The EtherNet/IP setting has no				8-point
			* "Manual"Set the configura * "Auto Configuration"Searc	tion from the equipment is th the connected equipment	t. ht to be set automatically. ET*	1.1	8-point
					EX	1.1	8-point Y
			Manual(M)	Auto Configuration	(A)		
	Output						
	N Node name	IP add	ress Con	nection	RPI[IN] RPI[OUT] (ms) (ms)	Time out p	Refresh riority
	H 4 + H Message Verify Setup	list		<			>
				Ed	itor	OK Cancel	Apply

5. Installation of EDS files

a. Right-click on the <u>"KV-8000"</u> in the <u>"Unit Editor"</u> window and select <u>"EtherNet/IP setting"</u> to enter the



b. Click <u>"EDS file"</u> in the menu bar of the <u>"EtherNet/IP settings"</u> screen, and then click <u>"Reg"</u> as shown in the following figure.

🗰 KV STUDIO -[Editor: KV-8000] - [C2S-EI *]							
File(F) Edit(E) View(V) Program(M) So	cript(S) Convert(A) Monitor/Simulator(N) Debug(D) (peration recorder/R	Replay(R) Tool(T)	Window(W) Help(H)		
i 🗅 🤒 🗟 🗟 🕐 🛸 🖶 🗟 🕗 i 🖥	🛍 Ethernet 🔹 🔹 🔛 🔐 📲	🗈 👌 🗹 🖏 🗉	1 🚉 💷 🔤 🗄 -	\$15 태 \$14 년 \$2 1	F8 SF8 <u>F9</u> SF9		
i 🗶 🗄 🗁 🗶 📾 📾 🖷 💲 🗞 💁		1 > 0	🕑 🔟 🕴 Editor	- c	omments Comment 1	-	
Project f	X Hain X						
 ■ ↓ Unit configuration n ↓ [0] KV-8000 ♥ Unit configuration switching ➡ Device comment ➡ Label ➡ Operation recorder setting ➡ Off system setting 	Unit Editor - Edit mode		2	3	4	5 ×	6
🔳 🕋 Program: C2S-EI	File(E) Edit(E) Convert() View(V) Opti	on(O) Window(M)	Help(H)		-	
Every-scan execution	K EtherNet/IP settings					-	
🖬 🔛 Main 🤚 Initialize module	File(F) Edit(E) Settings(S) View(V)	Convert(C) EDS	file(D) Communica	tion(N) Tool(T) H	lelp(H)		
- Standby module	40 B S X B A B M		Reg(I)				
- Fixed-period module			Delete(D)		EtherNet/IP unit		
	KV-8000[0] : 192.168.0.10		Search(S)				
= # Macro			Edit comments(E)		Unit list(1) Unit settin	.g(2) Search unit(3	D
🔄 Subroutine macro			Add to scan list(A)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Self-hold macro			Display all EDS files()	v.	Unit name		os fil ^
Device default File register setting			1.7	-,	Keyence Corpor		-5500
0:Memory card			Property(P)		KV-7500		-7500
1:CPU memory					KV-8000	1.1 KV	-8000
m 🔷 User document					E KV-EP02	1.1 Et	herNe
					KV-N16ER		-poin
					KV-N16ET*		-poin
					RV-N16EX		-poin
					KV-N3AM		lch a
					KV-N8ER		point
					KV-N8ET*		point
					KV-N8EX	1.1 8-	point Y
	Output Call III M IF M III M III N Node name	IP address	Connec	rtion	RPI[IN] RPI[OUT] (ms) (ms) Ti	me out Re pri	4 efresh lority
	H + + H Message Verify Setup list			[<			>
N	Read EDS file, and register to the unit list.			Edito	r (OK Cancel	Apply

c. In the folder where the EDS file is placed, select the EDS file of the corresponding model and click "OK", the configuration file installation is completed, as shown in the following figure.

EtherNet/IP settings		n(()) Window(W) Heln(H)				×
File(F) Edit(E) Settings(S) View(V)			Help(H)			^
KV-8000[0] : 192.168.0.10			EtherNet/IP unit Unit list(1) Unit setting(2) S □ Unit name □ LATCOS □ SRX-EP □ Nanjing Solidot □ C2P-EI-08B □ C2P-EI-08B □ C2P-EI-08B □ C2P-EI-24B □ C2S-EI-08B □ C2S-EI-08B □ C2S-EI-08B □ C2S-EI-08B □ C2S-EI-08B □ C2S-EI-08B □ C2S-EI-16B □ C2S-EI-24B □ C2S-EI-08B □ C2S	Rev. EI 2.2 EI 1.1 EI 2.2 EI	DS fil S fil	•
Dutput						
N Node name	IP address	Connection	RPI[IN] RPI[OUT] (ms) (ms) Time out		fresh. ority	
H 4 → M Message Verify Setup list		[] <	litor OK	Cancel	Apply	>

6, Topological configuration

Topology configuration can be "manually added" and "auto-configurated". In this configuration manual configuration is used.

a. Enter the <u>"EtherNet/IP settings"</u> page and switch to the <u>"Search unit"</u> tab, as shown in the following figure.

LtherNet/IP settings							_		×
File(F) Edit(E) Settings(S) View(V) Conver			Tool(T)	Help(H)					
📲 🔃 🐩 🐾 👗 🖿 👘 🕌 👹 🔗	Q 🔍 🗶 🛤 🛛	?							
KV-8000[0] : 192.168.0.10				EtherNe	t/IP unit				Д,
					t(<u>1</u>) Unit s	-	Search unit(<u>3</u>)		
					🖞 Display			\sim	
				Ur	it name	IP	address	MAC	a
				<					>
Output									д
						1			
N Node name IP ad	idress	Connection		RPI[IN] (ms)	RPI[OUT] (ms)	Time ou	t Ref:	resh ritv	
				()	(1	
H • • • Message Verify Setup list									>
			Edi	tor		ОК	Cancel	Appl	/

b. Click and the USB connection method is shown in the following figure.

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📕 Ethe	erNet/IP settings			••				_		×
File(F)	Edit(E) Settings(S) View(V)	Convert(C) EDS f	ile(D) Communication(N)	Tool(T) H	Help(H)					
📲 🕦	📅 🗞 🔥 🖆 👘 🕌 🌌 🖋	66 🙉 🔍 🗹	ia ii 🕜							
	₩-8000[0] : 192.168.0.10				EtherNet	/IP unit				ņ
							etting(2) Sea	rch unit(<u>3</u>)		
						🗳 Display			\sim	
					Uni	t name	IP ad	dress	MAC a	a
		Select co	mmunication path		×					
		Ether	net port of EtherNet/IP unit via	PLC(P)						
		OPCE	thernet port direct link(D)							
		8			- 					>
			ОК	Car	ncel					
Output										ņ
Ð Ð	🗰 ङ 💌 🛼 🔛									
N	Node name	IP address	Connection		RPI[IN] (ms)	RPI[OUT] (ms)	Time out	Ref: prio:	resh rity	
<u> </u>	N Message Verify Setup list		<							>
				Edito	or		ок	Cancel	Apply	

c. "PC Ethernet port direct link" as the connection method is shown in the following figure.

📕 EtherNet/IP settings						_	
File(F) Edit(E) Settings(S) View(V)			ol(T) Help(H)				
📲 🕼 🐕 🖧 🖿 👘 🕌 📾 🔗	6 🛱 🖗 🕅	to ti 🕐					
KV-8000[0] : 192.168.0.10			EtherNet	t/IP unit			ņ
					tting(2) Se	arch unit(<u>3</u>)	
			<u> </u>	🐴 Display			~
			Un	it name	IP ac	ddress	MAC a
	Select	communication path	×				
	OEthe	ernet port of EtherNet/IP unit via PLC	(P)				
	● PC	Ethernet port direct link(D)					
		今					>
		ОК	Cancel				
Output							ņ
•••••							
N Node name	IP address	Connection	RPI[IN] (ms)	RPI[OUT] (ms)	Time out	Refr prior	
II II I → → Message Verify Setup list							>
		_	Editor		ОК	Cancel	Apply

d. Select <u>"PC Ethernet port direct link"</u> to bring up the <u>"Select network card"</u> window, and set the local NIC and IP address, as shown in the following figure.

LtherNet/IP settings								-		×
File(F) Edit(E) Settings(S)				Tool(T)	Help(H)					
📲 🕼 🐕 🗣 👗 🖿 👘	h 🖬 🥙 🗞 🛱) 🔍 🗹 🔯	1 0							
KV-8000[0] : 192.10	68.0.10				EtherNet	/IP unit				ņ
					Unit list(<u>1</u>) Unit s	etting(<u>2</u>)	Search unit(<u>3</u>)		
					1 . 1 .	🗳 Display	all		\sim	
					Uni	it name	IP	address	MAC a	a
	Select network card						×			
	Network card(N)	Realtek PCIe 0	GbE Family Controller				~			
	IP address	192.168.0.252								
	Subnet mask	255.255.255.0								
				[OK	Car	icel			>
Output										ņ
N Node name	e IP ado	iress	Connection		RPI[IN] (ms)	RPI[OUT] (ms)	Time ou	it Ref	resh rity	
H → → → Message (Verify)	Setup list		<							>
				Edito	or		OK	Cancel	Apply	

e. Click to search for devices in the network. Set the IP address segment for searching, and click

"Search" as shown in the following figure.

