JNC technology
銘祥科技實業股份有限公司

JNC

Versatile SMS Alert System

I6



V2.00

Catalogue

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⚠ Precautions

Dear customer, we are glad that you are using our products. In order to maintain the service life of the product and your good experience, please read the following content before operating!

Operational matters:

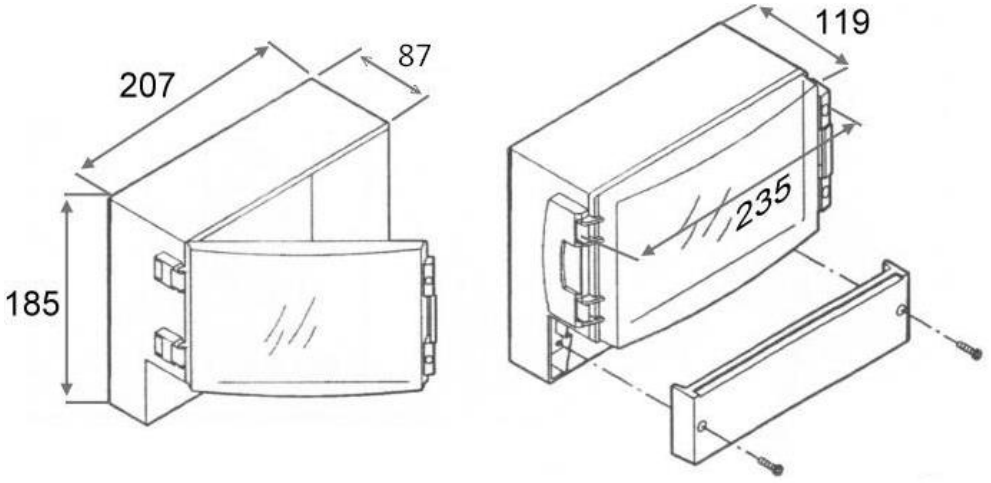
1. **Please do not use it in areas with high vibration or strong electromagnetic interference to avoid product damage, ERROR, and measurement errors.**
2. **Before performing any repair or maintenance, please remove the power cord to prevent personal injury or product damage caused by accidental contact with the power supply.**
3. **When installed in a polluted environment with conductive substances (such as metal dust, water, etc.), appropriate ventilation, filtration or sealing measures should be taken.**
4. **Do not operate the product if any components or modules have been removed or disassembled, and contact our company as soon as possible so that our dedicated personnel will serve you.**
5. **The company is not responsible for any impact or damage caused to the reliability of the product due to failure to follow the correct usage methods in this operating manual or exceeding the application methods or environmental conditions described in the product specifications.**
6. **Avoid installing electrical appliances that generate heat within 1 meter of the product to avoid affecting the temperature and humidity accuracy of the product.**
7. **Avoid installing the product within 1 meter of human activities to avoid being affected by humidity.**

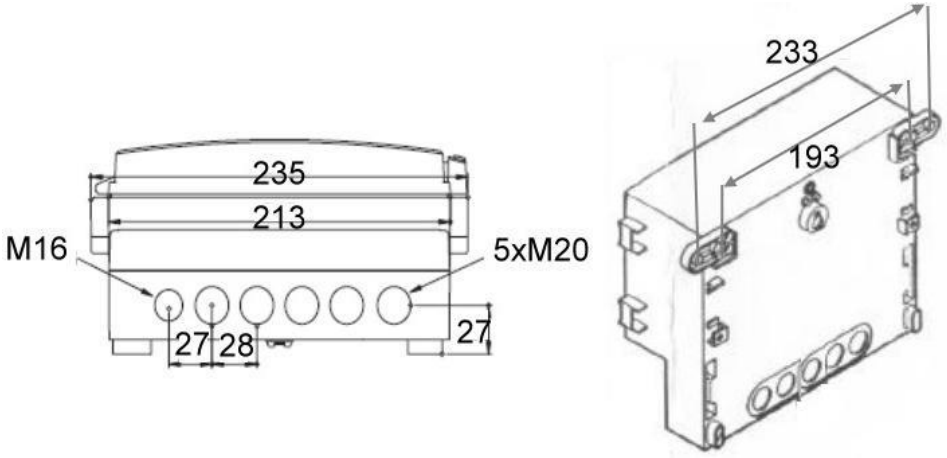
PART 1.Product Description

1-1 Product Specifications

Model	I6 WEB	
Power Supply	DC 9~36V	
Power Consumption	10.6W	
Environment	Working temperature	-10°C~60°C (14°F~140°F)
	Storage temperature	-20°C~70°C (-4°F~158°F)
	Relative humidity	0~95 % RH non-condensing
Alarm Output	Two groups share alarms	With reset function
	Relay contact capacity	1 A / 5 VDC ※Please add a relay to connect the load
Communication Function	Communication interface	RS-485*1 port/Ethernet
	Communication protocol	Modbus RTU/ Modbus TCP /Web Server
	SMS alarm	SIM card supports 4G
Signal Input	Input points (A I)	AIX6 points
	Input signal (A I)	4-20mA /DI/PT100 /mV software selection
	Signal input (D I)	2 points
Display Screen	7-inch Chinese color touch screen/display trend graph	
	Resolution 800 x 480	
Physical Conditions	Product size (mm)	235 x 185 x 119 (W×H×D)
	Weight	1.5Kg
	Installation method	Wall-mounted
	Waterproof and dustproof grade	IP65
	Material	ABS
Record (optional)	USB record，maximum to 64GB	
Software	USB reading	
Safety Certification	FCC PART 15 B AND CISPR 22 Class A，EN55022:2010:Class A， IEC61000-3-2:2005+A1:2008+A2:2009，EN61326-1:2006，EN61326-2-6:2006 IEC61000-4-2:2008，IEC61000-4-3:2006+A1:2007+A2:2010， IEC61000-4-4:2012，IEC61000-4-5:2005，IEC61000-4-6:2008， IEC61000-4-8:2009，IEC61000-4-11:2004	
Patent	R.O.C Patent No. M340502 / M474956 / I501088 China Patent No. 3968342 / 2514208 / 1211656	

1-2 Product Size (mm)





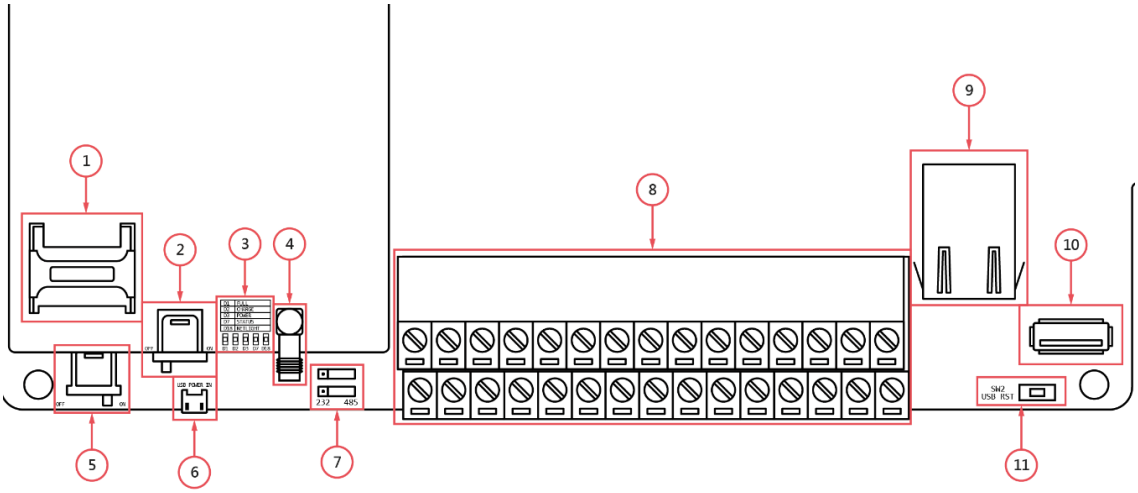
1-3 Product Description

- Global rapid upgrade function.
- Convenient management: Web interface, no App required, can be monitored over the Internet.
- Can set Chinese channel name and multi-language operation interface.
- Operates on 5VDC battery/USB power cord jack.
- Ring before sending SMS/reset notification/resend after exception continues.
- You can actively dial or send text messages to know the current values of each channel.
- Local and web trend graph display/network can download data in USB.
- Analog and RS-485 Modbus sensors can be input and can be mixed and matched.
- This unit has 6 sets of universal AI inputs, which can be expanded to 30 channels by plug-in.
- SIM card can automatically detect uninstalled/search/system service strength dynamic icons.
- You can set the channel name/measurement range/unit/zero offset/slope/HH/H/L/LL alarm points by yourself.

- 20 groups of mobile phone numbers can be set, and can be managed in two-stage groups. Contact persons can be designated for each channel.
- SMS notification of power outage and power restoration. The text message content includes the channel' s Chinese name, value, status, and occurrence time.
- Optional Bluetooth function, quick installation and no engineering required.

1-4 Product Application Site

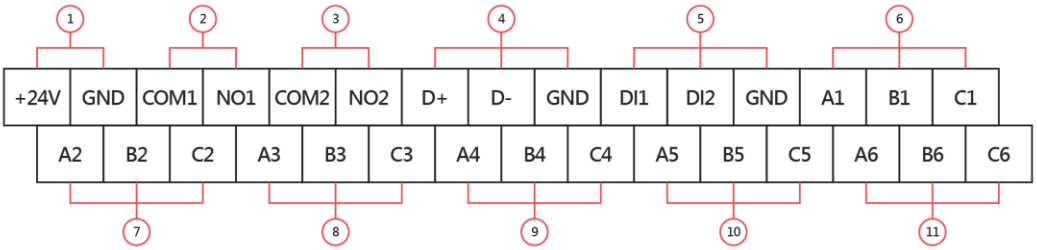
Mobile inspection, air pollution/noise/water quality inspection, water level warning, gas leakage, water gate/groundwater monitoring, unmanned monitoring station, facility agriculture.



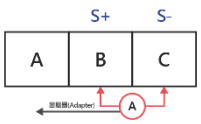
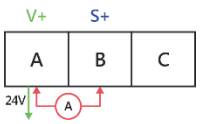
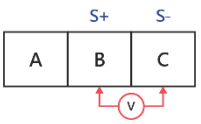
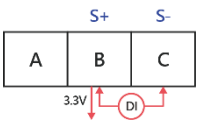
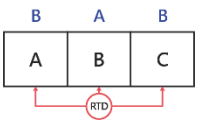
1-5 Hardware description

Code	Name	Function
1	SIM card slot	Provide SIM cards with 4G and communication functions.
2	SMS module power supply	Turn on and off the power outage SMS function.
3	Status light	● NETLIGHT (LED blue light): Enable SMS module (flashing), abnormal (constantly lit/not lit) ● POWER (LED red light): power supply (constantly on) ● CHARGE (LED yellow light): charging ● FULL (LED green light): Charging is completed (constantly lit), charging is not completed (not lit)
4	External antenna connector	Use the corresponding quick-connect antenna to enable 4G communication to be uploaded to the platform
5	Switch	Equipment main switch
6	Micro USB	USB power socket, DC5V (Choose one of 5VDC or 24VDC, not powered by the factory)
7	MINI-Jumper(communication)	Select communication RS-485 /RS- 232 485 communication :  232 communication : 
8	European terminal strip	Please refer to "Terminal Strip Connection Instructions"
9	RJ45socket	Provides connection to Ethernet
10	USB recording slot	Store data for use (optional)
11	Reset key	Keep pressing for 10 seconds to reset the system. ※System reset, returning all internal parameters to factory default values

1-6 Terminal Connection Description



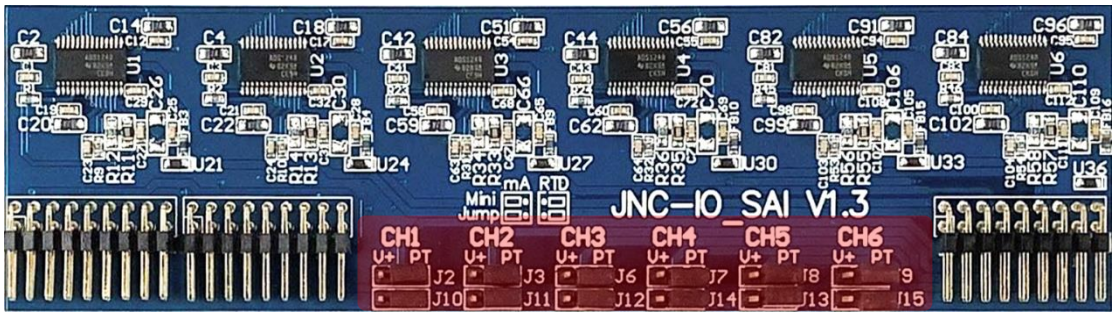
Code	Name	Function	
1	+24V/GND	Power input	
2	COM1/NO1	(Relay) Group 1	
3	COM2/NO2	(Relay) Group 2	
4	D+/D-/GND	RS-485/RS-232	
5	DI1/DI2/GND	Equipment main switch	
6	A1/B1/C1	CH1	Select input type (4-20mA、0-5V、DI、PT100)
7	A2/B2/C2	CH2	
8	A3/B3/C3	CH3	
9	A4/B4/C4	CH4	
10	A5/B5/C5	CH5	
11	A6/B6/C6	CH6	

