This document uses Gmail to send emails using the Monigear NTHM (Network temperature and humidity transmitter) as an example to demonstrate the email notification function of the Monigear device and introduce the concepts of alarm events at the Monigear device supervisory points.

If you use another email service, the setup process is similar.

1 Example of a email notification

1.1 Gmail sets up SMTP function

By default, Gmail enables the SMTP function (other types of mailboxes may need to manually enable the SMTP function, you can search for relevant tutorials online), and you need to add an **App password** for the SMTP function.

1) Click on Google apps, select Account, and click Security to enable two-step verification

Google Account Q Search	Google Account		0 💷 💿
 Home Personal info Data & privacy 	You have security tips Security tips found in the Security Checkup	Account Di	A Mini
Security	Review security tips	YouTube Ge	mini Maps
Payments & subscriptions	Recent security activity	G	31 6=
(i) About	Suspicious activity detected	Search Cale	endar News
	Review security activity	Photos M	leet Translate
	How you sign in to Google Make sure you can always access your Google Account by keepin	ng this information up to date	
	② 2-Step Verification	On since Jun 26	>
	Password	Last changed Aug 31, 2024	>

2) After enabling 2-Step Verification, enter App in the search box above and select App passwords

← → C 🖙 myaccou	nt.google.com/security?gar=Wzl4MV0&hl=en&utm_source=OGB&utm_medium=act	\$a ☆ Ď @ ;
Google Account	Q App X Google Account results	◎ Ⅲ ●
Home	Figure Connections to third-party apps & services Security	
Personal info	App passwords Security	it secure
Data & privacy	Web & App Activity	
Security	Help Center articles	
People & sharing	Sign in with app passwords	****
Payments & subscription	Manage app info from your devices	
(i) About	Access & control activity in your account	
	Recent security activity	
	Signing in with 2-Step Verification was turned on 4:02 PM	>
	Sign-in step added: Phone number 4:02 PM	>
	New sign-in on Windows 3:37 PM	>
	Review security activity (5)	

3) Enter your login password to confirm your identity

G	
Hi mlang	To continue, first verify it's you
m r@gmail.com -	Enter your password
	Forgot password? Next

4) Enter the name of the application, e.g. SMTP (the name can be customized), and click Create

Google Account



p password: rvices that d	help you sign into yo on't support modern	our Google Acco security standa	unt on older ap rds.	ops and	
p password	are less secure thar	using up-to-da	te apps and se	rvices	
at use mode	n security standards	. Before you cre	ate an app pas	sword,	
u should che	ck to see if your app	needs this in or	der to sign in.		
ammore					
You don't hav	e any app passwords.				
To create a n	w app specific passwo	rd, type a name fo	r it below		
App name					
SMTP					

5) Copy the password down for later configuration

Note: After this page is closed, you cannot get the password again, you can only delete and recreate it.

Google Account		G	2	m
← App pass	swords			
App passwords help services that don't App passwords are that use modern se	Generated app password Your app password for your device			
you should check to Learn more	russ			
Your app passw SMTP To create a new a App name	How to use it Go to the settings for your Google Account in the application or device you are trying to set up. Replace your password with the 16-character password shown above. Just like your normal password, this app password grants complete access to your Google Account. You won't need to remember it, so don't write it down or share it with anyone.			
	Create			

1.2 Configure email notifications for the device

Connect to the device using the network configuration tool and click **Email notification** configure. Enable email notifications, enter the *smtp.gmail.com* on the SMTP server, port 465, enter the email name for the sending user name, enter the SMTP App password obtained above for the sending password, enable SASL, enable SMTP SSL, enable Force SSL peer verify, and the ca-bundle is a root certificate bundle provided by your trusted organization, here using the <u>Mozilla</u> <u>CA certificate store</u>. Finally, fill in the recipient email address, which is separated by a comma. For more information about each configuration item, refer to <u>Email notification settings</u>.