LitherNet/IP settings						- 0	\times
File(F) Edit(E) Settings(S) View(V) Co	onvert(C) EDS file(D)	Communication(N) Tool() Help(H)				
📲 🕦 🐕 🖧 💺 🖿 👘 🕌 🥙	65 🙉 🔍 😿 🖿	0					
KV-8000[0] : 192.168.0.10			EtherNe	t/IP unit			¢
			Unit list	(<u>1</u>) Unit se	tting(2) Sea	rch unit(<u>3</u>)	
			16 %	🗳 Display	all	\sim	
			Un	it name	IP ad	dress MA	C a
	Search unit setti	ngs	×				
	Search start add	tress(T) 192 . 168 .	0,0				
	Search end add	ress(E) 192 . 168 .	0 . 255				
	Cooreb unitu	vithout IP address(U)					
	_	eptance time(O) 15	s				
	Requestacco			_			>
		Search(F)	Cancel	_			
Output							ņ
🖻 💼 # 🍠 🕏 🗛 🏨							
N Node name I	P address	Connection		RPI[OUT]	Time out	Refres	
	r dddrebb	001110002011	(ms)	(ms)		priorit	У
H + + H Message Verify Setup list		[<					>
			Editor		OK	Cancel Ap	ply

f. When the search is complete, the display is shown below.

📕 Ethe	erNet/IP se	ttings	- Convertiu	1 Wowliff 1	ntion// II	MundowiWi	Holp/Hi					-		×
				Convert(C) El			ation(N)	Tool(T)	Help(H)					
📲 🛈	***	% 🗈 	뉴 🖣 🖉	6 🛱 🖗 🗄		1 🕜								
	w-8000[0]		8.0.10					EtherNet	-					ņ
											Search unit(<u>3</u>)			
									🐴 Displa			~		
									it name S-EI-24B		address	MAC 00:08:D0	addres	
									5 61 215	1.2.10	0.0.120	100.00.00	5.00.20	
								C25-71	I-24B[1.]	1				
								Nanjin	g Solidot	Electric	Technology			
									ower on ne le for C2:		ixed IP sta	rt		
Output														ņ
	M 🍠 🛛	2 🛼 🏬												
N		Node name		IP address		Canna	ction		RPI[IN]	RPI [OUT]	Time out	Refi	resh	
N	1	Noue name		ir address		conne	cuion		(ms)	(ms)	Time out	prior	rity	
<u> </u>	N Messa	ige (Verify)	Setup list /				<							>
		,						E	ditor		ОК	Cancel	Apply	
													-	

g. Double-click the found device to add it to the configuration, as shown below.

LtherNet/IP settings	- 🗆 ×
File(F) Edit(E) Settings(S) View(V) Convert(C) EDS file(D) Communication(N)	Tool(T) Help(H)
📲 🕼 🐕 🐁 🕹 🛍 🕌 👫 🔤 🌮 🚳 🚳 🤍 🗹 🛍 😭 🔗	
KV-8000[0] : 192.168.0.10	EtherNet/IP unit 📮
	Unit list(1) Unit setting(2) Search unit(3)
	👫 🏪 👬 Display all 🗸
1: C2S-EI-24B : 192.168.0.120 Exclusive Owner	Unit name IP address MAC address
EXClusive Owner	C2S-EI-24B <u>192.168.0.120</u> 00:08:DC:00:20:50
	C2S-EI-24B[1.1]
	Nanjing Solidot Electric Technology Co.,Ltd. When power on next time:Fixed IP start
	EDS file for C2S EI
Output	4
🖻 💼 🗰 🐷 💌 🥾 🏨	
N Node name IP address Connection	RPI[IN] RPI[OUT] Time out Refresh
	(ms) (ms) priority
1 C2S-EI-24B 192.168 DEExclusive Owner [I	N_100 20.0 20.0 RPI*16 Normal
II II I I IIIIIIIIIIIIIIIIIIIIIIIIIIII	>
	Editor OK Cancel Apply

7、 Setting the IP address

In the interface of the found device, double-click the IP address column and configure the IP address in the pop-up box. The default address network segment is 192.168.0.

Description:

-The timeout for setting the IP address needs to be configured to 60s.

-If the dip switch has been configured with an IP address, it takes precedence.

In this example, the default IP address of C2S-EI-24B is 192.168.0.120.

8、 Parameter setting

a. Click the Switch Mode option in the menu bar to switch to "Editor" mode, as shown in the following figure.

KV STUDIO -[Editor: KV-8000] - [C2S-EI *]							
File(F) Edit(E) View(V) Program(M) Script(S	6) Convert(A)	Mon	tor/Simulator(N) Debu	ig(D) Operation	n recorder/Replay(R) Tool(T) Window(W) Help(H)	
🗄 🗅 📂 🗔 🗟 📄 🛤 🖶 🖶 🞝 🕗 🗄 🔛 Et	hernet	-	i 🗈 📽 剩 🔂 🖸	🛃 🏭 🚉 📼	EV : F5 SF5 F4 SF4 F7 S	F7 F8 SF8 <u>F9 SF9</u> 2- 1	
i 🖉 🗄 📰 🜌 🗃 🞬 📭 🏷 💀 🛼 🔘 (•	$\mathbb{H} \ \mathbb{H} \ \mathbb{A} \ \mathbb{H} > \mathbb{O}$	J 🗣 Ö 🖬	Editor •	Comments Comment 1	-
Project 📮 🗶	Main 🗙				Editor		
🔳 🖬 Unit configuration			1	2	Monitor Online edit	4	5
[0] KV-8000 Dit configuration switching				_	Simulator		
Pevice comment					Simulator edit Replay		
Label					Replay		
Operation recorder setting CPU system setting	00001						
a Program: C2S-EI							
Every-scan execution							
n 🛗 Main Initialize module							
Standby module							
Fixed-period module	00002						
Function Block	00002						
a 🗃 Macro							
Subroutine macro Self-hold macro							
🛓 👘 File register setting							
0:Memory card 1:CPU memory	00003						
🗉 🚞 User document							
	00004						
				1	E.		

b. Enter the <u>"EtherNet/IP settings"</u> screen and click <u>"Exclusive Owner"</u> to bring up the <u>"Connection settings"</u> window. In the window, click "Setup parameter" as shown below.

EtherNet/IP settings)) View!	V) ()ption(()) Mindow(M) Help(H)			- 🗆 X
File(F) Edit(E) Settings(S) View(V)	Convert	Connection settings - 1:C2S	-EI-24B	?	X	
📲 🛈 📸 🗣 👗 🖬 👘 📑 🖉	6.6	Connection list(L)				
	0	No. Connec	tion	Application type		а
KV-8000[0] : 192.168.0.10		1 Exclusive Owner [IN_	100,OUT_150]	exclusive owner		
					(2) Search unit(<u>3</u>)
					- L	
1: C2S-EI-24B : 192.168	.0.120					^
Exclusive Owner					-	1 192.168.0.120
		Add(A) Delete(E)			C2S-EI-24B
		Connection name(C)	Exclusive Owner		~	C2S-EI-24B
		Time out(T)	RPI*16 ~ (IN:3	20.0ms / OUT:320.0ms)	_	Nanjing Solidot E
				,		1.1
		Refresh priority(F)	Normal		✓ s	<setting> . <setting></setting></setting>
			Setup parameter(P) Assign device(D)	. 1	No
		IN (input from adapter)				. Unit error
		Connection type	Point-to-point		~	
		Connection point	IN_100		~	No No
		Data size	6 Word		k	NO
					- 1	
		Send trigger	Cyclic		~	~
		RPI (communication cycle)	20.0 ms (2.0 to 50.0ms)		
		Production inhibit time	ms			
	_	OUT (output to adapter)				
Output	_	Connection type	Point-to-point		~	4
ÈÈ # ₽ 8 %		Connection point	OUT_150		~	
N Node name	IP ad	Data size	3 Word		01	ut Refresh priority
1 C2S-EI-24B	192.1(RPI (communication cycle)	20.0 ms (2.0 to 50.0ms)	6	Normal
			Keep consistent	with IN		
H • • • Message Verify Setup list						>
				OK Cance	el (Cancel Apply
	_				_	

c. In the "Setup parameter" window, you can configure the parameters of the valve terminal. The clear/hold function of the output signals in the valve terminal C2S-EI series is shown in the following figure.