CH1~CH6 can select the input type (4-20mA, 0-5V, DI, PT100). The wiring diagram is as follows:				
4-20mA	4-20mA(2wire)	0-5V	DI	PT100
				

※Need to set CH1~CH6 signal/type first

※The default setting of CH1~CH6 is uncharged 24VDC, which needs to be adjusted through Jump. Please refer to "Hardware AI Module"

1-7 Hard AI Model



▲ Hardware AI module appearance

Item	Name	Function		
1	MINI-Jumper (CH1~CH6 signal)	Select CH1~CH6 function: charged or PT100 contact		
		Charged (V+)	■●	DC24V, do not connect PT100 in this state to avoid equipment damage.
		PT100(PT)	●■	Default state, applied to three-wire PT100

PART 2.Machine Operation

2-1 Main screen-Overview



Code	Name	Function				
1	Toolbar		Record			
			Settings			
			Trend			
			Alarm reset			
2	Page button		When the channel is greater than six, a second display page will appear. You can click to turn the page.			
3	Channel status	Can display Chinese and English channel names/units, instant time values, and alarm status. When a channel is in an alarm state, a flashing alarm prompt will appear in the lower left corner of the display area to which the channel belongs.				
4	Local information ※Applicable to v3.00 and above	Display system time, date, SIM status, USB status				
		SIM status	Insert		Not inserted	
			Searching		No signal	
		USB status	Insert		Not inserted	

2-2 Main Screen-Channel display instructions



Code	Name	Function	
1	AI instant value	Green word	Numerical value is normal.
		Red word	Numerical value is abnormal.
2	DI status ※ In the DI setting, the reverse function is turned on and off to determine what the HI/LO is as the alarm point.	Forward DI	LO HI HI is the alarm status
		Reverse DI	LO HI LO is in alarm status
3	DO status	ON	Channel is on (In manual mode, you can switch by yourself)
		OFF	Channel is closed (In manual mode, you can switch by yourself)
		自動	Open and close using internal settings related conditions
		手動	You can click to switch on and off status by yourself.

2-3 Event Record



Code	Name	Function	
1	Starting time	Record the time when the event occurred	
	Channel	The channel corresponding to the event	
	Value	The corresponding value of the trigger condition	
	Event type	Types of conditions that trigger alerts	
	End Time	Recording events returns to the current time	
2	Content	Can record up to 100 latest alarms	
		Blue word	**Alert has been cleared**
		Red word	Alarm is occurring

2-4 Channel Settings



Code	Name	Function	
1	Channel display	Channel sorting	Sort in order according to the number of channels created by I6 itself
		Instant time value	Click this field to display/hide the corresponding channel
2	Signal selection	AI	Analog input
		DI	Digital input
		DO	Digital output
3	Channel settings	Channel name	Enter the signal name (limited to ten characters), Chinese or English
		Channel unit	Input signal unit (limited to six characters), limited to English and Chinese characters
		Gain value	The multiplier method is applied to the correction value
		Offset	Applied additively and subtractively to the correction value
		Original range	Generate amplification/reduction range of the input signal according to the read value
		Corresponding range	Generate enlargement/reduction of the original range according to the read value
4	Alarm settings	Alarm switch	Turn off alarm
			Turn on alerts and event logging
			Control whether Relay is enabled. No recording, no alarm
		Low alarm	First segment low alert
		Low low alarm	Second period low warning

Code	Name	Function		
4	Alarm settings	High alert	High point warning for the first period	
		High high alert	Second period high warning	
		Failure point - high	Applicable to PT100	
		Point of failure - low	Suitable for 4-20mA/1~5V	
		Delay	If the value continues to exceed the limit and exceeds this number of seconds, an alarm will be triggered. (Range: 0~32,767)	
		Alert insensible zone	Also a hysteresis zone Example: H alarm value is 60, hysteresis band is set to 5, then 60-5=55, the value must be lower than 55 to reset the alarm	
5	Source	Equipment	Select the equipment as the data source (the options include our company's related products, if the equipment is not a product in the options, please select "Custom")	
		Location	The command location of the data source, for example: 0x0023 AI Input position: 300035+1 = 300036	
		Type	Choose different signal types according to the interface	
			Local	PT100、4~20mA、0~20mA、0~5V、1~5V、mV、K type
			RTU/TCP	INT16、UINT16、INT32、UINT32、Float
		Interface	Select the required connection method for the device	
			Local	Set local source
			RTU	External source via RS485
			TCP	External sources via the Internet
		Station No	Data source ID number	
		IP	If the interface is set to "TCP", you can only fill in the network source IP	
		Update frequency	Refresh instant value frequency	
		Hide settings	Hide the Source button. If you need to use it, press and hold the original Source button for 5 seconds to turn it on.	
6	Relay	Control the DO channel to act when an alarm occurs		
		LO	Low alarm	
		LL	Low low alarm	
		HI	High alarm	
		HH	High high alarm	

2-5 Supplementary Instructions for AI Data Source Configuration

※Can be entered from channel settings→Enter source button

2-5-1 Native AI(CH1~CH6)



Code	Name	Function
1	Equipment	Please select "I6 Web" to set the data input type of CH1~CH6
2	Location	CH1~CH6 (AI-1~AI-6) can be set to read the address Please refer to "1-6, Terminal Block Connection Instructions"
3	Type	Data types available: PT100, 4~20mA, 0~20mA, 0~5V, 1~5V, mV, K type Please refer to the "Wiring Diagram" instructions in "1-6, Terminal Block Connection Instructions"

2-5-2 External device



Code	Name	Function	
1	Equipment	If the device is not included in the options, please select "Custom"	
2	Location	Example: 0x0023 AI; input position: 300035+1 = 300036	
3	Type	The data type can be selected (the interface needs to select RTU/TCP): INT16, UINT16, INT32, UINT32, Float	
4	Interface	RTU	RS485 transmission function
		TCP	Network transmission function
5	Bit/byte	According to the data type, select the sorting style of return instructions	
6	Gain value/offset	Adjust the final value display based on the returned value. Example: Read the decimal value of Temp as 264, and the gain value needs to be adjusted to 0.1. Then the final display is 26.4℃	

※In the channel settings → the original range & corresponding range are both set to 0~100. If you need to adjust the decimal places of the final display screen, just change the decimal places of the corresponding range.

2-6 AO/Relay Control Parameter Configuration

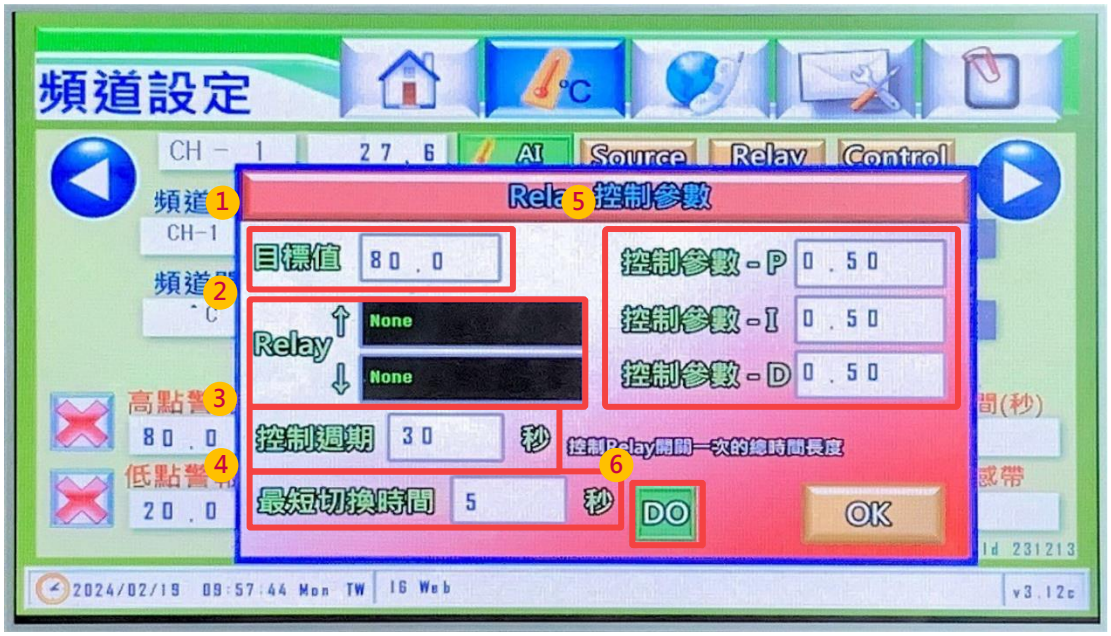
※Can be configured from the channel→Control key to enter

2-6-1 AO control parameters



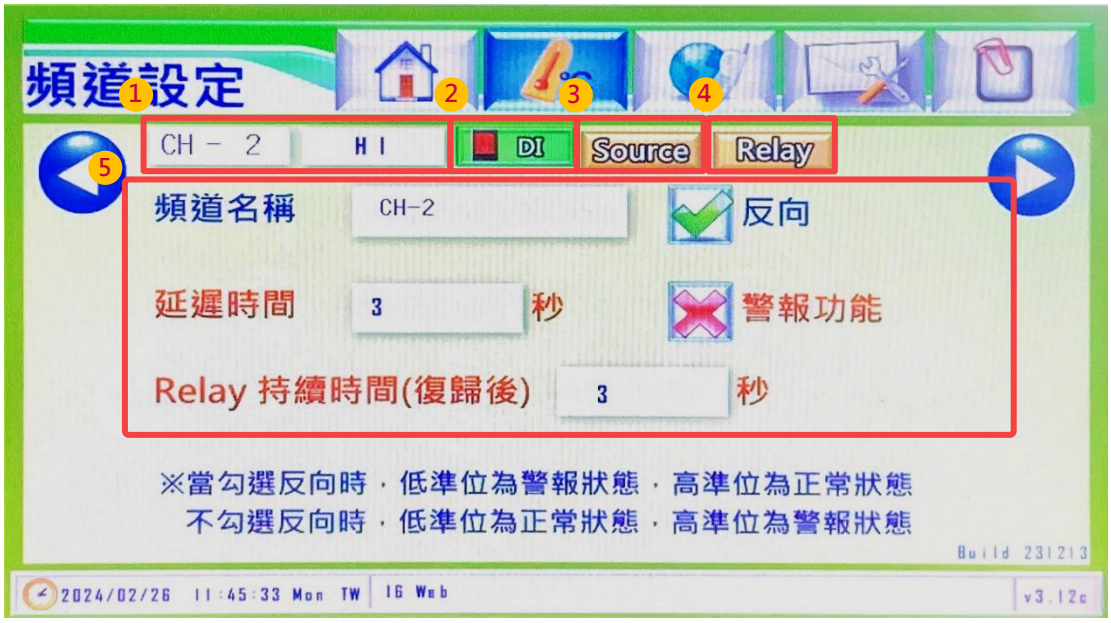
Code	Name	Function	
1	Output	You can choose to specify the output AO channel (you need to purchase our A6D6 as the AO channel selection)	
2	Model	Output again	Operate directly to the target value based on the target value
		PID control	Adjust the operation to the target value according to the target value
3	Target value	The AI channel target value	
4	PID parameters	P (proportional control), I (integral control), D (derivative control)	
5	Corresponding range	Give the specified range 0~20mA/4~20mA according to the output value	
6	Maximum value /minimum value	Set the maximum and minimum values of the corresponding range of AO output	
7	Control type	Switchable AO and DO types	

2-6-2 DO control parameters



Code	Name	Function
1	Target value	The AI channel target value
2	Relay	DO channel selection. When the instant time AI value does not reach the target value, the selected DO channel will operate until the conditions are met. Select ↑ DO: When the instant time AI value is lower than the target value, the selected DO channel operates Select ↓ DO: When the instant time AI value is higher than the target value, the selected DO channel operates
3	Control cycle	Controls the time elapsed between closing and opening the DO channel
4	Minimum switching time	Control the time elapsed between opening and closing the DO channel
5	PID	P (proportional control), I (integral control), D (derivative control)
6	Control type	Switchable AO and DO types

2-7 DI Channel Settings



Code	Name	Function		
1	Channel display	Channel sorting	Sort in order according to the number of channels created by I6 itself	
		Instant time value	Click this field to display/hide the corresponding channel	
2	Signal selection	AI	Analog input	
		DI	Digital input	
		DO	Digital output	
3	Source	Communication	Select the required connection method for the device	
			Local	Set local source
			RTU	External source via RS485
			TCP	External sources via the Internet
		Station No	Data source ID number	
		IP	If the interface is set to "TCP", you can only fill in the network source IP	
		Address	The command location of the data source, for example: 0x0001 DO Input position: 100001+1 = 100002	
			Can be set 100001~100008 100001~100006 : B1、C1~B6、C6 100007~100008 : DI1、DI2、GND (Please refer to "1-6, Terminal Block Connection Instructions")	
		Update frequency	Refresh instant value frequency	

