Instruction Manual

PC Recorder Series

Model: **PC Recorder**

Table of Contents

1. Introduction 5

1.1 Versions covered in this instruction manual 5
1.2 Precautions 6
1.3 Overview of PC Recorder 7
1.3.1 Functions of PC Recorder 7
1.3.2 Communication with I/O unit 7
1.3.3 System requirements 7
1.4 Others 8
1.4.1 Supported browser 8

2. Introduction 9

2.1 What to prepare 9
2.2 Setup procedure 9
2.3 Settings for PC Recorder 10
2.3.1 Installation of PC Recorder 10
2.3.2 Uninstallation of PC Recorder 10
2.3.3 Startup of PC Recorder 10
2.3.4 Connection between PC Recorder and I/O unit 11
2.4 Description of PC Recorder parts 12
1. View (V) 12
2. Setting (C) 12
3. Adjustment (D) 12
4. Language（L） 12
5. Version (A) 13
6. Close (X) 13

3. Setting 14

3.1 I/O connection setting 14
3.2 I/O channels 15
3.2.1 Analog input (AI) setting 16
1. Basic setting 16
2. Zone setting 18
3. Alarm zone setting 20
4. Alarm output setting 22
5. Reset function value setting 23
3.2.2 Digital input (DI) setting 24
1. Basic setting 24
2. Reset function value setting 26
3.2.3 Operation input (OI) setting 27
1. Basic setting 27
2. Zone setting 30
3. Alarm zone setting 32
4. Alarm output setting 34
5. Reset function value setting 35
3.2.4 Digital output (DO) settings 36
1. Basic setting 36
3.2.5 Copy of I/O channel setting 38
3.3 Web HTTP 39

3.4 Recording trend 40
3.4.1 Basic setting 41
1. Recording setting 41
2. Normal recording 43
3. Trigger recording 44
3.4.2 Pen setting 46
3.5 Recording report 48
3.5.1 Basic setting 48
3.5.2 Channel setting 49

4. Recording data 52
4.1 Trend file 52
1. File name 52
2. Time correction 53
4.2 Report file 54
1. File name 54
2. Daily report 54
3. Monthly report 55
4. Yearly report 55
4.3 System log file 56
4.4 Folder structure 57

5. View 58
5.1 Description of display 58
1. Current date 58
2. Current time 58
3. Menu button 59
4. Trend status display 59
5. Error display 59
6. Screen lock display 59
7. Trend start button 59
5.2 Trend display 60
5.2.1 Display items 60
1. Numerical display 60
2. Graph display 62
5.2.2 Operation 63
1. Switch between pages 63
2. Expand/compress the time axis 63
3. Changing the maximum/minimum value of the scale 64
4. Write of comments 65
5.3 Trend display (Event summary) 66
5.3.1 Display content 66
5.3.2 Operation 67
5.4 Trend display (Comments summary) 68
5.4.1 Display content 68
5.4.2 Operation 69
5.5 Event view 70
5.5.1 Display content 70
5.6 Overview 71
5.6.1 Display content 71
5.7 Trend file 73
5.7.1 Display content 73
5.8 Report file 74

5.8.1 Display content 74
5.9 Language 75
5.9.1 Display content 75
5.9.2 Operation 76

6. Adjustment 77

7. License 78
7.1 License 78

8. Appendix 79
8.1 Troubleshooting 79
8.1.1 I/O unit : lamp indication 79
8.1.2 PC Recorder 79

1. Introduction

Thank you for choosing us.
Before using this unit, read the following:

1.1 Versions covered in this instruction manual

This instruction manual is available for the following versions:

■ About the version of the PC recorder

- This instruction manual is for version 1.0 or later of the PC Recorder.
- For instructions on confirming the version of the PC Recorder, refer to 2.45. Version (A).

■ Supported I/O unit

- This instruction manual is available for the following I/O unit:

Model	Version
R7K4GUS-G16D4	1.0.x

- For instructions on confirming the version of the I/O unit, refer to 2.45. Version (A).

1.2 Precautions

■ Precautions for connecting to I/O unit

- Connection to the unit should be established after logging in using a predetermined PC (PC Recorder) and a user account.

  If the I/O unit is connected/disconnected while the PC Recorder is running, its operation is not guaranteed.

■ Notes on browser-dependent display screens

- PC Recorder uses standard Web technology with a browser to achieve its display function. Therefore, note that it is subject to your browser's operating specifications (the specifications that may be changed, such as for version upgrades).

1.3 Overview of PC Recorder

PC Recorder (model: PC Recorder) is application software that runs on Windows.

1.3.1 Functions of PC Recorder

The functions of PC Recorder can be broadly divided into the following:

- I/O unit client
  Data input/output is available through the USB connection with our I/O unit.
- Web server
  Web server functions are implemented. Trend and report data can be viewed in a browser.
- Settings for various functions
  Right-click the task tray icon to display the menu, allowing you to set various functions from the setting display.
- Trend waveform recording
  Trend waveform data can be saved as binary files.
- Report recording
  Daily, monthly, and yearly report data can be saved in CSV format.

1.3.2 Communication with I/O unit

Communication with the I/O unit is conducted through the USB connection (CDC).

1.3.3 System requirements

Refer to the table below for PC requirements for PC Recorder operation.

Item	Description
OS	A PC/AT compatible machine on which the following operating systems run normally: Windows 11
Browser	Chrome, Edge, Firefox
Language	Japanese/English

1.4 Others

1.4.1 Supported browser

The terminal (OS) and browsers on which the operation has been checked using a browser are listed below:

Terminal (OS)	Browser
Windows PC(11)	Microsoft Edge 119 Mozilla Firefox 120 Google Chrome 119

Note: Private/Secret mode is not supported.

Note that the operation is subject to change without notice for specification changes of the above terminal (OS) and browsers.

2. Introduction

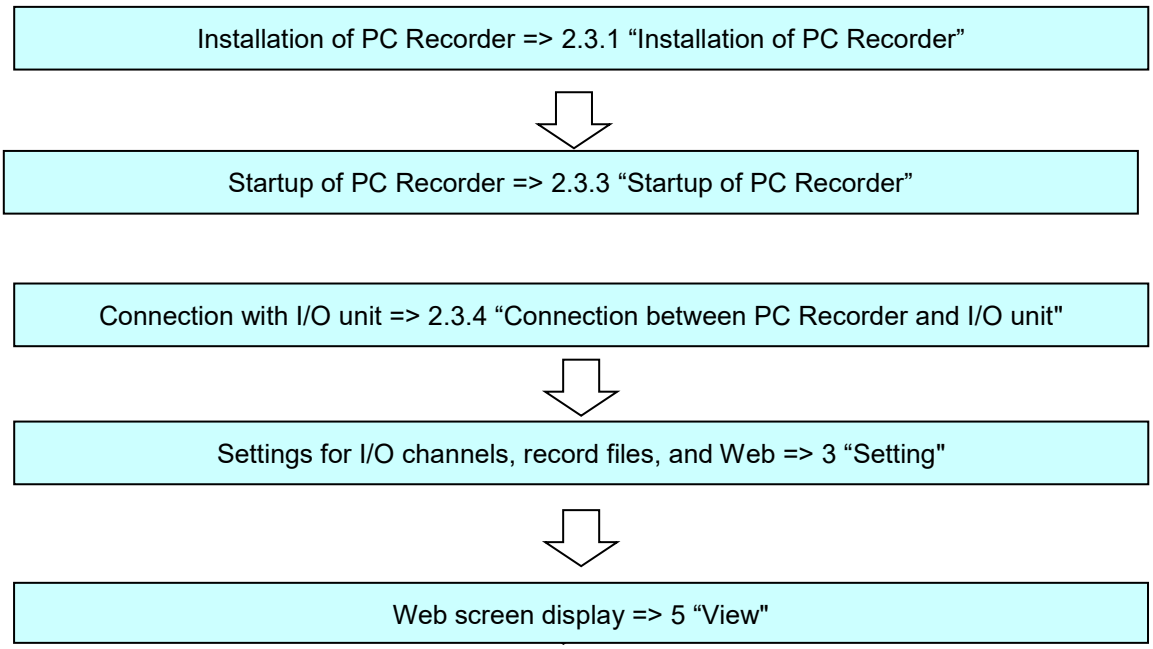
2.1 What to prepare

In addition to the I/O unit, prepare the following items:

- A personal computer (a USB port required)
- A USB cable (Type-C for the I/O unit side. For the PC side, refer to the specifications of your PC.)

2.2 Setup procedure

Set up PC Recorder following the procedure below:



2.3 Settings for PC Recorder

Install PC Recorder on your PC.

2.3.1 Installation of PC Recorder

Download PC Recorder from our website and uncompress it to any folder.
Run Setup.msi in the uncompressed folder and follow the dialog to install.

If an earlier version of PC Recorder is installed, uninstall it first and then install the latest version of PC Recorder.

2.3.2 Uninstallation of PC Recorder

From the Control Panel, select “All Control Panel Items” -> “Programs and Features.”
Select PC Recorder from the list and uninstall it.

2.3.3 Startup of PC Recorder

From the Start menu, select “M-SYSTEM” - “PC Recorder” -> “PC Recorder” and run it.

PC Recorder stays resident in the task tray after startup.

CAUTION

- When PC Recorder starts up for the first time, a Windows Security warning pop-up may displayed. If it is displayed, click “Allow access.”

2.3.4 Connection between PC Recorder and I/O unit

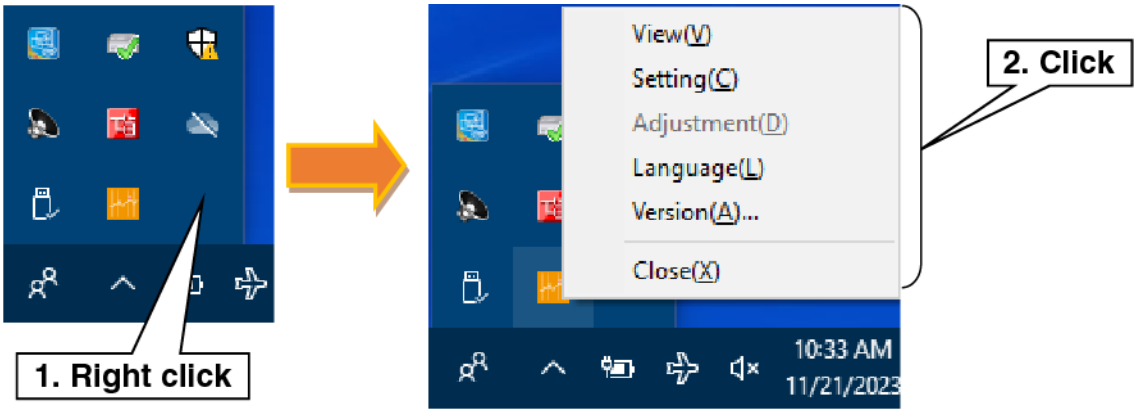
The I/O unit and PC Recorder are connected following the procedure below:

(1) Connect the I/O unit to the PC with a USB cable. When power is supplied from the PC to the I/O unit, the PWR indicator LED on the I/O unit lights in green.

(2) Check the connection to the I/O unit. When the I/O unit and PC Recorder are connected properly, the RUN indicator LED on the I/O unit lights in green. It does not light up when operating in the Demo mode.
->3.1 I/O connection setting

2.4 Description of PC Recorder parts

PC Recorder stays resident in the task tray after startup. Right-click the “PC Recorder” icon in the task tray to open the menu.



1. View (V)

Starts the default browser and displays the Trend display. For more information, refer to 5. View.

2. Setting (C)

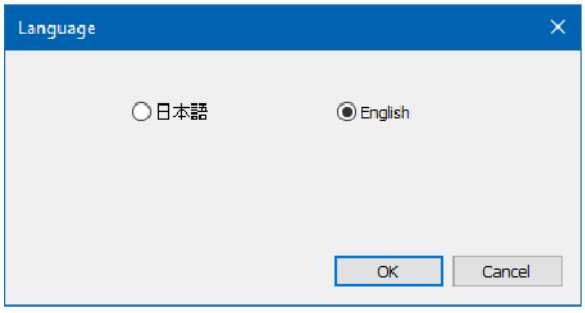
Displays the Setting dialog. For more information, refer to 3. Setting.

3. Adjustment (D)

Adjusts analog input channels 1 to 16. Refer to 6. Adjustment.

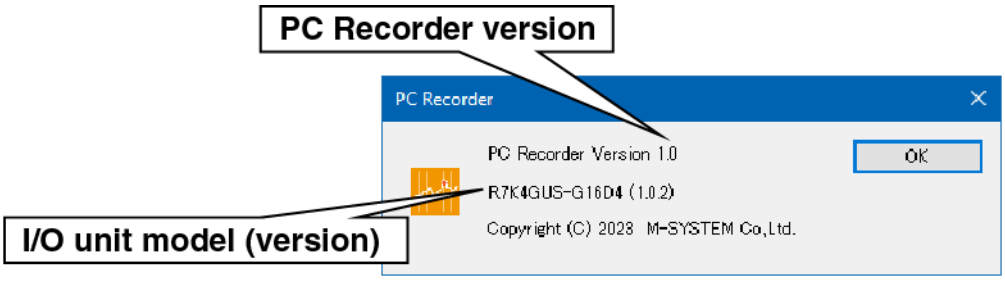
4. Language（L）

Switches the language displayed on PC Recorder. Japanese and English are selectable. Click the [OK] button to apply.



5. Version (A)

Displays the format and version of PC Recorder and the I/O unit.



CAUTION

- The model (version) of the I/O unit last recognized by PC Recorder is displayed.

6. Close (X)

Closes PC Recorder.

CAUTION

- When PC Recorder is closed, trend recording ends.

3. Setting

Right-click the “PC Recorder” icon in the task tray and click “Setting (C).” The Setting dialog is displayed.

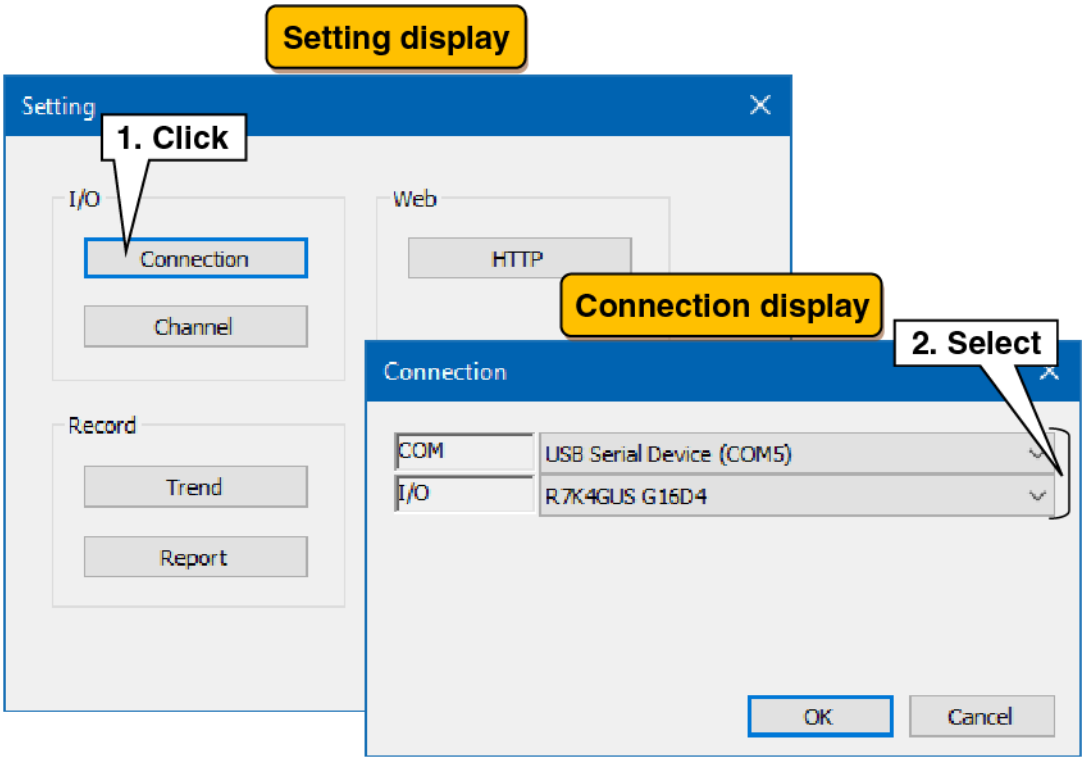
3.1 I/O connection setting

The setting for connection with the I/O unit are made as follows:

(1) In the “Setting” display, click the “Connection” button to show the “Connection” display.

(2) Select the connection port between the I/O unit and the PC.

(3) Select the operation mode with the I/O unit.



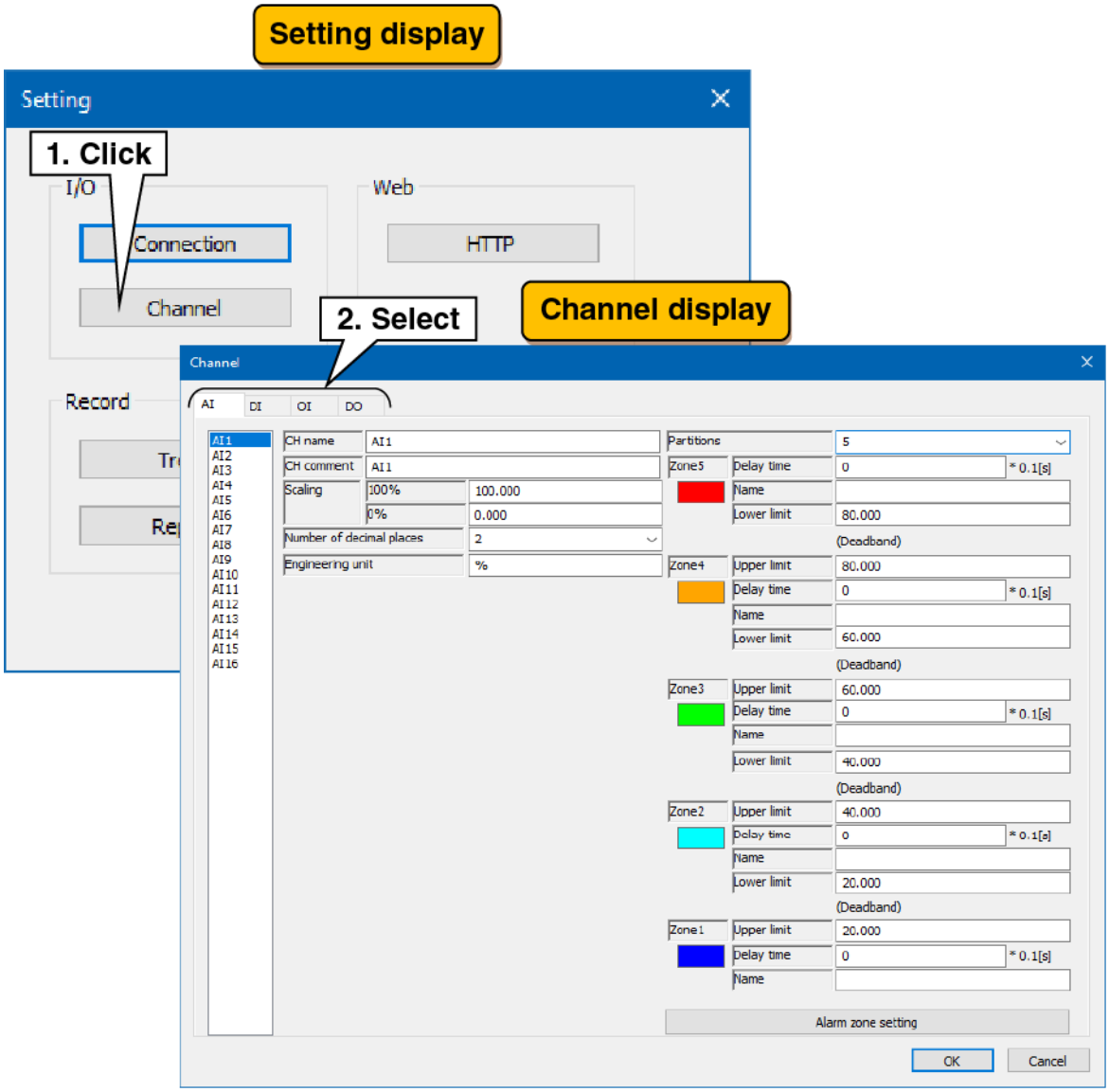
Settings	Description
COM	Select the connection port between the I/O unit and the PC.
I/O	Select “Demo” or “R7K4GUS G16D4” as the I/O unit.

3.2 I/O channels

The I/O unit input/output setting are made as follows:

(1) In the “Setting” display, click the “Channel” button to show the “Channel” display.

(2) Clicking a tab for the input/output type to be set shows the corresponding display.



3.2.1 Analog input (AI) setting

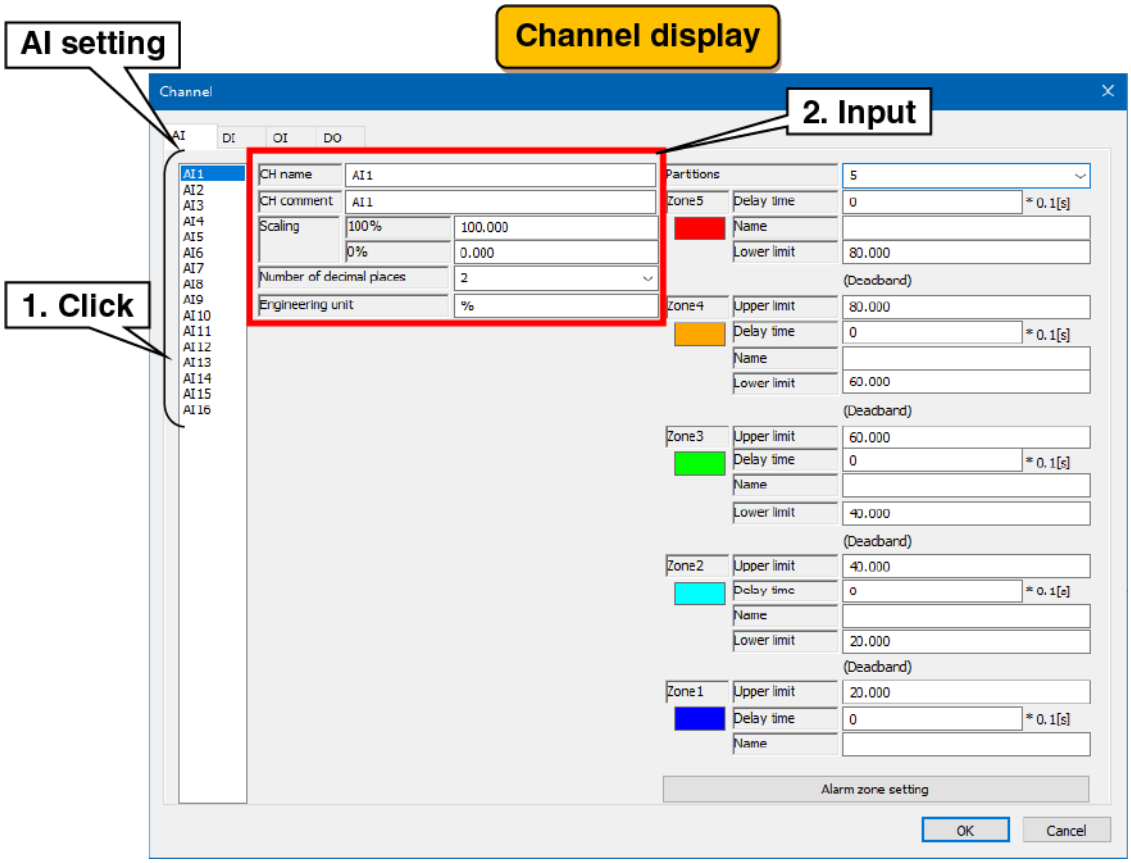
Make the analog input (AI) setting. There are 16 analog input channels (AI1 to AI16).

1. Basic setting

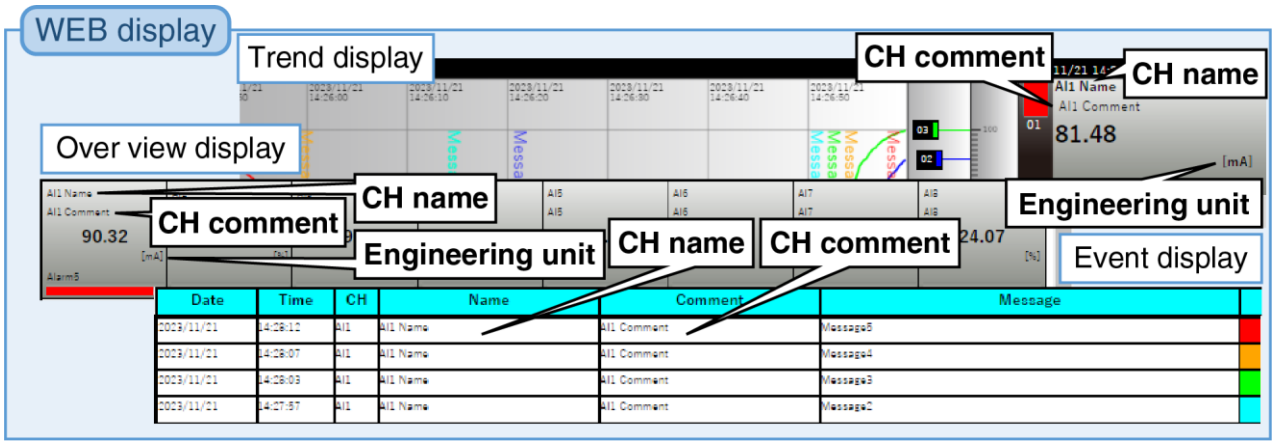
Make the basic setting for the analog input (AI).

(1) Clicking the channel to be set displays the current setting.

(2) Make the basic setting. In reference to the table below, set the various parameters.



Settings	Description
CH name	Set the name of the channel within 16 characters.
CH comment	Set the tag name or other comments about the channel within 16 characters.
Scaling	For each of 0% and 100%, set the corresponding actual quantity as a numerical value.
Number of decimal places	Set the number of decimal places for numbers displayed such as on the WEB display. Set this in the range of 0 to 3.
Engineering unit	Set the engineering unit that corresponds to the actual quantity set in “Scale.” Set this within eight characters.