LtherNet/IP settings						-		~
	_					1		×
File(F) Edit(E) Settings(S) View(V) Conve	t Conne	ction settings - 1:C2S-EI-24B		?	\times			
📲 🔃 🐩 🕾 👗 🛍 💼 🐘 📑 🔗 🚳 (Conn	ection list(L)						
	No.	Connection		plication type				д
KV-8000[0] : 192.168.0.10	1	Exclusive Owner [IN_100,OUT_	150] 🛛 🔹 exclusiv	e owner				
	ſ	Setup parameter		×		(2)	Search unit(<u>3</u>)	
		setup parameter		^	·			
1: C2S-EI-24B : 192.168.0.120		Parameter(P)	C2S-EI-24B					^
Exclusive Owner					1	4	1	
	ŀ	No. Parameter	Set value	Attribute			192.168.0.120	
	Conr	0001 BusFault_Clear/Hold 0020 Clear/Hold[07]	1 : Hold 0	R/W R/W	×		C2S-EI-24B C2S-EI-24B	
	00m	0020 Clear/Hold[815]	0	R/W	Ť		Nanjing Solidot E	
	Time	0022 Clear/Hold[1623]	0	R/W			1.1	
	Refre		0	R/W	\sim	s	<setting></setting>	
		0024 Clear/Hold[3239]	0	R/W			<setting></setting>	
		0025 Clear/Hold[4047]	0	R/W			No	
	-IN (i					••	Unit error	
	Con				-			
	Con				\sim		No	
	Data					k	NO	
	Date							
	Sen	becomption non-mole of me			\sim			~
	RPI	Default value 1 Range 0 to 2						-
		Current set 1						
	Proc	value						
	OUT	Remarks						
Output	Con				\sim			д
🗈 💼 🗰 🖅 💌 🗛 🐘								
	Con				~	-	Refresh	
N Node name IP a	¹ Data	Restore to default(D)	ОК	Cancel		ou	t priority	
1 C2S-EI-24B 192.1	1 00	(communication cycle) 20.0				6	Normal	
_	RPI		ms (2.0 to 50.0	ims)				
J II I → → Message Verify Setup list		🗹 Кеер о	consistent with IN)	>
			ОК	Can	col		Canad	
	-		UK	Call	Cei		Cancel Apply	
	-	1	1					

d. For Output signal's clear/hold function, double click the set value of parameter <u>"BusFault Clear/Hold"</u> to change values, **0** means clear and **1** means hold. When set value is **2**, it means single-channel setup or group setup and the following 0020~0025 parameters are valid, as shown in the figure below. Click <u>"OK"</u> to save the parameter, click <u>"Apply"</u> in the <u>"EtherNet/IP settings"</u> window and download it to the controller to make the parameter take effect.

EtherNet/IP settings								- 🗆 X
File(F) Edit(E) Settings(S) View(V) Convert					?	\times		
📲 🕼 🐕 🐁 🕹 🛍 🛼 📑 🔗 🤞 🧌				1				
KV-8000[0] : 192.168.0.10	No.	Connection Exclusive Owner [IN_100,OU1	1501	Ap	plication type			ţ
		Exclusive Owner [II4_100,001	_150]	- exclusive	owner		(2)	Search unit(<u>3</u>)
		Setup parameter			×			
1: C2S-EI-24B : 192.168.0.120		Parameter(P)	C2S-EI-2	24B				^
		No. Parameter		Set value	Attribute			192.168.0.120
	1	0001 BusFault_Clear/Hold	1:Ho	ld	R/W			C2S-EI-24B
	Conr	0020 Clear/Hold[07]	0		R/W	\sim		C2S-EI-24B
	Time	0021 Clear/Hold[815]	0		R/W			Nanjing Solidot E
	Time	0022 Clear/Hold[1623]	0		R/W			1.1
	Refre		0		R/W	\sim	s	<setting></setting>
		0024 Clear/Hold[3239]	0		R/W		• •	<setting></setting>
		0025 Clear/Hold[4047]	0		R/W			No
							• •	Unit error
	Con					~		No
	Con					\sim	• •	No
								NO
	Data						1	
	Sen	Description New Help Strin	IE			~		
	001	Default value 1						
	RPI	Range 0 to 2 Current set 1						
	Proc							
	OU	Remarks						
Output								¢
	Con					~		
	Con]				\sim		
N Node name IP ad	Data	Restore to default(D)		ОК	Cancel		ou	t Refresh priority
1 C2S-EI-24B 192.14	RPI	(communication cycle) 20.0	ms	(2.0 to 50.0	ms)		6	Normal
				ent with IN				
II I I Message Verify Setup list		M Keel	consiste	THE WHEN IN				>
				ОК	Can	cel	¢	Cancel Apply

e. For output signal's clear/hold function, if <u>0001 "BusFault Clear/Hold"</u> is set to **2**, double-click on the set value of the grouping parameter of 0020~0025 below, you can set clear/hold per single channel, as shown in the figure below. Click <u>"OK"</u> to save the parameter, and then click <u>"Apply"</u> in the <u>"EtherNet/IP Settings"</u> window and download it to the controller to make the parameter take effect.

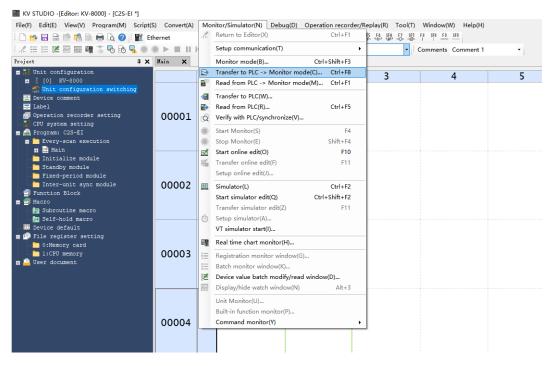
EtherNet/IP settings			HAIRIHI			-	- 0	×
	Connect	tion settings - 1:C2S-EI-24B		?	\times			~
File(F) Edit(E) Settings(S) View(V)	Connec	ction list(L)						
📲 🕦 🐕 🐁 👗 💼 🐘 📑 🔗	No.	Connection	Ap	plication type				
	1	Exclusive Owner [IN_100,OUT_						л
KV-8000[0] : 192.168.0.10							La	*
a	S	etup parameter		×		it setting(<u>2</u>)	Search unit(<u>3</u>)	
		Parameter(P)	C2S-EI-24B	\sim				
1: C2S-EI-24B : 192.168			020 11 240			tings		^
Exclusive Owner		No. Parameter	Set value	Attribute		s	1	
	1	0001 BusFault_Clear/Hold	2 : Set by channel	R/W			192.168.0.120	
	Conr	0020 Clear/Hold[07]	0	R/W	\sim		C2S-EI-24B	
	Time	0021 Clear/Hold[815]	0	R/W		le	C2S-EI-24B	
	Time	0022 Clear/Hold[1623]	0	R/W			Nanjing Solidot E	
	Refre	0023 Clear/Hold[2431]	0	R/W	\sim		1.1	
		0024 Clear/Hold[3239]	0	R/W		settings	<setting></setting>	
		0025 Clear/Hold[4047]	0	R/W		n adap	<setting></setting>	
	IN (-		•		apter	No	
	Con				\sim	messa	Unit error	
	Con				~	ication		
	Con				-	or set	No	
	Data					tor	No	
						ty check		
	Sen	Description New Help String	:		\sim			
	RPL	Default value 0 Range 0 to 255						\sim
		Current set 0				ngs		
	Proc	value						
	our	Remarks						
Output	Con				\sim			ņ
🖻 💼 🛤 🍠 🖻 🎭 🔛	Con				\sim			
	1	Restore to default(D)	ОК	Cancel				
N Node name	Data	Restore to default(D)	UK	Cancer		Time out	Refresh	
	RPI (c	communication cycle) 20.0	ms (2.0 to 50.0	me)		Time out	priority	
1 C2S-EI-24B	IXFI (C			(115)		RPI*16	Normal	
		Keep 🗸	consistent with IN					
II I I Message Verify Setup list			ОК	Canc	el			>
						ОК	Cancel Appl	у [//

- f. When the configuration is complete, click the <u>"OK"</u> button in the <u>"Setup parameter"</u> window.
- g. In the <u>"Connection settings"</u> window, click the <u>"OK"</u> button.
- h. In the <u>"EtherNet/IP settings"</u> window, click the "<u>Apply</u>" button and click the <u>"OK"</u> button.
- i. In the <u>"Unit Editor"</u> window, click the <u>"Apply"</u> button and click the <u>"OK"</u> button.

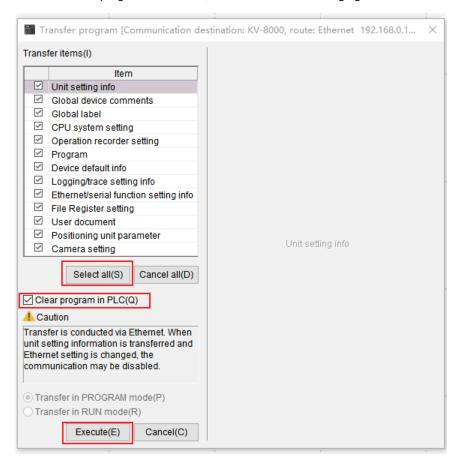
9, Configuration download

After module configuration and parameter setting are completed, download to PLC to operate.