Code	Name	Function	
4	Relay	Control the DO channel to act when an alarm occurs	
5	Channel settings	Channel name	Enter the signal name (limited to ten characters), Chinese or English
		Reverse	 HI is the normal state, Low is the alarm state
			 HI is the alarm state, Low is the normal state
		Delay	If the value continues to exceed the limit and exceeds this number of seconds, an alarm will be triggered. (Range: 0~32,767)
		Alarm function	 Turn off alert
			 Turn on alerts and event logging
			 Control whether Relay is enabled. No recording, no alarm
		Relay Duration	The alarm function must be set to After the alarm resets, how long must the Relay be on

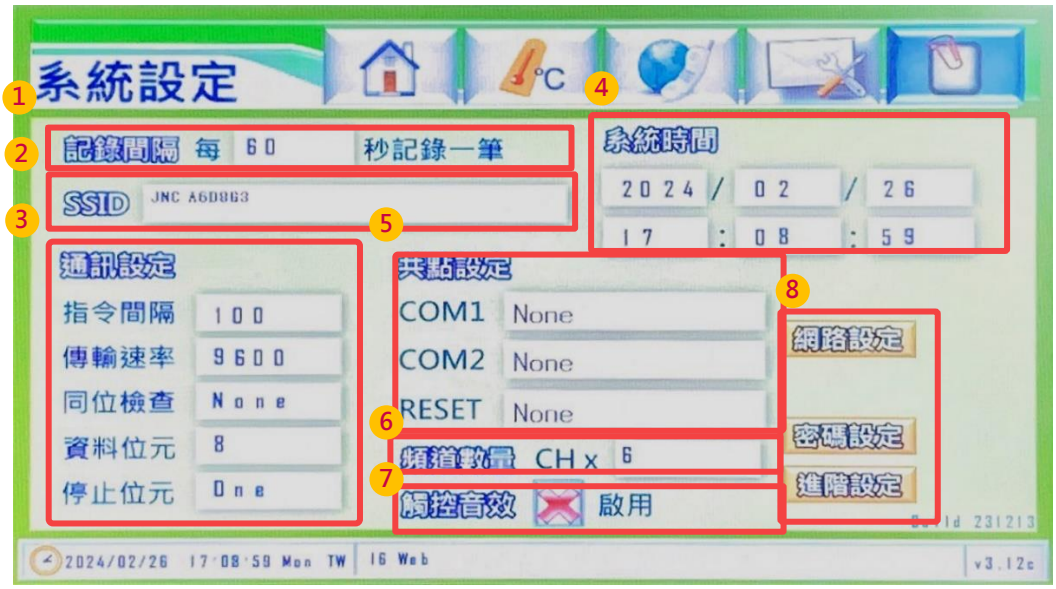
2-8 DO Channel Settings



Code	Name	Function		
1	Channel display	Channel sorting	Sort in order according to the number of channels created by I6 itself	
		Instant time value	Click this field to display/hide the corresponding channel	
2	Signal selection	AI	Analog input	
		DI	Digital input	
		DO	Digital output	
3	Source	Communication	Select the required connection method for the device	
			Local	Set local source
			RTU	External source via RS485
			TCP	External sources via the Internet
		Station No	Data source ID number	
		IP	If the interface is set to "TCP", you can only fill in the network source IP	
		Address	The command location of the data source, for example: 0x0001 DO Input position: 000001+1 = 000002	
			Can be set to 000001~000002 000001~000006 : (You need to purchase our A6D6 as a DO expansion option) (Please refer to "1-6, Terminal Block Connection Instructions")	
		Update frequency	Refresh instant value frequency	

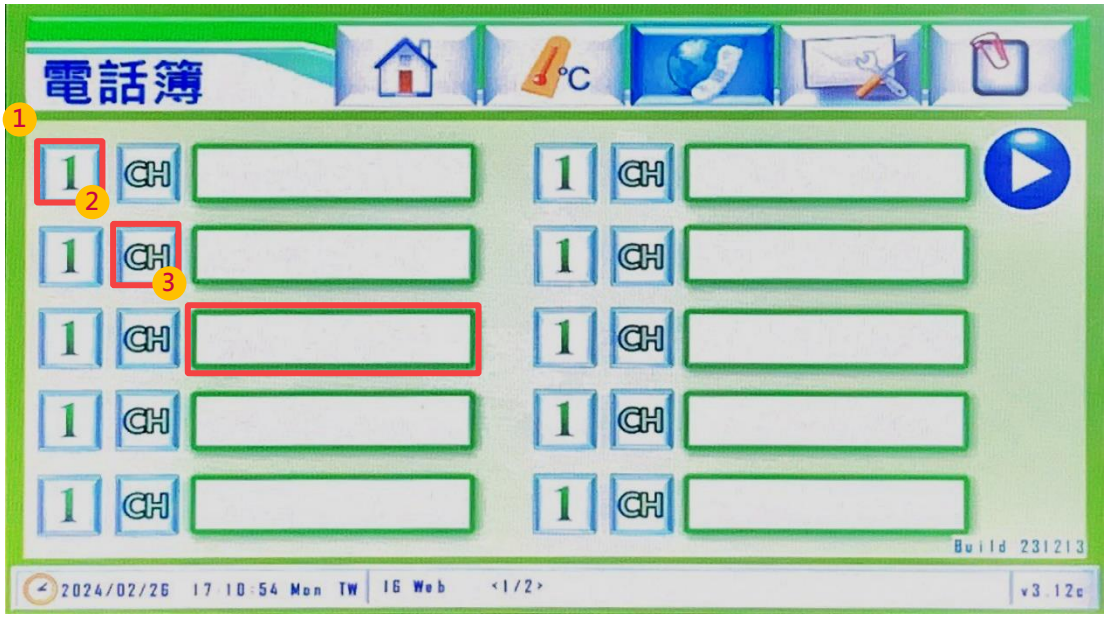
Code	Name	Function		
4	Period control	The time period during which DO is activated can be set. DO must be set to "automatic" state.		
5	Channel settings	Channel name	Enter the signal name (limited to ten characters), Chinese or English	
		Independent control		Operates according to cycle control switching parameters
				Operate according to set condition parameters
		Startup record		Start event logging
				Close event logging
		Reverse output		The output state is opposite to the display state
				Output status and display status are synchronized
		Numeric setting	If the data source is an AI channel and the address is set to 4xxxxx, this field will be displayed, otherwise it will be hidden. When the DO channel is turned on/off, according to the value set in the on/off field, the value is output to the specified AI address.	
6	Cycle control		When independent control is turned on, it will operate according to the switching parameters of periodic control. If the independent control is turned off, when the equipment conditions are reached and started, it will operate according to the switching parameters of the periodic control. Start field: Number of seconds to start DO running Close field: Number of seconds to close DO running	
			Switch parameters that do not perform periodic control	
7	Timeout alert	When DO is turned on due to alarm linkage and the duration exceeds the specified time, the DO alarm turns on.		
	Manual start time	When DO is opened in manual mode, it will time out and close according to the specified opening time.		
8	Chain control	Specify the linked secondary DO channel. After linking, it can be turned on/off synchronously.		
	Delay control	When the main DO channel is triggered and turned on, and the chain control has been linked to the secondary DO channel, the secondary DO channel will be delayed until the specified time.		
	Persist after closing	When the main DO channel is triggered to close from on, and the chain control has been linked to the secondary DO channel, the secondary DO channel will continue to be on until the specified time and then close.		

2-9 System Settings



Code	Name	Function	
1	Record interval	Record the data of each channel to USB according to the specified time.	
2	SSID identification code	ID name	
3	Communication settings	Command interval	Interval time for sending communication commands
		485 settings	RTU communication settings (transmission rate, parity check, data/stop bits)
4	System time	Displays the current device time, which can be changed and corrected by yourself	
5	Common point setting	COM1	Select DO channel, always on and in alarm state
		COM2	Select DO channel, normally closed and alarm status
		RESET	Select the DI channel and the alarm will reset
6	Number of channels	Number of device channels, up to 120 can be set	
7	Touch sound effects	Click the screen to feedback sound effects	
		☑ Turn on feedback sound	☒ Open and close feedback sound effects
8	Network settings	IP station number, default: 192.168.0.80 Mask subnet mask, default: 255.255.255.0 Gateway default gateway, default: 192.168.0.1	
	Password setting	Device password, can be changed and adjusted	
	Advanced settings	Configuration settings	I6 export configuration to USB: Export all settings in the device into a single file USB import configuration to I6: Import the exported configuration file into I6
		System update	Device update using USB firmware file

2-10 Phonebook Settings



Code	Name	Function	
1	Alarm phase	1	Receive channel first and second segment alerts
		2	Received channel second segment alert
2	Alarm channel selection	Select the channel to send alert text messages to mobile phones	
3	Mobile phone contact number	Enter the mobile phone number to receive alert text messages	

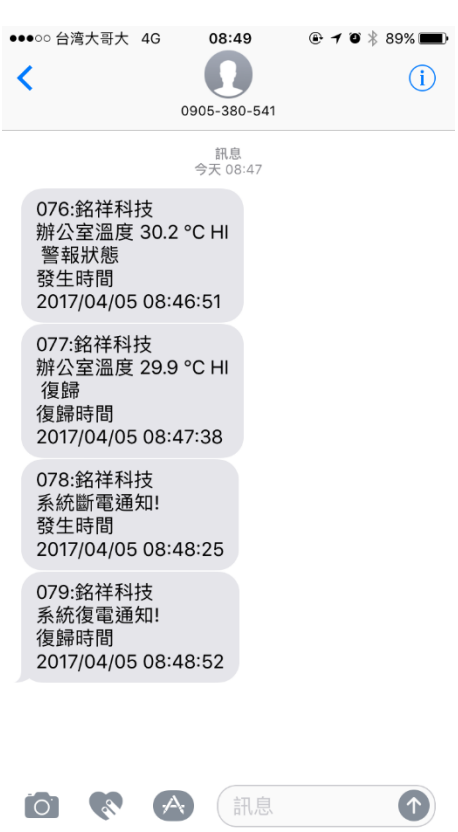
2-11 SMS Settings

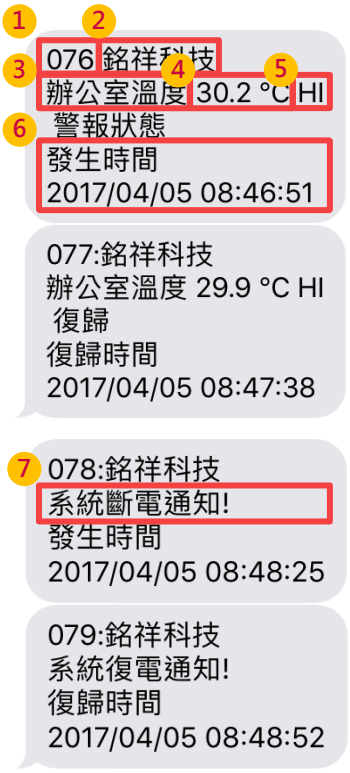


Code	Name	Function
1	Enable SMS	When the alarm is activated, send a text message ※Be sure to activate the SIM card to unlock this function
	Ring before sending	Before sending a text message, please dial the phone number to inform,send after connecting, hanging up or missing.
	Notice of return	After the alarm ends, send a text message
	Show DI status	When sending a text message, if there is a DI channel, the content includes the DI status.
	Resend interval	When the alarm state continues, a text message will be sent every time the set interval is reached.
2	Prepaid card expiry date	With a prepaid card, you can enter an expiration date. This function will send SMS notifications 14 days and 1 day before the expiration date. ※Be sure to activate a SIM card to unlock this function
3	No sending period	Set this time period to not send SMS notifications
	Discard notice	You will no longer be notified when entering the "no sending period"
4	Enable power outage alert	When this option is enabled and the device "power off" condition is met, a text message notification will be sent.
	Ring before sending	When the device is powered off, call the phone to notify before sending a text message, and send it after the call is connected, hung up, or missed.
	Notice of return	When the device is powered off and restored, a text message will be sent to notify you.
	Precautions	For the above three power outage notification functions, you need to turn on the power of the SMS module and insert the SIM card.
5	Reset	Reset the number of text messages sent so far and the alarm record content
6	Check number	Check whether the caller number is set in the phone book
	Coding	Choose to use Ascii/Unicode to transmit data

		Ascii: No Chinese, can accommodate 140 characters; Unicode: Chinese, only 70 characters
	Select channel	Select the channel to send data SMS to the mobile phone
7	System Mode	Select the signal used by the SIM card, AUTO (automatic)/4G
8	Enable Read alerts	When this option is enabled and the channel "Read (disconnected)" condition is met, a text message notification will be sent.