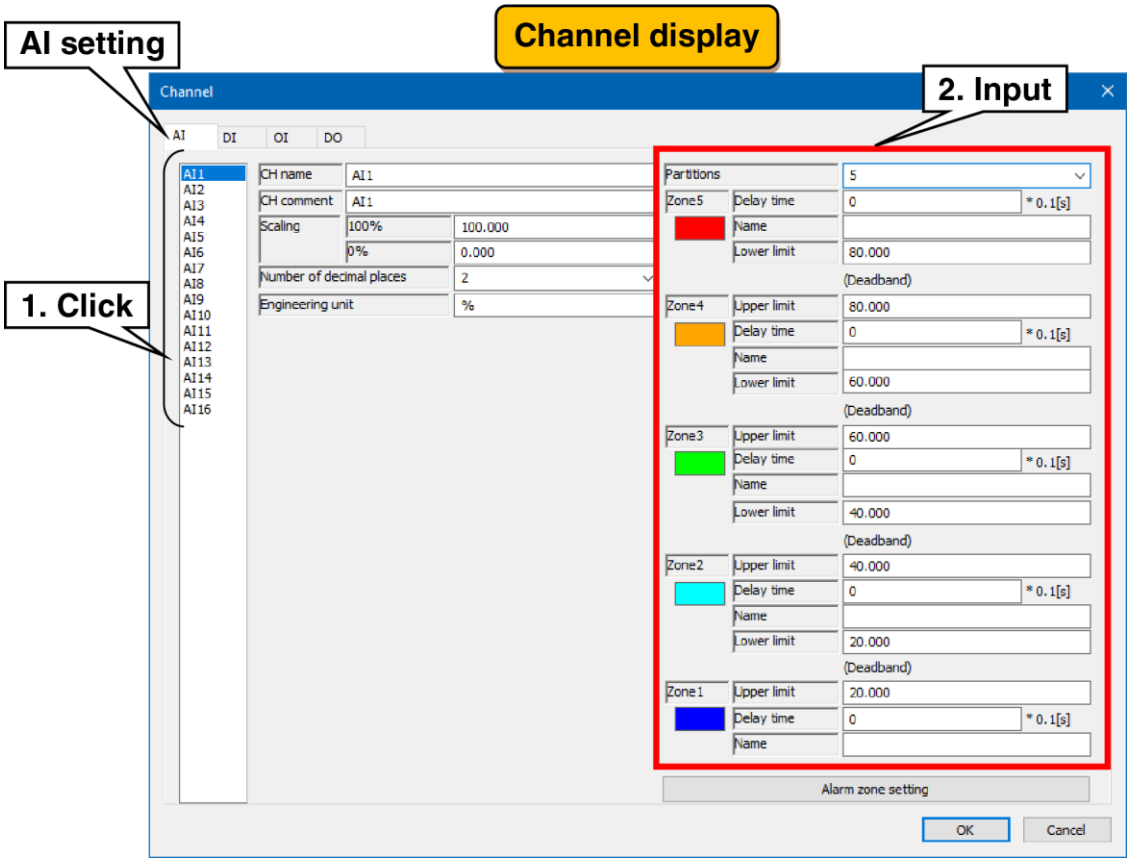


2. Zone setting

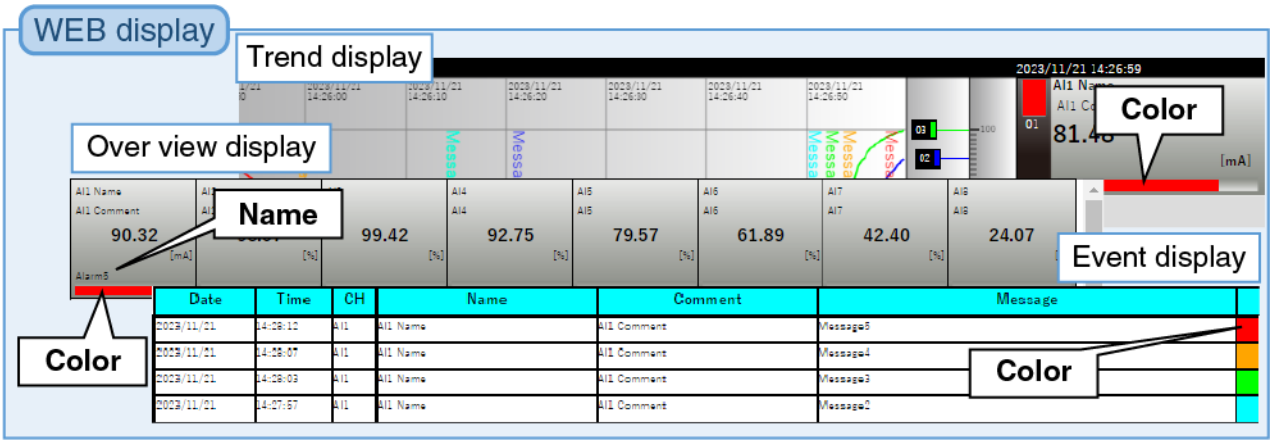
Make the analog input (AI) zone setting.

(1) Clicking the channel to be set displays the current setting.

(2) Make the zone setting. In reference to the table below, set the various parameters.



Settings	Description
Partitions	Set the partitions for use. Selectable from 0 (unused)/2/3/4/5.
Name	Set the name of each zone within 32 characters.
Color	Set a color to represent the zone on the WEB display.
Delay time	Set the time required for the transition from another zones to the corresponding zone to be confirmed in the range of 0.0 to 99.9 (seconds). When Zone 1 is set to five seconds: The transition to Zone 1 is confirmed five seconds after the input value changes in the state of Zone 2 and becomes less than or equal to the upper limit of Zone 1. It remains in Zone 2 until five seconds have elapsed.
Upper limit / Lower limit	The upper and lower limits of the zone are set by the actual quantity. Set the upper limit > lower limit in order. ● When setting a hysteresis zone: When setting a hysteresis zone between Zone 1 and Zone 2, set the hysteresis zone such that it is between the upper limit of Zone 1 and the lower limit of Zone 2. Set the other zones in the same way. ● When setting no hysteresis zone: When setting no hysteresis zone between Zone 1 and Zone 2, set the same value for the upper limit of Zone 1 and the lower limit of Zone 2. Set the other zones in the same way.

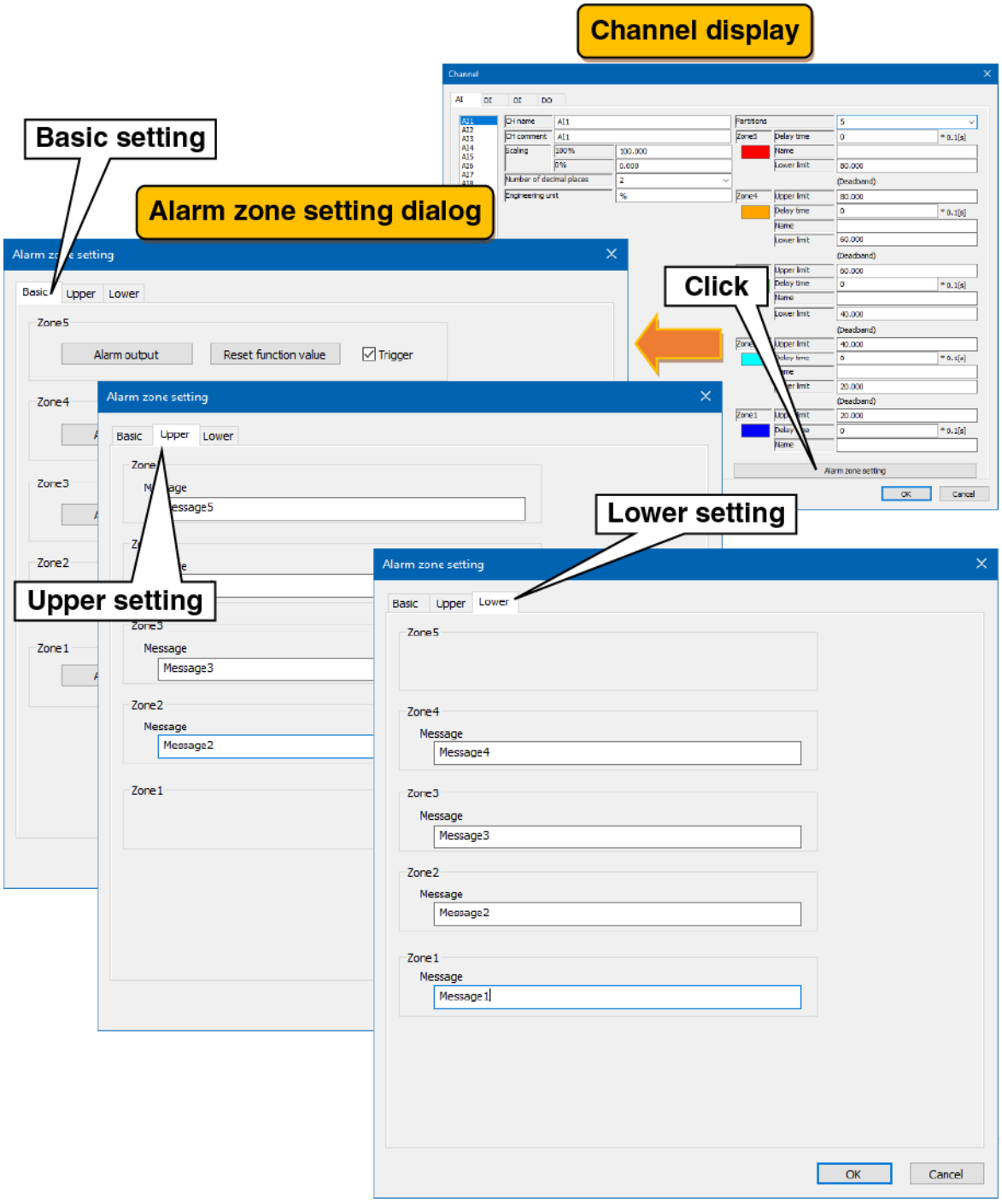


3. Alarm zone setting

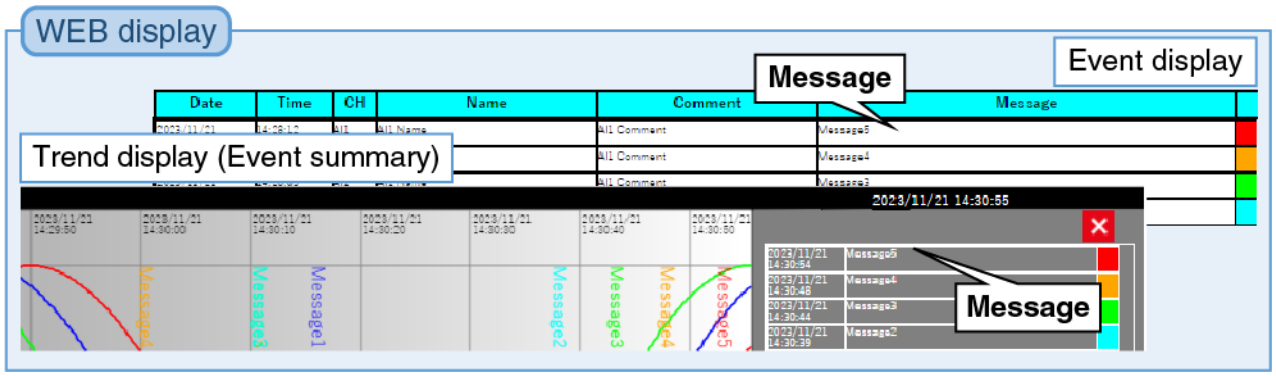
An event occurs when a transition is made to a zone set in the zone setting.

(1) Clicking the “Alarm zone setting” button on the “Channel” display shows the “Alarm zone setting” dialog. If the partitions is 0 (unused), the click is invalid.

(2) In reference to the table below, set the various parameters. Click the [OK] button to return to the “Channel” display.



Settings	Description
Trigger	Set whether or not to perform trigger recording when the input value changes and enters the corresponding zone. Select the checkbox if you use the trigger recording. -> 3.4.13. Trigger recording
Message	Set the message when the event occurs within 32 characters.

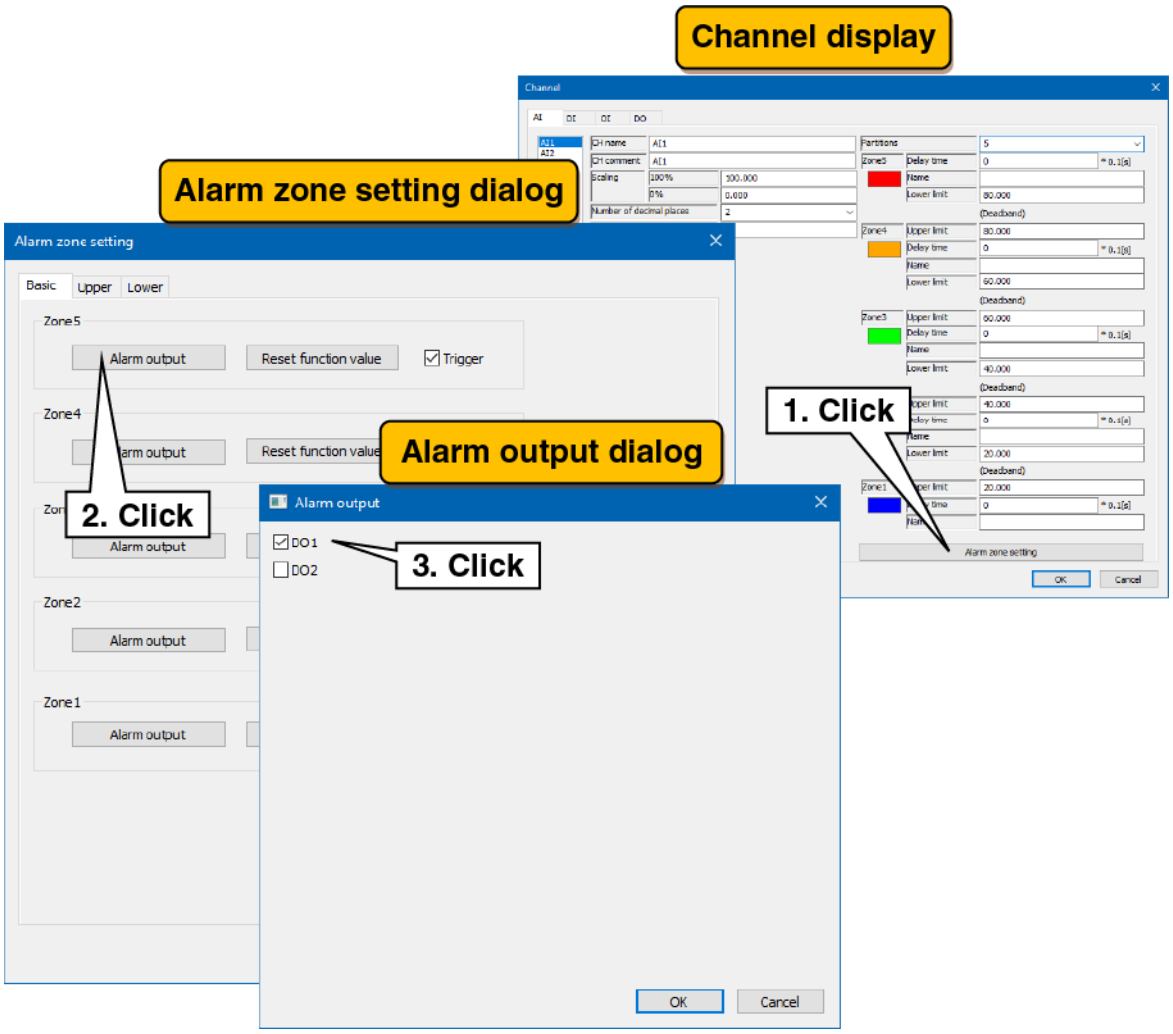

WEB display
Event display
Message
Trend display (Event summary)
Date
Time
CH
Name
Comment
Message
2023/11/21 14:30:55
Message
Message4
Message3
Message1
Message2
Message3
Message4
Message5

4. Alarm output setting

For each zone, specified DOs can be turned ON.

(1) Clicking the “Alarm zone setting” button on the “Channel” display shows the “Alarm zone setting” dialog. Clicking the “Alarm output” button in the specified zone shows the “Alarm output” dialog.

(2) Select the checkboxes for the DO channels to be set and click the [OK] button.

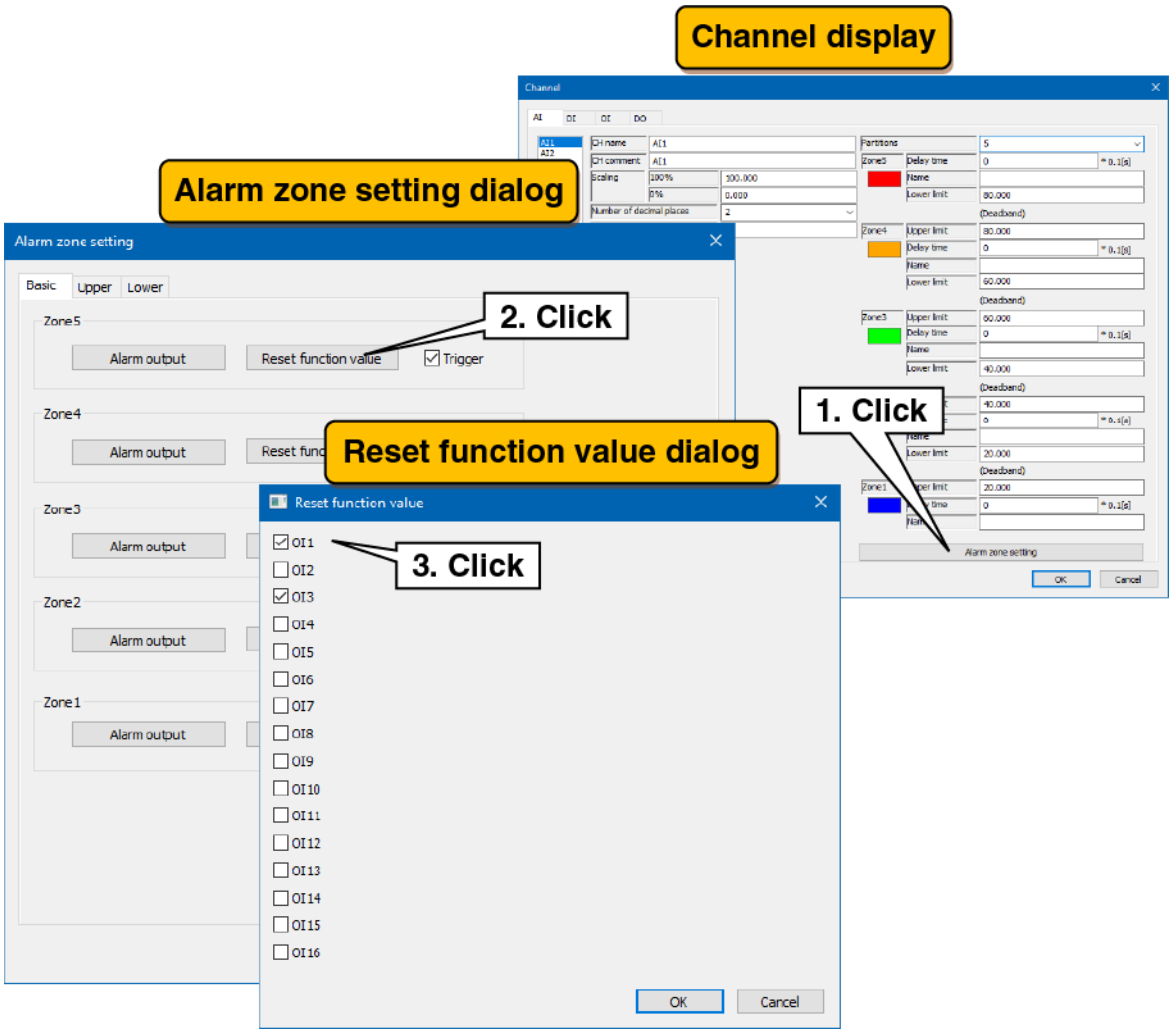


5. Reset function value setting

The operation of the specified OI can be reset during zone transition.

(1) Clicking the “Alarm zone setting” button on the “Channel” display shows the “Alarm zone setting” dialog.
Clicking the “Reset function value” button in the specified zone shows the “Reset function value” dialog.

(2) Select the checkboxes for the OI channels to be set and click the [OK] button.



Set each channel following the above procedure.

The channel setting already made in the “Analog Input (AI)” display can be copied to other channels and only the necessary parts can be edited. -> 3.2.5 Copy of I/O channel setting

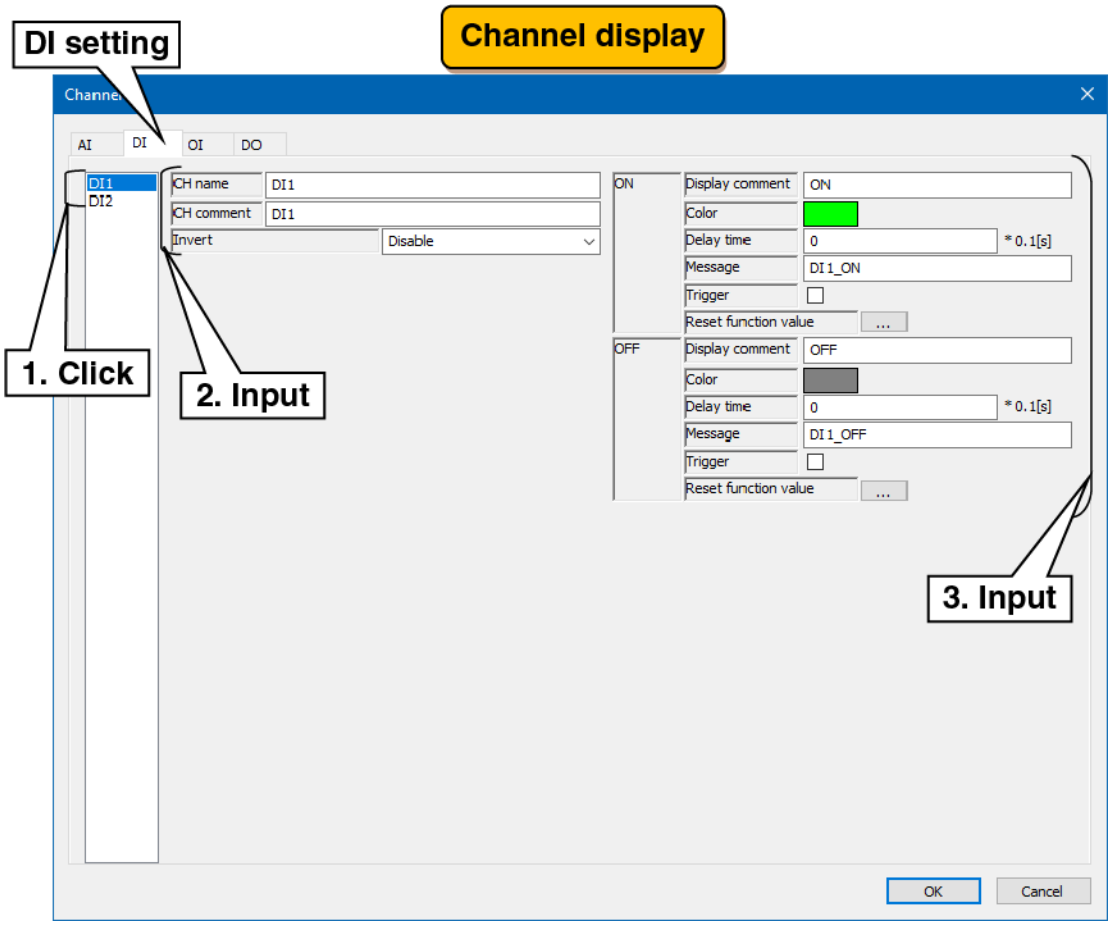
3.2.2 Digital input (DI) setting

Make the digital input (DI) setting. There are two digital input channels (DI1/DI2).

1. Basic setting

Make the basic setting for the digital input (DI).

(1) Clicking the channel to be set shows the current setting.

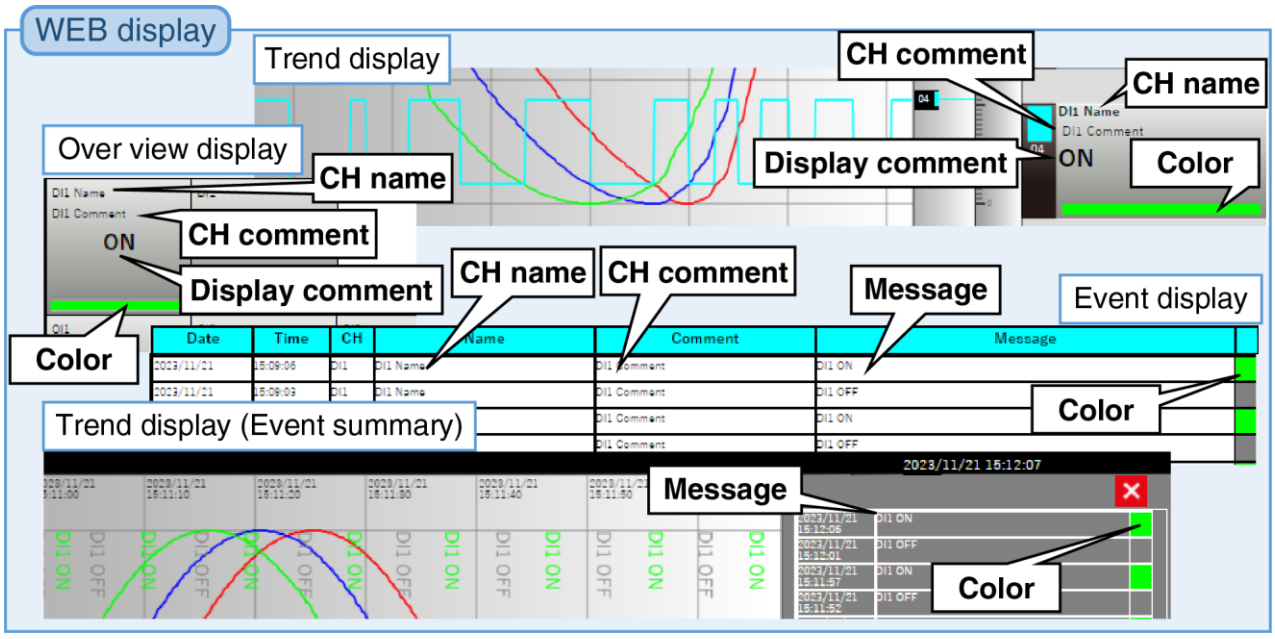


(2) Make the basic setting.

Settings	Description
CH name	Set the name of the channel within 16 characters.
CH comment	Set the tag name or other comments about the channel within 16 characters.
Invert	If ON/OFF of the input signal and ON/OFF as an application signal are reversed, select Enabled.

(3) Make the settings for each of ON and OFF.

