SUPCON

OMC WebSight

Deployment and Monitoring Guide

ZHEJIANG SUPCON TECHNOLOGY CO., LTD.

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OMC WebSight Deployment and Monitoring

Section 1 Overview

In order to more easily monitor the field, SUPCON developed OMC WebSight (hereafter as WebSight), which can help user to monitor the field data by Web browser.

In practical applications, you can monitor OMC system by the following network.

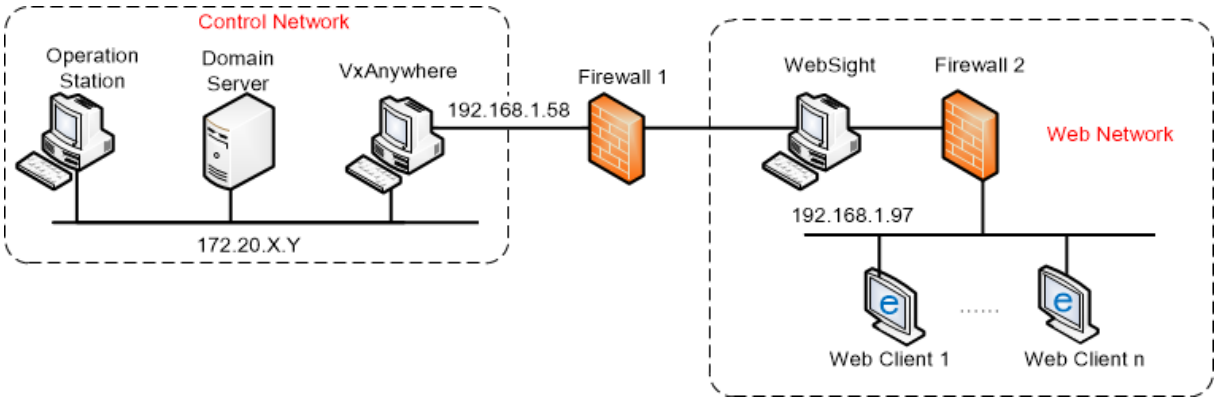


Figure 1-1 Typical network diagram of WebSight deployment

In the network shown in the figure above, each role assumes different functions:

- Anywhere node, that is the operation station or domain server installed with Anywhere, exchanges data with the WebSight node by the network via Firewall 1.
- WebSight node, that is the device installed WebSight, obtains monitoring data from the Anywhere node.
- Web client, that communicates with the WebSight node through Firewall 2 to obtain data for monitoring.
- Mobile Client, that running WebSight APP connects to WebSight node and obtains data for monitoring.

Tip:

- **Anywhere and WebSight support only one-to-one IP matching, which means that a Anywhere node can only connect to one WebSight at a time.**
- **Hereinafter the configuration items are the marked addresses in Figure 1-1.**

1.1 Configuration Requirement

Table 1-1 lists the software and hardware configuration requirement of each device node in WebSight group network.

Table 1-1 The configuration requirement of the software and hardware of WebSight node

Software Name	Configuration Item	Configuration Requirement
Anywhere	Hardware requirement	CPU: dual core 3.20GHz Memory: 8G Disk: 500G Network card: more than two kilomega network card Video memory ≥ 32MB
	Operational system	Windows 10 Enterprise 2019 LTSC, 64 bit Windows 10 Enterprise 2016 LTSB, 64bit Windows Server 2016 Standard English, 64 bit Windows Server 2019 Standard English, 64 bit
WebSight	Hardware requirement	CPU: four core 3.20GHz Memory: 8G Network card: 2 more than one kilomega network card
	Operational System	Windows 10 Enterprise 2019 LTSC, 64 bit Windows Server 2016 Standard, English, 64 bit Windows Server 2019 Standard, English, 64 bit
Client	Operational system	Windows 10 Enterprise 2019 LTSC, 64 bit Windows 7 Professional English, SP1, 64 bit Windows Server 2019 Standard, English, 64 bit
	Explorer	Google Chrome version 112.0.5615.138 (formal version) 64 bit
Mobile Operating System	Android 8.0 and above iOS 12.0 and above	
Firewall	Enable the following ports for Anywhere or WebSight to ensure the monitoring data communicated successfully: Anywhere node: 123, 18390, 18392, 18470, 18471, 18472, 18490 WebSight node: 80, 1883, 5672, 15672, 15675, 18340, 18341, 25672	

Tip:

- **Anywhere should installed in High-performanceHMI Operator Station.**
- **Please select the "112.0.5615.138_chrome_installer" file in the folder of WebSight install disk to install Chrome.**

1.2 Software Authorization

When user starts WebSight, software authorization is required, and the authorization code is “WebSight”. WebSight software authorization supports multiple-user authorization, namely 1, 10, 20. Authorization with different user numbers can provide data to different number of Web clients.

Section 2 Basic Settings

This section describes that the installed configuration of Anywhere node, the installation and configuration of WebSight, the configuration of clock synchronization need to be completed before the performing the WebSight monitor.

2.1 Install and Configure Anywhere

After installing OMC, Anywhere will be installed.

Then, you need to specify the address of the WebSight device that is connected to Anywhere to ensure that data can be correctly sent and received to the specified device .

1. After installing the Anywhere program , select “Start > OMC > System Global Options” in the start menu and the dialog box shown in the figure below pops up.

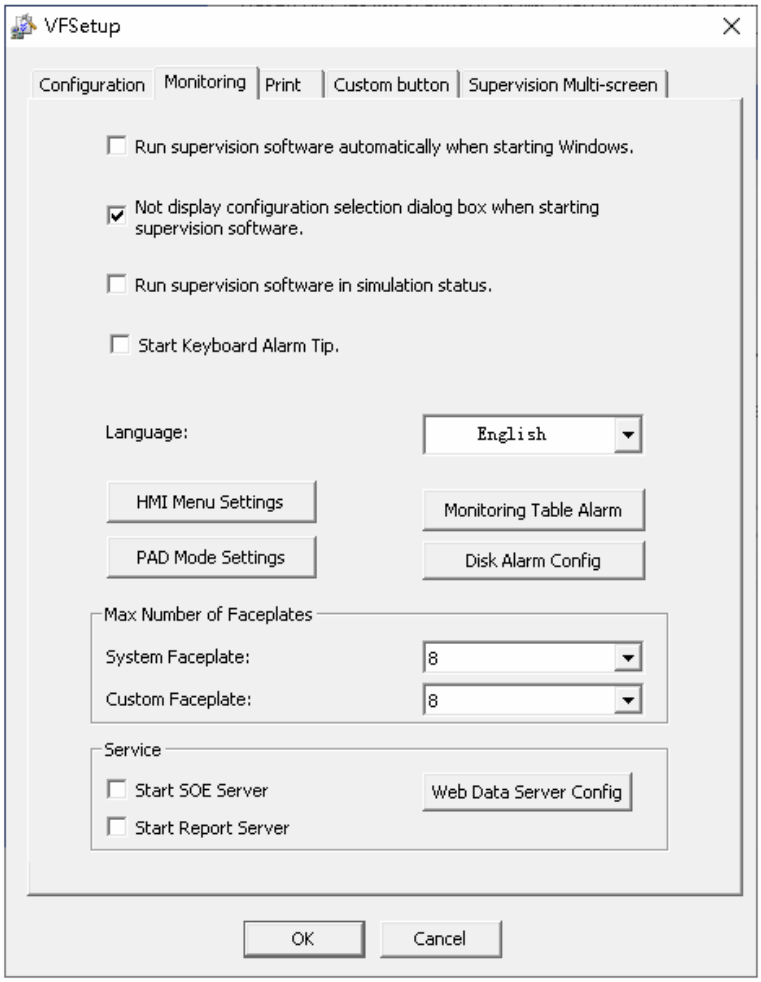


Figure 2-1 High-performanceHMI system global configuration interface

2. Click “Web Data Service Configuration” button, and popup the "Web Data Server Config"

dialog box shown as below figure.

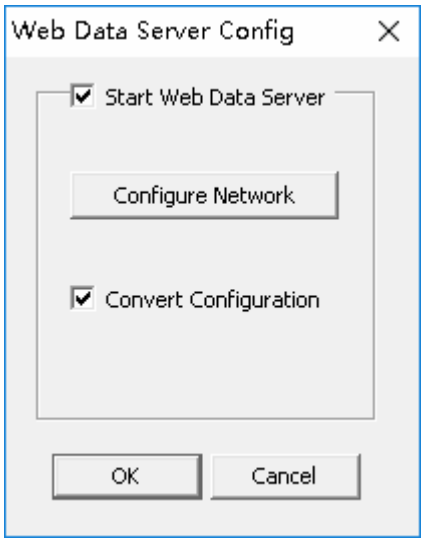


Figure 2-2 Anywhere configuration dialog box

3. Checking the "Start Web Data Service" and "Convert Configuration", and the DataServer service will start and configuration will convert with the High-performanceHMI monitoring starting. Then the Anywhere can provide various High-performanceHMI data to WebSight.

4. Click the “Configure Network” in the “Web Data Service Configuration” dialog box, then the “Configuration Configure” pops up.