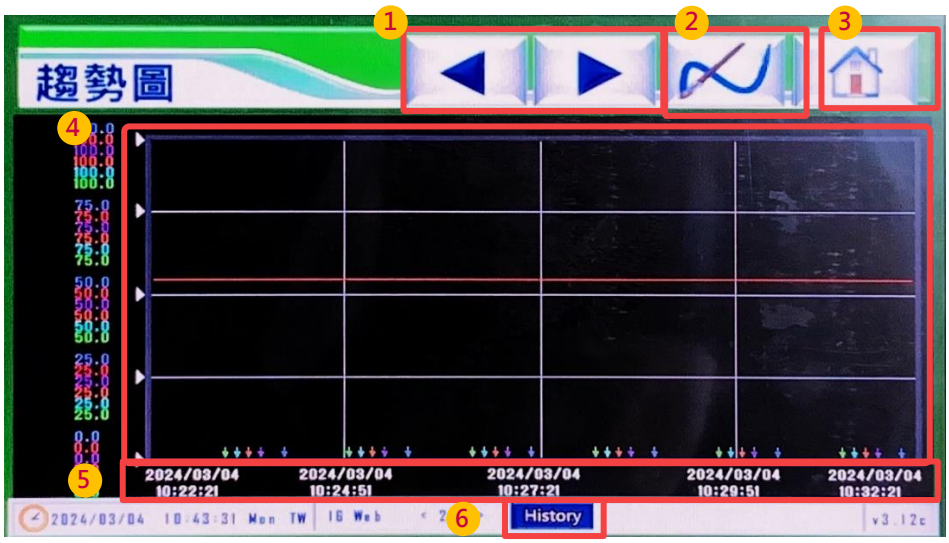
2-11-1 SMS content description





Code	Name	Function
1	Number of SMS messages	The number of text messages sent (accumulated). You can refer to "2-11, SMS Settings" to reset the number of text messages.
2	SMS header	Device name
3	Channel name	Show alert channel name
4	Alarm value	The current numerical status when the alarm occurs
5	Alarm status	Alert trigger conditions
6	Alarm time	The current time when the alarm occurs, and a text message will be sent when the alarm occurs. (Return notification needs to be turned on)
7	System notification	An alarm will be issued when the system is powered off, and a text message will be sent when the system is restored. (Return notification needs to be turned on)

2-12 Trend Chart

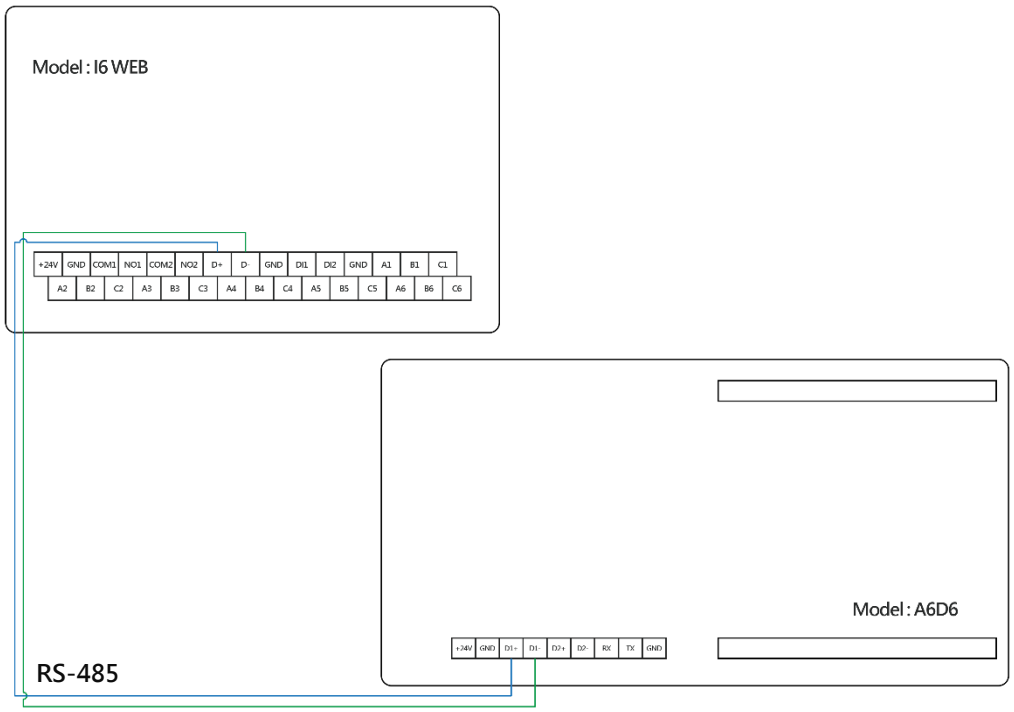


Code	Name	Function	
1	Channel display switching	Switch the trend chart channel display (the number that can be viewed at one time is 6CH) Left button: push back 6CH; right button: push back 6CH	
2	Line settings	The style can be set according to the 6 channels displayed on the current trend chart.	
		Channel	You can select the channel you want to display and adjust the channel style
		Color	Adjust the color of the curve displayed on the trend chart for this channel
		Width	Adjust the curve line diameter displayed on the trend chart for this channel
		Scope	Adjust the numerical range displayed on the trend chart for this channel
3	Front page	Click to return to the main screen overview	
4	Trend chart screen	Display channel values as lines	
		Click	Enter the numerical observation state and display the current data synchronously according to the positioning line.
		Press	You can drag the positioning line to view the current data instantly
5	Time setting	Adjustable trend chart overall time display range type	
		Type-1	Display based on selected "Start Time" and scheduled "Duration"
		Type-2	Display as time period based on selected "start time" and "end time"
		Type-3	Push back display based on selected "end time" and scheduled "duration"
		Type-4	Push back the current time display based on the selected "Read latest data"
6	Display mode switching	RealTime	Instant read status
		History	Historical data status

PART 3.Application Structure

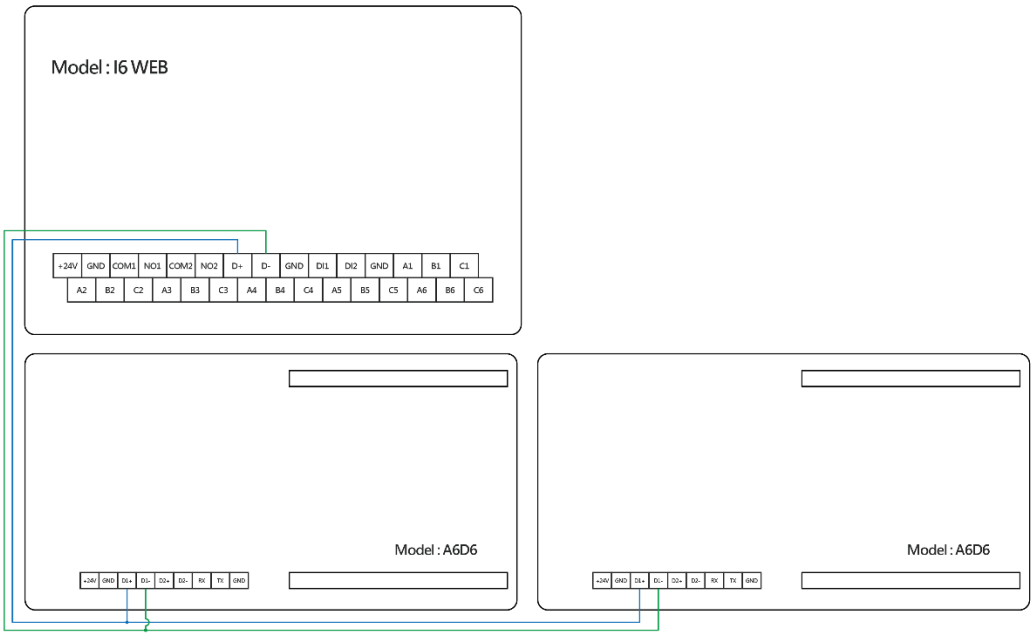
※This chapter uses our company's A6D6 product as an architectural description.

3-1 Single unit A6D6 (single unit equipment)



3-2 Multi-unit A6D6 (multi-unit equipment)

※When multiple devices enter I6 at the same time, you only need to connect each device D+D- in parallel. Note that the device IDs cannot conflict with each other.



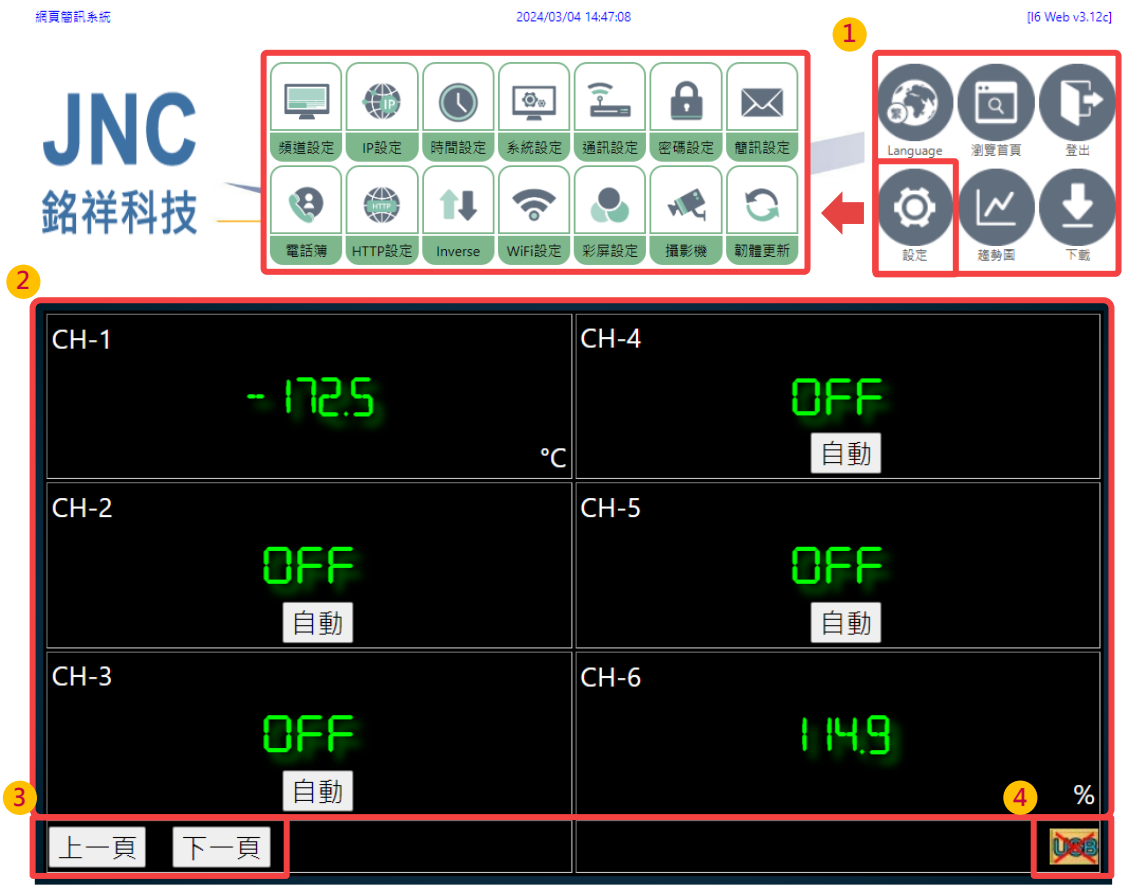
PART 4.Web Operations

4-1 Login Page



Code	Name	Function	
1	Language	Switchable between traditional, simplified and English languages	
2	Log in	The password login screen is displayed. There are three types of permissions:	
		Browse permissions	Password: 0000
		Set permissions	Password: 1234
		View permissions	Password: None, click to log in
3	System name	Device name	

4-2 Main Screen



Code	Name	Function					
1	Options	Language	Switchable between traditional, simplified and English languages				
		Browse home page	Jump to the main screen				
		Sign out	Jump to the login screen				
		Settings	Detailed internal adjustments to the device				
		Trend	You can browse real-time and historical graphs, event records, etc. in detail				
		Download	Has three loading modes They are USB-History, USB-Event, and Built-in-History.				
2	Instant time value	Six channels can be viewed at one time, and each channel presents a different style depending on the control type.					
3	Page key	When the channel is larger than six, you can click to turn the page.					
4	Status information	Display SIM status, USB status					
		SIM status	Insert		Not inserted		
			Searching		No signal		
		USB status	Insert		Not inserted		

4-3 Channel Settings

4-3-1 Channel overview



Code	Name	Function
1	Channel menu	Selectable channel display range, every 10 channels are sorted downwards in one column
2	Channel listing	Click on any column item to enter the channel for settings
3	Channel selection	Click to jump to channel overview

4-3-2 AI setting content description

4-3-2-1 AI settings: basic parameters



Code	Name	Function
1	Enable	If checked, the value of the channel will be displayed on the main screen; otherwise, the channel will be hidden.
2	Channel name	(Limited to ten characters), Chinese or English
	Unit	Input signal unit (limited to six characters), limited to English and Chinese characters
3	Original range	Generate amplification/reduction range of the input signal according to the read value
	Corresponding range	Generate an enlargement/reduction range of the original range according to the read value
4	Decimal places	Set the number of digits after the base point of a value
	Gain value	The multiplier method is applied to the correction value
	Offset	Applied additively and subtractively to the correction value
5	Instant time value	Show current numerical status