Configure NTHM2_19 via network			×			
Quit Use current certificates Use previous certificates Passwo	ord Oiscon	nect Update Certificates Update password				
Device configure IO state Technical suppor	t information					
Detect Blink Save Reboot Sys reboot	Read configure Apply changes					
	Property	Value				
Basic configure	Enable Email notification	Yes	-			
IOT center1 configure	Max Emails sent per day(0 no limit)	500				
IOT center2 configure	Send email interval(minutes)	1				
GNC center configure	Enable daily Email report	No	*			
SNMP configure	Send daily email hour	10				
Email notification configure	SMTP server	smtp.gmail.com				
	SMTP port	465				
	Sender username	🦈 🖉 @gmail.com				
	Sender password	russvdob				
	Enable SASL	Yes	~			
	Enable SSL for SMTP	Yes	*			
	Force SSL peer verify	Yes	*			
	ca-bundle	ca-bundle,file size: 222971, date: 06-26-2025 15:53:39				
	Proxy URL					
	Proxy authenticate user					
	Proxy authenticate password					
	Recipients	. @outlook.com,i @gmail.com				

After the settings are completed, click Apply Changes -> Save -> Reboot to take effect.



1.3 Send a test email

The process of sending an email involves multiple links (whether the device configuration is correct, whether the network is unblocked, whether the mail server is available, etc.), and any error in any link may lead to the failure of email delivery. Send a test email to display detailed debugging information when the email fails, troubleshoot the cause of the failure, and correct the configuration.

Email test	Click the button on the right to test sending an email.	
------------	---	--

You can modify the content and title of the test email, and then click **send** to wait for the email to be sent.

Before doing an email te has been rebooted, beca last saved settings are us	est, please make sure that the email-related settings have been sure the email-related settings are only loaded once when the d and to send emails.	saved and the device levice is started. The
Email content		
This is a test email. To avoid being treated as spa	m, you may need to increase the length of the email, but the maximum length is 256	5 bytes.
Subject This is a test email from	m a monigear device	Sen
Send result	Please wait ×	
	Sending email, wait 2 minutes at most	
	2%	

If the configuration is correct, a *Success* message will be displayed after the message is sent, as shown in the following figure:

Send result			
Success			

Check the test email you received in your mailbox:

≡	M Gr	mail	Q Searc	ch mail			莊	0	(\$)	+		m
1	÷	• () H	Ľ	Ð :			8 0	f 52 ≺	>	1000	•	31
		This is a test	t email fi	rom a n	nonigear de	vice Inbox ×				8	Ø	
☆ ©	m	to me 👻	nail.com			Tue, Jul 1, 4:17 PM (17 ho	urs ago)	☆	•	ί,	1	Ø
⊳		To avoid being treat	ed as spam, y	ou may nee	ed to increase the len	gth of the email, but the n	naximun	n length is	s 256 byt	tes.		
D												
~												
+		(r Reply	→ Forwa	rd) (@)							+

If the email is sent successfully, but you cannot receive the email, see Spam handling.

Example of sending failure:

Proxy-Connection: Keep-Alive	ł
[HEADER_IN]HTTP/1.1 200 Connection established	
[HEADER_IN]	
TEXT]CONNECT phase completed	
TEXTJCONNECT tunnel established, response 200	
TEXT]TLSv1.3 (OUT), TLS handshake, Client hello (1):	
[TEXT] CAfile: /opt/gnc/etc/ca-bundle.pem	
TEXT] CApath: /etc/ssl/certs	
TEXT]OpenSSL SSL_connect: SSL_ERROR_SYSCALL in connection to smtp.gmail.com:465	
TEXT]Closing connection	

If you encounter any problems, you can send a screenshot of the configuration and the failure debugging information to our technical support technicians for help.

1.4 Statistics and information debugging information

On the Technical support information page of the network configuration tool, select **Run** state and click Refresh to view the device running status and statistics. View the statistics of sent emails, in which email send is the number of emails that have been successfully sent, send fail has been sent failures, and send today is the number of times that have been successfully sent.

On the Technical support information page of the network configuration tool, select **Run** state and click **Refresh** to view the device running status and statistics. View email-related statistics.

Email send is the number of successful sents, send fail is the number of failed sends, and send today is the number of successful sends. Last send email error message is the reason for the most recent failed email.

Device configure IO state Technical support information Script in deivce



If the email is sent successfully (the number of email sends increases) but the email cannot be received, see <u>Spam handling</u>.