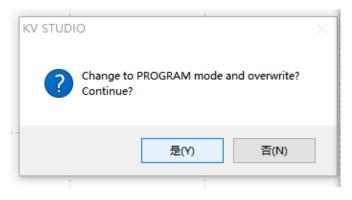
a. Click <u>"Monitor/Simulator (N) -> Transfer to PLC -> Monitor mode (C)</u>" in the menu bar as shown below.



 The Transfer Program window pops up, check <u>"Clear program in PLC"</u>, click <u>"Select all"</u>, click <u>"Execute"</u> to download the program to the PLC, as shown in the following figure.



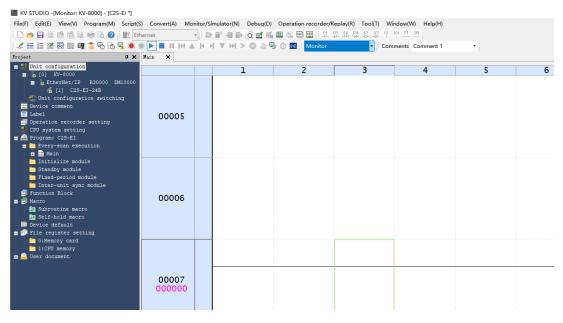
c. A prompt box pops up "Change to PROGRAM mode and overwrite? Contnue?" Click to select <u>"Yes"</u> as shown below.



d. After overwrite is completed, a pop-up box will appear, "Change to RUN mode", click and select "Yes", as shown in the figure below, to enter the monitoring mode.

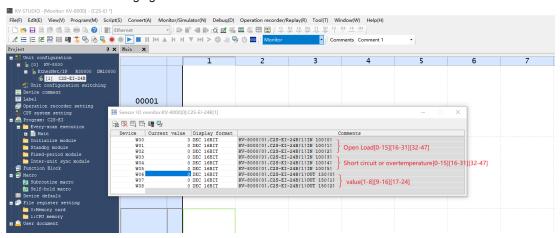
KV STUDIO	×
Change to R	UN mode?
是(Y)	否(N)

e. After the configuration is downloaded, it is shown in the following figure.



10, Data monitoring

a. In monitor mode, double click <u>"C2S-EI-24B"</u> icon to open the monitor table, you can monitor the module as shown in the following figure.

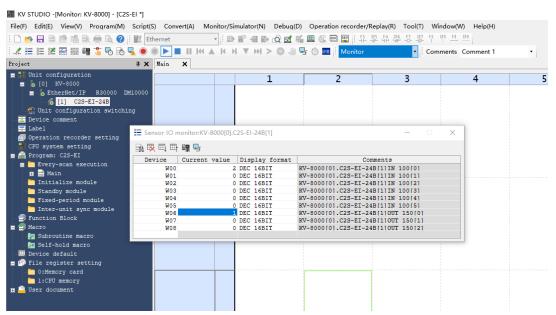


W00~W02 are the monitoring values for the open load detection function of the valve terminal. W03~W05 are the monitoring values for the short circuit or over temperature detection function of the

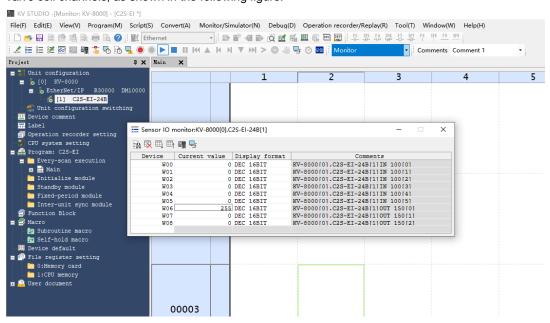
valve terminal.

W06~W08 are output control function of the valve terminal

b. To turn on any of the solenoid valve coil outputs of the valve island, take the first channel as an example, you can double-click on the current value of W06 and enter 1 to turn on the first solenoid coil channel, as shown below.



c. If you need to control a group of solenoid valve coil outputs, take the first group of channels as an example, you can double-click the current value of W06 to enter **255** to turn on the first group of solenoid valve coil channels, as shown in the following figure.



7.6.2 Application In CODESYS V3.5 Software Environment

1, Preparations

- Hardware Environment
 - > Valve terminal model C2S-EI-24B
 - > One computer pre-installed with CODESYS V3.5 software
 - > Shielded cable for valve terminal
 - > One switching power supply
 - > Device configuration files

Configuration file access: https://www.gdcoyo.com/bus-valve-island/bus-valve-island.html **Note:** Valve terminal configuration files of a high number of valve positions are compatible with valve terminals with a lower number of valve positions, e.g., a C2S-EI-20B valve island can use a C2S-EI-24B file.

 Hardware Configuration and Wiring Please follow "<u>5 Installation</u>" and "<u>6 Wiring</u>".

2. Installation configuration files

- Open CODESYS software and select <u>"Tools -> Device Repository"</u> to install the EhterNet/IP EDS device descriptions file.
- b. The Device Repository window pops up, click <u>"Install"</u>, select the relevant EDS file to install. Successful installation shows that the device "xxxx" installed to the device repository, as shown in the following figure.

cation	System Repository			~	Edit Locations
	(C:\ProgramData\CODESYS)	Devices)			
stalled d	evice descriptions				
String for	a fulltext search	Vendor:	<all vendors=""></all>	~	Install
Name		Ver	ndor	^	Uninstall
	🕤 C2P-EI-24B	Nanj	ing Solidot Electric Techno	ology Co.,	Export
	🔟 C2S-EI-08B	Nanj	ing Solidot Electric Techno	ology Co.,	
	🗂 C2S-EI-16B	Nanj	ing Solidot Electric Techno	ology Co.,	
	🗂 C2S-EI-24B	Nanj	ing Solidot Electric Techno	ology Co., 🗸	
<				>	
	:\项目测试\C2S-EI阀岛\配置y Device "C2S-EI-24B" installed			eds	
					Details

3. New project

a. Click <u>"File"</u>, select <u>"New Project"</u>, enter the project name, click <u>"OK"</u>, as shown below.

🖹 New Pr	oject				×
Categories		Templates			
	raries ojects	Empty project	HMI project	Standard project	Standard project w
A project o	ontaining one device, one a	application, and an	empty implemen	tation for PLC	PRG
Name	Untitled4				
Location	D:\workspace\codesys_	space \EI			~
				ОК	Cancel

4、 Add "Ethernet"

- a. Start the PLC with "CODESYS Control Win V3 x64 SysTray".
- b. Double-click "Device (CODESYS Control Win V3 X64)" in the left navigation tree and click "Scan Networks".
- c. Select devices, scan for networks, and networks are active, as shown in the following figure.

Device X			
Communication Settings	Scan Network Gateway - Device -		
Applications			
Backup and Restore			
Files			
Log	Gateway-1	Gateway	[0000.9001.6A1F] (active)
PLC Settings	IP-Address: localhost		Device Name: DESKTOP-8EEUM2N
PLC Shell	Port		Device Address:
Users and Groups	1217		0000.9001.6A1F Target ID:
Access Rights			0000 0004 Target Type:
Symbol Rights			4096
IEC Objects			Target Vendor: 3S - Smart Software Solutions GmbH
Task Deployment			Target Version: 3.5.15.10
Status			
Information			

d. Right click on "Device(CODESYS Control Win V3 X84)" in the left navigation tree and select "Add Device".

e. The Add Device window pops up, select <u>"EtherNet/IP -> Ethernet Adapter -> Ethernet</u>", click <u>"Add</u> <u>Device</u>", as shown in the following figure.

Mame Actior	d Device					×
	pend device O Insert device		Update device			
String	for a fulltext search	Vendor	<all vendors=""></all>			~
Nam	ne	Vendor		Version	Description	^
8-6	Fieldbuses					
e	CANbus					
B	Brown EtherCAT					
B	🗉 🎬 Ethernet Adapter					
E	🗝 👄 EtherNet/IP					
	🖃 🎟 Ethernet Adapter					
	👔 Ethernet	3S - Smart Softwar	e Solutions GmbH	3.5.15.0	Ethernet Link.	
	🗉 👄 EtherNet/IP Scanner					
9	🗄 🚮 Home&Building Automation					
9	E KIII Modbus					
B	🕬 🛲 Profibus					_
Gro	oup by category 🗌 Display all	versions (for experts	only) 🗌 Display o	outdated versi	ons	•
1	Name: Ethernet			^		
_	Vendor: 3S - Smart Software Se	olutions GmbH				
	Categories: Ethernet Adapter,	Ethernet Adapter, Et	hernet Adapter, Hom	ne&Building	S	
	Automation Version: 3.5, 15.0					
	Order Number: -			~		
Арре	nd selected device as last chi	d of				
Devic						
0	(You can select another target n	ode in the navigator v	while this window is	open.)		
				Add	Device	Close

- f. Right-click "Ethernet (Ethernet)" in the left navigation tree and select "Add Device".
- g. Select <u>"EthernetIP -> Ethernet/IP Scanner -> Ethernet/IP Scanner"</u> and click <u>"Add Device"</u> as shown below.