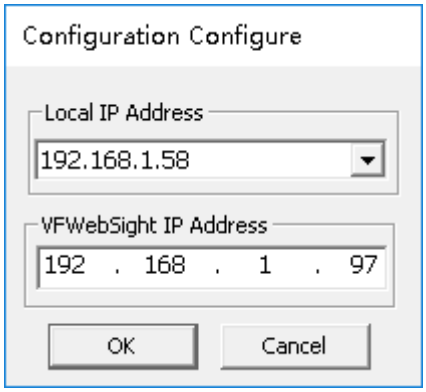


Figure 2-3 “Configuration Configure” dialog box

5. Configure the properties of Anywhere according to the following table.

Configuration Item	Configuration Illustration
Local IP address	This address is the IP address of the device where the Anywhere service is located.
VFWebSight IP address	This is the IP address of the local computer where WebSight locates.

6. Check “OK”, save the configuration.

2.2 Install and Configure WebSight

Attention:

The computer name of the device installed WebSight should start with English characters and should exclude Chinese characters.

During the installation of OMC, if you select the "Web Monitoring Component", WebSight will be installed automatically along with OMC. If you do not install the WebSight with OMC, you can manually install WebSight by running the "*OMC WebSight* ******.exe " file (*** ***represents the version of WebSight) located in the OMC installation folder.

After the installation is complete, you can launch the "Tools\AnywhereConfig.exe" file located in the WebSight installation path to open the "Web Monitoring" configuration interface as shown in the image below:

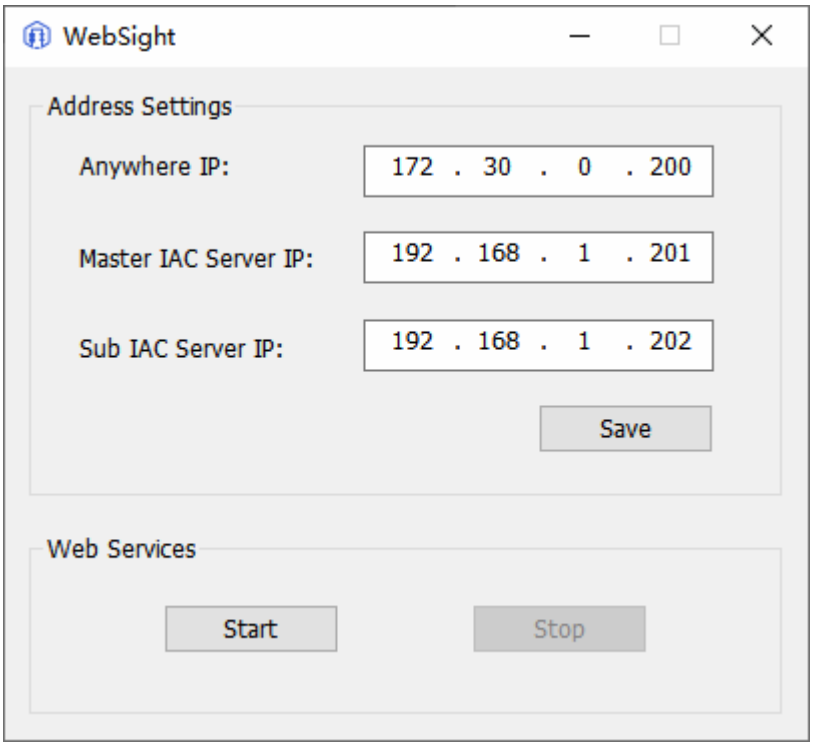


Figure 2-4 WebSight configuration dialog box

7. Configure the nodes connected with the WebSight node by following table.

Item	Description
Anywhere IP	This address is the local IP address used to connect with the Anywhere device."
Master IAC Server IP Sub IAC Server IP [note1]	This address is the local IP address used to connect with the master IAC or sub IAC server.

Note1: IAC is intelligent application center.

8. Click "Start", and you can monitor the field by web.

2.3 Configure Clock Synchronization

To ensure that the WebSight device can accurately obtain the High-performanceHMI data provided by the Anywhere device, the two devices should synchronize their clocks.

2.3.1 Configure Time Synchronization Server for the System

Firstly, you should configure the Clock Synchronization for the OMC System.

1. In the VFSysBuilder, add the address configured with Anywhere device as the clock synchronization server.

Time Synchronization Server	
Time Synchronization Server Count	3
Server 0	
Type	Hardware GPS
Third Byte Address	10
IP Address of Time Synchronization Server	10.254
Server 1	
Type	Software Time Synchronization Server
Third Byte Address	0
IP Address of Time Synchronization Server	0.254
Server 2	
Type	Software Time Synchronization Server(Web)
IP address	172.30.1.129
IP Address of Time Synchronization Server	172.30.1.129

Figure 2-5 Clock synchronization server configuration of High-performanceHMI System Builder

2. Configure clock synchronization server by adding different types of clock synchronization servers including:

   - "Hardware GPS" or "Software Time Synchronization Server", which provides the time synchronization source for the controller and all operation nodes (such as Anywhere nodes) within the information network.
   - Software Time Synchronization Server (Web), which is used to synchronize the time between Anywhere nodes and WebSight nodes. The IP address should be configured as the IP address of the Anywhere node communicating with WebSight.

2.3.2 Configure Time Synchronization Server for the WebSight node

Before synchronizing the time between WebSight and Anywhere, it is necessary to configure the time synchronization server on WebSight.

1. After installing WebSight, open the file "Config.xml" in the path of "C:\Program Files (x86)\Common Files\SUPCON\Shared\TimeSync\".

2. Configure the time synchronization server in the field of "server". As shown as the figure below, the time synchronization server is configured as 172.20.10.254" 172.21.10.254" 172.30.10.254".

```
Config.xml
1  <project>
2  <common search mode="0"/>
3  <timesync>
4  <server nodeip="172.20.10.254"/>
5  <server nodeip="172.21.10.254"/>
6  <server nodeip="172.30.10.254"/>
7  </timesync>
8  <timesync_clients>
9  <client nodeip="172.20.*.*"/>
10 <client nodeip="172.21.*.*"/>
11 </timesync_clients>
12 <timesync_srv_clients>
13 <client nodeip="172.20.*.*"/>
14 <client nodeip="172.21.*.*"/>
15 <client nodeip="172.30.*.*"/>
16 </timesync_srv_clients>
17 </project>
```

3. Save the file and manually synchronize the time according to the instructions in the next chapter.

2.3.3 Manually synchronize the time

After completing the clock synchronization configuration of the Anywhere and WebSight devices, manual synchronization is required.

Double click “TimeSync” at the system tray in WebSight, the dialog box shown in the figure below pops up.

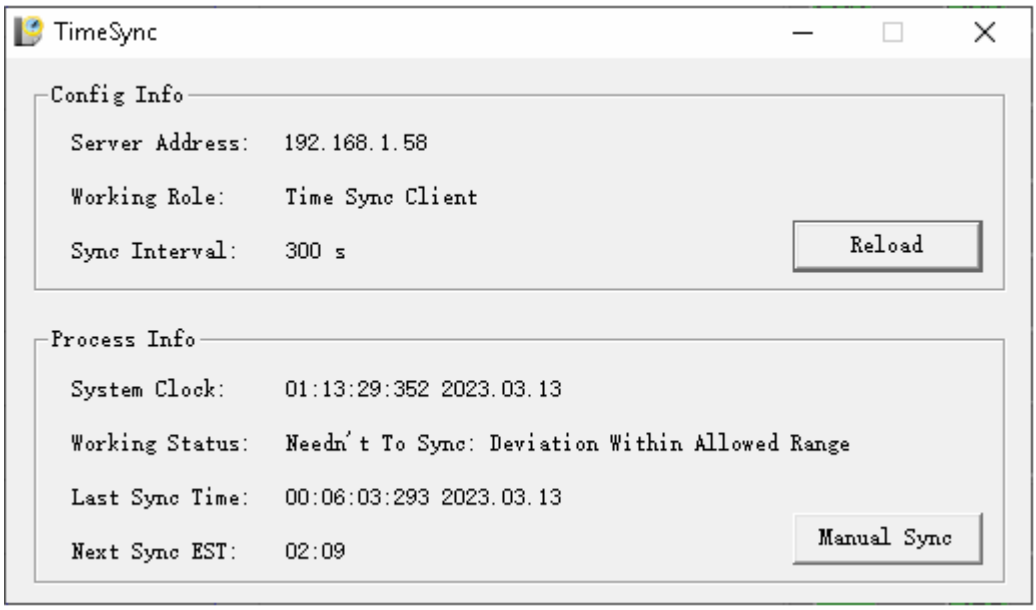


Figure 2-6 Dialog box of WebSight clock synchronization

Click “ Configuration Reload ” to complete the clock synchronization between the Anywhere and WebSight.

Section 3 Start Web Monitor

The content that can be monitored on the Web client includes trend screens, graphics, single trend, process alarms, system alarms and tag panel.

3.1 Task Preparation

Before starting web monitor, you need to complete the following tasks:

- Complete the configuration of Anywhere node and WebSight node.
- Complete the user configuration of High-performanceHMI monitor. WebSight monitor's login user name and password are High-performanceHMI monitor user's user name and password.
- Complete the High-performanceHMI operation group and monitor screen configuration. WebSight monitor's logged-on user group is High-performanceHMI operation group, and the monitor screen that you can log in to view is various types of monitor screen in the High-performanceHMI operation group.
- Publish the configuration via High-performanceHMI Explorer and launch the real-time monitor software.

Tip:

- **For the user name and password configuration of the High-performanceHMI monitor user, please refer to the *User Access Software User Manual*.**
- **For the detailed configuration of the High-performanceHMI operation group and its monitor screen, please refer to the *HMI Config Software User Manual*.**
- **The monitor screens viewed by WebSight client are ones published by High-performanceHMI Config Explorer software. Users must refresh web monitor client to obtain the latest monitor screens if the configuration is updated and published.**

3.2 Log into WebSight Monitor

By doing the following operations, you can log into the WebSight monitor.