2 Alarm settings for supervisory points(SP)

When an alarm event is triggered when the supervisory point of the device changes to the alarm threshold, the device sends an alarm email to the user. Each supervisory point of the Monigear device can set alarms separately, support delayed alarms, and provide up to 3 levels of alarms, usually level 3 is an emergency alarm, level 2 is an important alarm, and level 1 is a normal alarm. For a basic introduction to supervisory points, please refer to <u>Appendix A</u>

Example of a temperature alarm email:

	M Gm	nail	Q Sea	arch m	ail			큪	0	(3)	+		m
1	÷	₽ () Ū	Ľ	Ð	:			1 of	15 <	>		•	BI
		Temperatur	e alarn	n leve	el 2 dev	vice NTHM2	19 Inbox ×				æ	Z	
☆	m	to me ▼	nail.com				5:08 PM (0 minu	tes ago)	☆	<u>ن</u>	5	:	Ø
⊳	Temperature current value 87.0, enter alarm level 2, Message: Temperature high alarm.												
۵		Time:Mon Jun 30 17	7:08:06 202	5									
~													

Use the network configuration tool, connect to the device, click **IO state-> IO configure**, click **Read all**, select a supervisory point, click Modify, modify the supervisory point configuration in the pop-up window, and then select other supervisory points to continue the

configuration (see below for the alarm configuration description of each type of supervisory point), and after the configuration is complete, click **Apply changes** to apply the modification. For details about the configuration items of the monitoring points, see <u>Appendix B</u>.

Device config Modules Query	gure IO state	Technical sup	port inf	ormation values N	Aodule co	nfigure IO configure	
Address	Running	Name	Re	ad all M	odify App	oly changes Save SP list	
0	Running	Device	A				
				N	ame	Key	Value
				AIO1	4	SP Name	Temperature
				AIO2		SP Enabled	Yes
						Enable Control	No
						Enable Offline Save	No
						Value Precision	0.0
						Value Unit	F
						Report delta threshold(0 disable)	0
			а			Report Interval	0
						No timely send data	No
						Warn Type	Warn immediately
						Warn delay Time	0
						Hysteresis band	0

2.1 AIO alarm settings

1) Alarm threshold

You can enable 1, 2, and 3 alarms, and set the upper and lower thresholds for each level. ① Example of temperature alarm setting (Fahrenheit):

Property	Value	2
Warn Type	Warn after delay a period	-
Warn delay Time	30	
Hysteresis band	0	
Level 1 Warning Enable	Yes	
Level 1 Warning High Threshold	82	
Level 1 Warning Low Threshold	64	
Level 2 Warning Enable	Yes	-
Level 2 Warning High Threshold	86	1
Level 2 Warning Low Threshold	60	
Level 3 Warning Enable	Yes	-
Level 3 Warning High Threshold	90	
Level 3 Warning Low Threshold	57	

② Example of temperature alarm setting (Centigrade):

Property	Value	100
Warn Type	Warn immediately	-
Warn delay Time	30	
Hysteresis band	0	
Level 1 Warning Enable	Yes	•
Level 1 Warning High Threshold	28	
Level 1 Warning Low Threshold	18	212
Level 2 Warning Enable	Yes	-
Level 2 Warning High Threshold	30	
Level 2 Warning Low Threshold	16	
Level 3 Warning Enable	Yes	
Level 3 Warning High Threshold	32	
Level 3 Warning Low Threshold	14	-

2) Delay alarm

As shown in the following figure, an alarm is triggered only after the temperature reaches the alarm threshold and is maintained for 30 seconds.

Warn Type	Warn after delay a period	-
Warn delay Time	30	

- 3) Hysteresis band
- ① Fahrenheit example:

When the temperature value rises to 82F, a Level 1 alarm will be triggered, and when the temperature value collected by the sensor fluctuates around 82F, it will cause frequent alarms to be triggered and the alarm will be extinguished, and the hysteresis band shown in the following figure will only be extinguished when the temperature drops below 80F.

Hysteresis band	2	
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② Centigrade example:

When the temperature value rises to 28° C, a Level 1 alarm will be triggered, and when the temperature value collected by the sensor fluctuates around 28° C, it will cause frequent alarms and alarm cancellations, and the hysteresis band shown in the following figure will only be extinguished when the temperature drops below 27° C.