Devices 👻 👎	×	Device X				
Untitled33 Device (CODESYS Control Win V3 x64)	-	Communication Settings Scan Ne	etwork Ga	teway 🕶 Device 👻		
= 립니 PLC Logic		Applications		_		
Application		Add Device				×
Library Manager		Add Device				^ -
PLC_PRG (PRG) Task Configuration		Name EtherNet_IP_Scanner				
AinTask (IEC-Tasks)		Action				
PLC_PRG		Append device Insert device Pl	ug device 🔘	Update device		
Ethernet (Ethernet)		ir.		-		
		String for a fulltext search	Vendor	<all vendors=""></all>		~ ×
		Name	Vendor		Version	Description v
		E- 🚮 Fieldbuses				0
		🖹 🔶 EtherNet/IP				re
		🖲 👄 EtherNet/IP Local Adapter				
		EtherNet/IP Scanner	-			EtherNet/IP Scapper
		EtherNet/IP Scanner	3S - Smart So	oftware Solutions GmbH	3.5.15.10	e orenne gar o connier
		Modbus Modbus Modbus				rg -
		Profinet IO				
						re s.
		5				
		Group by category Display all versio	ns (for experts	only) Display outd	ated versions	
			ino (ron expense			
		Mame: EtherNet/IP Scanner	- C- I-1		^	
		Vendor: 3S - Smart Software Solution Categories: EtherNet/IP Scanner	SGMDH			
		Version: 3.5.15.10				S
		Order Number: 1				<u> </u>
		Description: EtherNet/TP Scanner				
		Append selected device as last child of				
		Ethernet				
		(You can select another target node in	the navigator	while this window is ope	en.)	
					Add Dev	ice Close

5, Configure "Ethernet/IP"

- a. Double-click on <u>"Ethernet (Ethernet)"</u> in the left navigation tree to open the configuration window.
- b. In the General tab, click on the right side of the Interface, select <u>"Network Adapters"</u>, and finally click <u>"OK"</u>, as shown in the following figure.

ices 🗸 🕂 🗙	Device 🛛 🕤 Ethernet	×			
ies 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oevice Of Oevice Of Oevice Of Oevice Of Oevice Of Oevice Of Oevice Oevice	Interface IP address 192 - Subnet mask 255 - Default gateway 0 - Adjust operating system st Network Adapters Interfaces Name 以太阿 ジ太戸 ジ太戸 255-259 11 address 192 - 101 Subnet mask 255 - 259	Description Realtek FCIs G&B Family Controller Statist FCIs G&B Family Controller Bluetooth Device (Fersonal Area Metwork) Myper-V Virtual Ethernst Adapter Intel(R) Vi-Fi & AI201 16080/s Microsoft Vi-Fi Direct Virtual Adapter 3. 0. 252 5. 255. 0 . 0. 0	IP address 169.054.100.31 179.169.052 0.0.0.0 172.27.06.1 172.28.00 0.0.0 0.0.0 172.27.06.1 172.27.06.1 172.27.06.1 172.27.06.1 172.100.00 0.0.0 0.0.0 0.0 0.0 0.0 0.	××

6、 Add Device

- a. Click 🥵 to log in to the device.
- b. Right-click on <u>"EtherNet IP Scanner (EtherNet/IP Scanner)"</u> in the left navigation tree **and** select <u>"Scan</u> Devices".
- c. After scanning, select "C2S-EI-24B" and click <u>"Copy to project"</u> as shown in the following figure.

tes 🗸 🕈 🗙	Device 🔐 Ethernet :	×			
Lotated3 Lotated3 Prece [connected] (COCEY's Control Win V3 x64) Prece [Connected] (COCEY's Control V3 x64) Prece [Control V3 x64) Pr		Interface [以太母:: IP address Subnet mask Default gateway Adjust operating Scan Devices Scanned Berrice Device name 	192 168 0 252 255 255 255 0 0 . 0 . 0 ystem settrgs 0 0 0 0 Device type 0 0 0 0	IP Address 192. 168. 0. 120	Serial Number 3650595792 (1680002050)

d. The device has been added, as shown below.

File	Edit	View	Project	Build	Online	Debug
1			~ X 🖻	$\mathbb{R} \times$	M 🕼	🍋 🍋 (
Devices					-	7 X
•	Untitled3	3				-
÷(👔 Devic	e (CODES	SYS Control V	Vin V3 x64j)	
	🖻 - 🗐 🖡 P					
	<u> </u>	🕽 Appli				
			orary Manage			
			.C_PRG (PRG			
			ask Configura			
			ENIPScann			
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			È ENIPScann ───────────────────────────────────			
			MainTask (ecycle
		-	PLC P		·	
			Ethernet)			
			let_IP_Scanr	ner (EtherN	let/IP Scan	ner)
		с	2S_EI_24B (C	2S-EI-24B)	

7, Parameter settings

The parameter setting function is used to configure the clear/hold function of the valve terminal.

a. Double-click the device to open the <u>"Device Configuration"</u> window, switch to the <u>"Connections"</u> page, as shown below.

Connectio	on Name RPI (r	ms) O>	T Size (Bytes)) T>O Si	ze (Bytes)	Proxy Config	g Size (Bytes) Target Config Size (Bytes)	Connection Path
5 1. Exclu	usive Owner 10	6		12				8	20 04 24 97 2C 96 2C 6
ed Parameters									
I/O Mapping									
IEC Objects									
Add Con		e Connection	Edit Cor	nnection					
Add Con Configuration	on Data			nnection					
Add Con Configuration				inection					
Add Con Configuration	on Data ata values 🗹 Show Pa		ps	Data Type	Minimum	Maximum	Default	Help String	
Add Con Configurati Raw d Paramet	on Data ata values 🗹 Show Pa	rameter Grou	ps		Minimum	Maximum	Default	Help String	
Add Con Configuret Raw d Paramet Second	on Data iata values 🗹 Show Pa ters	rameter Grou	ps		Minimum	Maximum	Default	Help String	
Add Con Configuret Raw d Paramet Second	on Data lata values 🗹 Show Pa ers sive Owner	rameter Grou	ps Unit		Minimum	Maximum 2		Help String	
Add Con Configuret Raw d Paramet Second	on Data iata values 🗹 Show Pa ters sive Owner arget Config data	rameter Grou Value	ps Unit	Data Type			1		
Add Con Configuret Raw d Paramet Second	on Data iata values 🗹 Show Pa ters sive Owner arget Config data — BusFault_Clear/Hold	Value Hold	ps Unit	Data Type	0	2	1	New Help String	
Add Con Configuret Raw d Paramet Second	on Data ata values 🗹 Show Pa iers sive Owner arget Config data BusFault_Clear/Hold Clear/Hold[07]	Value Hold	ps Unit	Data Type USINT USINT	0	2 255	1 0 0	New Help String	
Add Con Configuret Raw d Paramet Second	on Data ata values Show Pa ters sive Owner arget Config data - BusFault_Clear/Hold - Clear/Hold[07] - Clear/Hold[015]	Value Hold 0	ps Unit	Data Type USINT USINT USINT	0 0 0	2 255 255	1 0 0 0	New Help String New Help String New Help String	
Add Con Configuret Raw d Paramet Second	on Data ata values S Show Pa ters sive Owner arget Config data — BusFault_Clear/Hold — Clear/Hold[07] — Clear/Hold[015] — Clear/Hold[1623]	Hold 0 0 0	ps Unit	Data Type USINT USINT USINT USINT	0 0 0 0	2 255 255 255	1 0 0 0 0	New Help String New Help String New Help String New Help String	

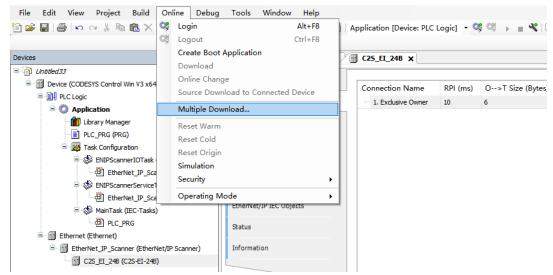
b.Output signal clear/hold parameter function, click the value of the parameter "BusFault Clear/Hold", you can select "Clear", "Hold", or "Set by channel". When you select "Set by channel", the Clear/Hold[0..7] ~ Clear/Hold[40..47] parameters are valid, as shown in the figure below.