1. Open the Chrome browser, and type the WebSight address in the address bar, such as

"192.168.1.97:8680".

2. After the IP address is correct, the login interface shown in the figure below pops up.
3. Enter the user name and password of the monitor user configured in the High-performanceHMI configuration in the "User Name" and "Password" respectively .
4. Click "Sign in" to enter the web monitor shown in the figure below.

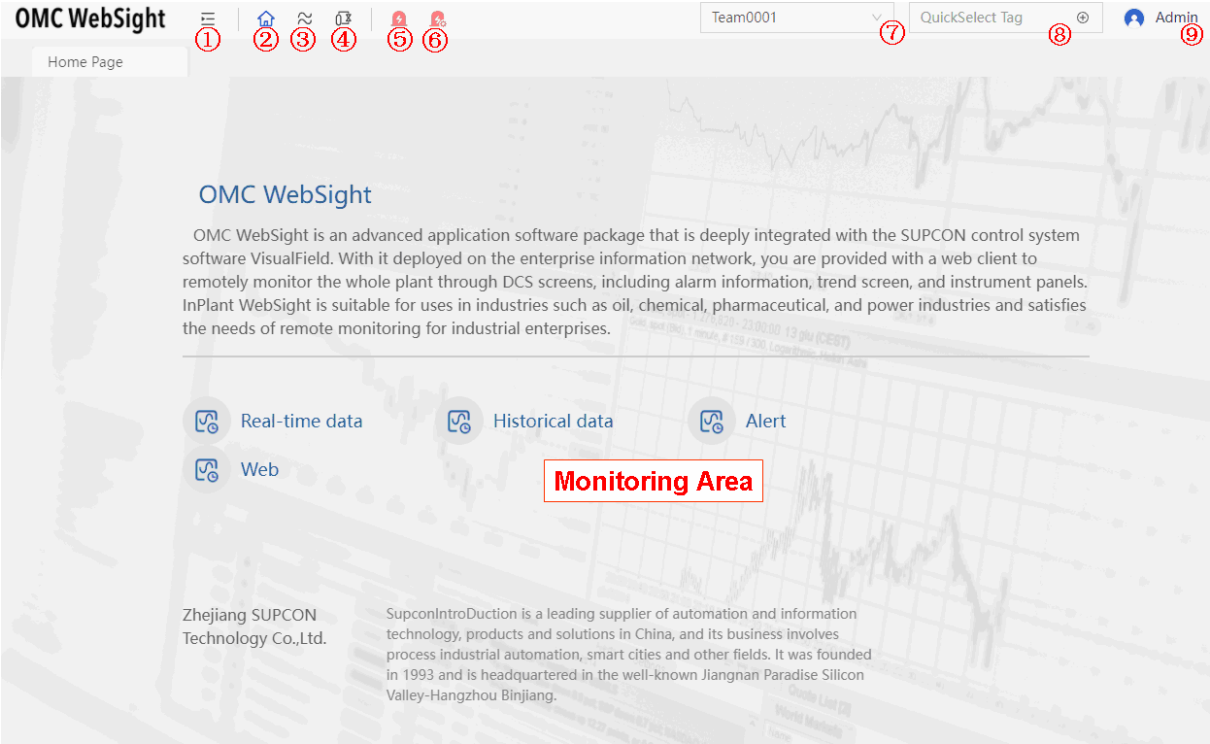


Figure 3-1 WebSight Monitor Interface

Table 3-1 WebSight Monitor Area Illustration

Area	Function
①	Function navigation bar, all functions can be selected and entered through the expanded menu of this button.
②	Click this button to return to the WebSight monitor home.
③	Click this button to enter the trend screen of WebSight monitor.
④	Click this button to enter the graphics screen of WebSight monitor.
⑤	Click this button to monitor the process alarms in the High-performanceHMI system.
⑥	Click this button to monitor system alarms in the High-performanceHMI system.
⑦	Select the operation domain to monitor.
⑧	Input the tag to monitor.
⑨	Click to set system properties or log out.
Monitoring Area	It is used to display trends, alarms, graphics and other screens.

3.3 View Trends

The trends in the operation group of the login user can be checked by WebSight client and the tag, time period and screen style displayed in custom trends are supported.

Tip:

The suppressed and blocked alarms are not displayed on the web site, and the on-hold display is consistent with the real-time monitor software.

In the WebSight monitor screen shown in Figure 3-1, click to show trend in the figure below..

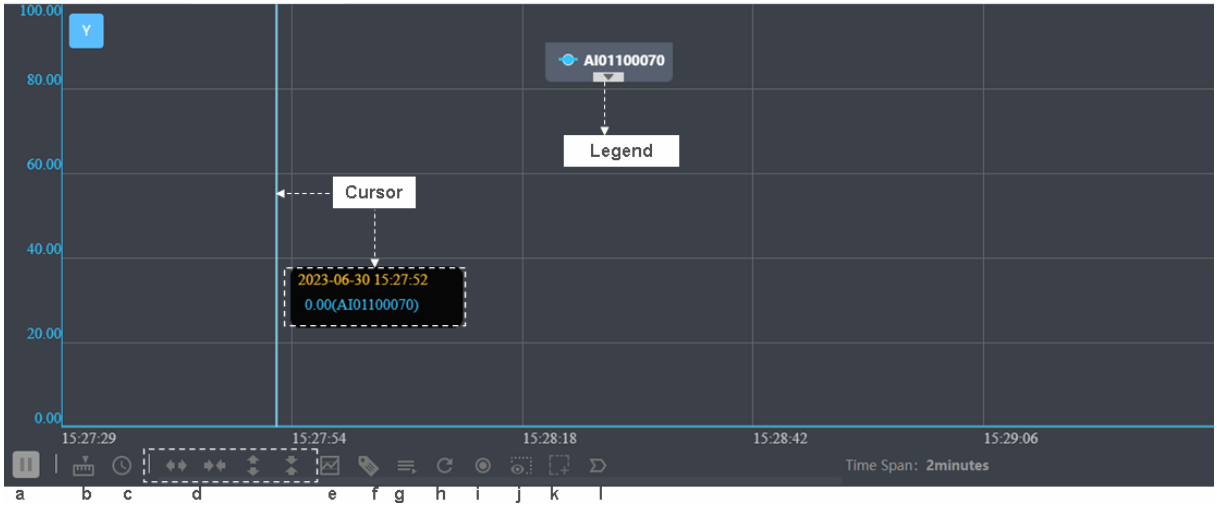


Figure 3-2 WebSight trend

3.3.1 Interface of Trends

Table 3-2 illustrates the composition and each part's function in the trends of WebSight.

Table 3-2 WebSight Trend Illustration

Area and Button	Function
a	Used to switch the display content of the trend screen is a historical trend or a real-time trend.
b	Used to select the time period span of the trend screen, supports options such as the last 2 minutes and the last 10 minutes.
c	It is used to specify the start time and end time of the trend screen display . For detailed operation instructions, please refer to Configure Trend Period and Start Time.
d	Adjusts the granularity of the X-axis and Y-axis
e	Used to specify the display style of the trend screen, such as the background color, the line style of the time coordinate, etc. For detailed operation instructions, please refer to Configure Display Style.

Area and Button	Function
f	It is used to specify the tag associated with the curve in the trend screen . For detailed operation instructions, please refer to Configure Trend Tags.
g	It is used to display or hide the tag list in the trend screen, whose position can be customized.
h	Used to refresh the trend screen.
i	Restore the display style of the trend screen to the default setting.
j	Used to add cursors to the trend screen. Up to 2 cursors can be added to the trend screen .
k	Zoom in or zoom out the trend curve.
l	Used to show or hide the legend.

3.3.2 Configure Trend Tags

Through the following operations, you can configure the tag associated with the trend curve in the trend screen.

1. Click in the monitoring interface and the “Tag Setting” dialog box shown in the figure below pops up.

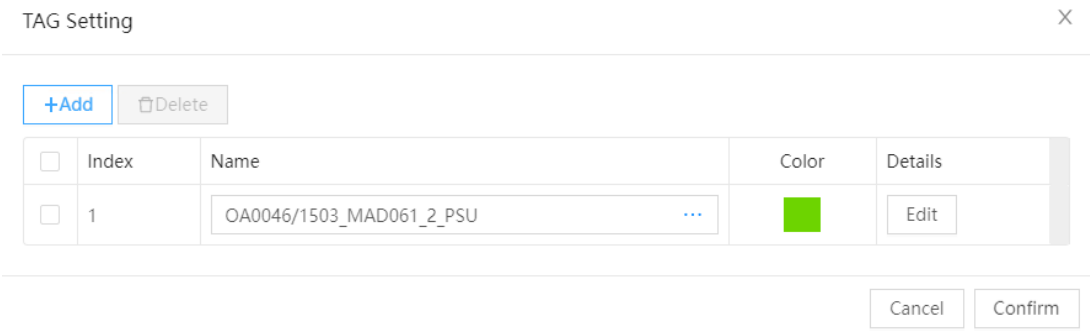


Figure 3-3 Trend tag setting interface

2. Click “Add”, select the tag in the pop-up dialog box, and click “Confirm”.
3. Return to the ”Tag Setting” interface, click “Confirm”, and the trend screen is displayed according to the set tag.