Hysteresis band	1	
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4) Alarm message

You can set the upper and lower limits of the 1/2/3 alarm level respectively, and describe the specific content of the alarm, the actions that need to be performed, and the installation location.

To avoid mail delivery failures, do not use special characters.

Property	Value	â
Level1 high warning message	Temperature high warning	
Level1 low warning message	Temperature low warning	
Level2 high alarm message	Temperature high alarm	
Level2 low alarm message	Temperature low alarm	
Level3 high alarm message	Temperature very high alarm	0
Level3 low alarm message	Temperature very low alarm	Ų

2.2 DIO alarm settings

As shown in the figure below, the DIO supervisory point corresponding to the door magnetic switch sensor is connected, and when the value is 1, it means that the door is open, triggering a level 3 alarm.

Property	Value	
SP Name	Door magnetic	
SP Enabled	Yes	~
Enable Control	No	-
Save data when offline	No	~
Value for warn	1	-
Warn level	3	
Warn method	Warn immediately	-
Delay warn time(sec)	0	
Enable lock a short time	No	-
Value for lock	0	~
Lock time(sec)	0	
D0 describe	Close	
D1 describe	Open	
Alarm message	Illegal intrusion through the back door	

State locked

For security supervisory points, such as when using infrared probes for illegal intrusion detection, the sensor status may be switched frequently, and the status lock may be set to avoid frequent alarms and alarm canceling by the device. As shown in the figure below, after the sensor status value changes to 1, the status value of the device remains 1 for 60 seconds, regardless of

how the sensor signal changes.

Enable lock a short time	Yes	-
Value for lock	1	-
Lock time(sec)	60	

Delay alarms and alarm messages are set up in the same way as AIO.

3 Email notification settings

3.1 Maximum number of sends per day

Sending too many emails in a single day may result in the sending email account being banned by the service provider. Limiting the maximum number of devices sent per day is necessary, especially if multiple Monigear devices are configured to use the same mailbox to send alert emails.

Max Emails sent per day(0 no limit)	500
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Note that the maximum number of sends on the device is a weak limit, and the number of sends on the day will be recalculated after the device is restarted hot/cold. In addition, if an email fails to be sent, the number of sent items is not counted.

3. 2 Send email Interval (Send email mode description)

Sending too quickly in a short period of time may also result in the sending email account being banned by the service provider. The interval between sending emails in two consecutive e-mails can be set at least 1 minute and up to 20 minutes.

Send email interval(minutes)	1
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Monigear devices use a cached queue mode to send messages in order to minimize the number of times they are sent. After the previous email is successfully sent, a new (multiple) alarm event is generated during the waiting period for the sending interval, the event content will be cached, and when the interval time expires, all the cached content to be sent will be merged into one email for sending.

For example, you may receive an email with multiple alarm event information, as shown in the following image

	There are multiple events from device NTHM2_19	Inbox ×			æ	Ø	
m	to me 👻	5:28 PM (4 minutes ago)	☆	٢	¢	ł	
	Temperature current value 90.1, enter alarm level 3, Message: Temperature very hig	h alarm.					
	Time:Mon Jun 30 17:24:02 2025						
	Humidity current value 80, enter alarm level 1, Message:Humidity high warning.						
	Time:Mon Jun 30 17:25:14 2025						

3.3 Repeat alarm

When an alarm is triggered at a supervisory point and the alarm state is entered, an alarm message will be sent once, and after that, if the alarm state is maintained and the alarm is not extinguished, the alarm message will be sent repeatedly, and the alarm message will be sent three times by default with an interval of 20 minutes. If the number of repetitions is set to 0, no repeated alarms will be sent, and the interval can be set to default 20 minutes, you can change it to 60 minutes for example.

Event email repeat send times	3
Repeat event email interval(minutes)	20

Examples of repeat message:

≡	M Gmail	Q Search mail	幸	0 \$	♦ ⅲ	m
1	← €	() A 🖻 🖻 🗄	2 0	f61 < >	-	31
•	Ter	nperature alarm level 2 devi	ce NTHM2_19[Repeat] 🔤	box ×	8 C	
☆ ©	m r to me	@gmail.com	12:04 PM (18 minutes ago)	☆ ☺	<hr/> ← :	Ø
⊳	Temp	perature current value 87.0F, alarm level 2, Mes	sage:Temperature high alarm.			
D	Time	:Tue Jul 1 23:04:12 2025				
~						

Tip: If the alarm description contains the current value and enter alarm level 1/2/3, it indicates that the alarm state is triggered, and only the current value contains the repeated alarm information.