4-3-2-2 AI settings: Alarm settings



Code	Name	Function	
1	Alarm switch	Deactivate	Turn off alert
		Alarm	Turn on alerts and event logging
		Control	Control whether Relay is enabled. No recording, no alarm
2	Four segment alarm	Alert -HiHi	Second segment high alert
		Alert -Hi	First segment high alert
		Alert -Lo	First segment low alert
		Alert -LoLo	Second segment low alert
	Point of failure	High	Applicable to PT100
		Low	Applicable to 4-20mA/1~5V
3	Alert insensible zone	Also a hysteresis zone Example: H alarm value is 60, hysteresis band is set to 5, then 60-5=55, the value must be lower than 55 to reset the alarm	
4	Delay time	If the value continues to exceed the limit and exceeds this number of seconds, an alarm will be triggered (range: 0~32,767)	

4-3-2-3 AI settings: PID control-AO mode



Code	Name	Function	
1	Output mode	Switchable AO and DO modes	
2	Output AO	You can choose to specify the output AO channel (You need to purchase our A6D6 as the AO channel selection)	
3	Model	Output	Operate directly to the target value based on the target value
		PID control	Adjust the operation to the target value according to the target value
4	Target value	The AI channel target value	
5	PID parameters	Kp (proportional control), Ki (integral control), Kd (differential control)	
6	Corresponding range	Give the specified range 0~20mA/4~20mA according to the output value	
7	Max/Min	Set the maximum and minimum values of the corresponding range of AO output	

4-3-2-4 AI setting: PID control-DO mode



Code	Name	Function	
1	Output mode	Switchable AO and DO modes	
2	Target value	The AI channel target value	
3	Relay	Relay+	When the AI instant time value is lower than the target value, the selected DO channel operates
		Relay-	When the AI instant time value is higher than the target value, the selected DO channel operates
4	PID parameters	Kp (proportional control), Ki (integral control), Kd (differential control)	
5	Control cycle	Controls the time elapsed between closing and opening the DO channel	
6	Minimum switching time	Controls the time elapsed between opening and closing the DO channel	

4-3-2-5 AI Settings: Data Source/Alarm Words



Code	Name	Function	
1	Facilities	Select the equipment from which the data is sourced (Selection includes products related to this department. If equipment is not included in the selection, please select "Custom")	
2	Interface	Selected equipment demand connection method	
		Local	Setting this unit source
		RTU	External source via RS485
		TCP	From external sources
3	Station number	Source ID number	
4	Address	Command position of data source, e.g. 0x0023 AI → Import position: 300035+1 = 300036	
5	Interval	Update instantaneous rates	

<table>
<tr><th>Code</th><th>Name</th><th colspan="2">Function</th></tr>
<tr><td rowspan="3">6</td><td rowspan="3">Data type</td><td colspan="2">Choose different signal types according to the interface</td></tr>
<tr><td>Local</td><td>PT100、4~20mA、0~20mA、0~5V、
1~5V、mV、K type</td></tr>
<tr><td>RTU/TCP</td><td>INT16、UINT16、INT32、UINT32、Float</td></tr>
<tr><td>7</td><td>Gain value/offset</td><td colspan="2">Adjust the final value display based on the returned value.
Example: Read the decimal value of Temp as 264, and the gain value needs to be adjusted to 0.1.
Then the final display is 26.4℃</td></tr>
<tr><td>8</td><td>Bit/byte</td><td colspan="2">According to the data type, select the sorting style of return instructions</td></tr>
<tr><td rowspan="4">9</td><td rowspan="4">Alarm warning</td><td colspan="2">According to the four-segment alarm and fault points in the alarm settings, set the corresponding alarm slogans on the main screen of the real machine.</td></tr>
<tr><td>Four segment alarm</td><td>(Limited to five characters), Chinese or English</td></tr>
<tr><td>Point of failure</td><td>(Limited to six characters), Chinese or English</td></tr>
<tr><td>Screen settings</td><td>
</td></tr>
<tr><td>Real machine main screen</td><td>
</td></tr>
</table>

4-3-3 DI setting content description

4-3-3-1 DI settings: basic parameters



Code	Name	Function	
1	Enable	If checked, the value of the channel will be displayed on the main screen; otherwise, the channel will be hidden.	
2	Channel name	(Limited to ten characters), Chinese or English	
3	Function	Deactivate	Turn off alert
		Alarm	Turn on alerts and event logging
		Control	Control whether Relay is enabled. No recording, no alarm
4	Reverse	Check	HI is the normal state, Low is the alarm state
		Not checked	HI is the alarm state, Low is the normal state
5	Delay	If the value continues to exceed the limit and exceeds this number of seconds, an alarm will be triggered (range: 0~32,767)	
6	Relay duration	The function must be set to "Control". After the alarm resets, how long must the Relay be on?	
7	Relay	Control the DO channel to act when an alarm occurs	

4-3-3-2、DI settings: Data source



Code	Name	Function	
1	Interface	Select the required connection method for the device	
		Local	Set local source
		RTU	External source via RS485
		TCP	External sources via the Internet
2	Station No	Data source ID number	
3	Address	The command location of the data source, for example: 0x0001 DO Input position: 100001+1 = 100002	
		Can be set to 100001~100008 100001~100006: B1, C1~B6, C6 100007~100008: DI1, DI2, GND (Please refer to "1-6, Terminal Block Connection Instructions")	
4	Sampling interval	Refresh instant value frequency	

4-3-4 DO setting content description

4-3-4-1 DO settings: basic parameters



Code	Name	Function	
1	Enable	If checked, the value of the channel will be displayed on the main screen; otherwise, the channel will be hidden.	
2	Channel name	(Limited to ten characters), Chinese or English	
3	Turn on/off values	If the data source is an AI channel and the address is set to 4xxxxx, this field will be displayed, otherwise it will be hidden. When the DO channel is turned on/off, according to the value set in the on/off field, the value is output to the specified AI address.	
4	Independent control	Check	Operates according to cycle control switching parameters
		Not checked	Operate according to set condition parameters
5	Startup record	Check	Start event logging
		Not checked	Close event logging

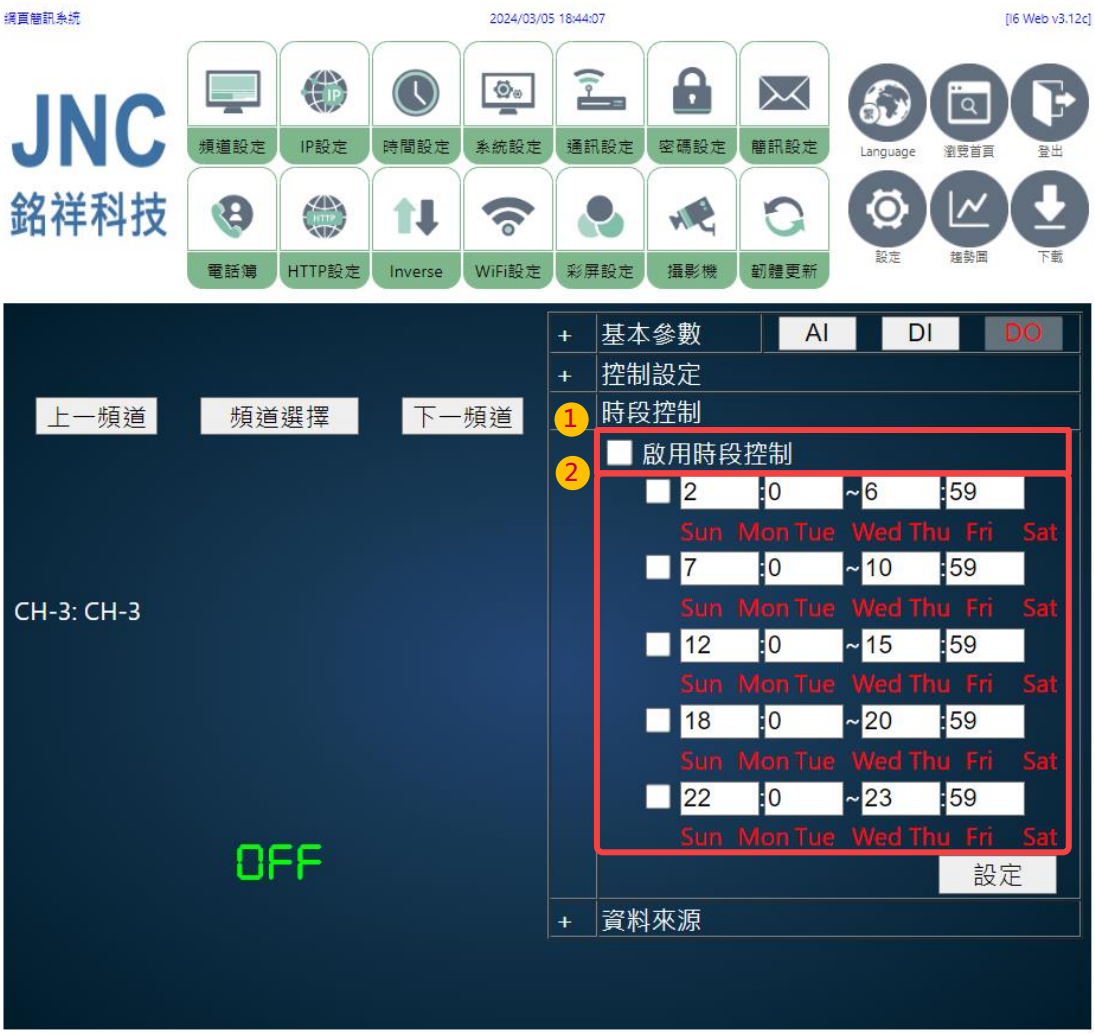
Code	Name	Function	
6	Timeout alert	When DO is turned on due to alarm linkage and the duration exceeds the specified time, the DO alarm turns on.	
7	Manual start time	When DO is opened in manual mode, it will time out and close according to the specified opening time.	
8	Manual / Auto	Manual	The operator can click to open/close the channel.
		Automatic	Let the system turn it on/off automatically according to the set conditions.
9	Reverse output	Check	The output state is opposite to the display state
		Not checked	Output status and display status are synchronized

4-3-4-2 DO setting: cycle control



Code	Name	Function		
1	Cycle control	Check	When independent control is turned on, it will operate according to the switching parameters of periodic control. If the independent control is turned off, when the equipment conditions are reached and started, it will operate according to the switching parameters of the periodic control.	
			Turn on	Number of seconds to start DO running
			Close	Number of seconds to close DO running
		Not checked	Switch parameters that do not perform periodic control	
2	Chain control	Specify the linked secondary DO channel. After linking, it can be turned on/off synchronously.		
	Delay control	When the main DO channel is triggered and turned on, and the chain control has been linked to the secondary DO channel, The deputy DO channel will be delayed until the specified time.		
	Persist after closing	When the main DO channel is triggered from opening to closing and the chain control has been linked to the secondary DO channel, The deputy DO channel will remain on until the specified time and then close.		

4-3-4-3 DO setting: time period control



Code	Name	Function	
1	Period control	Check	To set the time period during which DO is activated, DO must be set to the "automatic" state.
		Not checked	Unable to enable dayparting
2	Enable period	Check	Execute equipment operation during this period The following is the week of execution for this period. The red letters indicate activation and the white letters indicate inactivation.
		Not checked	No equipment operation will be performed during this period

4-3-4-4 DO settings: data source



Code	Name	Function	
1	Interface	Select the required connection method for the device	
		Local	Set local source
		RTU	External source via RS485
		TCP	External sources via the Internet
2	Station No	Data source ID number	
3	Address	The command location of the data source, for example: 0x0001 DO Input position: 000001+1 = 000002	
		Can be set to 000001~000002 000001~000006: (You need to purchase our A6D6 as DO expansion option) (Please refer to "1-6, Terminal Block Connection Instructions")	
4	Sampling interval	Refresh instant value frequency	

4-4 IP Settings



Code	Name	Function	
1	Internet protocol (Set by professionals)	IP	Internet Protocol Address
		Mask	Subnet mask
		Gateway	Default gateway
2	Original factory configuration	Mac	Network ID
3	Name	Device/system name, cannot exceed 15 characters in length	

4-5 Time Settings



Code	Name	Function
1	Monitor	Show current time and date
2	Time Calibration	When "Manual" is checked, the correction time can be entered in the lower field; otherwise, it cannot be changed.