3.3.3 Configure Trend Period and Start Time

Through the following operations, you can configure the start and end time of the trend curve in the trend screen.

1. Click in the monitoring interface, and the time configuration dialog box shown in the figure below pops up .

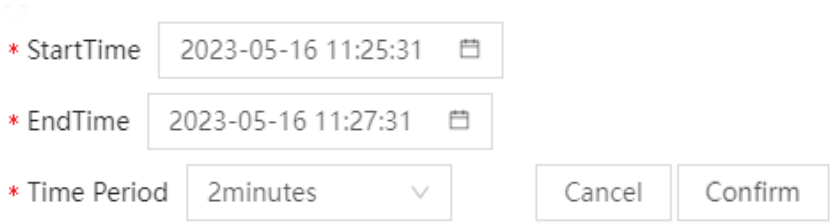


Figure 3-4 Time setting interface of trends

2. In the dialog box shown in the figure above, configure the “Start Time” and “End Time” of the trend or select the “Time Period” after specifying the start time .
3. Click “Confirm”, the trend curve is displayed according to the configured start and end time.

3.3.4 Configure Display Style

Through the following operations, you can configure the display style of the trend screen.

1. Click in the monitoring interface, and the dialog box shown as figure below pops up.

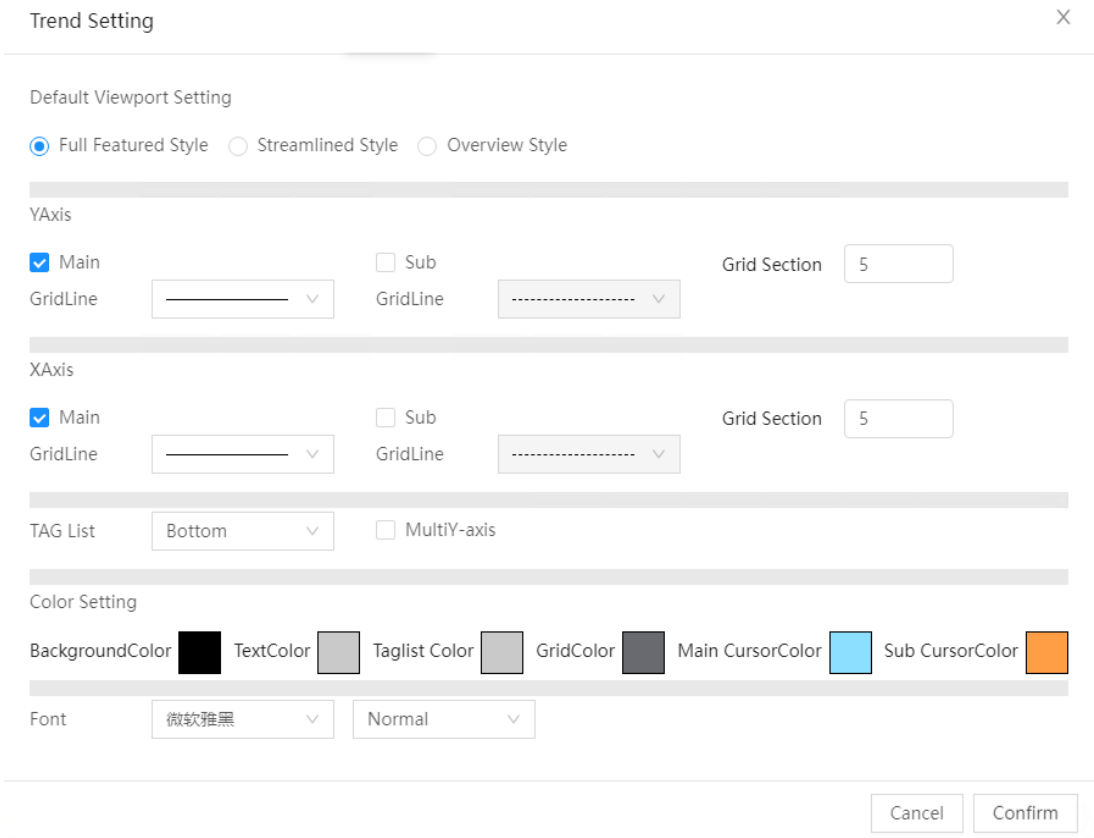


Figure 3-5 Graphics setting interface of trends

2. In the dialog box shown in the figure above, you can configure the display style of the trend screen, the coordinate line type, the position of the tag list and other display styles.

3. After configuring the style, click “Confirm”, and the trend screen is displayed according to the configured style.

3.4 View Graphics

By the operation, the WebSight side view customer High-performanceHMI graphics of the operation specified in the configuration group.

1. In the WebSight monitor screen shown in Figure 3-1, click and the graphics shown below pops up.

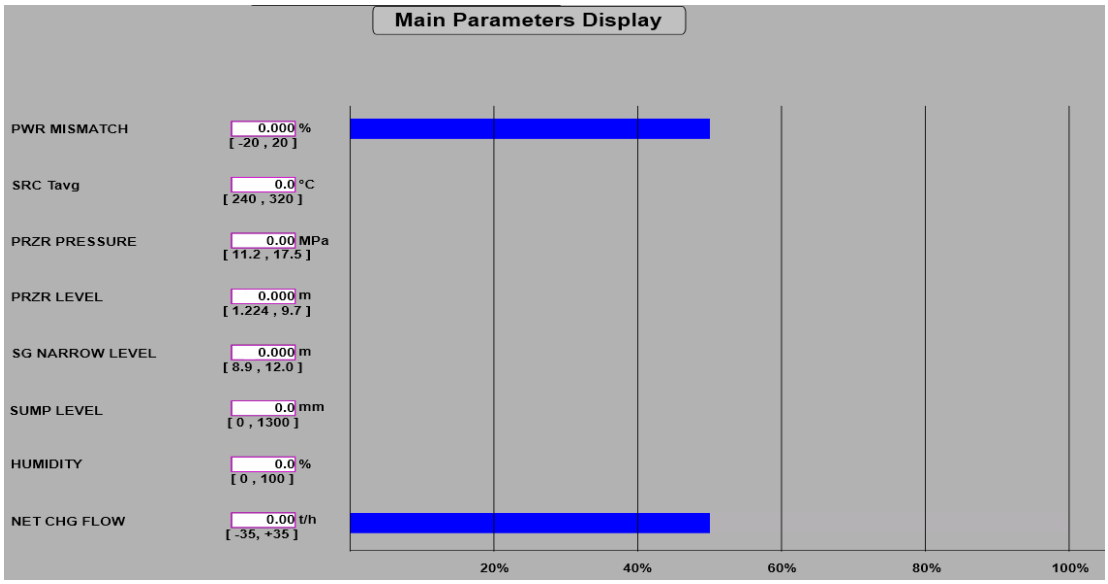


Figure 3-6 Examples of WebSight graphics

In the WebSight monitoring, the default graphic is the default graphic set in the operation domain.

2. Click the “Graphics Navigation Bar”, it will display all the graphics under the operation group of the currently logged-in user, and you can select the graphics you want to view.

3.4.1 View Pop-up Panel

While monitoring in Web, you can click on a tag in the process diagram to open a popup panel and view the detailed information of the tag. As shown in the figure below, the popup panel contains real-time value, trend, alarm settings and other properties of the tag.

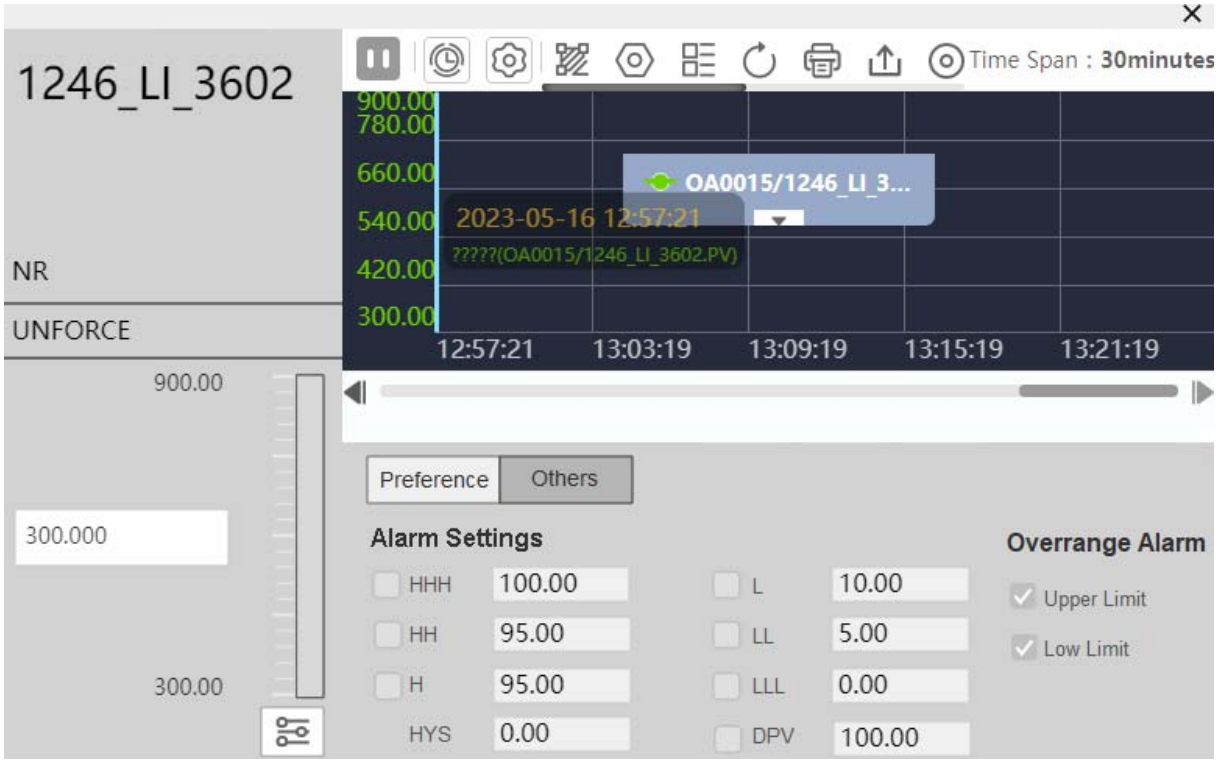


Figure 3-7 Tag panel example in WebSight

The following table lists the types of the tags whose panel can be shown in WebSight.