Settings	Description
Display comment	Set the comment for each of ON and OFF. Set this within eight characters.
Color	Set a color to represent the status on the WEB display for each of ON and OFF.
Delay time	Set the delay time for each of ON and OFF. (Setting range: 0.0 to 99.9 seconds)
Message	Set the message when the event occurs within 32 characters.
Trigger	Set whether or not to perform trigger recording when the input value changes and enters the corresponding zone. Select the checkbox if you use the trigger recording. -> 3.4.13. Trigger recording

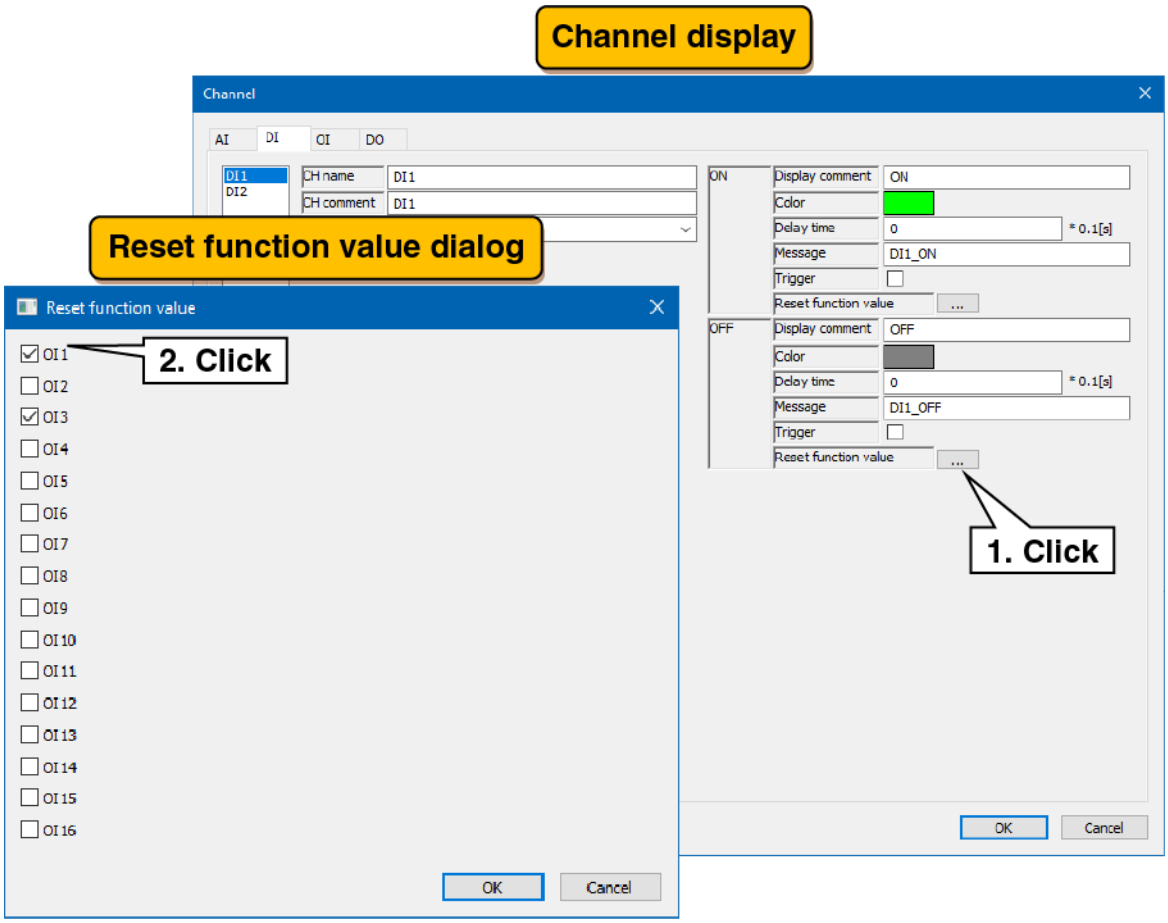

WEB display
Trend display
CH comment
CH name
Display comment
Color
Over view display
CH name
CH comment
Display comment
Color
CH name
CH comment
Message
Event display
Color
Trend display (Event summary)
Message
Color

2. Reset function value setting

The operation of the specified OI can be reset by turning DI ON -> OFF, OFF ->ON.

(1) Clicking the “Reset function value” button on the “Channel” display show the “Reset function value” dialog.

(2) Select the checkboxes for the OI channels to be set and click the [OK] button.



Set each channel following the above procedure.

The channel setting already made in the “Digital Input (DI)” display can be copied to other channels and only the necessary parts can be edited. -> 3.2.5 Copy of I/O channel setting

3.2.3 Operation input (OI) setting

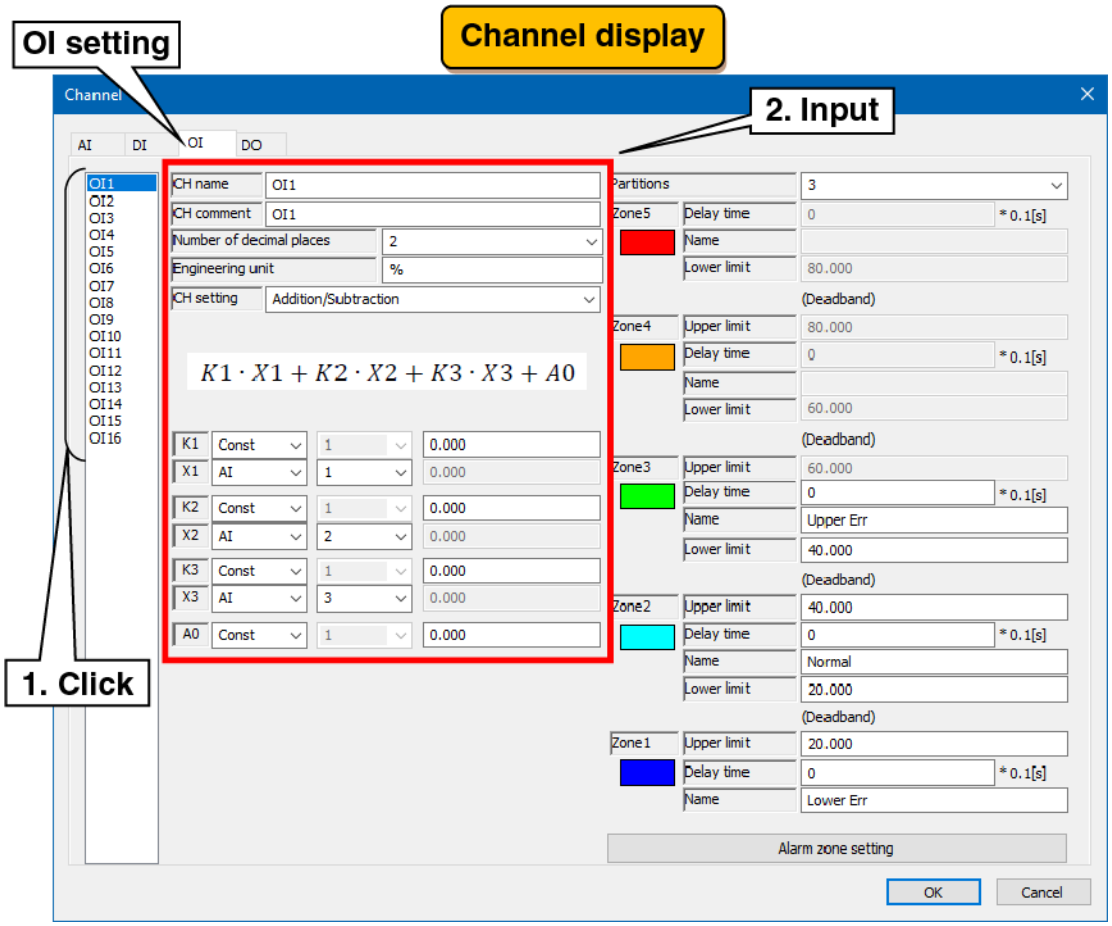
Make the operation input (OI) setting. There are 16 operation input channels (OI1 to OI16).

1. Basic setting

Make the basic setting for the operation input (OI).

(1) Clicking the channel to be set displays the current setting.

(2) Make the basic setting. In reference to the table below, set the various parameters.



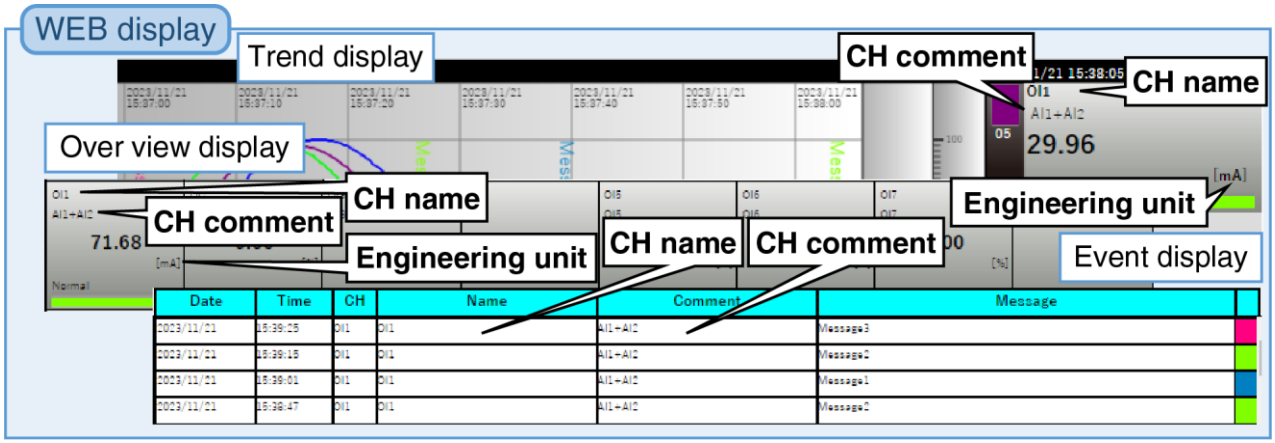
Settings	Description
CH name	Set the name of the channel within 16 characters.
CH comments	Set the tag name or other comments about the channel within 16 characters.
Number of decimal places	Set the number of decimal places for numbers displayed such as on the WEB display. Set this in the range of 0 to 3.
Engineering unit	Set the engineering unit. Set this within eight characters.
CH setting	Select from the following: Unused/ Addition/Subtraction / Multiplication / Division / Extraction of square root / Moving average / First order lag / exp / Common logarithm / Natural logarithm / Peak hold (maximum) / Peak hold (minimum) / Power / Analog integration / F-value operation / antilogarithm / Scaling / Time.

Operation specifications

Operation name	Expression	Parameter
Addition/Subtraction	K1X1+K2X2+ K3X3+A0	K1, K2, K3, A0, X1, X2, X3 : *1
Multiplication	(K1X1+A1)(K2X2+A2)+A0	K1, K2, A0, A1, A2, X1, X2 : *1
Division	(K1X1+A1)/(K2X2+A2)+A0	K1, K2, A0, A1, A2, X1, X2 : *1
Extraction of square root	$10K1\sqrt{X1}$	K1, X1 : *1
Moving average	$\frac{\sum_{n=0}^{N-1} x_n}{N}$	X : *1 N: Moving average value (4/8/16/32/64) RST: Initialization
First order lag	$G(s) = \frac{K}{1+T_s}$	G : *1 T: Time constant (0 to 100 seconds) K: Gain (Constant) RST: Reset
exp	e^{X1_n}	X1 : *1
Common logarithm	logX1	X1 : *1
Natural logarithm	lnX1	X1 : *1
Peak hold (Maximum)	MAX(X1)	X1 : *1 RST: Initialization (MAX=X1)
Peak hold (Minimum)	MIN(X1)	X1 : *1 RST: Initialization (MIN=X1)
Analog integration	$\sum_{n=0}^{N} x_n$	X1: AI1 to 16, OI1 to 16 (Actual quantity (0 to 100%)) K1: Integration rate K2: Unit (M/H/D) K3: Dropout (0.000 to 120.000%) RST: Initialization
Power	$X1^{K1}$	X1, K1 : *1
F-value operation	$\sum 10^{\frac{X1-K1}{K2}}$	X1 : *1 K1: Reference temperature (°C) K2: Z-value (Positive real number) RST: Initialization
Antilogarithm	10^{X1}	X1 : *1
Scaling	K3+(K4-K3)*(X1-K1)/(K2-K1)	X1 : *1 K1: Zero (Input) *2 K2: Span (Input) *2 K3: Zero (Output) *2 K4: Span (Output) *2
Time	MM/DD hh::mm::ss	K1 - 0: month, 1: day, 2: hour, 3: minute, 4: second, 5: day of week Day of week - 0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday

*1: constants, AI1 to 16, DI1 and 2, and OI1 to 16 can be set. It can also be operated with DI: ON -> 1.0, OFF -> 0.0.

*2: The same value cannot be set for zero and span.

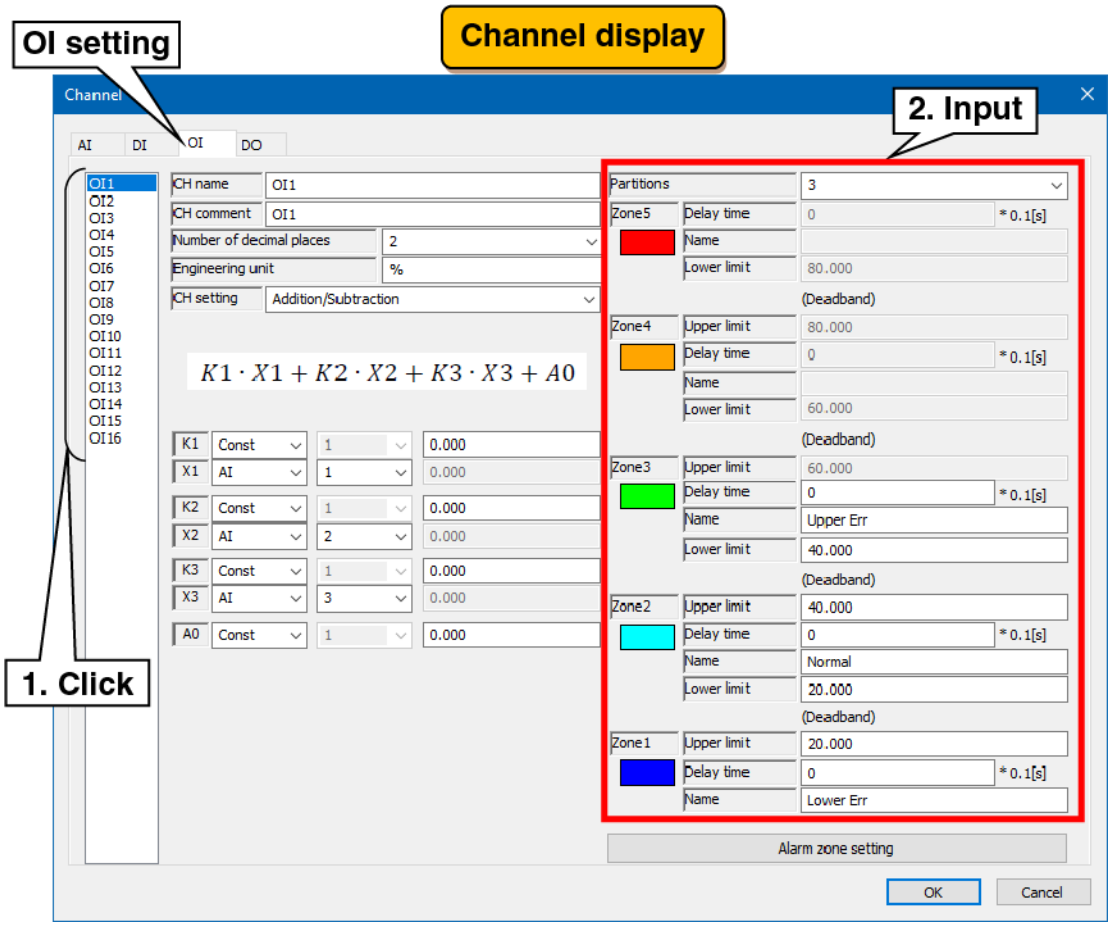

WEB display
Trend display
CH comment
CH name
Over view display
CH name
CH comment
Engineering unit
CH name
CH comment
Engineering unit
Event display
Date
Time
CH
Name
Comment
Message

2. Zone setting

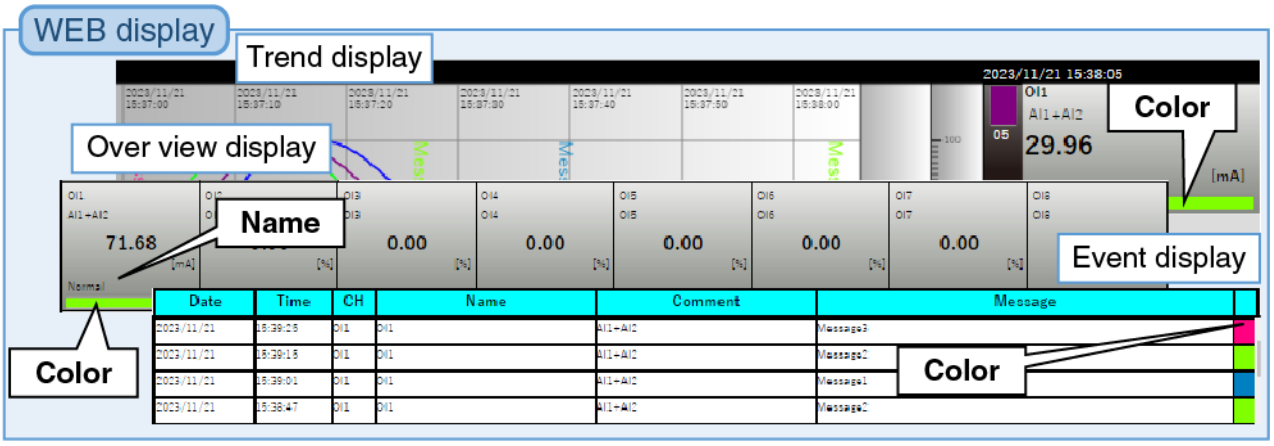
Make the zone setting for operation input (OI).

(1) Clicking the channel to be set displays the current setting.

(2) Make the zone setting. In reference to the table below, set the various parameters.



Settings	Description
Partitions	Set the partitions for use. Selectable from 0 (unused)/2/3/4/5.
Name	Set the name of each zone within 32 characters.
Display color	Set a color to represent the zone on the WEB display.
Delay time	Set the time required for the transition from another zones to the corresponding zone to be confirmed in the range of 0.0 to 99.9 (seconds). When Zone 1 is set to five seconds: The transition to Zone 1 is confirmed five seconds after the input value changes in the state of Zone 2 and becomes less than or equal to the upper limit of Zone 1. It remains in Zone 2 until five seconds have elapsed.
Upper limit / Lower limit	The upper and lower limits of the zone are set by the engineering unit value. Set the upper limit > lower limit in order. ● When setting a hysteresis zone: When setting a hysteresis zone between Zone 1 and Zone 2, set the hysteresis zone such that it is between the upper limit of Zone 1 and the lower limit of Zone 2. Set the other zones in the same way. ● When setting no hysteresis zone: When setting no hysteresis zone between Zone 1 and Zone 2, set the same value for the upper limit of Zone 1 and the lower limit of Zone 2. Set the other zones in the same way.

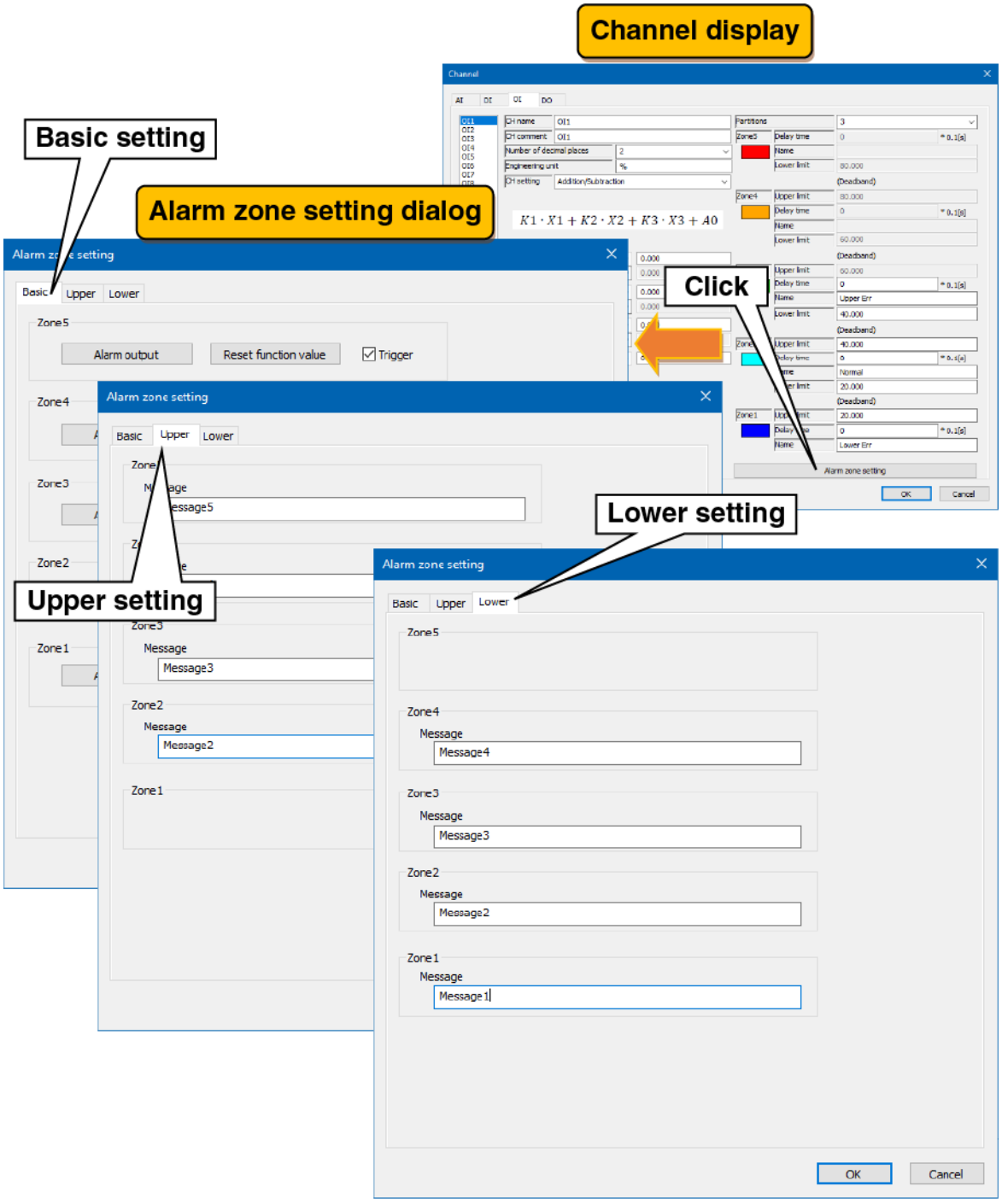

WEB display
Trend display
Over view display
Color
Name
Event display
Color
Color
2023/11/21 15:38:05
71.68
29.96
[mA]
Date
Time
CH
Name
Comment
Message

3. Alarm zone setting

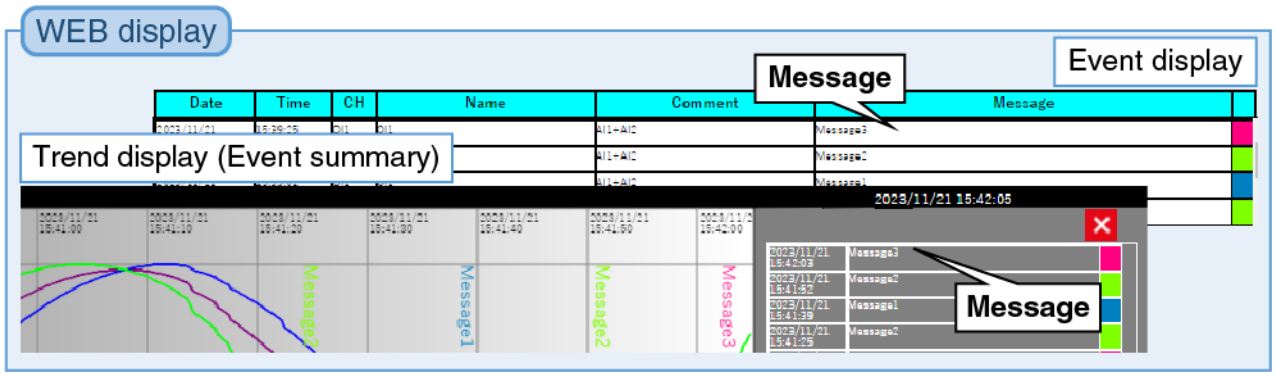
An event occurs when a transition is made to a zone set in the zone setting.

(1) Clicking the “Alarm zone setting” button on the “Channel” display show the “Alarm zone setting” dialog. If the partitions is 0 (unused), the click is invalid.

(2) In reference to the table below, set the various parameters. Click the [OK] button to return to the “Channel” display.



Settings	Description
Trigger	Set whether or not to perform trigger recording when the input value changes and enters the corresponding zone. To use the trigger recording, select the checkbox. -> 3.4.13. Trigger recording
Message	Set the message when the event occurs within 32 characters.

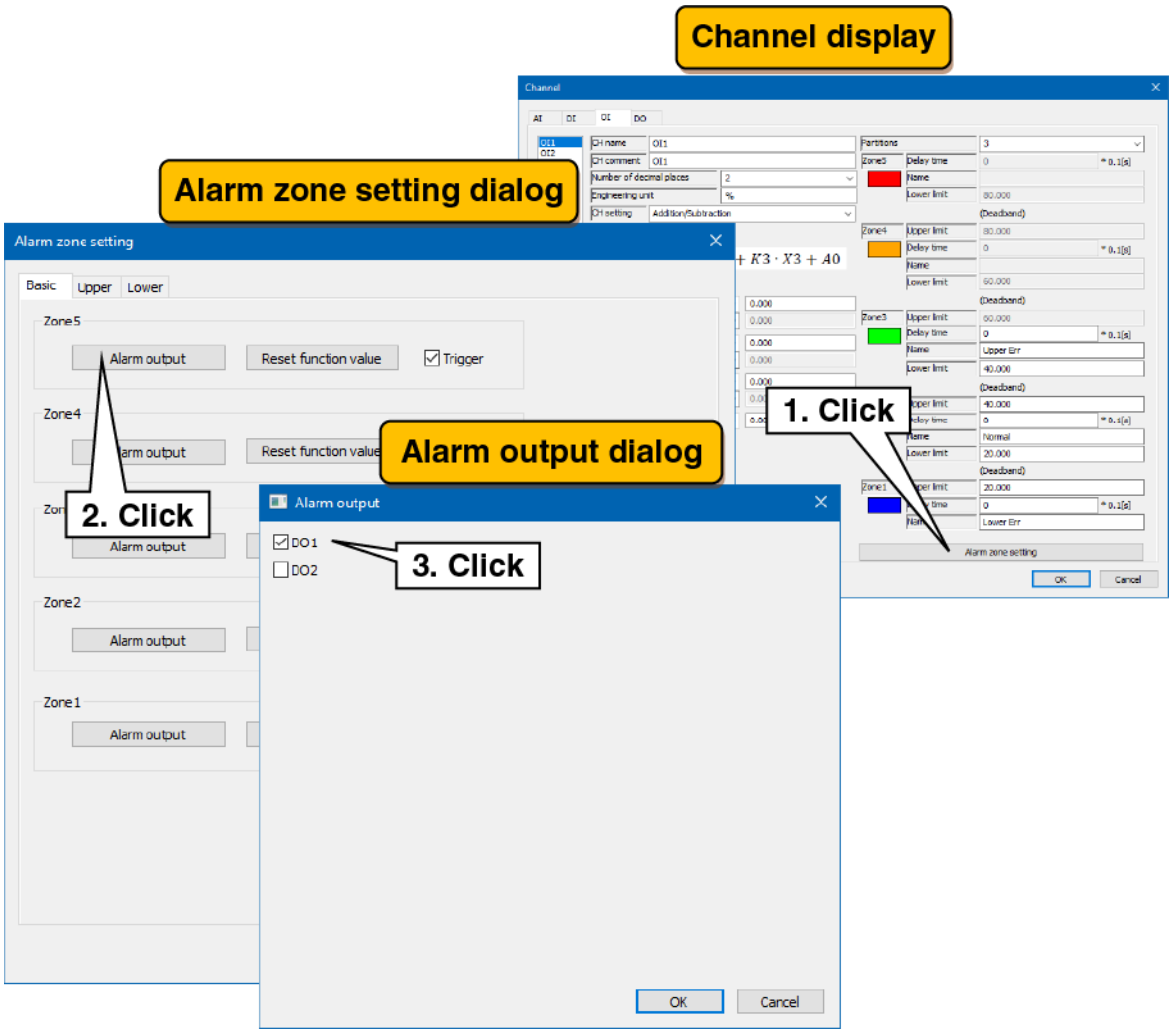

WEB display
Event display
Message
Trend display (Event summary)
Date
Time
CH
Name
Comment
Message
2023/11/21 15:42:05
Message
Message3
Message2
Message1

4. Alarm output setting

For each zone, specified DOs can be turned ON.