3.4 Exit the alarm notification

When the supervisory point exits the alarm state and returns to normal, an exit alarm message is sent.

	Temperature alarm level 0 device NTHM2_19 Inbox ×					Ø
m	to me 👻	5:10 PM (9 minutes ago)	☆	٢	¢	:
	Temperature current value 78, Exit the alarm state.					
	Time:Tue Jul 1 04:09:56 2025					

3.5 Sent at a timed daily time

Sometimes it is normal for a long time without any alarm events, so it is uncertain whether the device and email functions are normal. Therefore, we set up a function to send an email at a fixed time every day to let you know that the device is working normally.

Using a 24-hour clock, the hours can be set from 0 to 23.

Enable daily Email report	Yes	-
Send daily email hour	18	

Examples of timing messages:

	Jun 30,2025 Daily email from device NTHM2_19 Inbox ×	
m	r. ©gmail.com to me ▼	11:00 AM (0 minutes ago)
	Temperature 87.0F, humidity 74%	
	Time:Mon Jun 30 11:00:00 2025	

When using the scheduled sending function, check the time zone of your region and modify it in the basic settings:

Time zone Asia/Shanghai	
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3.6 Recipient of the message

Multiple email addresses are separated by commas, and the maximum length of the string is 255. Each time a message is sent to multiple mailboxes, the corresponding number of times is accumulated.

Recipients email1@outlook.com,email12@gmail.com,email3@yahoo.co

3.7 Send it to yourself

It is allowed to use only one email account, both as a sender and as a receiver.

SMTP server	smtp.gmail.com	
SMTP port	465	
Sender username	m. 4@gmail.com	
Sender password	russ' [`, vdob	
Enable SASL	Yes	-
Enable SSL for SMTP	Yes	-
Force SSL peer verify	Yes	+
ca-bundle	ca-bundle,file size: 222971, date: 06-26-2025 15:53:39]
Proxy URL		
Proxy authenticate user		
Proxy authenticate password		
Recipients	mi4@gmail.com	

3.8 Use proxy

Example of an HTTP proxy:

Proxy URL	http://192.168.1.80:64682	
Proxy authenticate user		
Proxy authenticate password		

Example of an SOCKS proxy:

Proxy URL	socks://192.168.1.80:64683
Proxy authenticate user	
Proxy authenticate password	

3.9 SMTP non-encrypted port

If you use an SMTP non-encrypted port (the default port number is 25), you do not need to enable SSL and certificate verification.

SMTP server	smtp.163.com
SMTP port	25
Sender username	1@163.com
Sender password	C
Enable SASL	Yes
Enable SSL for SMTP	No
Force SSL peer verify	No

4 Spam handling

Test emails or alarm emails sent by the device may be judged to be spam, and the recipient may not receive email notifications as scheduled. For example, in the following two cases, you can add the email address used to send alarm information to the whitelist in the recipient's mailbox settings.

1) Alert emails may be filtered as spam by the receiver and need to be viewed in the receiver's spam email.

2) The alert email may be judged as spam by the service provider where the recipient's email address is located and you cannot receive the alarm email.

Appendix A- Data Types of acquisition

analog input/outp	put(AIO), enumerat	ion ENUM and strin	ng STRING.	
GD T	Digital	Analogue	enumeration	STRING
SP Type	DIO	AIO	ENUM	STRING
Data type	Bool(0/1)	Float	Int	String
Example	Smoke sensor Motion detector	Temperature voltage	UPS、Generator status	IC card number

The Monigear device represents the status data collected by the front-end sensor in the form of a supervisory point (SP), which is divided into four basic types: digital input/output(DIO), analog input/output(AIO), enumeration ENUM and string STRING.

Monigear devices have certain storage and computing capabilities, and can process the collected raw data on the device side and then report it to the server side, such as converting from raw values to displayed values, triggering alarms based on preset thresholds, executing linkage actions, etc. The following further explains the collected data values and alarm related contents.