Tag type	Description
I/O tags	AI, AO, DI, DO
Custom variables	Custom analog variables, custom digital variables, Custom integer tag
Operation domain variables	Operation domain analog variables, Operation domain digital variables
Function variables	PID, DSET, DSET_DI_EP, DSET_EP, INTERGRALX, PVDI, PVI, PVIEX, SERVOCON, SPEEDTST, STP, THRSELX, DIO_01V, DIO_11V, DIO_21V, DIO_22V, FOUT, MANUAL, MOTOR, PIDEX, SPLIT, SS8, TWOSELX, VALVE, FXY

Tips:

Different software versions may have varying levels of English language support on the panel. Please refer to the actual software version for accurate information on English language support.

3.4.2 View Trend of Single Tag

When a graphic contains tags, you can drag the tag into the trend page to display the trend of the tag in WebSight monitoring, as shown in the figure below. The trend page can add up to 16 tags.

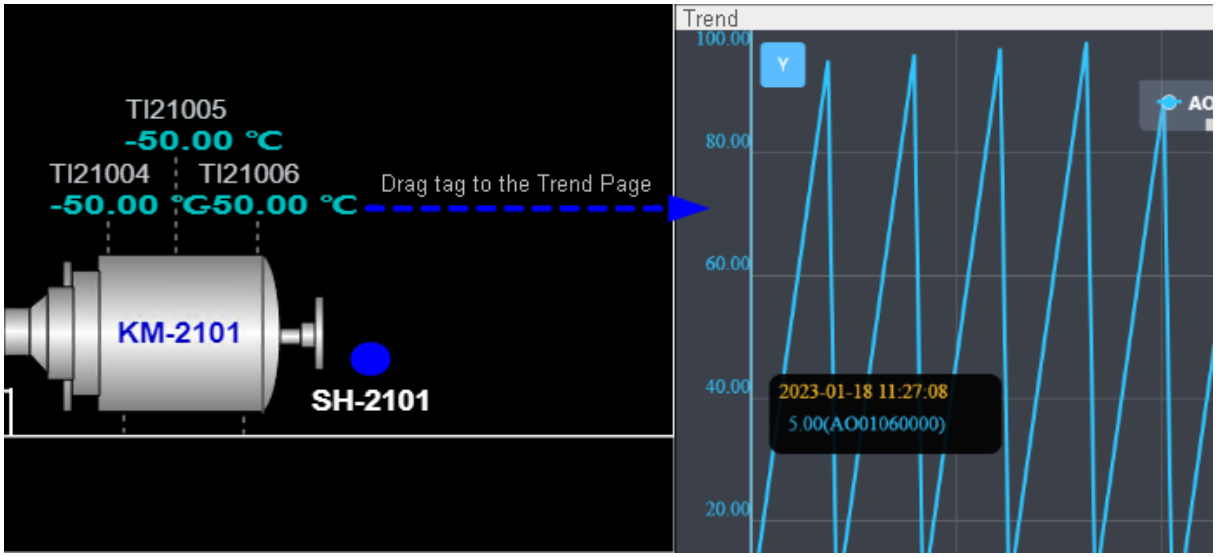


Figure 3-8 Drag tag to trend control

3.5 View Process Alarms

By WebSight client can view the currently logged on user's processes within the group alarm operation, and support for conditional filtering process alarm, press the alarm display and its associated tag of panels, trends, operating instructions.

In the WebSight monitor screen shown in Figure 3-1, click , the monitor of process alarms shown in the figure below is displayed.

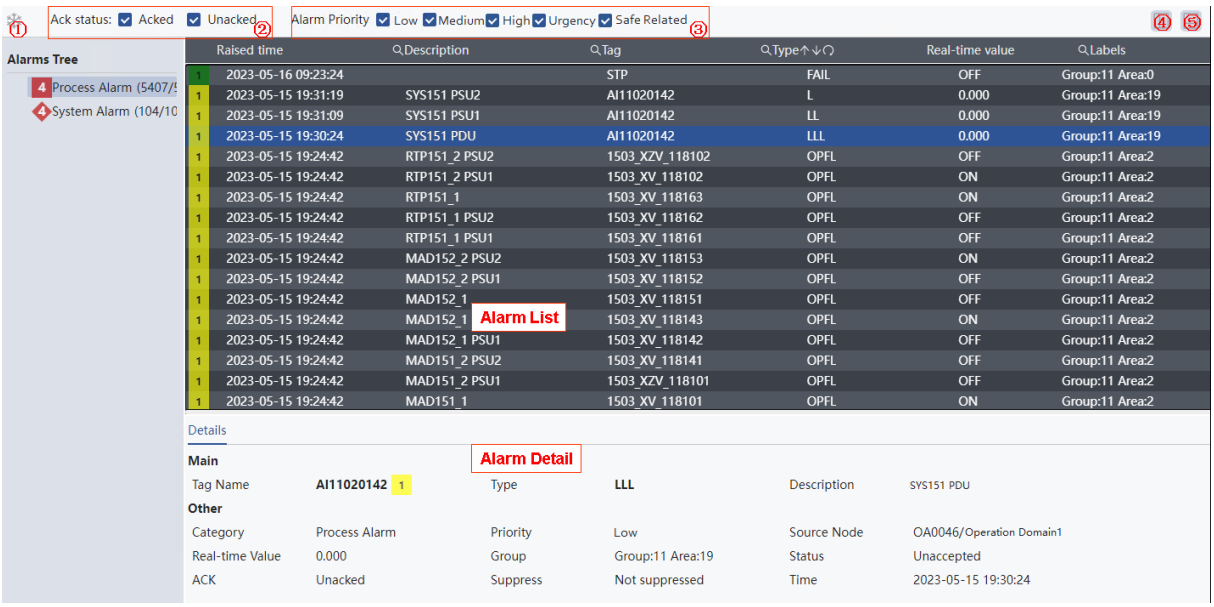


Figure 3-9 Monitoring examples of process alarms

3.5.1 Interface of Monitor on Process Alarms

Table 3-1 illustrates the composition and each part function in the trends of process alarms in WebSight.

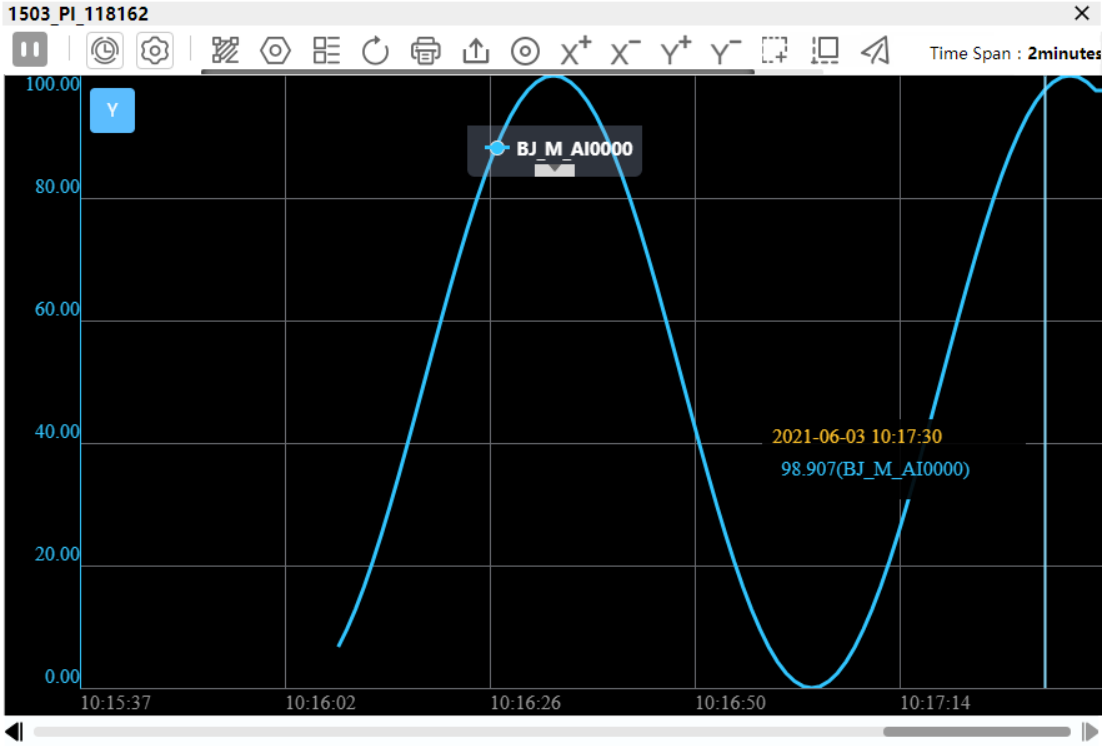
Table 3-3 Process alarm monitored by WebSight

Area or Button	Function
①	Click the button to frozen the alarm list. In this state, the alarm list will not be refreshed by the resolved or new alarms.
②	The alarms are filtered according to their confirmation status . If “Confirmed” is not checked, and “Unconfirmed” is checked , only the process alarms in the ”Unconfirmed” state will be displayed in the alarm list .
③	Filter alarms by alarm level or type . If “Low”, “Medium”, and “Signal circuit disconnection” are not checked, and “High” and “Emergency” are checked, only the alarm levels are displayed in the alarm list as “High” and “ Emergency” process alarm.
④	Used to show or hide the alarm tree.
⑤	Used to show or hide the detailed information of the alarm.
Alarm list	According to the settings of ④ and ⑤, the process alarms that meet the conditions are displayed.
Alarm details	Select the item that needs to be viewed in the alarm list, and the detailed information of the alarm, operation guidance and other information will be displayed in this area.