(1) Clicking the “Alarm zone setting” button on the “Channel” display show the “Alarm zone setting” dialog. Clicking the “Alarm output” button in the specified zone show the “Alarm output” dialog.

(2) Select the checkboxes for the DO channels to be set and click the [OK] button.

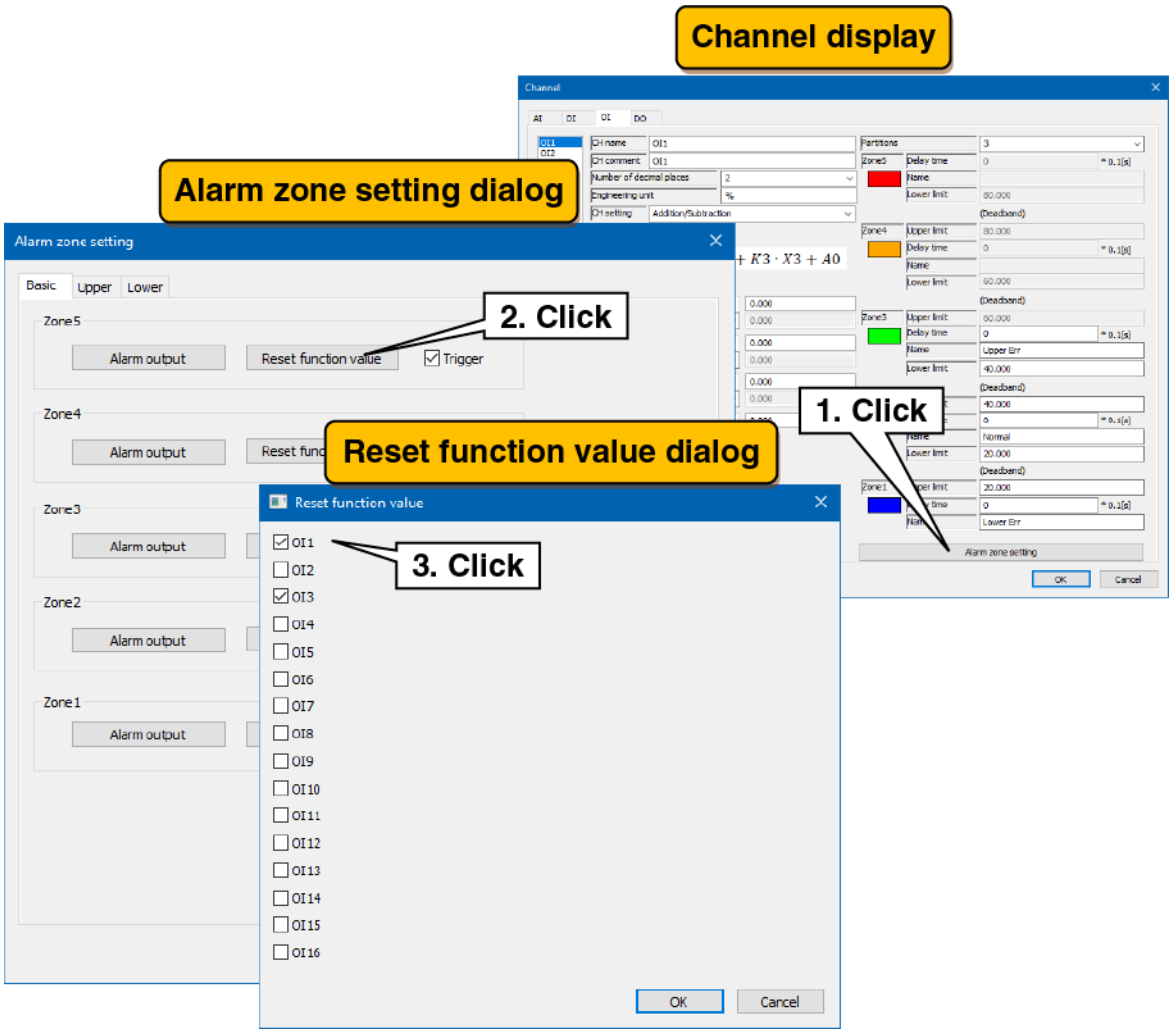


5. Reset function value setting

The operation of the specified OI can be reset during zone transition.

(1) Clicking the “Alarm zone setting” button on the “Channel” display show the “Alarm zone setting” dialog. Clicking the “Reset function value” button in the specified zone show the “Reset function value” dialog.

(2) Select the checkboxes for the OI channels to be set and click the [OK] button.



Set each channel following the above procedure.

The channel setting already made in the “Operation Input (OI)” display can be copied to other channels and only the necessary parts can be edited. -> 3.2.5 Copy of I/O channel setting

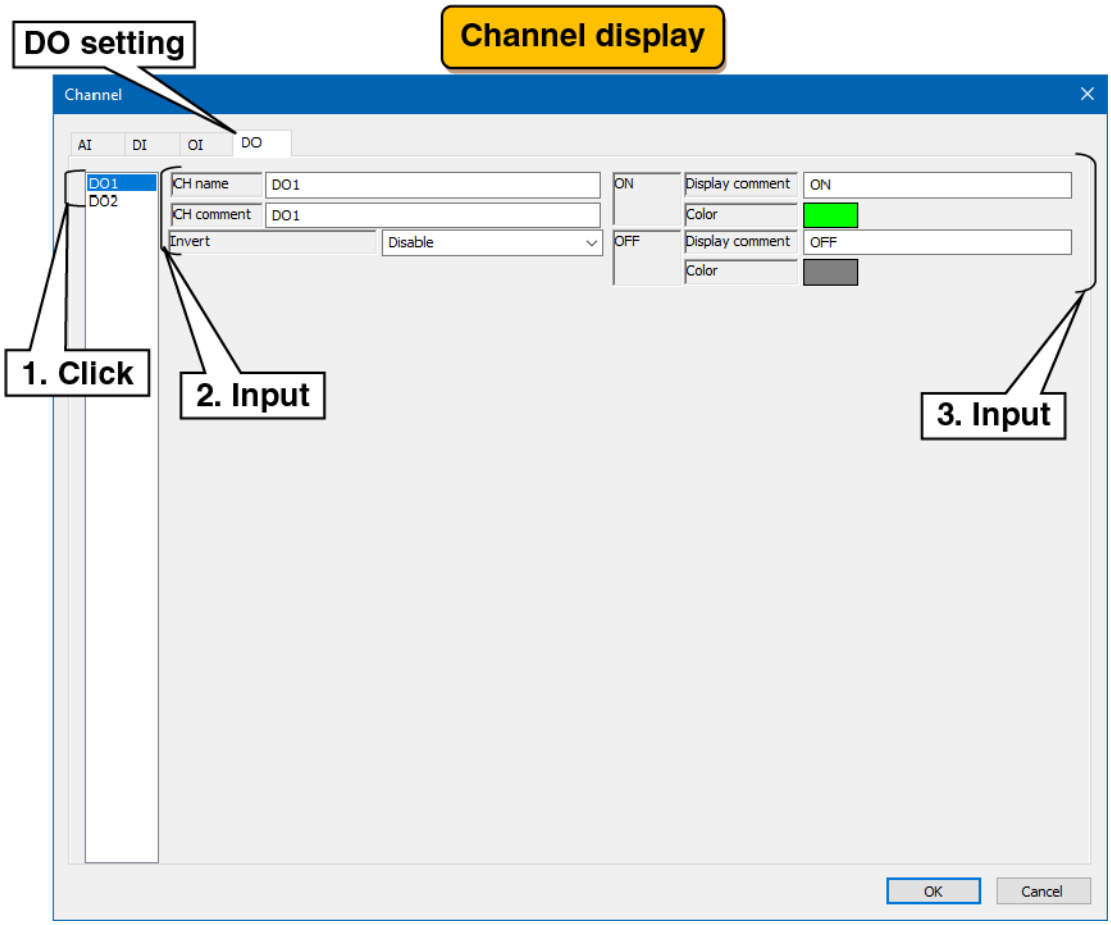
3.2.4 Digital output (DO) settings

Make the digital output (DO) setting. There are two digital output channels (DO1/DO2).

1. Basic setting

Make the basic setting for the digital output (DO).

(1) Clicking the channel to be set displays the current setting.

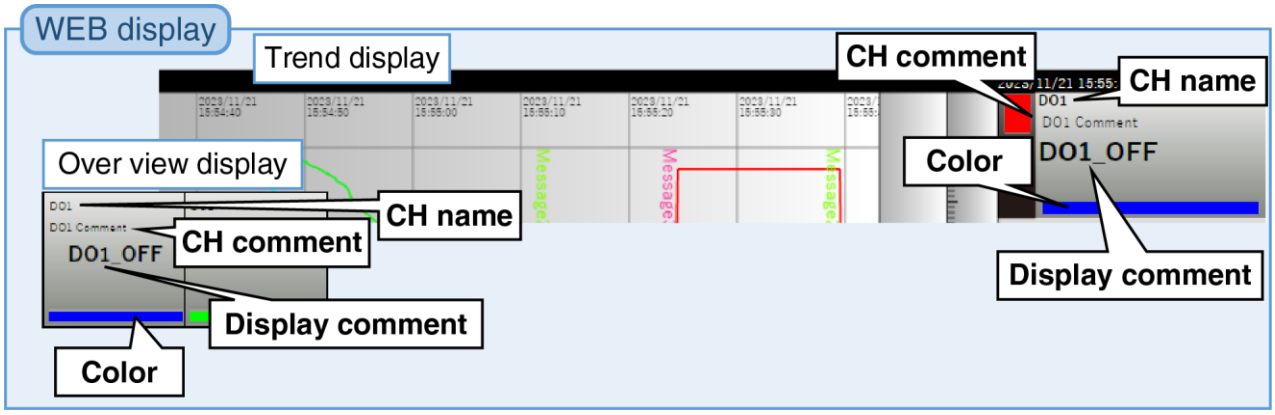


(2) Make the basic setting.

Settings	Description
CH name	Set the name of the channel within 16 characters.
CH comments	Set the tag name or other comments about the channel within 16 characters.
Invert	If ON/OFF of the output signal and ON/OFF as an application signal are reversed, select Enabled.

(3) Make the settings for each of ON and OFF.

Settings	Description
Display comment	Set the comment for each of ON and OFF. Set this within eight characters.
Color	Set a color to represent the status on the WEB display for each of ON and OFF.



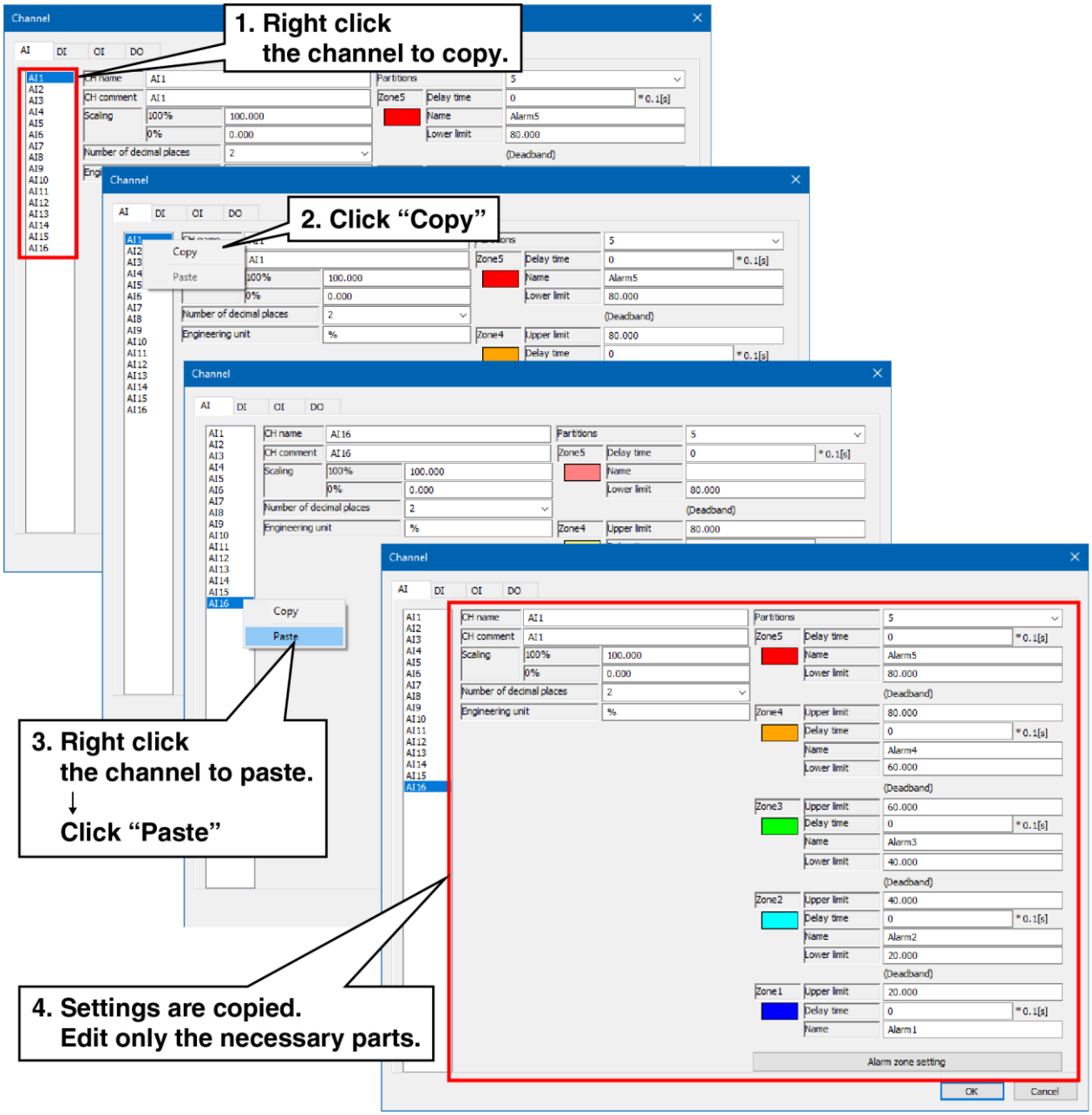
Set each channel following the above procedure.

The channel setting already made in the “Digital Output (DO)” display can be copied to other channels and only the necessary parts can be edited. -> 3.2.5 Copy of I/O channel setting

3.2.5 Copy of I/O channel setting

It is possible to select the channel number on the left of the display (e.g., Analog Input (AI) setting) and copy the already set channel setting to another channel to edit only the necessary parts.

Example: Copy of AI1 to AI16.



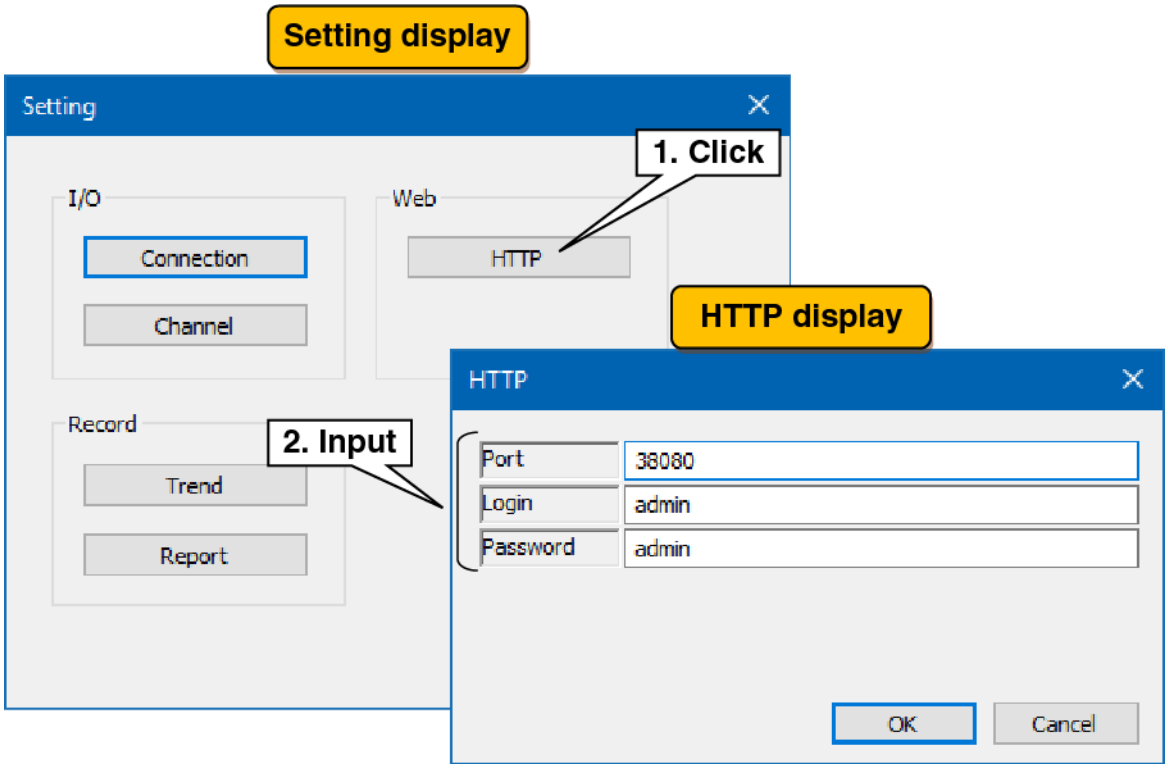
3.3 Web HTTP

Set up a simple Web server for PC Recorder.

(1) In the “Setting” display, click the “HTTP” button to show the “HTTP” display.

(2) Set the port number for the simple Web server.

(3) Set the login name and password for the simple Web server.



Settings	Description
Port	Set the HTTP connection port number for the I/O unit and the PC. (0 to 65535)
Login	Set a login name within 32 characters (alphanumeric characters and “_”).
Password	Set a password within 32 characters (alphanumeric characters and “_”).

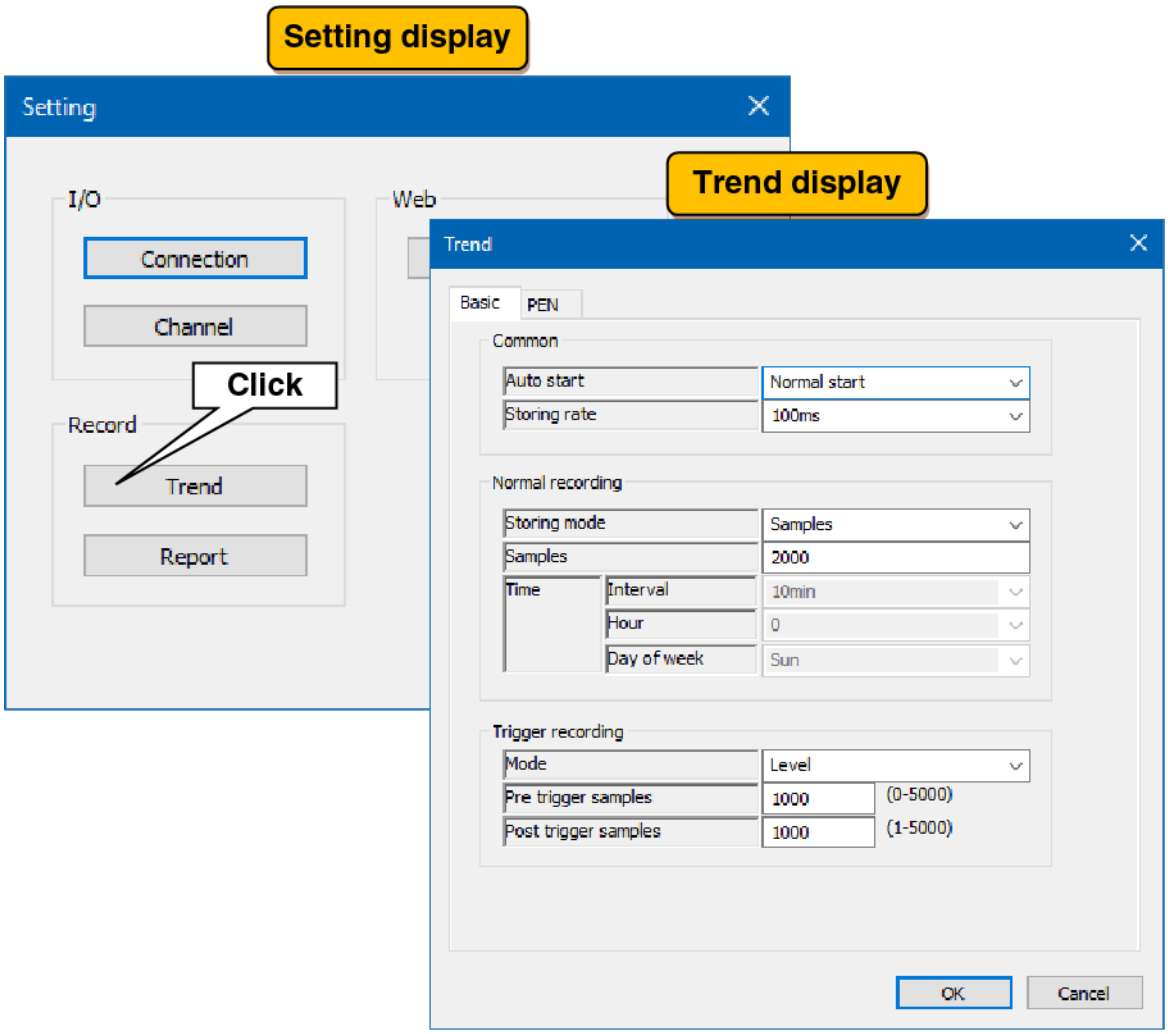
CAUTION

- The login ID and password for the simple Web server are simple functions. They do not guarantee complete security.
- After changing your login ID or password, refresh the cache by clicking the refresh button on your browser.
- Do not use the default login ID and password.
- We recommend that you change your password on a regular basis.

3.4 Recording trend

Assign any channels of the I/O unit to the pen and set the pen's waveform to be recorded and showed on the WEB display.

In the “Setting” display, click the “Trend” button to show the “Trend” display.

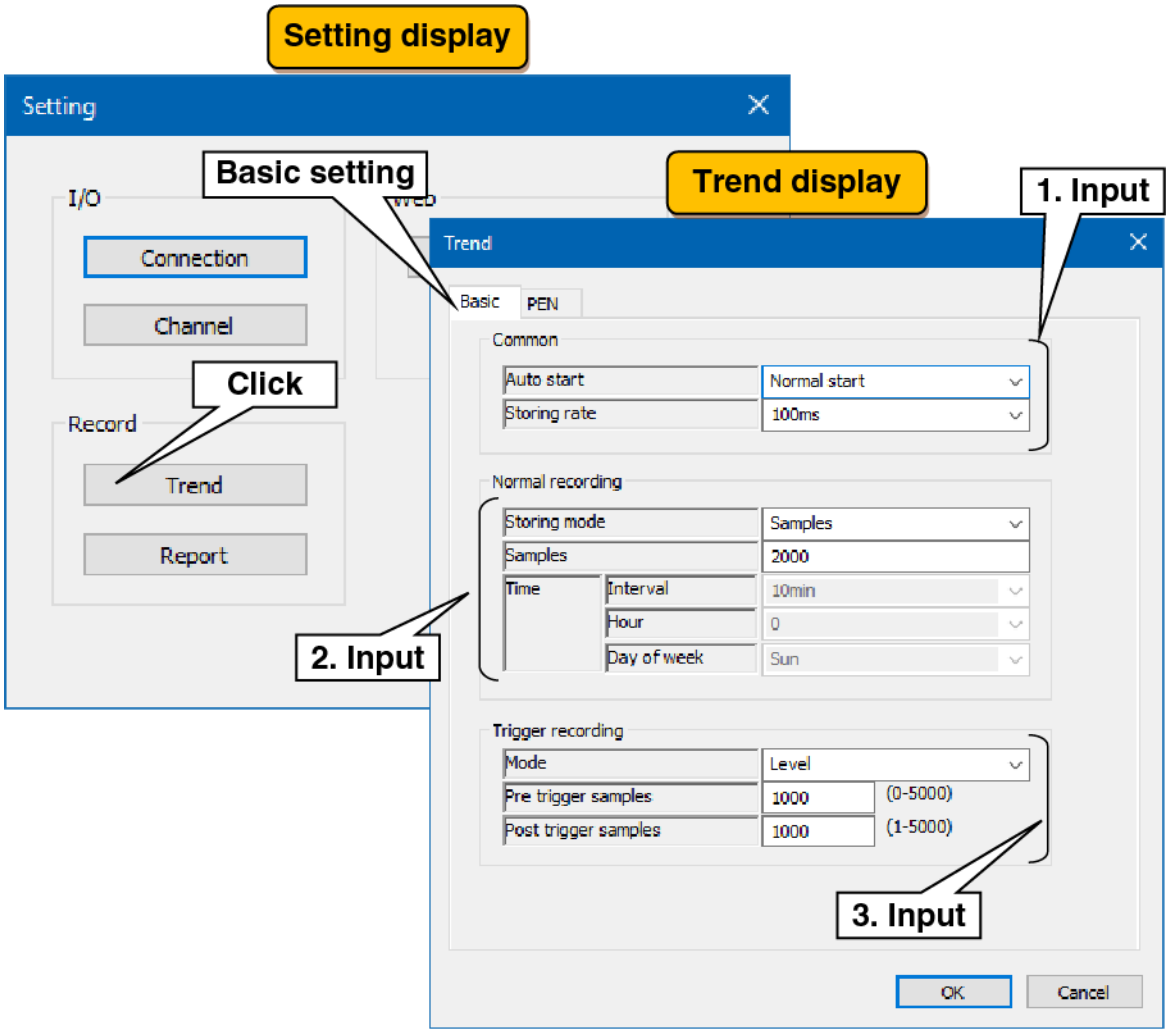


3.4.1 Basic setting

Make the setting to record pen waveforms to a trend file.
When recording pen's waveforms, event data and comment data during the recording period are recorded in the same file.