4-6 System Settings



Code	Name	Function	
1	Number of channels	Number of device channels, up to 120 can be set	
	Record interval	Record each channel data to USB according to the specified time	
2	Common point setting	COM1	Select DO channel, always on and in alarm state
		COM2	Select DO channel, normally closed and alarm status
		RESET	Select the DI channel and the alarm will reset
3	Configuration	Download	Export all settings in the I6 device into a single file to the computer system
		Select file	Select the configuration file from the computer system and import it to the I6 device
		Upload	Import the I6 configuration file in the computer system to the I6 device

4-7 Communication Settings



Code	Name	Function
1	Transmission rate	Drop-down menu, selectable: 9600, 19200, 38400, 57600, 115200
2	485 settings	RTU communication settings (parity check, data/stop bit)
3	Communication interval (ms)	Interval time for sending communication commands

※Please note! The above settings need to be set by professionals。

4-8 Password Settings



Code	Name	Function
1	Password Type	From the drop-down menu, select the type of password you want to set: Browse Password/Control Password/Set Password
2	Password setting	After checking Enable, the password field entered for this type will take effect immediately after being set. (Limited to ten characters), English numbers only

4-9 SMS settings



Code	Name	Function	
1	Enable SMS	When the alarm is activated, send a text message ※Be sure to activate the SIM card to unlock this function	
		Ring before sending	Make a phone call before sending a text message Execute sending after connecting, hanging up or missing.
		Enable return notifications	After the alarm ends, send a text message
		Power outage notification	When this option is enabled and the device "power off" condition is met, a text message notification will be sent.
		Power outage text message ring	When the device is powered off, call the phone to inform before sending a text message. Execute sending after connecting, hanging up or missing.
		Power outage return notification	When the device is powered off and restored, a text message will be sent to notify you.
	Sending interval	When the alarm state continues, a text message will be sent every time the set interval is reached.	
2	No sending period	After checking, it will be set to not send SMS notifications during this period.	
	Discard notice	You will no longer be notified when entering the "no sending period"	
3	Prepaid card expiry date	With a prepaid card, you can enter an expiration date. This function will send SMS notifications 14 days and 1 day before the expiration date. ※Be sure to activate a SIM card to unlock this function	

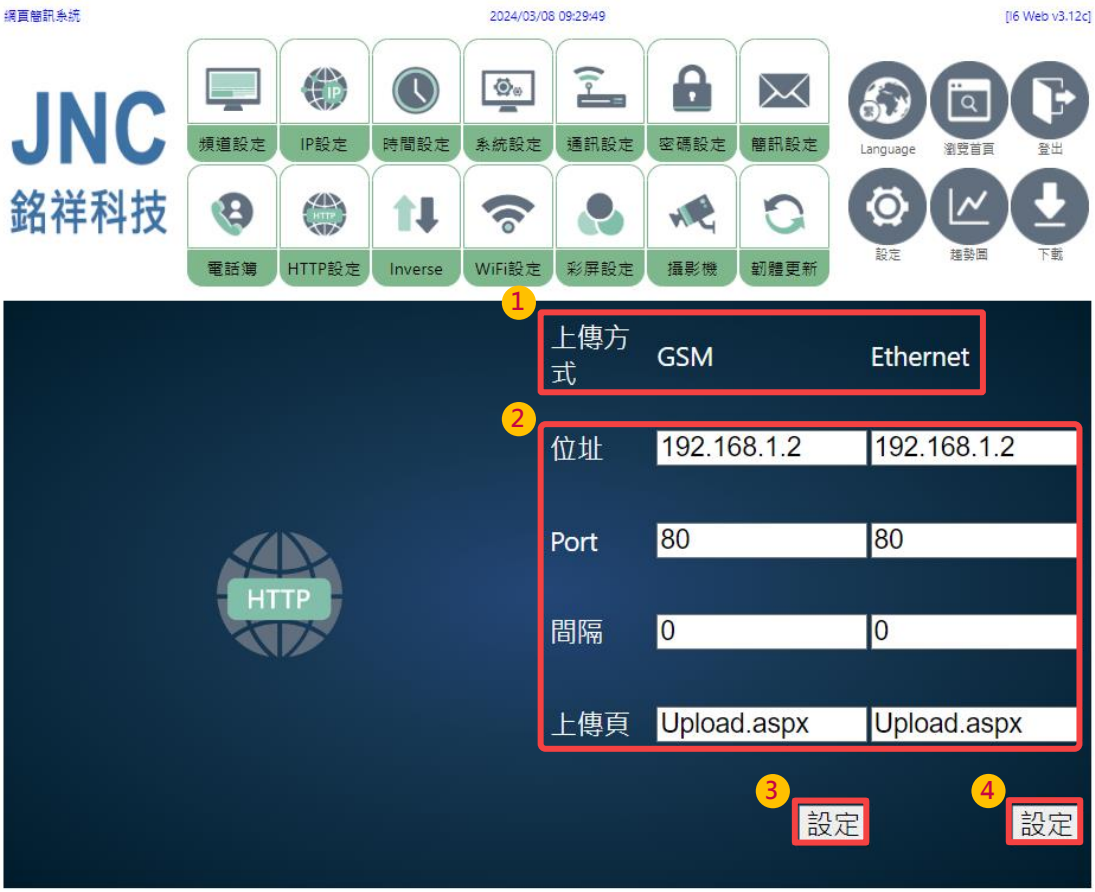
Code	Name	Function
4	Check number	Check whether the caller number is set in the phone book
	Coding	Choose to use Ascii/Unicode to transmit data English: Ascii, but can accommodate 140 characters; Chinese: Unicode, only 70 characters
5	Show DI status	When sending a text message, if there is a DI channel, the content includes the DI status
	Mode	Select the signal used by the SIM card, AUTO (automatic)/4G
	Select channel	Select the channel to send data SMS to the mobile phone

4-10 Phonebook



Code	Name	Function	
1	Alarm type	1	Receive channel first and second segment alerts
		2	Received channel second segment alert
2	Channel	Select the channel to send alert text messages to mobile phones	
3	Number	Enter the mobile phone number to receive alert text messages	

4-11 Http Settings



Code	Name	Function	
1	Upload method	GSM	4G mobile network
		Ethemet	Ethernet
2	Address	To upload to the designated server IP	
	Port	Designated server port (for web pages)	
	Interval	Each transmission time (seconds), 0 means disabled	
	Upload page	Upload the specified page URL	
3	GSM setting key		
4	Ethemet setting key		

※Please note! The above settings need to be set by professionals.

4-12 Inverse

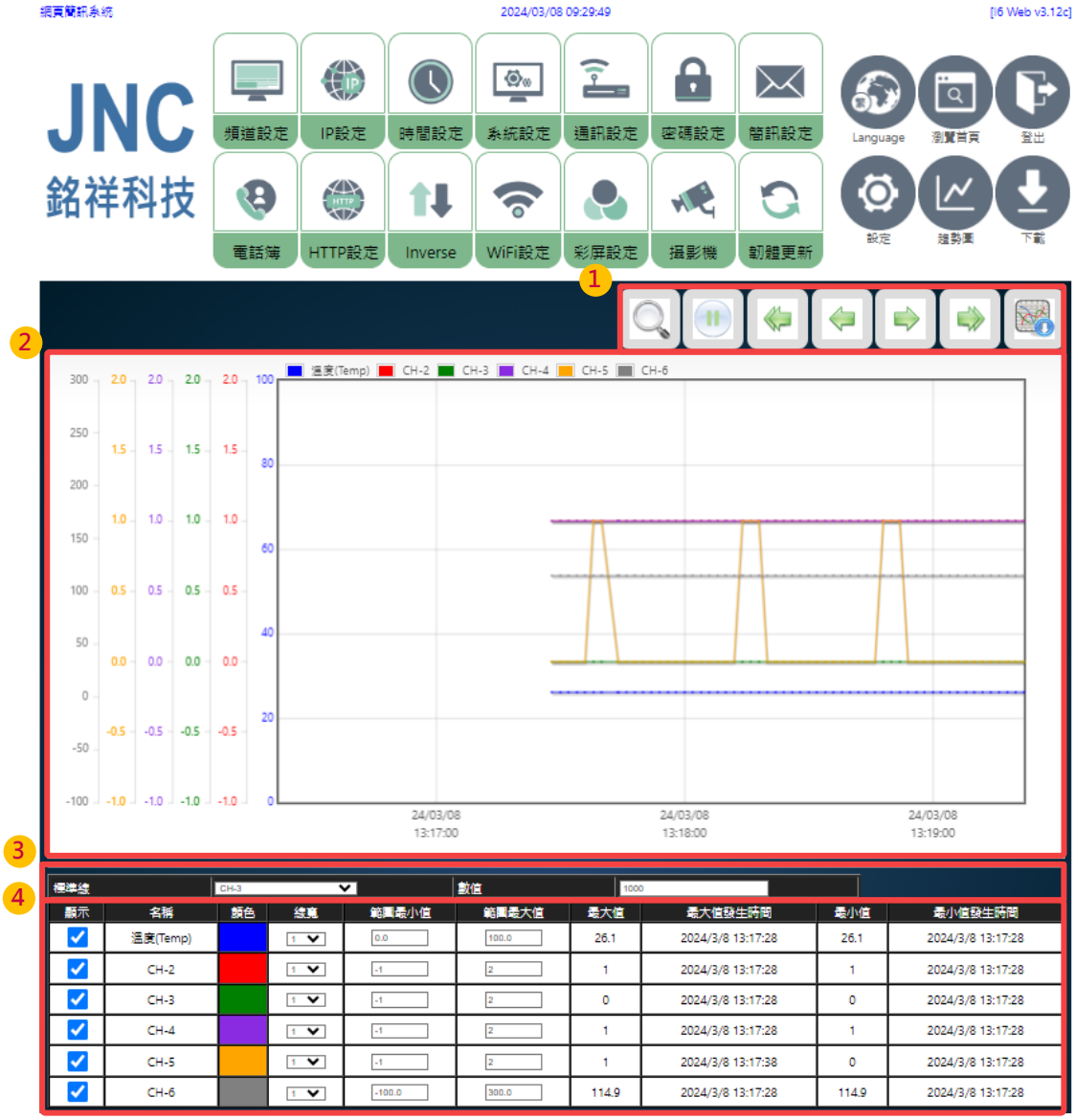


Code	Name	Function	
1	Enable	When checked, the inverse function is enabled	
2	Upload method	3G	4G mobile network
		Ethemet	Http Ethernet
3	Address	To upload to the designated server IP	
	Modbus Port	Designated server communication port (for communication)	
	Event Port	Specify server communication port (for transmitting events/alerts)	
4	Connection ID	Connection ID	
	IoT ID	Device ID	
5	SIM APN	Telecom access point name	

※Please note! The above settings need to be set by professionals.

4-13 Trend Chart

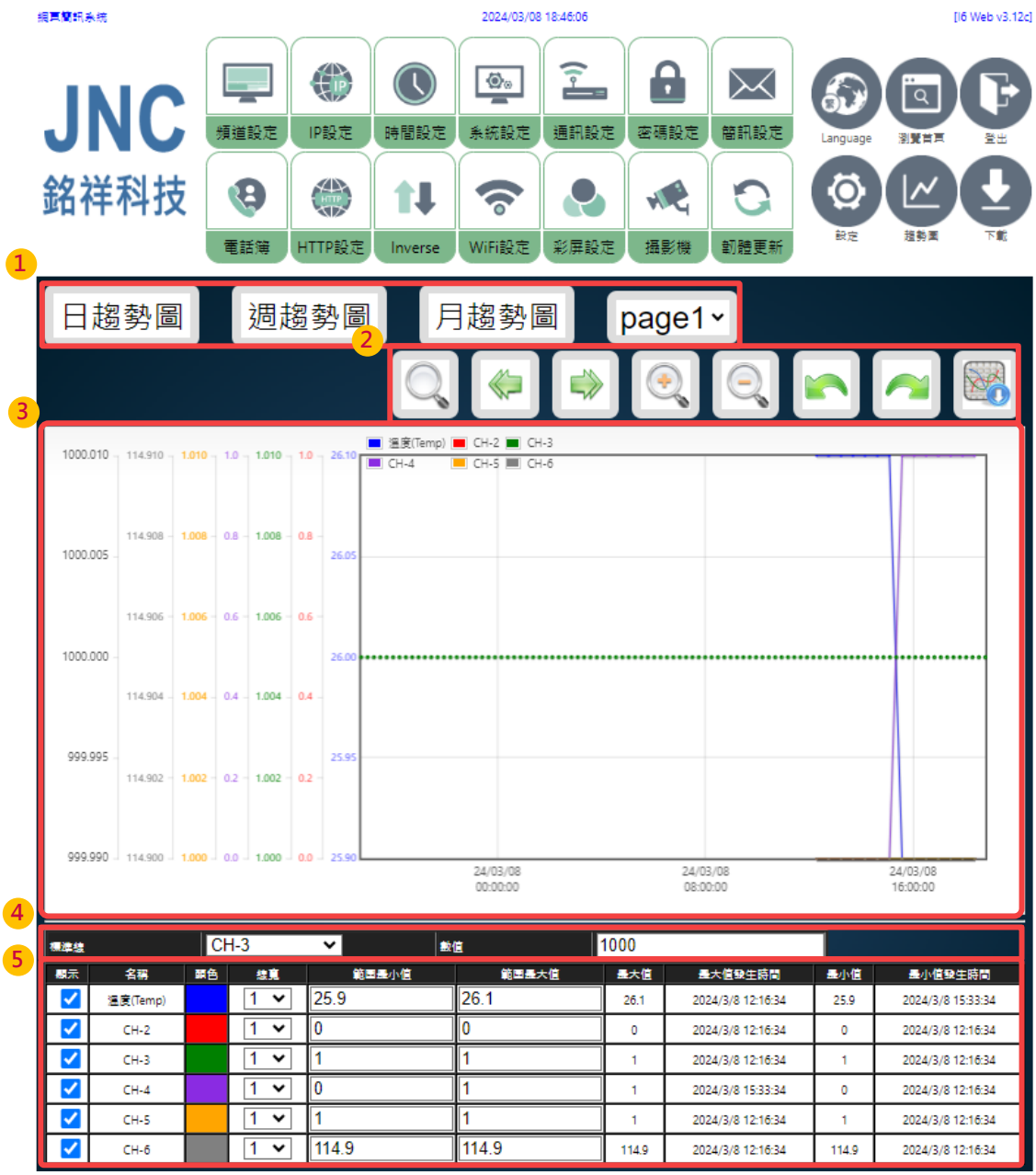
4-13-1 Instant time trend chart



Code	Name	Function	
1	Menu		Select 6 channels to display
			Pause instant time reading of values
			Push data forward two hours ago
			Push data forward one hour ago
			Move data back one hour
			Move data back two hours
			Download the current trend chart screen, the file type is .png