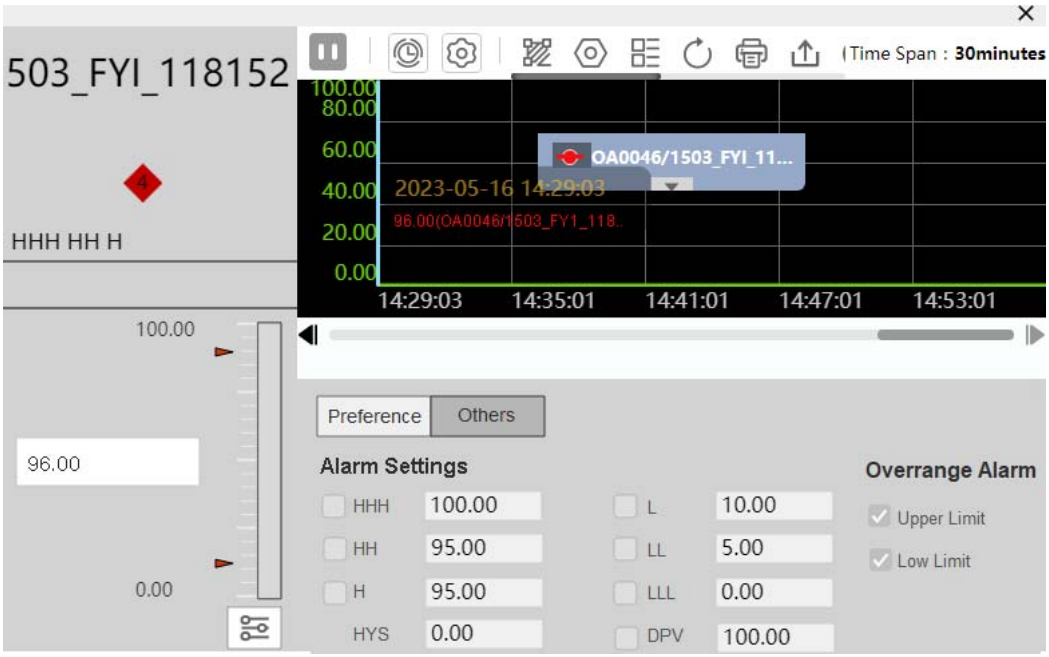
3.5.2 Jump to Interface related to Alarms

In the WebSight process monitoring alarm screen, you can jump to the tag of the alarm related trend screen, the context menu by an instrument panel and other images .

- An alarm in the alarm list, and select “Popup Trend” through its right-click menu, and the single trend screen of the alarm associated tag as shown in the figure below is displayed. For detailed operation instructions on the trend screen, refer to “View the Trend”.



- An alarm in the alarm list, and select “Popup Panel” through its right-click menu, and the instrument panel with the alarm associated tag number shown in the figure below will be displayed . For detailed descriptions of various tag panels, refer to the *Function Block User Manual*.



3.6 View System Alarms

By WebSight, users can view the system alarms in the current monitor system, and support for conditional filtering system alarm, press the alarm display and its associated operating instructions.

In the WebSight monitor screen shown in Figure 3-1, click to display the monitor of system alarms shown in the figure below.

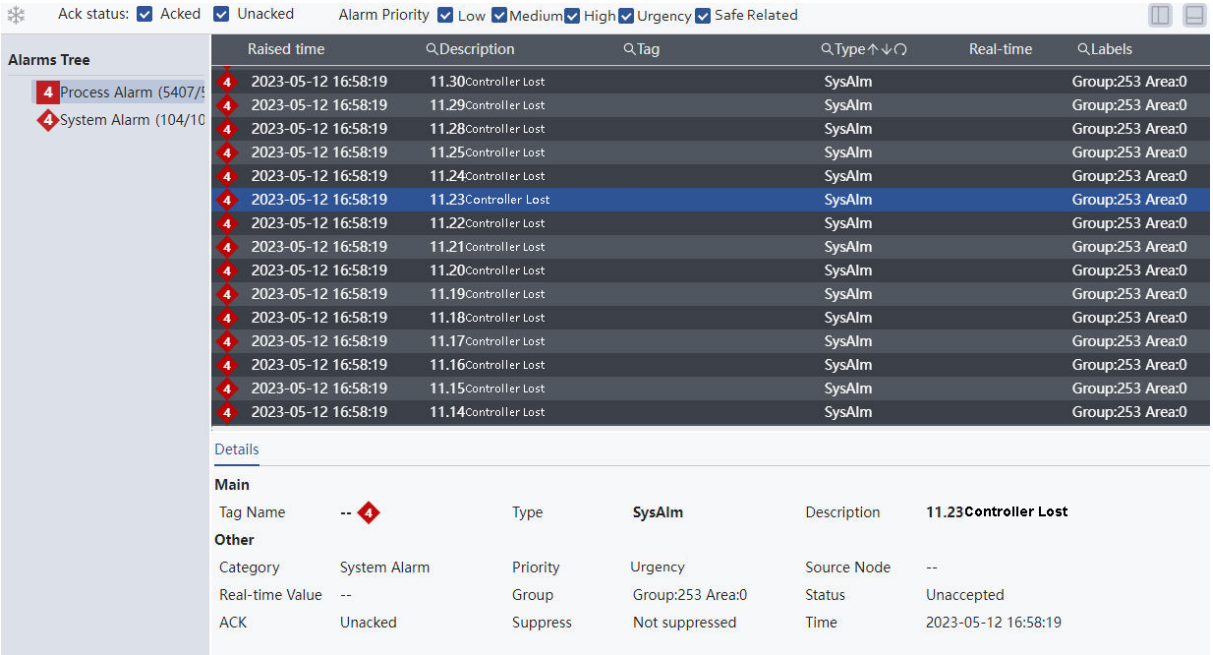


Figure 3-10 Monitoring examples of system alarms

The alarm system and alarm interface view guidance methods, and process alarms related content is basically the same, not repeat them here.

3.7 Monitor Settings

The WebSight client supports switching language and configuring trend displays.

3.7.1 Switch Language

The WebSight client supports switching language.

Click the user in the upper right corner of the monitoring interface, and select “Language Settings > Chinese or English" from the pop-up menu. After selecting the new language, the page will

automatically refresh, and the content will be displayed in the newly set language after the refresh.

3.7.2 Switch Users

Through the following operations, you can switch the login user of the WebSight client.

1. Click the user in the upper right corner of the monitoring interface, and select “Logout”, return to the login interface.
2. Configure the user name and password of the new login user in the user name and password.
3. Click “OK” to return to the home page, and new users can view the monitoring screen of their operation team as required.

3.7.3 System Settings

You can configure the trend display style of WebSight client by following the steps below:

1. Click on the user icon at the top right corner of the monitoring interface, and select "System Settings" from the pop-up menu to display the configuration interface shown in the figure below.

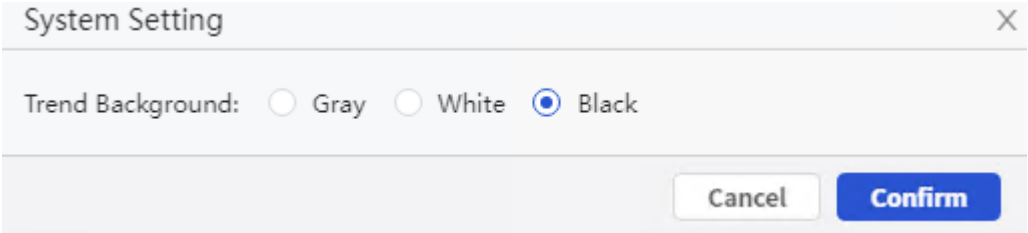


Figure 3-11 System setting interface

2. Check the trend background color in the radio button.
3. Click "Confirm" to update the display of the trend.

Tip:

After configuring the trend background color, the background color in both the trend and trend control's will be changed together.

Section 4 Mobile Monitoring

Trend, process diagrams, single-point trends, process alarms, system alarms can be monitored in

the WebSight mobile client.

Tip:

Different software versions have varying levels of Mobile Monitoring support. The actual level of support depends on the specific software version.