1. Recording setting

Set the recording conditions for the trend.



(1) Make the common setting. In reference to the table below, set the various parameters.

Settings	Description
Auto start	Select from Stop / Normal start / Trigger start.
Storing rate	Select from 100 ms / 500 ms / 1 sec / 2 sec / 5 sec / 10 sec / 1 min / 2 min / 5 min / 10 min / 30 min / 1 hour.

(2) Make the settings for normal recording. In reference to the table below, set the various parameters.

Settings	Description
Storing mode	Select from Samples / Time.
Samples	When “Samples” is selected in String mode, the samples can be set. Set this in the range of 1000 to 50000.
Time	When “Time” is selected in Storing mode, the time can be set. The settable interval depends on the storing rate. Refer to the table below. - When “1 day” is selected for the interval, set “Hour.” Select from 0 to 23 (hours). - When “1 week” is selected for the interval, set “Hour” and “Day of week.” Select from 0 to 23 (hours), Sun / Mon / Tue / Wed / Thu / Fri / Sat. - When “1 month” is selected for the interval, set “Hour.” Select from 0 to 23 (hours).

Correspondence table storing rate and interval (●: selectable)

Interval / Storing rate	10 min	30 min	1 hour	6 hours	12 hours	1 day	1 week	1 month
100 ms	●	●	●	—	—	—	—	—
500 ms	—	●	●	●	—	—	—	—
1 sec	—	—	●	●	●	—	—	—
2 sec	—	—	●	●	●	●	—	—
5 sec	—	—	—	●	●	●	—	—
10 sec	—	—	—	●	●	●	—	—
1 min	—	—	—	—	—	●	●	—
2 min	—	—	—	—	—	●	●	—
5 min	—	—	—	—	—	●	●	●
10 min	—	—	—	—	—	●	●	●
30 min	—	—	—	—	—	●	●	●
1 hour	—	—	—	—	—	—	●	●

(3) Make the settings for trigger recording. In reference to the table below, set the various parameters.

Settings	Description
Mode	Select from Level / Edge.
Pre trigger samples	Set this in the range of 0 to 5000.
Post trigger samples	Set this in the range of 1 to 5000.

2. Normal recording

When Normal start is set in [Auto start] on the “Trend” display, trend recording starts upon PC Recorder startup.

(1) Storing mode: Samples

When Samples is set in [Storing mode], the recorded data are saved to a trend file by samples.

(2) Storing mode: Time

When Time is set in [Storing mode], the recorded data are saved to a trend file at the time set in [Time]. For storage timing, refer to the table below.

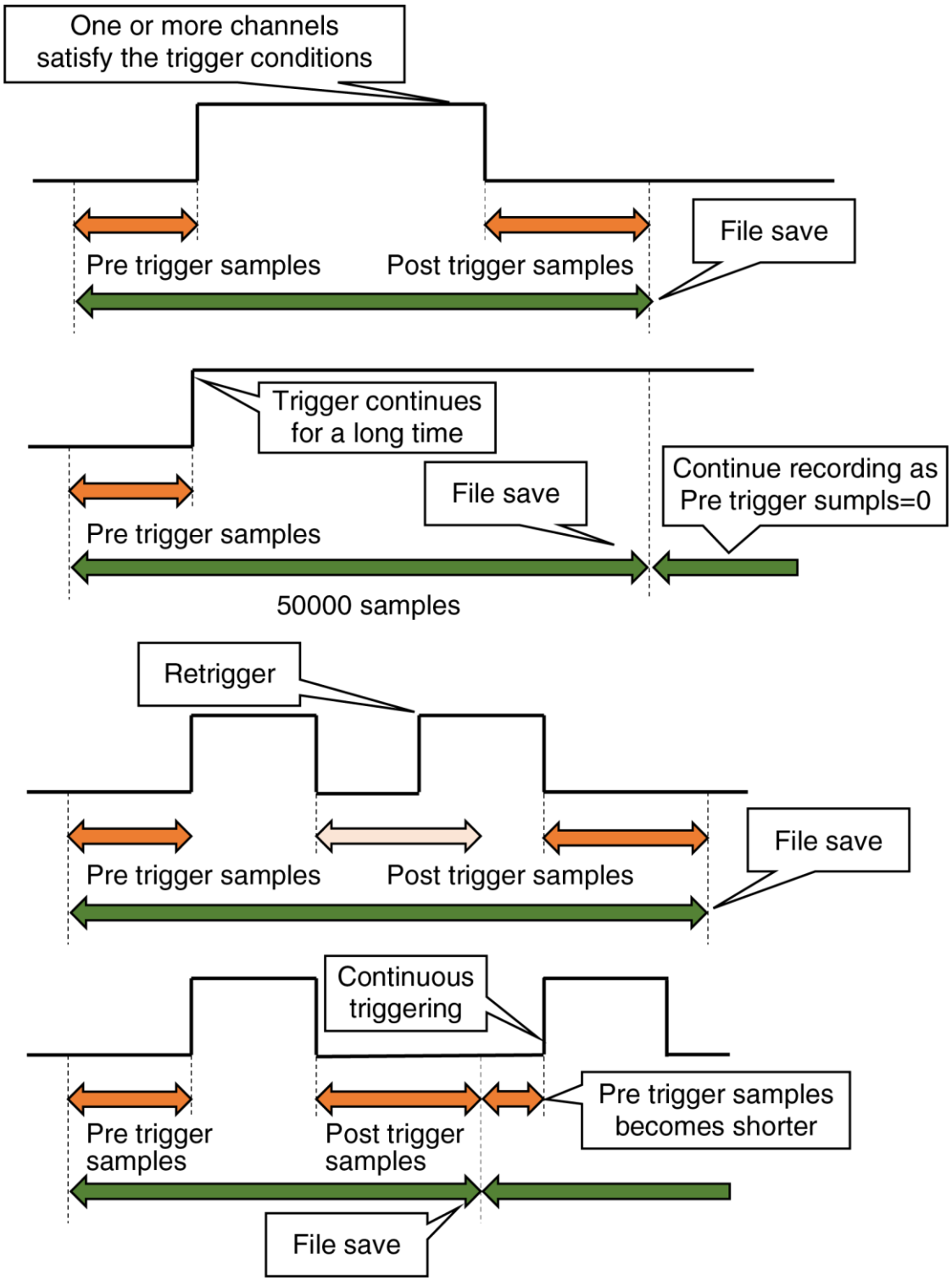
Interval	Timing
10 min	0, 10, 20, 30, 40, 50 minutes and 0 seconds past the hour
30 min	0, 30 minutes and 0 seconds past the hour
1 hour	0 minutes and 0 seconds every hour
6 hours	0, 6, 12, 18 hours, 0 minutes, and 0 seconds
12 hours	0, 12 hours, 0 minutes, and 0 seconds
1 day	0 minutes and 0 seconds when set in [Hour]
1 week	0 minutes and 0 seconds when set in [Hour] on the day of the week set in [Day of week]
1 month	0 minutes and 0 seconds when set in [Hour] on the first day of every month.

3. Trigger recording

When trigger recording is set in [Auto Start] on the “Trend” display, the trend is recorded for each channel of AI, DI, and OI according to the conditions set for the trigger.

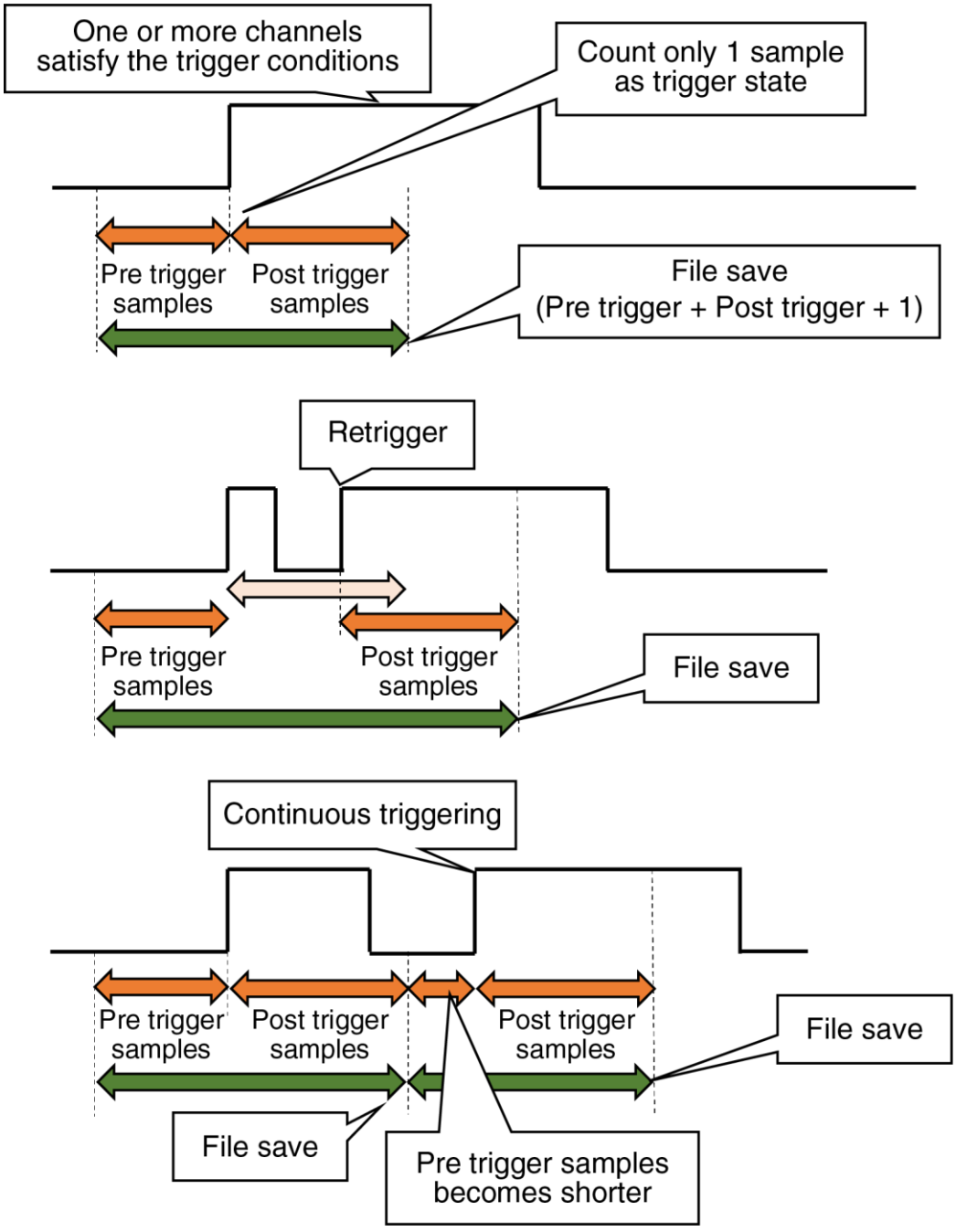
(1) Mode: Level

When Level is set in [Mode] of the trigger recording on the “Trend” display, the trend is recorded as long as one or more of the AI, DI, or OI channels with trigger settings satisfy the trigger conditions. The data samples to be saved in the trend file should be set in [Pre trigger samples] and [Post trigger samples]. The data sample interval is determined by the [Common] storing rate. For details, refer to the following:



(2) Mode: Edge

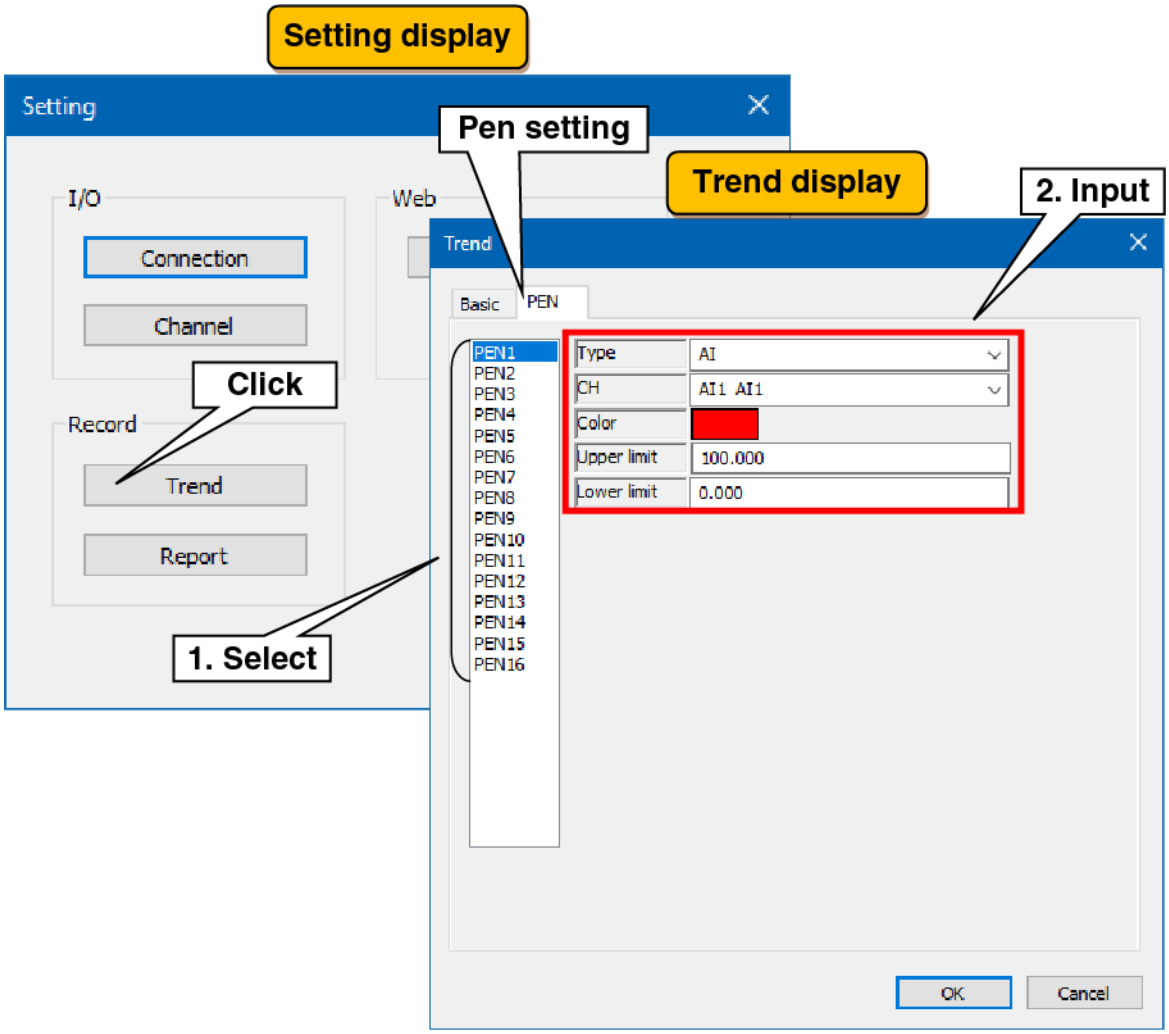
When Edge is set in [Mode] of the trigger recording on the “Trend” display, trends are recorded with reference to the change point where one or more channels satisfy the trigger conditions from the non-trigger state of all channels among the trigger settings for AI, DI, and OI channels. The data samples to be saved in the file should be set in [Pre trigger samples] and [Post trigger samples]. The data sample interval is determined by the [Common] storing rate. For details, refer to the following:



3.4.2 Pen setting

Make the setting for pen assignments and colors for trends recorded to trend files and show on the WEB display.

For trend pens show on the WEB display, 16 pens in total can be displayed on four pages: pens 1 to 4 on page 1, pens 5 to 8 on page 2.



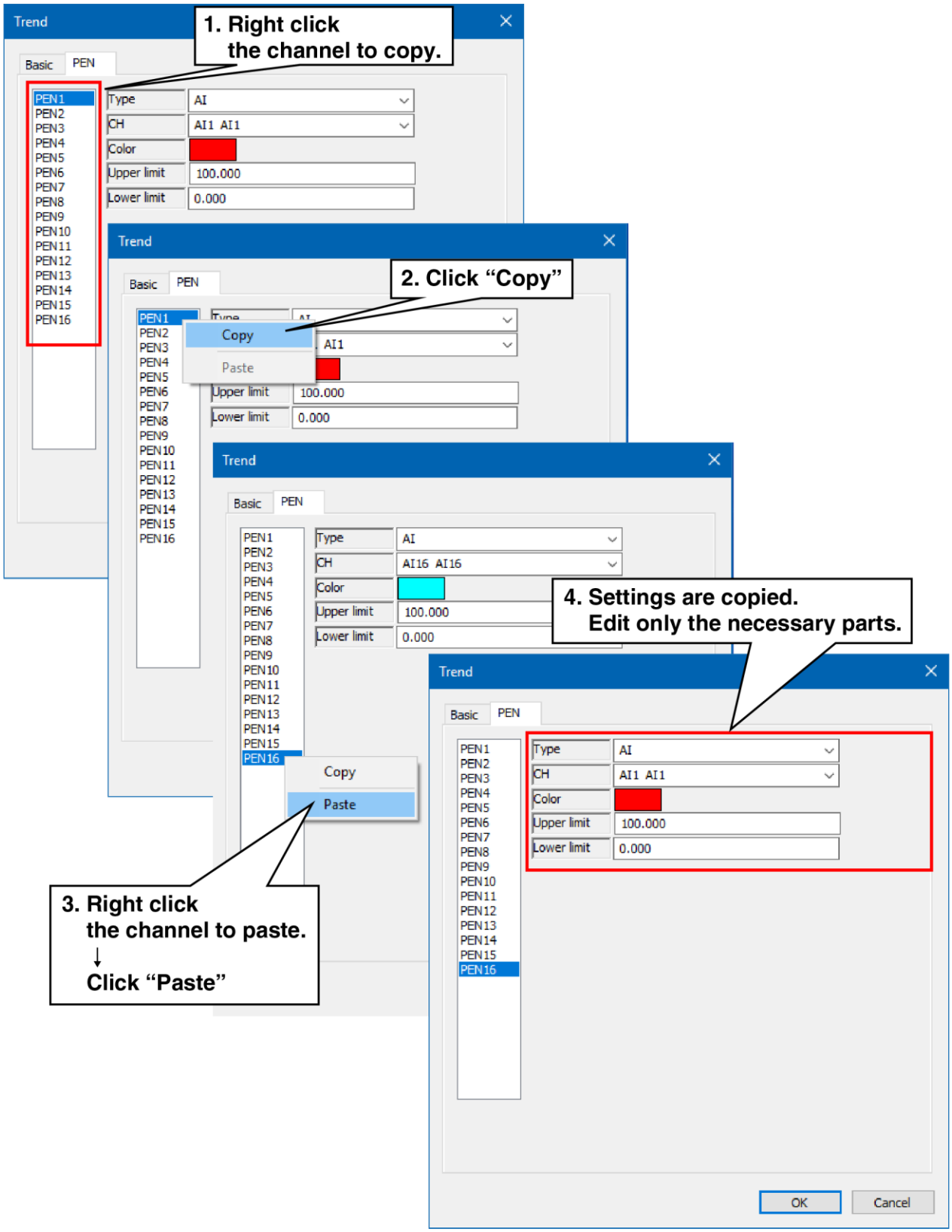
(1) Select the pen to be set. The current setting data for the selected pen is displayed.

(2) Make pen assignments. Set the pen in reference to the table below and click the [OK] button.

Settings	Description
Type	Select the type to be assigned. Selectable from None / AI / DI / OI / DO.
CH	Set the channel to be assigned. It can be selected from a list of the input/output channels selected in the type.
Color	Set the color of the pen.
Upper limit	Set the scaling value of 0% in the trend graph.
Lower limit	Set the scaling value of 100% in the trend graph.

(3) In the same way, set all pens that are recorded to trend files and showed on the WEB display. It is also possible to copy the settings of a pen that has already been set and then edit only the changes.

Example: Copy of PEN1 to PEN16.

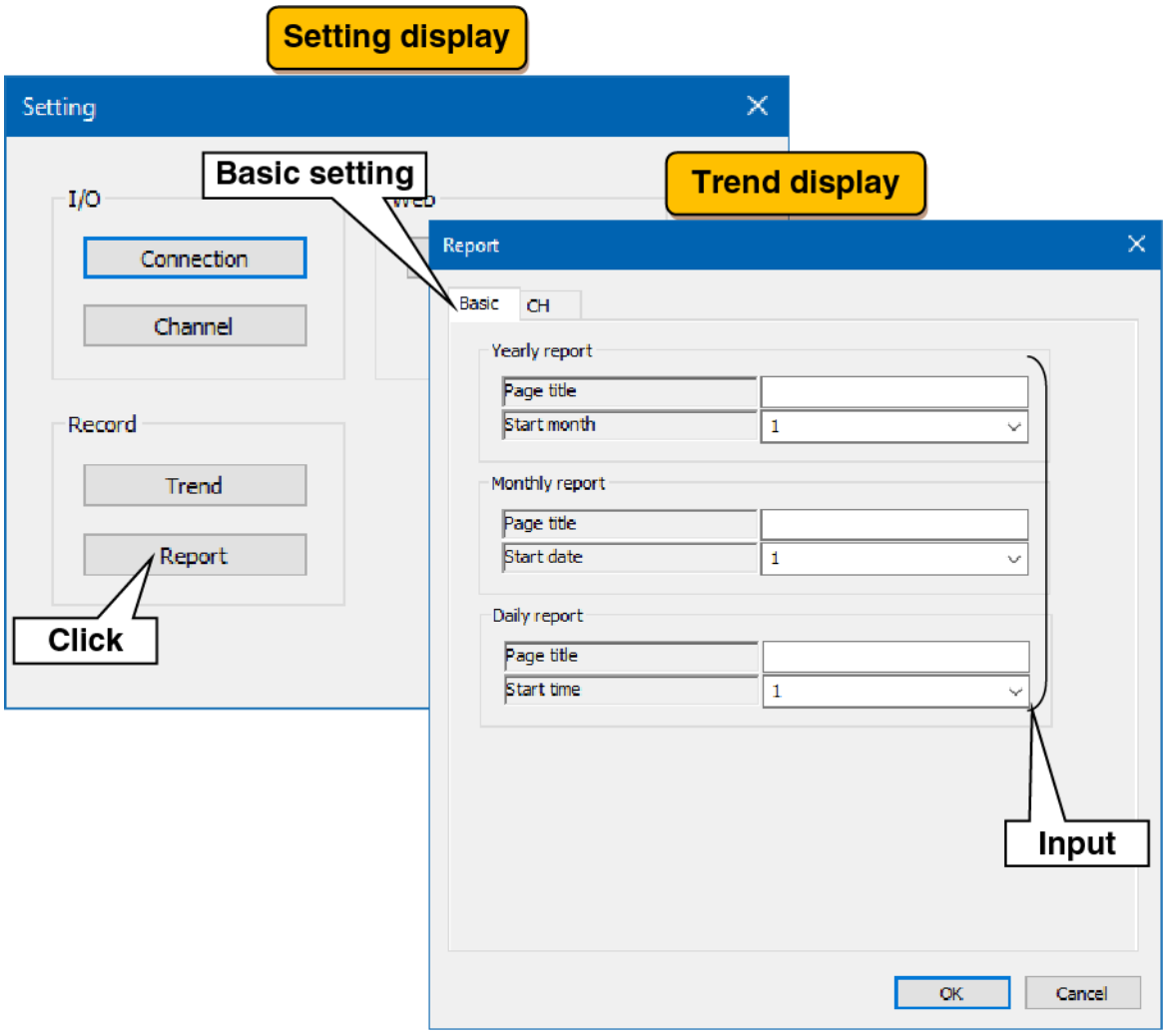


3.5 Recording report

Make the report setting. PC Recorder has the function to generate daily, monthly, and yearly reports.
AI and OI data can be recorded for 16 channels.
Daily report data for one hour is generated by sampling from data per second as “Momentary value,” “Average value,” “Maximum value (peak value (high),” or “Minimum value (peak value (low)).” Monthly report data are generated from daily report data and yearly report data from monthly report data.

3.5.1 Basic setting

Make the basic setting for daily, monthly, and yearly reports. In reference to the table below, set the following parameters:

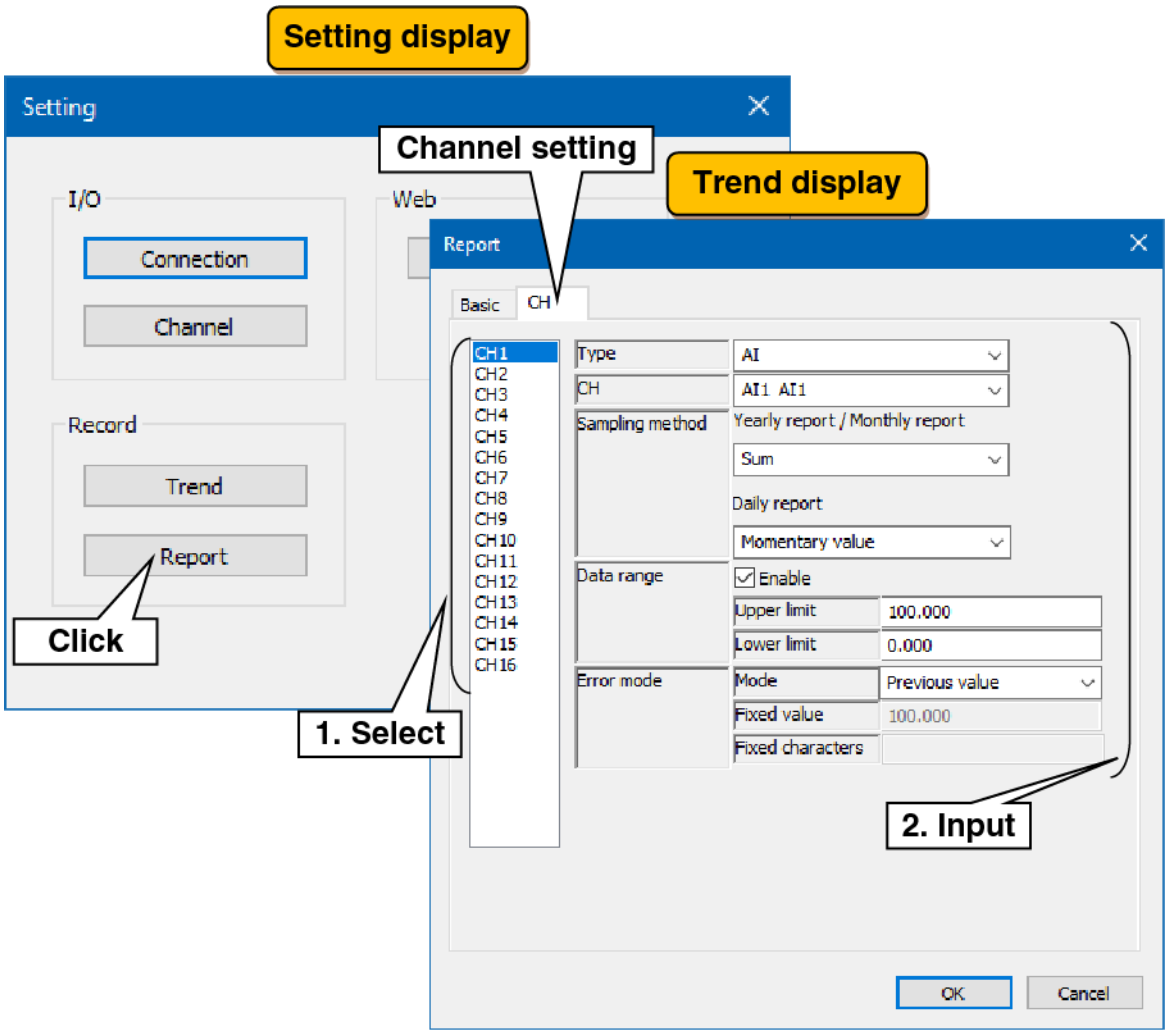


Settings	Description
Page title	Set the report title within 32 characters for each of daily, monthly, and yearly report.
Yearly report / Start month	Select the start month of the yearly report from January to December.
Monthly report / Start date	Select the start date of the monthly report from 1st to 28th.
Daily report / Start time	Select the start time of the daily report from 1 to 24 (o'clock).