Code	Name	Function	
2	Trend chart display	Click any position in the picture to display the positioning line at that position and view the current data instantly.	
3	Standard line	Channel selection	You can select one of the 6 displayed channels as a numerical reference
		Numeric setting	Set the position of the horizontal standard line. The value must be within the range of the channel.
4	Channel content	Show	Check to display the trend chart status of the channel
		Name	Channel name, display only
		Color	Channel line color, you can change the color yourself
		Line width	Channel line width, display line diameter can be changed by yourself
		Range minimum	The minimum value displayed on the Y-axis of the channel
		Range maximum	The maximum value displayed on the Y-axis of the channel
		Maximum value	Among the values currently displayed on this channel, the largest value in the past/current
		Maximum occurrence time	Display the current time when the maximum value occurs
		Minimum value	Among the values currently displayed on this channel, the previous/current minimum value
		Minimum occurrence time	Display the current time when the minimum value occurs

4-13-2 Historical trend chart



Code	Name	Function
1	Trend chart display range	Daily trend chart/Weekly trend chart/Monthly trend chart

Code	Name	Function	
2	Menu		Select the trend chart range to view, such as: daily trend/monthly trend/custom range
			Push trend chart data forward and backward
			Move trend chart data backward
			Shorten the time before and after the trend chart
			Extend the time before and after the trend chart
			Undo previous step
			Repeat next step
			Download the current trend chart screen, the file type is .png
3	Trend chart display	Click any position in the picture to display the positioning line at that position and view the current data instantly.	
4	Standard line	Channel selection	You can select one of the 6 displayed channels as a numerical reference
		Numeric setting	Set the position of the horizontal standard line. The value must be within the range of the channel.
5	Channel content	Show	Check to display the trend chart status of the channel
		Name	Channel name, display only
		Color	Channel line color, you can change the color yourself
		Line width	Channel line width, display line diameter can be changed by yourself
		Range minimum	The minimum value displayed on the Y-axis of the channel
		Range maximum	The maximum value displayed on the Y-axis of the channel
		Maximum value	Among the values currently displayed on this channel, the largest value in the past/current
		Maximum occurrence time	Display the current time when the maximum value occurs
		Minimum value	Among the values currently displayed on this channel, the previous/current minimum value
		Minimum occurrence time	Display the current time when the minimum value occurs

4-13-3 Event record



Code	Name	Function	
1	No.	Number of events, up to 100 latest alarms can be recorded	
	Trigger time	Record the time when the event occurred	
	Channel	The channel corresponding to the event	
	Numerical value	The corresponding value of the trigger condition	
	Type	Types of conditions that trigger alerts	
	End Time	Recording events returns to the current time	
2	Content	Blue letter	The alert has been cleared
		Red letter	Alarm is occurring

PART 5.Modbus Table

5-1 Analog Output (0x03、0x06、0x10)

Function 03 to Read/ Function 06、10 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x0000	400001	Device model First word and second word	INT16	R	Response: 0xAABB,AA=2,BB=1
0x0001	400002	Device model The third and fourth word	INT16	R	Response: 0xAABB,AA=4,BB=3
0x0002	400003	Device model The fifth and sixth word	INT16	R	Response: 0xAABB,AA=6,BB=5
0x0003	400004	Device major version	INT16	R	
0x0004	400005	RS485 station number	INT16	R/W	
0x0005	400006	RS485 transmission rate	INT16	R/W	9600 = 0 19200 = 1 38400 = 2 57600 = 3 115200 = 4
0x0006	400007	RS485 stop bit	INT16	R/W	One = 1 Two = 2
0x0007	400008	RS485 parity check	INT16	R/W	None = 0 Even = 1 Odd = 2
0x0008	400009	RS485 data bits	INT16	R/W	
0x0009	400010	Number of channels	INT16	R/W	
0x000A	400011	COM1	INT16	R/W	
0x000B	400012	COM2	INT16	R/W	
0x000C	400013	Reset	INT16	R/W	
0x000F	400016	Device IP1 address	INT16	R/W	Internet protocol application
0x0010	400017	Device IP2 address	INT16	R/W	
0x0011	400018	Device IP3 address	INT16	R/W	
0x0012	400019	Device IP4 address	INT16	R/W	
0x0013	400020	Device Mask1 address	INT16	R/W	
0x0014	400021	Device Mask2 address	INT16	R/W	
0x0015	400022	Device Mask3 address	INT16	R/W	
0x0016	400023	Device Mask4 address	INT16	R/W	
0x0017	400024	Device Gateway1 address	INT16	R/W	
0x0018	400025	Device Gateway2 address	INT16	R/W	
0x0019	400026	Device Gateway3 address	INT16	R/W	
0x001A	400027	Device Gateway4 address	INT16	R/W	

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x001B	400028	Device Mac1 address	INT16	R/W	
0x001C	400029	Device Mac2 address	INT16	R/W	
0x001D	400030	Device Mac3 address	INT16	R/W	
0x001E	400031	Device Mac4 address	INT16	R/W	
0x001F	400032	Device Mac5 address	INT16	R/W	
0x0020	400033	Device Mac6 address	INT16	R/W	
0x0035	400054	Upload interval	INT16	R/W	
0x0036	400055	Upload Port bit	INT16	R/W	
0x0037	400056	Show hide Source button	INT16	R/W	
0x0038	400057	System time - year	INT16	R/W	
0x0039	400058	System time - month	INT16	R/W	
0x003A	400059	System time - day	INT16	R/W	
0x003B	400060	System time-hour	INT16	R/W	
0x003C	400061	System time-minutes	INT16	R/W	
0x003D	400062	System time - seconds	INT16	R/W	
0x003E	400063	password (char 1~2)	INT16	R/W	
0x003F	400064	password (char 3~4)	INT16	R/W	
0x0040	400065	Logging interval	INT16	R/W	
0x0041	400066	Screen sleep	INT16	R/W	
0x0042	400067	Modified status	INT16	R/W	
0x0043	400068	Main screen refresh	INT16	R/W	
0x0100	400257	Channel name(1st word)	INT16	R/W	Send: 0x0102, 01=channel;02=address Correspond First channel name (3rd character) Ex.Send: 0x0202, 02=channel; 02=address Correspond Second channel name (3rd character)
0x0101	400258	Channel name (2nd word)	INT16	R/W	
0x0102	400259	Channel name (3rd word)	INT16	R/W	
0x0103	400260	Channel name(4th word)	INT16	R/W	
0x0104	400261	Channel name(5th word)	INT16	R/W	
0x0105	400262	Channel name (6th word)	INT16	R/W	
0x0106	400263	Channel name (7th word)	INT16	R/W	
0x0107	400264	Channel name (8th word)	INT16	R/W	
0x0108	400265	Channel name (9th word)	INT16	R/W	
0x0109	400266	Channel name (10th word)	INT16	R/W	
0x010A	400267	Channel name (11th word)	INT16	R/W	
0x010B	400268	Channel name (12th word)	INT16	R/W	
0x010C	400269	Channel name (13th word)	INT16	R/W	
0x010D	400270	Channel name (14th word)	INT16	R/W	
0x010E	400271	Channel name (15th word)	INT16	R/W	
0x010F	400272	Channel name (16th word)	INT16	R/W	

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x0110	400273	Channel unit (1st word)	INT16	R/W	Send: 0x0113, 01=channel; 13=address Correspond First channel unit (4th character) Ex.Send: 0x0213, 02=channel; 13=address Correspond Second channel unit (4th character)
0x0111	400274	Channel unit (2nd word)	INT16	R/W	
0x0112	400275	Channel unit (3rd word)	INT16	R/W	
0x0113	400276	Channel unit (4th word)	INT16	R/W	
0x0114	400277	Channel unit (5th word)	INT16	R/W	
0x0115	400278	Channel unit(6th word)	INT16	R/W	
0x0116	400279	Channel unit (7th word)	INT16	R/W	
0x0117	400280	Channel unit (8th word)	INT16	R/W	
0x0118	400281	Channel unit (9th word)	INT16	R/W	
0x0119	400282	Channel unit (10th word)	INT16	R/W	
0x011A	400283	Channel unit (11th word)	INT16	R/W	
0x011B	400284	Channel unit (12th word)	INT16	R/W	
0x011C	400285	Channel unit (13th word)	INT16	R/W	
0x011D	400286	Channel unit (14th word)	INT16	R/W	
0x011E	400287	Channel unit (15th word)	INT16	R/W	
0x011F	400288	Channel unit (16th word)	INT16	R/W	
0x0120	400289	Channel signal	INT16	R/W	AI = 1 DI = 2 DO = 3
0x0121	400290	Channel station number	INT16	R/W	
0x0122	400291	Channel location	INT16	R/W	
0x0123	400292	Channel type (Channel interface TCP/RTU)	INT16	R/W	INT16 = 0 INT32 = 1 UINT16 = 2 UINT32 = 3 Float = 4
0x0124	400293	Channel gain value	INT16	R/W	
0x0125	400294	Channel offset	INT16	R/W	
0x0126	400295	Channel Function	INT16	R/W	Function 3 = 4xxxxx Function 4= 3xxxxx
0x0127	400296	Channel high and low bits/byte	INT16	R/W	0xAABB,0=low, 1=high AA=bits, BB=bytes
0x0128	400297	Channel type (Channel interface Local)	INT16	R/W	4~20mA = 0 0~20mA = 1 1~5V = 2 0~5V = 3 mV = 4 PT100 = 5 K Type = 6

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x0129	400298	Channel interface	INT16	R/W	RTU = 0 TCP = 1 Local = 2
0x012A	400299	Channel update frequency	INT16	R/W	Unit：ms
0x012B	400300	Channel IP1, IP2 (Channel interface TCP)	INT16	R/W	0xAABB AA=IP1,BB=IP2
0x012C	400301	Channel IP3, IP4 (Channel interface TCP)	INT16	R/W	0xAABB AA=IP3,BB=IP4
0x0130	400305	AI channel opening and closing	INT16	R/W	ON = 1 OFF = 0
0x0131	400306	AI decimal point	INT16	R/W	
0x0132	400307	AI original range maximum	INT16	R/W	Value/10
0x0133	400308	AI original range minimum	INT16	R/W	Value/10
0x0134	400309	AI corresponding range maximum value	INT16	R/W	Value/10
0x0135	400310	Minimum value of AI corresponding range	INT16	R/W	Value/10
0x0136	400311	AI gain value	INT16	R/W	Value/10000
0x0137	400312	AI offset	INT16	R/W	Value/10
0x0138	400313	AI high high point alarm value	INT16	R/W	Value/10
0x0139	400314	AI high point alarm value	INT16	R/W	Value/10
0x013A	400315	AI low point alarm value	INT16	R/W	Value/10
0x013B	400316	AI low low point alarm value	INT16	R/W	Value/10
0x013C	400317	AI fault high point alarm value	INT16	R/W	Value/10
0x013D	400318	AI fault low alarm value	INT16	R/W	Value/10
0x013E	400319	AI alert delay time	INT16	R/W	Unit：S
0x013F	400320	AI alarm insensitivity zone	INT16	R/W	
0x0140	400321	AI high high point alarm switch	INT16	R/W	NONE = 0 CTL(control) = 1 ALT(alert)=2
0x0141	400322	AI high point alarm switch	INT16	R/W	
0x0142	400323	AI low point alarm switch	INT16	R/W	
0x0143	400324	AI low low point alarm switch	INT16	R/W	
0x0144	400325	AI fault high point alarm switch	INT16	R/W	
0x0145	400326	AI fault low point alarm switch	INT16	R/W	
0x0146	400327	AI High High Point Alert Relay	INT16	R/W	Display control channel
0x0147	400328	AI High Point Alert Relay	INT16	R/W	
0x0148	400329	AI Low Point Alert Relay	INT16	R/W	
0x0149	400330	AI Low Low Point Alert Relay	INT16	R/W	
0x014A	400331	AI LowCut	INT16	R/W	Value/10, limit the minimum value
0x014B	400332	AI Control control mode	INT16	R/W	
0x014C	400333	AI Control Output	INT16	R/W	
0x014D	400334	AI Control target value	INT16	R/W	