4.1 Prerequisites

Before WebSight mobile monitoring, the following tasks need to be completed:

- Phone preparation
  Prepare the phone's operating system according to the "Configuration Requirement".
- Android App installation
  The mobile client can be installed by downloading the APK file separately or by scanning the QR code on the homepage to download and install it.
  The app version is 1.0.1, the display name is "WebSight".
- User preparation
  Complete the monitoring user configuration. The login username and password for WebSight mobile monitoring are the same as the monitoring user's username and password.

4.2 Logging in to the app

You can log in to the WebSight monitoring app by following these steps:

1. Login

- First-time login to the app:
  The WebSight login screen will be displayed, where you need to enter the WebSight server address, monitoring username and password. After entering the information, click "Login" to enter the mobile monitoring homepage.
- Non-first-time login:
  After successful login, the app will remember the user's login information, and there is no need to re-enter it for subsequent logins.

Tips:

In case of password expiration, High-performanceHMI user passwords changed and published, or the existing mobile token expired, users need to log in again.

2. After login, the app home page shown in the figure below will be displayed.

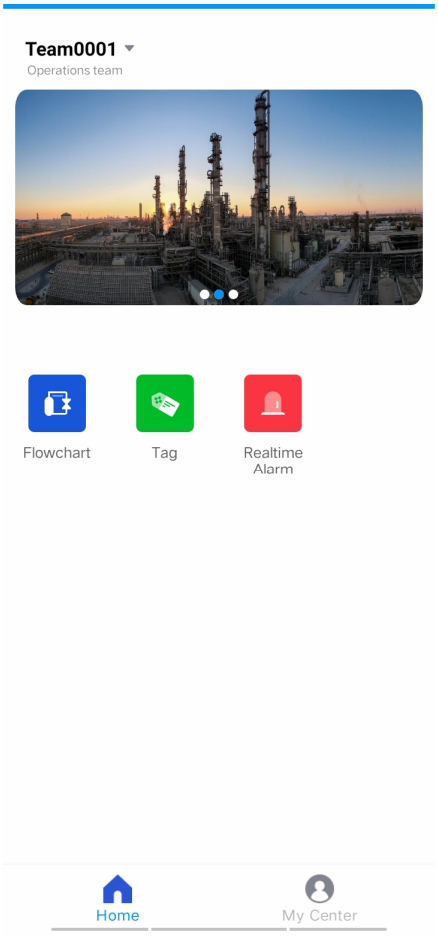


Figure 4-1 Homepage of WebSight

The following table lists the components of the WebSight mobile monitoring client interface.

Number	Function	Description
1	Operation Team	Switch to other operation groups authorized for the current logged-in user by clicking this button.
2	Flowchart	Enter the graphics list.
3	Tag	View the tag list.
4	Realtime Alarm	View real-time process alarms and system alarms.

4.3 View Realtime Alarms

WebSight mobile client allows you to view real-time system alarms and process alarms, and supports filtering alarms by condition.

Click on the "Realtime Alarm" button on the home page to enter the alarm interface shown in the figure below. The list of real-time process alarms and system alarms is displayed by default, supporting up to 250 real-time process alarms and 250 system alarms at most.

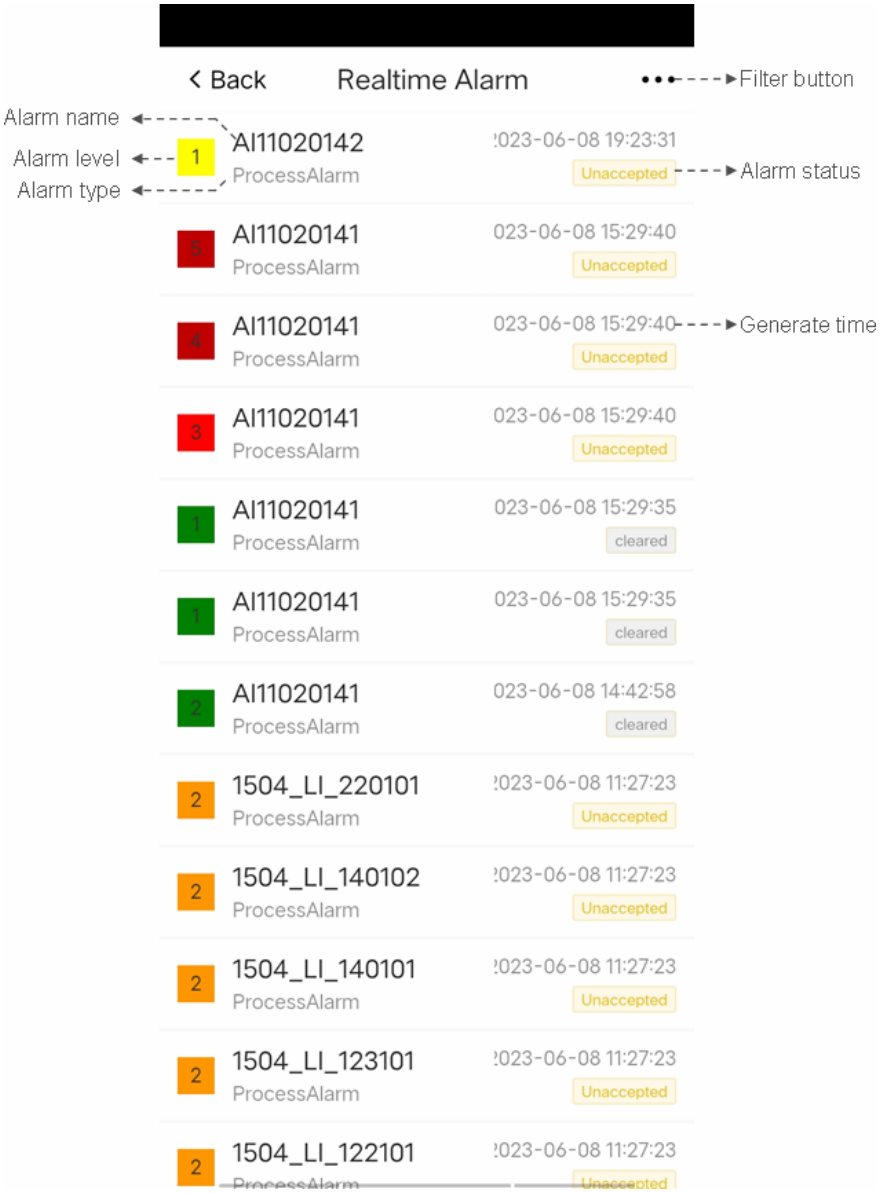


Figure 4-2 Realtime Alarm Example

In the real-time alarm list shown in the figure above, you can filter alarms as needed or view detailed information for a specific alarm.

- Filter Alarms:
  Click … at the upper right corner to display the "Filter" interface, where you can filter alarms by alarm category and alarm level.
- View Alarm Details:
  In the alarm list, click on an alarm entry to view its detailed information, as shown in the following figure.

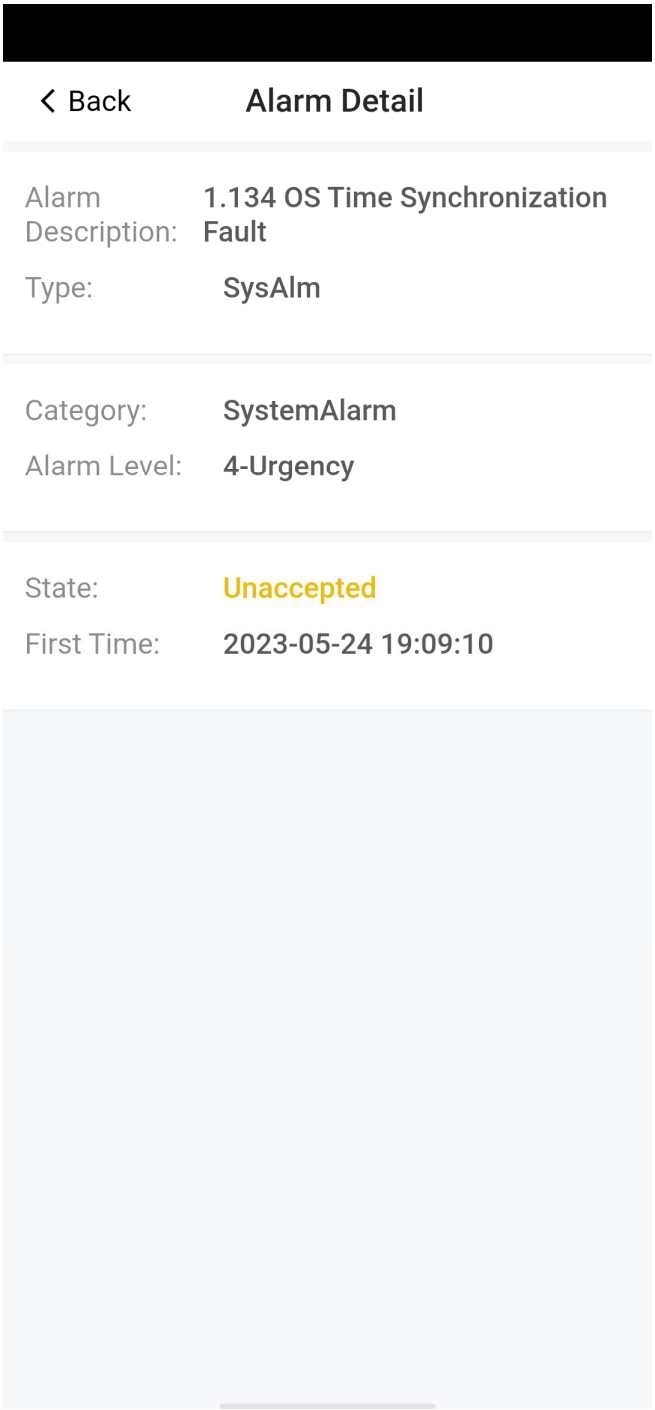


Figure 4-3 Real-time Alarm Example

4.4 View Tags

The WebSight mobile client allows users to view the current tags and their trends in the monitoring system and filter tags based on conditions.