3.5.2 Channel setting

Make the setting for the content of recording.

(1) Select the channel to be set and, in reference to the table below, set the various parameters.

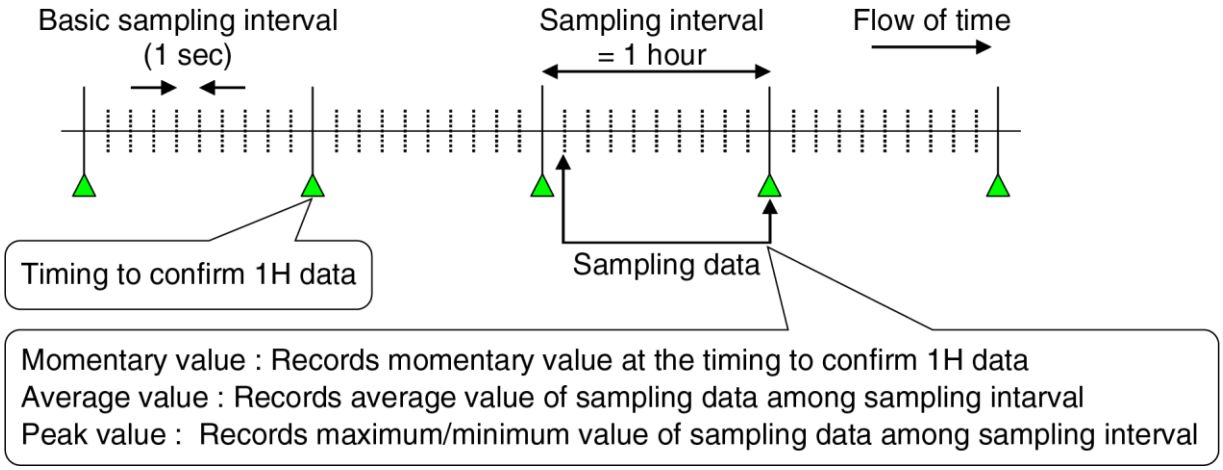


Settings	Description
Type	Select the type of the channel to be assigned from None / AI / OI.
CH	Select the channel to be assigned.
Sampling method Yearly report / Monthly report	Select the sampling method for the “daily/monthly data” to be recorded in the yearly / monthly report from Total / Average / Maximum / Minimum.
Sampling method Daily report	Select the sampling method for the “hourly data” to be recorded in the daily report from Momentary value / Average / Maximum / Minimum. [1]
Data range	- To set an effective range for data to be recorded on the reports, check the “Enable” check box. - Upper limit: Set the upper limit when “Enable” is checked. - Lower limit: Set the lower limit when “Enable” is checked.
Error mode	- Mode: Select the value to be recorded in the report data when data could not be obtained or when data outside the range set in the data range is obtained from Previous value / Fixed value / Fixed characters. - Fixed value: Set a value when set to “Fixed value.” - Fixed characters: Set a character string within 24 characters when set to “Fixed characters.”

Special note

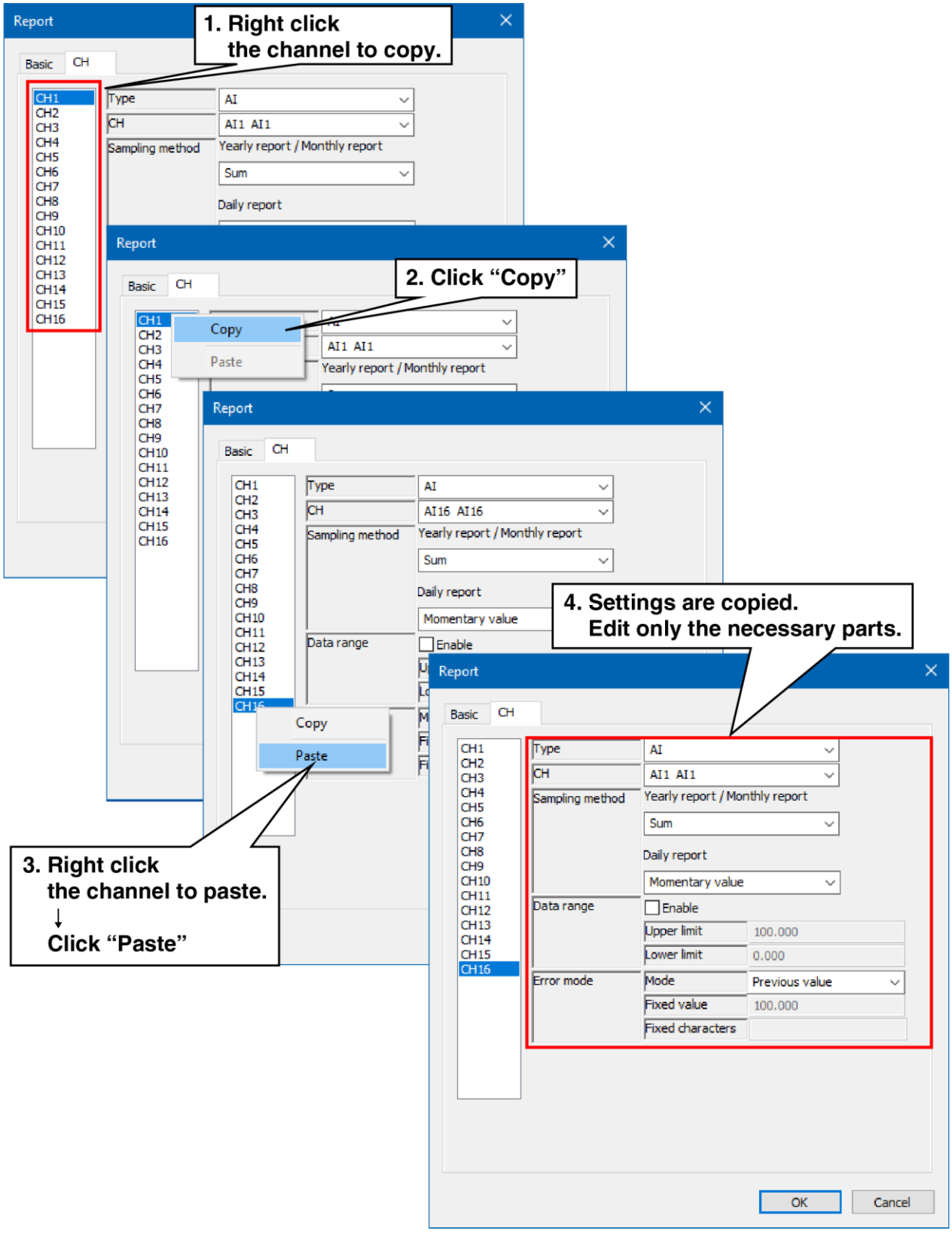
- When “Momentary value” is selected as the sampling method, data is recorded at 0 minutes and 0 seconds of every hour.
- When the sampling method is other than “Momentary value,” the “Fixed character” set in the “error mode” is recorded in the “hourly data” to be recorded in the daily report if the sampling data recorded for an hour is all an error. If even one piece of data can be obtained during one hour, the operation set in the sampling method is performed from the obtained data.

*1: Description of sampling method



(2) In the same way, set all channels to be desirably recorded in the reports. It is also possible to copy the settings of a channel that has already been set and then edit only the changes.

Example: Copy of CH1 to CH16.



4. Recording data

PC Recorder stores three types of data files: trend files, report files, and system log files.
The data to be saved in the trend files and the report files should be set in 3.4 Recording trend and the 3.5 Recording report.
The system log is automatically saved by PC Recorder.

4.1 Trend file

Trend files are saved in binary format (extension: TRD).

1. File name

A file is created with a name consisting of the year, month, day, hour, minute, second, and millisecond (yyyymmddhhmmss///) of the first sample.
(e.g. 20231025103010500.TRD for October 25, 2023, 10:30:10, and 500 milliseconds with daylight saving time not used)
For details on trend files, refer to the table below. Also, for the folder structure, refer to 4.4 Folder structure.

Item	Description
Record file	File names depend on whether or not to use in daylight saving time. In daylight saving time, recording is performed with “S” added to the end of the file name for the “Standard,” or “D” for “DST.” - When daylight saving time is not used: *YYYYMMDDhhmmsslll*.TRD - When daylight saving time (Standard) is used: *YYYYMMDDhhmmssllll*S.TRD - When daylight saving time (DST) is used: *YYYYMMDDhhmmssllll*D.TRD
Records	Setting information, trend data, event data, comment data
Data view	Right-click the “PC Recorder” icon in the task tray and click “View (V).” Data can be viewed using a Web browser. ->5.2 Trend Data can be viewed with the waveform viewer software for TR30 (model: TRViewer). TRViewer can be downloaded from our website.
Recording capacity (per file)	- Trend data: 50000 samples × 16 pen-points - Event data: 3000 events - Comment data: 1000 comments
CAUTION	- To prevent the creation of fragmented files due to short-term continuous triggering, it is prohibited to create a file again within one second after another file is created. - Actual quantity may differ slightly between PC Recorder and TRViewer.

2. Time correction

If the PC time is corrected during trend data recording, the time is corrected at regular intervals for a fixed period of time to ensure time continuity. During the time correction process, the time on the WEB display is showed in yellow. -> 5.1 Description of

Range of correction	Process
Within -180 to 0 sec.	The recording cycle is extended until the corrected current time catches up with the time in the process of trend data recording. After catching up, the recording cycle is restored.
Within 0 to 180 sec.	Complements data for missing recording cycles. In addition, the recording cycle is shortened until the time in the process of trend data recording catches up with the corrected current time. After catching up, the recording cycle is restored.
Other than those above	The time change is applied immediately and is not equalized.

Special note

- If time is corrected again during the equalization process, it works as follows:
  If the change reduces the difference between the current time after the correction and the current time before the correction, the equalization process continues.
  Otherwise, the change is applied immediately.

4.2 Report file

Report files are saved in CSV format.

1. File name

Daily report files are created with a name consisting of the year, month, and day (yyyymmdd) of the first sample, monthly report files with a name consisting of the year and month (yyyymm) of the first sample, and yearly report files with a name consisting of the year (yyyy) of the first sample. Also. for the folder structure, refer to 4.4 Folder structure.

When the settings are changed, it is recorded with "_X" added to the end of the file name. The previously recorded reports are confirmed at the time of change.

If the file in which the report data is saved is opened in Excel or another application and cannot be saved, "_S" is added to the end of the file name and the file is temporarily saved.

Report	How to name a file	Example:
Daily report	Year, month, and day followed by "RPT"	RPT20231025.CSV, RPT20231025_X.CSV, RPT20231025_S.CSV
Monthly report	Year and month followed by "RPT"	RPT202310.CSV, RPT202310_X.CSV, RPT202310_S.CSV
Yearly report	Year followed by "RPT"	RPT2023.CSV, RPT2023_X.CSV, RPT2023_S.CSV

The format of each CSV file is as follows (when 16 channels are assigned):

2. Daily report

	Row 1	Row 2	Row 3	・・・	Row 17
Line 1	Title of daily report				
Line 2	(Blank)	CH1 name	CH2 name	・・・	CH16 name
Line 3	A.D. year/month/day	CH1 comment	CH2 comment	・・・	CH16 comment
Line 4	(Blank)	CH1 engineering unit	CH2 engineering unit	・・・	CH16 engineering unit
Line 5	1 o'clock	CH1 data	CH2 data	・・・	CH16 data
Line 6	2 o'clock	CH1 data	CH2 data	・・・	CH16 data
・・・	・・・	・・・	・・・	・・・	・・・
Line 28	24 o'clock	CH1 data	CH2 data	・・・	CH16 data
Line 29	Total	CH1 total value	CH2 total value	・・・	CH16 total value
Line 30	Average	CH1 average value	CH2 average value	・・・	CH16 average value
Line 31	Maximum	CH1 maximum value	CH2 maximum value	・・・	CH16 maximum value
Line 32	Minimum	CH1 minimum value	CH2 minimum value	・・・	CH16 minimum value

3. Monthly report

	Row 1	Row 2	Row 3	・・・	Row 17
Line 1	Title of monthly report				
Line 2	(Blank)	CH1 name	CH2 name	・・・	CH16 name
Line 3	A.D. year/month	CH1 comment	CH2 comment	・・・	CH16 comment
Line 4	(Blank)	CH1 engineering unit	CH2 engineering unit	・・・	CH16 engineering unit
Line 5	Day 1	CH1 data	CH2 data	・・・	CH16 data
Line 6	Days 2	CH1 data	CH2 data	・・・	CH16 data
・・・	・・・	・・・	・・・	・・・	・・・
Line 35	Day 31	CH1 data	CH2 data	・・・	CH16 data
Line 36	Total	CH1 total value	CH2 total value	・・・	CH16 total value
Line 37	Average	CH1 average value	CH2 average value	・・・	CH16 average value
Line 38	Maximum	CH1 maximum value	CH2 maximum value	・・・	CH16 maximum value
Line 39	Minimum	CH1 minimum value	CH2 minimum value	・・・	CH16 minimum value

4. Yearly report

	Row 1	Row 2	Row 3	・・・	Row 17
Line 1	Title of yearly report				
Line 2	(Blank)	CH1 name	CH2 name	・・・	CH16 name
Line 3	A.D. year	CH1 comment	CH2 comment	・・・	CH16 comment
Line 4	(Blank)	CH1 engineering unit	CH2 engineering unit	・・・	CH16 engineering unit
Line 5	January	CH1 data	CH2 data	・・・	CH16 data
Line 6	February	CH1 data	CH2 data	・・・	CH16 data
・・・	・・・	・・・	・・・	・・・	・・・
Line 16	December	CH1 data	CH2 data	・・・	CH16 data
Line 17	Total	CH1 total value	CH2 total value	・・・	CH16 total value
Line 18	Average	CH1 average value	CH2 average value	・・・	CH16 average value
Line 19	Maximum	CH1 maximum value	CH2 maximum value	・・・	CH16 maximum value
Line 20	Minimum	CH1 minimum value	CH2 minimum value	・・・	CH16 minimum value

4.3 System log file

The system log file is saved in text file format (filename: Log.txt).

The date/time of occurrence and details of the operations listed in the table below are additionally saved in the system log file.

(Example: When PC Recorder started at 10:30:50 on October 25, 2023, the log file of “2023/10/25 10:30:50 Start PC Recorder” was added.)

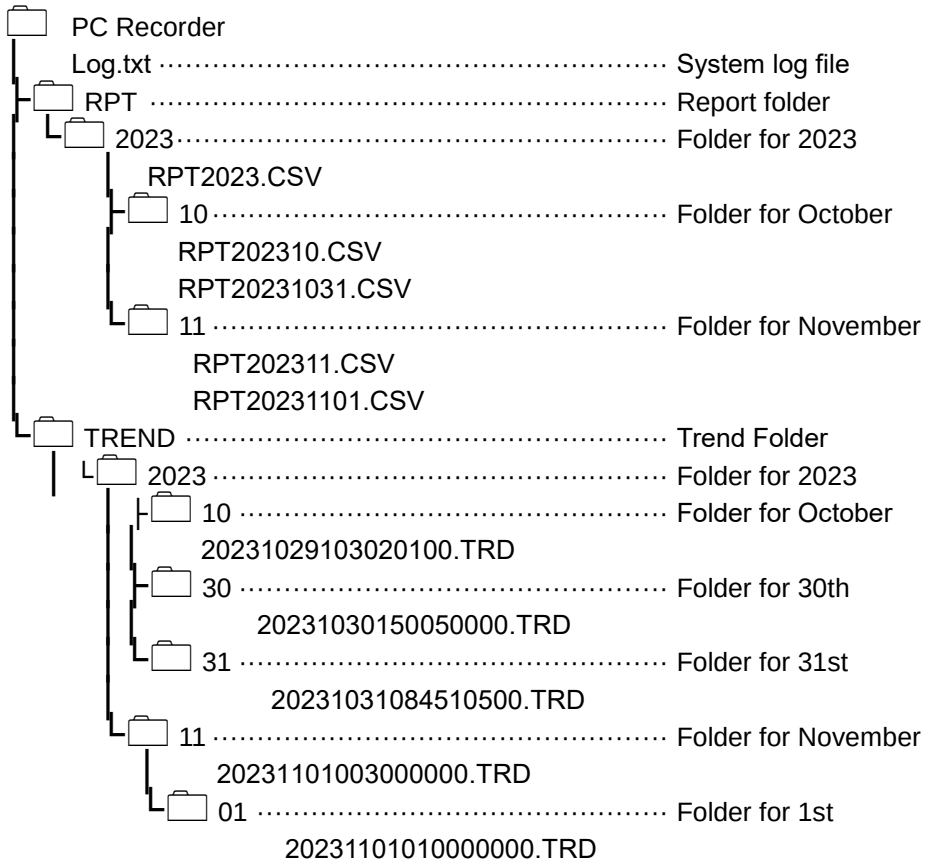
System log	Operation
Start PC Recorder	PC Recorder started.
Close PC Recorder	PC Recorder closed.
I/O ERROR	I/O communication failure
I/O OK	I/O communication recovery

4.4 Folder structure

Each file is saved based on the Windows “Documents” folder “C:¥Users¥[USERNAME]M-System¥PC Recorder.”

([USERNAME] depends on the account.)

The folder structure under PC Recorder is shown in the figure below. Year/Month/Day folders are automatically created as more files are saved.



CAUTION

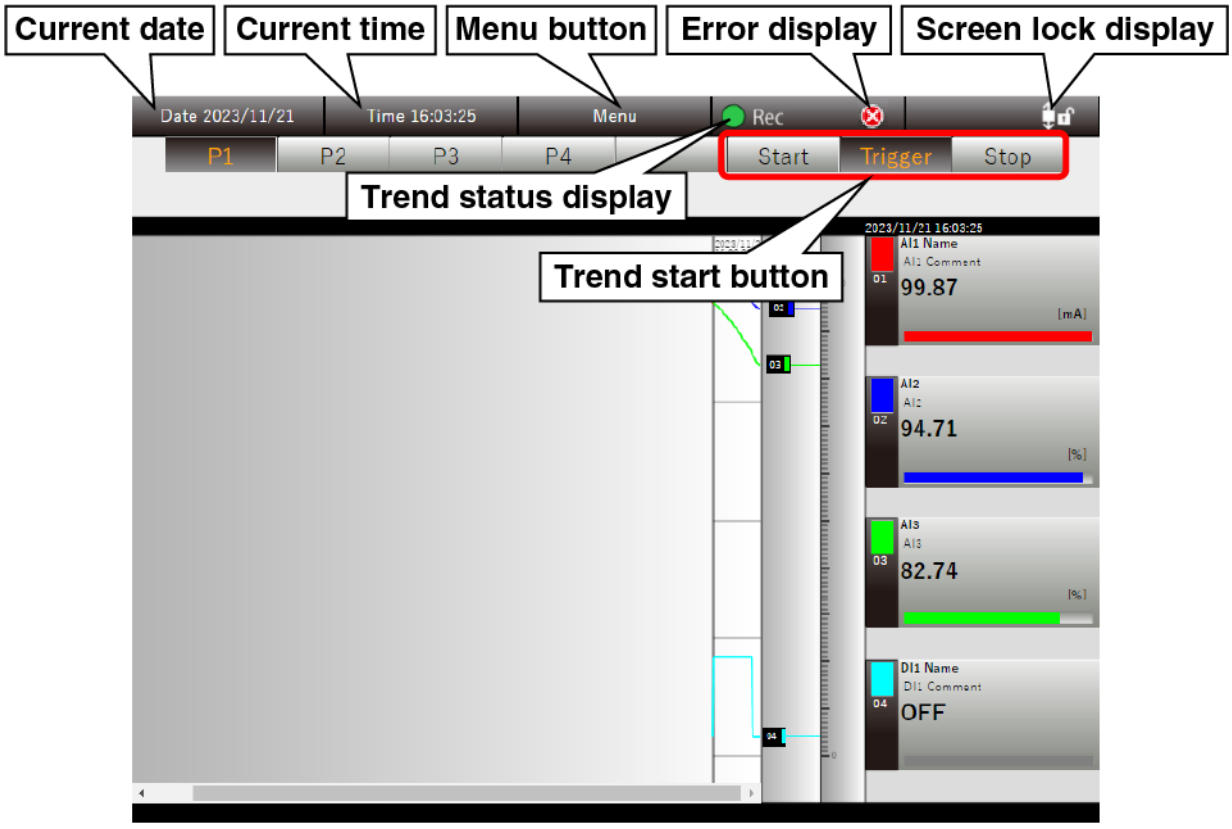
- When the trend data recording speed is set to 10 s, 1 m, 2 m, 5 m, 10 m, 30 m, or 1 h, trend files are saved in the month folders.

5. View

Right-click the “PC Recorder” icon in the task tray and click on “View (View (V).” The Trend display is showed as the initial screen on the Web browser.

5.1 Description of display

The shared content is always showed at the top of each display.



1. Current date

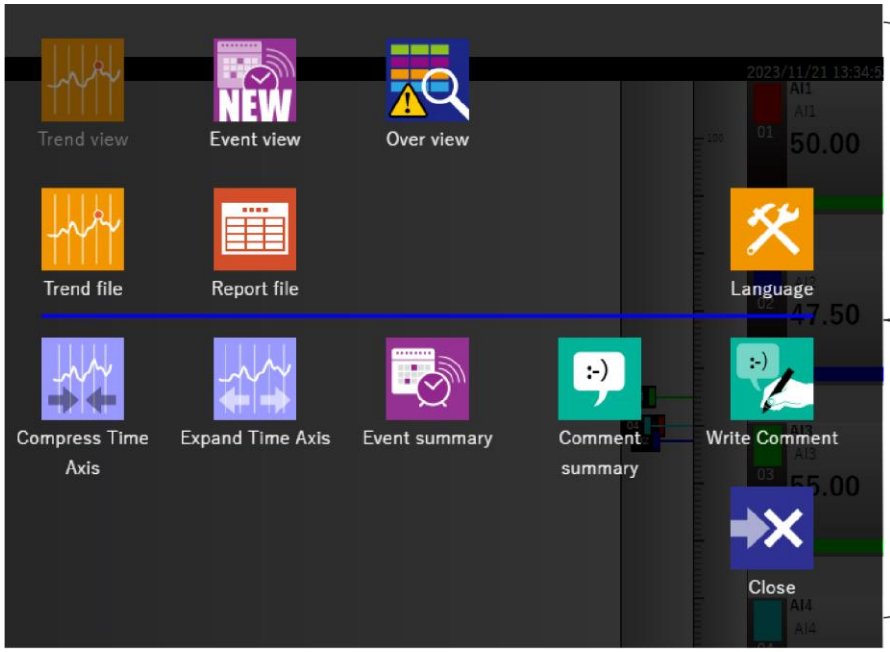
Displays the current date. During the time correction, this is displayed in yellow (Date 2023/10/31). -> 4.12 Time correction

2. Current time

Displays the current time. During the time correction, this is displayed in yellow (Time 14:46:54). -> 4.12 Time correction

3. Menu button

Clicking the Menu button displays the menu dialog.



4. Trend status display

Displays the recording status of trend data. This lights in green (

) during recording and goes off (

) when recording is stopped. When waiting for a trigger, it blinks.

5. Error display

If communication with PC Recorder is lost, an error is displayed.

6. Screen lock display

If the screen scroll is not locked, the open key icon is displayed; if it is locked, the closed key icon is displayed. Click to toggle the screen lock status.
To print the “Trend” or “Event view” display, “screen-lock” the display to be printed, and then print it.

7. Trend start button

By clicking the “Trend Start” button, you can switch between Normal start

, Trigger recording

, and Stop trend recording

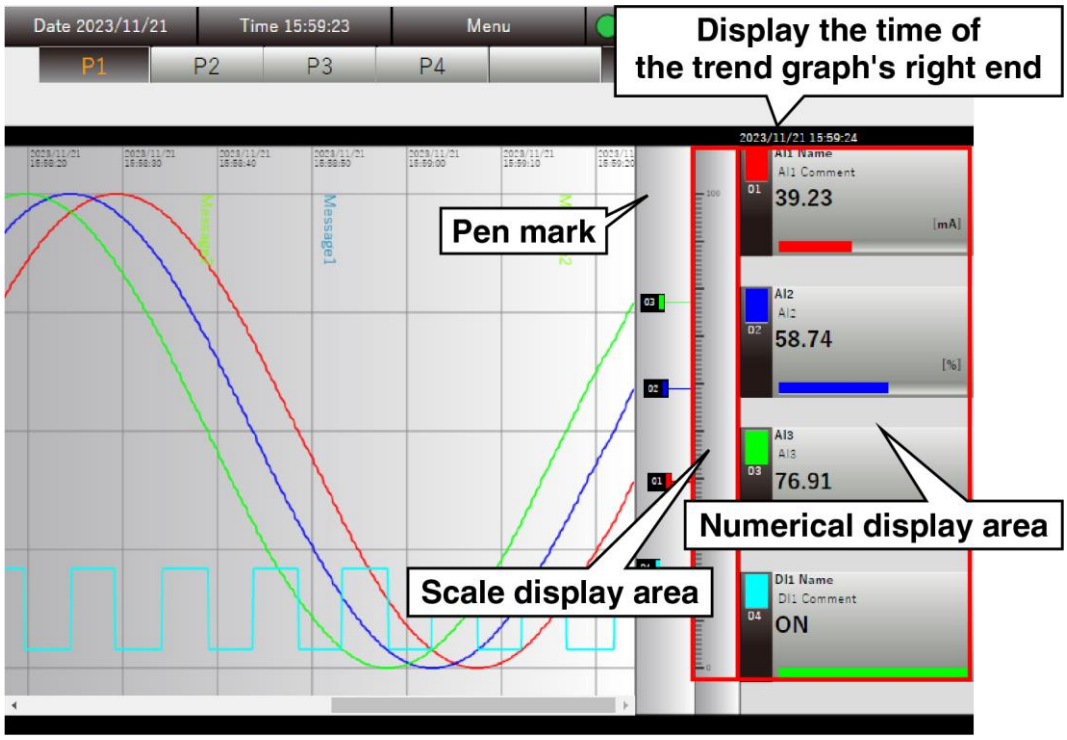
.