Co	onnection Name	RPI (ms)	O>T Size	(Bytes)	T>O Size (B	(vtes) Pro	xy Config Siz	e (Bytes)	Target Config Size (Bytes)	Connection Path
ions	1. Exclusive Owner	10	6		12	,,	.,		8	20 04 24 97 2C 96 2C 64
ies										
fined Parameters										
/IP I/O Mapping										
/IP IEC Objects										
on										
	Add Connection	Delete Co	onnection	Edit Conne	ection					
	Add Connection Infiguration Data Raw data values Parameters		neter Groups	Edit Conne Unit	ection Data Type	Minimum	Maximum	Default	Help String	
Co P	onfiguration Data] Raw data values 🗹		neter Groups			Minimum	Maximum	Default	Help String	
Co P	Anfiguration Data Raw data values Parameters Exclusive Owner Target Config	Show Paran data	neter Groups Value			Minimum	Maximum	Default		
	Arameters Exclusive Owner Target Config	Show Paran data ar/Hold	neter Groups Value Hold V		Data Type USINT	0	2	1	New Help String	
Co P	Arameters Exclusive Owner Caraget Config BusFault_Cle Clear/Hold[0	Show Paran data ar/Hold 7]	neter Groups Value		Data Type USINT USINT	0	2 255	1 0	New Help String New Help String	
Co P	Arameters Raw data values Raw data val	Show Paran data ear/Hold 7] 15]	Hold Hold Set by channel		Data Type USINT USINT USINT	0 0 0	2 255 255	1 0 0	New Help String New Help String New Help String	
Co P	Arringuration Data Raw data values Arameters Exclusive Owner BusFault_Cle Clear/Hold[0 Clear/Hold[1 Clear/Ho	Show Paran data ar/Hold 7] 15] 623]	Hold Hold Hold Set by channel 0		Data Type USINT USINT USINT USINT	0 0 0 0	2 255 255 255	1 0 0 0	New Help String New Help String New Help String New Help String	
Co P	Anfiguration Data Rew data values arameters Exclusive Owner Exclusive Owner BusFault_Cle Clear/Hold[Show Paran data ar/Hold 7] 15] 623] 431]	Hold Hold Hold Clear Hold 0 0		Data Type USINT USINT USINT USINT USINT	0 0 0 0 0	2 255 255 255 255	1 0 0 0	New Help String New Help String New Help String New Help String New Help String	
Co P	Arringuration Data Raw data values Arameters Exclusive Owner BusFault_Cle Clear/Hold[0 Clear/Hold[1 Clear/Ho	Show Paran data ar/Hold 7] 15] 623] 431] 239]	Hold Hold Hold Set by channel 0		Data Type USINT USINT USINT USINT USINT USINT	0 0 0 0	2 255 255 255	1 0 0 0	New Help String New Help String New Help String New Help String	

c. Under "Set by channel", double-click the value of Clear/Hold [0..7], you can set the value by channel, as shown in the figure below.

	Connection Name	RPI (ms) O>T Size (Byt	tes) T	->O Size (Bytes)	Proxy Co	onfig Size (By	tes) Targ	get Config Size (Bytes)	Connection Path
s	1. Exclusive Owner	10	6	12				8		20 04 24 97 2C 96 2C 64
•										
ned Parameters										
IP I/O Mapping										
IP IEC Objects										
on										
on										
ion	Add Connection	Delete C	onnection Edit	Connectio	on					
ion	Add Connection Configuration Data Raw data values Parameters		meter Groups			Minimum	Maximum	Default	Help String	
on	Configuration Data Raw data values Parameters			Connectio Unit	Data Type	Minimum	Maximum	Default	Help String	
on	Configuration Data	Show Parar	meter Groups			Minimum	Maximum	Default	Help String	
on	Configuration Data Raw data values Parameters Exclusive Owner] Show Paran data	meter Groups			Minimum	Maximum 2	Default	Help String	
20	Configuration Data Carl Raw data values Parameters Carl Exclusive Owner Target Config] Show Paran data ear/Hold	meter Groups Value		Data Type					
on	Configuration Data Raw data values Parameters Exclusive Owner Target Config BusFault_Ch	Show Para data ear/Hold)7]	meter Groups Value Set by channel		Data Type	0	2	1	New Help String	
on	Configuration Data Raw data values Parameters Exclusive Owner Target Config BusFault_Cl Clear/Hold[C	data ear/Hold 07] 315]	meter Groups Value Set by channel 255		Data Type USINT USINT	0	2 255	1	New Help String New Help String	
on	Configuration Data Raw data values Parameters Factusive Owner Burgat Config Burgat, Col Clear, Hold[t Clear, Hold[t	data ear/Hold 07] 315] 1623]	meter Groups Value Set by channel 255 0		Data Type USINT USINT USINT	0 0 0	2 255 255	1 0 0	New Help String New Help String New Help String	
on	Configuration Data Configuration Data Raw data values Parameters Configuration Config	data ear/Hold 07] 315] 1623] 2431]	meter Groups Value Set by channel 255 0 0		Data Type USINT USINT USINT USINT	0 0 0 0	2 255 255 255	1 0 0 0	New Help String New Help String New Help String New Help String	

d. Click <u>"Online -> Multi-Download..."</u> in the menu bar, as shown below.



e. Multiple Download window will pop up, select <u>"Always perform a full download"</u>, click <u>"OK"</u>, as shown in the figure below.

lultiple Download	\times
Please select the items to be downloaded	
Move Up ↓ Move Down	
Device: Application	
Online change options If the application in the project differs from the application already present on the PLC, then behave as follows:	
Try to perform an online change. If this is not possible, perform a full download	
\bigcirc Force an online change. If this is not possible, cancel the operation	
Always perform a full download	
If an application is not yet present on the PLC, a full download is always performe	ŧ.
Additional operations	
Delete all applications on the PLC which are not part of the project.	
Start all applications after download or online change.	
Do not release forced variables.	
	el

f. Once the download is complete, click 🥵 and the system is online as shown below.

nices v a X	Device C25_EL	248 X								
D Unsted33	General	Find	-	Filter Show all		Add	FB for IO Channel	Go to Instan	e.	
Constraint (Constraint Constraint) Constraint (Constraint) Constraint (C	Connections Assemblies User-Ordined Parameters Log Etherke(JP 3/O Maeping Btherke(JP 3/O Maeping Reliss Leformation	Variable	Mapping	Channel Open Load(07) Open Load(07) Open Load(23) Open Load(23) Open Load(23) Open Load(23) Open Load(23) Short circuit or overtimperature(07) Short circuit or overtimperature(21) Short circuit or overtimperature(23) Short circuit o	Address %180 %181 %183 %183 %184 %185 %186 %189 %188 %189 %189 %189 %189 %189 %189	Type USINT USINT USINT USINT USINT USINT USINT USINT USINT USINT USINT USINT	Current Value	Prepared Value	Ne Ne Ne Ne Ne	scription w Help String w Help String
	Watch 1 Expression	Rew Heb String	? ∳ = M	valve[21.24] up to existing variable	%QBS	USINT	Application	Reset #	Tapping Value	Always update variab

8、 Data monitoring

- Click the button to log out and switch to the <u>"EtherNet/IP I/O Mapping"</u> tab. a.
- b. Select <u>"Enable 1"</u> mode from the drop-down list in the lower right corner, as shown below.