Clicking on the "Tag" button on the homepage will display the tag list shown in the figure below. By default, it shows the information of all tags in the current operating domain, and the trend displayed in the tag list is the trend of the tag within the last 2 minutes.

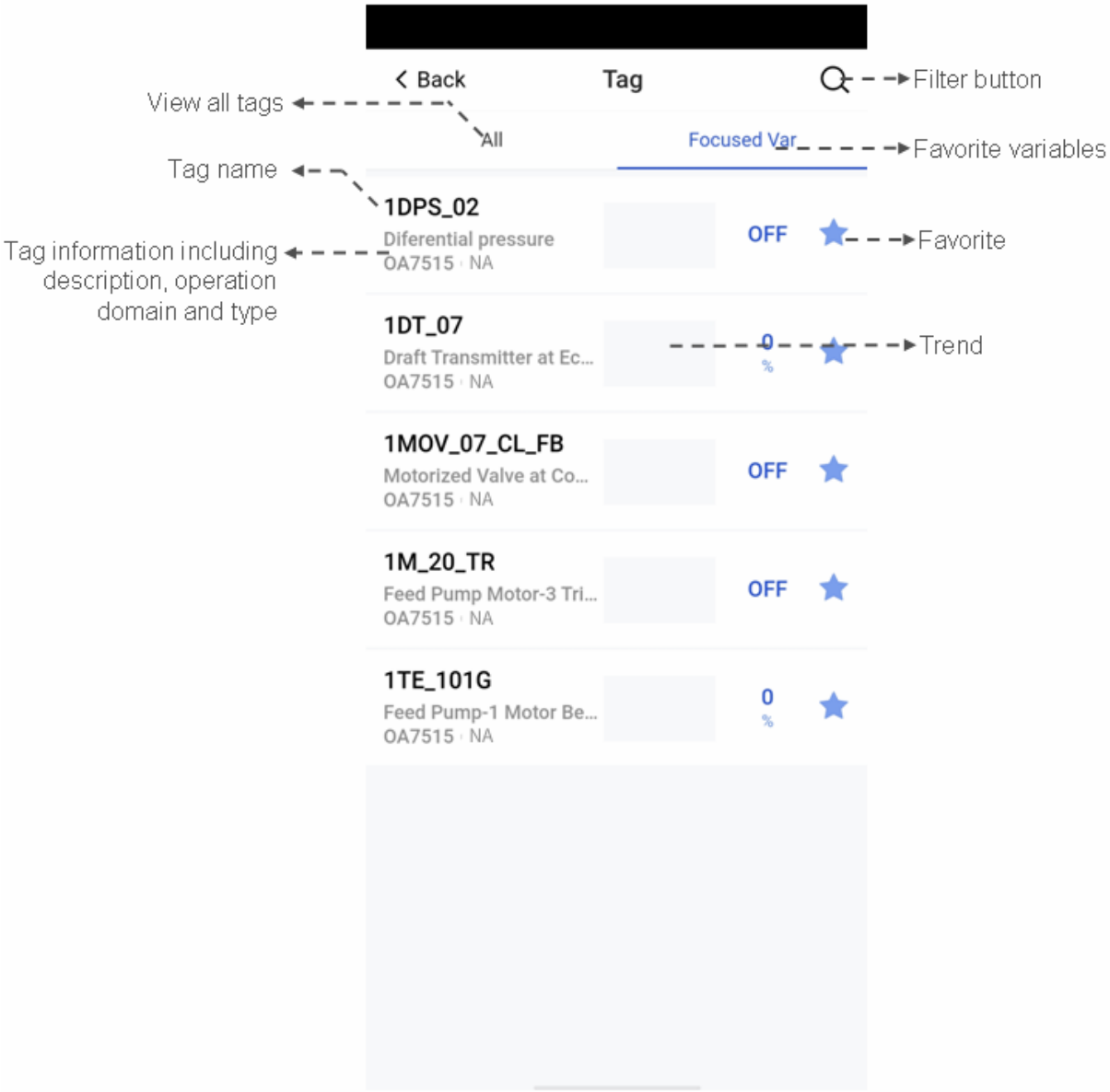


Figure 4-4 Tag List Example

In the tag list shown in the above figure, you can filter tags as needed or view detailed information for a specific tag.

- Filter Tags:
  Click at the upper right corner to display the "Filter" interface, where you can search for tags by the keyword of the tag name.
- View Tag Details:

In the tag list, click on a tag entry to display the tag details as shown in the figure below. This includes the real-time value of the tag, the real-time value of internal members, trend screen, and alarm information for the tag.

Figure 4-5 Tag's Detail Example

4.5 View Flowchart

Through WebSight mobile client, you can view the graphics in the operation group where the current logged-in user resides.

Clicking on "Flowchart" on the home page will display the graphics list shown in the figure below, which shows the flowchart folders and Flowcharts in the current path. Clicking on a flowchart in the list will display the detailed flowchart monitoring screen.

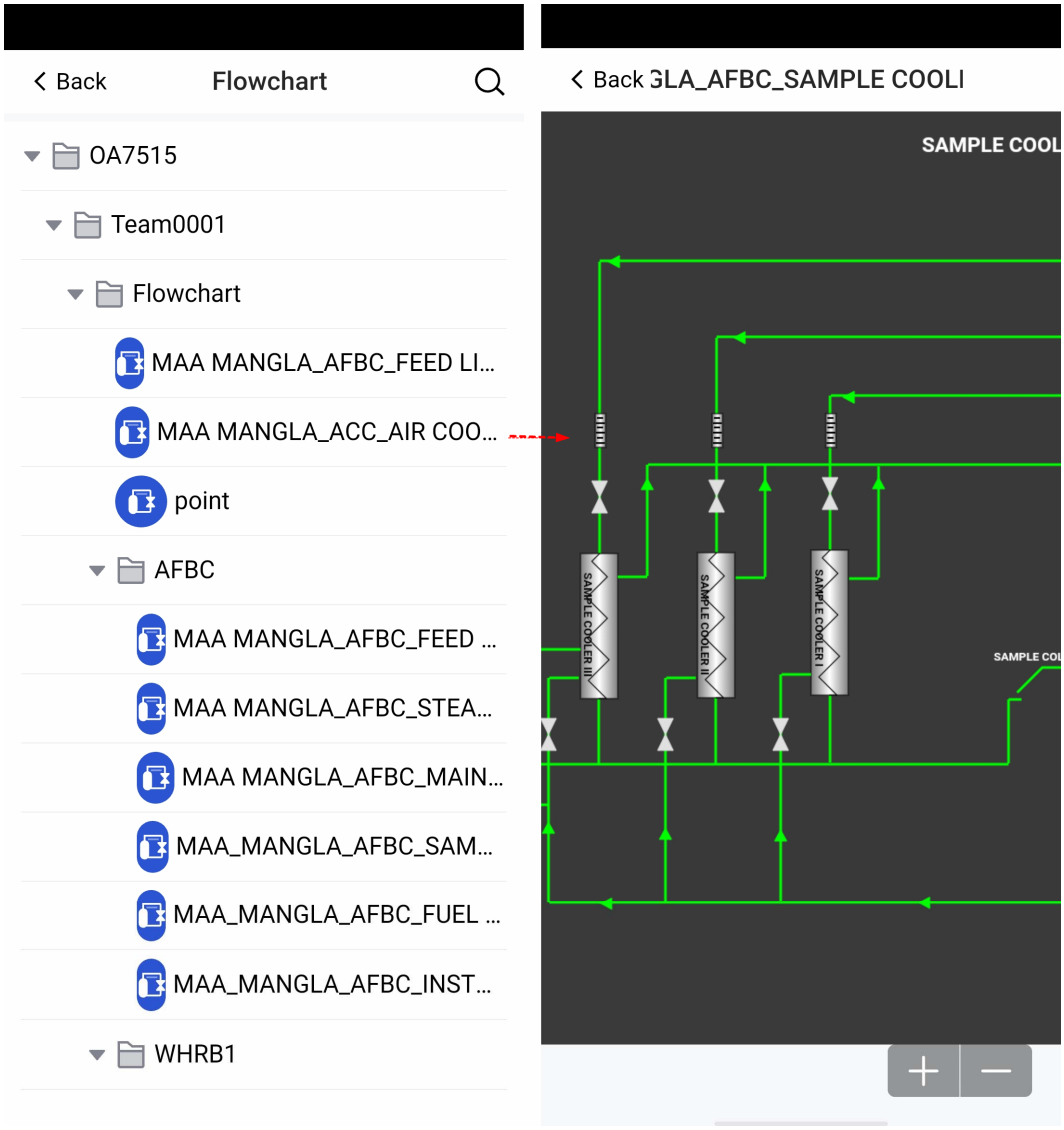


Figure 4-6 Flowchart Example

Section 5 Revision

Table 5-1 Retrofit list of the version

Document Version	Applicable Software	Remarks
V1.0(20230817)	OMC V1.20.00.00-M and above OMC High-performanceHMI V5.10.00.00 WebSight V1.04.00.01-M	The first edition