5.2 Trend display

Click the “Menu Menu ” button and select “Trend ” to go to the “Trend” display.

5.2.1 Display items

The “Trend” display largely consists of the “Menu bar,” “Page switching button,” and “Trend area.”



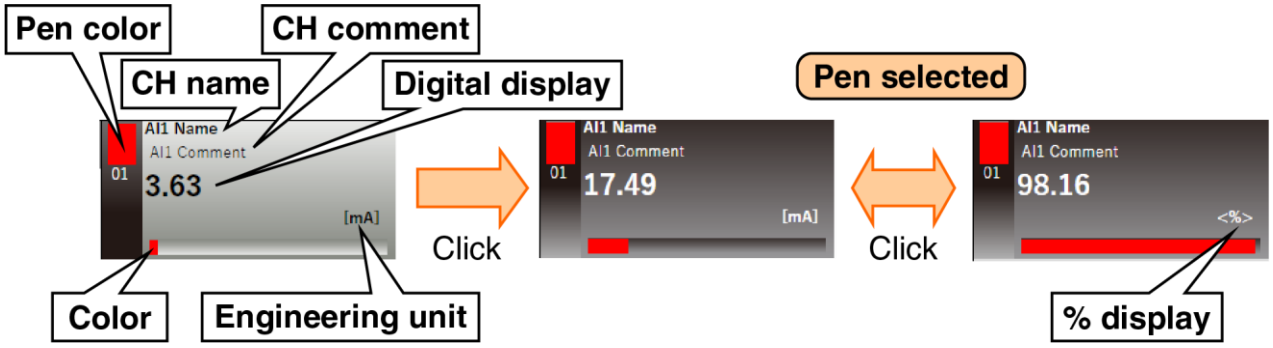
1. Numerical display

Black text indicates the current value.

Scrolling the trend graph shows the values on the right end of the graph and the text turns blue.

Clicking the “numerical display area” selects the pen and deepens the background color.

To deselect the pen, click “Scale display area.”



For items that are displayed differently depending on the type of input/output, refer to the table below.

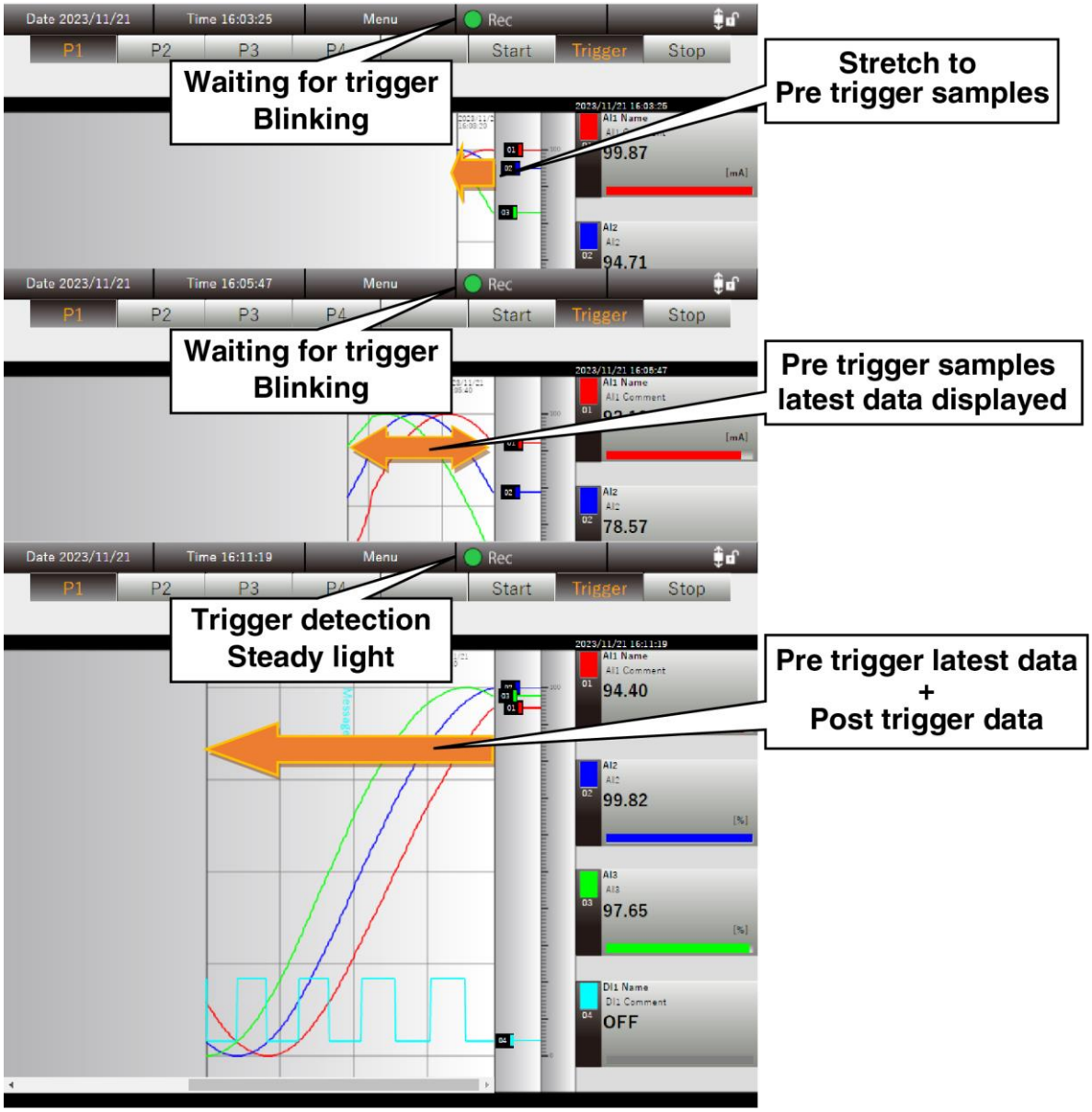
Item	Type	Description
Digital display	AI	Displays the % value or the actual quantity value.
	DI DO	Displays the display comment corresponding to ON/OFF.
	OI	Displays the numerical value of the actual quantity.
Status	AI OI	When a zone is used, the current display color is shown. When a zone is not used, the pen color is shown. This is displayed in a simple bar graph manner. The display color corresponding to the whole status is shown.
	DI DO	Display color corresponding to ON/OFF as a bar.
Engineering unit	AI OI	Displays the specified unit.
	DI DO	Blank.

2. Graph display

(1) When the trend status display is “Recording” or “Waiting for trigger,” the latest data is displayed at the right end of the trend graph.

(2) When the trend status display is “Waiting for trigger,” the latest data of the samples specified in “Pre trigger samples” is displayed. -> 3.4.11 Recording setting

(3) When the trend status display transitions from “Waiting for trigger” to “Recording,” the data of the samples specified in “Post trigger samples” is displayed following Step (2) above. -> 3.4.13 Trigger recording



5.2.2 Operation

1. Switch between pages

The pages can be switched by clicking the “Page Switch” button. The maximum number of pages is four.

2. Expand/compress the time axis

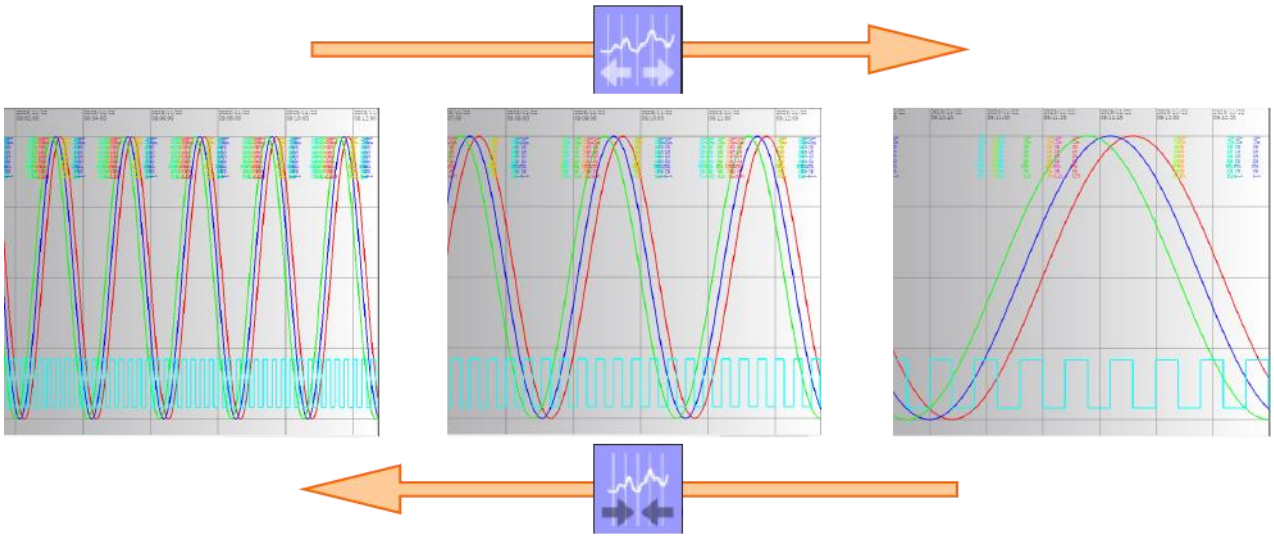
The time axis of the trend graph can be expand/compress. The expansion and compression ratios are the settings shared among all pages.

(1) Clicking the “Menu

” button displays the “menu” dialog.

(2) Click “Compress Time Axis ” or “Expand Time Axis ” of the operation icons.

Each time the button is clicked, the time axis of the trend graph compress/expand.



Special note

- The time axis can be switched between four levels: 100% (unity magnification), 50%, 20%, and 10%.

3. Changing the maximum/minimum value of the scale

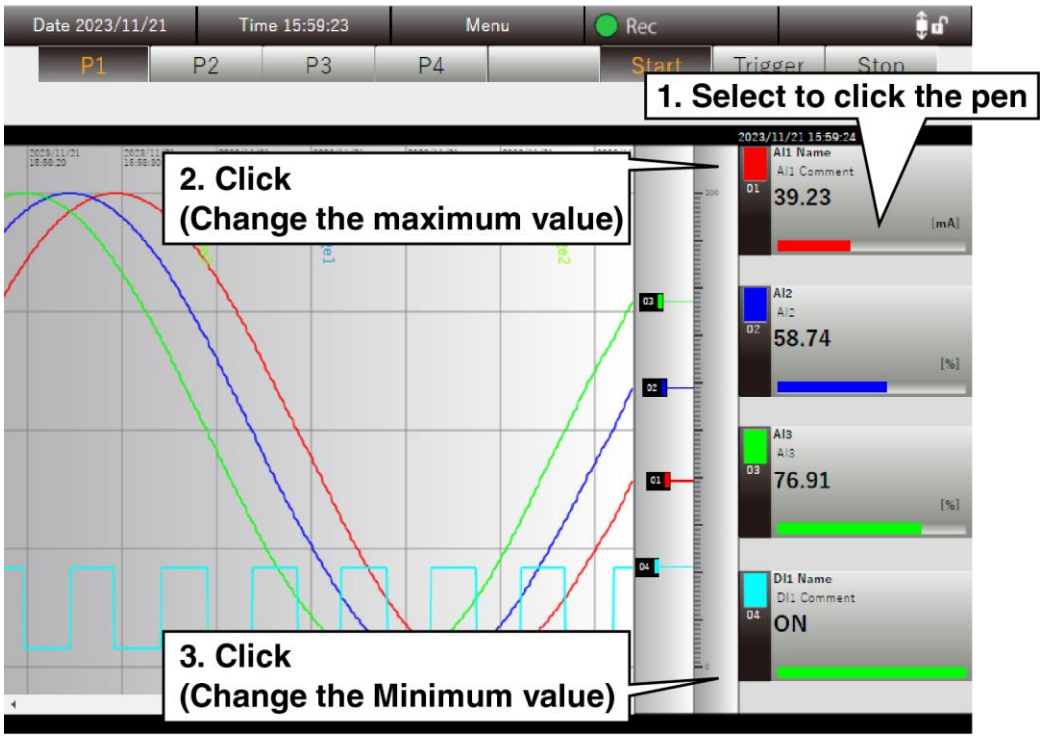
The maximum and minimum values of the scale can be changed.

(1) Click the “Digital display area” of the pen to be changed to select it.

(2) To change the maximum value, click on the blank area to the right of the scale; to change the minimum value, click the blank area to the left of the scale. The Change maximum/minimum value dialog is displayed.

(3) Enter the desired value and click the [OK] button to change the maximum/minimum value of the scale.

(4) To deselect the pen, click “Scale display area.”



Special note

- The changed maximum/minimum values are effective until the browser is closed.

4. Write of comments

Comments can be written in the trend graph. Comments are shared and displayed on all pages.

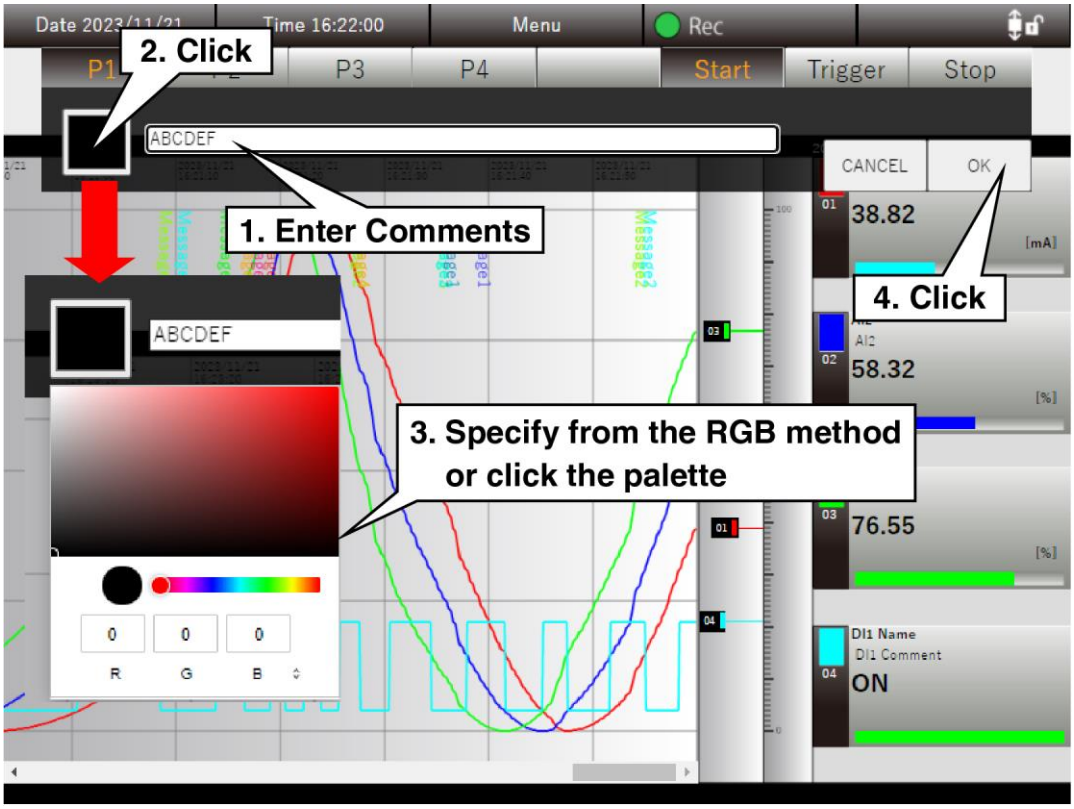
The list of comments written can be viewed on the “Trend” display (Comments summary). ->5.4 Trend display (Comments summary)

(1) Click the “Menu Menu ” button.

(2) On the submenu, click the “Write comment ”.

(3) Specify the text color of comments. Specify it from the color palette.

(4) Write comments and click the [OK] button. The comments are written to the point on the time axis where the [OK] button is pressed.



CAUTION

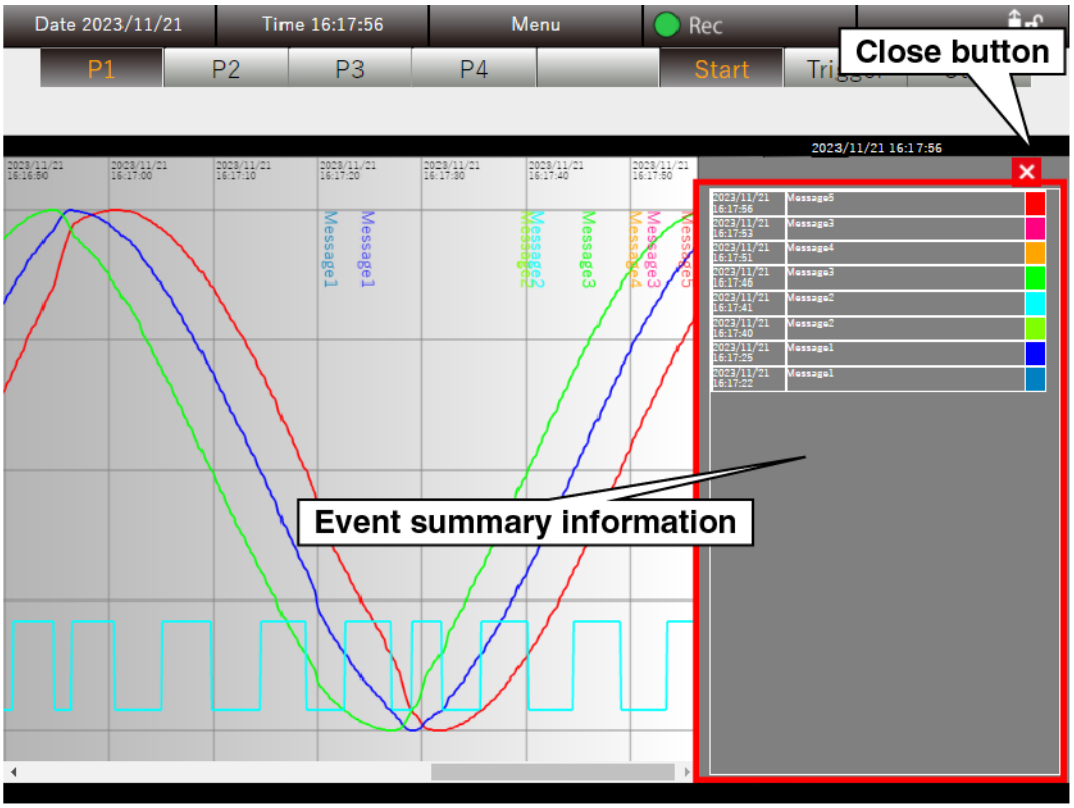
- Comments are recorded when the [OK] button click is successfully accepted.
- The color palette display depends on the browser.

5.3 Trend display (Event summary)

With the Trend display showed, click the “Menu Menu ” button and select “Event Summary .” Then the event summary information is showed on the Trend display.

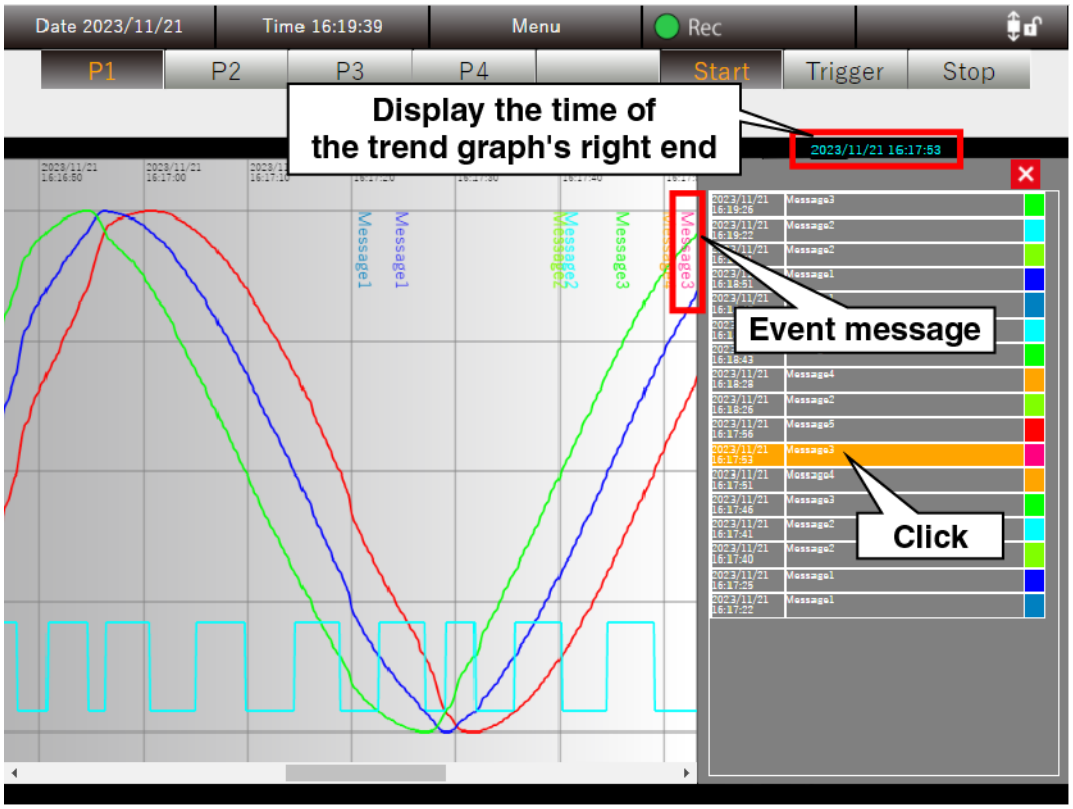
5.3.1 Display content

Event summary information is showed in the “Trend area” of the “Trend” display, where the digital display area, scale display area, and pen mark are showed. The event summary information is shared and showed on all pages. Clicking the [Close] button closes the event summary information and returns to the normal “Trend” display.



5.3.2 Operation

Clicking the “event summary” highlights the clicked summary and displays the data starting from the point where the event occurred.
When the right end of the trend graph is past data, the time display is blue. At this time, the event summary information is not updated.

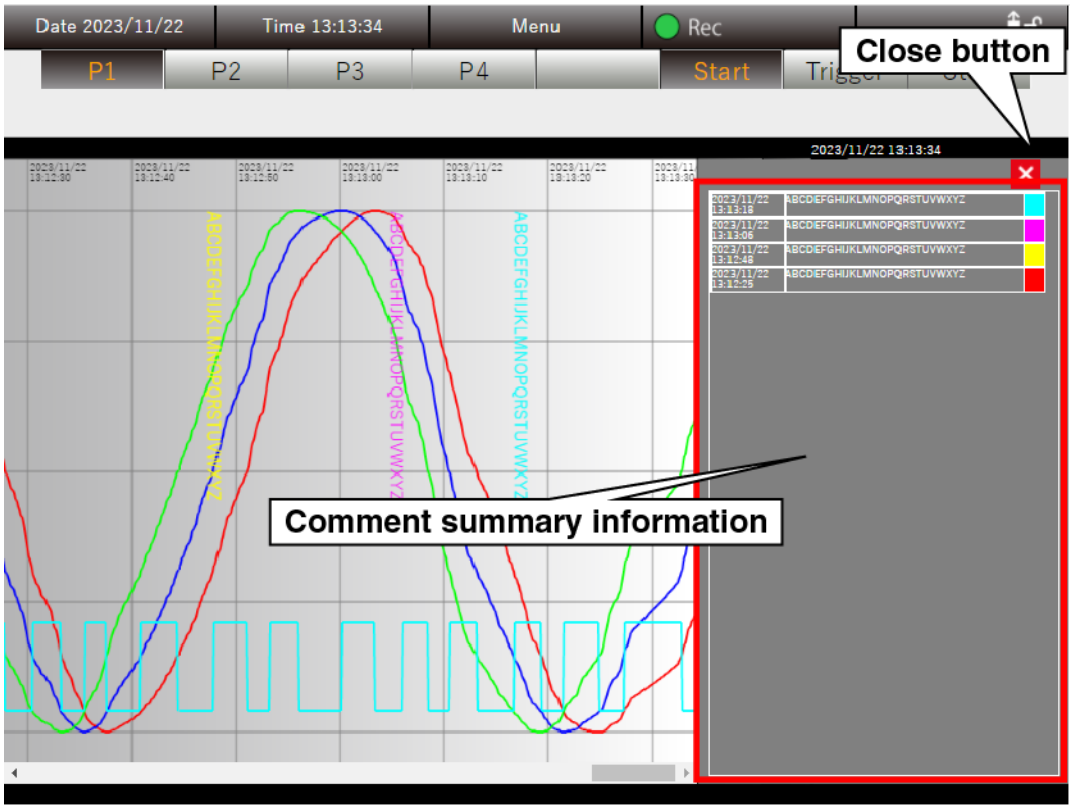


5.4 Trend display (Comments summary)

With the Trend display showed, click the “Menu Menu ” button and select “Comments Summary .” Then the comments summary information is showed on the Trend display.

5.4.1 Display content

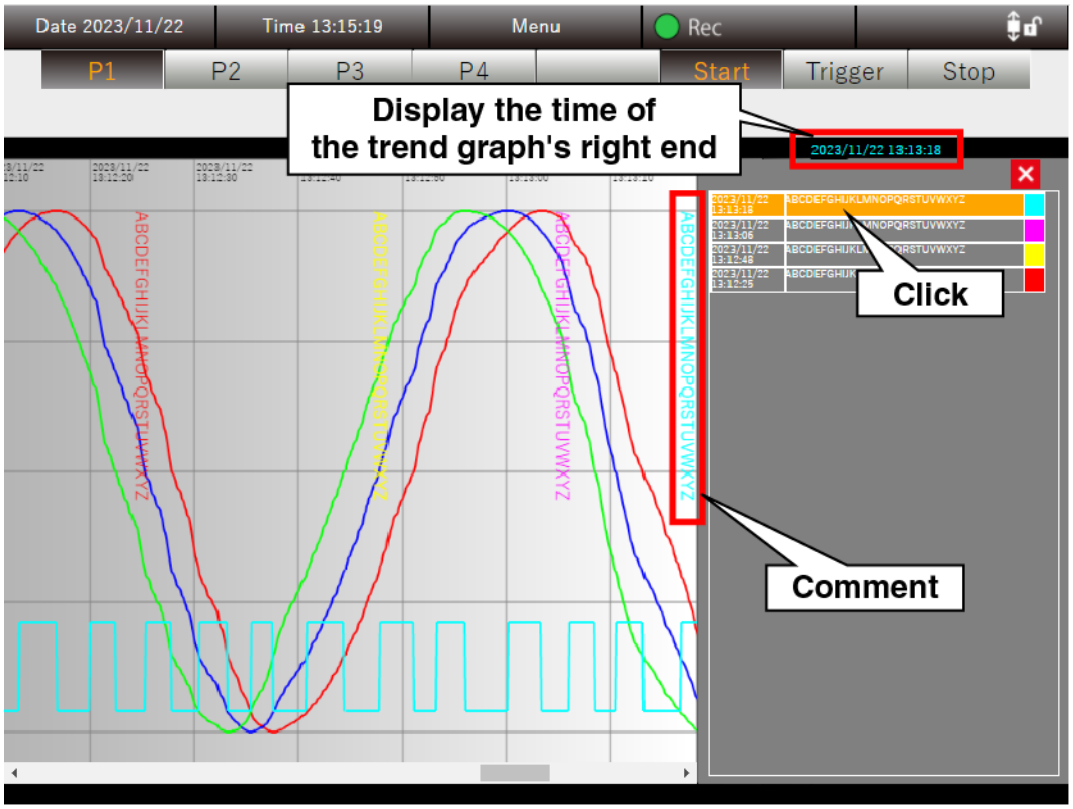
Comments summary information is showed in the “Trend area” of the “Trend” display, where the digital display area, scale display area, and pen mark are showed. The comments summary information is shared and showed on all pages. Clicking the [Close] button closes the comments summary information and returns to the normal “Trend” display.