AddUT See COMPACT AND 14 of Comments of Co		Mapping (Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Brief Gold and on one transport Land[]1] Brief Gold and and transport Land[]1]	Address %280 %281 %281 %281 %283 %284 %285 %285 %285 %285 %285 %285 %285 %285	Type USDNT USDNT		Channel ** Go to Description New Help String New Help String	stance	
Protection P	* D totale Owe * D totale Owe * V * V * V * V * V * V * V * V		Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Brief Gold and on one transport Land[]1] Brief Gold and and transport Land[]1]	%280 %281 %283 %284 %285 %286 %287 %288 %289 %281 %283 %281 %283 %281 %283 %281 %283 %284 %285 %286 %287 %288 %289 %2811 %280	LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT	Unit	New Help String New Help String		
Comparison C	* D totale Owe * D totale Owe * V * V * V * V * V * V * V * V		Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Game Land[]1] Brief Gold and on one transport Land[]1] Brief Gold and and transport Land[]1]	%280 %281 %283 %284 %285 %286 %287 %288 %289 %281 %283 %281 %283 %281 %283 %281 %283 %284 %285 %286 %287 %288 %289 %2811 %280	LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT LISNT		New Help String New Help String		
Image: Instance Image: Instance Image: Instance Image: Instance Image: Instance Image: Instance Image: Instance Image: Instance Image			Cpen Lead[8:13] Cpen kad[8:13] Cpen kad[9:12] Cpen kad[9:13] Cpen kad[9:1.3] Shot Cost or overtexperature[8:12] Shot Cost or overtexperature[8:13] Shot Cost or overtexperature[8:13]	%281 %282 %283 %284 %285 %286 %287 %288 %289 %281 %282 %283 %284 %285 %285 %286 %287 %288 %281 %281 %281 %281 %281 %281 %282 %283 %284 %285 %285 %286 %287 %288 %283 %284 %284 %285 %285 %286 %287 %288 %288 %289 %281 %281 %281 %282 %283 %284 %284 %285	USDIT USDIT USDIT USDIT USDIT USDIT USDIT USDIT USDIT USDIT		New Help String New Help String		
Construction C			Cpen Lead[8:13] Cpen kad[8:13] Cpen kad[9:12] Cpen kad[9:13] Cpen kad[9:1.3] Shot Cost or overtexperature[8:12] Shot Cost or overtexperature[8:13] Shot Cost or overtexperature[8:13]	%281 %282 %283 %284 %285 %286 %287 %288 %289 %281 %282 %283 %284 %285 %285 %286 %287 %288 %281 %281 %281 %281 %281 %281 %282 %283 %284 %285 %285 %286 %287 %288 %283 %284 %284 %285 %285 %286 %287 %288 %288 %289 %281 %281 %281 %282 %283 %284 %284 %285	USDIT USDIT USDIT USDIT USDIT USDIT USDIT USDIT USDIT USDIT		New Help String New Help String		
Barter (J) Same Benetic (Pisame Same)			Cipen Kad[1421] Cipen Kad[2432] Open Kad[2432] Open Kad[2437] Bert Coast or overtegerature[37] Bert Coast or overtegerature[32] Bert Coast or overtegerature[3238] Bert Coast or overtegerature[3437] sket[4]	%482 %483 %484 %485 %486 %487 %488 %489 %4810 %4811 %4801	USINT USINT USINT USINT USINT USINT USINT USINT USINT		New Help String New Help String		
			Open Isad[24, 31] Open Isad[24, 37] Open Isad[24, 47] Best Contart or overtexperature[36, 7] Best Contart or overtexperature[36, 13] Short Contart or overtexperature[36, 32] Best Contart or overtexperature[36, 47] Waite[1, 47] Waite[1, 47]	%283 %284 %284 %285 %286 %287 %288 %289 %2810 %2811 %280	USDNT USDNT USDNT USDNT USDNT USDNT USDNT USDNT USDNT		New Help String New Help String		
D) Benetur (J. Scoren Stocke D) Benetur (J. Scoren Stocke D) Benetur (J. Scoren Stocke D) Benetur (J. Score Stocke) Stock Stocke Stockee Stocke			Open load[1229] Open load[447] Der fosst or overtengerature[47] Short Graut or overtengerature[419] Short Graut or overtengerature[421] Short Graut or overtengerature[421] Short Graut or overtengerature[447] Short Graut or overtengerature[447] silve[14] Short Graut or overtengerature[447] Short Graut or overtengerature[447] Short Graut or overtengerature[447]	%204 %205 %205 %207 %207 %208 %209 %209 %2010 %2011 %200	USINT USINT USINT USINT USINT USINT USINT USINT		New Help String New Help String New Help String New Help String New Help String New Help String New Help String		
			Open load[40.47] Sher to rait or overtemperature[07] Sher to rait or overtemperature[0.18] Sher to rait or overtemperature[54.28] Sher to rait or overtemperature[54.28] Sher to rait or overtemperature[54.39] Sher to rait or overtemperature[54.47] unite[1.4] Unite[5.8]	%285 %285 %287 %288 %289 %2830 %2830 %2811 %280	USDNT USDNT USDNT USDNT USDNT USDNT USDNT		New Help String New Help String New Help String New Help String New Help String New Help String		
	· · · · · · · · · · · · · · · · · · ·		Short circuit or overtemperature[07] Short circuit or overtemperature[318] Short circuit or overtemperature[3621] Short circuit or overtemperature[3239] Short circuit or overtemperature[3239] Short circuit or overtemperature[3047] subjec[14] subjec[14]	%295 %287 %288 %299 %28.20 %28.11 %Q80	USINT USINT USINT USINT USINT USINT		New Help String New Help String New Help String New Help String New Help String		
Maritak (BC-Tasks) Denret (Brenet) Denret (Brenet) Denret (Brenet)	· · · · · · · · · · · · · · · · · · ·		Shart circuit or overtemperature[16, 15] Shart circuit or overtemperature[16, 23] Shart circuit or overtemperature[24, 31] Shart circuit or overtemperature[24, 35] Shart circuit or overtemperature[40, 47] sale[1, 4] value[5, 8]	%287 %288 %299 %2810 %2811 %Q80	USENT USENT USENT USENT USENT		New Help String New Help String New Help String New Help String		
B RC_PRG Sature			Short diruit or overtemperature[5623] (Rort diruit or overtemperature[2414] Short diruit or overtemperature[3239] Short diruit or overtemperature[4047] salve[14] salve[58]	N288 N289 N2810 N2811 N2811 N280	USINT USINT USINT USINT USINT		New Help String New Help String New Help String		
Chernet (Dhernet) Chernet (Dhe	+ 5 + 5 + 5 + 5 + 5 + 5		Short circuit or overtemperature[2421] Short circuit or overtemperature[3239] Short circuit or overtemperature[4047] valve[14] valve[58]	%299 %28.10 %28.11 %Q90	USINT USINT USINT USINT		New Help String New Help String		
Etheniet_P_Scanner (Etheniet/IP Scanner) Information		9	Short circuit or overtemperature[3239] Short circuit or overtemperature[4047] valve[14] valve[58]	%IB11 %Q80	USINT		New Help String		
	***		Short circuit or overtemperature[4047] valve[14] valve[58]	%Q80	USINT		New Help String		
	- 19 - 19 - 19		valve[58]						
			valve[58]						
	8.19				USINT				
			value [9., 12]	%Q82	USINT				
			valve[1316]	%Q83	USINT				
			valve[1720]	5004	USINT				
	8.10		valve[2124]	NQ85	USINT				

c. Click $\stackrel{\bigcirc}{\longrightarrow}$ to log in and monitor the page as shown below.

	X B Device C25_EL	248 x								
Unsteled.07 G Device [connected] (CODESYS Control Win V3 x64)	General	Find		Filter Show all	Add FB for IO Channel * Go to Instance					
Device (connected) (COURSTS Control win v3 xory Device (connected) (COURSTS Control win v3 xory Device (connected) (COURSTS Control win v3 xory Device (connected) (COURSTS Control win v3 xory	Connections	Variable	Mapping	Channel	Address	Туре	Current Value	Prepared Value Uni	Description	
Ubrary Manager	Assemblies	i - 10		Open Load[07]	%380	USINT	3			
PLC PRG (PRG)		· · · ·		Open Load[815]	9681	USINT				
Task Configuration	User-Defined Parameters	8.4		Open load[1623]	%82	USINT	0		New Help String	
BITScannerIOTask (IEC-Tasks)	1.00	8-14		Open load[2431]	%83	USINT	0		New Help String	
BeherNet_P_Scanner.IOCyde Set BMPScannerServiceTask (EC-Tasks) BeherNet_P_Scanner.ServiceCyde	Log	8-10		Open load [3239]	%284	USINT	0		New Help String	
	EtherNet/IP I/O Mapping	8-10		Open load [4047]	%85	USINT	0		New Help String	
		8-16		Short drcuit or overtemperature[07]	%286	USINT	0		New Help String	
🖻 - 😏 🕵 MainTask (IEC-Tasks)	EtherNet/IP IEC Objects	8-16		Short drcuit or overtemperature[815]	%187	USINT	0		New Help String	
B PLC_PRG	Status	8-10		Short circuit or overtemperature[1623]	%288	USINT	0		New Help String	
😑 🥵 🗊 Ethernet (Ethernet)		8-16		Short drouit or overtemperature[2431]	%289	USINT	0		New Help String	
🖹 🥵 🚰 EtherNet_IP_Scanner (EtherNet/IP Scanner)	Information	8-10		Short circuit or overtemperature[3239]	%2810	USINT	0		New Help String	
C2S_EL_248 (C2S-EL-248)		8-39		Short circuit or overtemperature[4047]	%1811	USINT	0		New Help String	
		8-14		valve[14]	%Q80	USINT	0			
		* *		valve[58]	%Q81	USINT	0			
		8.10		valve[912]	%Q82	USINT				
		8-50		valve[1316]	%Q83	USINT	0			
		8-14		valve[1720]	%Q84	USINT				
		8-10		valve[2124]	%Q85	USINT	0			

• Open Load Detection

Open load[0..7], Open load[8..15], Open load[16..23], Open load[24..31], Open load[32..39], Open load[40..47], in total 48 channels can be diagnosed independently.

Short Circuit/Over Temperature Detection

Short circuit or overtemperature[0..7], Short circuit or overtemperature[8..15], Short circuit or overtemperature[16..23], Short circuit or overtemperature[24..31], Short circuit or overtemperature[32..39], Short circuit or overtemperature[40..47], in total 48 channels can be diagnosed independently.

Valve Terminal Output Control Function

24 double solenoid valve are grouped into 6 groups of channels according to the driver chip types, which are valve[1..4], valve[5..8], valve[9..12], valve[13..16], valve[17..20], valve[21..24]. Each group has 8 channels, so there is a total of 48 channels output control.

d. Open load detection

The diagnostic value is valid when the channel solenoid coil output is off (value is 0).

In the "Current Value" of channel Open load[0..7], you can view the solenoid valve open load diagnostic value of each group of channels of the valve terminal. A group of channels with normal status of solenoid valve coils is **0**, and an open circuit status is not **0**.

Click "+" to expand Open load [0..7], you can view the open load diagnostic value of each channel's solenoid valve, the value **1** means the open load status, the value **0** means normal status, as shown in the figure below.