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x014E	400335	AI Control Parameter-P	INT16	R/W	
0x014F	400336	AI Control Parameter -I	INT16	R/W	
0x0150	400337	AI Control Parameter -D	INT16	R/W	
0x0151	400338	AI AO control parameter mode	INT16	R/W	
0x0152	400339	AI AO control parameters Corresponding range	INT16	R/W	
0x0153	400340	AI AO control parameters Maximum value	INT16	R/W	
0x0154	400341	AI AO control parameters Minimum value	INT16	R/W	
0x0155	400342	AI Relay control parameters Relay↑	INT16	R/W	
0x0156	400343	AI Relay control parameters Relay↓	INT16	R/W	
0x0157	400344	AI Relay control parameters Control cycle	INT16	R/W	
0x0158	400345	AI Relay control parameters Shortest switching period	INT16	R/W	
0x0170	400369	DI channel opening and closing	INT16	R/W	ON = 1 OFF = 0
0x0171	400370	DI delay time	INT16	R/W	
0x0172	400371	DI relay duration	INT16	R/W	
0x0173	400372	DI reverse	INT16	R/W	ON = 1 OFF = 0
0x0174	400373	DI alarm switch	INT16	R/W	NONE = 0 CTL(control) = 1 ALT(alert)= 2
0x0175	400374	DI alarm Relay	INT16	R/W	
0x0190	400401	DO channel switch	INT16	R/W	
0x0191	400402	DO independent control	INT16	R/W	ON = 1 OFF = 0
0x0192	400403	DO startup record	INT16	R/W	ON = 1 OFF = 0
0x0193	400404	DO reverse	INT16	R/W	ON = 1 OFF = 0
0x0194	400405	DO manual option	INT16	R/W	
0x0195	400406	DO cycle control	INT16	R/W	ON = 1 OFF = 0
0x0196	400407	DO cycle control start time	INT16	R/W	
0x0197	400408	DO cycle control off time	INT16	R/W	

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x0198	400409	DO timeout alert	INT16	R/W	
0x0199	400410	DO manual start time	INT16	R/W	
0x019A	400411	DO chain control Relay	INT16	R/W	
0x019B	400412	DO chain control Delayed start time	INT16	R/W	
0x019C	400413	DO chain control Delay closing time	INT16	R/W	
0x019D	400414	DO time period control main switch	INT16	R/W	
0x019E	400415	DO period control First section switch	INT16	R/W	ON = 1 OFF = 0
0x019F	400416	DO period control Second section switch	INT16	R/W	ON = 1 OFF = 0
0x01A0	400417	DO period control Third section switch	INT16	R/W	ON = 1 OFF = 0
0x01A1	400418	DO period control Fourth section switch	INT16	R/W	ON = 1 OFF = 0
0x01A2	400419	DO period control Fifth stage switch	INT16	R/W	ON = 1 OFF = 0
0x01A3	400420	DO period control First start time (hours)	INT16	R/W	
0x01A4	400421	DO period control Second start time (hours)	INT16	R/W	
0x01A5	400422	DO period control Third start time (hours)	INT16	R/W	
0x01A6	400423	DO period control Fourth start time (hours)	INT16	R/W	
0x01A7	400424	DO period control Fifth start time (hours)	INT16	R/W	
0x01A8	400425	DO period control First shutdown time (hours)	INT16	R/W	
0x01A9	400426	DO period control Second shutdown time (hours)	INT16	R/W	
0x01AA	400427	DO period control Third shutdown time (hours)	INT16	R/W	
0x01AB	400428	DO period control Fourth shutdown time (hours)	INT16	R/W	
0x01AC	400429	DO period control Fifth shutdown time (hours)	INT16	R/W	

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x01AD	400430	DO memory open value	INT16	R/W	
0x01AE	400431	DO memory close value	INT16	R/W	
0x01AF	400432	DO period control First opening time (minutes)	INT16	R/W	
0x01B0	400433	DO period control Second opening time(minutes)	INT16	R/W	
0x01B1	400434	DO period control Third opening time (minutes)	INT16	R/W	
0x01B2	400435	DO period control Fourth opening time (minutes)	INT16	R/W	
0x01B3	400436	DO period control Fifth opening time (minutes)	INT16	R/W	
0x01B4	400437	DO period control First shutdown time(minutes)	INT16	R/W	
0x01B5	400438	DO period control Second shutdown time(minutes)	INT16	R/W	
0x01B6	400439	DO period control Third shutdown time(minutes)	INT16	R/W	
0x01B7	400440	DO period control Fourth shutdown time(minutes)	INT16	R/W	
0x01B8	400441	DO period control Fifth shutdown time(minutes)	INT16	R/W	
0x01B9	400442	DO period control First period of week switch	INT16	R/W	ON = 1 OFF = 0
0x01BA	400443	DO period control Second period of week switch	INT16	R/W	ON = 1 OFF = 0
0x01BB	400444	DO period control Third period of week switch	INT16	R/W	ON = 1 OFF = 0
0x01BC	400445	DO period control Fourth period of week switch	INT16	R/W	ON = 1 OFF = 0
0x01BD	400446	DO period control Fifth period of week switch	INT16	R/W	ON = 1 OFF = 0
0x01D0	400465	AI high high point alarm value (Float low word)	FLOAT	R/W	
0x01D1	400466	AI high high point alarm value (Float high word)	FLOAT	R/W	
0x01D2	400467	AI high alarm value (Float low word)	FLOAT	R/W	
0x01D3	400468	AI high alarm value (Float high word)	FLOAT	R/W	

Function 03 to Read/ Function 06、16 to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x01D4	400469	AI low alarm value (Float low word)	FLOAT	R/W	
0x01D5	400470	AI low alarm value (Float high word)	FLOAT	R/W	
0x01D6	400471	AI low low alarm value (Float low word)	FLOAT	R/W	
0x01D7	400472	AI low low alarm value (Float high word)	FLOAT	R/W	
0x01D8	400473	AI fault high point alarm value (Float low word)	FLOAT	R/W	
0x01D9	400474	AI fault high point alarm value (Float high word)	FLOAT	R/W	
0x01DA	400475	AI fault low alarm value (Float low word)	FLOAT	R/W	
0x01DB	400476	AI fault low alarm value (Float high word)	FLOAT	R/W	

5-1-1 INT16 Read instant value (Function 03)

Example: Read the first channel signal, and the signal source is DO.

Content	Equipment station number	Function	Starting address		Number of data (Word)		16 CRC code	
Host command	01	03	01	20	00	01	84	3C
Number of bytes	1	1	2		2		2	

Content	Equipment station number	Function	Data bytes	Device data		16 CRC code	
Reply from machine	01	03	02	00	03	F8	45
Number of bytes	1	1	1	2		2	

5-1-2 INT16 instant time numerical description (Function 03)

In the slave reply, you can see that the "Device Data" is "00 03".
Convert 0X0003 (hex) to decimal to "3", and after corresponding to the Modbus table, the channel signal of the first channel is "DO" digital output.

5-1-3 Float Read instant value (Function 03)

Example: Read the AI high point alarm value of the first channel, and the alarm value is "26".

Content	Equipment station number	Function	Starting address		Number of data (Word)		16 CRC code	
Host command	01	03	01	D2	00	02	65	CE
Number of bytes	1	1	2		2		2	

Content	Equipment station number	Function	Data bytes	Device data			
Reply from machine	01	03	04	00	00	41	D0
Number of bytes	1	1	1	2			

16 CRC code	
CB	FF
2	

5-1-4 Float instant time numerical description (Function 03)

In the slave reply, you can see that the "device data" is "00 00 41 D0".
Switch the low word "41 D0" to the front and the high word "00 00" to the back, then it will be "41 D0 00 00", and then convert it to Float to 26, and the alarm value = 26.
Please refer to the online conversion tool: https://gregstoll.com/~gregstoll/floattohex/

5-2 Analog Input (0x04)

Function 04 to Read					
Address	Setting Value	Item	Type	R/W	Remarks
0x0000	300001	CH1 instant time value	INT16	R	
0x0001	300002	CH2 instant time value	INT16	R	
. . .	. . .	. . .	. . .	. . .	
0x0076	300119	CH119 instant time value	INT16	R	
0x0077	300120	CH120 instant time value	INT16	R	
0x0078	300121	SMS status	INT16	R	
0x0079	300122	USB status	INT16	R	
0x007A	300123	Alarm status	INT16	R	
0x007B	300124	Modified status	INT16	R	
0x0100	300257	CH1 instant time value (Float low word)	FLOAT	R	
0x0101	300258	CH1 instant time value (Float high word)	FLOAT	R	
. . .	. . .	. . .	. . .	. . .	
0x01EE	300495	CH120 instant time value (Float low word)	FLOAT	R	
0x01EF	300496	CH120 instant time value (Float high word)	FLOAT	R	
0x0200	300513	Is CH1 Read?	INT16	R	Read = 1
. . .	. . .	. . .	. . .	. . .	
0x0277	300632	Is CH120 Read?	INT16	R	

5-2-1 INT16 Read instant value (Function 04)

Example: Read "Channel one instant time value" as 260.

Content	Equipment station number	Function	Starting address		Number of data (Word)		16 CRC code	
Host command	01	04	00	00	00	01	31	CA
Number of bytes	1	1	2		2		2	

Content	Equipment station number	Function	Data bytes	Device data		16 CRC code	
Reply from machine	01	04	02	01	04	B9	63
Number of bytes	1	1	1	2		2	

5-2-2 INT16 instant time numerical description (Function 04)

In the slave reply, you can see that the "Device Data" is "01 04".

Convert 0X0104 (hex) to decimal to "260", and get the real-time value of CH1 = 260.

5-2-3 Float Read instant value (Function 04)

Example: Read "Channel one instant time value" as 260.

Content	Equipment station number	Function	Starting address		Number of data (Word)		16 CRC code	
Host command	01	04	01	00	00	02	70	37
Number of bytes	1	1	2		2		2	

Content	Equipment station number	Function	Data bytes	Device data			
Reply from machine	01	04	04	01	21	41	D0
Number of bytes	1	1	1	2			

16 CRC code	
9B	BE
2	

5-2-4 Float instant time numerical description (Function 04)

In the slave reply, you can see that the "device data" is "01 21 41 D0".
Switch the low word "41 D0" to the front, and switch the high word "01 21" to the back, then it will be "41 D0 01 21". After that, it will be converted to Float to 260, and the real-time value of CH1 = 260.
Please refer to the online conversion tool: https://gregstoll.com/~gregstoll/floattohex/

5-3 Digital Output (0x01、0x05、0x0F)

Function 01 to Read/ Function 05、0F to Write					
Address	Setting Value	Item	Type	R/W	Remarks
0x0000	000001	CH1 instant time value	INT16	R/W	Channel signal must be set to "DO"
0x0001	000002	CH2 instant time value	INT16	R/W	
.	.	.	.	.	
.	.	.	.	.	
.	.	.	.	.	
0x0076	000119	CH119 instant time value	INT16	R/W	
0x0077	000120	CH120 instant time value	INT16	R/W	

5-3-1 Write instructions (Function 05)

Example: Let "Channel 2 DO" enabled.

Content	Equipment station number	Function	Starting address		Write value: FF 00 enabled 00 00 Close		16 CRC code	
Host command	01	05	00	01	FF	00	DD	FA
Number of bytes	1	1	2		2		2	

Content	Equipment station number	Function	Starting address		Device data		16 CRC code	
Reply from machine	01	05	00	01	FF	00	DD	FA
Number of bytes	1	1	1		2		2	

PART 6.Troubleshooting

Exception Category	Cause of issue	Solution
READ appears on the screen	Communication line fell off	● Follow the 1-6 terminal strip connection instructions to check whether the communication wiring is indeed connected.
	Equipment station number conflict	● According to the 4-3-2-5 data source, check whether the station numbers of each channel are repeated. If there are duplicates, please stagger the station numbers.
I6-WEB cannot connect	Ethernet line abnormality	● After the device is connected, please use a computer to check the Ethernet connection status. If it is not connected, it is most likely that the connection line is abnormal.
The time and date are incorrect	Time record abnormality	● Please use the device WEB or screen to enter the time setting, reset the time and date and then cut off the power for about ten minutes. If the time deviation is still too large after powering on again, the internal battery of the device is exhausted and you need to contact our company for assistance. deal with.
SIM card cannot be read	Card not opened internally	● Please confirm whether the SIM card PIN code has been released. If it has not been released, use your mobile phone to insert the SIM card to unlock it.
SMS not sent	SIM card data is full	● Please reproduce the SMS usage number
	Phone settings error	● Go to the phone book to confirm whether the phone number entered is correct
Power outage without alarm	"Power outage SMS alert" is unchecked	● Please go to SMS settings and check to enable power outage alert
	The power of the SMS module is not turned on	● Please confirm whether the power switch of the SMS module is turned on

Revision history

Version	Revision Date	Revision Description	Maintenance Personnel
V1.15	2022/08/12	Added WEB operation process	denny
V2.00	2024/04/18	Update cover and page label styles, Add Modbus command	bin

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