5.4.2 Operation

Clicking the “comments summary” highlights the clicked comments and displays the trend data starting from the point of recording.

When the right end of the trend graph is past data, the time display is blue.



5.5 Event view

Click the “Menu Menu ” button and select “Event view NEW ” to go to the “Event view” display.

5.5.1 Display content

A list of Event view is displayed.

When an event that has been set for each channel by right clicking the “PC Recorder” icon in the task tray and selecting “Setting (C)” occurs, the event information is showed on this display.

On the Event view display, the event information on the 500 most recent events is displayed. It is also updated even when recording is suspended.

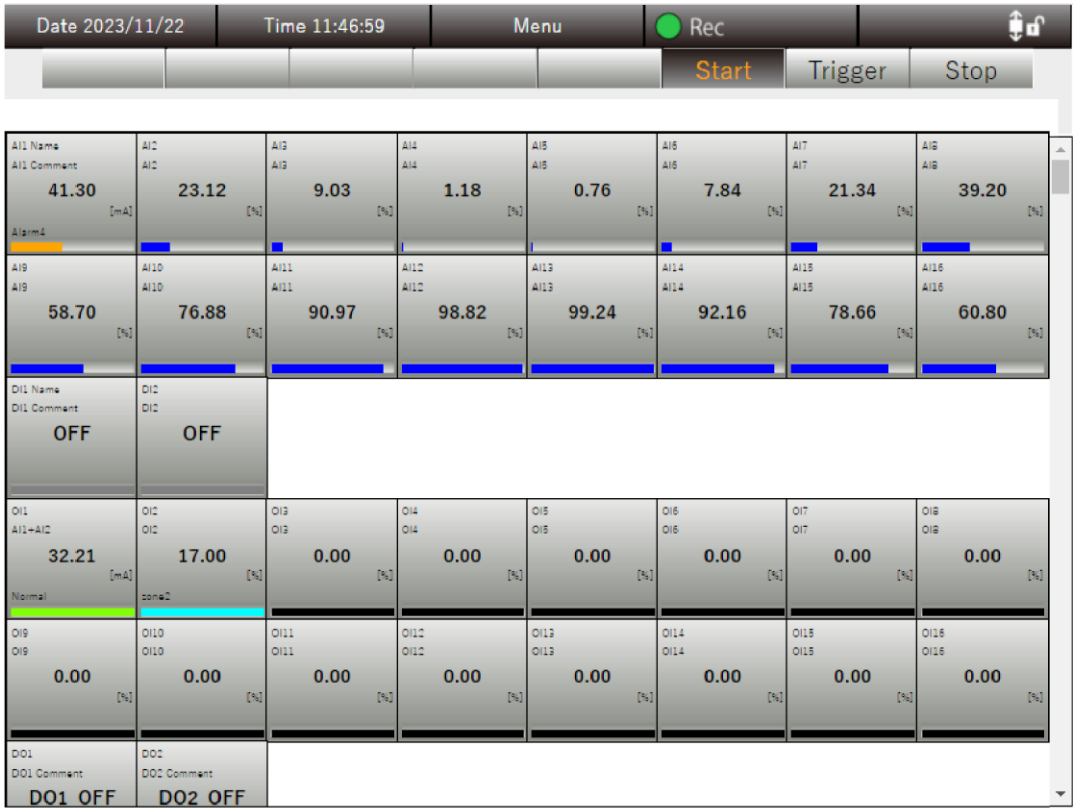
Event view data is cleared by right clicking the “PC Recorder” icon and clicking “Close (X)” to close.

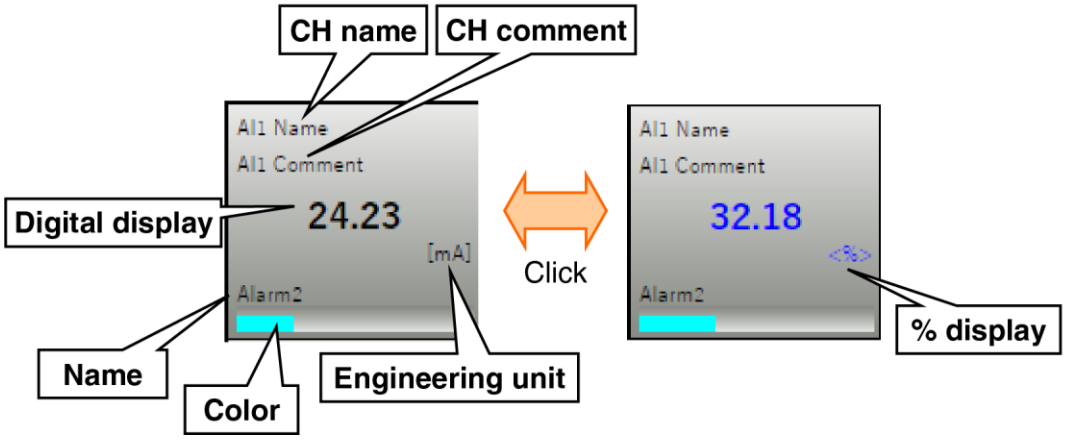
5.6 Overview

Click the “Menu Menu ” button and select “Overview ” to go to the “Overview” display.

5.6.1 Display content

The current values and alarm generation status of all channels are displayed. It is updated even when recording is suspended.





For items that are displayed differently depending on the type of input/output, refer to the table below.

Item	Type	Display content
Digital display	AI	Displays the % value or the actual quantity value.
	DI DO	Displays the character string corresponding to ON/OFF.
	OI	Displays the numerical value of the actual quantity.
Status	AI OI	When a zone is used, the current zone color is shown. When a zone is not used, blue is shown. This is displayed in a simple bar graph manner. The display color corresponding to the whole status is shown. The name corresponding to the whole status is shown.
	DI DO	Display color corresponding to ON/OFF as a bar.
Engineering unit	AI OI	Blank.
	DI DO	Displays the specified unit.

5.7 Trend file

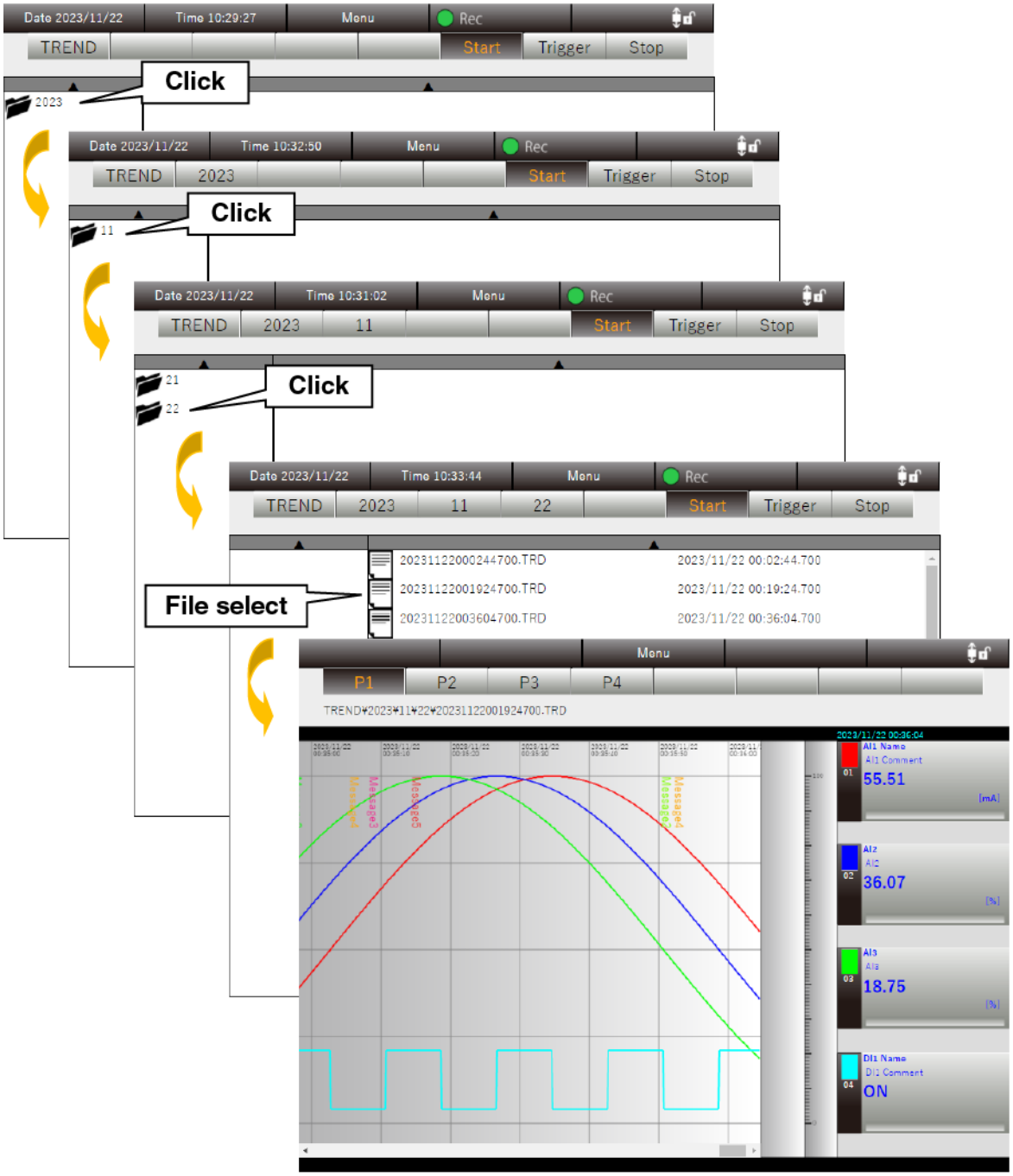
Click the “Menu Menu ” button and select “Trend file ” to go to the “Trend file” display.

5.7.1 Display content

A list of trend files stored in the PC is displayed.

Click on the “Year/Month/Day” folder and select the trend file to view.

The content and operation of the displayed trend file are the same as in “5.2 Trend ”.



CAUTION

- The pen display and bar graph display functions are disabled.

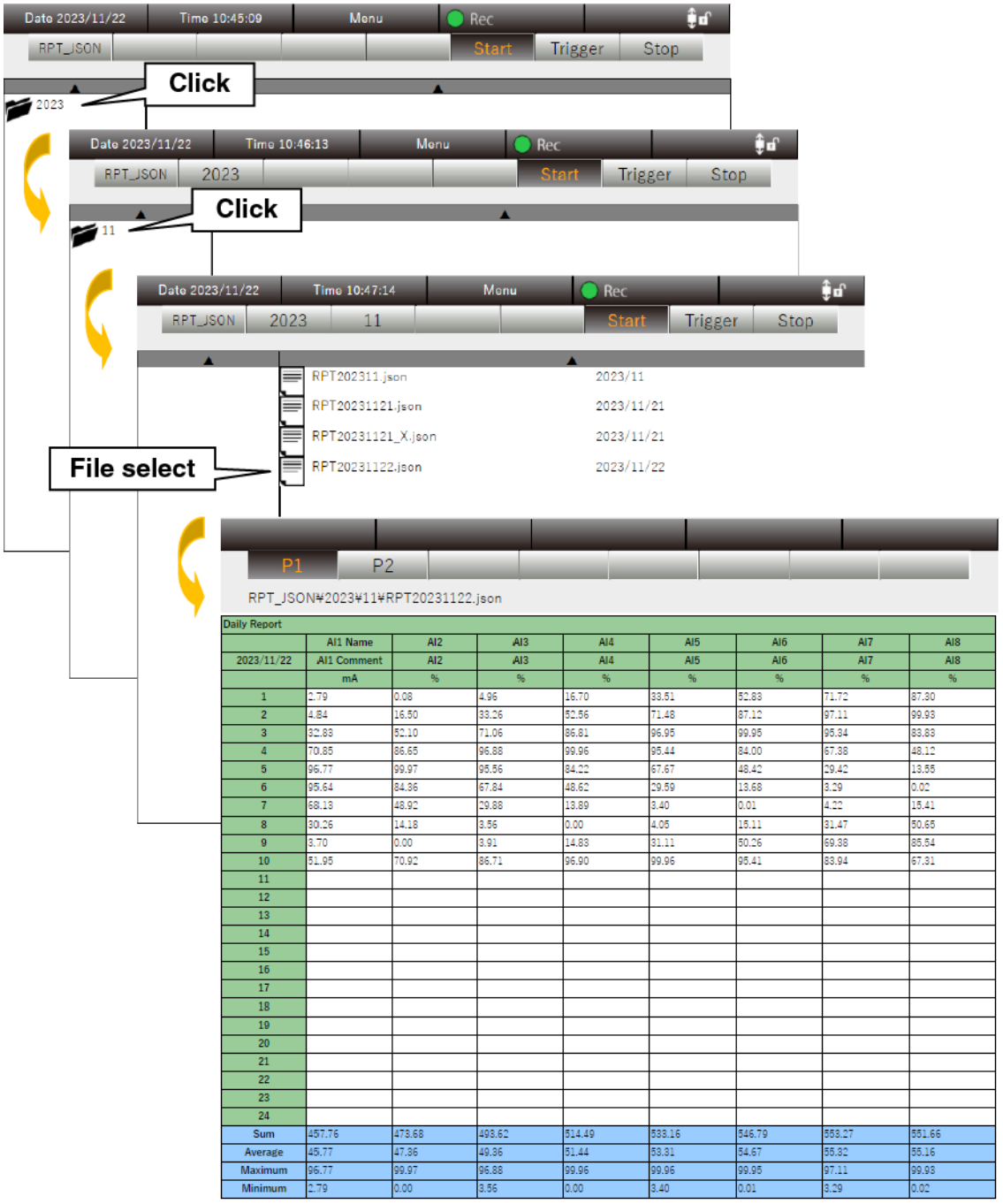
5.8 Report file

Click the “Menu Menu ” button and select “Report file ” to go to the “Report file” display.

5.8.1 Display content

A list of report files stored in the PC is displayed.

Click the “Year/Month/Day” folder and select the report file to view.



Daily Report

	AI1 Name	AI2	AI3	AI4	AI5	AI6	AI7	AI8
2023/11/22	AI1 Comment	AI2	AI3	AI4	AI5	AI6	AI7	AI8
	mA	%	%	%	%	%	%	%
1	2.79	0.08	4.96	16.70	33.51	52.83	71.72	87.30
2	4.84	16.50	33.26	52.56	71.48	87.12	97.11	99.93
3	32.83	52.10	71.06	86.81	96.95	99.95	95.34	83.83
4	70.85	86.65	96.88	99.96	95.44	84.00	67.38	48.12
5	96.77	99.97	95.56	84.22	67.67	48.42	29.42	13.55
6	95.64	84.36	67.84	48.62	29.59	13.68	3.29	0.02
7	68.13	48.92	29.88	13.89	3.40	0.01	4.22	15.41
8	30.26	14.18	3.56	0.00	4.05	15.11	31.47	50.65
9	3.70	0.00	3.91	14.83	31.11	50.26	69.38	85.54
10	51.95	70.92	86.71	96.90	99.96	95.41	83.94	67.31
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
Sum	457.76	473.68	498.62	514.49	533.16	546.79	553.27	551.66
Average	45.77	47.36	49.86	51.44	53.31	54.67	55.32	55.16
Maximum	96.77	99.97	96.88	99.96	99.96	99.95	97.11	99.93
Minimum	2.79	0.00	3.56	0.00	3.40	0.01	3.29	0.02

Special note

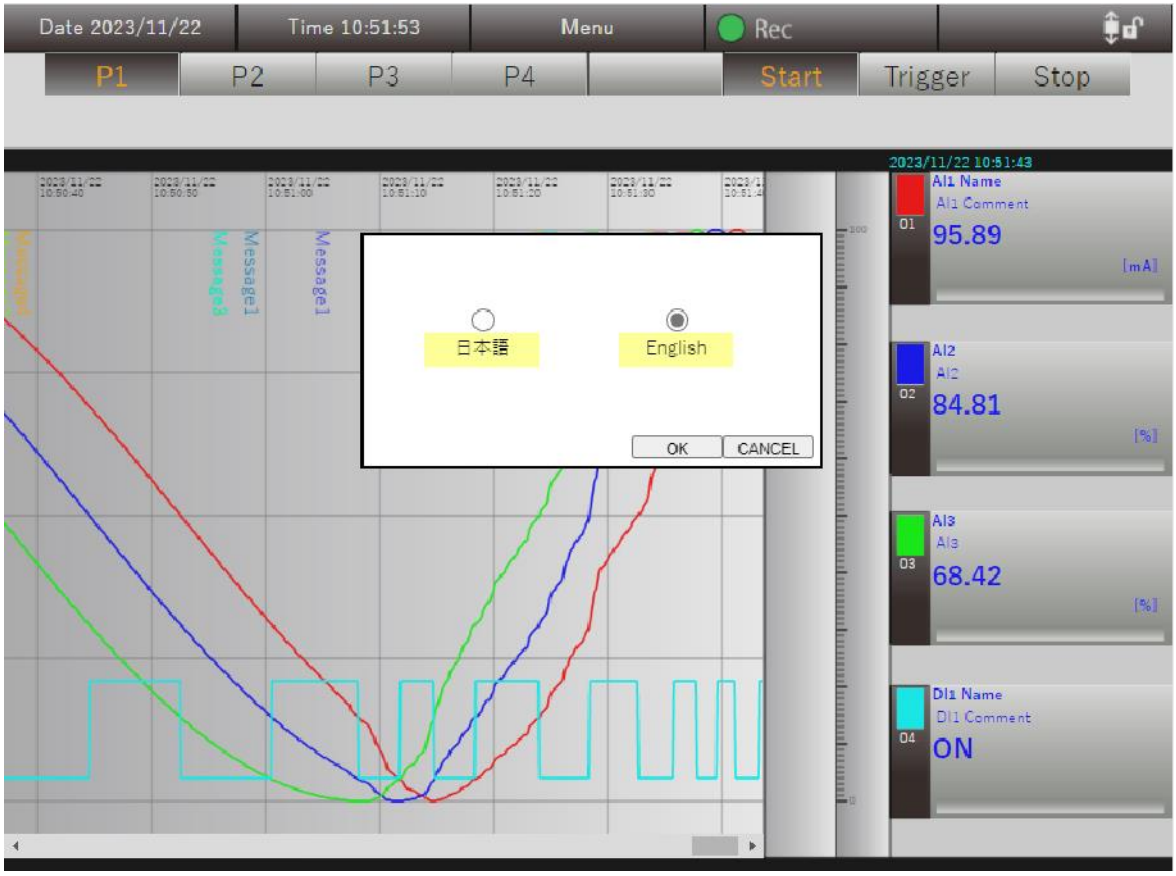
- If the settings are changed during the recording of report data, new report data is created and an “X” is added to the end of the data name.

5.9 Language

Click the “Menu Menu ” button and select “Language ” to go to the “Language” display.

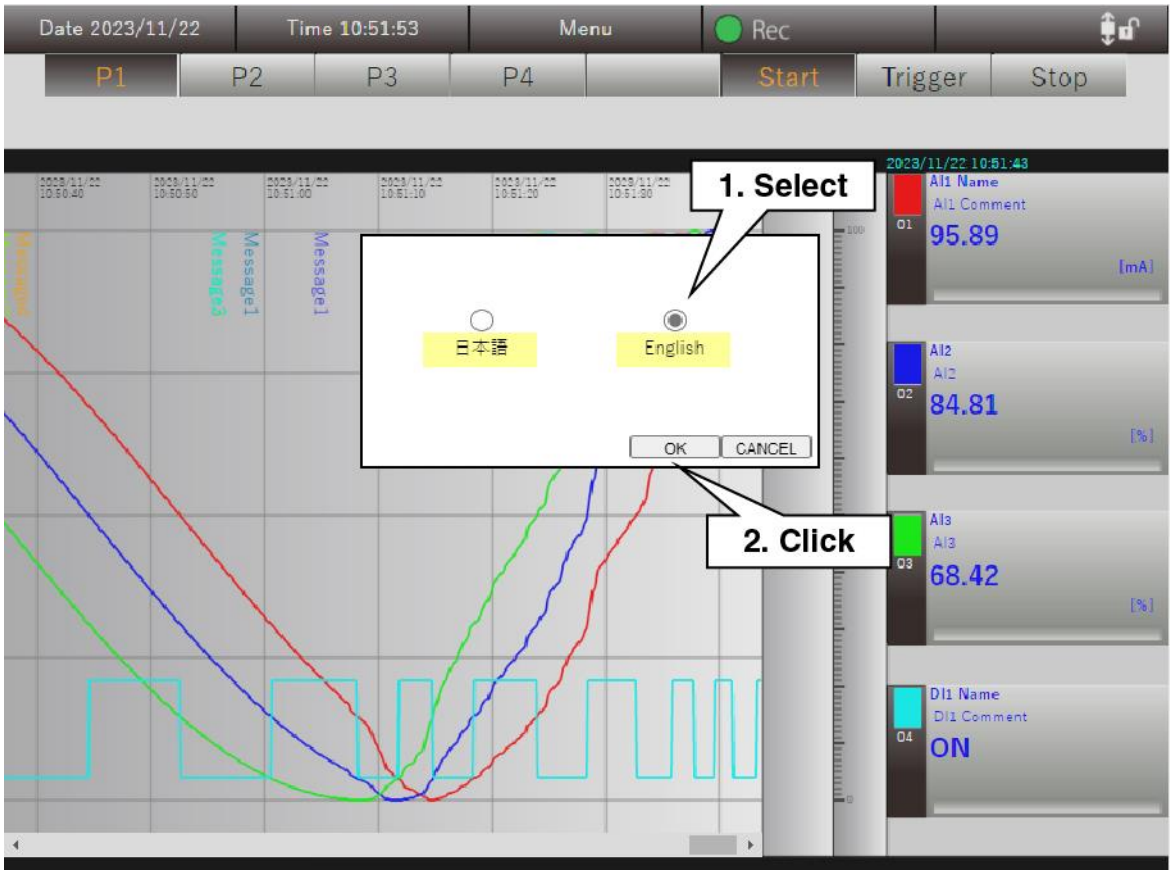
5.9.1 Display content

The currently used language is displayed as selected.



5.9.2 Operation

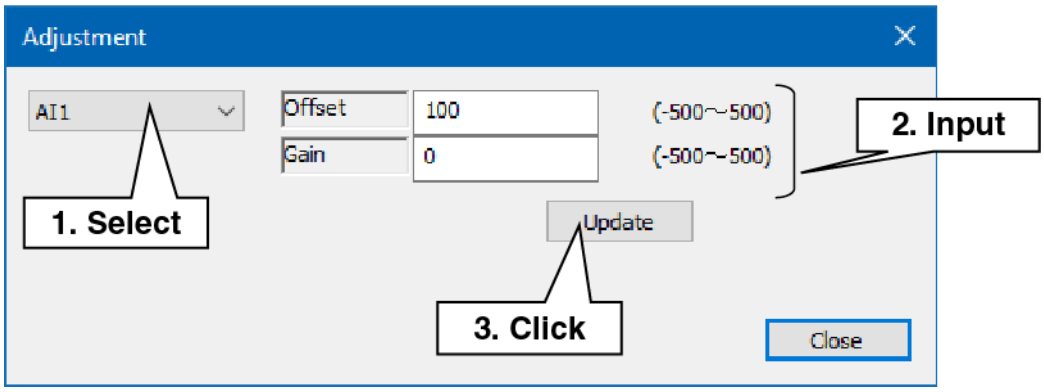
Select the language to be used from “Japanese” or “English,” and click the [OK] button to switch the language.



6. Adjustment

Adjust analog input channels 1 to 16.

Right-click the “PC Recorder” icon in the task tray and click “Adjustment (D).” The Adjustment dialog is displayed.



(1) Select the analog input channel to be adjusted.

(2) Enter Offset and Gain.

(3) Click the “Apply” button to apply the settings.

7. License

Below are the licenses for the functions used by PC Recorder.

7.1 License

This software incorporates expat (http://expat.sourceforge.net/).
This expat is distributed under the MIT License.
The following is the copyright notice, license statement, and disclaimer required by the MIT/X Consortium License:

Copyright (c) 1998, 1999, 2000 Thai Open Source Software Center Ltd. and Clark Cooper
Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006 Expat maintainers.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software") to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

8. Appendix

8.1 Troubleshooting

Also refer to the “Frequently Asked Questions (FAQ)” on our Website.

https://www.mgco.jp/

8.1.1 I/O unit : lamp indication

Phenomenon	Check item	Measure
The PWR indicator lamp does not light up.	Is the I/O unit turned on?	Check the connection to the PC.
The RUN indicator lamp does not light up.	Is the I/O unit set in the connection settings?	Right-click the “PC Recorder” icon in the task tray to open the menu. Click [Settings] to show the “Settings” display and then click [Connect]. Show the “Connection” display and check the [I/O] settings. ->3.1 I/O connection setting

8.1.2 PC Recorder

Phenomenon	Check items	Measure
Unable to connect to the I/O unit.	Is the I/O unit set in the connection settings?	Right-click the “PC Recorder” icon in the task tray to open the menu. Click [Settings] to show the “Settings” display and then click [Connect]. Show the “Connection” display and check the [I/O] settings. ->3.1 I/O connection setting
Unable to display the screen on the Web browser.	Is the port number used by PC Recorder (default: 38080) open?	Check the firewall settings on the PC.
Trend data is not displayed.	Are the trend settings correct?	Right-click the “PC Recorder” icon in the task tray to open the menu. Click [Settings] to show the “Settings” display and then click [Trend]. Show the “Trend” display and check the settings. ->3.4 Recording trend
Reports are not recorded.	Are the report settings correct?	Right-click the “PC Recorder” icon in the task tray to open the menu. Click [Settings] to show the “Settings” display and then click [Report]. Show the “Report” display and check the settings. ->3.5 Recording report
Trend and report data are not recorded.	Is PC Recorder started?	Even if the PC and the I/O unit are connected, the data are not recorded if PC Recorder is not started up.