1. Original value and displayed value

The raw value of the Monigear device data represents the data directly obtained from the sensor. When users read the device data through the standard communication protocol, they usually only care about the raw value. In some cases, the raw value is not easy to understand (for example, the two example DIOs in the following text have raw values of 1, one for water leak alarm and the other for normal), and it is necessary to combine the sensor information to get a readable display value corresponding to the monitored entity for the user.

Monigear devices provide corresponding conversion configurations for different types of monitoring points for users to modify (or refer to). Some communication protocols (such as SNMP GET) can directly read the conversion results. The following is an example of the conversion of original values and displayed values of each type. For a detailed description of monitoring point attributes, refer to the appendix B.

① dioValue 和 dioDetail

dioValue	D0 descr	D1 descr	dioDetail
1	Normal	Leak alarm	Water leak

dioValue	D0 descr	D1 descr	dioDetail
1	Smoke alarm	Normal	Normal

② aioValue 和 aioDetail

Original	Precision	Unit	Display
237.5146	0.0	V	237.5V

③ enumValue 和 enumDetail

Original	Enum string	Display
1	0, No output	Main nowar supply
1	1, Main power supply	Main power suppry

2,Battery supply	

④ strValue

Strings do not need to distinguish between raw and displayed values.

2. SP Alarm

Each supervisory point of the Monigear device can set an alarm individually, support delayed alarm, and provide up to 3 levels of alarms, usually level 3 is an emergency alarm, level 2 is an important alarm, and level 1 is a normal alarm. For the settings of various types of alarms, refer to the <u>appendix B</u>.

After the alarm is triggered, some communication protocols (such as SNMP GET, MQTT) can directly read the current alarm level. In addition, you can choose to send an email after the alarm, execute linkage actions (such as MN-NIO, control relay actions), etc.

Appendix B-Supervisory Point Configuration

• DIO(Digital Input Output) Digital input and output configuration: including whether the channel is enabled, the value for alarm, the alarm level, whether it is a security monitoring point, delayed alarm time, etc.

Configur	e NIO3 via ne	twork				
Quit 0 U	lse current cer lse previous c	rtificates Password ertificates			Disconnect Update pas	sword
Device config	gure IO state	Technical support in	nforma	ation Script in dei	vce	
Modules			10 v	alues Module co	nfigure IO configure	
Query			Page	d all Madify Apr	hu changes - Cours CD list	
Address	Running	Name	DIC		by changes save sellist	
0	Running	Device	DIC	AIO		
33	Running	CLIMAVENET		Name	Key	Value
				DIO1	SP Name	DI1
				DIO2	SP Enabled	Yes
				DIO3	Enable Control	No
				DIO4	Save data when offline	No
				DIO5	Value for warn	0
		!		DIO6	Warn level	0
				DIO7	Warn method	Warn immediately
				DIO8	Delay warn time(sec)	0
				DIO9	Enable lock a short time	No
				DIO10	Value for lock	0
				DIO11	Lock time(sec)	0
				DIO12	D0 describe	0
					D1 describe	1
					Alarm message	

DIO Property	Value	Description
SP Name	The descri	ption of the DIO SP

SP Enabled	Yes	This SP is enabled and the data will be reported to the center when conditions are met.				
	No	This SP is not er	nabled and will not be reported to the center.			
	Yes	Digital output li	ke relay that can be control			
Enable Control	No	Digital input that	Digital input that cannot be controlled should be No			
Save data when	Yes	Keep the history	⁷ data			
offline	No	Don't keep the ł	iistory data			
XII C	0	Digital value 0 i	s value for alarm			
value for warn	1	Digital value 1 i	s value for alarm			
Warn level	This item	can only be 0, 1,	2, or 3 (0 means the alarm is not enabled)			
W7 41 1	Warn immediately		When the digital value is the same as the alarm value, an alarm is generated immediately.			
warn metnod	Warn after delay a period		The digital value is the same as the alarm value and keep for a period of time then the alarm is generated.			
Delay warn time	Use with the previous item					
Enable lock a short time	Used for security SPs. Frequently changing digital signals will cause frequent alarms. Enabling this function can solve the problem of frequent alarms.					
Value for lock	When a state is locked for a period of time, if the digital input value changes to the locked value, the SP value will remain locked during the locked time, regardless of whether the value of the actual SP value changes during this period.					
Lock time	When the lock function is enabled, the SP remains unchanged for a certain period of time.					
D0 describe	A status description that is represented when the sensor signal value is 0					
D1 describe	A status description that is represented when the sensor signal value is 1					
Alarm message	Additional information when an alarm is triggered					

• AIO(Analog Input Output) Analog input and output configuration: including whether the channel is enabled, precision, unit, upper and lower limits of effective value, alarm level, delayed alarm time, etc.