General	Find		Filter Show all			- I Add FB for IO Channel → Go to Instance						
Connections	Variable	Mapping	Channel	Address	Туре	Current Value	Prepared Value	Unit	Description			
Assemblies	8-10		Open Load[07]	%IB0	USINT	3						
	- *>		BitO	%DX0.0	BOOL	TRUE						
User-Defined Parameters			Bit1	%IX0.1	BOOL	TRUE						
Log	- *>		Bit2	%DX0.2	BOOL	FALSE						
	- *>		Bit3	%EX0.3	BOOL	FALSE						
EtherNet/IP I/O Mapping	- *>		Bit4	%IX0.4	BOOL	FALSE						
EtherNet/IP IEC Objects	🍫		Bit5	%DX0.5	BOOL	FALSE						
Ethenvet/IP IEC Objects	- *		Bit6	%IX0.6	BOOL	FALSE						
Status			Bit7	%IX0.7	BOOL	FALSE						
	æ- ¥≱		Open Load[815]	%IB1	USINT	0						
Information	8- %		Open load[1623]	%IB2	USINT	0			New Help String			
	8-¥		Open load[2431]	%IB3	USINT	0			New Help String			
	🗷 🍫		Open load[3239]	%IB4	USINT	0			New Help String			
	8-19		Open load[4047]	%IB5	USINT	0			New Help String			
	B- 🍫		Short circuit or overtemperature[07]	%IB6	USINT	0			New Help String			
	i≆- ¥≱		Short circuit or overtemperature[815]	%IB7	USINT	0			New Help String			
	8-39		Short circuit or overtemperature[1623]	%IB8	USINT	0			New Help String			
	B- 🍫		Short circuit or overtemperature[2431]	%IB9	USINT	0			New Help String			
	i≣*≱		Short circuit or overtemperature[3239]	%IB10	USINT	0			New Help String			
	di Ma		al	0/7044	1.000.00	•	1					
	New Help String						Reset Map	ping	Always update variables	Enabled 1 (use bus cycle task if no	t used in any tas	

e. Short circuit or overtemperature detection

The diagnostic value is valid when the channel solenoid coil output is on (the value is 1). In the "Current Value" of channel Open load[0..7], you can view the solenoid valve short circuit/overtempertaure diagnostic value of each group of channels of the valve terminal. A group of channels with normal status of solenoid valve coils is **0**, and a short circuit/overtempertaure status is not **0**.

Click "+" to expand short circuit/overtempertaure [0..7], you can view the short circuit/overtempertaure diagnostic value of each channel's solenoid valve, the value **1** means the short circuit/overtempertaure status, the value **0** means normal status, as shown in the figure below.

Connections Variable Assembles User-Defined Parameters Log Etherted/P I/O Napping Etherted/P I/O Napping Etherted/P I/O Dotots	Mapping usive Owner	Channel Open Load[07] Open Load[815] Open load[1623] Open load[2431]	Address %IB0 %IB1 %IB2	USINT	Current Value	Prepared Value	Unit	Description	
Assemblies User-Defined Parameters Log EtherNet/JP 1/0 Mapping	usive Owner	Open Load[815] Open load[1623]	%IB1		3				
User-Defined Parameters		Open Load[815] Open load[1623]	%IB1		3				
User-Defined Parameters		Open load[1623]		USINT					
Log EtherNet/IP I/O Mapping			9/100		0				
EtherNet/IP I/O Mapping		Open load[2431]		USINT	0			New Help String	
EtherNet/IP I/O Mapping			%IB3	USINT	0			New Help String	
		Open load[3239]	%IB4	USINT	0			New Help String	
		Open load[4047]	%IB5	USINT	0			New Help String	
Ethenvet/IP IEC Objects		Short circuit or overtemperature[07]	%IB6	USINT	0			New Help String	
	*	Bit0	%DX6.0	BOOL	FALSE				
Status	*	Bit1	%DX6.1	BOOL	FALSE				
	*	Bit2	%DX6.2	BOOL	FALSE				
Information	*	Bit3	%D(6.3	BOOL	FALSE				
	*	Bit4	%DX6.4	BOOL	FALSE				
	*	Bit5	%IX6.5	BOOL	FALSE				
	*	Bit6	%DX6.6	BOOL	FALSE				
	*	Bit7	%DX6.7	BOOL	FALSE				
⊕-¥≱		Short circuit or overtemperature[815]	%I87	USINT	0			New Help String	
⊞ *≱		Short circuit or overtemperature[1623]	%IB8	USINT	0			New Help String	
(i) - *ip		Short circuit or overtemperature[2431]	%IB9	USINT	0			New Help String	
÷-*		Short circuit or overtemperature[3239]	%IB10	USINT	0			New Help String	
New Help St	ina		1.000	^	Reset Mapp	ina	Alwaye undatavariablae	Enabled 1 (use bus cycle task if not used in any ta	
	-	p to existing variable							and a contract of the contract of the second

f. Channel output control

If any solenoid valve coil of the valve terminal need to start the output, take the first channel as an example, you can click "+" to expand the valve[1...4], write "1" in <u>"prepared value"</u> of channel Bit0, press "Ctrl+F7" to enter, then the first solenoid valve coil channel should open, as shown below. To open other channels output, follow the above steps.

General	Find	Filter Show all		• 🗣 Add	FB for IO Channel 🦈	Go to Instance			
Connections	Variable	Mapping Channel	Address	Туре	Current Value	Prepared Value	Unit	Description	
connections	ii - 🏘	Open load[1623]	%IB2	USINT	0			New Help String	
Assemblies	B-10	Open load[2431]	%IB3	USINT	0			New Help String	
	÷.*	Open load[3239]	%IB4	USINT	0			New Help String	
User-Defined Parameters	B- 🏘	Open load[4047]	%IB5	USINT	0			New Help String	
Log	8-10	Short circuit or overtemperature[07]	%IB6	USINT	0			New Help String	
209	B- 🏘	Short circuit or overtemperature[815]	%IB7	USINT	0			New Help String	
EtherNet/IP I/O Mapping	8-10	Short circuit or overtemperature[1623]	%IB8	USINT	0			New Help String	
	B-*9	Short circuit or overtemperature[2431]	%I89	USINT	0			New Help String	
EtherNet/IP IEC Objects	÷-*	Short circuit or overtemperature[3239]	%IB10	USINT	0			New Help String	
Status	8-10	Short circuit or overtemperature[4047]	%IB11	USINT	0			New Help String	
010100	B- 🍫	valve[14]	%Q80	USINT	0				
Information	🍫	BitD	%QX0.0	BOOL	FALSE	TRUE			
	- 5	Bit1	%QX0.1	BOOL	FALSE	TRUE			
	- **	Bit2	%QX0.2	BOOL	FALSE	TRUE			
	- 59	Bit3	%QX0.3	BOOL	FALSE	TRUE			
	- 50	Bit4	%QX0.4	BOOL	FALSE	TRUE			
	- 50	Bit5	%QX0.5	BOOL	FALSE	TRUE			
	🍫	Bit6	%QX0.6	BOOL	FALSE	TRUE			
	- * 9	Bit7	%QX0.7	BOOL	FALSE	TRUE			
	8-50	valve[58]	%Q81	USINT	0				
	10 Ka	1. 10. 403	av. 000		0				

8 FAQ

8.1 Inability of Scanning Modules

1. Check network cable connections

Use windows command to the IP address of the ping module, if ping is on, then check the status of the indicator, if not, then check the network cable connection. If the network cable connection is normal, set the request acceptance time to 60s in the device scanning and then rescan the module. If an unknown device was found, then this module's IP has not been assigned, re-assign the IP aaddress. If you still can not scan for the module, then check the status of the indicator.

2. Check indicator status

If the RUN light flashes, the IP address exists. The IP of the controller and module may not be in the same network segment, restore the module to factory settings and then reset the IP address. RUN light flashing may also means the module detects duplicate IP address in the network, it is recommended to troubleshoot duplicate IP devices and deal with them.

8.2 Abnormal IP Address Assignment

1. Unable to scan the device under factory settings

Modify the request acceptance time to 60s.

2. Using BOOTP to assign timeout for IP address

Click Advanced Settings in IP Address Settings and set the timeout time to 60s. If the timeout time has already been set to 60s, check whether the IP addresses of the controller and allocated module are in the same network segment.

3. Loss of assigned IP address after power failure

This is caused by not setting the module with a fixed IP after using BOOTP to assign an IP address.

4. Unable to use rotary switc to change IP address

The IP address setting is out of the regulated range or the IP address setting is 0. Verify that if the rotary switch settings are as expected.

8.3 Inability of Scanning Devices with IP Setting Tool

When the device cannot be scanned using the IP Setting Tool tool, you can try the following methods.

- First, use the cmd command route print to view all the network segments of the routing table, and use the host computer software to set the IP address of the valve terminal so that the IP address is inconsistent with all the network segments of the routing table.
- After an interval of five minutes, re-power on the device, power on 15s, and then scan. Try few times more if the device cannot be found.