Configur	e NTHM2_19	via network					×
Quit O U	lse current cei lse previous c	rtificates Pas ertificates	sword	•••••	Disconnect Update Certificates	Update password	
Device config	gure IO state	Technical sup	port in	formation			
Modules Query) values Module co	nfigure IO configure		
Address	Running	Name	R	ead all Modify Ap	ply changes Save SP list		
0	Running	Device	4	10			
				Name	Key	Value	â
				AIO1	SP Name	Temperature	
				AIO2	SP Enabled	Yes	
					Enable Control	No	
					Enable Offline Save	No	
					Value Precision	0.0	
			TS.		Value Unit	°C	
					Report delta threshold(0 disable)	0	
					Report Interval	0	
					No timely send data	No	
					Warn Type	Warn immediately	
					Warn delay Time	0	
					Hysteresis band	0	
					Level 1 Warning Enable	No	
					Level 1 Warning High Threshold	0	
					Level 1 Warning Low Threshold	0	—IJ

AIO Properies	Value	Description
SP Name	Funct	ional description of analog monitoring points
SP Enabled	Yes	This SP is enabled and the data will be reported to the center when conditions are met.
	No	This SP is not enabled and will not be reported to the center.
Enchla Control	Yes	For an analogue output
Enable Control	No	For an analogue input
	Yes	Save the history data
Enable Offline save	No	Don't save history data
Value Precision	The display precision of the SP value, for example, if it is set to 0.0, one decimal place will be retained	
Value Unit	The unit of the monitoring value, such as meter, °C, etc.	
Send Var Condition	If the deviation between the monitored value and the last reported value is greater than this value, the monitored data will be immediately reported to the data center.	
Report interval	The frequency at which the SP is reported to the data center. If it is 0, the default system reporting interval is used (in the basic configuration category, the default is 20 minutes)	
No timely send data	Yes	When the device reports all monitoring data regularly, the value of

	this monitoring point is not reported.
	No When the device reports all SP data regularly, it reports the value of the monitoring point
	Warn immediately When the monitoring value is higher than the upper alarm limit or lower than the lower alarm limit, an alarm is immediately issued
Warn Type	Warn after delay a value is higher than the upper alarm limit or period lower than the lower alarm limit and keep for a period of time.
Warn delay time	Use with the previous item
Hysteresis band	The difference between the monitoring value and the alarm threshold must be greater than the hysteresis band value to meet the alarm cancellation condition, which can avoid frequent alarm triggering near the critical point. For example, if the alarm is set to be greater than 36° , if this value is set to 0.5, the alarm state will be cancelled only when the value is less than 35.5.
Level 1/2/3 Warning	When the monitoring value meets the conditions, an alarm of the
Eanble	corresponding level will be generated
Level 1/2/3 warning high threshold	When the monitoring value is higher than the alarm upper threshold, an alarm of the corresponding level will be generated
Level 1/2/3 waring low threshold	When the monitoring value is lower than the alarm lower threshold, an alarm of the corresponding level will be generated
Minimum value	The lower limit of the external transmitter range
Maximum value	The upper limit of the external transmitter range
Levell high warning message	Additional information when a Level 1 high-limit alarm is triggered
Levell low warning message	Additional information when a Level 1 low-limit alarm is triggered
Level2 high alarm message	Additional information when a Level 2 high-limit alarm is triggered
Level2 low alarm message	Additional information when a Level 2 low-limit alarm is triggered
Level3 high alarm message	Additional information when a Level 3 high-limit alarm is triggered
Level3 low alarm message	Additional information when a Level 3 low-limit alarm is triggered